

2017
2018



MEASURING INSTRUMENTS

CATALOGUE NO. 102

←INSIZE→

QUALITY | INNOVATION | SERVICE | VALUE



The products with this mark are INSIZE PLUS brand

←INSIZE→ is our standard quality and made in Asia – Korea, China, Taiwan, etc.

←INSIZE PLUS→ is our premium quality and mainly made in Germany, UK and Italy



The products with this mark are supplied with manufacturer inspection certificate

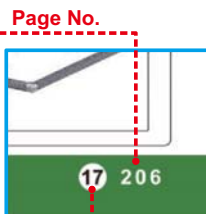
| ←INSIZE→ | | Inspection Certificate | | | | | |
|------------------|--------------------|------------------------|--|------------------|-------------------|----------|----------|
| Product name | Digital Caliper | Traceable to | USA NIST No.821279484-10 Germany DKD No.D-K-15190-01-00 | | | | |
| Code No. | 1108-150 | Inspector | <i>Don</i> | | | | |
| Measuring range | 0-150mm / 0-6" | Judgement | Passed | | | | |
| Resolution | 0.01mm / 0.0005" | Standard temperature | 20°C / 68°F | | | | |
| Serial No. | 0910120004 | | | | | | |
| | | | | | | | |
| | | Unit: inch | | Unit: mm | | | |
| Measuring Length | Permissible Error | Error | | Measuring Length | Permissible Error | Error | |
| | | External | Internal | | | External | Internal |
| 0.4 DIA | +0.0005 -0.0010 | / | 0.0005 | Φ10 | +0.01 -0.02 | / | 0.01 |
| 2 | ±0.0010 | -0.0005 | / | 50 | ±0.02 | -0.01 | / |
| 4 | | -0.0005 | / | 100 | | -0.01 | / |
| 6 | | -0.0010 | / | 150 | | -0.02 | / |
| 8 | ±0.0015 | / | / | 200 | ±0.03 | / | / |
| 10 | | / | / | 250 | | / | / |
| 12 | | / | / | 300 | | / | / |



VIDEO

Please scan QR code to watch the basic operation video of the products.
For detailed operation video, please enter into <http://www.insize.com/support.php>

How to use PRODUCTION INDEX



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Page No.



PRODUCT INDEX

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CALIPER

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DIGITAL CALIPER

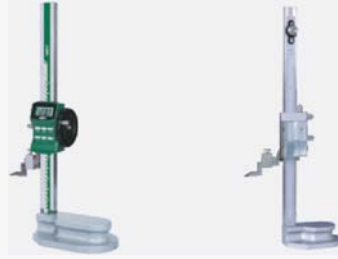
DIAL CALIPER

VERNIER CALIPER

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HEIGHT GAGE

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DIGITAL HEIGHT GAGE

VERNIER HEIGHT GAGE

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BORE AND SHAFT DIAMETER

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THREE POINTS
INTERNAL MICROMETER

INSIDE MICROMETER

TUBULAR INSIDE
MICROMETER



BORE PLUG GAGE

BORE GAGE

INTERNAL CHAMFER
GAGE



TELESCOPING GAGE SET

DIGITAL RADIUS GAGE

CIRCUMFERENCE TAPE

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GAGE BLOCKS

CHECK MASTER

ANGLE GAGE BLOCKS



PIN GAGE

PLAIN PLUG GAGE

THREAD RING/PLUG GAGE

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MICROMETER

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OUTSIDE MICROMETER

MICROMETER HEAD

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DIGITAL INDICATOR

DIAL INDICATOR

DIAL TEST INDICATOR



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DIAL INDICATOR STAND

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INTERNAL/EXTERNAL
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DIAL SNAP GAGE



DIGITAL SNAP GAGE

CRANKSHAFT TESTER

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ANGLE AND STRAIGHTNESS

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DIGITAL PROTRACTOR

UNIVERSAL PROTRACTOR

PERPENDICULARITY
TESTER



GRANITE SQUARE

SQUARE

PRECISION STRAIGHT
EDGE

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PITCH GAGE



RADIUS GAGE



CHAMFER GAGE



TAPER GAGE



WELDING GAGE



INSIDE/OUTSIDE CALIPER



MEASURING TAPE



STEEL RULE



COMBINATION SQUARE SET



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SCRIBER

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MEASURING TOOL SET

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GRANITE SURFACE PLATE



V-BLOCK SET



PARALLEL SET



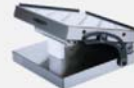
ANGLE PLATE SET



RIGHT ANGLE PLATE



SINE BAR



SINE TABLE



PRECISION VISE



CENTERING INDICATOR



3D TESTER



EDGE FINDER



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VISION MEASURING SYSTEM

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VIDEOSCOPE



PIPE VIDEOSCOPE



RIGID BORESCOPE

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COATING THICKNESS GAGE



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PULL OFF ADHESION TESTER



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EXTERNAL THREAD MEASURING DEVICE

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FORCE GAGE



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FOLDING MAGNIFIER



MAGNIFIER WITH ILLUMINATION



THREE WAYS MAGNIFIER WITH ILLUMINATION

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ROUGHNESS TESTER



SURFACE ROUGHNESS SPECIMEN

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ULTRASONIC THICKNESS GAGE



LASER DISTANCE METER



INFRARED THERMOMETER



DIGITAL ANEMOMETER



DIGITAL MOISTURE METER



DIGITAL SOUND LEVEL METER



DIGITAL TACHOMETER



GLOSS METER



PORTABLE REFRACTOMETER

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LEVEL

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ELECTRONIC LEVEL



DIGITAL LEVEL AND PROTRACTOR



BLOCK LEVEL

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**TORQUE TESTER
TORQUE WRENCH**

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DIGITAL TORQUE TESTER



DIGITAL BOTTLE CAP TORQUE TESTER



DIGITAL TORQUE SCREWDRIVER



TORQUE SCREWDRIVER



DIGITAL TORQUE WRENCH



TORQUE WRENCH

WATERPROOF DIGITAL CALIPERS

ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

ATTENTION: NO DATA OUTPUT

IP67
WATERPROOF

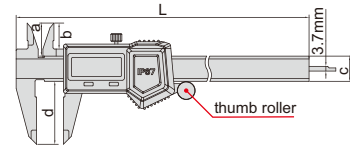
- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Battery CR2032
- Meet DIN862
- Made of stainless steel

INSPECTION CERTIFICATE
TRACEABLE TO DKD



1118-150B

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|-------------|---------------|----------|--------------|-----|----|------|----|----|
| 1118-150B* | 0-150mm/0-6" | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 |
| 1118-200B* | 0-200mm/0-8" | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 |
| 1118-300B* | 0-300mm/0-12" | ±0.03mm | with | 400 | 25 | 20.5 | 17 | 60 |
| 1118-150BW* | 0-150mm/0-6" | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 |
| 1118-200BW* | 0-200mm/0-8" | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 |
| 1118-300BW* | 0-300mm/0-12" | ±0.03mm | without | 400 | 25 | 20.5 | 17 | 60 |



* Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL CALIPERS (ABSOLUTE CODE)

HIGH PRECISION

ABSOLUTE CODE

DATA OUTPUT

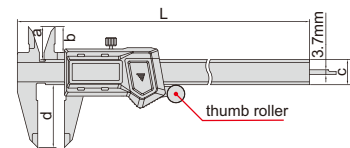
- Absolute code
- Resolution: 0.01mm/0.0005"
- Buttons: mm/inch, ABS/REL, on/off, origin set
- Battery CR2032, automatic power off
- After automatic power off, move the digital unit to turn on power
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7302-SPC4)

INSPECTION CERTIFICATE
TRACEABLE TO DKD



1103-150

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|------------|---------------|----------|--------------|-----|----|------|----|----|
| 1103-150* | 0-150mm/0-6" | ±0.02mm | with | 234 | 20 | 15 | 16 | 40 |
| 1103-200* | 0-200mm/0-8" | ±0.02mm | with | 286 | 24 | 19 | 16 | 50 |
| 1103-300* | 0-300mm/0-12" | ±0.03mm | with | 390 | 26 | 21.5 | 16 | 60 |
| 1103-150W* | 0-150mm/0-6" | ±0.02mm | without | 234 | 20 | 15 | 16 | 40 |
| 1103-200W* | 0-200mm/0-8" | ±0.02mm | without | 286 | 24 | 19 | 16 | 50 |
| 1103-300W* | 0-300mm/0-12" | ±0.03mm | without | 390 | 26 | 21.5 | 16 | 60 |



* Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL CALIPERS

INSPECTION CERTIFICATE
TRACEABLE TO DKD

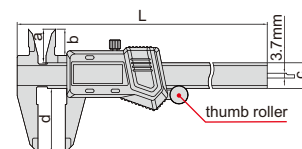
ATTENTION: NO DATA OUTPUT

- Zinc alloy housing for digital unit
- Resolution: 0.01mm/0.0005"
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel



1114-150A

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|-------------|---------------|----------|--------------|-----|----|------|----|----|
| 1114-150A* | 0-150mm/0-6" | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 |
| 1114-200A* | 0-200mm/0-8" | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 |
| 1114-300A* | 0-300mm/0-12" | ±0.03mm | with | 400 | 25 | 20.5 | 17 | 60 |
| 1114-150AW* | 0-150mm/0-6" | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 |
| 1114-200AW* | 0-200mm/0-8" | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 |
| 1114-300AW* | 0-300mm/0-12" | ±0.03mm | without | 400 | 25 | 20.5 | 17 | 60 |



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DATA OUTPUT

DIGITAL CALIPERS (STANDARD MODEL)

INSPECTION CERTIFICATE
TRACEABLE TO DKD

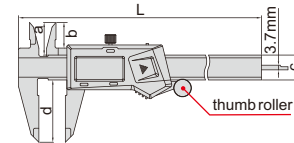
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1108-150

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|-------------|---------------|----------|--------------|-----|----|------|----|----|
| 1108-150 * | 0-150mm/0-6" | ±0.02mm | with | 236 | 21 | 16 | 16 | 40 |
| 1108-200 * | 0-200mm/0-8" | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 |
| 1108-250 * | 0-250mm/0-10" | ±0.03mm | with | 350 | 25 | 20.5 | 16 | 60 |
| 1108-300 * | 0-300mm/0-12" | ±0.03mm | with | 400 | 25 | 20.5 | 16 | 60 |
| 1108-150W * | 0-150mm/0-6" | ±0.02mm | without | 236 | 21 | 16 | 16 | 40 |
| 1108-200W * | 0-200mm/0-8" | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 |
| 1108-250W * | 0-250mm/0-10" | ±0.03mm | without | 350 | 25 | 20.5 | 16 | 60 |
| 1108-300W * | 0-300mm/0-12" | ±0.03mm | without | 400 | 25 | 20.5 | 16 | 60 |

(mm)



* Supplied with manufacturer inspection certificate traceable to DKD Germany

LOCK READING WITH "HOLD" BUTTON

DATA OUTPUT

METRIC DIGITAL CALIPERS

INSPECTION CERTIFICATE
TRACEABLE TO DKD

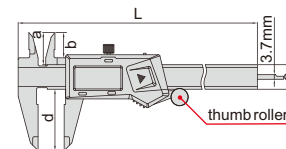
- Resolution: 0.01mm
- Buttons: on/off, zero, hold
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1109-150

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|-------------|---------|----------|--------------|-----|----|------|----|----|
| 1109-150 * | 0-150mm | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 |
| 1109-200 * | 0-200mm | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 |
| 1109-300 * | 0-300mm | ±0.03mm | with | 400 | 25 | 20.5 | 16 | 60 |
| 1109-150W * | 0-150mm | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 |
| 1109-200W * | 0-200mm | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 |
| 1109-300W * | 0-300mm | ±0.03mm | without | 400 | 25 | 20.5 | 16 | 60 |

(mm)



* Supplied with manufacturer inspection certificate traceable to DKD Germany

DATA OUTPUT

DIGITAL CALIPERS WITH ROUND DEPTH BAR

INSPECTION CERTIFICATE
TRACEABLE TO DKD

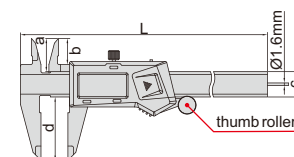
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1119-150

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|-------------|--------------|----------|--------------|-----|----|----|----|----|
| 1119-150 * | 0-150mm/0-6" | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 |
| 1119-150W * | 0-150mm/0-6" | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 |

(mm)



* Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL CALIPERS WITH CARBIDE TIPPED JAWS

**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD

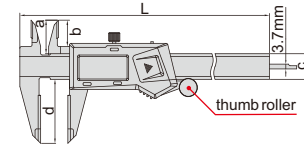
DATA
OUTPUT

- Carbide tipped jaws for inside and outside measurements
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output, meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1110-150A

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d | (mm) |
|-------------|---------------|----------|--------------|-----|----|------|----|----|------|
| 1110-150A* | 0-150mm/0-6" | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 | |
| 1110-200A* | 0-200mm/0-8" | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 | |
| 1110-300A* | 0-300mm/0-12" | ±0.03mm | with | 400 | 25 | 20.5 | 16 | 60 | |
| 1110-150AW* | 0-150mm/0-6" | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 | |
| 1110-200AW* | 0-200mm/0-8" | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 | |
| 1110-300AW* | 0-300mm/0-12" | ±0.03mm | without | 400 | 25 | 20.5 | 16 | 60 | |



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DIGITAL CALIPERS WITH CERAMIC TIPPED JAWS

**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD

DATA
OUTPUT

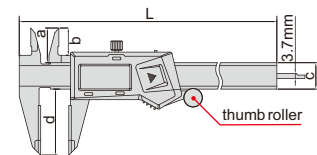
- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic, non-conductive
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output, made of stainless steel
- Meet DIN862
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

ceramic
tipped jaws



1193-150

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d | (mm) |
|------------|---------------|----------|--------------|-----|----|------|----|----|------|
| 1193-150* | 0-150mm/0-6" | ±0.03mm | with | 235 | 21 | 16.5 | 16 | 40 | |
| 1193-200* | 0-200mm/0-8" | ±0.03mm | with | 297 | 24 | 20 | 16 | 50 | |
| 1193-300* | 0-300mm/0-12" | ±0.03mm | with | 390 | 26 | 21.5 | 16 | 60 | |
| 1193-150W* | 0-150mm/0-6" | ±0.03mm | without | 235 | 21 | 16.5 | 16 | 40 | |
| 1193-200W* | 0-200mm/0-8" | ±0.03mm | without | 297 | 24 | 20 | 16 | 50 | |
| 1193-300W* | 0-300mm/0-12" | ±0.03mm | without | 390 | 26 | 21.5 | 16 | 60 | |



* Supplied with manufacturer inspection certificate traceable to DKD Germany

LEFT HAND DIGITAL CALIPERS

**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD

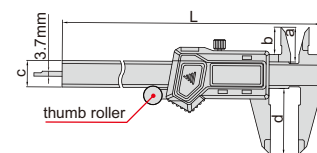
DATA
OUTPUT

- Designed for left handed users
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1130-150

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d | (mm) |
|------------|---------------|----------|--------------|-----|----|------|----|----|------|
| 1130-150* | 0-150mm/0-6" | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 | |
| 1130-200* | 0-200mm/0-8" | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 | |
| 1130-300* | 0-300mm/0-12" | ±0.03mm | with | 400 | 25 | 20.5 | 17 | 60 | |
| 1130-150W* | 0-150mm/0-6" | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 | |
| 1130-200W* | 0-200mm/0-8" | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 | |
| 1130-300W* | 0-300mm/0-12" | ±0.03mm | without | 400 | 25 | 20.5 | 17 | 60 | |



* Supplied with manufacturer inspection certificate traceable to DKD Germany

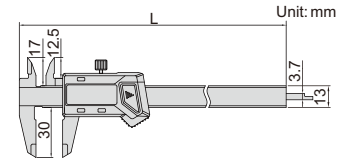
MINI DIGITAL CALIPERS

- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Automatic power off, move the digital unit to turn on power
- Battery LR44
- Meet DIN862
- Made of stainless steel



1111-100A

ATTENTION:
NO DATA OUTPUT



| Code | Range | Accuracy | L |
|-----------|--------------|----------|-------|
| 1111-75A | 0-75mm/0-3" | ±0.02mm | 144mm |
| 1111-100A | 0-100mm/0-4" | ±0.02mm | 170mm |

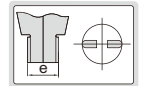
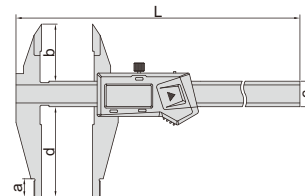
DIGITAL CALIPERS

DATA OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1171-300



| Code | Range | Accuracy | a | b | c | d | e | L |
|----------|---------------|----------|----|----|----|----|----|-----|
| 1171-200 | 0-200mm/0-8" | ±0.03mm | 12 | 38 | 17 | 60 | 10 | 320 |
| 1171-306 | 0-300mm/0-12" | ±0.04mm | 12 | 38 | 17 | 60 | 10 | 420 |
| 1171-300 | 0-300mm/0-12" | ±0.04mm | 12 | 38 | 17 | 90 | 10 | 420 |

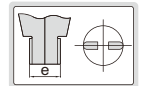
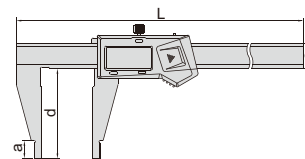
DIGITAL CALIPERS

DATA OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1170-300



| Code | Range | Accuracy | a | c | d | e | L |
|----------|---------------|----------|----|----|----|----|-----|
| 1170-200 | 0-200mm/0-8" | ±0.03mm | 12 | 17 | 60 | 10 | 320 |
| 1170-306 | 0-300mm/0-12" | ±0.04mm | 12 | 17 | 60 | 10 | 420 |
| 1170-300 | 0-300mm/0-12" | ±0.04mm | 12 | 17 | 90 | 10 | 420 |

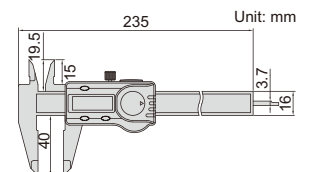
PLASTIC DIGITAL CALIPER

- Made of hard plastic, non-magnetic and non-conductive
- Prevent workpieces from scratching by calipers
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off



1139-150

ATTENTION:
NO DATA OUTPUT



| Code | Range | Accuracy |
|----------|--------------|----------|
| 1139-150 | 0-150mm/0-6" | ±0.1mm |

DIAL CALIPERS

**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD

**SHOCK
PROOF**

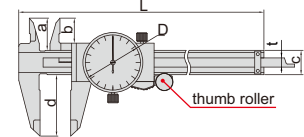
- Shockproof dial indicator
- Made of stainless steel



1312-150A

Dial indicator graduation: 0.02mm (mm)

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d | D | t |
|-------------|---------|----------|--------------|-----|----|------|----|----|-------|-----|
| 1312-150A* | 0-150mm | ±0.03mm | with | 235 | 21 | 16.5 | 16 | 40 | Ø39 | 6.5 |
| 1312-200A* | 0-200mm | ±0.03mm | with | 288 | 24 | 19 | 16 | 48 | Ø39 | 6.5 |
| 1312-300A* | 0-300mm | ±0.03mm | with | 410 | 28 | 22 | 20 | 62 | Ø44.5 | 7.5 |
| 1312-150AW* | 0-150mm | ±0.03mm | without | 235 | 21 | 16.5 | 16 | 40 | Ø39 | 6.5 |
| 1312-200AW* | 0-200mm | ±0.03mm | without | 288 | 24 | 19 | 16 | 48 | Ø39 | 6.5 |
| 1312-300AW* | 0-300mm | ±0.03mm | without | 410 | 28 | 22 | 20 | 62 | Ø44.5 | 7.5 |



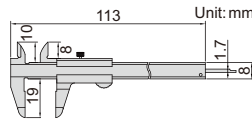
Dial indicator graduation: 0.01mm (mm)

| Code | Range | Accuracy | Thumb roller | L | a | b | c | d | D | t |
|-------------|---------|----------|--------------|-----|----|------|----|----|-------|-----|
| 1311-150A* | 0-150mm | ±0.03mm | with | 235 | 21 | 16.5 | 16 | 40 | Ø39 | 6.5 |
| 1311-200A* | 0-200mm | ±0.03mm | with | 288 | 24 | 19 | 16 | 48 | Ø39 | 6.5 |
| 1311-300A* | 0-300mm | ±0.03mm | with | 410 | 28 | 22 | 20 | 62 | Ø44.5 | 7.5 |
| 1311-150AW* | 0-150mm | ±0.03mm | without | 235 | 21 | 16.5 | 16 | 40 | Ø39 | 6.5 |
| 1311-200AW* | 0-200mm | ±0.03mm | without | 288 | 24 | 19 | 16 | 48 | Ø39 | 6.5 |
| 1311-300AW* | 0-300mm | ±0.03mm | without | 410 | 28 | 22 | 20 | 62 | Ø44.5 | 7.5 |

* Supplied with manufacturer inspection certificate traceable to DKD Germany

MINI VERNIER CALIPER

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

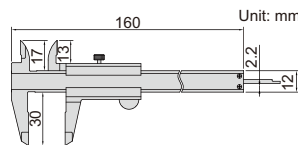


1204-70

| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 1204-70 | 0-70mm | 0.05mm | ±0.05mm |

MINI VERNIER CALIPER

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

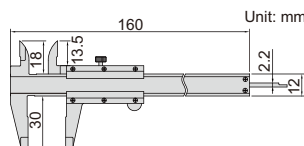


1203-1003

| Code | Range | Graduation | Accuracy |
|-----------|---------|------------|----------|
| 1203-1003 | 0-100mm | 0.05mm | ±0.05mm |

MINI VERNIER CALIPER

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1201-1003

| Code | Range | Graduation | Accuracy |
|-----------|---------|------------|----------|
| 1201-1003 | 0-100mm | 0.05mm | ±0.05mm |

VERNIER CALIPERS

Graduation 0.05mm/1/128" (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|-----------|---------------|----------|-----|------|------|----|----|
| 1205-150S | 0-150mm/0-6" | ±0.05mm | 235 | 20.5 | 15.5 | 16 | 40 |
| 1205-200S | 0-200mm/0-8" | ±0.05mm | 290 | 23.5 | 19 | 17 | 50 |
| 1205-250S | 0-250mm/0-10" | ±0.05mm | 364 | 27.5 | 22 | 20 | 64 |
| 1205-300S | 0-300mm/0-12" | ±0.05mm | 414 | 27.5 | 22 | 20 | 64 |

Graduation 0.05mm (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|------------|---------|----------|-----|------|------|----|----|
| 1205-1503S | 0-150mm | ±0.05mm | 235 | 20.5 | 15.5 | 16 | 40 |
| 1205-2003S | 0-200mm | ±0.05mm | 290 | 23.5 | 19 | 17 | 50 |
| 1205-3003S | 0-300mm | ±0.05mm | 414 | 27.5 | 22 | 20 | 64 |

Graduation 0.02mm/0.001" (mm)

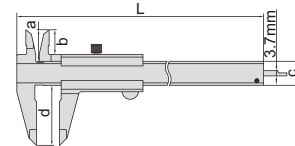
| Code | Range | Accuracy | L | a | b | c | d |
|------------|---------------|----------|-----|------|------|----|----|
| 1205-1502S | 0-150mm/0-6" | ±0.03mm | 235 | 20.5 | 15.5 | 16 | 40 |
| 1205-2002S | 0-200mm/0-8" | ±0.03mm | 290 | 23.5 | 19 | 17 | 50 |
| 1205-2502S | 0-250mm/0-10" | ±0.03mm | 364 | 27.5 | 22 | 20 | 64 |
| 1205-3002S | 0-300mm/0-12" | ±0.03mm | 414 | 27.5 | 22 | 20 | 64 |

Graduation 0.02mm (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|------------|---------|----------|-----|------|------|----|----|
| 1205-1501S | 0-150mm | ±0.03mm | 235 | 20.5 | 15.5 | 16 | 40 |
| 1205-2001S | 0-200mm | ±0.03mm | 290 | 23.5 | 19 | 17 | 50 |
| 1205-3001S | 0-300mm | ±0.03mm | 414 | 27.5 | 22 | 20 | 64 |



1205-150S



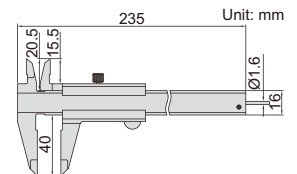
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

VERNIER CALIPER WITH ROUND DEPTH BAR

- Graduation 0.05mm/1/128"
- Round depth bar
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1202-150



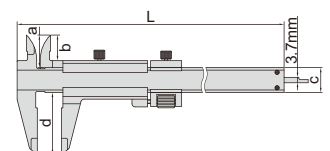
| Code | Range | Accuracy |
|----------|--------------|----------|
| 1202-150 | 0-150mm/0-6" | ±0.05mm |

VERNIER CALIPERS WITH FINE ADJUSTMENT

- Graduation 0.02mm/0.001"
- With fine adjustment
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1233-130



| Code | Range | Accuracy | L | a | b | c | d |
|----------|---------------|----------|-----|------|------|----|----|
| 1233-130 | 0-130mm/0-5" | ±0.03mm | 230 | 20.5 | 16.5 | 16 | 40 |
| 1233-180 | 0-180mm/0-7" | ±0.03mm | 295 | 23.5 | 19 | 16 | 50 |
| 1233-280 | 0-280mm/0-11" | ±0.03mm | 410 | 26 | 20 | 20 | 60 |

VERNIER CALIPERS WITH THUMB CLAMP

- Meet DIN862
- With thumb clamp
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128" (mm)

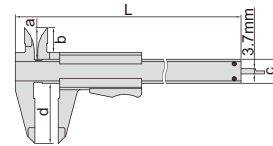
| Code | Range | Accuracy | L | a | b | c | d |
|----------|---------------|----------|-----|------|------|----|----|
| 1223-150 | 0-150mm/0-6" | ±0.05mm | 230 | 20.5 | 16.5 | 16 | 40 |
| 1223-200 | 0-200mm/0-8" | ±0.05mm | 295 | 23.5 | 19 | 16 | 50 |
| 1223-300 | 0-300mm/0-12" | ±0.05mm | 405 | 26 | 20 | 20 | 60 |

Graduation 0.02mm/0.001" (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|-----------|---------------|----------|-----|------|------|----|----|
| 1223-1502 | 0-150mm/0-6" | ±0.03mm | 230 | 20.5 | 16.5 | 16 | 40 |
| 1223-2002 | 0-200mm/0-8" | ±0.03mm | 295 | 23.5 | 19 | 16 | 50 |
| 1223-3002 | 0-300mm/0-12" | ±0.03mm | 405 | 26 | 20 | 20 | 60 |



1223-150



VERNIER CALIPERS WITH CARBIDE TIPPED JAWS

- Carbide tipped jaws for inside and outside measurements
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128" (mm)

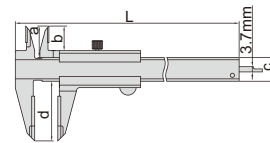
| Code | Range | Accuracy | L | a | b | c | d |
|----------|---------------|----------|-----|----|------|----|----|
| 1238-150 | 0-150mm/0-6" | ±0.05mm | 230 | 21 | 16.5 | 16 | 40 |
| 1238-200 | 0-200mm/0-8" | ±0.05mm | 295 | 24 | 19 | 16 | 50 |
| 1238-300 | 0-300mm/0-12" | ±0.05mm | 410 | 25 | 20 | 17 | 60 |

Graduation 0.02mm/0.001" (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|-----------|---------------|----------|-----|----|------|----|----|
| 1238-1502 | 0-150mm/0-6" | ±0.03mm | 230 | 21 | 16.5 | 16 | 40 |
| 1238-2002 | 0-200mm/0-8" | ±0.03mm | 295 | 24 | 19 | 16 | 50 |
| 1238-3002 | 0-300mm/0-12" | ±0.03mm | 410 | 25 | 20 | 17 | 60 |



1238-150

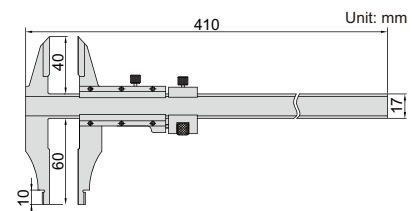


VERNIER CALIPER

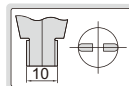
- Graduation 0.02mm
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1217-3001



| Code | Range | Accuracy |
|-----------|---------|----------|
| 1217-3001 | 0-300mm | ±0.03mm |



**ATTENTION:
NOT HARDENED**

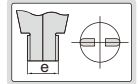
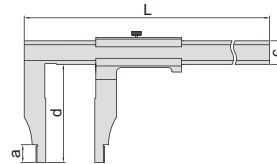
VERNIER CALIPERS (ANTI MAGNETIC)

- Suitable for magnetic parts
- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface
- Measuring faces are not hardened, HRC18-22



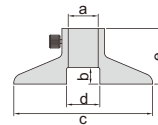
1224-201

| (mm) | | | | | | | |
|----------|---------|----------|----|----|----|----|-----|
| Code | Range | Accuracy | a | c | d | e | L |
| 1224-151 | 0-150mm | ±0.04mm | 10 | 17 | 50 | 10 | 250 |
| 1224-201 | 0-200mm | ±0.04mm | 10 | 17 | 50 | 10 | 300 |
| 1224-361 | 0-300mm | ±0.04mm | 10 | 17 | 60 | 10 | 400 |



DEPTH BASE ATTACHMENTS

- To increase the stability of depth measurement
- Suitable for digital calipers and dial calipers
- Made of stainless steel



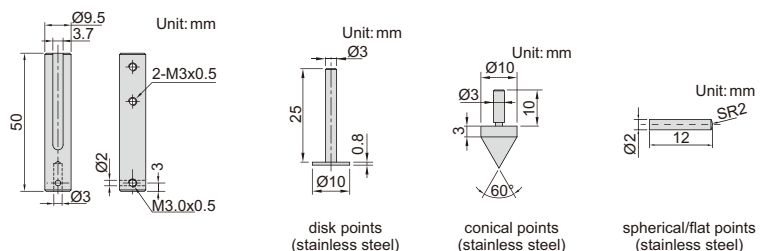
6140

| (mm) | | | | | | |
|-----------|------|----|-----|----|----|--|
| Code | a | b | c | d | e | Application |
| 6140 | 16.5 | 9 | 75 | 18 | 30 | Suitable for calipers with beam width (w) 16mm |
| 6140-300A | 20 | 15 | 125 | 22 | 34 | Suitable for calipers with beam width (w) 20mm |

ACCESSORY SET FOR DIGITAL CALIPERS CODE 6144



6144



- Suitable for 0-150mm/0-6" and 0-200mm/0-8" digital calipers (thickness of lower jaws < 3.7mm)

**Code
6144**

DIGITAL CALIPERS

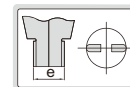
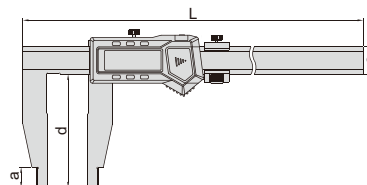
(mm)

| Code | Range | Accuracy | a | c | d | e | L |
|-----------|-----------------|----------|----|----|-----|----|------|
| 1106-301 | 0-300mm/0-12" | ±0.05mm | 18 | 24 | 100 | 20 | 420 |
| 1106-302 | 0-300mm/0-12" | ±0.05mm | 18 | 24 | 150 | 20 | 420 |
| 1106-451 | 0-450mm/0-18" | ±0.05mm | 18 | 24 | 100 | 20 | 625 |
| 1106-501 | 0-500mm/0-20" | ±0.05mm | 18 | 24 | 100 | 20 | 675 |
| 1106-502 | 0-500mm/0-20" | ±0.06mm | 18 | 24 | 150 | 20 | 675 |
| 1106-503 | 0-500mm/0-20" | ±0.06mm | 24 | 31 | 200 | 20 | 675 |
| 1106-505 | 0-500mm/0-20" | ±0.08mm | 24 | 42 | 300 | 20 | 675 |
| 1106-601 | 0-600mm/0-24" | ±0.05mm | 18 | 24 | 100 | 20 | 770 |
| 1106-602 | 0-600mm/0-24" | ±0.06mm | 18 | 24 | 150 | 20 | 770 |
| 1106-603 | 0-600mm/0-24" | ±0.06mm | 24 | 31 | 200 | 20 | 770 |
| 1106-802 | 0-800mm/0-32" | ±0.07mm | 24 | 31 | 150 | 20 | 1025 |
| 1106-1002 | 0-1000mm/0-40" | ±0.08mm | 24 | 31 | 150 | 20 | 1220 |
| 1106-1003 | 0-1000mm/0-40" | ±0.08mm | 24 | 31 | 200 | 20 | 1220 |
| 1106-1005 | 0-1000mm/0-40" | ±0.10mm | 24 | 42 | 300 | 20 | 1220 |
| 1106-1502 | 0-1500mm/0-60" | ±0.11mm | 24 | 42 | 150 | 20 | 1780 |
| 1106-1503 | 0-1500mm/0-60" | ±0.12mm | 24 | 42 | 200 | 20 | 1780 |
| 1106-2002 | 0-2000mm/0-80" | ±0.14mm | 24 | 42 | 150 | 20 | 2290 |
| 1106-2003 | 0-2000mm/0-80" | ±0.14mm | 24 | 42 | 200 | 20 | 2290 |
| 1106-2502 | 0-2500mm/0-100" | ±0.22mm | 24 | 42 | 150 | 20 | 2800 |
| 1106-3002 | 0-3000mm/0-120" | ±0.26mm | 24 | 42 | 150 | 20 | 3300 |

DATA OUTPUT



1106-501



- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

DIGITAL CALIPERS

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

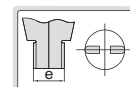
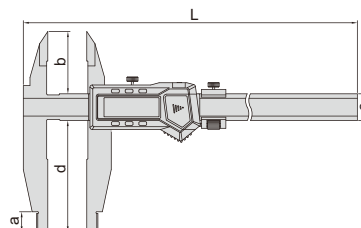
(mm)

| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------------|----------|----|----|----|-----|----|------|
| 1117-301 | 0-300mm/0-12" | ±0.05mm | 18 | 56 | 24 | 100 | 20 | 420 |
| 1117-501 | 0-500mm/0-20" | ±0.05mm | 18 | 56 | 24 | 100 | 20 | 675 |
| 1117-502 | 0-500mm/0-20" | ±0.06mm | 18 | 56 | 24 | 150 | 20 | 675 |
| 1117-601 | 0-600mm/0-24" | ±0.05mm | 18 | 56 | 24 | 100 | 20 | 770 |
| 1117-802 | 0-800mm/0-32" | ±0.07mm | 24 | 67 | 31 | 150 | 20 | 1025 |
| 1117-1002 | 0-1000mm/0-40" | ±0.08mm | 24 | 67 | 31 | 150 | 20 | 1220 |

DATA OUTPUT



1117-501



DIGITAL CALIPERS

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

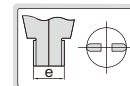
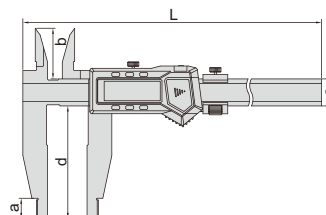
(mm)

| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------------|----------|----|----|----|-----|----|------|
| 1136-301 | 0-300mm/0-12" | ±0.05mm | 18 | 45 | 24 | 100 | 20 | 420 |
| 1136-451 | 0-450mm/0-18" | ±0.05mm | 18 | 45 | 24 | 100 | 20 | 625 |
| 1136-501 | 0-500mm/0-20" | ±0.05mm | 18 | 45 | 24 | 100 | 20 | 675 |
| 1136-502 | 0-500mm/0-20" | ±0.06mm | 18 | 45 | 24 | 150 | 20 | 675 |
| 1136-503 | 0-500mm/0-20" | ±0.06mm | 24 | 60 | 31 | 200 | 20 | 675 |
| 1136-601 | 0-600mm/0-24" | ±0.05mm | 18 | 45 | 24 | 100 | 20 | 770 |
| 1136-1002 | 0-1000mm/0-40" | ±0.08mm | 24 | 60 | 31 | 150 | 20 | 1220 |
| 1136-1502 | 0-1500mm/0-60" | ±0.11mm | 24 | 60 | 42 | 150 | 20 | 1780 |
| 1136-2002 | 0-2000mm/0-80" | ±0.14mm | 24 | 60 | 42 | 150 | 20 | 2290 |

DATA OUTPUT



1136-501



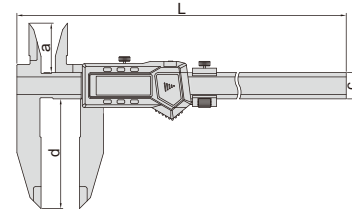
DIGITAL CALIPERS

DATA OUTPUT

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1135-601



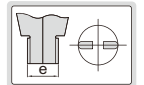
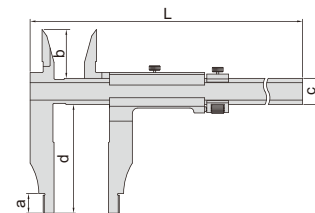
| (mm) | | | | | | | |
|-----------|----------------|----------|----|----|-----|------|---|
| Code | Range | Accuracy | a | b | c | d | L |
| 1135-451 | 0-450mm/0-18" | ±0.05mm | 45 | 24 | 100 | 625 | |
| 1135-601 | 0-600mm/0-24" | ±0.05mm | 45 | 24 | 100 | 770 | |
| 1135-1002 | 0-1000mm/0-40" | ±0.08mm | 60 | 31 | 150 | 1220 | |

VERNIER CALIPERS (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1236-521



Graduation 0.05mm/1/128" (mm)

| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------------|----------|----|----|----|-----|----|------|
| 1236-394 | 0-300mm/0-12" | ±0.07mm | 12 | 38 | 20 | 90 | 10 | 450 |
| 1236-514 | 0-500mm/0-20" | ±0.07mm | 18 | 45 | 24 | 100 | 20 | 670 |
| 1236-524 | 0-500mm/0-20" | ±0.08mm | 18 | 45 | 24 | 150 | 20 | 670 |
| 1236-614 | 0-600mm/0-24" | ±0.08mm | 18 | 45 | 24 | 100 | 20 | 770 |
| 1236-824 | 0-800mm/0-32" | ±0.09mm | 24 | 60 | 31 | 150 | 20 | 1030 |
| 1236-1024 | 0-1000mm/0-40" | ±0.12mm | 24 | 60 | 31 | 150 | 20 | 1230 |

Graduation 0.02mm (mm)

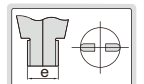
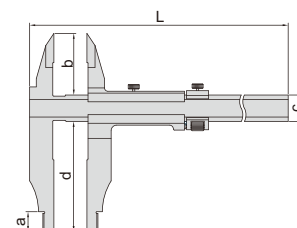
| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------|----------|----|----|----|-----|----|------|
| 1236-511 | 0-500mm | ±0.05mm | 18 | 45 | 24 | 100 | 20 | 670 |
| 1236-521 | 0-500mm | ±0.06mm | 18 | 45 | 24 | 150 | 20 | 670 |
| 1236-1021 | 0-1000mm | ±0.08mm | 24 | 60 | 31 | 150 | 20 | 1230 |

VERNIER CALIPERS (SOLID TYPE)

- Graduation 0.05mm/1/128"
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1207-514



(mm)

| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------------|----------|----|----|----|-----|----|------|
| 1207-394 | 0-300mm/0-12" | ±0.07mm | 12 | 40 | 20 | 90 | 10 | 440 |
| 1207-514 | 0-500mm/0-20" | ±0.07mm | 18 | 56 | 24 | 100 | 20 | 670 |
| 1207-524 | 0-500mm/0-20" | ±0.08mm | 18 | 56 | 24 | 150 | 20 | 670 |
| 1207-824 | 0-800mm/0-32" | ±0.09mm | 24 | 67 | 31 | 150 | 20 | 930 |
| 1207-1024 | 0-1000mm/0-40" | ±0.12mm | 24 | 67 | 31 | 150 | 20 | 1230 |

VERNIER CALIPERS (SOLID TYPE)

Graduation 0.05mm/1/128" (mm)

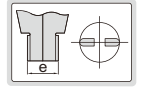
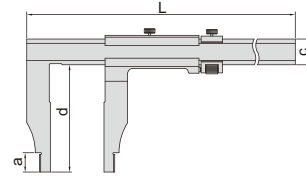
| Code | Range | Accuracy | a | c | d | e | L |
|-----------|----------------|----------|----|----|-----|----|------|
| 1208-214 | 0-200mm/0-8" | ±0.06mm | 10 | 20 | 100 | 10 | 330 |
| 1208-394 | 0-300mm/0-12" | ±0.07mm | 10 | 20 | 90 | 10 | 410 |
| 1208-324 | 0-300mm/0-12" | ±0.07mm | 18 | 24 | 150 | 20 | 410 |
| 1208-524 | 0-500mm/0-20" | ±0.08mm | 18 | 24 | 150 | 20 | 670 |
| 1208-614 | 0-600mm/0-24" | ±0.08mm | 18 | 24 | 100 | 20 | 770 |
| 1208-624 | 0-600mm/0-24" | ±0.09mm | 18 | 24 | 150 | 20 | 770 |
| 1208-824 | 0-800mm/0-32" | ±0.09mm | 24 | 31 | 150 | 20 | 1030 |
| 1208-1024 | 0-1000mm/0-40" | ±0.12mm | 24 | 31 | 150 | 20 | 1230 |
| 1208-1524 | 0-1500mm/0-60" | ±0.16mm | 24 | 42 | 150 | 20 | 1820 |
| 1208-2024 | 0-2000mm/0-80" | ±0.20mm | 24 | 42 | 150 | 20 | 2330 |

Graduation 0.02mm (mm)

| Code | Range | Accuracy | a | c | d | e | L |
|-----------|----------|----------|----|----|-----|----|------|
| 1208-511 | 0-500mm | ±0.05mm | 18 | 24 | 100 | 20 | 670 |
| 1208-521 | 0-500mm | ±0.06mm | 18 | 24 | 150 | 20 | 670 |
| 1208-1021 | 0-1000mm | ±0.08mm | 24 | 31 | 150 | 20 | 1230 |
| 1208-1521 | 0-1500mm | ±0.11mm | 24 | 42 | 150 | 20 | 1820 |



1208-511



- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

VERNIER CALIPERS (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128" (mm)

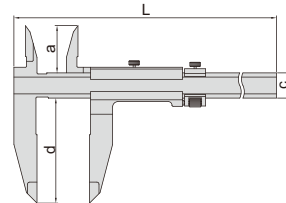
| Code | Range | Accuracy | a | c | d | L |
|-----------|----------------|----------|----|----|-----|------|
| 1210-614 | 0-600mm/0-24" | ±0.08mm | 45 | 24 | 100 | 770 |
| 1210-1024 | 0-1000mm/0-40" | ±0.12mm | 60 | 31 | 150 | 1230 |

Graduation 0.02mm (mm)

| Code | Range | Accuracy | a | c | d | L |
|-----------|----------|----------|----|----|-----|------|
| 1210-611 | 0-600mm | ±0.05mm | 45 | 24 | 100 | 770 |
| 1210-1021 | 0-1000mm | ±0.08mm | 60 | 31 | 150 | 1230 |



1210-611



VERNIER CALIPERS

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.02mm/0.001" (mm)

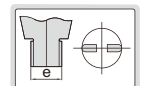
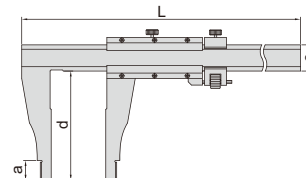
| Code | Range | Accuracy | a | c | d | e | L |
|-----------|----------------|----------|----|----|-----|----|------|
| 1214-300 | 0-300mm/0-12" | ±0.05mm | 10 | 20 | 75 | 10 | 410 |
| 1214-450 | 0-450mm/0-18" | ±0.05mm | 18 | 24 | 100 | 20 | 620 |
| 1214-500 | 0-500mm/0-20" | ±0.05mm | 18 | 24 | 100 | 20 | 670 |
| 1214-600 | 0-600mm/0-24" | ±0.05mm | 18 | 24 | 100 | 20 | 770 |
| 1214-1000 | 0-1000mm/0-40" | ±0.08mm | 24 | 32 | 140 | 20 | 1216 |
| 1214-1500 | 0-1500mm/0-60" | ±0.12mm | 24 | 42 | 200 | 20 | 1830 |
| 1214-2000 | 0-2000mm/0-80" | ±0.14mm | 24 | 42 | 200 | 20 | 2320 |

Graduation 0.05mm/1/128" (mm)

| Code | Range | Accuracy | a | c | d | e | L |
|-----------|----------------|----------|----|----|-----|----|------|
| 1214-6004 | 0-600mm/0-24" | ±0.08mm | 18 | 24 | 100 | 20 | 770 |
| 1214-1004 | 0-1000mm/0-40" | ±0.12mm | 24 | 32 | 140 | 20 | 1216 |



1214-500



LONG JAW VERNIER CALIPERS

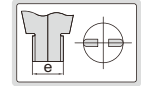
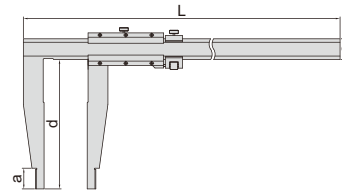
Graduation 0.02mm/0.001"

(mm)

| Code | Range | Accuracy | a | c | d | e | L |
|-----------|-----------------|----------|----|----|-----|----|------|
| 1215-392 | 0-300mm/0-12" | ±0.05mm | 10 | 17 | 90 | 10 | 410 |
| 1215-322 | 0-300mm/0-12" | ±0.05mm | 18 | 24 | 150 | 20 | 470 |
| 1215-522 | 0-500mm/0-20" | ±0.06mm | 18 | 24 | 150 | 20 | 670 |
| 1215-532 | 0-500mm/0-20" | ±0.06mm | 18 | 24 | 200 | 20 | 670 |
| 1215-622 | 0-600mm/0-24" | ±0.06mm | 18 | 24 | 150 | 20 | 770 |
| 1215-642 | 0-600mm/0-24" | ±0.08mm | 24 | 32 | 250 | 20 | 870 |
| 1215-822 | 0-800mm/0-32" | ±0.07mm | 24 | 32 | 150 | 20 | 1020 |
| 1215-832 | 0-800mm/0-32" | ±0.07mm | 24 | 32 | 200 | 20 | 1020 |
| 1215-1032 | 0-1000mm/0-40" | ±0.08mm | 24 | 32 | 200 | 20 | 1220 |
| 1215-1052 | 0-1000mm/0-40" | ±0.11mm | 24 | 42 | 300 | 20 | 1330 |
| 1215-3052 | 0-3000mm/0-120" | ±0.26mm | 24 | 50 | 300 | 20 | 3360 |



1215-1032



Graduation 0.05mm/1/128"

(mm)

| Code | Range | Accuracy | a | c | d | e | L |
|-----------|----------------|----------|----|----|-----|----|------|
| 1215-524 | 0-500mm/0-20" | ±0.08mm | 18 | 24 | 150 | 20 | 670 |
| 1215-1034 | 0-1000mm/0-40" | ±0.12mm | 24 | 32 | 200 | 20 | 1330 |

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

CUSTOM-MADE CALIPERS



- We are able to make calipers according to the design from customers

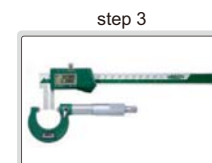
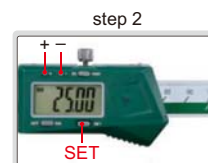
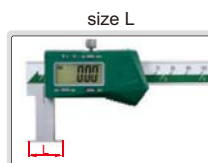
SET BUTTON

- In some calipers, there is a "SET" button. It is possible to set a initial reading (instead of zero) on these calipers.
- For internal measurement, if the size L is unknown, it is necessary to set. After setting, you can get a direct reading, without adding L.
 Step 1: Find a micrometer, set it at a number (for example, 25mm) and lock it.
 Step 2: Press "SET", "+" and "-" buttons to set 25 on caliper. After setting, the initial reading will be 25 instead of zero, when "SET" is pressed anytime.
 Step 3: Put caliper into the micrometer, press "SET", the reading is 25.

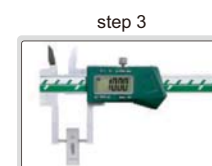
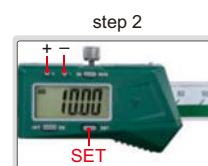
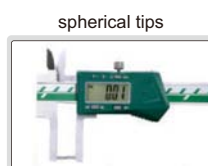


VIDEO

SET button



- For external measurement, if the tips are spherical, it is difficult to set zero because the two tips may not be aligned.
 Step 1: Find a gage block (for example, 10mm).
 Step 2: Press "SET", "+" and "-" buttons to set 10mm on caliper. After setting, the initial reading will be 10mm instead of zero, when SET is pressed anytime.
 Step 3: Hold the gage block, press "SET", the reading is 10mm.



UNIVERSAL CALIPER CODE 1125-600

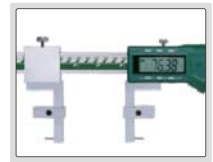
DATA
OUTPUT



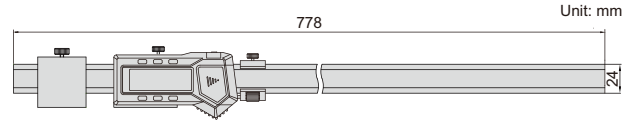
working with stands



working with measuring jaws



1125-600

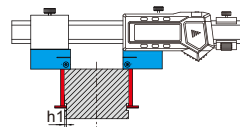
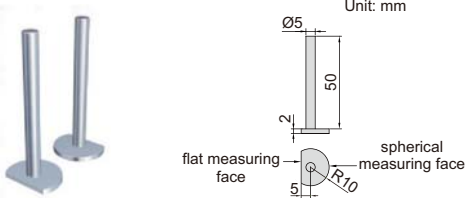


- Buttons: on/off, set, mm/inch, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

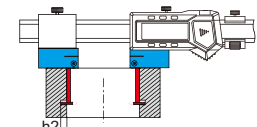
| Code | Range* | Resolution | Accuracy |
|----------|---------------|----------------|----------|
| 1125-600 | 0-600mm/0-24" | 0.01mm/0.0005" | ±0.05mm |

*The range changes according to different points

Half disk points (included)

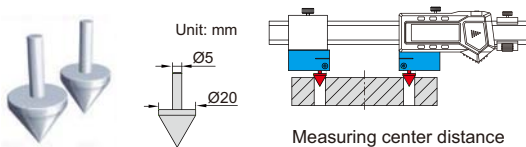


Measuring external groove diameter with flat measuring face (depth $h1 \leq 2.5\text{mm}$)



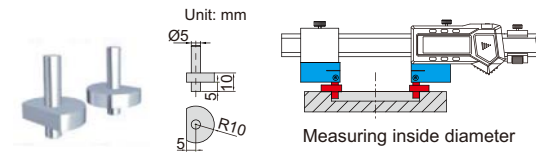
Measuring internal groove diameter with spherical measuring face (depth $h2 \leq 7.5\text{mm}$)

Conical points (optional)



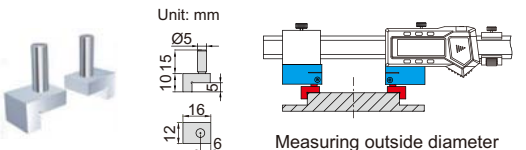
Code
1125-T101

Round shoulder points (optional)



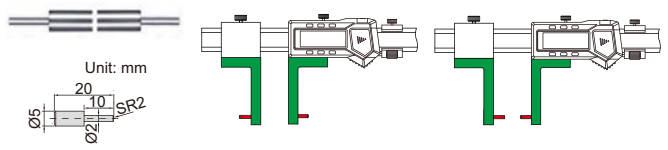
Code
1125-T102

Flat shoulder points (optional)

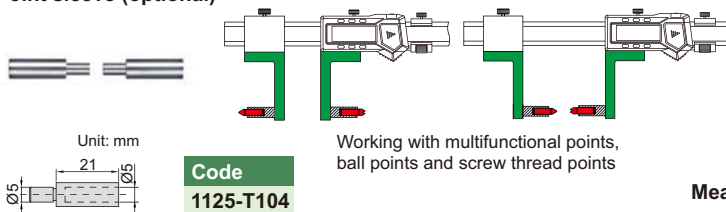


Code
1125-T103

Spherical points (included)

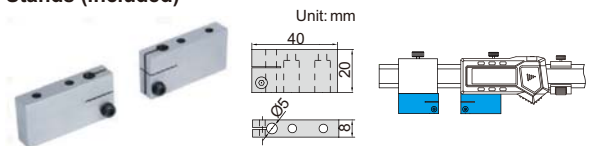


Point sleeve (optional)

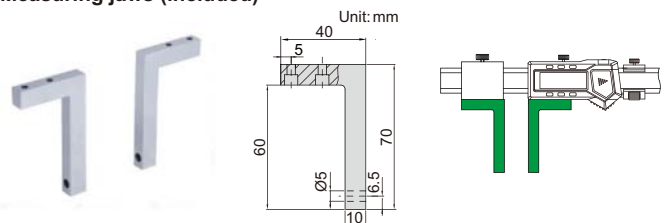


Code
1125-T104

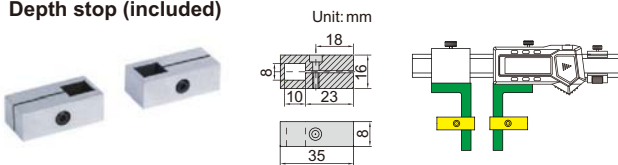
Stands (included)



Measuring jaws (included)



Depth stop (included)



Multifunctional points 7392 (optional, next page)



Ball points 7391 (optional, next page)



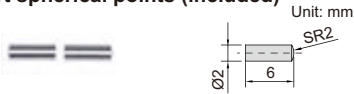
Screw thread points 7381, 7321 (optional, next page)



DIGITAL CALIPER WITH INTERCHANGEABLE POINTS CODE 1526-200

DATA OUTPUT

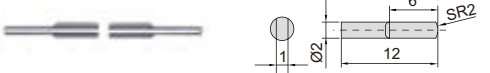
short spherical points (included)



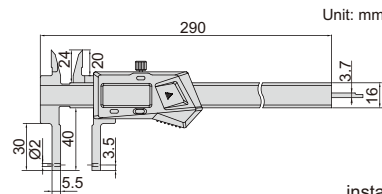
long spherical/flat points (included)



spherical blade points (included)

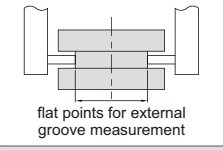
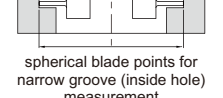
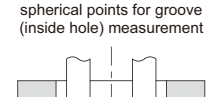
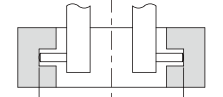


1526-200

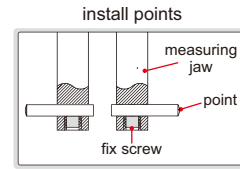
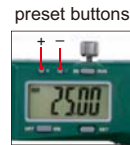


Unit: mm

measure internal and external grooves



- Supplied with 3 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points (code 1526-T101, 7392, 7391, 7381, 7321), depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



zero setting block for external measurement (included)

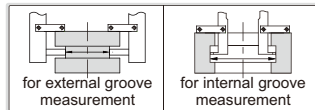
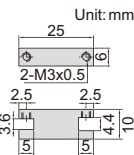


| Point | Range | Accuracy | Application |
|----------------------------|---|----------|--|
| short spherical points | 12-212mm/0.5-8.5"(internal) | ±0.03mm | for grooves inside small hole |
| long spherical/flat points | 24-224mm/1-8.8"(internal) 0-187mm/0-7.5"(external) | ±0.03mm | spherical points for grooves inside hole flat points for external grooves |
| spherical blade points | 24-224mm/1-8.8"(internal) 0-187mm/0-7.5"(external) | ±0.03mm | for narrow grooves inside hole |

Depth stop (optional)

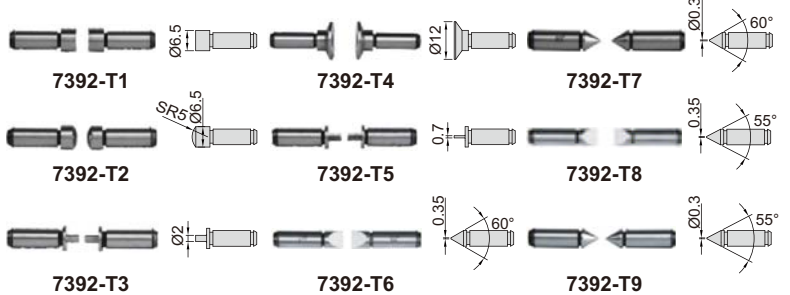


6143



Code
6143

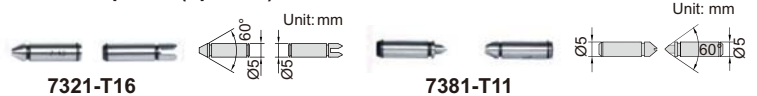
Multifunctional points (optional)



| Code | Type | Code | Type | Code | Type |
|----------|-----------|----------|------------|----------|------------|
| 7392-T1* | flat | 7392-T4* | disk | 7392-T7* | point |
| 7392-T2* | spherical | 7392-T5* | blade | 7392-T8* | knife-edge |
| 7392-T3* | spline | 7392-T6* | knife-edge | 7392-T9* | point |

* It is necessary to use point sleeve (code 1526-T101) for these points

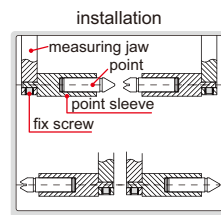
Screw thread points (optional)



Point sleeve (optional)



1526-T101

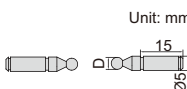


Code
1526-T101

Ball points (optional)



7391-T5



Unit: mm

| Code | Ball dia.(D) | Module |
|-----------|--------------|--------|
| 7391-T3* | SØ2.0mm | 1.25 |
| 7391-T4* | SØ2.5mm | 1.5 |
| 7391-T5* | SØ3.0mm | 1.75 |
| 7391-T6* | SØ3.5mm | 2 |
| 7391-T7* | SØ4.0mm | 2.25 |
| 7391-T8* | SØ4.5mm | 2.5 |
| 7391-T9* | SØ5.0mm | 2.75 |
| 7391-T10* | SØ6.0mm | 3.5 |

* It is necessary to use point sleeve (code 1526-T101) for these points

Internal thread (60° thread angle)

| Code | Pitch |
|-----------|---|
| 7321-T11* | 0.4-0.5mm/64-48TPI |
| 7321-T12* | 0.6-0.9mm/44-28TPI |
| 7321-T13* | 1-1.75mm/24-14TPI |
| 7321-T14* | 2-3mm/13-9TPI |
| 7321-T15* | 3.5-5mm/8-5TPI |
| 7321-T16* | 5.5-7mm/4.5-3.5TPI |
| 7321-T1S* | 6 pairs/set, including all above points |

External thread (60° thread angle)

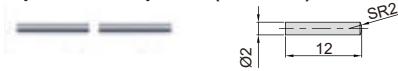
| Code | Pitch |
|-----------|---|
| 7381-T11* | 0.4-0.5mm/64-48TPI |
| 7381-T12* | 0.6-0.9mm/44-28TPI |
| 7381-T13* | 1-1.75mm/24-14TPI |
| 7381-T14* | 2-3mm/13-9TPI |
| 7381-T15* | 3.5-5mm/8-5TPI |
| 7381-T16* | 5.5-7mm/4.5-3.5TPI |
| 7381-TS* | 6 pairs/set, including all above points |

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS CODE 1124-300A

DATA
OUTPUT



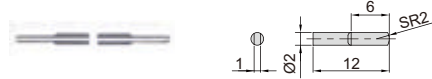
short spherical/flat points (included) Unit: mm



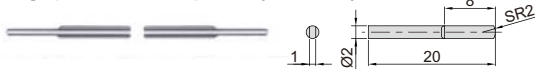
long spherical/flat points (included) Unit: mm



short spherical blade points (included) Unit: mm



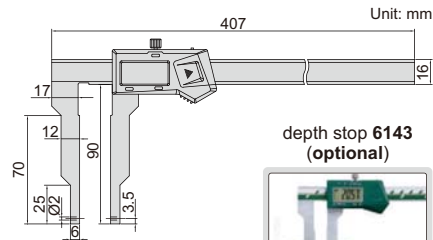
long spherical blade points (included) Unit: mm



- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points (code 1526-T101, 7392, 7391, 7381, 7321), depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



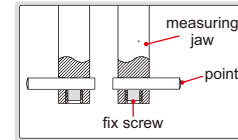
1124-300A



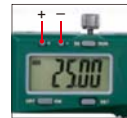
depth stop 6143
(optional)



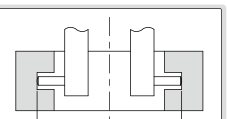
install points



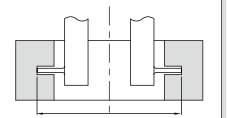
preset buttons



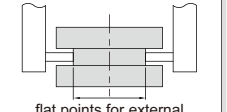
measure internal and
external grooves



spherical points for groove
(inside hole) measurement



spherical blade points for
narrow groove (inside hole)
measurement



flat points for external
groove measurement

zero setting block for
external measurement
(included)



| Point | Range | Accuracy | Application |
|---------------------------------|---|----------|---|
| short spherical/ flat points | 24-324mm/1-12.7"(internal) 0-288mm/0-11.3"(external) | ±0.04mm | spherical points for grooves inside hole (small hole) flat points for external grooves |
| long spherical/ flat points | 40-340mm/1.5-13.3"(internal) 0-272mm/0-10.7"(external) | ±0.04mm | spherical points for grooves inside hole (large hole) flat points for external grooves |
| short spherical blade points | 24-324mm/1-12.7"(internal) 0-288mm/0-11.3"(external) | ±0.04mm | for narrow grooves inside hole (small hole) |
| long spherical blade points | 40-340mm/1.5-13.3"(internal) 0-272mm/0-10.7"(external) | ±0.04mm | for narrow grooves inside hole (large hole) |

Multifunctional points 7392
(optional, refer to 1526-200 for more details)



Ball points 7391
(optional, refer to 1526-200 for more details)



Screw thread points 7381, 7321
(optional, refer to 1526-200 for more details)



DIGITAL INSIDE GROOVE CALIPERS

DATA
OUTPUT



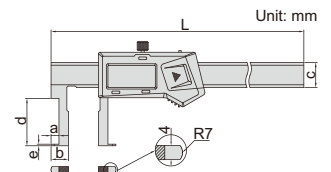
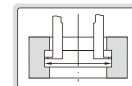
- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

preset buttons



1120-150A

depth stop 6143
(optional)



| Code | Range | Accuracy | L | a | b | c | d | e |
|-----------|----------|----------|-----|---|------|----|----|-----|
| 1120-150A | 22-150mm | ±0.04mm | 250 | 5 | 11 | 16 | 30 | 1 |
| 1120-200A | 25-200mm | ±0.04mm | 310 | 5 | 12.5 | 16 | 40 | 1 |
| 1120-300A | 30-300mm | ±0.05mm | 410 | 5 | 15 | 17 | 50 | 1.5 |

DATA OUTPUT



DIGITAL INSIDE POINT CALIPERS

- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

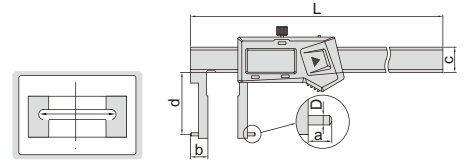
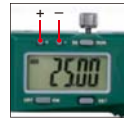
depth stop 6143 (optional)



1121-150A

| Code | Range | Accuracy | L | a | b | c | d | D |
|------------|----------|----------|-----|---|------|----|----|----|
| 1121-150A | 24-150mm | ±0.04mm | 250 | 5 | 12 | 16 | 30 | Ø2 |
| 1121-200A | 25-200mm | ±0.04mm | 310 | 5 | 12.5 | 16 | 40 | Ø2 |
| 1121-3001A | 50-300mm | ±0.06mm | 410 | 8 | 25 | 17 | 80 | Ø3 |

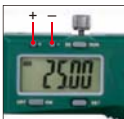
preset buttons



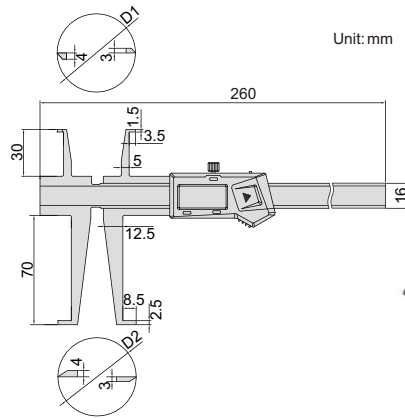
DATA OUTPUT

DIGITAL INSIDE GROOVE CALIPER

preset buttons



depth stop 6143 (optional)



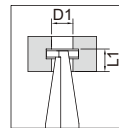
Unit: mm



1176-150

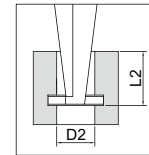
- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

sizes to be measured (use upper jaws)



| (mm) | |
|---------|-----|
| D1 | L1 |
| Ø9 | <8 |
| Ø10 | <15 |
| Ø11~150 | <30 |

sizes to be measured (use lower jaws)



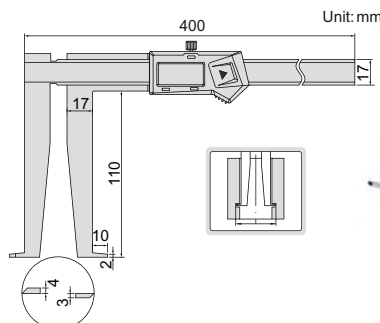
| (mm) | | | |
|------|-----|---------|-----|
| D2 | L2 | D2 | L2 |
| Ø15 | <10 | Ø19 | <42 |
| Ø16 | <18 | Ø20 | <50 |
| Ø17 | <26 | Ø21 | <58 |
| Ø18 | <34 | Ø22~150 | <70 |

| Code | Range of upper jaw | Range of lower jaw | Accuracy |
|----------|--------------------|--------------------|----------|
| 1176-150 | 9-150mm/0.35-6" | 15-150mm/0.59-6" | ±0.04mm |

DATA OUTPUT

DIGITAL INSIDE GROOVE CALIPER

- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

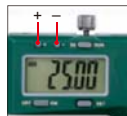


Unit: mm



1178-300

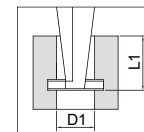
preset buttons



depth stop 6143 (optional)



sizes to be measured



| (mm) | |
|---------|------|
| D1 | L1 |
| Ø25 | <50 |
| Ø26 | <60 |
| Ø27~300 | <110 |

| Code | Range | Accuracy |
|----------|-------------------|----------|
| 1178-300 | 25-300mm/1.18-12" | ±0.05mm |

DIGITAL INSIDE GROOVE CALIPER

- Measure diameter of grooves inside small bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)



VIDEO

preset buttons

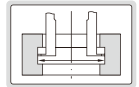
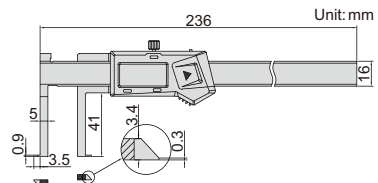


depth stop **6143** (optional)



1520-150

DATA OUTPUT



| Code | Range | Accuracy |
|----------|------------------|----------|
| 1520-150 | 11-150mm/0.43-6" | ±0.04mm |

DIGITAL OUTSIDE NECK CALIPER

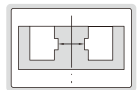
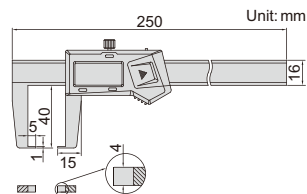
- Measure grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

depth stop **6143** (optional)



1187-150A

DATA OUTPUT



| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1187-150A | 0-150mm/0-6" | ±0.04mm |

DIGITAL OUTSIDE POINT CALIPER

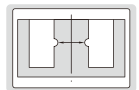
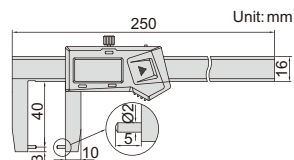
- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

depth stop **6143** (optional)



1185-150A

DATA OUTPUT

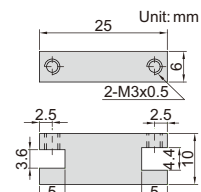
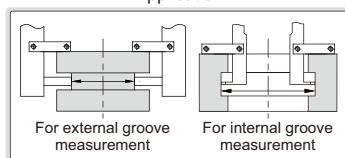


| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1185-150A | 0-150mm/0-6" | ±0.04mm |

DEPTH STOP FOR CALIPERS

- Supplied in pair
- Made of stainless steel
- Suitable for caliper series **1124**, **1526**, **1520**, **1176**, **1178**, **1120**, **1121**, **1187** and **1185**

Application



6143



VIDEO

| Code |
|------|
| 6143 |

DATA
OUTPUT

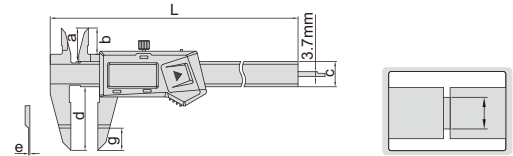
DIGITAL BLADE CALIPERS

- The blade jaws fit into small grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1188-150A

| Code | Range | Accuracy | L | a | b | c | d | e | g |
|-----------|---------------|----------|-----|----|------|----|----|------|----|
| 1188-150A | 0-150mm/0-6" | ±0.03mm | 235 | 21 | 16.5 | 16 | 40 | 0.75 | 17 |
| 1188-200A | 0-200mm/0-8" | ±0.03mm | 297 | 24 | 20 | 16 | 50 | 0.75 | 17 |
| 1188-300A | 0-300mm/0-12" | ±0.04mm | 390 | 26 | 21.5 | 16 | 60 | 1.00 | 17 |



- Small pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

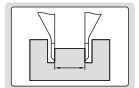
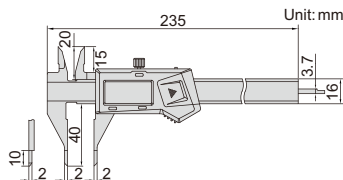
DATA
OUTPUT

DIGITAL SMALL POINT CALIPER



1169-150

| Code | Range | Accuracy |
|----------|--------------|----------|
| 1169-150 | 0-150mm/0-6" | ±0.03mm |



- Pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

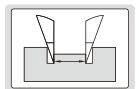
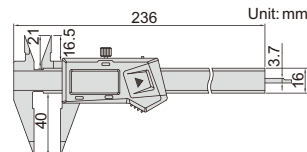
DATA
OUTPUT

DIGITAL POINT CALIPER



1183-150A

| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1183-150A | 0-150mm/0-6" | ±0.03mm |



- Measure diameter of deep step holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

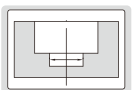
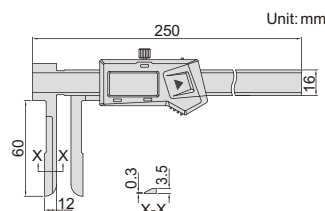
DATA
OUTPUT

DIGITAL INSIDE KNIFE-EDGE CALIPER



1123-150A

| Code | Range | Accuracy |
|-----------|-----------------|----------|
| 1123-150A | 15-150mm/0.6-6" | ±0.05mm |



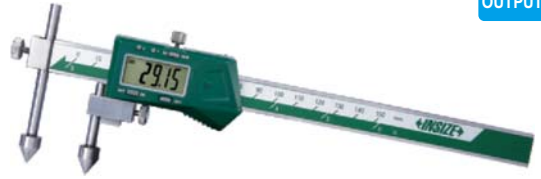
DIGITAL OFFSET CENTERLINE CALIPERS



VIDEO

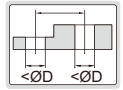
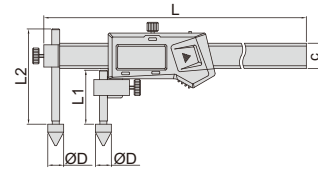
DATA OUTPUT

- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1192-150A

| Code | Range | Accuracy | c | ØD | L1 | L2 | L |
|------------|-------------------|----------|----|----|----|----|------|
| 1192-150A | 10-150mm/0.4-6" | ±0.05mm | 16 | 10 | 32 | 65 | 236 |
| 1192-200A | 10-200mm/0.4-8" | ±0.07mm | 16 | 10 | 32 | 65 | 286 |
| 1192-300A | 10-300mm /0.4-12" | ±0.09mm | 16 | 10 | 32 | 65 | 396 |
| 1192-500A | 20-500mm/0.8-20" | ±0.09mm | 24 | 20 | 48 | 88 | 686 |
| 1192-1000A | 30-1000mm/1.2-40" | ±0.12mm | 31 | 30 | 48 | 88 | 1242 |
| 1192-1500A | 30-1500mm/1.2-60" | ±0.15mm | 31 | 30 | 48 | 88 | 1745 |



DIGITAL BACK-JAW CENTERLINE CALIPERS



VIDEO

DATA OUTPUT

- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

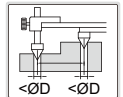
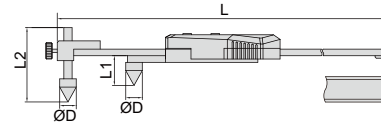


back-jaw



1177-200

| Code | Range | Accuracy | ØD | c | L1 | L2 | L |
|-----------|-------------------|----------|----|----|----|----|------|
| 1177-200 | 10-200mm/0.4-8" | ±0.10mm | 10 | 16 | 18 | 45 | 310 |
| 1177-300 | 10-300mm/0.4-12" | ±0.10mm | 10 | 16 | 18 | 45 | 410 |
| 1177-500 | 20-500mm/0.8-20" | ±0.10mm | 20 | 24 | 26 | 70 | 692 |
| 1177-1000 | 30-1000mm/1.2-40" | ±0.12mm | 30 | 31 | 39 | 70 | 1242 |
| 1177-1500 | 30-1500mm/1.2-60" | ±0.15mm | 30 | 31 | 39 | 70 | 1745 |



DIGITAL CENTERLINE/EDGE TO CENTER CALIPERS



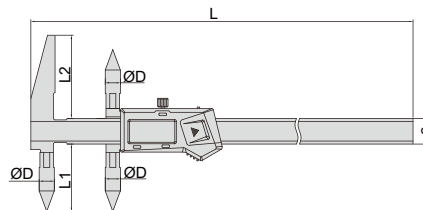
VIDEO

DATA OUTPUT

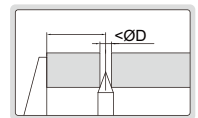
- Measure hole center distance or edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1525-300

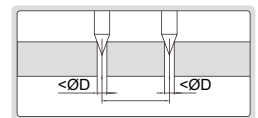


measure edge to hole center distance



| Code | Range of upper jaw (edge to center) | Range of lower jaw (center to center) | Accuracy | ØD | L1 | L2 | c | L |
|-----------|-------------------------------------|---------------------------------------|----------|----|------|----|----|------|
| 1525-300 | 5-300mm/0.2-12" | 10-300mm/0.4-12" | ±0.08mm | 10 | 44.5 | 55 | 17 | 410 |
| 1525-500 | 10-500mm/0.4-20" | 20-50mm/0.8-20" | ±0.09mm | 20 | 40 | 50 | 24 | 690 |
| 1525-1000 | 15-1000mm/0.6-40" | 30-1000mm/1.2-40" | ±0.12mm | 30 | 60 | 70 | 31 | 1255 |
| 1525-1500 | 15-1500mm/0.6-60" | 30-1500mm/1.2-60" | ±0.15mm | 30 | 60 | 70 | 31 | 1760 |

measure hole center distance

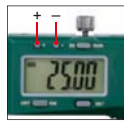




DIGITAL BACK-JAW EDGE TO CENTER CALIPERS

- Measure edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

preset buttons

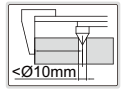
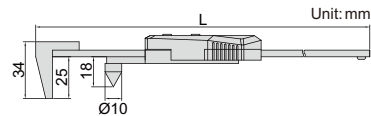


back-jaw



DATA OUTPUT

1524-200



| Code | Range | Accuracy | L (mm) |
|----------|-----------------|----------|--------|
| 1524-200 | 5-200mm/0.2-8" | ±0.1 | 310 |
| 1524-300 | 5-300mm/0.2-12" | ±0.1 | 410 |

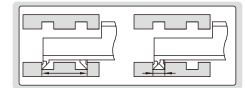
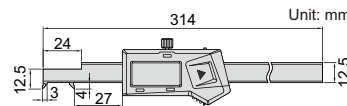
DIGITAL HOOK CALIPER

- Measure width of groove inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

DATA OUTPUT



1122-200A



| Code | Range | Accuracy |
|-----------|-----------------|----------|
| 1122-200A | 3-200mm/0.12-8" | ±0.03mm |

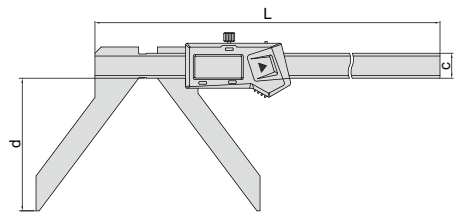
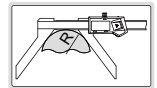
DIGITAL ARC RADIUS CALIPERS

DATA OUTPUT

- Measure the radius of arc less than half round
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1189-150B



| Code | Range (R) | Accuracy | L (mm) | c (mm) | d (mm) |
|-----------|----------------|----------|--------|--------|--------|
| 1189-150B | 5-150mm/0.2-6" | ±0.05mm | 263 | 16 | 65 |
| 1189-200B | 5-200mm/0.2-8" | ±0.07mm | 313 | 16 | 85 |

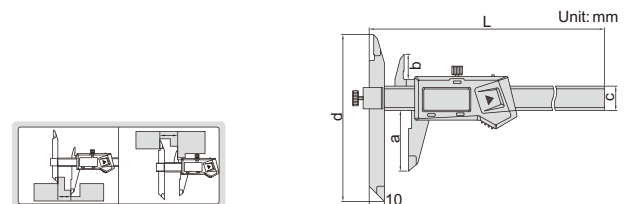
DIGITAL OFFSET CALIPERS

DATA OUTPUT

- The left jaw can slide up and down to facilitate measurement of stepped sections
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1186-150A



| Code | Range | Accuracy | L (mm) | a (mm) | b (mm) | c (mm) | d (mm) |
|-----------|---------------|----------|--------|--------|--------|--------|--------|
| 1186-150A | 0-150mm/0-6" | ±0.04mm | 239 | 40 | 16.5 | 17 | 110 |
| 1186-200A | 0-200mm/0-8" | ±0.04mm | 289 | 50 | 19.5 | 17 | 120 |
| 1186-300A | 0-300mm/0-12" | ±0.05mm | 389 | 60 | 20.5 | 17 | 130 |

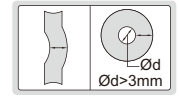
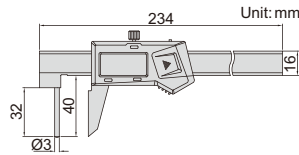
DIGITAL TUBE THICKNESS CALIPER

DATA
OUTPUT

- Measure wall thickness of tubes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1161-150A



| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1161-150A | 0-150mm/0-6" | ±0.05mm |

DIGITAL RTJ RING GROOVE CALIPERS

DATA
OUTPUT

- Measure ring grooves of flange
- Resolution: 0.01mm/0.0005"
- Button function: on/off, set, zero, mm/inch, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



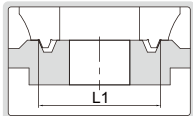
1179-300

1179-300
preset buttons

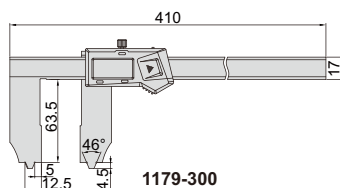
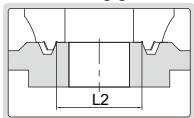


1179-600

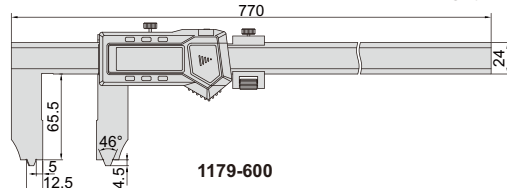
measure outside diameter
of RTJ ring groove



measure inside diameter
of RTJ ring groove

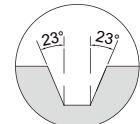


1179-300

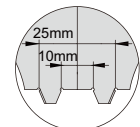


1179-600

applicable for RTJ ring
grooves with angle 23°



10mm and 25mm need to
be added on the reading



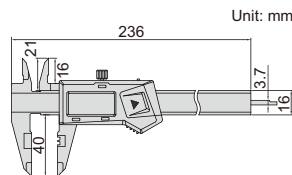
| Code | Range (inside diameter of RTJ ring groove) | Range (outside diameter of RTJ ring groove) | Angle of RTJ ring groove | Accuracy |
|----------|---|--|-----------------------------|----------|
| 1179-300 | 10-300mm/0.4-12" | 25-300mm/1-12" | 23° | ±0.06mm |
| 1179-600 | 10-600mm/0.4-24" | 25-600mm/1-24" | 23° | ±0.07mm |

DIGITAL CRIMP HEIGHT CALIPER

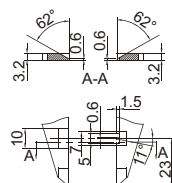
RELATIVE PRODUCT: CRIMP HEIGHT
MICROMETER (CODE 3266-25BA, 3566-25BA)

DATA
OUTPUT

- Measure crimp height
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1165-150A



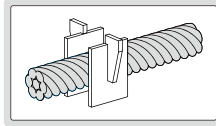
| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1165-150A | 0-150mm/0-6" | ±0.03mm |

DATA OUTPUT

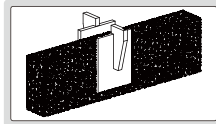
DIGITAL CALIPER WITH LARGE MEASURING FACES

- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

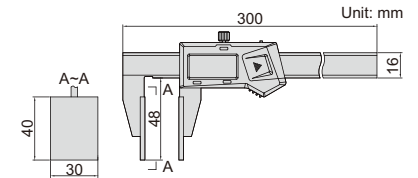
measure diameter of wire ropes



measure thickness of rubber, sponge, etc.



1172-200

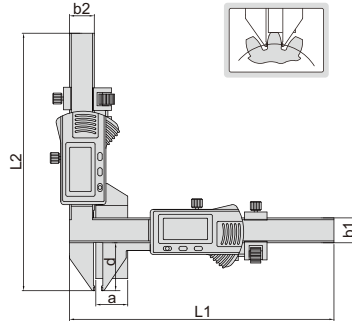


| Code | Range | Accuracy |
|----------|--------------|----------|
| 1172-200 | 0-200mm/0-8" | ±0.07mm |

DATA OUTPUT

DIGITAL GEAR TOOTH CALIPERS

- Resolution: 0.01mm/0.0005"
- Carbide tips
- Buttons: zero, on/off, mm/inch
- Battery LR44
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2)



(mm)

| Code | Range | Accuracy | L1 | L2 | a | b1 | b2 | d |
|-----------|---------|----------|-----|-------|------|----|----|------|
| 1181-M25A | M1-25mm | ±0.04mm | 170 | 165.5 | 21 | 16 | 16 | 30.5 |
| 1181-M50A | M5-50mm | ±0.04mm | 220 | 190 | 50.5 | 16 | 16 | 55 |



1181-M25A

RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

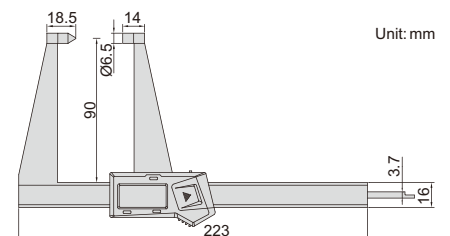
DATA OUTPUT

DIGITAL DISK BRAKE CALIPER

- Measure thickness of disk brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1162-125A



| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1162-125A | 0-125mm/0-5" | ±0.05mm |

DIGITAL DISK BRAKE AND PAD CALIPER

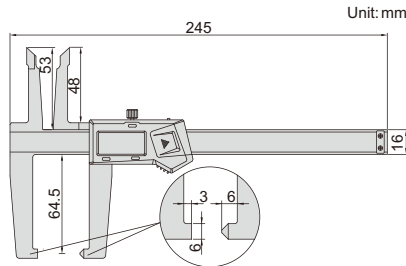
RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT

- Measure thickness of disk brakes and pad wear
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1167-150A



| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1167-150A | 0-150mm/0-6" | ±0.07mm |

DIGITAL DRUM BRAKE CALIPER

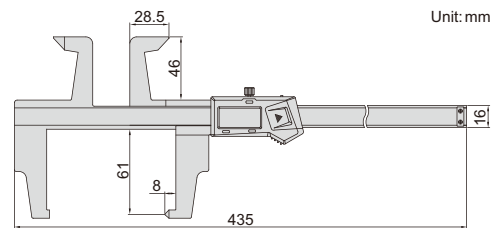
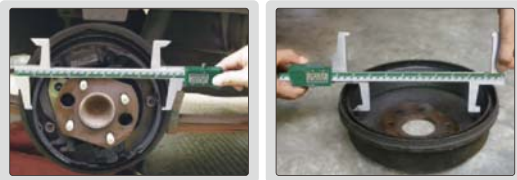
RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT

- Measure internal and external diameter of drum brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1168-300A



| Code | Range | Accuracy |
|-----------|---------------|----------|
| 1168-300A | 0-300mm/0-12" | ±0.07mm |

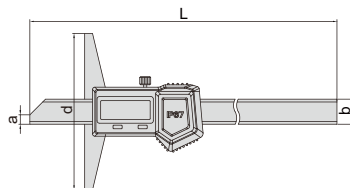
WATERPROOF DIGITAL DEPTH GAGES

ATTENTION: NO DATA OUTPUT

ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

IP67 WATERPROOF

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Meet DIN862
- Battery CR2032
- Made of stainless steel

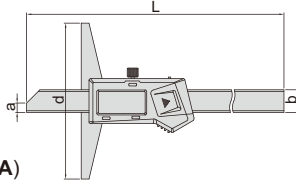


1149-150

| Code | Range | Accuracy | L | a | b | d |
|----------|---------------|----------|-----|---|----|-----|
| 1149-150 | 0-150mm/0-6" | ±0.03mm | 240 | 6 | 16 | 100 |
| 1149-200 | 0-200mm/0-8" | ±0.03mm | 290 | 6 | 16 | 100 |
| 1149-300 | 0-300mm/0-12" | ±0.03mm | 390 | 6 | 16 | 150 |

DIGITAL DEPTH GAGES (STANDARD MODEL)

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862 (except 1141-500A)
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



(mm)

| Code | Range | Accuracy | L | a | b | d |
|-----------|---------------|----------|-----|---|------|-----|
| 1141-150A | 0-150mm/0-6" | ±0.03mm | 230 | 6 | 14.5 | 100 |
| 1141-200A | 0-200mm/0-8" | ±0.03mm | 280 | 6 | 14.5 | 100 |
| 1141-300A | 0-300mm/0-12" | ±0.03mm | 380 | 6 | 14.5 | 150 |
| 1141-500A | 0-500mm/0-20" | ±0.05mm | 585 | 7 | 15 | 150 |



DATA OUTPUT

1141-150A

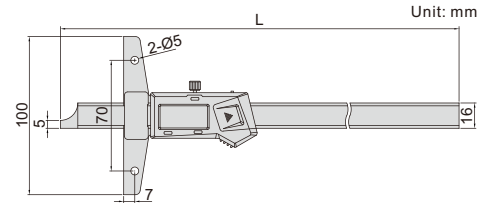
DIGITAL DEPTH GAGES WITH MOUNTING HOLES FOR EXTENSION BASE

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A), extension base (code 6141)

DATA OUTPUT



1147-300



extension base (optional)

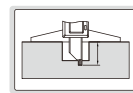
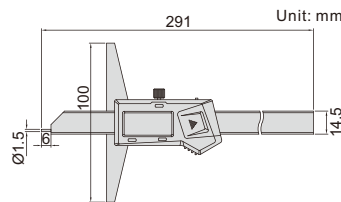


6141 series

| Code | Range | Accuracy | L |
|----------|---------------|----------|-----|
| 1147-150 | 0-150mm/0-6" | ±0.03mm | 237 |
| 1147-200 | 0-200mm/0-8" | ±0.03mm | 287 |
| 1147-300 | 0-300mm/0-12" | ±0.03mm | 403 |

DIGITAL POINT DEPTH GAGE

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



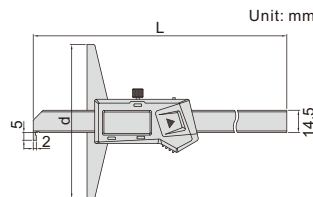
1143-200A

DATA OUTPUT

| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1143-200A | 0-200mm/0-8" | ±0.03mm |

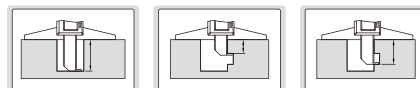
DIGITAL HOOK DEPTH GAGES

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



(mm)

| Code | Range | Accuracy | L | d |
|-----------|---------------|----------|-----|-----|
| 1142-150A | 0-150mm/0-6" | ±0.03mm | 230 | 100 |
| 1142-200A | 0-200mm/0-8" | ±0.03mm | 280 | 100 |
| 1142-300A | 0-300mm/0-12" | ±0.04mm | 380 | 150 |



1142-150A

DATA OUTPUT

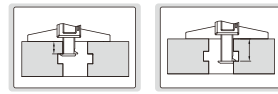
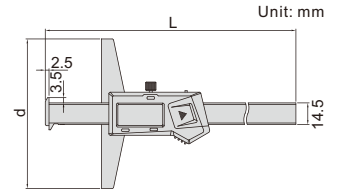
DIGITAL DOUBLE HOOK DEPTH GAGES

DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1144-150A



| Code | Range | Accuracy | L | d |
|-----------|---------------|----------|-----|-----|
| 1144-150A | 0-150mm/0-6" | ±0.03mm | 233 | 100 |
| 1144-200A | 0-200mm/0-8" | ±0.03mm | 283 | 100 |
| 1144-300A | 0-300mm/0-12" | ±0.03mm | 383 | 150 |

DIGITAL DEPTH GAGES WITH ROUND DEPTH BAR

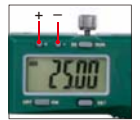
MEASURE WIDTH AND DEPTH
OF GROOVES INSIDE BORE

MEASURE DEPTH OF
SMALL HOLES (>Ø4mm)

DATA
OUTPUT



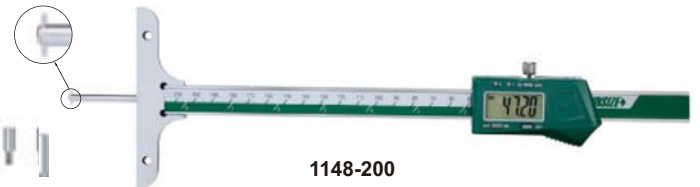
preset buttons



- Resolution: 0.01mm/0.0005"
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A),
disk points (see below table),
extension base (code 6141, for 1148-120 and 1148-200)



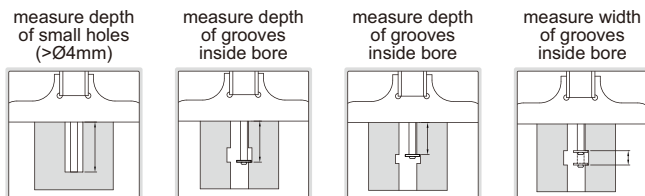
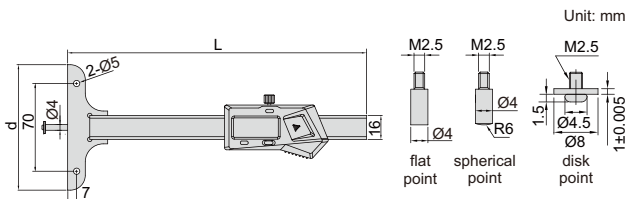
1148-100S



1148-200



1148-120



one-hand use of 1148-120



extension base for 1148-120
and 1148-200 (optional)



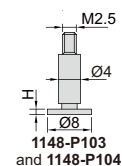
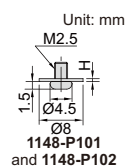
(mm)

| Code | Range* | Accuracy | L | d | Remark |
|-----------|----------------|----------|-----|-----|--|
| 1148-100S | 0-100mm/0-4" | ±0.02mm | 200 | 45 | |
| 1148-100 | 0-100mm/0-4" | ±0.02mm | 200 | 85 | |
| 1148-120 | 0-120mm/0-4.7" | ±0.03mm | 300 | 101 | one-hand use, with mounting holes for extension base |
| 1148-200 | 0-200mm/0-8" | ±0.03mm | 300 | 101 | with mounting holes for extension base |

* When disk points are used, the range is reduced by 10mm

OPTIONAL DISK POINTS

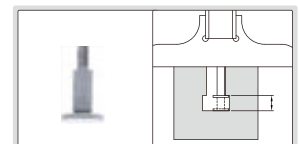
| Code | Description | H | Remark |
|-----------|------------------|-------------|-------------------------------|
| 1148-P101 | 0.5mm disk point | 0.5±0.005mm | for narrow grooves |
| 1148-P102 | 0.7mm disk point | 0.7±0.005mm | for narrow grooves |
| 1148-P103 | 1mm disk point | 1±0.005mm | for grooves inside blind hole |
| 1148-P104 | 0.5mm disk point | 0.5±0.005mm | for grooves inside blind hole |



1148-P101
(optional)



1148-P103 (optional), measure width
of bottom grooves inside blind hole



VERNIER DEPTH GAGES (STANDARD MODEL)

- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm (mm)

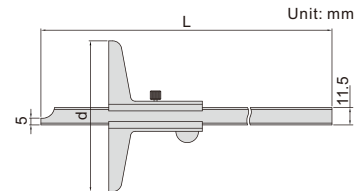
| Code | Range | Accuracy | L | d |
|----------|---------|----------|-----|-----|
| 1240-150 | 0-150mm | ±0.05mm | 245 | 100 |
| 1240-200 | 0-200mm | ±0.05mm | 282 | 100 |
| 1240-300 | 0-300mm | ±0.08mm | 382 | 100 |
| 1240-500 | 0-500mm | ±0.09mm | 585 | 150 |

Graduation 0.02mm (mm)

| Code | Range | Accuracy | L | d |
|-----------|---------|----------|-----|-----|
| 1240-1501 | 0-150mm | ±0.03mm | 245 | 100 |
| 1240-2001 | 0-200mm | ±0.03mm | 282 | 100 |
| 1240-3001 | 0-300mm | ±0.04mm | 382 | 100 |
| 1240-5001 | 0-500mm | ±0.05mm | 585 | 150 |



1240-2001



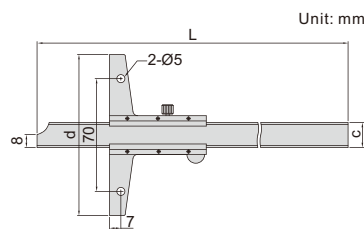
WITH MOUNTING HOLES FOR EXTENSION BASE

- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

extension base (optional)



6141 series



Unit: mm

VERNIER DEPTH GAGES



1247-1501

Graduation 0.05mm

| Code | Range | Accuracy |
|-----------|----------|----------|
| 1247-150 | 0-150mm | ±0.05mm |
| 1247-200 | 0-200mm | ±0.05mm |
| 1247-300 | 0-300mm | ±0.08mm |
| 1247-600 | 0-600mm | ±0.10mm |
| 1247-1000 | 0-1000mm | ±0.15mm |

Graduation 0.02mm

| Code | Range | Accuracy |
|-----------|----------|----------|
| 1247-1501 | 0-150mm | ±0.03mm |
| 1247-2001 | 0-200mm | ±0.03mm |
| 1247-3001 | 0-300mm | ±0.04mm |
| 1247-6001 | 0-600mm | ±0.05mm |
| 1247-1001 | 0-1000mm | ±0.07mm |

(mm)

| Range | L | c | d |
|----------|------|----|-----|
| 0-150mm | 240 | 16 | 100 |
| 0-200mm | 290 | 16 | 100 |
| 0-300mm | 390 | 16 | 100 |
| 0-600mm | 704 | 16 | 150 |
| 0-1000mm | 1124 | 18 | 200 |

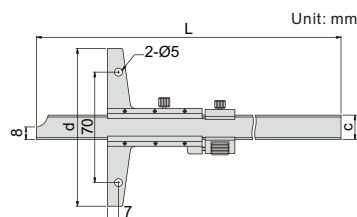
WITH MOUNTING HOLES FOR EXTENSION BASE

- With fine adjustment
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

extension base (optional)



6141 series



Unit: mm

VERNIER DEPTH GAGES WITH FINE ADJUSTMENT



1249-1501

Graduation 0.05mm

| Code | Range | Accuracy |
|----------|---------|----------|
| 1249-150 | 0-150mm | ±0.05mm |
| 1249-200 | 0-200mm | ±0.05mm |
| 1249-300 | 0-300mm | ±0.08mm |

Graduation 0.02mm

| Code | Range | Accuracy |
|-----------|---------|----------|
| 1249-1501 | 0-150mm | ±0.03mm |
| 1249-2001 | 0-200mm | ±0.03mm |
| 1249-3001 | 0-300mm | ±0.04mm |

(mm)

| Range | L | c | d |
|---------|-----|----|-----|
| 0-150mm | 256 | 16 | 100 |
| 0-200mm | 306 | 16 | 100 |
| 0-300mm | 406 | 16 | 100 |

VERNIER HOOK DEPTH GAGES

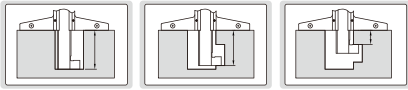
WITH MOUNTING HOLES FOR EXTENSION BASE

- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)



1248-1501

extension base (optional)

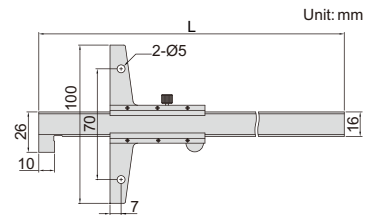


Graduation 0.05mm

| Code | Range | Accuracy | L |
|----------|---------|----------|-------|
| 1248-150 | 0-150mm | ±0.05mm | 266mm |
| 1248-200 | 0-200mm | ±0.05mm | 316mm |
| 1248-300 | 0-300mm | ±0.08mm | 416mm |

Graduation 0.02mm

| Code | Range | Accuracy | L |
|-----------|---------|----------|-------|
| 1248-1501 | 0-150mm | ±0.03mm | 266mm |
| 1248-2001 | 0-200mm | ±0.03mm | 316mm |
| 1248-3001 | 0-300mm | ±0.04mm | 416mm |



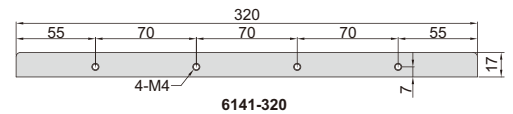
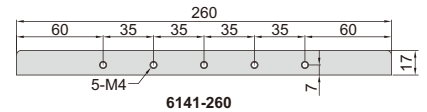
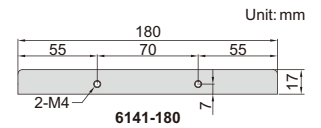
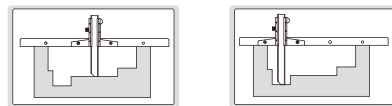
EXTENSION BASES



6141-260

- Supplied with two screws
- Made of stainless steel
- Suitable for depth gages series 1147, 1148, 1247, 1248 and 1249

| Code | Length |
|----------|--------|
| 6141-180 | 180mm |
| 6141-260 | 260mm |
| 6141-320 | 320mm |



VERNIER DEPTH GAGE

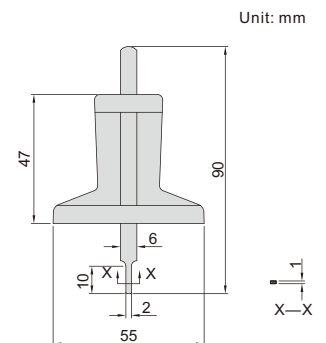
ATTENTION: BASIC MODEL

- Graduation: 0.1mm
- Made of stainless steel



1244-30

| Code | Range | Accuracy |
|---------|--------|----------|
| 1244-30 | 0-30mm | ±0.10mm |



DATA OUTPUT

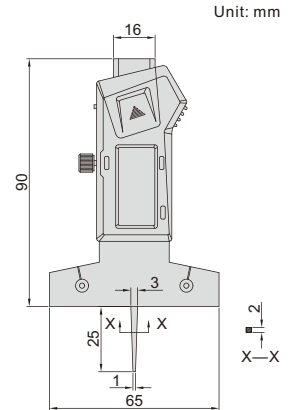
- Measure depth of small groove and hole, also measure depth of tire tread
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

| Code | Range | Accuracy |
|----------|-------------|----------|
| 1145-25A | 0-25mm/0-1" | ±0.03mm |



1145-25A

DIGITAL DEPTH GAGE



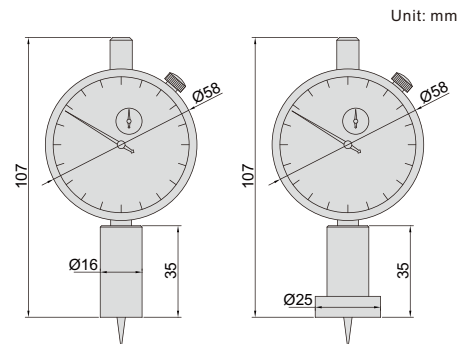
- Accuracy: ±0.017mm
- Stainless steel base
- Pointed tip

| Code | Range | Dial indicator stroke | Dial indicator graduation | Base |
|----------|--------|-----------------------|---------------------------|-------|
| 2343-101 | 0-10mm | 10mm | 0.01mm | Ø16mm |
| 2343-102 | 0-10mm | 10mm | 0.01mm | Ø25mm |



2343-102

DIAL DEPTH GAGES



2343-101

2343-102

DATA OUTPUT

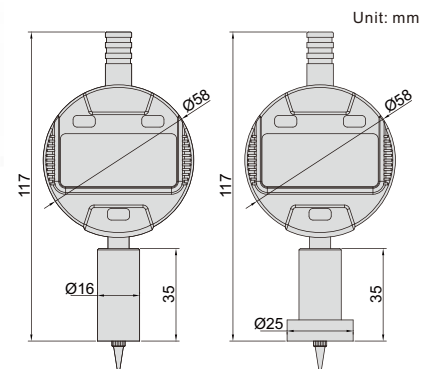
- Accuracy: ±0.02mm
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

| Code | Range | Digital indicator stroke | Digital indicator resolution | Base |
|----------|-----------------|--------------------------|------------------------------|-------|
| 2142-101 | 0-12.7mm/0-0.5" | 12.7mm/0.5" | 0.01mm/0.0005" | Ø16mm |
| 2142-102 | 0-12.7mm/0-0.5" | 12.7mm/0.5" | 0.01mm/0.0005" | Ø25mm |



2142-102

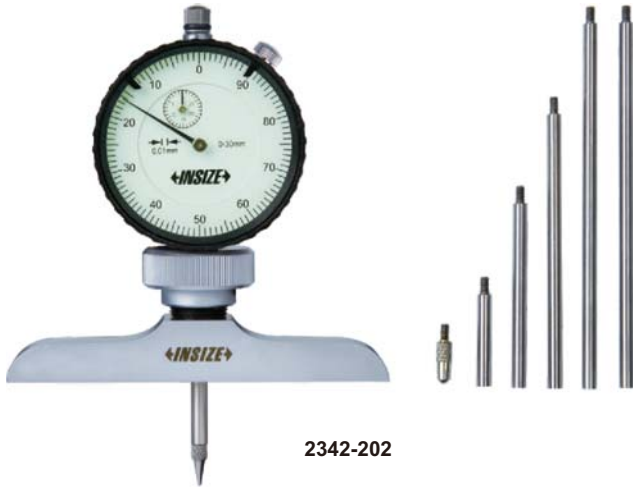
DIGITAL DEPTH GAGES



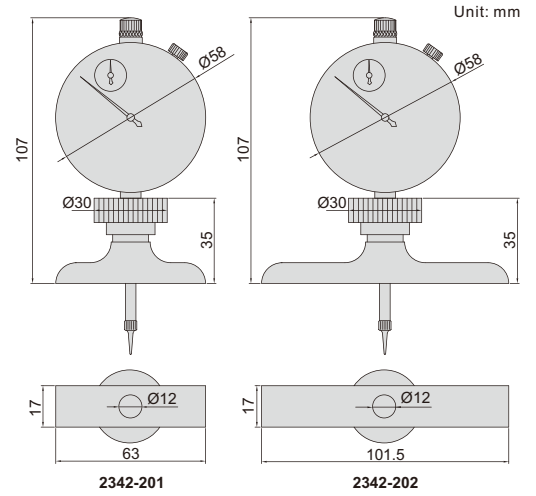
2142-101

2142-102

DIAL DEPTH GAGES



2342-202

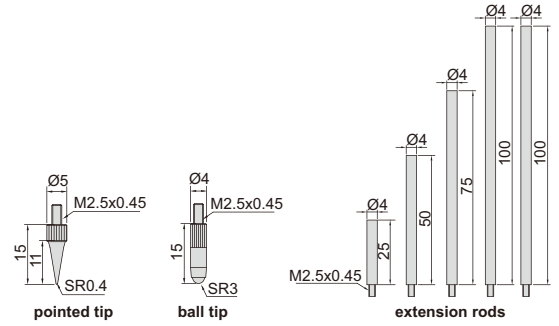


2342-201

2342-202

- Dial indicator graduation: 0.01mm
- Accuracy: ± 0.03 mm
- Stainless steel base
- Extension rods: 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)
- Supplied with pointed tip and ball tip

| Code | Range | Dial indicator stroke | Base |
|----------|---------|-----------------------|------------|
| 2342-201 | 0-300mm | 30mm | 63x17mm |
| 2342-202 | 0-300mm | 30mm | 101.5x17mm |



pointed tip

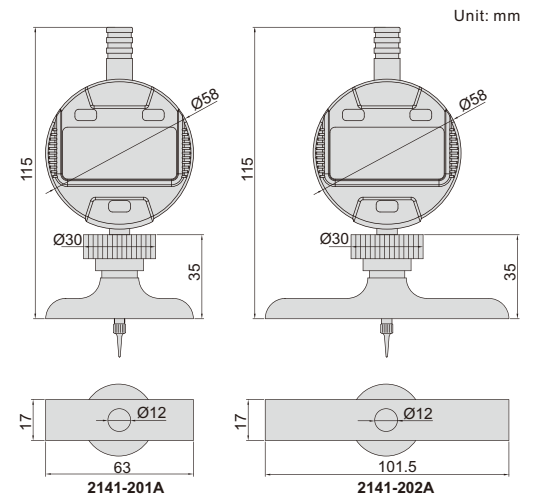
ball tip

extension rods

DIGITAL DEPTH GAGES



2141-202A

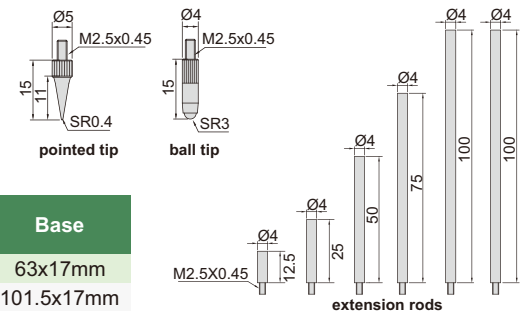


2141-201A

2141-202A

- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off
- Data output
- Stainless steel base
- Extension rods: 12.5mm (1pc), 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

| Code | Range | Digital indicator stroke | Digital indicator resolution | Accuracy | Base |
|-----------|---------------|--------------------------|------------------------------|---------------|------------|
| 2141-201A | 0-300mm/0-12" | 12.7mm/0.5" | 0.01mm/0.0005" | ± 0.02 mm | 63x17mm |
| 2141-202A | 0-300mm/0-12" | 12.7mm/0.5" | 0.01mm/0.0005" | ± 0.02 mm | 101.5x17mm |



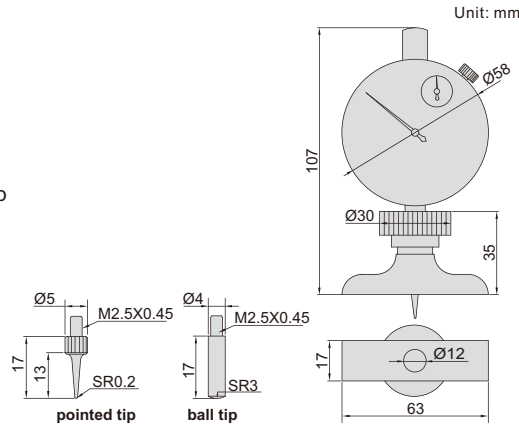
pointed tip

ball tip

extension rods

DIAL DEPTH GAGE

- Accuracy: $\pm 0.017\text{mm}$
- Stainless steel base
- Supplied with pointed tip and ball tip



2341-101A

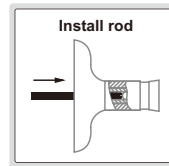
| Code | Range | Dial indicator stroke | Dial indicator graduation |
|-----------|--------|-----------------------|---------------------------|
| 2341-101A | 0-10mm | 10mm | 0.01mm |

IP54
WATERPROOF

DATA
OUTPUT

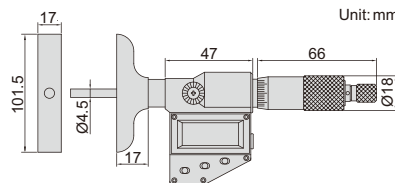
DIGITAL DEPTH MICROMETERS

- Resolution: 0.001mm/0.00005"
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Button function: on/off, set, mm/inch, ABS/INC, data output
- IP54 dust/waterproof
- Data output
- LR44 battery, automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



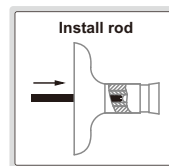
3540-50

| Code | Range | Rods |
|----------|---------------|-------|
| 3540-50 | 0-50mm/0-2" | 2pcs |
| 3540-150 | 0-150mm/0-6" | 6pcs |
| 3540-300 | 0-300mm/0-12" | 12pcs |



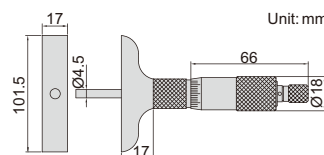
DEPTH MICROMETERS

- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Rods with flat end
- Ratchet stop



3240-100

| Code | Range | Rods |
|----------|---------|-------|
| 3240-25 | 0-25mm | 1pc |
| 3240-50 | 0-50mm | 2pcs |
| 3240-75 | 0-75mm | 3pcs |
| 3240-100 | 0-100mm | 4pcs |
| 3240-150 | 0-150mm | 6pcs |
| 3240-200 | 0-200mm | 8pcs |
| 3240-300 | 0-300mm | 12pcs |

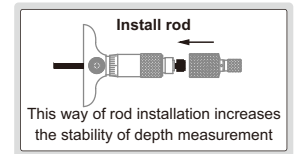


DEPTH MICROMETERS

- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Rods with flat end
- Ratchet stop



3241-100

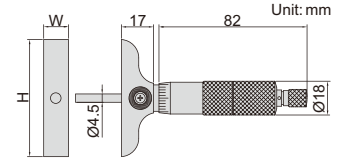


Base: HxW=101.5x17mm

| Code | Range | Rods |
|----------|---------|-------|
| 3241-25 | 0-25mm | 1pc |
| 3241-50 | 0-50mm | 2pcs |
| 3241-75 | 0-75mm | 3pcs |
| 3241-100 | 0-100mm | 4pcs |
| 3241-150 | 0-150mm | 6pcs |
| 3241-200 | 0-200mm | 8pcs |
| 3241-300 | 0-300mm | 12pcs |

Base: HxW=63x17mm

| Code | Range | Rods |
|----------|--------|------|
| 3241-B25 | 0-25mm | 1pc |



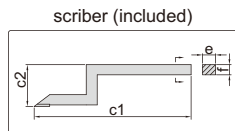
DIGITAL HEIGHT GAGES (ECONOMIC MODEL)

ATTENTION:
LOW ACCURACY

ATTENTION: CAN NOT USE CLAMP
FOR PROTRACTORS (CODE 2372-CLAMP)

DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- LR44 battery
- Data output
- Supplied with dial test indicator holder
- Supplied with dust cover (except 1150-1500/2000)
- Optional accessory: data output cable (code 7301-SPC5)

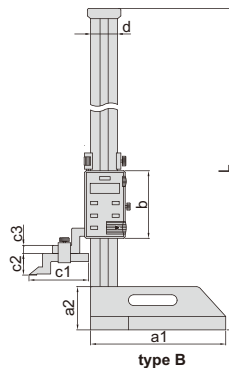
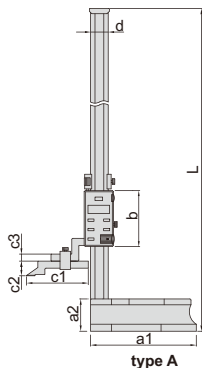
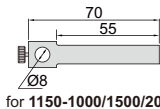
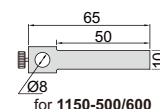
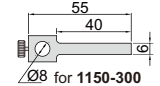


data output cable (optional)



dial test indicator
holder (included)

Unit: mm



1150-1000



1150-500

dust cover
(included, except
1150-1500/2000)



| Code | Range | Type | Accuracy | L | a1 | a2 | b | c1 | c2 | c3 | d | e | f |
|-----------|----------------|------|---------------------|------|-----|----|-----|-----|----|----|----|----|----|
| 1150-300 | 0-300mm/0-12" | A | $\pm 0.05\text{mm}$ | 470 | 135 | 45 | 80 | 76 | 25 | 10 | 23 | 6 | 8 |
| 1150-500 | 0-500mm/0-20" | A | $\pm 0.06\text{mm}$ | 720 | 180 | 55 | 95 | 103 | 25 | 12 | 30 | 10 | 12 |
| 1150-600 | 0-600mm/0-24" | A | $\pm 0.06\text{mm}$ | 820 | 180 | 55 | 95 | 103 | 25 | 12 | 30 | 10 | 12 |
| 1150-1000 | 0-1000mm/0-40" | B | $\pm 0.08\text{mm}$ | 1275 | 250 | 80 | 125 | 110 | 39 | 15 | 50 | 10 | 15 |
| 1150-1500 | 0-1500mm/0-60" | B | $\pm 0.12\text{mm}$ | 1790 | 280 | 80 | 125 | 110 | 39 | 15 | 50 | 10 | 15 |
| 1150-2000 | 0-2000mm/0-80" | B | $\pm 0.16\text{mm}$ | 2290 | 280 | 80 | 125 | 110 | 39 | 15 | 50 | 10 | 15 |

DATA OUTPUT

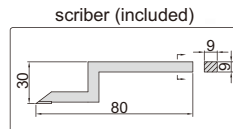
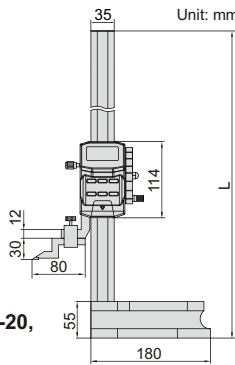
METAL RACK



VIDEO

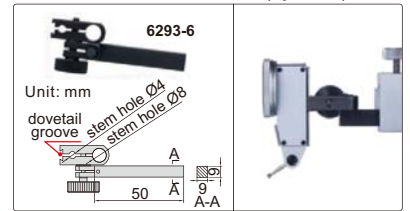
DIGITAL HEIGHT GAGES WITH DRIVING WHEEL

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, preset +, preset -, hold
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032
- Data output
- Supplied with dust cover
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**), dial test indicator holder (code **6293-6**), clamp for protractors (code **2372-CLAMP**)

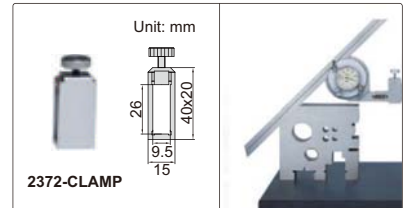


1156-300

dial test indicator holder (optional)



clamp for protractors (optional)



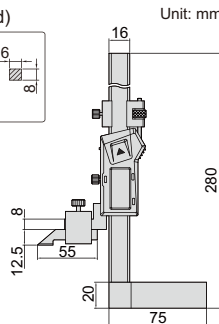
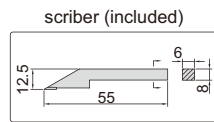
| Code | Range | Accuracy | L |
|----------|---------------|----------|-------|
| 1156-300 | 0-300mm/0-12" | ±0.03mm | 515mm |
| 1156-600 | 0-600mm/0-24" | ±0.05mm | 815mm |

DATA OUTPUT

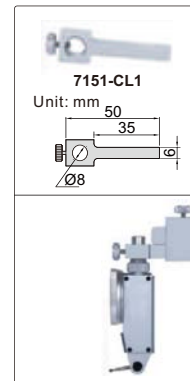
ATTENTION: CAN NOT USE CLAMP FOR PROTRACTORS (CODE 2372-CLAMP)

DIGITAL HEIGHT GAGE (LIGHT DUTY)

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- With fine adjustment
- Made of stainless steel
- Battery CR2032
- Data output
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**), dial test indicator holder (code **7151-CL1**)



dial test indicator holder (optional)



1154-150

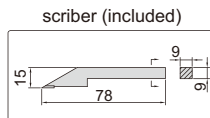
| Code | Range | Accuracy |
|----------|--------------|----------|
| 1154-150 | 0-150mm/0-6" | ±0.03mm |



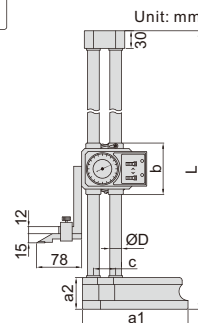
VIDEO



driving wheel



dust cover (included)

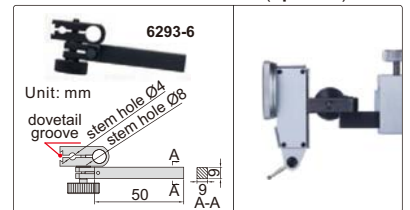


1351-300

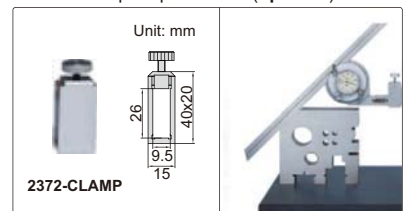
DIAL HEIGHT GAGES

- Dial indicator graduation: 0.01mm
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scriber
- Made of stainless steel (except the base)
- With driving wheel
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code **6293-6**), clamp for protractors (code **2372-CLAMP**)

dial test indicator holder (optional)

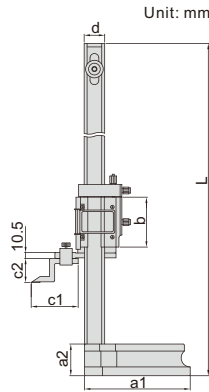
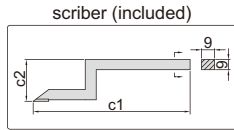


clamp for protractors (optional)

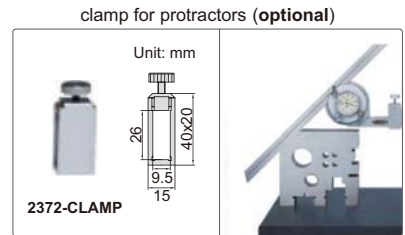
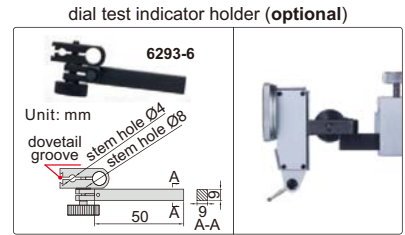


| Code | Range | Accuracy | L | a1 | a2 | b | c | ØD |
|----------|---------|----------|-----|-----|----|----|----|----|
| 1351-300 | 0-300mm | ±0.04mm | 475 | 135 | 43 | 84 | 33 | 15 |
| 1351-450 | 0-450mm | ±0.05mm | 660 | 180 | 54 | 88 | 38 | 20 |
| 1351-600 | 0-600mm | ±0.05mm | 810 | 180 | 54 | 88 | 38 | 20 |

VERNIER HEIGHT GAGES



- Graduation: 0.02mm/0.001"
- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code **6293-6**), clamp for protractors (code **2372-CLAMP**)

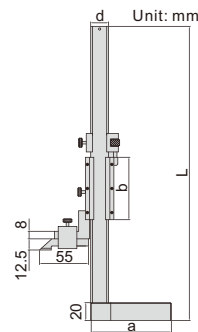
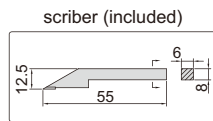


| Code | Range | Accuracy | L | a1 | a2 | b | c1 | c2 | d |
|----------|---------------|----------|-----|-----|----|----|----|----|----|
| 1250-300 | 0-300mm/0-12" | ±0.04mm | 545 | 135 | 43 | 75 | 80 | 30 | 28 |
| 1250-450 | 0-450mm/0-18" | ±0.05mm | 720 | 180 | 54 | 85 | 80 | 41 | 35 |
| 1250-600 | 0-600mm/0-24" | ±0.05mm | 870 | 180 | 54 | 85 | 80 | 41 | 35 |

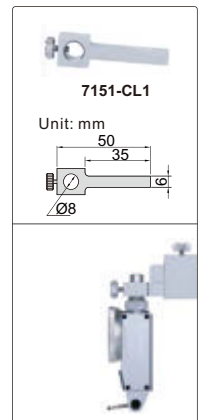
VERNIER HEIGHT GAGES (LIGHT DUTY)

ATTENTION: CAN NOT USE CLAMP FOR PROTRACTORS (CODE 2372-CLAMP)

- Graduation 0.02mm/0.001"
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory: dial test indicator holder (code **7151-CL1**)



dial test indicator holder (optional)



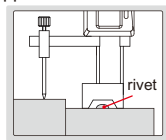
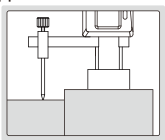
| Code | Range | Accuracy | L | a | b | d |
|----------|--------------|----------|-----|----|----|----|
| 1253-150 | 0-150mm/0-6" | ±0.03mm | 265 | 75 | 57 | 16 |
| 1253-200 | 0-200mm/0-8" | ±0.03mm | 325 | 90 | 70 | 20 |

MINI DIGITAL HEIGHT GAGES

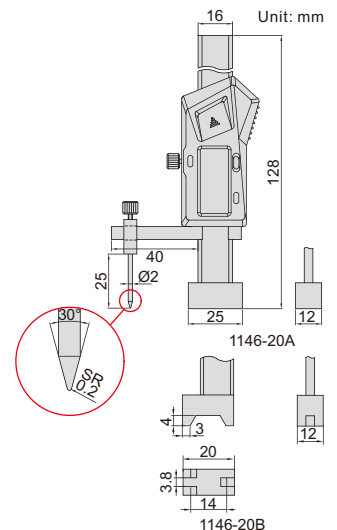
DATA OUTPUT

application of **1146-20A**

application of **1146-20B**



- Measure height difference of two surfaces (**1146-20B** suitable for surfaces with barrier, such as rivet)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)



| Code | Range | Accuracy |
|----------|-----------------|----------|
| 1146-20A | 0~±20mm/0~±0.8" | ±0.02mm |
| 1146-20B | 0~±20mm/0~±0.8" | ±0.02mm |

SCRIBERS FOR HEIGHT GAGES

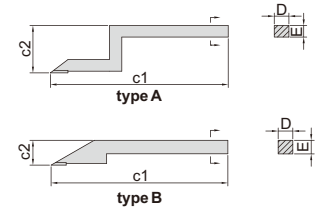
- Carbide tipped



7150-SC1

(mm)

| Code | For height gages | Type | c1 | c2 | D | E |
|----------|---------------------------------|------|-----|------|----|----|
| 7150-SC1 | 1150-300 | A | 76 | 25 | 6 | 8 |
| 7150-SC2 | 1150-500, 1150-600 | A | 103 | 25 | 10 | 12 |
| 7150-SC3 | 1150-1000, 1150-1500, 1150-2000 | A | 110 | 39 | 10 | 15 |
| 7150-SC4 | 1351-300, 1351-450, 1351-600 | B | 78 | 15 | 9 | 9 |
| 7150-SC6 | 1250-300, 1156-300, 1156-600 | A | 80 | 30 | 9 | 9 |
| 7150-SC7 | 1250-450, 1250-600 | A | 80 | 41 | 9 | 9 |
| 7150-SC9 | 1253-150, 1253-200, 1154-150 | B | 55 | 12.5 | 6 | 8 |



NON-ROTATING SPINDLE

DATA OUTPUT

NON-ROTATING SPINDLE DIGITAL MICROMETERS

- Resolution: 0.001mm/0.00005"
- Repeatability: 1µm
- Measuring force: 5-10N
- Non-rotating spindle, suitable for cylinders
- Quick measurement: one turn of sleeve or ratchet stop makes 1mm spindle feed
- Carbide measuring faces
- Ratchet stop
- Data output
- Button function: mm/inch, max./min. value tracking, tolerance measurement, hold, on/off, zero
- CR2032 battery, automatic power off
- Supplied with setting standards (except 0-25mm/0-1")



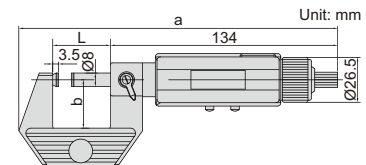
QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET STOP MAKES 1MM SPINDLE FEED



3631-25

(mm)

| Code | Range | Accuracy | L | a | b |
|----------|----------------|----------|-----|-----|------|
| 3631-25 | 0-25mm/0-1" | ±2µm | 34 | 188 | 28.5 |
| 3631-50 | 25-50mm/1-2" | ±2µm | 59 | 211 | 30 |
| 3631-75 | 50-75mm/2-3" | ±3µm | 84 | 240 | 44 |
| 3631-100 | 75-100mm/3-4" | ±3µm | 109 | 264 | 56 |
| 3631-125 | 100-125mm/4-5" | ±3µm | 134 | 289 | 76 |
| 3631-150 | 125-150mm/5-6" | ±3µm | 160 | 314 | 89 |



LEVER DEVICE SUITABLE FOR MASS PRODUCTION

NON-ROTATING SPINDLE

DATA OUTPUT

NON-ROTATING SPINDLE DIGITAL MICROMETERS

- Resolution: 0.001mm/0.00005"
- Repeatability: 1µm
- Measuring force: 5-10N
- Lever device suitable for mass production
- Non-rotating spindle, suitable for cylinders
- Quick measurement: one turn of sleeve or ratchet stop makes 1mm spindle feed
- Carbide measuring faces
- Ratchet stop
- Data output
- Button function: mm/inch, max./min. value tracking, tolerance measurement, hold, on/off, zero
- CR2032 battery, automatic power off

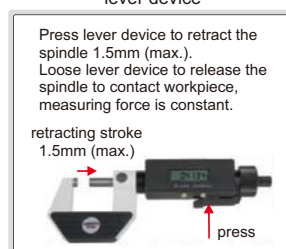


QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET STOP MAKES 1MM SPINDLE FEED



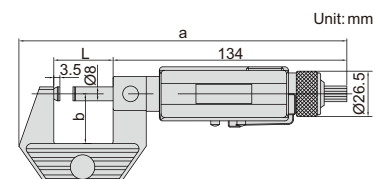
3632-25

lever device



(mm)

| Code | Range | Accuracy | L | a | b |
|---------|-------------|----------|----|-----|------|
| 3632-25 | 0-25mm/0-1" | ±2µm | 34 | 188 | 28.5 |



DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT)

DATA
OUTPUT

IP65
WATERPROOF

Ratchet stop type

| Code | Range | Accuracy | L | a | b | c |
|------------|------------------|----------|-------|----|-------|-----|
| 3101-25A* | 0-25mm/0-1" | ±2µm | 34.5 | 6 | 25 | 3 |
| 3101-50A* | 25-50mm/1-2" | ±2µm | 59.5 | 8 | 32 | 3 |
| 3101-75A* | 50-75mm/2-3" | ±3µm | 84.5 | 8 | 44.5 | 3 |
| 3101-100A* | 75-100mm/3-4" | ±3µm | 109.5 | 8 | 57 | 3 |
| 3101-125A | 100-125mm/4-5" | ±3µm | 135 | 10 | 70 | 3 |
| 3101-150A | 125-150mm/5-6" | ±3µm | 160.5 | 10 | 82 | 3 |
| 3101-175A | 150-175mm/6-7" | ±4µm | 186 | 12 | 94.5 | 5.5 |
| 3101-200A | 175-200mm/7-8" | ±4µm | 211.5 | 12 | 107 | 5.5 |
| 3101-225A | 200-225mm/8-9" | ±4µm | 236 | 23 | 129.5 | 5.5 |
| 3101-250A | 225-250mm/9-10" | ±4µm | 261.5 | 23 | 142.5 | 5.5 |
| 3101-275A | 250-275mm/10-11" | ±5µm | 287 | 23 | 155 | 5.5 |
| 3101-300A | 275-300mm/11-12" | ±5µm | 312.5 | 23 | 167.5 | 5.5 |

Friction thimble type

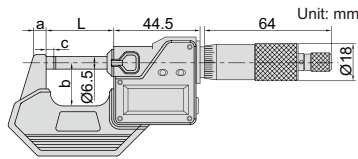
| Code | Range | Accuracy | L | a | b | c |
|------------|-------------|----------|------|---|----|---|
| 3101-25FA* | 0-25mm/0-1" | ±2µm | 34.5 | 6 | 25 | 3 |

* Supplied with manufacturer inspection certificate traceable to DKD Germany

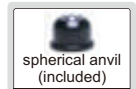


3101-25A

data output



INSPECTION
CERTIFICATE
TRACEABLE TO DKD



- Resolution 0.001mm/0.00005" (resolution of 3101-275A and 3101-300A is 0.001mm/0.0001")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30A, 7302-SPC6, 7305-SPC3A)

DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

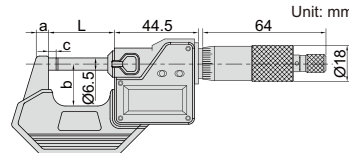
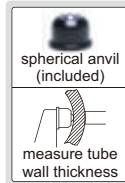
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")

INSPECTION
CERTIFICATE
TRACEABLE TO DKD



3108-25A

without data output



ATTENTION: NO
DATA OUTPUT

IP65
WATERPROOF



Ratchet stop type

| Code | Range | Accuracy | L | a | b | c |
|------------|----------------|----------|-------|----|------|-----|
| 3108-25A* | 0-25mm/0-1" | ±2µm | 34.5 | 6 | 25 | 3 |
| 3108-50A* | 25-50mm/1-2" | ±2µm | 59.5 | 8 | 32 | 3 |
| 3108-75A* | 50-75mm/2-3" | ±3µm | 84.5 | 8 | 44.5 | 3 |
| 3108-100A* | 75-100mm/3-4" | ±3µm | 109.5 | 8 | 57 | 3 |
| 3108-125A | 100-125mm/4-5" | ±3µm | 135 | 10 | 70 | 3 |
| 3108-150A | 125-150mm/5-6" | ±3µm | 160.5 | 10 | 82 | 3 |
| 3108-175A | 150-175mm/6-7" | ±4µm | 186 | 12 | 94.5 | 5.5 |
| 3108-200A | 175-200mm/7-8" | ±4µm | 211.5 | 12 | 107 | 5.5 |

Friction thimble type

| Code | Range | Accuracy | L | a | b | c |
|------------|-------------|----------|------|---|----|---|
| 3108-25FA* | 0-25mm/0-1" | ±2µm | 34.5 | 6 | 25 | 3 |

* Supplied with manufacturer inspection certificate traceable to DKD Germany

DIGITAL OUTSIDE MICROMETERS

ATTENTION: NO
DATA OUTPUT

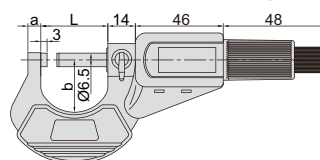
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")

INSPECTION
CERTIFICATE
TRACEABLE TO DKD



3109-25A

Unit: mm



| Code | Range | Accuracy | L | a | b |
|------------|---------------|----------|-----|----|------|
| 3109-25A* | 0-25mm/0-1" | ±2µm | 32 | 6 | 27.5 |
| 3109-50A* | 25-50mm/1-2" | ±2µm | 57 | 8 | 37 |
| 3109-75A* | 50-75mm/2-3" | ±3µm | 82 | 8 | 50 |
| 3109-100A* | 75-100mm/3-4" | ±3µm | 107 | 10 | 61 |

* Supplied with manufacturer inspection certificate traceable to DKD Germany

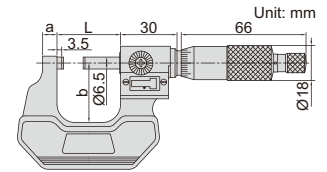
OUTSIDE MICROMETERS WITH COUNTER

- Counter resolution: 0.01mm
- Thimble graduation: 0.01mm
- Carbide measuring faces
- Meet DIN 863-1
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD



3400-25



| (mm) | | | | | |
|-----------|----------|----------|-----|---|------|
| Code | Range | Accuracy | L | a | b |
| 3400-25* | 0-25mm | 4µm | 32 | 6 | 26 |
| 3400-50* | 25-50mm | 4µm | 57 | 8 | 32 |
| 3400-75* | 50-75mm | 5µm | 82 | 8 | 44.5 |
| 3400-100* | 75-100mm | 5µm | 107 | 8 | 57 |

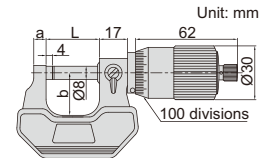
* Supplied with manufacturer inspection certificate traceable to DKD Germany

QUICK FEEDING OUTSIDE MICROMETERS

- Graduation 0.01mm
- 1mm feeding of each turn
- Friction thimble
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



3208-25B



| (mm) | | | | | |
|-----------|----------|----------|-----|---|----|
| Code | Range | Accuracy | L | a | b |
| 3208-25B | 0-25mm | 4µm | 32 | 6 | 24 |
| 3208-50B | 25-50mm | 4µm | 57 | 8 | 32 |
| 3208-75B | 50-75mm | 5µm | 82 | 8 | 45 |
| 3208-100B | 75-100mm | 5µm | 107 | 8 | 57 |

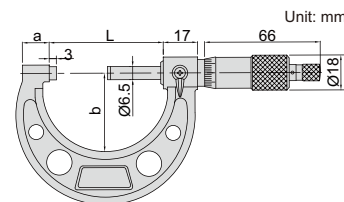
**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD

1µm GRADUATION OUTSIDE MICROMETERS

- Graduation 0.001mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



3210-25A



| (mm) | | | | | |
|------------|-----------|----------|-----|------|-----|
| Code | Range | Accuracy | L | a | b |
| 3210-25A* | 0-25mm | 4µm | 32 | 9 | 28 |
| 3210-50A* | 25-50mm | 4µm | 57 | 14 | 38 |
| 3210-75A* | 50-75mm | 5µm | 82 | 15 | 49 |
| 3210-100A* | 75-100mm | 5µm | 107 | 15 | 60 |
| 3210-125A | 100-125mm | 6µm | 133 | 16.5 | 73 |
| 3210-150A | 125-150mm | 6µm | 158 | 16.5 | 85 |
| 3210-175A | 150-175mm | 7µm | 183 | 19.4 | 104 |
| 3210-200A | 175-200mm | 7µm | 209 | 19.4 | 117 |

| (mm) | | | | | |
|------------|---------|----------|----|----|----|
| Code | Range | Accuracy | L | a | b |
| 3210-25FA* | 0-25mm | 4µm | 32 | 9 | 28 |
| 3210-50FA* | 25-50mm | 4µm | 57 | 14 | 38 |

Micrometer set (ratchet stop type)

| Code | Range | Micrometers included |
|-------------|---------|---|
| 3210-753A* | 0-75mm | 3210-25A, 3210-50A, 3210-75A |
| 3210-1004A* | 0-100mm | 3210-25A, 3210-50A, 3210-75A, 3210-100A |
| 3210-1506A | 0-150mm | 3210-25A, 3210-50A, 3210-75A, 3210-100A, 3210-125A, 3210-150A |

* Supplied with manufacturer inspection certificate traceable to DKD Germany

OUTSIDE MICROMETERS

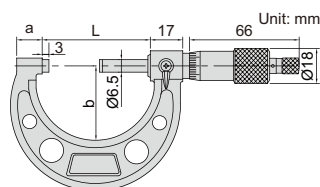
**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD



3203-25A



3203-50A



3203-1004A

- Graduation: metric 0.01mm
imperial .0001"
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards
(except 0-25mm and 0-1")

Metric (ratchet stop type)

| Code | Range | Accuracy | L | a | b |
|-------------|-----------|----------|-------|--------|-------|
| 3203-25A * | 0-25mm | 4µm | 32mm | 9mm | 28mm |
| 3203-50A * | 25-50mm | 4µm | 57mm | 14mm | 38mm |
| 3203-75A * | 50-75mm | 5µm | 82mm | 15mm | 49mm |
| 3203-100A * | 75-100mm | 5µm | 107mm | 15mm | 60mm |
| 3203-125A | 100-125mm | 6µm | 133mm | 16.5mm | 73mm |
| 3203-150A | 125-150mm | 6µm | 158mm | 16.5mm | 85mm |
| 3203-175A | 150-175mm | 7µm | 183mm | 19.4mm | 104mm |
| 3203-200A | 175-200mm | 7µm | 209mm | 19.4mm | 117mm |
| 3203-225A | 200-225mm | 8µm | 234mm | 19.4mm | 130mm |
| 3203-250A | 225-250mm | 8µm | 260mm | 19.4mm | 142mm |
| 3203-275A | 250-275mm | 9µm | 285mm | 19.4mm | 155mm |
| 3203-300A | 275-300mm | 9µm | 310mm | 19.4mm | 168mm |

Imperial (ratchet stop type)

| Code | Range | Accuracy | L | a | b |
|-----------|--------|----------|---------|-------|--------|
| 3203-1A * | 0-1" | .00016" | 1.260" | .354" | 1.102" |
| 3203-2A * | 1-2" | .00016" | 2.244" | .551" | 1.496" |
| 3203-3A * | 2-3" | .00020" | 3.228" | .591" | 1.929" |
| 3203-4A * | 3-4" | .00020" | 4.213" | .591" | 2.362" |
| 3203-5A * | 4-5" | .00024" | 5.236" | .650" | 2.874" |
| 3203-6A * | 5-6" | .00024" | 6.220" | .650" | 3.346" |
| 3203-7A | 6-7" | .00028" | 7.205" | .764" | 4.094" |
| 3203-8A | 7-8" | .00028" | 8.228" | .764" | 4.606" |
| 3203-9A | 8-9" | .00031" | 9.213" | .764" | 5.118" |
| 3203-10A | 9-10" | .00031" | 10.236" | .764" | 5.591" |
| 3203-11A | 10-11" | .00035" | 11.220" | .764" | 6.102" |
| 3203-12A | 11-12" | .00035" | 12.205" | .764" | 6.614" |

Metric micrometer set (ratchet stop type)

| Code | Range | Micrometers Included |
|--------------|-----------|---|
| 3203-753A * | 0-75mm | 3203-25A, 3203-50A, 3203-75A |
| 3203-1004A * | 0-100mm | 3203-25A, 3203-50A, 3203-75A, 3203-100A |
| 3203-1506A | 0-150mm | 3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A |
| 3203-3006A | 150-300mm | 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A |
| 3203-3012A | 0-300mm | 3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A, 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A |

Imperial micrometer set (ratchet stop type)

| Code | Range | Micrometers Included |
|------------|-------|---|
| 3203-33A * | 0-3" | 3203-1A, 3203-2A, 3203-3A |
| 3203-44A * | 0-4" | 3203-1A, 3203-2A, 3203-3A, 3203-4A |
| 3203-66A * | 0-6" | 3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A |
| 3203-126A | 6-12" | 3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A |
| 3203-1212A | 0-12" | 3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A, 3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A |

Imperial (friction thimble type)

| Code | Range | Accuracy | L | a | b |
|------------|-------|----------|--------|-------|--------|
| 3203-1FA * | 0-1" | .00016" | 1.260" | .354" | 1.102" |
| 3203-2FA * | 1-2" | .00016" | 2.244" | .551" | 1.496" |
| 3203-3FA * | 2-3" | .00020" | 2.244" | .591" | 1.929" |

* Supplied with manufacturer inspection certificate traceable to DKD Germany or NIST USA

OUTSIDE MICROMETERS

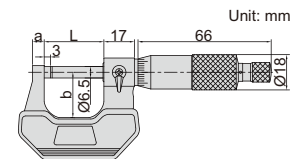
- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

**INSPECTION
CERTIFICATE**
TRACEABLE TO DKD

| (mm) | | | | | |
|------------|-----------|----------|-----|---|-----|
| Code | Range | Accuracy | L | a | b |
| 3202-25A* | 0-25mm | 4µm | 32 | 6 | 24 |
| 3202-50A* | 25-50mm | 4µm | 57 | 8 | 32 |
| 3202-75A* | 50-75mm | 5µm | 82 | 8 | 45 |
| 3202-100A* | 75-100mm | 5µm | 107 | 8 | 57 |
| 3202-125A | 100-125mm | 6µm | 133 | 8 | 70 |
| 3202-150A | 125-150mm | 6µm | 125 | 8 | 82 |
| 3202-175A | 150-175mm | 7µm | 183 | 8 | 95 |
| 3202-200A | 175-200mm | 7µm | 209 | 8 | 107 |



3202-25A



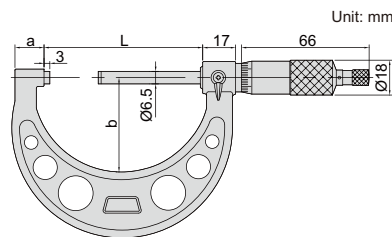
Micrometer set

| Code | Range | Micrometers included |
|-------------|---------|---|
| 3202-753A* | 0-75mm | 3202-25A, 3202-50A, 3202-75A |
| 3202-1004A* | 0-100mm | 3202-25A, 3202-50A, 3202-75A, 3202-100A |
| 3202-1506A | 0-150mm | 3202-25A, 3202-50A, 3202-75A, 3202-100A, 3202-125A, 3202-150A |

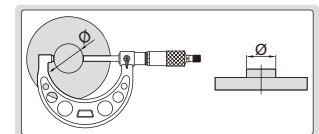
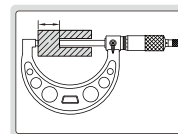
* Supplied with manufacturer inspection certificate traceable to DKD Germany

LONG SPINDLE OUTSIDE MICROMETERS

- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards (except 0-25mm)



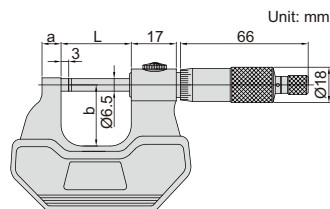
3209-25



| (mm) | | | | | |
|----------|----------|----------|-----|------|----|
| Code | Range | Accuracy | L | a | b |
| 3209-25 | 0-25mm | 4µm | 57 | 14 | 38 |
| 3209-50 | 25-50mm | 4µm | 82 | 15 | 49 |
| 3209-75 | 50-75mm | 5µm | 107 | 15 | 60 |
| 3209-100 | 75-100mm | 5µm | 133 | 16.5 | 73 |

OUTSIDE MICROMETERS FOR LEFT OR RIGHT HAND

- Graduation 0.01mm
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



front

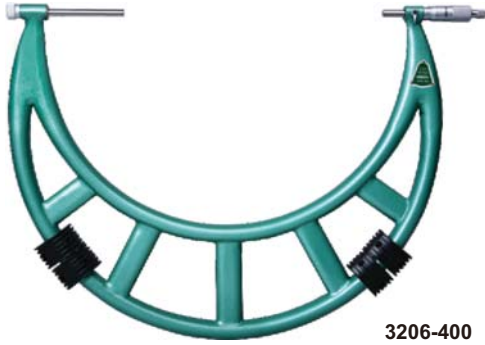


back

| (mm) | | | | | |
|----------|---------|----------|----|---|----|
| Code | Range | Accuracy | L | a | b |
| 3236-25B | 0-25mm | 4µm | 32 | 6 | 24 |
| 3236-50B | 25-50mm | 4µm | 57 | 8 | 32 |

3236-25B

OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

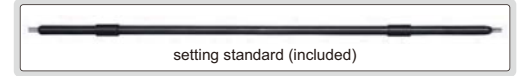
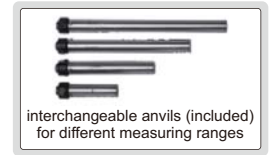


3206-400

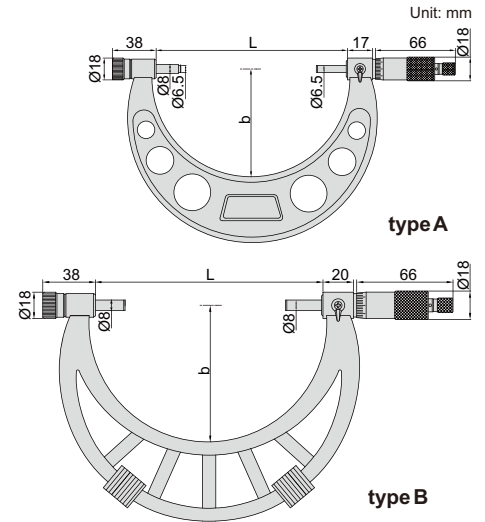


3206-150A

- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Supplied with setting standards



| Code | Range | Type | Accuracy | L | b | Setting standard (included) |
|-----------|------------|------|----------|------|-----|------------------------------|
| 3206-50A | 0-50mm | A | 4µm | 58 | 35 | 25 |
| 3206-100A | 0-100mm | A | 5µm | 108 | 57 | 25, 50, 75 |
| 3206-150A | 0-150mm | A | 6µm | 158 | 82 | 25, 50, 75, 100, 125 |
| 3206-151A | 50-150mm | A | 6µm | 158 | 82 | 50, 75, 100, 125 |
| 3206-200A | 100-200mm | A | 7µm | 208 | 114 | 100, 125, 150, 175 |
| 3206-300A | 150-300mm | A | 9µm | 308 | 165 | 150, 175, 200, 225, 250, 275 |
| 3206-301A | 200-300mm | A | 9µm | 308 | 165 | 200, 225, 250, 275 |
| 3206-400 | 300-400mm | B | 11µm | 409 | 224 | 325, 375 |
| 3206-500 | 400-500mm | B | 13µm | 509 | 275 | 425, 475 |
| 3206-600 | 500-600mm | B | 14µm | 609 | 321 | 525, 575 |
| 3206-700 | 600-700mm | B | 16µm | 709 | 371 | 625, 675 |
| 3206-800 | 700-800mm | B | 18µm | 809 | 426 | 725, 775 |
| 3206-900 | 800-900mm | B | 20µm | 909 | 476 | 825, 875 |
| 3206-1000 | 900-1000mm | B | 22µm | 1009 | 576 | 925, 975 |



DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

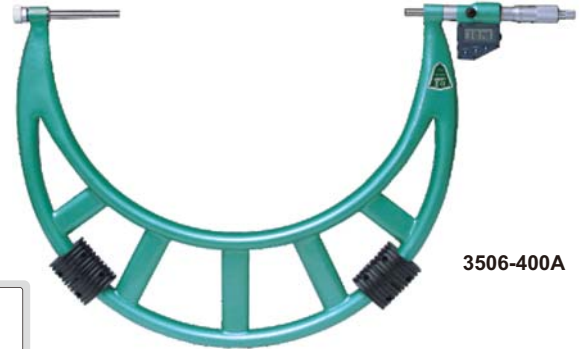
IP54
WATERPROOF

DATA
OUTPUT

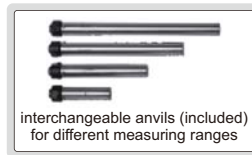
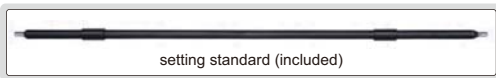
- Resolution 0.001mm/0.0001" (resolution of 3506-100A and 3506-150A is 0.001mm/0.00005")
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



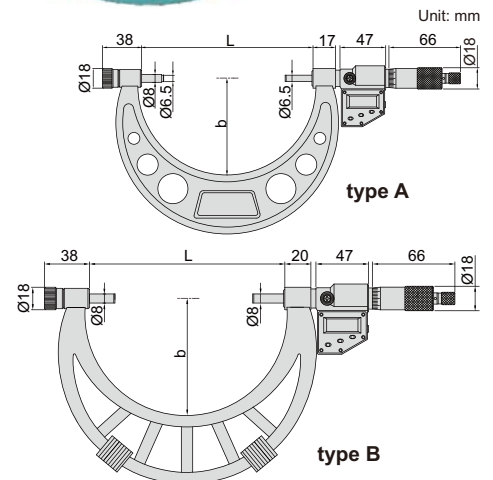
3506-100A



3506-400A



| Code | Range | Type | Accuracy | L | b | Setting standard (included) |
|------------|-------------------|------|----------|------|-----|------------------------------|
| 3506-100A | 0-100mm/0-4" | A | ±5µm | 105 | 57 | 25, 50, 75 |
| 3506-150A | 0-150mm/0-6" | A | ±6µm | 155 | 82 | 25, 50, 75, 100, 125 |
| 3506-300A | 150-300mm/6-12" | A | ±8µm | 305 | 165 | 150, 175, 200, 225, 250, 275 |
| 3506-301A | 200-300mm/8-12" | A | ±8µm | 305 | 165 | 200, 225, 250, 275 |
| 3506-400A | 300-400mm/12-16" | B | ±9µm | 405 | 224 | 325, 375 |
| 3506-500A | 400-500mm/16-20" | B | ±11µm | 505 | 275 | 425, 475 |
| 3506-600A | 500-600mm/20-24" | B | ±12µm | 605 | 321 | 525, 575 |
| 3506-700A | 600-700mm/24-28" | B | ±13µm | 705 | 371 | 625, 675 |
| 3506-800A | 700-800mm/28-32" | B | ±15µm | 805 | 426 | 725, 775 |
| 3506-900A | 800-900mm/32-36" | B | ±16µm | 905 | 476 | 825, 875 |
| 3506-1000A | 900-1000mm/36-40" | B | ±17µm | 1005 | 576 | 925, 975 |

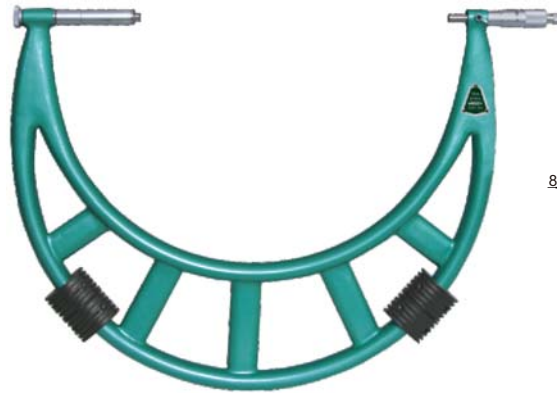


OUTSIDE MICROMETERS WITH EXTENSION ANVIL COLLAR

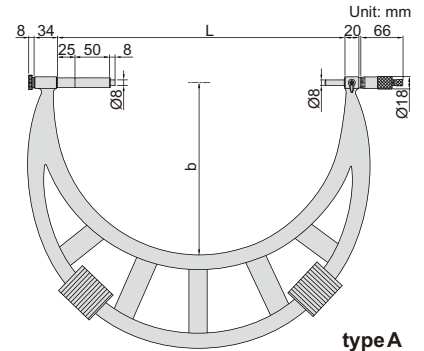


adjust collars for different measuring ranges

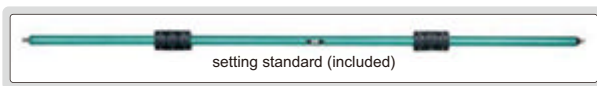
- Graduation 0.01mm
- Adjust collars for different measuring ranges
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



3205-400



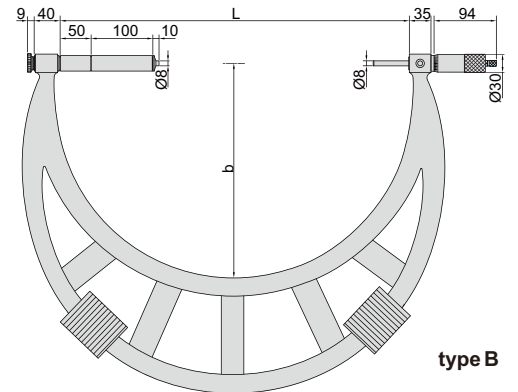
type A



setting standard (included)

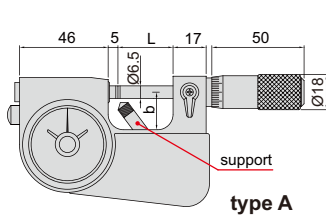
(mm)

| Code | Range | Type | Accuracy | L | b | Setting standard (included) |
|-----------|-------------|------|----------|------|------|-----------------------------|
| 3205-400 | 300-400mm | A | 11µm | 410 | 250 | 325, 375 |
| 3205-500 | 400-500mm | A | 13µm | 510 | 295 | 425, 475 |
| 3205-600 | 500-600mm | A | 14µm | 610 | 345 | 525, 575 |
| 3205-700 | 600-700mm | A | 16µm | 710 | 395 | 625, 675 |
| 3205-800 | 700-800mm | A | 18µm | 810 | 445 | 725, 775 |
| 3205-900 | 800-900mm | A | 20µm | 910 | 495 | 825, 875 |
| 3205-1000 | 900-1000mm | A | 22µm | 1010 | 545 | 925, 975 |
| 3205-1200 | 1000-1200mm | B | 22µm | 1210 | 645 | 1050, 1150 |
| 3205-1400 | 1200-1400mm | B | 24µm | 1410 | 745 | 1250, 1350 |
| 3205-1600 | 1400-1600mm | B | 28µm | 1610 | 845 | 1450, 1550 |
| 3205-1800 | 1600-1800mm | B | 31µm | 1810 | 945 | 1650, 1750 |
| 3205-2000 | 1800-2000mm | B | 34µm | 2010 | 1045 | 1850, 1950 |

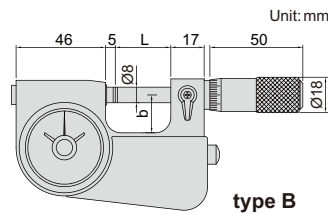


type B

INDICATING MICROMETERS

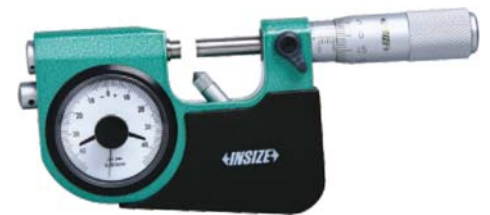


type A



type B

- Meet DIN863-3
- Micrometer head graduation: 0.002mm
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3332-25

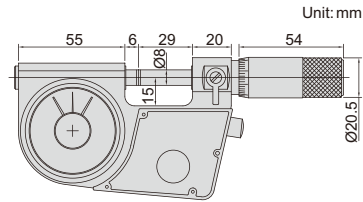


3332-25B

(mm)

| Code | Micrometer head range | Micrometer head accuracy | Type | L | b | Remark |
|----------|-----------------------|--------------------------|------|-------|----|-----------------|
| 3332-25 | 0-25mm | 4µm | A | 28.5 | 19 | with support |
| 3332-50 | 25-50mm | 4µm | A | 53.5 | 30 | with support |
| 3332-75 | 50-75mm | 5µm | A | 78.5 | 45 | without support |
| 3332-100 | 75-100mm | 5µm | A | 103.5 | 57 | without support |
| 3332-25B | 0-25mm | 4µm | B | 28.5 | 19 | without support |

INDICATING MICROMETER

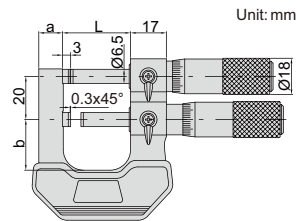


3333-25

- Meet DIN863-3
- Carbide measuring faces
- Measuring force 5-10N

| Code | Micrometer head | | | Dial indicator | | |
|---------|-----------------|------------|----------|----------------|------------|----------|
| | Range | Graduation | Accuracy | Range | Graduation | Accuracy |
| 3333-25 | 0-25mm | 0.01mm | 2µm | ±0.07mm | 1µm | 1µm |

LIMIT MICROMETERS

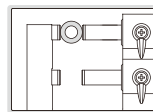


3235-25A

- Used as Go/No-Go gauge by setting upper and lower limits
- Graduation 0.002mm
- Carbide measuring faces
- Supplied with setting standard (except 0-25mm)

(mm)

| Code | Range | Accuracy | L | a | b |
|----------|---------|----------|----|----|----|
| 3235-25A | 0-25mm | 4µm | 32 | 12 | 24 |
| 3235-50A | 25-50mm | 4µm | 57 | 15 | 32 |



MICROMETERS WITH DIAL INDICATING

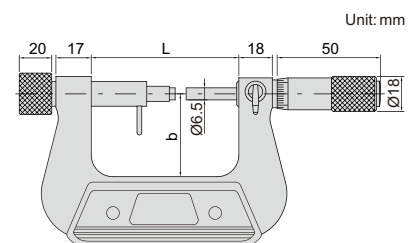
ATTENTION: NOT SUITABLE FOR 0.001MM INDICATORS



3331-25A

- Meet DIN863-3
- Micrometer head graduation 0.01mm
- Anvil retracting range: 8mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")

| Code | Micrometer head range | Micrometer head accuracy | L | b |
|-----------|-----------------------|--------------------------|-------|------|
| 3331-25A | 0-25mm | 4µm | 67 | 38 |
| 3331-50A | 25-50mm | 4µm | 92.4 | 50 |
| 3331-75A | 50-75mm | 5µm | 117.6 | 62 |
| 3331-100A | 75-100mm | 5µm | 143 | 70 |
| 3331-125A | 100-125mm | 6µm | 168.2 | 82 |
| 3331-150A | 125-150mm | 6µm | 192 | 94.5 |
| 3331-175A | 150-175mm | 7µm | 217 | 107 |

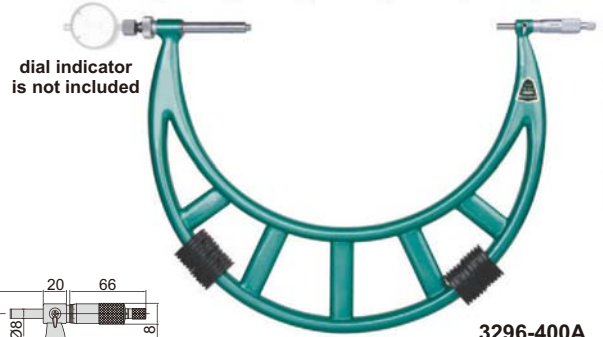


ATTENTION: NOT SUITABLE FOR 0.001MM INDICATORS

MICROMETERS WITH DIAL INDICATOR

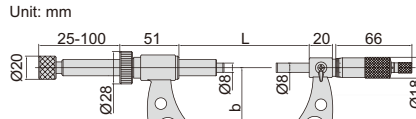


3296-100A



3296-400A

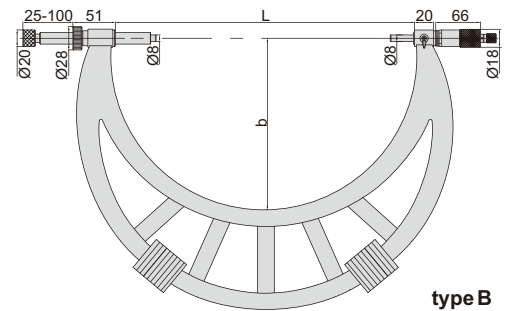
- Meet DIN863-3
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory:
 - dial indicators (graduation 0.01mm)
 - digital indicators (resolution 0.01mm/0.0005")



(mm)

| Code | Range | Type | Accuracy | L | b |
|------------|------------|------|----------|------|-----|
| 3296-100A | 0-100mm | A | 6μm | 115 | 68 |
| 3296-200A | 100-200mm | A | 7μm | 215 | 120 |
| 3296-300A | 200-300mm | A | 8μm | 315 | 170 |
| 3296-400A | 300-400mm | B | 9μm | 415 | 225 |
| 3296-500A | 400-500mm | B | 10μm | 515 | 275 |
| 3296-600A | 500-600mm | B | 11μm | 615 | 325 |
| 3296-700A | 600-700mm | B | 12μm | 715 | 375 |
| 3296-800A | 700-800mm | B | 13μm | 815 | 430 |
| 3296-900A | 800-900mm | B | 14μm | 915 | 480 |
| 3296-1000A | 900-1000mm | B | 15μm | 1015 | 530 |

type A



type B

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



MICROMETERS WITH DIAL INDICATOR

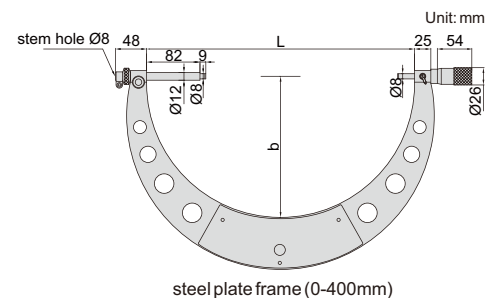
- Meet DIN863-3
- Micrometer head graduation: 0.01mm
- Adjust collars for different measuring ranges
- Anvil retracting range: 3mm
- Carbide measuring faces
- Optional accessory: dial indicators or digital indicators, setting standards

(mm)

| Code | Range | Micrometer head range | Frame type | L | b |
|-----------|------------|-----------------------|-------------|------|-----|
| 3633-100 | 0-100mm | 25mm | steel plate | 116 | 65 |
| 3633-200 | 100-200mm | 25mm | steel plate | 217 | 109 |
| 3633-300 | 200-300mm | 25mm | steel plate | 317 | 159 |
| 3633-400 | 300-400mm | 25mm | steel plate | 417 | 209 |
| 3633-500 | 400-500mm | 25mm | steel tube | 517 | 259 |
| 3633-600 | 500-600mm | 25mm | steel tube | 617 | 310 |
| 3633-700 | 600-700mm | 25mm | steel tube | 717 | 360 |
| 3633-800 | 700-800mm | 25mm | steel tube | 817 | 408 |
| 3633-900 | 800-900mm | 25mm | steel tube | 917 | 460 |
| 3633-1000 | 900-1000mm | 25mm | steel tube | 1017 | 512 |

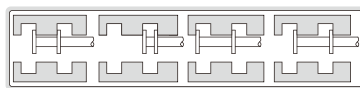


3633-300



steel plate frame (0-400mm)

- Graduation 0.01mm
- Measure width of grooves inside bores
- Non-rotating spindle
- Two graduations for inside and outside measurement

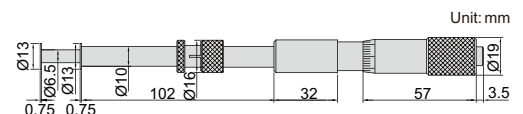


GROOVE MICROMETERS



3287-25A

| Code | Range (outside) | Range (inside) | Accuracy |
|-----------|-----------------|----------------|----------|
| 3287-25A | 0-25mm | 1.6-26.5mm | 10μm |
| 3287-50A | 25-50mm | 26.5-51.5mm | 10μm |
| 3287-75A | 50-75mm | 51.5-76.5mm | 10μm |
| 3287-100A | 75-100mm | 76.5-101.5mm | 10μm |



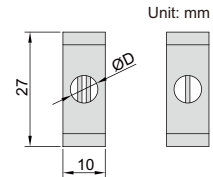
3-WIRES

- Used with standard outside micrometers with spindle $\varnothing 6.35\text{mm}$ or $\varnothing 6.50\text{mm}$ to measure pitch diameter of screw threads
- Diameter accuracy: $\pm 0.5\mu\text{m}$
- Cylindricity: $1\mu\text{m}$
- Hardness: HRC60
- Supplied with manufacturer inspection certificate

INSPECTION
CERTIFICATE



7382-19



Unit: mm

Formula of pitch diameter E
 $E = M - 3d + 0.866025P$
M=measured value of the micrometer
d=diameter of the pin gage (choose diameter of pin gage according to pitch: $d = 0.577P$)
P=screw thread pitch
The formula is suitable for 60° screw

For outside micrometers with spindle $\varnothing 6.35\text{mm}$ (ØD)

| Code | Pin gage diameter (Ød) | Applicable pitch |
|----------|---|----------------------|
| 7382-11 | 0.170mm | 0.25mm |
| 7382-12 | 0.195mm | 0.35mm |
| 7382-13 | 0.220mm | 0.35mm |
| 7382-14 | 0.250mm | 0.4mm |
| 7382-15 | 0.290mm | 0.45mm, 0.5mm |
| 7382-16 | 0.335mm | 0.6mm |
| 7382-17 | 0.390mm | 0.7mm |
| 7382-18 | 0.455mm | 0.7mm, 0.75mm, 0.8mm |
| 7382-19 | 0.530mm | 0.9mm |
| 7382-110 | 0.620mm | 1mm |
| 7382-111 | 0.725mm | 1.25mm |
| 7382-112 | 0.895mm | 1.5mm |
| 7382-113 | 1.100mm | 1.75mm |
| 7382-114 | 1.350mm | 2mm |
| 7382-115 | 1.650mm | 2.5mm |
| 7382-116 | 2.050mm | 3mm, 3.5mm |
| 7382-117 | 2.550mm | 4mm, 4.5mm |
| 7382-118 | 3.200mm | 5mm, 5.5mm |
| 7382-1S | 18 pairs/set, including all above 3-wires | |

For outside micrometers with spindle $\varnothing 6.50\text{mm}$ (ØD)

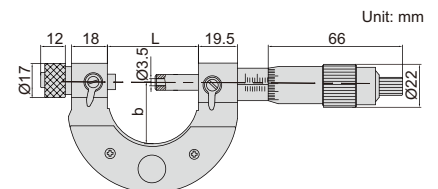
| Code | Pin gage diameter (Ød) | Applicable pitch |
|----------|---|----------------------|
| 7382-21 | 0.170mm | 0.25mm |
| 7382-22 | 0.195mm | 0.35mm |
| 7382-23 | 0.220mm | 0.35mm |
| 7382-24 | 0.250mm | 0.4mm |
| 7382-25 | 0.290mm | 0.45mm, 0.5mm |
| 7382-26 | 0.335mm | 0.6mm |
| 7382-27 | 0.390mm | 0.7mm |
| 7382-28 | 0.455mm | 0.7mm, 0.75mm, 0.8mm |
| 7382-29 | 0.530mm | 0.9mm |
| 7382-210 | 0.620mm | 1mm |
| 7382-211 | 0.725mm | 1.25mm |
| 7382-212 | 0.895mm | 1.5mm |
| 7382-213 | 1.100mm | 1.75mm |
| 7382-214 | 1.350mm | 2mm |
| 7382-215 | 1.650mm | 2.5mm |
| 7382-216 | 2.050mm | 3mm, 3.5mm |
| 7382-217 | 2.550mm | 4mm, 4.5mm |
| 7382-218 | 3.200mm | 5mm, 5.5mm |
| 7382-2S | 18 pairs/set, including all above 3-wires | |

EXTERNAL SCREW THREAD MICROMETERS

- Meet DIN863-3
- Measure pitch diameter of screw thread
- Graduation 0.01mm
- Ratchet thimble
- Optional accessory: measuring tips for external screw thread micrometer (code 7384)

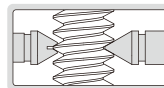


3639-25



Unit: mm

| Code | Range | Accuracy | L | b |
|----------|-----------|-----------------|-----|------|
| 3639-25 | 0-25mm | 4 μm | 45 | 31 |
| 3639-50 | 25-50mm | 4 μm | 70 | 35 |
| 3639-75 | 50-75mm | 5 μm | 95 | 48.5 |
| 3639-100 | 75-100mm | 5 μm | 120 | 60 |
| 3639-125 | 100-125mm | 6 μm | 145 | 72.5 |
| 3639-150 | 125-150mm | 6 μm | 170 | 80 |
| 3639-175 | 150-175mm | 7 μm | 195 | 97.5 |
| 3639-200 | 175-200mm | 7 μm | 220 | 110 |
| 3639-225 | 200-225mm | 8 μm | 245 | 122 |





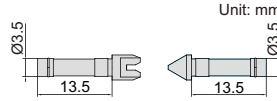
MEASURING TIPS FOR EXTERNAL SCREW THREAD MICROMETERS

TIPS FOR TRAPEZOIDAL, ACME THREAD ARE ALSO AVAILABLE

- Supplied in pair
- Made of hardened steel
- Suitable for 3639 series micrometers



7384-T108



Unit: mm

55° thread angle

| Code | Applicable pitch (TPI) |
|-----------|------------------------|
| 7384-T201 | 80 |
| 7384-T202 | 72/64 |
| 7384-T203 | 60/48 |
| 7384-T204 | 40/32 |
| 7384-T205 | 28/26/24/22 |
| 7384-T206 | 20/19/18/16 |
| 7384-T207 | 14/12/11 |
| 7384-T208 | 10/9/8 |
| 7384-T209 | 7/6 |
| 7384-T210 | 5/4.5/4 |
| 7384-T211 | 3.5/3.25/3/2.875/2.75 |
| 7384-T212 | 2.625/2.5/2 |

60° thread angle

| Code | Applicable pitch (mm) |
|-----------|-----------------------|
| 7384-T101 | 0.2 |
| 7384-T102 | 0.225 |
| 7384-T103 | 0.25 |
| 7384-T104 | 0.3 |
| 7384-T105 | 0.35 |
| 7384-T106 | 0.4/0.45 |
| 7384-T107 | 0.5/0.6 |

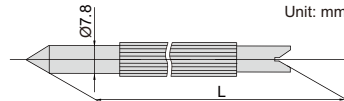
60° thread angle

| Code | Applicable pitch (mm) |
|-----------|-----------------------|
| 7384-T108 | 0.7/0.75/0.8 |
| 7384-T109 | 1/1.25 |
| 7384-T110 | 1.5/1.75 |
| 7384-T111 | 2.0/2.5 |
| 7384-T112 | 3.0/3.5 |
| 7384-T113 | 4.0/4.5/5.0 |
| 7384-T114 | 5.5/6.0 |

SETTING STANDARDS FOR EXTERNAL SCREW THREAD MICROMETERS



7384-A100



Unit: mm

60° thread angle

| Code | L | Accuracy | Code | L | Accuracy |
|-----------|-------|----------|-----------|-------|----------|
| 7384-A25 | 25mm | ±1.5µm | 7384-A175 | 175mm | ±4.5µm |
| 7384-A50 | 50mm | ±2µm | 7384-A200 | 200mm | ±5µm |
| 7384-A75 | 75mm | ±2.5µm | 7384-A225 | 225mm | ±5.5µm |
| 7384-A100 | 100mm | ±3µm | 7384-A250 | 250mm | ±6µm |
| 7384-A125 | 125mm | ±3.5µm | 7384-A275 | 275mm | ±6.5µm |
| 7384-A150 | 150mm | ±4µm | 7384-A300 | 300mm | ±7µm |

55° thread angle

| Code | L | Accuracy | Code | L | Accuracy |
|-----------|-------|----------|-----------|-------|----------|
| 7384-B25 | 25mm | ±1.5µm | 7384-B175 | 175mm | ±4.5µm |
| 7384-B50 | 50mm | ±2µm | 7384-B200 | 200mm | ±5µm |
| 7384-B75 | 75mm | ±2.5µm | 7384-B225 | 225mm | ±5.5µm |
| 7384-B100 | 100mm | ±3µm | 7384-B250 | 250mm | ±6µm |
| 7384-B125 | 125mm | ±3.5µm | 7384-B275 | 275mm | ±6.5µm |
| 7384-B150 | 150mm | ±4µm | 7384-B300 | 300mm | ±7µm |



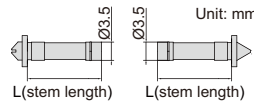
MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETERS

TIPS FOR TRAPEZOIDAL, ACME THREAD ARE ALSO AVAILABLE

- Supplied in pair
- Made of hardened steel
- Suitable for 3640, 3641 series micrometers



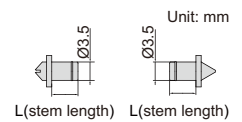
7385-T106A



Unit: mm



7385-T106B



Unit: mm

60° thread angle

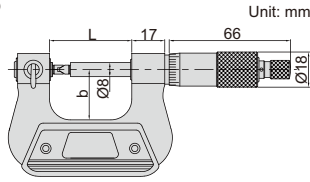
| Code | | Applicable pitch (mm) |
|------------|------------|-----------------------|
| L=13.5mm | L=5mm | |
| 7385-T101A | 7385-T101B | 0.35 |
| 7385-T102A | 7385-T102B | 0.4/0.45 |
| 7385-T103A | 7385-T103B | 0.5/0.6 |
| 7385-T104A | 7385-T104B | 0.7/0.75/0.8 |
| 7385-T105A | 7385-T105B | 1/1.25 |
| 7385-T106A | 7385-T106B | 1.5/1.75 |
| 7385-T107A | 7385-T107B | 2.0/2.5 |
| 7385-T108A | 7385-T108B | 3.0/3.5 |
| 7385-T109A | 7385-T109B | 4.0/4.5/5.0 |
| 7385-T110A | 7385-T110B | 5.5/6.0 |

55° thread angle

| Code | | Applicable pitch (TPI) |
|------------|------------|------------------------|
| L=13.5mm | L=5mm | |
| 7385-T201A | 7385-T201B | 60/48 |
| 7385-T202A | 7385-T202B | 40/32 |
| 7385-T203A | 7385-T203B | 28/26/24/22 |
| 7385-T204A | 7385-T204B | 20/19/18/16 |
| 7385-T205A | 7385-T205B | 14/12/11 |
| 7385-T206A | 7385-T206B | 10/9/8 |
| 7385-T207A | 7385-T207B | 7/6 |
| 7385-T208A | 7385-T208B | 5/4.5/4 |
| 7385-T209A | 7385-T209B | 3.5/3.25/3/2.875/2.75 |
| 7385-T210A | 7385-T210B | 2.625/2.5/2 |

SCREW THREAD MICROMETERS

- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessory: 55° setting standards, measuring tips (code 7381)



NON-ROTATING SPINDLE

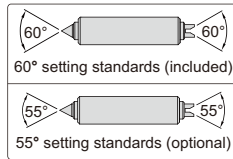
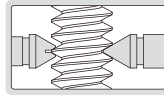
measuring tips are not included



3281-25A

(mm)

| Code | Range | L | b | 55° setting standard (optional) |
|-----------|-----------|-------|------|---------------------------------|
| 3281-25A | 0-25mm | 42 | 26 | - |
| 3281-50A | 25-50mm | 67 | 38 | 3281-SP1 |
| 3281-75A | 50-75mm | 92 | 50 | 3281-SP2 |
| 3281-100A | 75-100mm | 117.6 | 62 | 3281-SP3 |
| 3281-125A | 100-125mm | 143 | 70 | 3281-SP4 |
| 3281-150A | 125-150mm | 168.2 | 82 | 3281-SP5 |
| 3281-175A | 150-175mm | 192 | 94.5 | 3281-SP6 |
| 3281-200A | 175-200mm | 217 | 107 | 3281-SP7 |

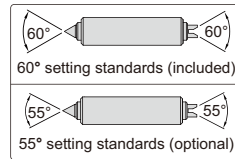


accuracy of micrometers with tips (mm)

| Pitch | Range | | | | | |
|---------|--------|--------|--------|--------|---------|---------|
| | 0-25 | 25-50 | 50-75 | 75-100 | 100-125 | 125-200 |
| 0.4~0.5 | ±0.01 | - | - | - | - | - |
| 0.6~0.8 | ±0.01 | ±0.013 | - | - | - | - |
| 1~1.25 | ±0.012 | ±0.015 | ±0.017 | ±0.017 | - | - |
| 1.5~2.0 | ±0.014 | ±0.017 | ±0.019 | ±0.019 | ±0.020 | ±0.023 |
| 2.5~3.5 | ±0.016 | ±0.019 | ±0.021 | ±0.021 | ±0.023 | ±0.025 |
| 4.0~7.0 | - | ±0.021 | ±0.023 | ±0.023 | ±0.025 | ±0.028 |

DIGITAL SCREW THREAD MICROMETERS

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessory: 55° setting standards, measuring tips (code 7381), data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



measuring tips are not included



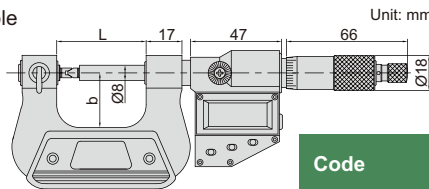
3581-25A

DATA OUTPUT

NON-ROTATING SPINDLE

accuracy of micrometers with tips (mm)

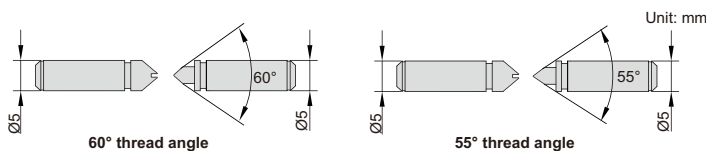
| Pitch | Range | | | |
|---------|--------|--------|--------|--------|
| | 0-25 | 25-50 | 50-75 | 75-100 |
| 0.4~0.5 | ±0.01 | - | - | - |
| 0.6~0.8 | ±0.01 | ±0.013 | - | - |
| 1~1.25 | ±0.012 | ±0.015 | ±0.017 | ±0.017 |
| 1.5~2.0 | ±0.014 | ±0.017 | ±0.019 | ±0.019 |
| 2.5~3.5 | ±0.016 | ±0.019 | ±0.021 | ±0.021 |
| 4.0~7.0 | - | ±0.021 | ±0.023 | ±0.023 |



(mm)

| Code | Range | L | b | 55° setting standard (optional) |
|-----------|---------------|-------|----|---------------------------------|
| 3581-25A | 0-25mm/0-1" | 42 | 26 | - |
| 3581-50A | 25-50mm/1-2" | 67 | 38 | 3281-SP1 |
| 3581-75A | 50-75mm/2-3" | 92 | 50 | 3281-SP2 |
| 3581-100A | 75-100mm/3-4" | 117.6 | 62 | 3281-SP3 |

MEASURING TIPS FOR SCREW THREAD MICROMETERS



7381-T13

Whitworth thread (55° thread angle)

Metric and unified thread (60° thread angle)

| Code | Pitch |
|----------|---------------------------------------|
| 7381-T11 | 0.4-0.5mm/ 64-48TPI |
| 7381-T12 | 0.6-0.9mm/ 44-28TPI |
| 7381-T13 | 1-1.75mm/ 24-14TPI |
| 7381-T14 | 2-3mm/ 13-9TPI |
| 7381-T15 | 3.5-5mm/ 8-5TPI |
| 7381-T16 | 5.5-7mm/ 4.5-3.5TPI |
| 7381-TS | 6 pairs/set, including all above tips |

- Supplied in pair
- Suitable for 3281, 3581 series micrometers

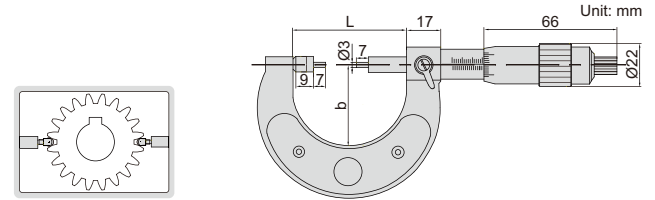
| Code | Pitch |
|-----------|--|
| 7381-T21 | 60-48TPI |
| 7381-T22 | 48-40TPI |
| 7381-T23 | 40-32TPI |
| 7381-T24 | 32-24TPI |
| 7381-T25 | 24-18TPI |
| 7381-T26 | 18-14TPI |
| 7381-T27 | 14-10TPI |
| 7381-T28 | 10-7TPI |
| 7381-T29 | 7-4.5TPI |
| 7381-T210 | 4.5-3.5TPI |
| 7381-T2S | 10 pairs/set, including all above tips |



EXTERNAL GEAR TOOTH MICROMETERS

- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code 7383)

| Code | Range | Accuracy | L | b |
|----------|-----------|----------|-------|-------|
| 3636-25 | 0-25mm | 4µm | 56 | 40 |
| 3636-50 | 25-50mm | 4µm | 81.5 | 52 |
| 3636-75 | 50-75mm | 5µm | 106.5 | 64.5 |
| 3636-100 | 75-100mm | 5µm | 131.5 | 76 |
| 3636-125 | 100-125mm | 6µm | 156.5 | 88.5 |
| 3636-150 | 125-150mm | 6µm | 181.5 | 100 |
| 3636-175 | 150-175mm | 7µm | 242.5 | 121.5 |
| 3636-200 | 175-200mm | 7µm | 242.5 | 121.5 |
| 3636-225 | 200-225mm | 8µm | 267.5 | 134 |
| 3636-250 | 225-250mm | 8µm | 292.5 | 146.5 |
| 3636-275 | 250-275mm | 9µm | 318 | 159 |
| 3636-300 | 275-300mm | 9µm | 342.5 | 171.5 |
| 3636-325 | 300-325mm | 10µm | 367.5 | 184 |
| 3636-350 | 325-350mm | 10µm | 392.5 | 196.5 |
| 3636-375 | 350-375mm | 11µm | 417.5 | 209 |



BALL TIPS FOR GEAR TOOTH MICROMETERS



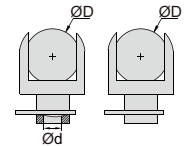
- Supplied in pair
- Made of hardened special steel
- Suitable for 3636, 3637, 3638 series micrometers



7383-8

| Code | Ball dia. (D) | Accuracy of D | d |
|--------|---------------|---------------|------|
| 7383-1 | SØ1mm | ±1µm | Ø3mm |
| 7383-2 | SØ2mm | ±1µm | Ø3mm |
| 7383-3 | SØ3mm | ±1µm | Ø3mm |
| 7383-4 | SØ4mm | ±1µm | Ø3mm |
| 7383-5 | SØ5mm | ±1µm | Ø3mm |
| 7383-6 | SØ6mm | ±1µm | Ø3mm |
| 7383-7 | SØ7mm | ±1µm | Ø3mm |
| 7383-8 | SØ8mm | ±1µm | Ø3mm |

| Code | Ball dia. (D) | Accuracy of D | d |
|---------|---------------|---------------|------|
| 7383-9 | SØ9mm | ±1µm | Ø3mm |
| 7383-10 | SØ10mm | ±1µm | Ø3mm |
| 7383-11 | SØ11mm | ±1µm | Ø3mm |
| 7383-12 | SØ12mm | ±1µm | Ø3mm |
| 7383-13 | SØ13mm | ±1µm | Ø3mm |
| 7383-14 | SØ14mm | ±1µm | Ø3mm |
| 7383-15 | SØ15mm | ±1µm | Ø3mm |
| 7383-16 | SØ16mm | ±1µm | Ø3mm |



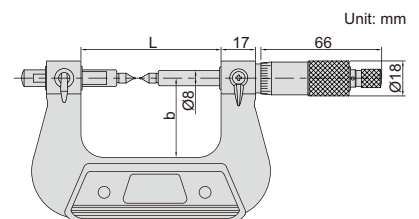
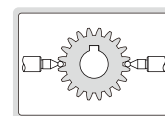
GEAR TOOTH MICROMETERS

- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)
- Optional accessory: ball tips (code 7391)

| Code | Range | Accuracy | L | b |
|----------|-----------|----------|-------|------|
| 3291-25 | 0-25mm | 4µm | 67 | 38 |
| 3291-50 | 25-50mm | 4µm | 92.4 | 50 |
| 3291-75 | 50-75mm | 5µm | 117.6 | 62 |
| 3291-100 | 75-100mm | 5µm | 143 | 70 |
| 3291-125 | 100-125mm | 6µm | 168.2 | 82 |
| 3291-150 | 125-150mm | 6µm | 192 | 94.5 |
| 3291-175 | 150-175mm | 7µm | 217 | 107 |



3291-25

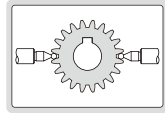


DIGITAL GEAR TOOTH MICROMETERS

IP54
WATERPROOF

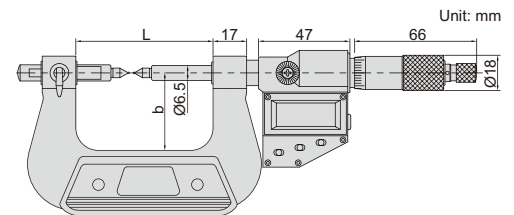
DATA
OUTPUT

- Measure over-pin diameter of gears
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: ball tips (code 7391), data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



3591-25A

| Code | Range | Accuracy | L | b |
|-----------|---------------|----------|-------|----|
| 3591-25A | 0-25mm/0-1" | ±4µm | 67 | 38 |
| 3591-50A | 25-50mm/1-2" | ±4µm | 92.4 | 50 |
| 3591-75A | 50-75mm/2-3" | ±5µm | 117.6 | 62 |
| 3591-100A | 75-100mm/3-4" | ±5µm | 143 | 70 |



BALL TIPS FOR GEAR TOOTH MICROMETERS

- Supplied in pair
- Suitable for 3291, 3591 series micrometers

| Code | Ball dia. (D) | Code | Ball dia. (D) |
|---------|---------------|----------|---------------|
| 7391-T2 | SØ1.5mm | 7391-T7 | SØ4.0mm |
| 7391-T3 | SØ2.0mm | 7391-T8 | SØ4.5mm |
| 7391-T4 | SØ2.5mm | 7391-T9 | SØ5.0mm |
| 7391-T5 | SØ3.0mm | 7391-T10 | SØ6.0mm |
| 7391-T6 | SØ3.5mm | | |



7391-T5



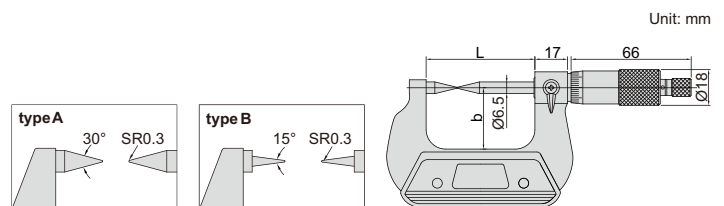
POINT MICROMETERS

- Measure the web thickness of drills, small grooves and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm)



3230-25A

| Code | Range | Type | Accuracy | L | b |
|------------|----------|------|----------|-------|------|
| 3230-25A | 0-25mm | A | 4µm | 57 | 32 |
| 3230-50A | 25-50mm | A | 4µm | 82 | 44.5 |
| 3230-75A | 50-75mm | A | 5µm | 107 | 57 |
| 3230-100A | 75-100mm | A | 5µm | 132.6 | 69.5 |
| 3230-25BA | 0-25mm | B | 4µm | 57 | 32 |
| 3230-50BA | 25-50mm | B | 4µm | 82 | 44.5 |
| 3230-75BA | 50-75mm | B | 5µm | 107 | 57 |
| 3230-100BA | 75-100mm | B | 5µm | 132.6 | 69.5 |



DIGITAL POINT MICROMETERS

- Measure the web thickness of drills, small grooves and keyways
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

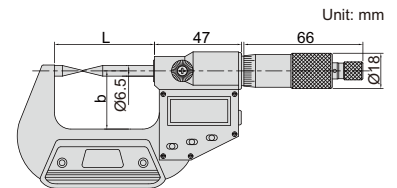
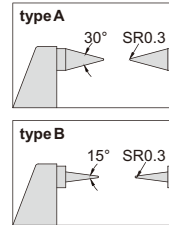
IP54
WATERPROOF

DATA
OUTPUT



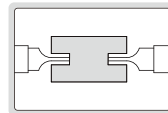
3530-25A

| Code | Range | Type | Accuracy | L | b |
|------------|---------------|------|----------|-------|------|
| 3530-25A | 0-25mm/0-1" | A | ±4μm | 57 | 32 |
| 3530-50A | 25-50mm/1-2" | A | ±4μm | 82 | 44.5 |
| 3530-75A | 50-75mm/2-3" | A | ±5μm | 107 | 57 |
| 3530-100A | 75-100mm/3-4" | A | ±5μm | 132.6 | 69.5 |
| 3530-25BA | 0-25mm/0-1" | B | ±4μm | 57 | 32 |
| 3530-50BA | 25-50mm/1-2" | B | ±4μm | 82 | 44.5 |
| 3530-75BA | 50-75mm/2-3" | B | ±5μm | 107 | 57 |
| 3530-100BA | 75-100mm/3-4" | B | ±5μm | 132.6 | 69.5 |



NON-ROTATING
SPINDLE

- Meet DIN863-3
- Measure the groove diameter of shafts and keyways
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

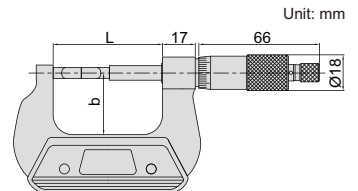
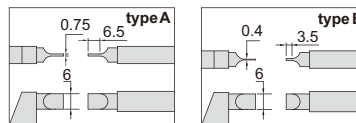


BLADE MICROMETERS

| Code | Range | Type | Accuracy | L | b |
|-----------|-----------|------|----------|-------|------|
| 3232-25A | 0-25mm | A | 4μm | 57 | 32 |
| 3232-50A | 25-50mm | A | 4μm | 82 | 44.5 |
| 3232-75A | 50-75mm | A | 5μm | 107 | 57 |
| 3232-100A | 75-100mm | A | 5μm | 132.6 | 69.5 |
| 3232-125A | 100-125mm | A | 6μm | 158 | 82 |
| 3232-150A | 125-150mm | A | 6μm | 183.4 | 94.5 |
| 3232-175A | 150-175mm | A | 7μm | 208.8 | 107 |
| 3232-25BA | 0-25mm | B | 4μm | 57 | 32 |
| 3232-50BA | 25-50mm | B | 4μm | 82 | 44.5 |



3232-25A



DATA
OUTPUT

NON-ROTATING
SPINDLE

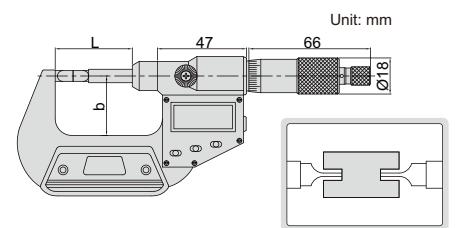
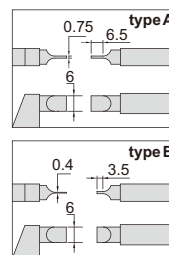
- Measure the groove diameter of shafts and keyways
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

| Code | Range | Type | Accuracy | L | b |
|-----------|---------------|------|----------|-------|------|
| 3532-25A | 0-25mm/0-1" | A | ±4μm | 57 | 32 |
| 3532-50A | 25-50mm/1-2" | A | ±4μm | 82 | 44.5 |
| 3532-75A | 50-75mm/2-3" | A | ±5μm | 107 | 57 |
| 3532-100A | 75-100mm/3-4" | A | ±5μm | 132.6 | 69.5 |
| 3532-25BA | 0-25mm/0-1" | B | ±4μm | 57 | 32 |
| 3532-50BA | 25-50mm/1-2" | B | ±4μm | 82 | 44.5 |

DIGITAL BLADE MICROMETERS



3532-25A



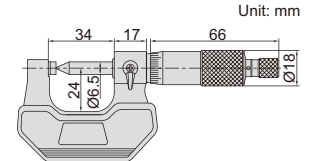
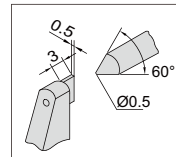
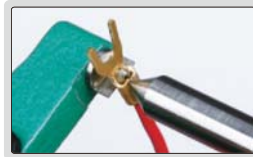
CRIMP HEIGHT MICROMETER

RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-150A)

- Measure the height of crimp contact
- Graduation 0.01mm
- Ratchet stop



3266-25BA



| Code | Range | Accuracy |
|-----------|--------|----------|
| 3266-25BA | 0-25mm | 4µm |

DIGITAL CRIMP HEIGHT MICROMETER

IP54
WATERPROOF

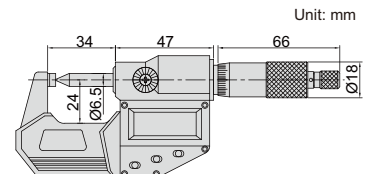
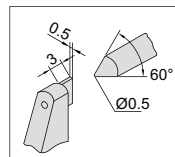
DATA
OUTPUT

RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-150A)

- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



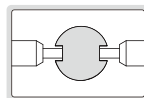
3566-25BA



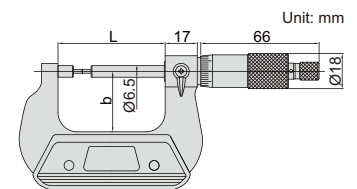
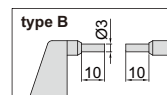
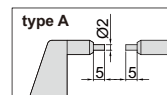
| Code | Range | Accuracy |
|-----------|-------------|----------|
| 3566-25BA | 0-25mm/0-1" | ±4µm |

SPLINE MICROMETERS

- Meet DIN863-3
- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3233-25BA



| Code | Range | Type | Accuracy | (mm) | |
|------------|-----------|------|----------|-------|------|
| | | | | L | b |
| 3233-25A | 0-25mm | A | 4µm | 57 | 32 |
| 3233-25BA | 0-25mm | B | 4µm | 57 | 32 |
| 3233-50BA | 25-50mm | B | 4µm | 82 | 44.5 |
| 3233-75BA | 50-75mm | B | 5µm | 107 | 57 |
| 3233-100BA | 75-100mm | B | 5µm | 132.6 | 69.5 |
| 3233-125BA | 100-125mm | B | 6µm | 158 | 82 |
| 3233-150BA | 125-150mm | B | 6µm | 183.4 | 94.5 |
| 3233-175BA | 150-175mm | B | 7µm | 208.8 | 107 |

IP54
WATERPROOF

DATA
OUTPUT

DIGITAL SPLINE MICROMETERS

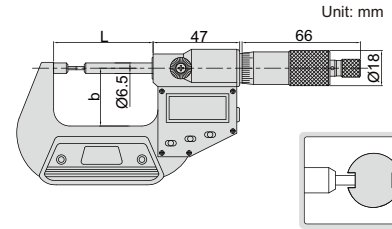
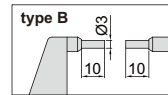
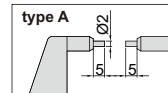
- Measure splined shafts, slots and keyways
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



3533-25BA

| Code | Range | Type | Accuracy | L | b |
|------------|---------------|------|----------|-------|------|
| 3533-25A | 0-25mm/0-1" | A | ±4μm | 57 | 32 |
| 3533-50A | 25-50mm/1-2" | A | ±4μm | 82 | 44.5 |
| 3533-75A | 50-75mm/2-3" | A | ±5μm | 107 | 57 |
| 3533-100A | 75-100mm/3-4" | A | ±5μm | 132.6 | 69.5 |
| 3533-25BA | 0-25mm/0-1" | B | ±4μm | 57 | 32 |
| 3533-50BA | 25-50mm/1-2" | B | ±4μm | 82 | 44.5 |
| 3533-75BA | 50-75mm/2-3" | B | ±5μm | 107 | 57 |
| 3533-100BA | 75-100mm/3-4" | B | ±5μm | 132.6 | 69.5 |

(mm)



CYLINDRICAL ANVIL TUBE MICROMETERS

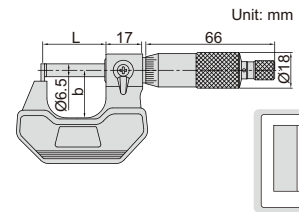
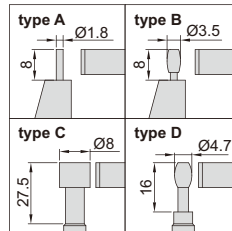
- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm)



3261-25A

| Code | Range | Type | Accuracy | L | b |
|-----------|---------|------|----------|----|----|
| 3261-25A | 0-25mm | A | 6μm | 31 | 24 |
| 3261-50A | 25-50mm | A | 6μm | 57 | 32 |
| 3261-25BA | 0-25mm | B | 6μm | 31 | 24 |
| 3261-50BA | 25-50mm | B | 6μm | 57 | 32 |
| 3261-25CA | 0-25mm | C | 6μm | 31 | 24 |
| 3261-25DA | 0-25mm | D | 6μm | 31 | 24 |

(mm)



DIGITAL CYLINDRICAL ANVIL TUBE MICROMETERS

IP54
WATERPROOF

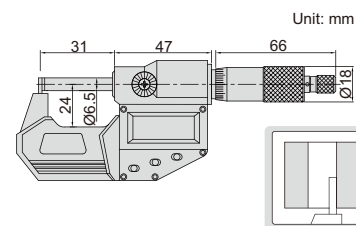
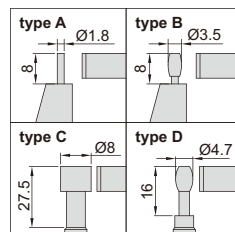
DATA
OUTPUT

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



3561-25A

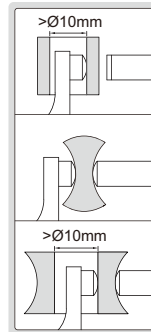
| Code | Range | Type | Accuracy |
|-----------|-------------|------|----------|
| 3561-25A | 0-25mm/0-1" | A | ±6μm |
| 3561-25BA | 0-25mm/0-1" | B | ±6μm |
| 3561-25CA | 0-25mm/0-1" | C | ±6μm |
| 3561-25DA | 0-25mm/0-1" | D | ±6μm |



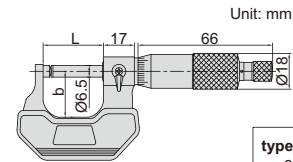
SPHERICAL ANVIL TUBE MICROMETERS

- Meet DIN863-3
- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

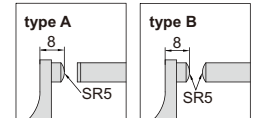
| Code | Range | Type | Accuracy | L | b |
|------------|----------|------|-----------|-----|------|
| 3260-25A | 0-25mm | A | 4 μ m | 32 | 24 |
| 3260-50A | 25-50mm | A | 4 μ m | 57 | 32 |
| 3260-75A | 50-75mm | A | 5 μ m | 82 | 44.5 |
| 3260-100A | 75-100mm | A | 5 μ m | 107 | 57 |
| 3260-25SA | 0-25mm | B | 4 μ m | 32 | 24 |
| 3260-50SA | 25-50mm | B | 4 μ m | 57 | 32 |
| 3260-75SA | 50-75mm | B | 5 μ m | 82 | 44.5 |
| 3260-100SA | 75-100mm | B | 5 μ m | 107 | 57 |



3260-25A



Unit: mm



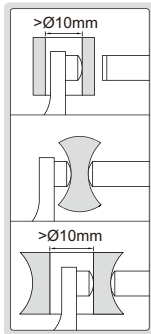
DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

IP54
WATERPROOF

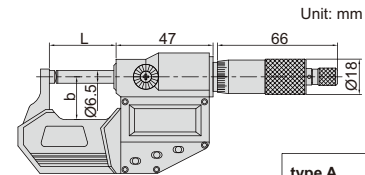
DATA
OUTPUT

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

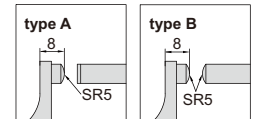
| Code | Range | Type | Accuracy | L | b |
|------------|---------------|------|-----------------|-----|------|
| 3560-25A | 0-25mm/0-1" | A | \pm 4 μ m | 32 | 24 |
| 3560-50A | 25-50mm/1-2" | A | \pm 4 μ m | 57 | 32 |
| 3560-75A | 50-75mm/2-3" | A | \pm 5 μ m | 82 | 44.5 |
| 3560-100A | 75-100mm/3-4" | A | \pm 5 μ m | 107 | 57 |
| 3560-25SA | 0-25mm/0-1" | B | \pm 4 μ m | 32 | 24 |
| 3560-50SA | 25-50mm/1-2" | B | \pm 4 μ m | 57 | 32 |
| 3560-75SA | 50-75mm/2-3" | B | \pm 5 μ m | 82 | 44.5 |
| 3560-100SA | 75-100mm/3-4" | B | \pm 5 μ m | 107 | 57 |



3560-25A



Unit: mm

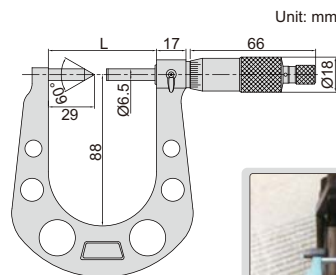


DISK BRAKE MICROMETERS

RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-150A, 1167-150A, 1168-300A)

- Measure thickness of disk brakes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

| Code | Range | Accuracy | L |
|----------|----------|-----------|------|
| 3288-33A | 7.6-33mm | 5 μ m | 64.5 |
| 3288-50A | 25-50mm | 5 μ m | 82 |



3288-33A

RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-150A, 1167-150A, 1168-300A)

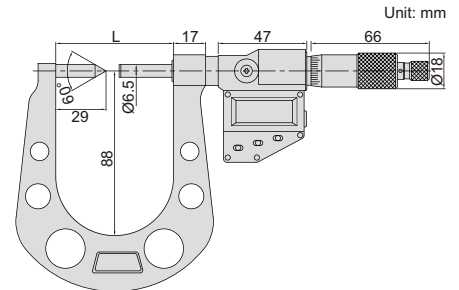
DIGITAL DISK BRAKE MICROMETERS

- Measure thickness of disk brakes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



IP54
WATERPROOF

DATA
OUTPUT

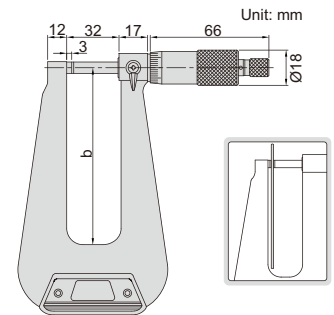


3588-33A

| Code | Range | Accuracy | L (mm) |
|----------|-------------------|----------|--------|
| 3588-33A | 7.6-33mm/0.3-1.3" | ±5µm | 64.5 |
| 3588-50A | 25-50mm/1-2" | ±5µm | 82 |

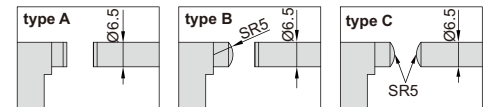
SHEET METAL MICROMETERS

- Deep frame suitable for sheet metal, paper and plastic
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3239-253

| Code | Range | Type | Accuracy | b (mm) |
|-----------|--------|------|----------|--------|
| 3239-253 | 0-25mm | A | 7µm | 155 |
| 3239-253F | 0-25mm | B | 7µm | 155 |
| 3239-254F | 0-25mm | B | 10µm | 310 |
| 3239-253S | 0-25mm | C | 7µm | 155 |

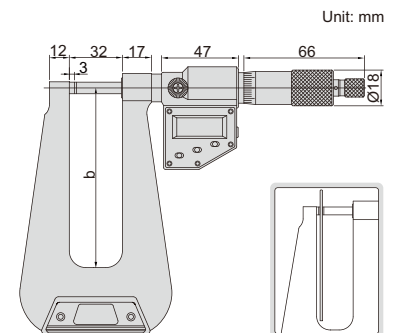


DIGITAL SHEET METAL MICROMETERS

IP54
WATERPROOF

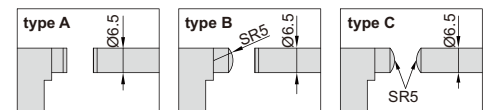
DATA
OUTPUT

- Deep frame suitable for sheet metal, paper and plastic
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



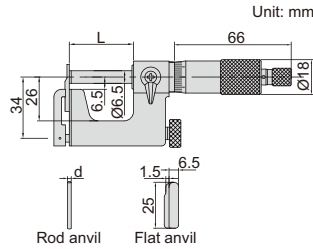
3539-253A

| Code | Range | Type | Accuracy | b (mm) |
|------------|-------------|------|----------|--------|
| 3539-253A | 0-25mm/0-1" | A | ±7µm | 155 |
| 3539-253FA | 0-25mm/0-1" | B | ±7µm | 155 |
| 3539-254FA | 0-25mm/0-1" | B | ±10µm | 310 |
| 3539-253SA | 0-25mm/0-1" | C | ±7µm | 155 |

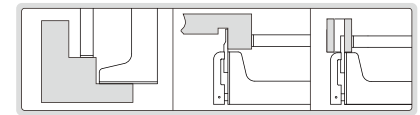


INTERCHANGEABLE ANVIL MICROMETERS

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm)



3262-25A



(mm)

| Code | Range | Accuracy | L | d |
|----------|---------|----------|------|----|
| 3262-25A | 0-25mm | 4µm | 28.5 | Ø3 |
| 3262-50A | 25-50mm | 4µm | 53.5 | Ø5 |

DIGITAL INTERCHANGEABLE ANVIL MICROMETERS

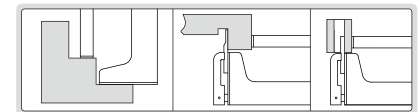
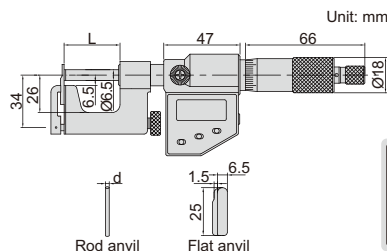
IP54
WATERPROOF

DATA
OUTPUT

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



3562-25A



(mm)

| Code | Range | Accuracy | L | d |
|----------|--------------|----------|------|----|
| 3562-25A | 0-25mm/0-1" | ±4µm | 28.5 | Ø3 |
| 3562-50A | 25-50mm/1-2" | ±4µm | 53.5 | Ø5 |

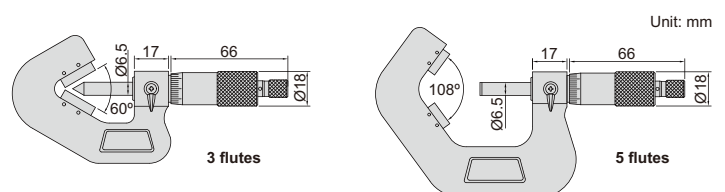
V-ANVIL MICROMETERS

- Meet DIN863-3
- Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 or 5 flutes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

| Code | Range | Flutes | Accuracy |
|-----------|---------|--------|----------|
| 3290-153A | 1-15mm | 3 | 4µm |
| 3290-203A | 5-20mm | 3 | 4µm |
| 3290-353A | 20-35mm | 3 | 5µm |
| 3290-503A | 35-50mm | 3 | 5µm |
| 3290-653A | 50-65mm | 3 | 6µm |
| 3290-803A | 65-80mm | 3 | 6µm |
| 3290-953A | 80-95mm | 3 | 7µm |
| 3290-255A | 5-25mm | 5 | 4µm |
| 3290-455A | 25-45mm | 5 | 5µm |
| 3290-655A | 45-65mm | 5 | 6µm |
| 3290-855A | 65-85mm | 5 | 7µm |



3290-153A



Unit: mm

DIGITAL V-ANVIL MICROMETERS

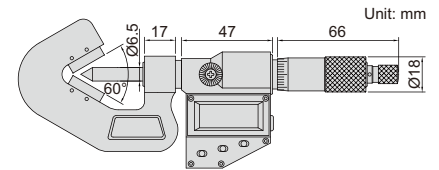
- Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 flutes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



IP54
WATERPROOF

DATA
OUTPUT

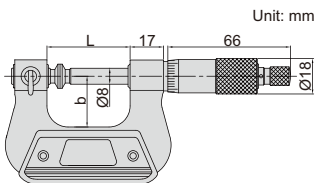
3590-153A



| Code | Range | Flutes | Accuracy |
|-----------|------------------|--------|----------|
| 3590-153A | 1-15mm/0.04-0.6" | 3 | ±4µm |
| 3590-203A | 5-20mm/0.2-0.8" | 3 | ±4µm |
| 3590-353A | 20-35mm/0.8-1.4" | 3 | ±5µm |
| 3590-503A | 35-50mm/1.4-2.0" | 3 | ±5µm |

NON-ROTATING
SPINDLE

NON-ROTATING SPINDLE UNIVERSAL MICROMETERS



3280-25A

- Meet DIN863-3
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Setting standards are included (except 0-25mm)
- Optional accessory: 55° anvil/spindle tip (code 3280-SP1 and 3280-SP2)

| Code | Range | Accuracy | L | b |
|----------|---------|----------|----|----|
| 3280-25A | 0-25mm | 4µm | 42 | 26 |
| 3280-50A | 25-50mm | 4µm | 67 | 38 |

55° anvil/spindle tip (optional)

| Code | Tip | Unit: mm |
|---------------|------------|----------|
| Code 3280-SP1 | Knife-edge | |
| Code 3280-SP2 | Point | |

Anvil/spindle tip (included)

Unit: mm

| Tip Type | Diagram | Image |
|------------|---------|-------|
| Flat | | |
| Spherical | | |
| Spline | | |
| Disk | | |
| Blade | | |
| Knife-edge | | |
| Point | | |

IP54
WATERPROOF

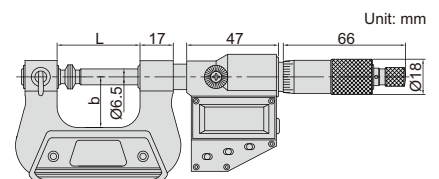
DATA
OUTPUT

DIGITAL UNIVERSAL MICROMETERS

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip (same as series 3280)
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: 55° anvil/spindle tip code 3280-SP1 and 3280-SP2 (same as series 3280), data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



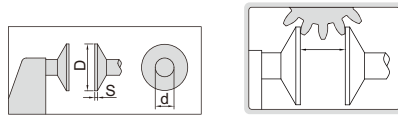
3580-25A



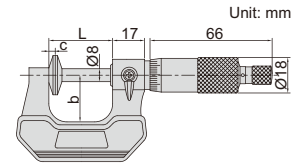
| Code | Range | Accuracy | L | b |
|----------|--------------|----------|----|----|
| 3580-25A | 0-25mm/0-1" | ±4µm | 42 | 26 |
| 3580-50A | 25-50mm/1-2" | ±4µm | 67 | 38 |

DISK MICROMETERS

- Meet DIN863-3
- Measure root tangent length of gear
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards



3282-25

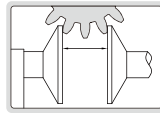


(mm)

| Code | Range | Accuracy | Parallelism | L | b | c | D | S | d |
|----------|----------|----------|-------------|-----|----|-----|-----|-----|----|
| 3282-25 | 0-25mm | 4µm | 5µm | 34 | 24 | 3.3 | Ø20 | 0.7 | Ø8 |
| 3282-50 | 25-50mm | 4µm | 5µm | 59 | 32 | 3.3 | Ø20 | 0.7 | Ø8 |
| 3282-75 | 50-75mm | 5µm | 5µm | 85 | 45 | 3.3 | Ø20 | 0.7 | Ø8 |
| 3282-100 | 75-100mm | 5µm | 5µm | 110 | 57 | 3.3 | Ø20 | 0.7 | Ø8 |

NON-ROTATING SPINDLE DISK MICROMETERS

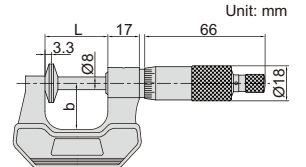
- Meet DIN863-3
- Measure root tangent length of gear
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards



NON-ROTATING SPINDLE

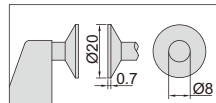


3294-25



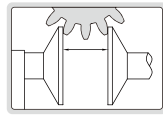
(mm)

| Code | Range | Accuracy | Parallelism | L | b |
|----------|----------|----------|-------------|-----|----|
| 3294-25 | 0-25mm | 4µm | 5µm | 34 | 24 |
| 3294-50 | 25-50mm | 4µm | 5µm | 59 | 32 |
| 3294-75 | 50-75mm | 5µm | 5µm | 85 | 45 |
| 3294-100 | 75-100mm | 5µm | 5µm | 110 | 57 |



DIGITAL NON-ROTATING SPINDLE DISK MICROMETERS

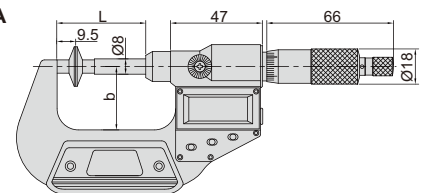
- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



NON-ROTATING SPINDLE

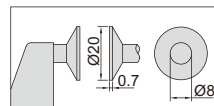
DATA OUTPUT

3594-25A



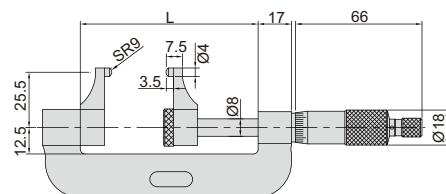
(mm)

| Code | Range | Accuracy | Parallelism | L | b |
|-----------|---------------|----------|-------------|-------|------|
| 3594-25A | 0-25mm/0-1" | ±4µm | 5µm | 43 | 32 |
| 3594-50A | 25-50mm/1-2" | ±4µm | 5µm | 68 | 44.5 |
| 3594-75A | 50-75mm/2-3" | ±5µm | 5µm | 93 | 57 |
| 3594-100A | 75-100mm/3-4" | ±5µm | 5µm | 118.5 | 70 |

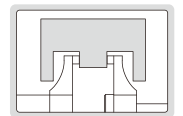


CALIPER TYPE MICROMETERS

- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



Unit: mm

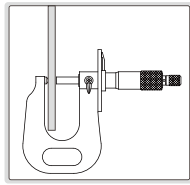


3238-25

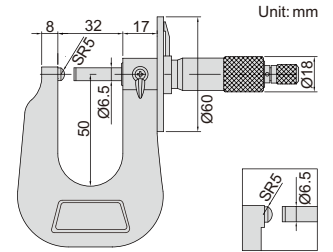
| Code | Range | Accuracy | L |
|---------|---------|----------|----|
| 3238-25 | 0-25mm | 5µm | 56 |
| 3238-50 | 25-50mm | 6µm | 81 |

SHEET METAL MICROMETER

- Meet DIN863-3
- Measure thickness of sheet metal, paper, plastic and rubber parts
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3263-25A



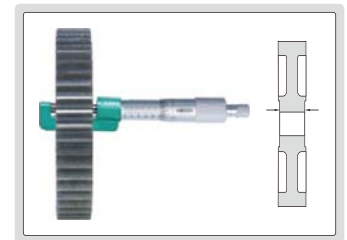
| Code | Range | Accuracy |
|----------|--------|----------|
| 3263-25A | 0-25mm | 4µm |

HUB MICROMETERS

- Meet DIN863-3
- Measure hub thickness and shoulder inside a bore
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

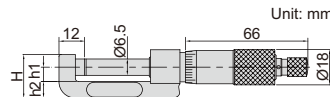


3292-25



(mm)

| Code | Range | Accuracy | h1 | h2 | H |
|----------|----------|----------|-----|----|------|
| 3292-25 | 0-25mm | 4µm | 6 | 9 | 18.7 |
| 3292-50 | 25-50mm | 4µm | 6.5 | 11 | 21.2 |
| 3292-75 | 50-75mm | 5µm | 6.5 | 11 | 21.2 |
| 3292-100 | 75-100mm | 5µm | 6.5 | 11 | 21.2 |

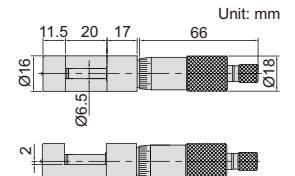
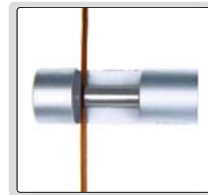


WIRE MICROMETER

- Meet DIN863-3
- Measure diameter of wires and small balls
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3285-10



| Code | Range | Accuracy |
|---------|--------|----------|
| 3285-10 | 0-10mm | 4µm |

CAN SEAM MICROMETERS



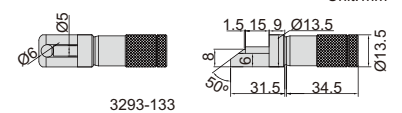
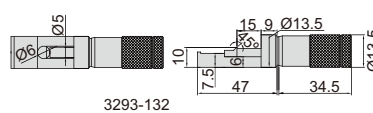
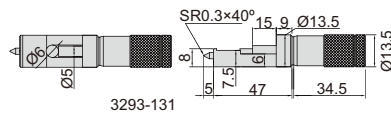
3293-131



3293-132

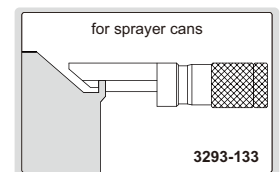
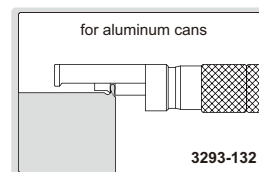
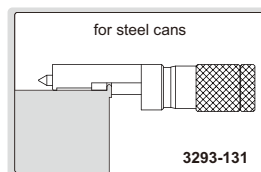


3293-133



- Measure the width, height and depth of can seams
- Graduation 0.01mm

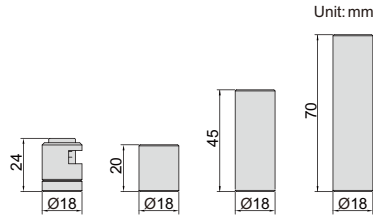
| Code | Range | Accuracy |
|----------|--------|----------|
| 3293-131 | 0-13mm | 4µm |
| 3293-132 | 0-13mm | 4µm |
| 3293-133 | 0-13mm | 4µm |



MICROMETER MEASURING FORCE DETECTOR

- For outside micrometers
0-25mm/0-1", 25-50mm/1-2",
50-75mm/2-3" and 75-100mm/3-4"

| Code | Measuring force |
|------|-----------------|
| 6315 | 5-12N |



6315

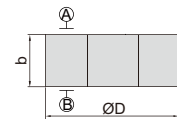
OPTICAL PARALLELS

- Check the flatness and parallelism of measuring faces of micrometer
- Flatness of A and B: 0.03 μ m
- Parallelism between A and B: 0.6 μ m



4184-41A

| Code | Parallels included (b) | ØD | Applicable micrometer |
|----------|------------------------------------|------|-----------------------|
| 4184-41A | 15.62mm, 15.75mm, 15.87mm, 16.00mm | 30mm | 0-25mm |
| 4184-42A | 40.62mm, 40.75mm, 40.87mm, 41.00mm | 30mm | 25-50mm |
| 4184-43B | 65.62mm, 65.75mm, 65.87mm, 66.00mm | 40mm | 50-75mm |
| 4184-44B | 90.62mm, 90.75mm, 90.87mm, 91.00mm | 50mm | 75-100mm |

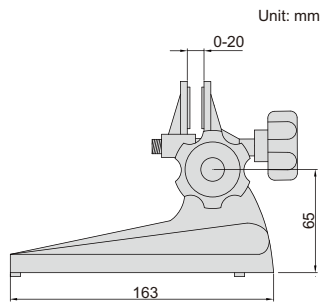


MICROMETER STAND

- Suitable for micrometers up to 100mm

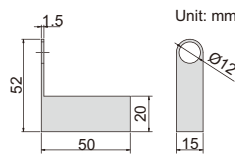


| Code |
|------|
| 6301 |



6301

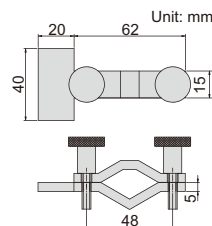
- Suitable for inside micrometers



6301-1

| Code | Description | Applicable products |
|--------|------------------------------|--------------------------|
| 6301-1 | clamp for inside micrometers | all sizes of 3220 series |

- Suitable for three points internal micrometers



6301-2

| Code | Description | Applicable products |
|--------|---|-------------------------------------|
| 6301-2 | clamp for three points internal micrometers | up to 100mm of 3127 and 3227 series |

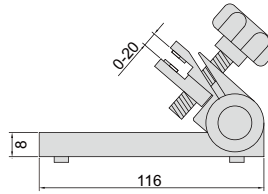
MICROMETER STAND

- Suitable for micrometers up to 100mm



6300

Unit: mm

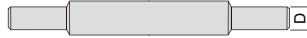


Code
6300

MICROMETER SETTING STANDARDS



6310-100



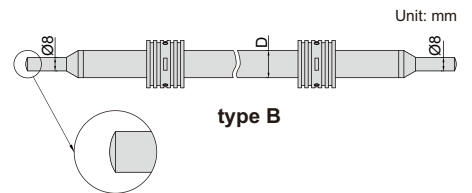
type A



6310-300

| (mm) | | | | |
|----------|--------|------|----------|-----|
| Code | Length | Type | Accuracy | D |
| 6310-25 | 25 | A | ±1.5µm | Ø7 |
| 6310-50 | 50 | A | ±2µm | Ø7 |
| 6310-75 | 75 | A | ±2.5µm | Ø7 |
| 6310-100 | 100 | A | ±3µm | Ø8 |
| 6310-125 | 125 | A | ±3.5µm | Ø8 |
| 6310-150 | 150 | A | ±4µm | Ø8 |
| 6310-175 | 175 | A | ±4.5µm | Ø8 |
| 6310-200 | 200 | A | ±5µm | Ø8 |
| 6310-225 | 225 | A | ±5.5µm | Ø8 |
| 6310-250 | 250 | A | ±6µm | Ø8 |
| 6310-275 | 275 | A | ±6.5µm | Ø8 |
| 6310-300 | 300 | B | ±7µm | Ø16 |
| 6310-325 | 325 | B | ±7.5µm | Ø16 |
| 6310-350 | 350 | B | ±8µm | Ø16 |
| 6310-375 | 375 | B | ±8.5µm | Ø16 |
| 6310-400 | 400 | B | ±9µm | Ø16 |
| 6310-425 | 425 | B | ±9.5µm | Ø16 |

| (mm) | | | | |
|-----------|--------|------|----------|-----|
| Code | Length | Type | Accuracy | D |
| 6310-450 | 450 | B | ±10µm | Ø16 |
| 6310-475 | 475 | B | ±10.5µm | Ø16 |
| 6310-500 | 500 | B | ±11µm | Ø16 |
| 6310-525 | 525 | B | ±11.5µm | Ø16 |
| 6310-575 | 575 | B | ±12.5µm | Ø16 |
| 6310-625 | 625 | B | ±13.5µm | Ø16 |
| 6310-675 | 675 | B | ±14.5µm | Ø16 |
| 6310-725 | 725 | B | ±15.5µm | Ø16 |
| 6310-775 | 775 | B | ±16.5µm | Ø16 |
| 6310-825 | 825 | B | ±17.5µm | Ø16 |
| 6310-875 | 875 | B | ±18.5µm | Ø16 |
| 6310-925 | 925 | B | ±19.5µm | Ø16 |
| 6310-975 | 975 | B | ±20.5µm | Ø16 |
| 6310-1050 | 1050 | B | ±22µm | Ø23 |
| 6310-1150 | 1150 | B | ±24µm | Ø23 |
| 6310-1250 | 1250 | B | ±26µm | Ø23 |
| 6310-1350 | 1350 | B | ±28µm | Ø23 |



type B

Unit: mm

| (mm) | | | | |
|-----------|--------|------|----------|-----|
| Code | Length | Type | Accuracy | D |
| 6310-1450 | 1450 | B | ±30µm | Ø23 |
| 6310-1550 | 1550 | B | ±32µm | Ø23 |
| 6310-1650 | 1650 | B | ±34µm | Ø23 |
| 6310-1750 | 1750 | B | ±36µm | Ø23 |
| 6310-1850 | 1850 | B | ±38µm | Ø23 |
| 6310-1950 | 1950 | B | ±40µm | Ø23 |

IP54
WATERPROOF

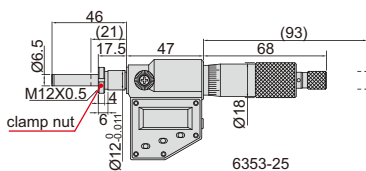
DATA
OUTPUT

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

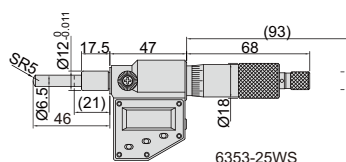


6353-25W

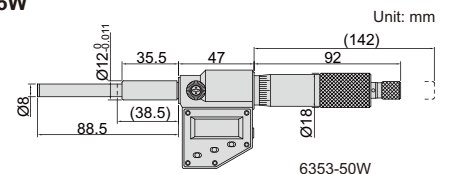
DIGITAL MICROMETER HEADS



6353-25



6353-25WS



6353-50W

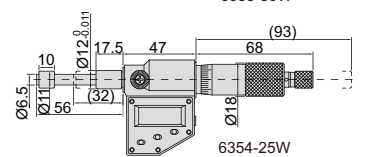
Unit: mm

Rotating spindle

| Code | Range | Stem | Spindle tip | Accuracy |
|-----------|-------------|----------------|-----------------|----------|
| 6353-25 | 0-25mm/0-1" | with clamp nut | flat (carbide) | ±2µm |
| 6353-25W | 0-25mm/0-1" | plain | flat (carbide) | ±2µm |
| 6353-25S | 0-25mm/0-1" | with clamp nut | spherical (SR5) | ±2µm |
| 6353-25WS | 0-25mm/0-1" | plain | spherical (SR5) | ±2µm |
| 6353-50W | 0-50mm/0-2" | plain | flat (carbide) | ±4µm |

Non-rotating spindle

| Code | Range | Stem | Spindle tip | Accuracy |
|----------|-------------|-------|-------------|----------|
| 6354-25W | 0-25mm/0-1" | plain | flat | ±2µm |



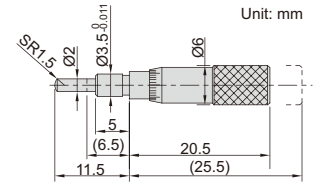
6354-25W

SMALL MICROMETER HEAD

- Graduation 0.02mm



6372-5WS



| Code | Range | Stem | Spindle tip | Accuracy |
|----------|-------|-------|-------------------|----------|
| 6372-5WS | 0-5mm | plain | spherical (SR1.5) | 5µm |

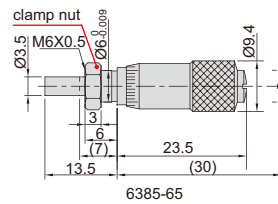
SMALL MICROMETER HEADS

- Range 0-6.5mm
- Graduation 0.01mm
- Accuracy 5µm

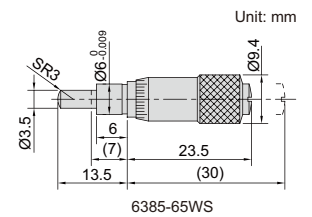


6385-65W

| Code | Stem | Spindle tip |
|-----------|----------------|-----------------|
| 6385-65 | with clamp nut | flat |
| 6385-65W | plain | flat |
| 6385-65S | with clamp nut | spherical (SR3) |
| 6385-65WS | plain | spherical (SR3) |



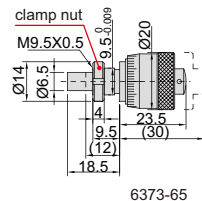
6385-65



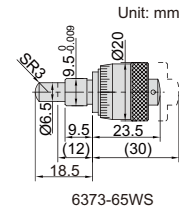
6385-65WS

LARGE THIMBLE MICROMETER HEADS

- Meet DIN863-2
- Large thimble diameter for easy reading
- Graduation 0.01mm
- Accuracy 3µm



6373-65

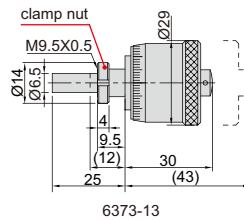


6373-65WS

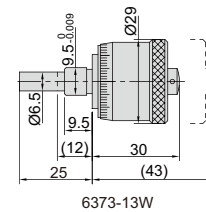


6373-65

| Code | Range | Stem | Spindle tip |
|-----------|---------|----------------|-----------------|
| 6373-65 | 0-6.5mm | with clamp nut | flat |
| 6373-65W | 0-6.5mm | plain | flat |
| 6373-65S | 0-6.5mm | with clamp nut | spherical (SR3) |
| 6373-65WS | 0-6.5mm | plain | spherical (SR3) |
| 6373-13 | 0-13mm | with clamp nut | flat |
| 6373-13W | 0-13mm | plain | flat |



6373-13



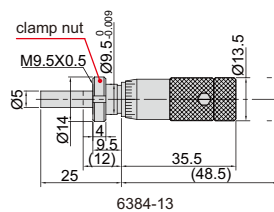
6373-13W



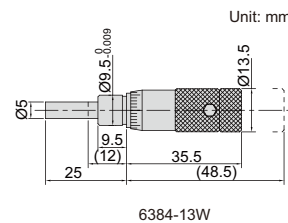
6373-13

MICROMETER HEADS WITH ZERO ADJUSTABLE THIMBLE

- Meet DIN863-2
- Range 0-13mm
- Graduation 0.01mm
- Accuracy 3µm
- The thimble can be set to zero at any position



6384-13



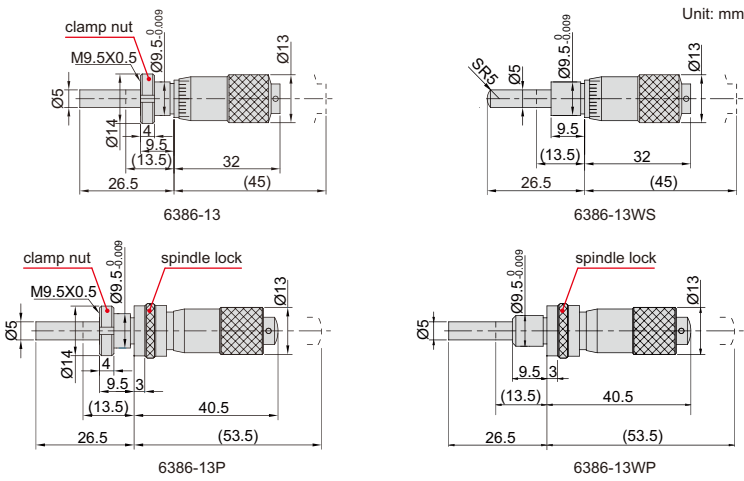
6384-13W



6384-13W

| Code | Stem | Spindle tip |
|----------|----------------|-------------|
| 6384-13 | with clamp nut | flat |
| 6384-13W | plain | flat |

MICROMETER HEADS



6386-13W



6386-13P

| Code | Range | Stem | Spindle tip | Remark | Accuracy |
|-----------|--------|----------------|-----------------|-------------------|----------|
| 6386-13 | 0-13mm | with clamp nut | flat | | 3µm |
| 6386-13W | 0-13mm | plain | flat | | 3µm |
| 6386-13S | 0-13mm | with clamp nut | spherical (SR5) | | 3µm |
| 6386-13WS | 0-13mm | plain | spherical (SR5) | | 3µm |
| 6386-13P | 0-13mm | with clamp nut | flat | with spindle lock | 3µm |
| 6386-13WP | 0-13mm | plain | flat | with spindle lock | 3µm |

- Meet DIN863-2
- Graduation 0.01mm

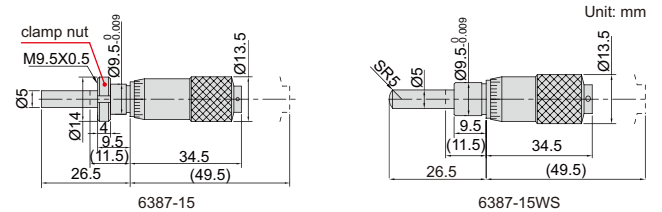
MICROMETER HEADS

- Meet DIN863-2
- Graduation 0.01mm
- Accuracy 3µm



6387-15WS

| Code | Range | Stem | Spindle tip |
|-----------|--------|----------------|-----------------|
| 6387-15 | 0-15mm | with clamp nut | flat |
| 6387-15W | 0-15mm | plain | flat |
| 6387-15S | 0-15mm | with clamp nut | spherical (SR5) |
| 6387-15WS | 0-15mm | plain | spherical (SR5) |

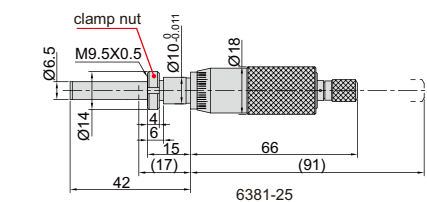
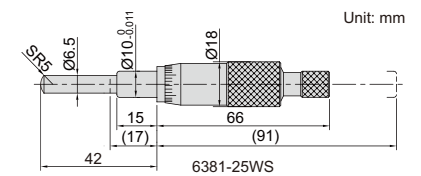


MICROMETER HEADS

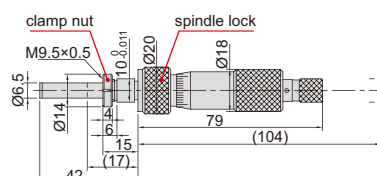


6381-25

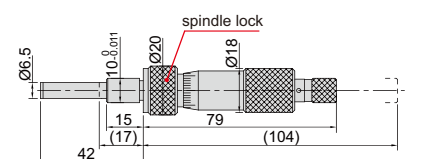
6381-25P



6381-25



6381-25P



6381-25WP

| Code | Range | Stem | Spindle tip | Remark | Accuracy |
|-----------|--------|----------------|-----------------|-------------------|----------|
| 6381-25 | 0-25mm | with clamp nut | flat (carbide) | | 3µm |
| 6381-25W | 0-25mm | plain | flat (carbide) | | 3µm |
| 6381-25S | 0-25mm | with clamp nut | spherical (SR5) | | 3µm |
| 6381-25WS | 0-25mm | plain | spherical (SR5) | | 3µm |
| 6381-25P | 0-25mm | with clamp nut | flat (carbide) | with spindle lock | 3µm |
| 6381-25WP | 0-25mm | plain | flat (carbide) | with spindle lock | 3µm |

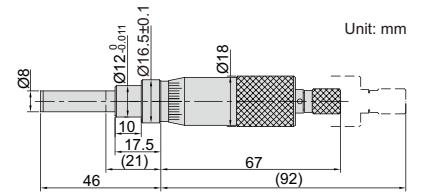
- Meet DIN863-2
- Graduation 0.01mm
- Ratchet stop

NON-ROTATING SPINDLE MICROMETER HEAD



6377-25W

- Meet DIN863-2
- Graduation 0.01mm
- Ratchet stop
- Non-rotating spindle



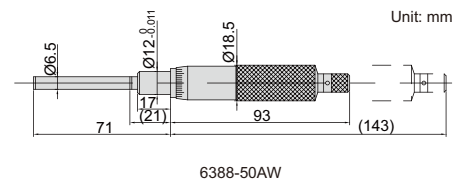
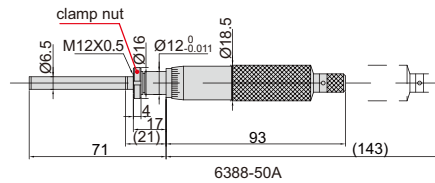
| Code | Range | Stem | Spindle tip | Accuracy |
|----------|--------|-------|----------------|----------|
| 6377-25W | 0-25mm | plain | flat (carbide) | 3µm |

LARGE MICROMETER HEADS



6388-50AW

- Graduation 0.01mm
- Ratchet stop



| Code | Range | Stem | Spindle tip | Accuracy |
|-----------|--------|----------------|----------------|----------|
| 6388-50A | 0-50mm | with clamp nut | flat (carbide) | 5µm |
| 6388-50AW | 0-50mm | plain | flat (carbide) | 5µm |

QUICK SPINDLE FEEDING MICROMETER HEADS



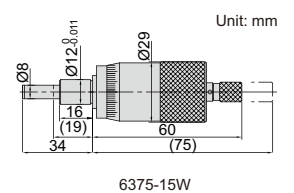
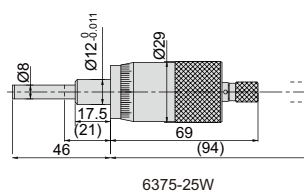
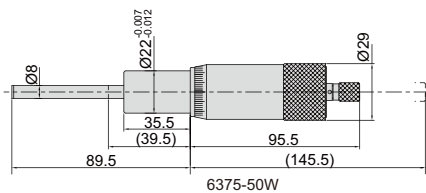
6375-50W



6375-25W



6375-15W



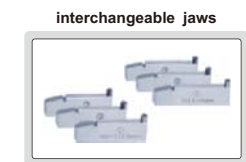
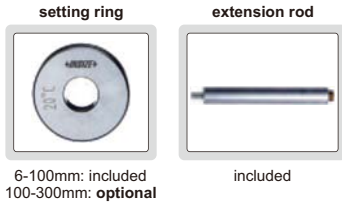
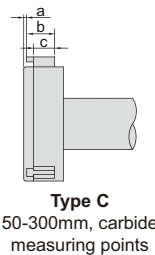
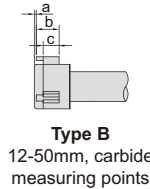
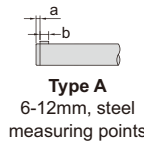
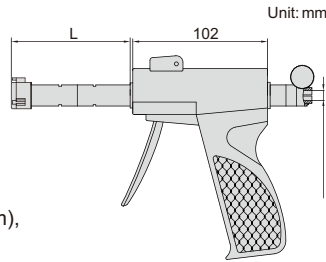
| Code | Range | Stem | Spindle tip | Accuracy |
|----------|--------|-------|----------------|----------|
| 6375-15W | 0-15mm | plain | flat (carbide) | 3µm |
| 6375-25W | 0-25mm | plain | flat (carbide) | 3µm |
| 6375-50W | 0-50mm | plain | flat (carbide) | 5µm |

- Micrometers up to 25mm meet DIN863-2
- Graduation 0.01mm
- Quick spindle feed of 1mm/rev.
- Ratchet stop



PISTOL GRIP THREE POINTS BORE GAGES

- Optional accessory:
digital indicators (code **2103-10F**, resolution 0.001mm/0.00005")
or dial indicators (graduation 0.001mm),
setting rings (code **6312**)



100-300mm: have two sets of jaws for different measuring range (For example, 2124-125 has 100-112.5mm and 112.5-125mm jaws)



Individual

| Code | Range | Type | Accuracy (without digital indicator) | Setting ring | Extension rod (included) | L | a | b | c |
|-----------|-----------|------|--------------------------------------|---------------------|--------------------------|-----|-----|------|------|
| 2124-8* | 6-8mm | A | 4µm | Ø6mm (included) | 100mm | 50 | 1.5 | 2.5 | — |
| 2124-10* | 8-10mm | A | 4µm | Ø8mm (included) | 100mm | 50 | 1.5 | 2.5 | — |
| 2124-12* | 10-12mm | A | 4µm | Ø10mm (included) | 100mm | 50 | 1.5 | 2.5 | — |
| 2124-16* | 12-16mm | B | 4µm | Ø16mm (included) | 150mm | 65 | 0.5 | 6 | 4.5 |
| 2124-20* | 16-20mm | B | 4µm | Ø16mm (included) | 150mm | 65 | 0.5 | 6 | 4.5 |
| 2124-25* | 20-25mm | B | 4µm | Ø25mm (included) | 150mm | 91 | 0.5 | 8 | 6 |
| 2124-30* | 25-30mm | B | 4µm | Ø25mm (included) | 150mm | 91 | 0.5 | 8 | 6 |
| 2124-40* | 30-40mm | B | 4µm | Ø40mm (included) | 150mm | 97 | 0.5 | 14 | 12 |
| 2124-50* | 40-50mm | B | 5µm | Ø40mm (included) | 150mm | 97 | 0.5 | 14 | 12 |
| 2124-63* | 50-63mm | C | 5µm | Ø62mm (included) | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-75* | 62-75mm | C | 5µm | Ø62mm (included) | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-88* | 75-88mm | C | 5µm | Ø87mm (included) | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-100* | 87-100mm | C | 5µm | Ø87mm (included) | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-125* | 100-125mm | C | 5µm | Ø112.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-150* | 125-150mm | C | 5µm | Ø137.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-175* | 150-175mm | C | 5µm | Ø162.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-200* | 175-200mm | C | 5µm | Ø187.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-225 | 200-225mm | C | 7µm | Ø212.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-250 | 225-250mm | C | 7µm | Ø237.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-275 | 250-275mm | C | 7µm | Ø262.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |
| 2124-300 | 275-300mm | C | 7µm | Ø287.5mm (optional) | 150mm | 130 | 0.5 | 19.5 | 14.5 |

Set

| Code | Range | Probes included | Setting ring (included) | Extension rod (included) |
|-------------|----------|-------------------------------------|-------------------------|--------------------------|
| 2124-S123* | 6-12mm | 6-8mm, 8-10mm, 10-12mm | Ø6mm, Ø8mm, Ø10mm | 100mm |
| 2124-S202* | 12-20mm | 12-16mm, 16-20mm | Ø16mm | 150mm |
| 2124-S504* | 20-50mm | 20-25mm, 25-30mm, 30-40mm, 40-50mm | Ø25mm, Ø40mm | 150mm |
| 2124-S1004* | 50-100mm | 50-63mm, 62-75mm, 75-88mm, 87-100mm | Ø62mm, Ø87mm | 150mm |

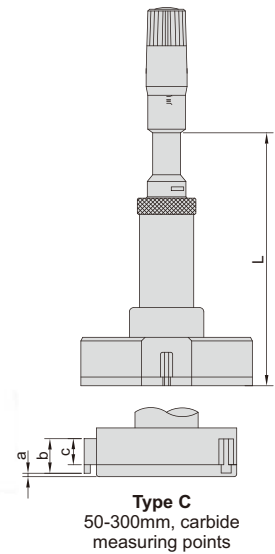
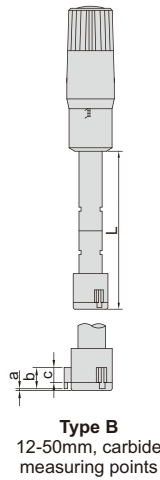
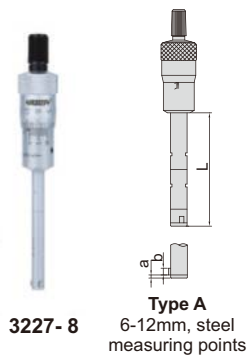
* Supplied with manufacturer inspection certificate



2124-S504

THREE POINTS INTERNAL MICROMETERS

**INSPECTION
CERTIFICATE**



- Meet DIN863-4
- 6-12mm: graduation 0.001mm
12-300mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)



Individual

| Code | Range | Type | Accuracy | Setting ring | Extension rod (included) | L | a | b | c |
|------------------|-----------|------|----------|---------------------|--------------------------|------|-----|------|------|
| 3227-8* | 6-8mm | A | 4µm | Ø6mm (included) | 100mm | 54.5 | 1.5 | 2.5 | — |
| 3227-10* | 8-10mm | A | 4µm | Ø8mm (included) | 100mm | 54.5 | 1.5 | 2.5 | — |
| 3227-12* | 10-12mm | A | 4µm | Ø10mm (included) | 100mm | 54.5 | 1.5 | 2.5 | — |
| 3227-16* | 12-16mm | B | 4µm | Ø16mm (included) | 150mm | 80 | 0.5 | 6 | 4.5 |
| 3227-20* | 16-20mm | B | 4µm | Ø16mm (included) | 150mm | 80 | 0.5 | 6 | 4.5 |
| 3227-25* | 20-25mm | B | 4µm | Ø25mm (included) | 150mm | 90 | 0.5 | 8 | 6 |
| 3227-30* | 25-30mm | B | 4µm | Ø25mm (included) | 150mm | 90 | 0.5 | 8 | 6 |
| 3227-40* | 30-40mm | B | 4µm | Ø40mm (included) | 150mm | 97 | 0.5 | 14 | 12 |
| 3227-50* | 40-50mm | B | 5µm | Ø40mm (included) | 150mm | 97 | 0.5 | 14 | 12 |
| 3227-63* | 50-63mm | C | 5µm | Ø62mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3227-75* | 62-75mm | C | 5µm | Ø62mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3227-88* | 75-88mm | C | 5µm | Ø87mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3227-100* | 87-100mm | C | 5µm | Ø87mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3227-125* | 100-125mm | C | 5µm | Ø112.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-150* | 125-150mm | C | 5µm | Ø137.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-175* | 150-175mm | C | 5µm | Ø162.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-200* | 175-200mm | C | 5µm | Ø187.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-225 | 200-225mm | C | 7µm | Ø212.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-250 | 225-250mm | C | 7µm | Ø237.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-275 | 250-275mm | C | 7µm | Ø262.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |
| 3227-300 | 275-300mm | C | 7µm | Ø287.5mm (optional) | 150mm | 145 | 0.5 | 19.5 | 14.5 |

(mm)

setting ring



6-100mm: included
100-300mm: optional

extension rod



included

interchangeable jaws



100-300mm: have two sets of jaws for different measuring range (For example, 3227-125 has 100-112.5mm and 112.5-125mm jaws)

Set

| Code | Range | Micrometers included | Setting ring (included) | Extension rod (included) |
|-------------------|----------|-------------------------------------|-------------------------|--------------------------|
| 3227-123* | 6-12mm | 6-8mm, 8-10mm, 10-12mm | Ø6mm, Ø8mm, Ø10mm | 100mm |
| 3227-202* | 12-20mm | 12-16mm, 16-20mm | Ø16mm | 150mm |
| 3227-504* | 20-50mm | 20-25mm, 25-30mm, 30-40mm, 40-50mm | Ø25mm, Ø40mm | 150mm |
| 3227-1004* | 50-100mm | 50-63mm, 62-75mm, 75-88mm, 87-100mm | Ø62mm, Ø87mm | 150mm |

* Supplied with manufacturer inspection certificate



3227-504



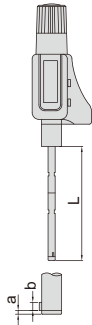
IP54
WATERPROOF

DATA
OUTPUT

DIGITAL THREE POINTS INTERNAL MICROMETERS



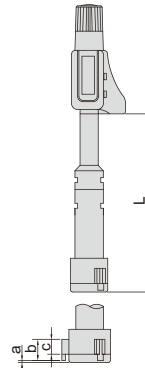
3127-12



Type A
6-12mm, steel
measuring points



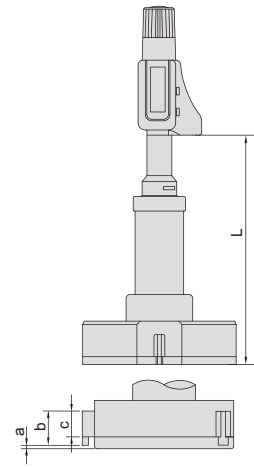
3127-40



Type B
12-50mm, carbide
measuring points



3127-125



Type C
50-300mm, carbide
measuring points

- Meet DIN863-4
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code **7306-30A**, **7302-SPC6**, **7305-SPC3A**), setting ring (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)



setting ring



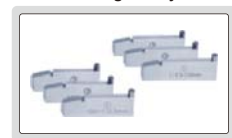
6-100mm: included
100-300mm: optional

extension rod



included

interchangeable jaws



100-300mm: have two sets of jaws for different measuring range (For example, 3227-125 has 100-112.5mm and 112.5-125mm jaws)

Individual

(mm)

| Code | Range | Type | Accuracy | Setting ring | Extension rod (included) | L | a | b | c |
|------------------|------------------------|------|----------|---------------------|--------------------------|------|-----|------|------|
| 3127-8* | 6-8mm/0.24-0.31" | A | 4µm | Ø6mm (included) | 100mm | 54.5 | 1.5 | 2.5 | — |
| 3127-10* | 8-10mm/0.31-0.39" | A | 4µm | Ø8mm (included) | 100mm | 54.5 | 1.5 | 2.5 | — |
| 3127-12* | 10-12mm/0.39-0.47" | A | 4µm | Ø10mm (included) | 100mm | 54.5 | 1.5 | 2.5 | — |
| 3127-16* | 12-16mm/0.47-0.63" | B | 4µm | Ø16mm (included) | 150mm | 80 | 0.5 | 6 | 4.5 |
| 3127-20* | 16-20mm/0.63-0.79" | B | 4µm | Ø16mm (included) | 150mm | 80 | 0.5 | 6 | 4.5 |
| 3127-25* | 20-25mm/0.79-0.98" | B | 4µm | Ø25mm (included) | 150mm | 90 | 0.5 | 8 | 6 |
| 3127-30* | 25-30mm/0.98-1.18" | B | 4µm | Ø25mm (included) | 150mm | 90 | 0.5 | 8 | 6 |
| 3127-40* | 30-40mm/1.18-1.57" | B | 4µm | Ø40mm (included) | 150mm | 97 | 0.5 | 14 | 12 |
| 3127-50* | 40-50mm/1.57-1.97" | B | 5µm | Ø40mm (included) | 150mm | 97 | 0.5 | 14 | 12 |
| 3127-63* | 50-63mm/1.97-2.48" | C | 5µm | Ø62mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3127-75* | 62-75mm/2.44-2.95" | C | 5µm | Ø62mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3127-88* | 75-88mm/2.95-3.46" | C | 5µm | Ø87mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3127-100* | 87-100mm/3.43-3.94" | C | 5µm | Ø87mm (included) | 150mm | 114 | 0.5 | 17.5 | 14.5 |
| 3127-125* | 100-125mm/3.94-4.92" | C | 5µm | Ø112.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-150* | 125-150mm/4.92-5.91" | C | 5µm | Ø137.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-175* | 150-175mm/5.91-6.89" | C | 5µm | Ø162.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-200* | 175-200mm/6.89-7.87" | C | 5µm | Ø187.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-225* | 200-225mm/7.87-8.86" | C | 7µm | Ø212.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-250* | 225-250mm/8.86-9.84" | C | 7µm | Ø237.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-275* | 250-275mm/9.84-10.83" | C | 7µm | Ø262.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |
| 3127-300* | 275-300mm/10.83-11.81" | C | 7µm | Ø287.5mm (optional) | 150mm | 150 | 0.5 | 19.5 | 14.5 |

Set

| Code | Range | Micrometers included | Setting ring (included) | Extension rod (included) |
|-------------------|---------------------|-------------------------------------|-------------------------|--------------------------|
| 3127-123* | 6-12mm/0.24-0.47" | 6-8mm, 8-10mm, 10-12mm | Ø6mm, Ø8mm, Ø10mm | 100mm |
| 3127-202* | 12-20mm/0.47-0.79" | 12-16mm, 16-20mm | Ø16mm | 150mm |
| 3127-504* | 20-50mm/0.79-1.97" | 20-25mm, 25-30mm, 30-40mm, 40-50mm | Ø25mm, Ø40mm | 150mm |
| 3127-1004* | 50-100mm/1.97-3.94" | 50-63mm, 62-75mm, 75-88mm, 87-100mm | Ø62mm, Ø87mm | 150mm |

* Supplied with manufacturer inspection certificate



3127-504

WIDE RANGE THREE POINTS INTERNAL MICROMETERS

- Meet DIN863-4
- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Setting rings are included (except 200-300mm)

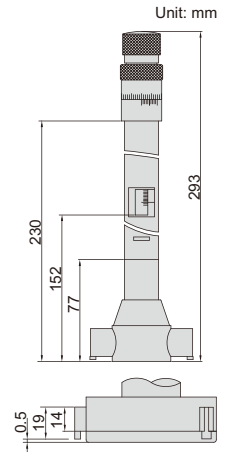
**INSPECTION
CERTIFICATE**

| Code | Range | Accuracy | Setting ring |
|-----------|-----------|----------|-------------------|
| 3228-70* | 50-70mm | 5µm | Ø50mm (included) |
| 3228-100* | 70-100mm | 5µm | Ø70mm (included) |
| 3228-150* | 100-150mm | 6µm | Ø100mm (included) |
| 3228-250* | 150-250mm | 8µm | Ø150mm (included) |
| 3228-300* | 200-300mm | 9µm | Ø200mm (optional) |

* Supplied with manufacturer inspection certificate



3228-70



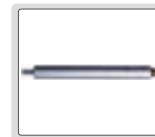
DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS

**IP54
WATERPROOF**

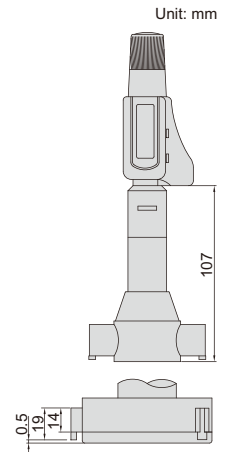
**DATA
OUTPUT**

**INSPECTION
CERTIFICATE**

- Meet DIN863-4
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except 200-300mm)
- Optional accessory: data output cable (code 7306-30A, 7302-SPC6, 7305-SPC3A)



3128-70

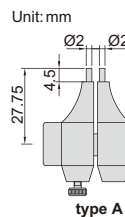


| Code | Range | Accuracy | Setting ring | Extension rod (included) |
|-----------|-----------------------|----------|-------------------|--------------------------|
| 3128-70* | 50-70mm/1.97-2.76" | 5µm | Ø50mm (included) | 150mm |
| 3128-100* | 70-100mm/2.76-3.94" | 5µm | Ø70mm (included) | 150mm |
| 3128-150* | 100-150mm/3.94-5.91" | 6µm | Ø100mm (included) | 150mm |
| 3128-250* | 150-250mm/5.91-9.84" | 8µm | Ø150mm (included) | 150mm |
| 3128-300* | 200-300mm/7.87-11.81" | 9µm | Ø200mm (optional) | 150mm |

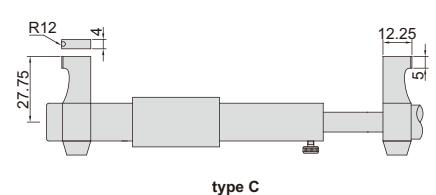
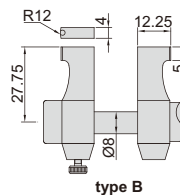
* Supplied with manufacturer inspection certificate

INSIDE MICROMETERS

- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (code 6312), micrometer stand and clamp (code 6301 and 6301-1)



3220-50



| Code | Range | Type | Setting ring | Accuracy |
|----------|----------|------|-----------------|----------|
| 3220-30 | 5-30mm | A | 5mm (included) | 7µm |
| 3220-50 | 25-50mm | B | 25mm (included) | 8µm |
| 3220-75 | 50-75mm | B | 50mm (optional) | 9µm |
| 3220-100 | 75-100mm | C | 75mm (optional) | 10µm |

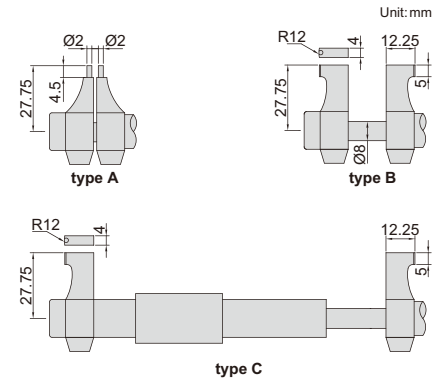
DATA
OUTPUT

DIGITAL INSIDE MICROMETERS

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code **7306-30**, **7302-SPC2A**, **7305-SPC3**), setting ring (code **6312**)



3520-30



| Code | Range | Type | Setting ring | Accuracy |
|----------|-----------------|------|-----------------|----------|
| 3520-30 | 5-30mm/0.2-1.2" | A | 5mm (included) | ±5µm |
| 3520-50 | 25-50mm/1-2" | B | 25mm (included) | ±6µm |
| 3520-75 | 50-75mm/2-3" | B | 50mm (optional) | ±7µm |
| 3520-100 | 75-100mm/3-4" | C | 75mm (optional) | ±8µm |



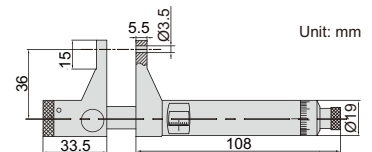
INTERNAL SCREW THREAD MICROMETERS

- Measure pitch diameter of screw thread
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: measuring tips for internal screw thread micrometer (code **7385**)

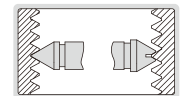
tips are not included



3640-45



| Code | Range | Accuracy | Applicable tips |
|----------|----------|----------|----------------------|
| 3640-45 | 20-45mm | 4µm | stem length L=5mm |
| 3640-70 | 45-70mm | 5µm | stem length L=5mm |
| 3640-95 | 70-95mm | 5µm | stem length L=13.5mm |
| 3640-120 | 95-120mm | 6µm | stem length L=13.5mm |



RELATIVE PRODUCT:
GEAR BORE GAGE (CODE 2428)



INTERNAL GEAR TOOTH MICROMETERS

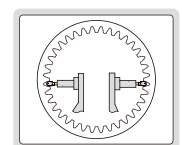
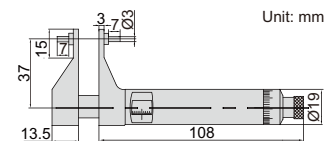
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code **7383**)

before ball tips
are installed



3637-50

ball tips are not included



| Code | Range | Accuracy |
|---------|---------|----------|
| 3637-50 | 25-50mm | 4µm |
| 3637-75 | 50-75mm | 5µm |

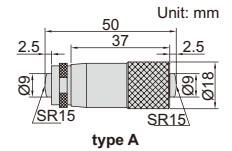
TUBULAR INSIDE MICROMETERS

- Micrometers up to 500mm meet DIN863-4
- Graduation 0.01mm
- Carbide measuring faces

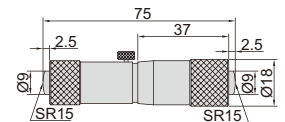
| Code | Range | Type | Accuracy |
|----------|-----------|------|----------|
| 3229-75 | 50-75mm | A | 5µm |
| 3229-100 | 75-100mm | B | 5µm |
| 3229-125 | 100-125mm | C | 6µm |
| 3229-150 | 125-150mm | C | 6µm |
| 3229-175 | 150-175mm | C | 7µm |
| 3229-200 | 175-200mm | C | 7µm |
| 3229-225 | 200-225mm | C | 8µm |
| 3229-250 | 225-250mm | C | 8µm |
| 3229-275 | 250-275mm | C | 9µm |
| 3229-300 | 275-300mm | C | 9µm |
| 3229-325 | 300-325mm | C | 9µm |
| 3229-350 | 325-350mm | C | 9µm |
| 3229-375 | 350-375mm | C | 10µm |
| 3229-400 | 375-400mm | C | 10µm |
| 3229-425 | 400-425mm | C | 10µm |
| 3229-450 | 425-450mm | C | 10µm |
| 3229-475 | 450-475mm | C | 11µm |
| 3229-500 | 475-500mm | C | 11µm |
| 3229-525 | 500-525mm | C | 11µm |
| 3229-550 | 525-550mm | C | 11µm |
| 3229-575 | 550-575mm | C | 11µm |
| 3229-600 | 575-600mm | C | 12µm |
| 3229-625 | 600-625mm | C | 12µm |
| 3229-650 | 625-650mm | C | 12µm |
| 3229-675 | 650-675mm | C | 13µm |
| 3229-700 | 675-700mm | C | 13µm |
| 3229-725 | 700-725mm | C | 13µm |
| 3229-750 | 725-750mm | C | 14µm |
| 3229-775 | 750-775mm | C | 14µm |
| 3229-800 | 775-800mm | C | 14µm |



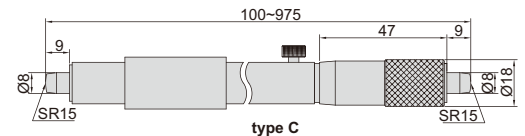
3229-225



type A



type B



type C

| Code | Range | Type | Accuracy |
|-----------|------------|------|----------|
| 3229-825 | 800-825mm | C | 15µm |
| 3229-850 | 825-850mm | C | 15µm |
| 3229-875 | 850-875mm | C | 15µm |
| 3229-900 | 875-900mm | C | 16µm |
| 3229-925 | 900-925mm | C | 16µm |
| 3229-950 | 925-950mm | C | 16µm |
| 3229-975 | 950-975mm | C | 17µm |
| 3229-1000 | 975-1000mm | C | 17µm |

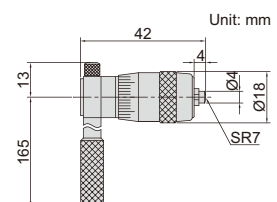
TUBULAR INSIDE MICROMETERS

- Graduation 0.01mm
- Accuracy: $(6+L/50)\mu\text{m}$
L=maximum measuring length (mm)
- Optional accessory: setting ring (code 6312)



3221-200

| Code | Range | Travel of micrometer head | Extension rods |
|-----------|------------|---------------------------|----------------|
| 3221-32 | 25-32mm | 7mm | — |
| 3221-50 | 25-50mm | 7mm | 2pcs |
| 3221-63 | 50-63mm | 13mm | — |
| 3221-200 | 50-200mm | 13mm | 6pcs |
| 3221-300 | 50-300mm | 13mm | 10pcs |
| 3221-225 | 200-225mm | 25mm | — |
| 3221-500 | 200-500mm | 25mm | 3pcs |
| 3221-1000 | 200-1000mm | 25mm | 8pcs |

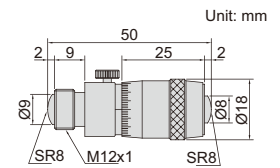


TUBULAR INSIDE MICROMETERS

- Graduation 0.01mm
- Accuracy: $(3+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Supplied with setting standards
- Carbide measuring faces



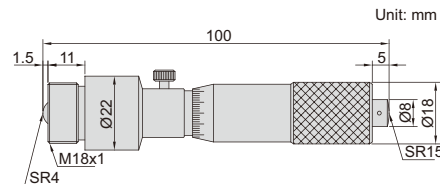
3222-150



| Code | Range | Travel of micrometer head | Extension rods |
|-----------|-----------|---------------------------|--|
| 3222-63 | 50-63mm | 13mm | — |
| 3222-150 | 50-150mm | 13mm | 13mm, 25mm, 50mm |
| 3222-300 | 50-300mm | 13mm | 13mm, 25mm, 50mm (2pcs), 100mm |
| 3222-500 | 50-500mm | 13mm | 13mm, 25mm, 50mm (2pcs), 100mm, 200mm |
| 3222-600 | 50-600mm | 13mm | 13mm, 25mm, 50mm, 100mm, 150mm, 200mm |
| 3222-1000 | 50-1000mm | 13mm | 13mm, 25mm, 50mm (2pcs), 100mm, 200mm (2pcs), 300mm |
| 3222-1500 | 50-1500mm | 13mm | 13mm, 25mm, 50mm (2pcs), 100mm, 200mm (3pcs), 300mm (2pcs) |

TUBULAR INSIDE MICROMETERS

- Graduation 0.01mm
- Accuracy: $(3+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Travel of micrometer head 25mm
- Supplied with setting standards
- Carbide measuring faces



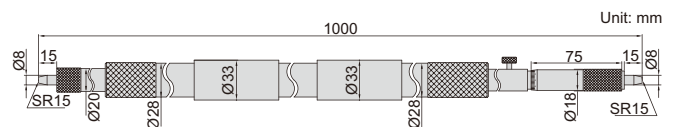
3225-500

| Code | Range | Extension rods |
|-----------|------------|--|
| 3225-125 | 100-125mm | — |
| 3225-500 | 100-500mm | 25mm, 50mm, 100mm, 200mm |
| 3225-900 | 100-900mm | 25mm, 50mm, 100mm, 200mm, 400mm |
| 3225-1300 | 100-1300mm | 25mm, 50mm, 100mm, 200mm, 400mm (2pcs) |
| 3225-1700 | 100-1700mm | 25mm, 50mm, 100mm, 200mm, 400mm (3pcs) |
| 3225-2100 | 100-2100mm | 25mm, 50mm, 100mm, 200mm, 400mm (4pcs) |

TUBULAR INSIDE MICROMETERS



3224-2000



| Code | Range | Extension rods |
|-----------|-------------|---|
| 3224-2000 | 1000-2000mm | 50mm, 100mm (2pcs), 200mm, 500mm |
| 3224-3000 | 1000-3000mm | 50mm, 100mm (2pcs), 200mm, 500mm, 1000mm |
| 3224-4000 | 1000-4000mm | 50mm, 100mm (2pcs), 200mm, 500mm, 1000mm (2pcs) |
| 3224-5000 | 1000-5000mm | 50mm, 100mm (2pcs), 200mm, 500mm, 1000mm (3pcs) |

- Graduation 0.01mm
- Accuracy: $(7+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Travel of micrometer head 50mm
- Carbide measuring faces

DIGITAL NON-ROTATING SPINDLE TUBULAR INSIDE MICROMETERS



NON-ROTATING SPINDLE

DATA OUTPUT

SPRING LOADED MEASURING POINT



3635-950

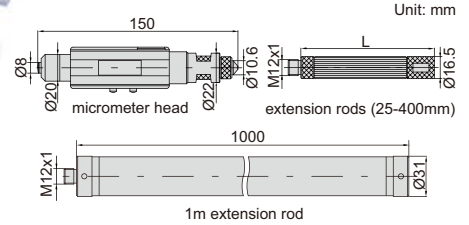
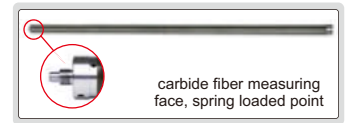
- Micrometer head: 150-175mm
- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded
- Data output
- Button function: mm/inch, max./min. value tracking, tolerance measurement, hold, on/off, zero
- CR2032 battery, automatic power off

| Code | Range | Extension rods |
|-----------|------------|---|
| 3635-350 | 150-350mm | 25mm, 50mm, 100mm |
| 3635-550 | 150-550mm | 25mm, 50mm, 100mm, 200mm |
| 3635-950 | 150-950mm | 25mm, 50mm, 100mm, 200mm, 400mm |
| 3635-1550 | 150-1550mm | 25mm, 50mm, 100mm, 200mm(2pcs), 400mm(2pcs) |
| 3635-2150 | 150-2150mm | 25mm, 50mm, 100mm, 200mm, 400mm(4pcs) |
| 3635-3150 | 150-3150mm | 25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(2pcs) |
| 3635-4150 | 150-4150mm | 25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(3pcs) |
| 3635-5150 | 150-5150mm | 25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(4pcs) |
| 3635-6150 | 150-6150mm | 25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(5pcs) |

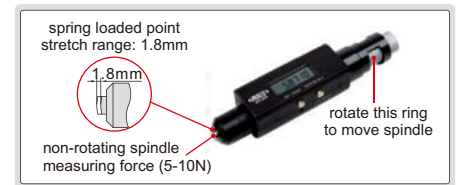
Micrometer head

| Range | Resolution | Accuracy | Repeatability | Measuring force | Weight |
|-----------|---|----------|---------------|-----------------|--------|
| 150-175mm | 0.001mm/0.00005" 0.01mm/0.0005" (switchable) | ±4µm | 1µm | 5-10N | 275g |

1m carbon fiber extension rod, light weight, no deform



non-rotating spindle, spring loaded point and max./min. value tracking make it easy to find the right measuring position



Extension rods

| Length (L) | Accuracy | Weight | Material |
|------------|----------|--------|--------------|
| 25mm | ±1.25µm | 37g | steel |
| 50mm | ±1.25µm | 65g | steel |
| 100mm | ±2µm | 113g | steel |
| 200mm | ±3.5µm | 208g | steel |
| 400mm | ±4.5µm | 402g | steel |
| 1000mm | ±7.5µm | 909g | carbon fiber |

TUBULAR INSIDE MICROMETERS

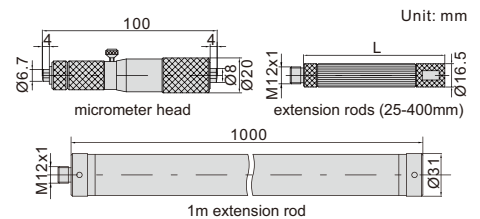
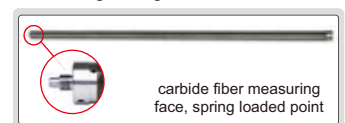


3634-1300

- Micrometer head: 100-125mm
- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded

| Code | Range | Extension rods |
|-----------|------------|---|
| 3634-350 | 100-350mm | 25mm, 200mm |
| 3634-500 | 100-500mm | 25mm, 50mm, 100mm, 200mm |
| 3634-1300 | 100-1300mm | 25mm, 50mm, 100mm, 200mm, 400mm (2pcs) |
| 3634-1500 | 100-1500mm | 25mm, 50mm, 100mm, 200mm (2pcs), 400mm (2pcs) |
| 3634-2100 | 100-2100mm | 25mm, 50mm, 100mm, 200mm, 400mm (4pcs) |
| 3634-3100 | 100-3100mm | 25mm, 50mm, 100mm, 200mm (2pcs), 400mm, 1000mm (2pcs) |
| 3634-4100 | 100-4100mm | 25mm, 50mm, 100mm, 200mm (2pcs), 400mm, 1000mm (3pcs) |
| 3634-5100 | 100-5100mm | 25mm, 50mm, 100mm, 200mm (2pcs), 400mm, 1000mm (4pcs) |
| 3634-6100 | 100-6100mm | 25mm, 50mm, 100mm, 200mm (2pcs), 400mm, 1000mm (5pcs) |

1m carbon fiber extension rod, light weight, no deform



Micrometer head

| Range | Graduation | Accuracy | Weight |
|-----------|------------|----------|--------|
| 100-125mm | 0.01mm | ±4µm | 154g |

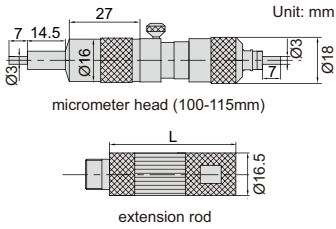
Extension rods

| Length (L) | Accuracy | Weight | Material |
|------------|----------|--------|--------------|
| 25mm | ±1.25µm | 37g | steel |
| 50mm | ±1.25µm | 65g | steel |
| 100mm | ±2µm | 113g | steel |
| 200mm | ±3.5µm | 208g | steel |
| 400mm | ±4.5µm | 402g | steel |
| 1000mm | ±7.5µm | 909g | carbon fiber |



RELATIVE PRODUCT:
GEAR BORE GAGE (CODE 2428)

INTERNAL GEAR TOOTH MICROMETERS



3638-200

- Measure over-pin diameter of gears
- Points of extension rods are spring loaded
- Optional accessory: ball tips (code 7383)

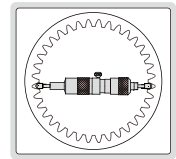
Micrometer head

| Range | Graduation | Accuracy |
|-----------|------------|----------|
| 100-115mm | 0.01mm | ±4µm |
| 150-175mm | 0.01mm | ±4µm |

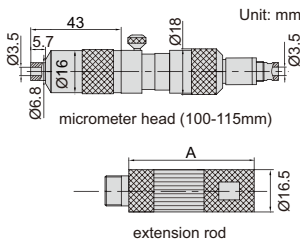
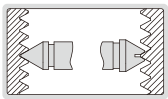
Extension rod

| Length (L) | Accuracy |
|------------|----------|
| 15mm | ±1µm |
| 25mm | ±1.25µm |
| 30mm | ±1.25µm |
| 50mm | ±1.25µm |
| 100mm | ±2µm |
| 200mm | ±3.5µm |
| 400mm | ±4.5µm |

| Code | Range | Micrometer head | Extension rod (L) |
|-----------|------------|-----------------|----------------------------|
| 3638-200 | 100-205mm | 100-115mm | 15, 25, 30 |
| 3638-500 | 100-505mm | 100-115mm | 15, 25, 50, 100, 200 |
| 3638-900 | 100-905mm | 100-115mm | 15, 25, 50, 100, 200, 400 |
| 3638-1100 | 150-1150mm | 150-175mm | 25, 50, 100, 200, 200, 400 |



INTERNAL SCREW THREAD MICROMETERS



3641-200

- Measure pitch diameter of screw thread
- Points of extension rods are spring loaded
- Optional accessory: measuring tips for internal screw thread micrometer (code 7385)

Micrometer head

| Range | Graduation | Accuracy |
|-----------|------------|----------|
| 100-115mm | 0.01mm | ±4µm |
| 150-175mm | 0.01mm | ±4µm |

Extension rod

| Length (A) | Accuracy |
|------------|----------|
| 15mm | ±1µm |
| 25mm | ±1.25µm |
| 50mm | ±1.25µm |
| 100mm | ±2µm |
| 200mm | ±3.5µm |
| 400mm | ±4.5µm |

| Code | Range | Micrometer head | Extension rod (A) | Applicable tips |
|-----------|------------|-----------------|----------------------------|----------------------|
| 3641-200 | 100-205mm | 100-115mm | 15, 25, 50 | stem length L=13.5mm |
| 3641-500 | 100-505mm | 100-115mm | 15, 25, 50, 100, 200 | stem length L=13.5mm |
| 3641-900 | 100-905mm | 100-115mm | 15, 25, 50, 100, 200, 400 | stem length L=13.5mm |
| 3641-1100 | 150-1150mm | 150-175mm | 25, 50, 100, 200, 200, 400 | stem length L=13.5mm |

INTERNAL SCREW THREAD MICROMETERS

- Graduation: 0.01mm
- Optional accessory: measuring tips for internal screw thread micrometer (code 7321), zero block (code 3226-SP)

| Code | Range | Zero Block (optional) |
|-----------|-----------|-------------------------|
| 3226-1001 | 75-100mm | 100mm (code 3226-SP100) |
| 3226-1251 | 100-125mm | 100mm (code 3226-SP100) |
| 3226-1501 | 125-150mm | 150mm (code 3226-SP150) |
| 3226-1751 | 150-175mm | 150mm (code 3226-SP150) |
| 3226-2001 | 175-200mm | 200mm (code 3226-SP200) |
| 3226-2251 | 200-225mm | 200mm (code 3226-SP200) |
| 3226-2501 | 225-250mm | 250mm (code 3226-SP250) |
| 3226-2751 | 250-275mm | 250mm (code 3226-SP250) |
| 3226-3001 | 275-300mm | 300mm (code 3226-SP300) |



3226-1001

zero block (optional)

measuring tips for internal screw thread micrometer (optional)



MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETERS

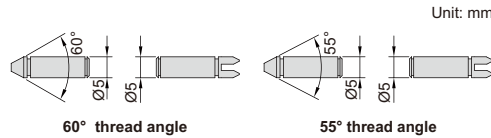
- Supplied in pair
- Suitable for 3226 series micrometers

Metric and unified screw (60° thread angle)

| Code | Pitch |
|----------|---------------------------------------|
| 7321-T11 | 0.4-0.5mm/64-48TPI |
| 7321-T12 | 0.6-0.9mm/44-28TPI |
| 7321-T13 | 1-1.75mm/24-14TPI |
| 7321-T14 | 2-3mm/13-9TPI |
| 7321-T15 | 3.5-5mm/8-5TPI |
| 7321-T16 | 5.5-7mm /4.5-3.5TPI |
| 7321-T1S | 6 pairs/set, including all above tips |



7321-T1S



Unit: mm

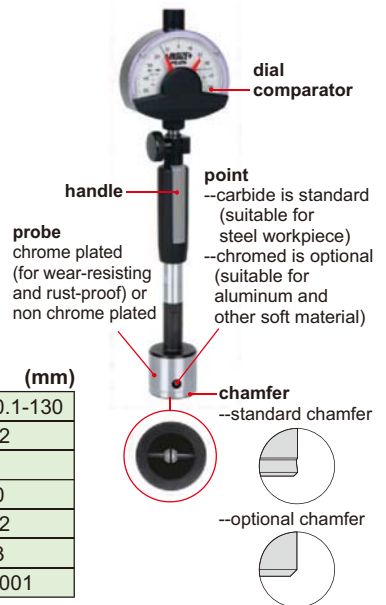
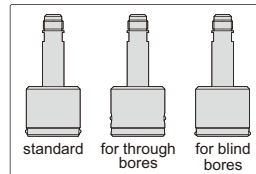
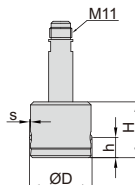
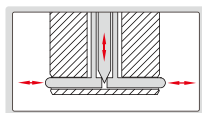
Whitworth screw (55° thread angle)

| Code | Pitch |
|-----------|--|
| 7321-T21 | 60-48TPI |
| 7321-T22 | 48-40TPI |
| 7321-T23 | 40-32TPI |
| 7321-T24 | 32-24TPI |
| 7321-T25 | 24-18TPI |
| 7321-T26 | 18-14TPI |
| 7321-T27 | 14-10TPI |
| 7321-T28 | 10-7TPI |
| 7321-T29 | 7-4.5TPI |
| 7321-T210 | 4.5-3.5TPI |
| 7321-T2S | 10 pairs/set, including all above tips |

BORE PLUG GAGES



principle of measurement



SPECIFICATION OF PROBE

| | (mm) | | | | | | | | | |
|---------------------|-------------------|-------|-------|--------|--------|---------|---------|---------|----------|-------|
| Range | 2-3 | 3.1-4 | 4.1-6 | 6.1-9 | 9.1-12 | 12.1-20 | 20.1-40 | 40.1-60 | 60.1-130 | |
| Travel of point (s) | 0.15 | 0.15 | 0.15 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Height of point (h) | standard | 1 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 3.5 | 3.5 | 4 |
| | for through bores | — | 6 | 6 | 6 | 10 | 10 | 10 | 10 | 10 |
| for blind bores | 0.7 | 1 | 1 | 1 | 1 | 1 | 1.2 | 1.2 | 1.2 | |
| Height of probe (H) | 17.5 | 26 | 10 | 15 | 15 | 15 | 20 | 28 | 33 | |
| Repeatability | 0.001 | 0.001 | 0.001 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.001 |

PROBE

| Code | Type |
|------------|--------------------------------------|
| 4653-A□□□□ | standard, non chrome plated |
| 4653-B□□□□ | for through bores, non chrome plated |
| 4653-C□□□□ | for blind bores, non chrome plated |
| 4653-D□□□□ | standard, chrome plated |
| 4653-E□□□□ | for through bores, chrome plated |
| 4653-F□□□□ | for blind bores, chrome plated |



HANDLE

| Code | Length (L) | Retraction |
|-----------|------------|------------|
| 4653-150 | 45 | without |
| 4653-1105 | 105 | without |
| 4653-1235 | 235 | without |
| 4653-H70 | 70 | with |



Ordering examples:

| Code | Type | Range (mm) |
|----------------|----------------------------------|------------|
| 4653-A30D6H7 * | standard, non chrome plated | 30.6H7 |
| 4653-E18D2H8 * | for through bores, chrome plated | 18.2H8 |

* "D" stands for "."

DEPTH STOP

| Code | Applicable for probe |
|------------|----------------------|
| 4653-G□□□□ | 3.0-60mm |

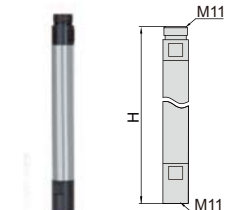
Ordering example:

| Code | Applicable for probe (mm) |
|------------|---------------------------|
| 4653-G22H7 | 22H7 |



EXTENSION ROD FOR HANDLE

| Code | Length (H) |
|-----------|------------|
| 4653-R50 | 50mm |
| 4653-R100 | 100mm |
| 4653-R250 | 250mm |
| 4653-R500 | 500mm |



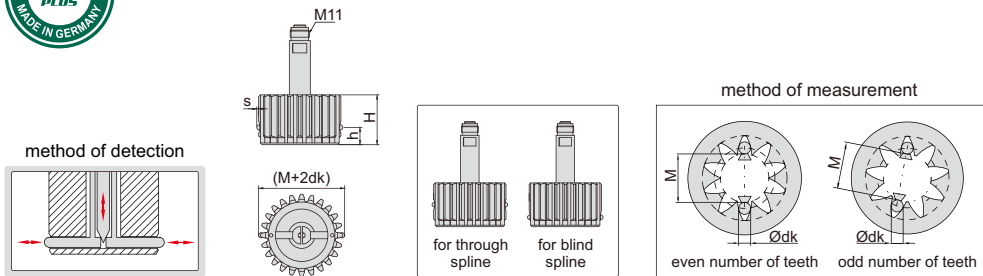
SETTING RING

| Code |
|------------|
| 6312-□□□□□ |





INTERNAL SPLINE PLUG GAGES



PROBE SPECIFICATION

(mm)

| | | | | |
|----------------------|-------------------|---------|---------|---------|
| Range | 8-15 | 12.1-20 | 20.1-40 | 40.1-60 |
| Travel of point (s) | 0.2 | 0.2 | 0.2 | 0.2 |
| Height of point (h) | for through bores | 6 | 10 | 10 |
| | for blind bores | 4 | 6 | 6 |
| Height of sleeve (H) | for through bores | 18.5 | 22.5 | 28 |
| | for blind bores | 16.5 | 18.5 | 24 |
| Repeatability | 0.002 | 0.002 | 0.002 | 0.002 |

PROBE

| Code | Type |
|------------|--------------------|
| 4655-A□□□□ | for through spline |
| 4655-B□□□□ | for blind spline |

Probe ordering examples:

| Code | Type | Range |
|--------------|--------------------|--------|
| 4655-A20D8 * | for through spline | 20.8mm |
| 4655-B16D6 * | for blind spline | 16.6mm |

* "D" stands for "."

HANDLE (OPTIONAL)

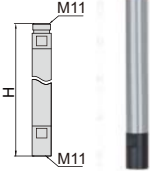
(mm)

| Code | Length (L) | Retraction |
|-----------|------------|------------|
| 4653-150 | 45 | without |
| 4653-1105 | 105 | without |
| 4653-1235 | 235 | without |
| 4653-H70 | 70 | with |



EXTENSION ROD FOR HANDLE (OPTIONAL)

| Code | Length (H) |
|-----------|------------|
| 4653-R50 | 50 |
| 4653-R100 | 100 |
| 4653-R250 | 250 |
| 4653-R500 | 500 |



SETTING MASTER (OPTIONAL)

| Code | Remark |
|------------------|----------------------------|
| 4655-□□□□-SETTER | design according to probes |



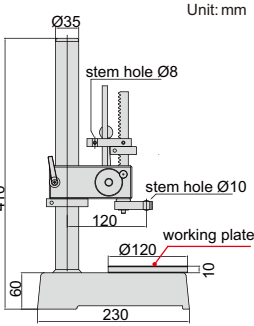
VIDEO

- For split type dial bore gages 2421, 2426, 2427 and 2429
- Maximum working stroke: 90mm
- Accept dial indicator to show measuring depth

| Code |
|----------|
| 2491-250 |



STAND FOR SPLIT DIAL BORE GAGES



2491-250

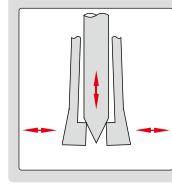
SPLIT TYPE DIAL BORE GAGES

dial indicator
is not included



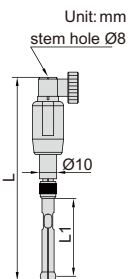
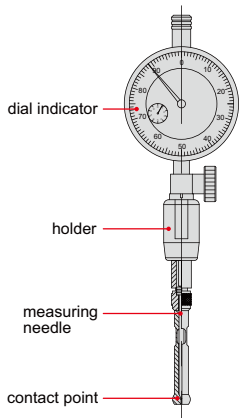
- Split type contact points
- Accuracy (without indicator):
3µm (measuring range 0.95–10mm),
4µm (measuring range 10–20.6mm)
- Repeatability (without indicator): 1µm

principle of measurement



(mm)

| Code | Contact point | | | Material | Measuring needle | | Setting ring | |
|-----------|-----------------|----------------------|------------------|--------------|------------------|-----------|--------------|--|
| | Measuring range | Measuring depth (L1) | Total length (L) | | Code | Code | Diameter | |
| 2426-1 | 0.95-1.15 | 13 | 89 | carbide tip | 2426-N1D4 | 6312-R1 | 1 | |
| 2426-1D1 | 1.07-1.25 | 13 | 89 | carbide tip | | 6312-R1D1 | 1.1 | |
| 2426-1D2 | 1.17-1.35 | 13 | 89 | carbide tip | | 6312-R1D2 | 1.2 | |
| 2426-1D3 | 1.27-1.45 | 13 | 89 | carbide tip | | 6312-R1D3 | 1.3 | |
| 2426-1D4 | 1.37-1.55 | 13 | 89 | carbide tip | | 6312-R1D4 | 1.4 | |
| 2426-1D75 | 1.5-1.9 | 17 | 93 | carbide tip | 2426-N2D25 | 6312-1D75 | 1.75 | |
| 2426-2 | 1.8-2.2 | 17 | 93 | carbide tip | | 6312-2 | 2 | |
| 2426-2D25 | 2.05-2.45 | 17 | 93 | carbide tip | | 6312-2D25 | 2.25 | |
| 2426-2D5 | 2.3-2.7 | 25 | 101 | carbide tip | 2426-N4 | 6312-2D5 | 2.5 | |
| 2426-2D75 | 2.55-2.95 | 25 | 101 | carbide tip | | 6312-2D75 | 2.75 | |
| 2426-3 | 2.8-3.2 | 25 | 101 | carbide tip | | 6312-3 | 3 | |
| 2426-3D25 | 3.05-3.45 | 25 | 101 | carbide tip | | 6312-3D25 | 3.25 | |
| 2426-3D5 | 3.3-3.7 | 25 | 101 | carbide tip | | 6312-3D5 | 3.5 | |
| 2426-3D75 | 3.55-3.95 | 25 | 101 | carbide tip | | 6312-3D75 | 3.75 | |
| 2426-4 | 3.8-4.2 | 25 | 101 | carbide tip | | 6312-4 | 4 | |
| 2426-4D5 | 4.15-4.8 | 41 | 118 | hard chromed | 2426-N9 | 6312-4D5 | 4.5 | |
| 2426-5 | 4.7-5.3 | 41 | 118 | hard chromed | | 6312-5 | 5 | |
| 2426-5D5 | 5.2-5.8 | 41 | 118 | hard chromed | | 6312-5D5 | 5.5 | |
| 2426-6 | 5.7-6.3 | 41 | 118 | hard chromed | | 6312-6 | 6 | |
| 2426-6D5 | 6.2-6.8 | 41 | 118 | hard chromed | | 6312-6D5 | 6.5 | |
| 2426-7 | 6.7-7.3 | 41 | 118 | hard chromed | | 6312-7 | 7 | |
| 2426-7D5 | 7.2-7.8 | 45 | 118 | hard chromed | | 6312-7D5 | 7.5 | |
| 2426-8 | 7.7-8.3 | 45 | 118 | hard chromed | | 6312-8 | 8 | |
| 2426-8D5 | 8.2-8.8 | 45 | 118 | hard chromed | | 6312-8D5 | 8.5 | |
| 2426-9 | 8.7-9.3 | 45 | 118 | hard chromed | | 6312-9 | 9 | |
| 2426-10 | 9.2-10.5 | 45 | 118 | hard chromed | | 6312-10 | 10 | |
| 2426-11 | 10.2-11.5 | 45 | 118 | hard chromed | | 6312-11 | 11 | |
| 2426-12 | 11.2-12.5 | 45 | 118 | hard chromed | 2426-N20 | 6312-12 | 12 | |
| 2426-13 | 12.2-13.5 | 45 | 118 | hard chromed | | 6312-13 | 13 | |
| 2426-14 | 13.4-14.6 | 45 | 118 | hard chromed | | 6312-14 | 14 | |
| 2426-15 | 14.4-15.6 | 45 | 118 | hard chromed | | 6312-15 | 15 | |
| 2426-16 | 15.4-16.6 | 45 | 118 | hard chromed | | 6312-16 | 16 | |
| 2426-17 | 16.4-17.6 | 45 | 118 | hard chromed | | 6312-17 | 17 | |
| 2426-18 | 17.4-18.6 | 45 | 118 | hard chromed | | 6312-18 | 18 | |
| 2426-19 | 18.4-19.6 | 45 | 118 | hard chromed | | 6312-19 | 19 | |
| 2426-20 | 19.4-20.6 | 45 | 118 | hard chromed | | 6312-20 | 20 | |



HOLDER

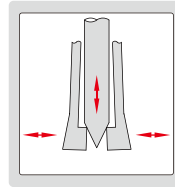
| Code | Retraction | Applicable points |
|--------------|------------|-------------------|
| 2426-HOLDER1 | without | all |
| 2426-HOLDER2 | with | all |



SPLIT TYPE DIAL BORE GAGE SETS

- Split type contact points
- Accuracy (without indicator): 3µm (measuring range 0.95~10mm), 4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm
- Setting rings and dial indicators are optional

principle of measurement

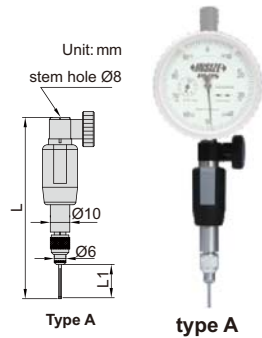


| Code | Range | Quantity of points | Measuring range of point | Measuring depth (L1) | Total length (L) | Material | Type of point | Setting ring (optional) | |
|----------|-----------|--------------------|--------------------------|----------------------|------------------|--------------|---------------|-------------------------|----------|
| | | | | | | | | Code | Diameter |
| 2421-1D4 | 0.95-1.55 | 5 | 0.95-1.15 | 13 | 89 | carbide tip | A | 6312-R1 | 1 |
| | | | 1.07-1.25 | 13 | 89 | carbide tip | A | 6312-R1D1 | 1.1 |
| | | | 1.17-1.35 | 13 | 89 | carbide tip | A | 6312-R1D2 | 1.2 |
| | | | 1.27-1.45 | 13 | 89 | carbide tip | A | 6312-R1D3 | 1.3 |
| | | | 1.37-1.55 | 13 | 89 | carbide tip | A | 6312-R1D4 | 1.4 |
| 2421-4 | 1.5-4.2 | 10 | 1.5-1.9 | 17 | 93 | carbide tip | A | 6312-1D75 | 1.75 |
| | | | 1.8-2.2 | 17 | 93 | carbide tip | A | 6312-2 | 2 |
| | | | 2.05-2.45 | 17 | 93 | carbide tip | A | 6312-2D25 | 2.25 |
| | | | 2.3-2.7 | 25 | 101 | carbide tip | A | 6312-2D5 | 2.5 |
| | | | 2.55-2.95 | 25 | 101 | carbide tip | A | 6312-2D75 | 2.75 |
| | | | 2.8-3.2 | 25 | 101 | carbide tip | A | 6312-3 | 3 |
| | | | 3.05-3.45 | 25 | 101 | carbide tip | A | 6312-3D25 | 3.25 |
| | | | 3.3-3.7 | 25 | 101 | carbide tip | A | 6312-3D5 | 3.5 |
| | | | 3.55-3.95 | 25 | 101 | carbide tip | A | 6312-3D75 | 3.75 |
| | | | 3.8-4.2 | 25 | 101 | carbide tip | A | 6312-4 | 4 |
| 2421-7D5 | 4.15-7.8 | 7 | 4.15-4.8 | 41 | 118 | hard chromed | B | 6312-4D5 | 4.5 |
| | | | 4.7-5.3 | 41 | 118 | hard chromed | B | 6312-5 | 5 |
| | | | 5.2-5.8 | 41 | 118 | hard chromed | B | 6312-5D5 | 5.5 |
| | | | 5.7-6.3 | 41 | 118 | hard chromed | B | 6312-6 | 6 |
| | | | 6.2-6.8 | 41 | 118 | hard chromed | B | 6312-6D5 | 6.5 |
| | | | 6.7-7.3 | 41 | 118 | hard chromed | B | 6312-7 | 7 |
| | | | 7.2-7.8 | 45 | 118 | hard chromed | C | 6312-7D5 | 7.5 |
| 2421-12 | 7.7-12.5 | 6 | 7.7-8.3 | 45 | 118 | hard chromed | C | 6312-8 | 8 |
| | | | 8.2-8.8 | 45 | 118 | hard chromed | C | 6312-8D5 | 8.5 |
| | | | 8.7-9.3 | 45 | 118 | hard chromed | C | 6312-9 | 9 |
| | | | 9.2-10.5 | 45 | 118 | hard chromed | C | 6312-10 | 10 |
| | | | 10.2-11.5 | 45 | 118 | hard chromed | C | 6312-11 | 11 |
| | | | 11.2-12.5 | 45 | 118 | hard chromed | C | 6312-12 | 12 |
| 2421-20 | 12.2-20.6 | 8 | 12.2-13.5 | 45 | 118 | hard chromed | C | 6312-13 | 13 |
| | | | 13.4-14.6 | 45 | 118 | hard chromed | C | 6312-14 | 14 |
| | | | 14.4-15.6 | 45 | 118 | hard chromed | C | 6312-15 | 15 |
| | | | 15.4-16.6 | 45 | 118 | hard chromed | C | 6312-16 | 16 |
| | | | 16.4-17.6 | 45 | 118 | hard chromed | C | 6312-17 | 17 |
| | | | 17.4-18.6 | 45 | 118 | hard chromed | C | 6312-18 | 18 |
| | | | 18.4-19.6 | 45 | 118 | hard chromed | C | 6312-19 | 19 |
| | | | 19.4-20.6 | 45 | 118 | hard chromed | C | 6312-20 | 20 |
| 2421-121 | 4.15-12.5 | 13 | 4.15-4.8 | 41 | 118 | hard chromed | B | 6312-4D5 | 4.5 |
| | | | 4.7-5.3 | 41 | 118 | hard chromed | B | 6312-5 | 5 |
| | | | 5.2-5.8 | 41 | 118 | hard chromed | B | 6312-5D5 | 5.5 |
| | | | 5.7-6.3 | 41 | 118 | hard chromed | B | 6312-6 | 6 |
| | | | 6.2-6.8 | 41 | 118 | hard chromed | B | 6312-6D5 | 6.5 |
| | | | 6.7-7.3 | 41 | 118 | hard chromed | B | 6312-7 | 7 |
| | | | 7.2-7.8 | 45 | 118 | hard chromed | C | 6312-7D5 | 7.5 |
| | | | 7.7-8.3 | 45 | 118 | hard chromed | C | 6312-8 | 8 |
| | | | 8.2-8.8 | 45 | 118 | hard chromed | C | 6312-8D5 | 8.5 |
| | | | 8.7-9.3 | 45 | 118 | hard chromed | C | 6312-9 | 9 |
| | | | 9.2-10.5 | 45 | 118 | hard chromed | C | 6312-10 | 10 |
| | | | 10.2-11.5 | 45 | 118 | hard chromed | C | 6312-11 | 11 |
| | | | 11.2-12.5 | 45 | 118 | hard chromed | C | 6312-12 | 12 |

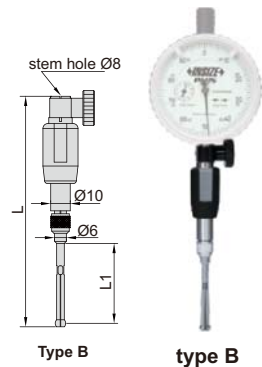
(mm)

2421-121

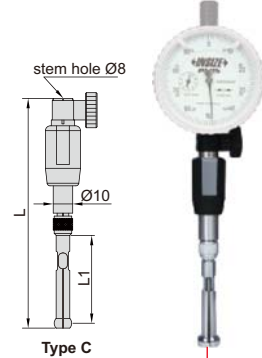
dial indicator is not included



dial indicator is not included



dial indicator is not included



contact point

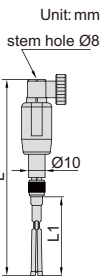
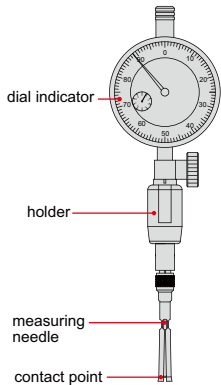
type C

SPLIT TYPE DIAL BORE GAGES FOR BLIND HOLES

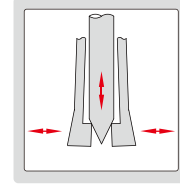
dial indicator
is not included



contact point



principle of measurement



- Split type contact points
- Accuracy (without indicator):
3µm (measuring range 1.5~10mm),
4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm

(mm)

| Contact point | | | | Measuring needle | Setting ring | |
|---------------|-----------------|----------------------|------------------|------------------|--------------|----------|
| Code | Measuring range | Measuring depth (L1) | Total length (L) | Code | Code | Diameter |
| 2427-1D75 | 1.5-1.9 | 17 | 93 | 2426-N2D25 | 6312-1D75 | 1.75 |
| 2427-2 | 1.8-2.2 | 17 | 93 | | 6312-2 | 2 |
| 2427-2D25 | 2.05-2.45 | 17 | 93 | | 6312-2D25 | 2.25 |
| 2427-2D5 | 2.3-2.7 | 25 | 101 | | 6312-2D5 | 2.5 |
| 2427-2D75 | 2.55-2.95 | 25 | 101 | 2426-N4 | 6312-2D75 | 2.75 |
| 2427-3 | 2.8-3.2 | 25 | 101 | | 6312-3 | 3 |
| 2427-3D25 | 3.05-3.45 | 25 | 101 | | 6312-3D25 | 3.25 |
| 2427-3D5 | 3.3-3.7 | 25 | 101 | | 6312-3D5 | 3.5 |
| 2427-3D75 | 3.55-3.95 | 25 | 101 | 2427-N9 | 6312-3D75 | 3.75 |
| 2427-4 | 3.8-4.2 | 25 | 101 | | 6312-4 | 4 |
| 2427-4D5 | 4.15-4.8 | 41 | 118 | | 6312-4D5 | 4.5 |
| 2427-5 | 4.7-5.3 | 41 | 118 | | 6312-5 | 5 |
| 2427-5D5 | 5.2-5.8 | 41 | 118 | 2427-N9 | 6312-5D5 | 5.5 |
| 2427-6 | 5.7-6.3 | 41 | 118 | | 6312-6 | 6 |
| 2427-6D5 | 6.2-6.8 | 41 | 118 | | 6312-6D5 | 6.5 |
| 2427-7 | 6.7-7.3 | 41 | 118 | | 6312-7 | 7 |
| 2427-7D5 | 7.2-7.8 | 45 | 118 | 2427-N20 | 6312-7D5 | 7.5 |
| 2427-8 | 7.7-8.3 | 45 | 118 | | 6312-8 | 8 |
| 2427-8D5 | 8.2-8.8 | 45 | 118 | | 6312-8D5 | 8.5 |
| 2427-9 | 8.7-9.3 | 45 | 118 | | 6312-9 | 9 |
| 2427-10 | 9.2-10.5 | 45 | 118 | 2427-N20 | 6312-10 | 10 |
| 2427-11 | 10.2-11.5 | 45 | 118 | | 6312-11 | 11 |
| 2427-12 | 11.2-12.5 | 45 | 118 | | 6312-12 | 12 |
| 2427-13 | 12.2-13.5 | 45 | 118 | | 6312-13 | 13 |
| 2427-14 | 13.4-14.6 | 45 | 118 | 2427-N20 | 6312-14 | 14 |
| 2427-15 | 14.4-15.6 | 45 | 118 | | 6312-15 | 15 |
| 2427-16 | 15.4-16.6 | 45 | 118 | | 6312-16 | 16 |
| 2427-17 | 16.4-17.6 | 45 | 118 | | 6312-17 | 17 |
| 2427-18 | 17.4-18.6 | 45 | 118 | 2427-N20 | 6312-18 | 18 |
| 2427-19 | 18.4-19.6 | 45 | 118 | | 6312-19 | 19 |
| 2427-20 | 19.4-20.6 | 45 | 118 | | 6312-20 | 20 |



2426-HOLDER1



retraction
button

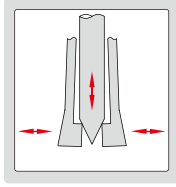
2426-HOLDER2

HOLDER

| Code | Retraction | Applicable points |
|--------------|------------|-------------------|
| 2426-HOLDER1 | without | all |
| 2426-HOLDER2 | with | all |



principle of measurement



SPLIT TYPE DIAL BORE GAGE SETS FOR BLIND HOLES

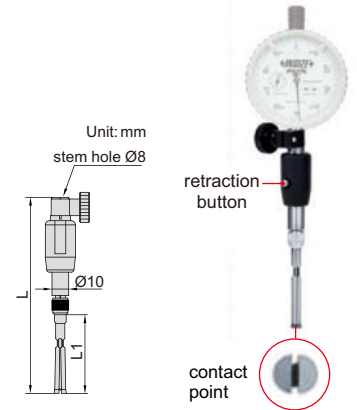


2429-4

(mm)

| Code | Range | Quantity of points | Measuring range of point | Measuring depth (L1) | Total length (L) | Setting ring (optional) | |
|----------|-----------|--------------------|--------------------------|----------------------|------------------|-------------------------|----------|
| | | | | | | Code | Diameter |
| 2429-4 | 1.5-4.2 | 10 | 1.5-1.9 | 17 | 93 | 6312-1D75 | 1.75 |
| | | | 1.8-2.2 | 17 | 93 | 6312-2 | 2 |
| | | | 2.05-2.45 | 17 | 93 | 6312-2D25 | 2.25 |
| | | | 2.3-2.7 | 25 | 101 | 6312-2D5 | 2.5 |
| | | | 2.55-2.95 | 25 | 101 | 6312-2D75 | 2.75 |
| | | | 2.8-3.2 | 25 | 101 | 6312-3 | 3 |
| | | | 3.05-3.45 | 25 | 101 | 6312-3D25 | 3.25 |
| | | | 3.3-3.7 | 25 | 101 | 6312-3D5 | 3.5 |
| | | | 3.55-3.95 | 25 | 101 | 6312-3D75 | 3.75 |
| | | | 3.8-4.2 | 25 | 101 | 6312-4 | 4 |
| 2429-7D5 | 4.15-7.8 | 7 | 4.15-4.8 | 41 | 118 | 6312-4D5 | 4.5 |
| | | | 4.7-5.3 | 41 | 118 | 6312-5 | 5 |
| | | | 5.2-5.8 | 41 | 118 | 6312-5D5 | 5.5 |
| | | | 5.7-6.3 | 41 | 118 | 6312-6 | 6 |
| | | | 6.2-6.8 | 41 | 118 | 6312-6D5 | 6.5 |
| | | | 6.7-7.3 | 41 | 118 | 6312-7 | 7 |
| | | | 7.2-7.8 | 45 | 118 | 6312-7D5 | 7.5 |
| 2429-12 | 7.7-12.5 | 6 | 7.7-8.3 | 45 | 118 | 6312-8 | 8 |
| | | | 8.2-8.8 | 45 | 118 | 6312-8D5 | 8.5 |
| | | | 8.7-9.3 | 45 | 118 | 6312-9 | 9 |
| | | | 9.2-10.5 | 45 | 118 | 6312-10 | 10 |
| | | | 10.2-11.5 | 45 | 118 | 6312-11 | 11 |
| | | | 11.2-12.5 | 45 | 118 | 6312-12 | 12 |
| 2429-20 | 12.2-20.6 | 8 | 12.2-13.5 | 45 | 118 | 6312-13 | 13 |
| | | | 13.4-14.6 | 45 | 118 | 6312-14 | 14 |
| | | | 14.4-15.6 | 45 | 118 | 6312-15 | 15 |
| | | | 15.4-16.6 | 45 | 118 | 6312-16 | 16 |
| | | | 16.4-17.6 | 45 | 118 | 6312-17 | 17 |
| | | | 17.4-18.6 | 45 | 118 | 6312-18 | 18 |
| | | | 18.4-19.6 | 45 | 118 | 6312-19 | 19 |
| | | | 19.4-20.6 | 45 | 118 | 6312-20 | 20 |

dial indicator is not included



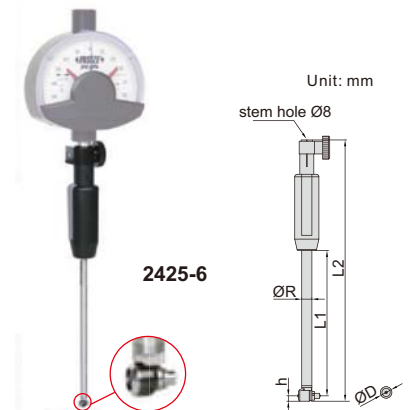
- Split type contact points
- Accuracy (without indicator): 3µm (measuring range 1.5~10mm), 4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm
- Setting rings and dial indicators are optional



- Applicable for 0.01mm or 0.001mm graduation dial indicators
- Carbide contact point and anvil
- Optional accessory: dial indicator or dial comparator, setting ring (code 6312)

BORE GAGES FOR SMALL HOLES

dial comparator is not included



2425-6

(mm)

| Code | Range | Accuracy (without dial comparator) | Repeatability (without dial comparator) | L1 | L2 | ØR | ØD | h |
|---------|---------|------------------------------------|---|-----|-----|----|-----|------|
| 2425-6 | 4.5-6mm | 2µm | 0.5µm | 80 | 147 | 4 | 4 | 2 |
| 2425-8 | 6-8mm | 2µm | 0.5µm | 100 | 165 | 5 | 5.2 | 2.6 |
| 2425-12 | 8-12mm | 2µm | 0.5µm | 100 | 166 | 5 | 6.5 | 3.25 |
| 2425-20 | 12-20mm | 2µm | 0.5µm | 110 | 204 | 8 | 9 | 4.5 |

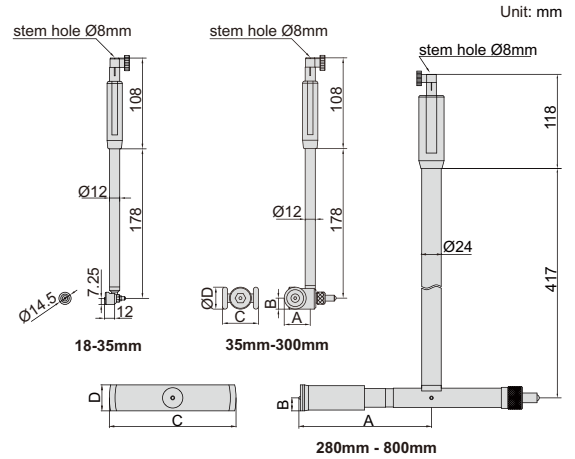


BORE GAGES

dial comparator
is not included



2422-150



- Applicable for 0.01mm or 0.001mm graduation dial indicators
- Optional accessory:
 - Dial indicator or dial comparator
 - Setting ring (code **6312**)
 - Long handle (code **7352**)

| Code | Range | Accuracy (without dial comparator) | Repeatability (without dial comparator) |
|----------|-----------|------------------------------------|---|
| 2422-35 | 18-35mm | 4µm | 2µm |
| 2422-60 | 35-60mm | 4µm | 2µm |
| 2422-150 | 50-150mm | 4µm | 2µm |
| 2422-300 | 150-300mm | 4µm | 2µm |
| 2422-510 | 280-510mm | 3µm | 1.5µm |
| 2422-800 | 400-800mm | 3µm | 1.5µm |

| Range | A | B | C | D |
|-----------|------|------|------|----|
| 35-60mm | 19.5 | 10.5 | 28 | 21 |
| 50-150mm | 30.8 | 13 | 42.5 | 26 |
| 150-300mm | 30.8 | 13 | 76.5 | 26 |
| 280-510mm | 164 | 16 | 156 | 32 |
| 400-800mm | 305 | 18 | 300 | 36 |

BORE GAGE SET

dial comparator
is not included



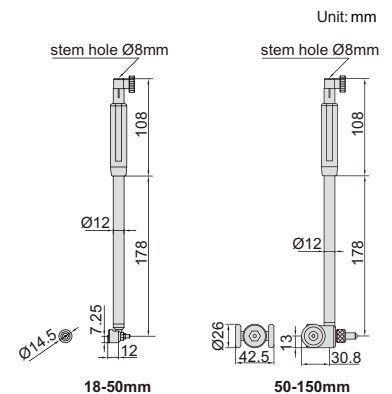
2423-S2



18-50mm



50-150mm



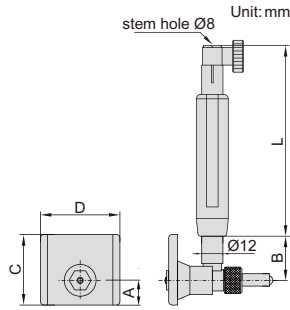
- Includes bore gages 18-50mm and 50-150mm
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicator or dial comparator
 - Setting ring (code **6312**)
 - Long handle (code **7352**)

| Code | Range | Accuracy (without dial comparator) | Repeatability (without dial comparator) |
|---------|------------|------------------------------------|---|
| 2423-S2 | 18 - 150mm | 4µm | 2µm |



SELF-POSITIONING, NO NEED TO FIND TURNING POINT (MINIMUM VALUE)

- Self-positioning, no need to find turning point (minimum value)
- Carbide contact point
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicators or dial comparator
 - Setting ring (code 6312)



BORE GAGES

dial indicator is not included



2431-80

| Code | Range | Accuracy (without dial indicator) | Repeatability (without dial indicator) | A | B | C | D | L |
|----------|-----------|-----------------------------------|--|----|----|----|----|-----|
| 2431-35 | 20-35mm | 2µm | 1µm | 9 | 21 | 12 | 16 | 89 |
| 2431-55 | 35-55mm | 2µm | 1µm | 10 | 23 | 30 | 28 | 96 |
| 2431-80 | 50-80mm | 2µm | 1µm | 15 | 25 | 40 | 45 | 108 |
| 2431-120 | 80-120mm | 2µm | 1µm | 15 | 25 | 40 | 60 | 108 |
| 2431-170 | 120-170mm | 2µm | 1µm | 18 | 30 | 50 | 88 | 119 |

GEAR BORE GAGES

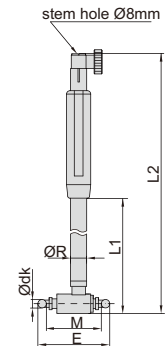
RELATIVE PRODUCT: INTERNAL GEAR TOOTH MICROMETER (CODE 3637, 3638)

- Tungsten carbide ball points, diameter accuracy 2µm
- Optional accessory:
 - Dial indicator or dial comparator
 - Ball points
 - Thread adaptor
 - Setting ring (code 6312)
 - Long handle (code 7352)

dial comparator is not included



2428-55



| Code | Range (E) | Accuracy (without dial comparator) | Repeatability (without dial comparator) | ØR | L1 | L2 | Thread for ball points |
|----------|-----------|------------------------------------|---|----|-----|-----|------------------------|
| 2428-12 | 8-12mm | 2µm | 0.5µm | 5 | 100 | 165 | M1.6 |
| 2428-22 | 12-22mm | 2µm | 0.5µm | 5 | 102 | 168 | M1.6 |
| 2428-55 | 22-55mm | 2µm | 0.5µm | 8 | 110 | 204 | M2.5 |
| 2428-250 | 55-250mm | 2µm | 0.5µm | 12 | 177 | 290 | M4 |
| 2428-510 | 250-510mm | 2µm | 0.5µm | 18 | 235 | 363 | M4 |

ball points (optional)

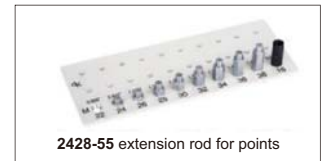
Ball points (optional)

| Ball point diameter Ødk | 2428-12 | 2428-22 | 2428-55 | 2428-250 | 2428-510 |
|-------------------------|-------------------|-------------------|-------------------|-----------------|-----------------|
| | point thread M1.6 | point thread M1.6 | point thread M2.5 | point thread M4 | point thread M4 |
| | point code | point code | point code | point code | point code |
| 1mm | 2428-A1 | 2428-A1 | 2428-B1 | 2428-C1 | 2428-C1 |
| 1.5mm | 2428-A1D5 | 2428-A1D5 | 2428-B1D5 | 2428-C1D5 | 2428-C1D5 |
| 2mm | 2428-A2 | 2428-A2 | 2428-B2 | 2428-C2 | 2428-C2 |
| 2.5mm | — | 2428-A2D5 | 2428-B2D5 | 2428-C2D5 | 2428-C2D5 |
| 3mm | — | 2428-A3 | 2428-B3 | 2428-C3 | 2428-C3 |
| 3.5mm | — | 2428-A3D5 | 2428-B3D5 | 2428-C3D5 | 2428-C3D5 |
| 4mm | — | 2428-A4 | 2428-B4 | 2428-C4 | 2428-C4 |
| 4.5mm | — | — | 2428-B4D5 | 2428-C4D5 | 2428-C4D5 |
| 5mm | — | — | 2428-B5 | 2428-C5 | 2428-C5 |
| 5.5mm | — | — | 2428-B5D5 | 2428-C5D5 | 2428-C5D5 |
| 6mm | — | — | 2428-B6 | 2428-C6 | 2428-C6 |
| 6.5mm | — | — | 2428-B6D5 | 2428-C6D5 | 2428-C6D5 |
| 7mm | — | — | 2428-B7 | 2428-C7 | 2428-C7 |
| 7.5mm | — | — | 2428-B7D5 | 2428-C7D5 | 2428-C7D5 |
| 8mm | — | — | 2428-B8 | 2428-C8 | 2428-C8 |
| 8.5mm | — | — | 2428-B8D5 | 2428-C8D5 | 2428-C8D5 |
| 9mm | — | — | 2428-B9 | 2428-C9 | 2428-C9 |
| 9.5mm | — | — | 2428-B9D5 | 2428-C9D5 | 2428-C9D5 |
| 10mm | — | — | 2428-B10 | 2428-C10 | 2428-C10 |

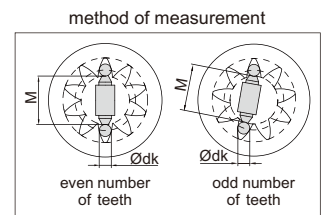
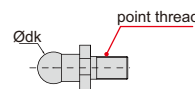
ball points (optional), in pair



extension rod for points (included)



2428-55 extension rod for points



Thread adaptor (optional)

| Code | Thread | Remark |
|---------|-----------|--|
| 2428-D1 | M1.6/M2.5 | For example, use 2428-A1 with 2428-D1 to replace 2428-B1 |
| 2428-D2 | M2.5/M4 | For example, use 2428-B1 with 2428-D2 to replace 2428-C1 |

BORE GAGES FOR BLIND HOLES

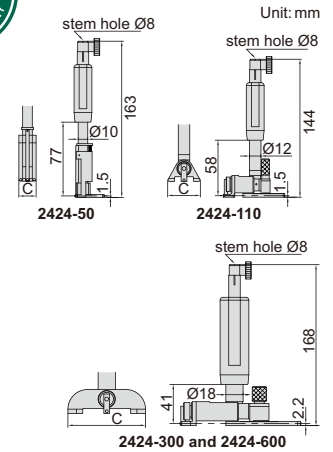
- To measure diameter of shallow and blind holes
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicators
 - Setting ring (code **6312**)
 - Long handle (code **7352**)



(mm)

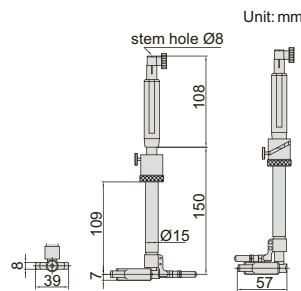
| Code | Range | Accuracy (without dial indicator) | Repeatability (without dial indicator) | C |
|-----------------|-----------|-----------------------------------|--|-----|
| 2424-50 | 20-50mm | 4µm | 1µm | 18 |
| 2424-110 | 50-110mm | 4µm | 1µm | 34 |
| 2424-300 | 110-300mm | 4µm | 1µm | 81 |
| 2424-600 | 300-600mm | 4µm | 1µm | 140 |

dial indicator is not included



ROTARY BORE GAGE

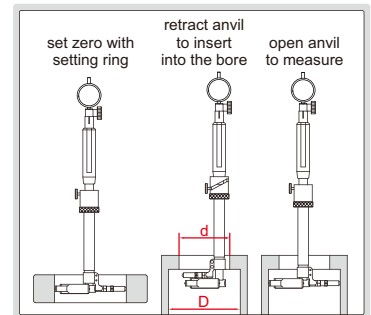
- Rotary anvil, to measure bores with small opening
- D: bore diameter to be measured, d: minimum opening diameter (see right drawing)
- d=57mm (D≤95mm)
- d=D-38 (D>95mm)
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicator or dial comparator
 - Setting ring (code **6312**)
 - Long handle (code **7352**)



| Code | Range | Accuracy (without dial indicator) | Repeatability* (without dial indicator) |
|-----------------|----------|-----------------------------------|---|
| 2921-150 | 80-150mm | 2µm | 1µm |

* Repeatability includes the error of rotary anvil

dial indicator is not included

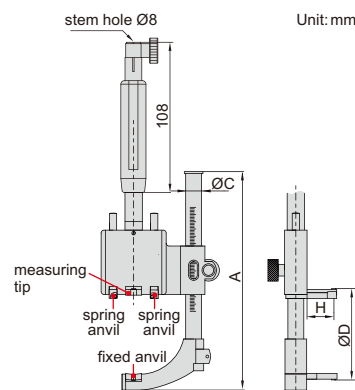
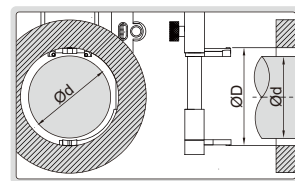


BORE GAGES

MEASURE DIAMETER OF BORES WITH BARRIER INSIDE

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

- Measure diameter of bores with barrier inside
- Optional accessory:
 - 0.01mm graduation dial indicators
 - Setting ring (code **6312**)



(mm)

| Code | Range ØD | Diameter of barrier Ød | Travel of measuring tip | Measuring depth H | Accuracy (without dial indicator) | Measuring force | A | ØC |
|-----------------|-----------|--------------------------|-------------------------|-------------------|-----------------------------------|-----------------|-----|----|
| 2432-70 | 25-70mm | <D-6 (less than 45mm)* | 2.5 | 12 | 0.01 | 1.5N | 115 | 10 |
| 2432-105 | 35-105mm | <D-11 (less than 70mm)* | 3.0 | 18 | 0.01 | 2.5N | 150 | 11 |
| 2432-210 | 100-210mm | <D-20 (less than 130mm)* | 3.5 | 30 | 0.015 | 2.5N | 233 | 15 |
| 2432-280 | 100-280mm | <D-20 (less than 130mm)* | 3.5 | 30 | 0.015 | 2.5N | 303 | 15 |
| 2432-500 | 200-500mm | <D-20 (less than 240mm)* | 3.5 | 30 | 0.02 | 2.5N | 622 | 30 |

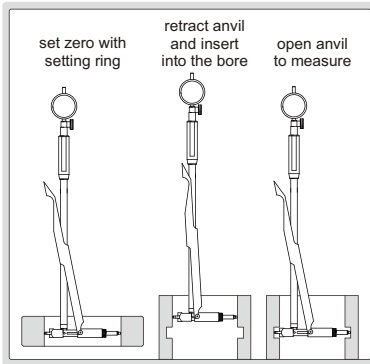
* For example, range of 2432-70 is 25-70mm, diameter of barrier is <D-6 (less than 45mm). When measuring size is 40mm, D-6=34mm, so the maximum diameter of barrier is 34mm. When measuring size is 60mm, D-6=54mm, however it should be less than 45mm, so the maximum diameter of barrier is 45mm.

dial indicator is not included





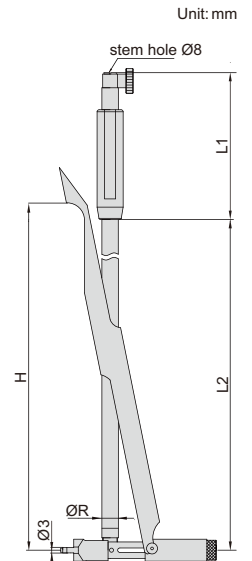
INTERNAL GROOVE BORE GAGES



dial indicator is not included

2433-180

anvil (optional)



- Measure diameter of internal grooves (width of groove > 3mm)
- Anvil is needed
- Optional accessory:
 - 0.001mm graduation dial indicators
 - Setting ring (code 6312)

| Code | Range | Retraction of anvil | Measuring depth H | Accuracy (without dial indicator) | Repeatability (without dial indicator) | ØR | L1 | L2 |
|----------|-----------|---------------------|-------------------|-----------------------------------|--|----|-----|-----|
| 2433-120 | 60-120mm | 8.5 | 180 | 2µm | 1µm | 10 | 105 | 215 |
| 2433-180 | 120-180mm | 23 | 230 | 2µm | 1µm | 12 | 108 | 285 |
| 2433-300 | 180-300mm | 30 | 230 | 2µm | 1µm | 18 | 130 | 285 |

(mm)

ANVIL (OPTIONAL)

| Code | Remark |
|------------|--|
| 2433-P□□□□ | We design and make anvils according to the grooves to be measured. * |

* Note: please provide the dimension of grooves to be measured.

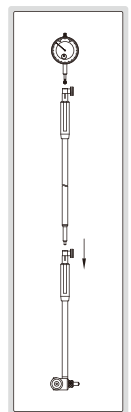
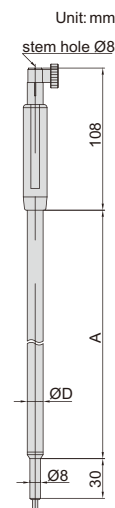


LONG HANDLES

- To assist deep-hole measurement
- Can be used for bore gages 2422, 2423, 2424 and 2921



7352-500

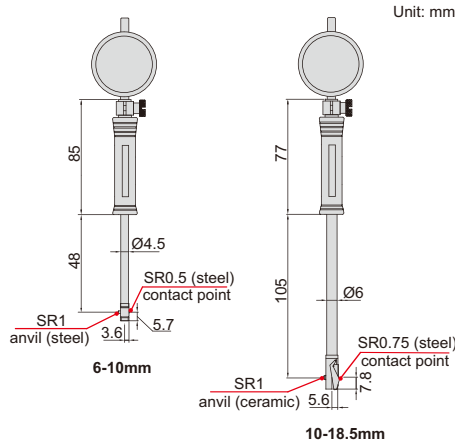
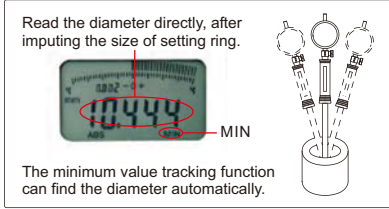
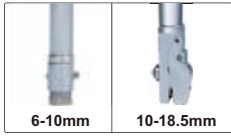


| Code | Applicable bore gages | A | ØD |
|-----------|-----------------------|-----|----|
| 7352-500 | above 35mm | 438 | 12 |
| 7352-1000 | | 938 | 12 |

(mm)

BORE GAGES FOR SMALL HOLES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



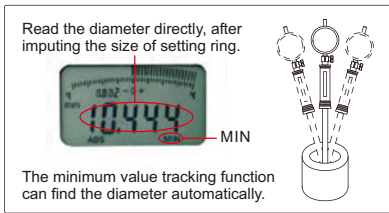
■ Optional accessory: setting ring (code 6312)

| Code | Range | Indicator | Accuracy | Repeatability |
|---------|-----------|---|----------|---------------|
| 2852-10 | 6-10mm | dial indicator, range 3mm, graduation 0.01mm (code 2311-3F) | ±0.012mm | 0.003mm |
| 2852-18 | 10-18.5mm | dial indicator, range 3mm, graduation 0.01mm (code 2311-3F) | ±0.012mm | 0.003mm |

| Code | Range | Indicator | Accuracy | Repeatability |
|---------|-----------|--|----------|---------------|
| 2152-10 | 6-10mm | digital indicator, range 12.7mm/0.5", resolution 0.002mm/0.0001" (code 2108-10F) | ±0.012mm | 0.003mm |
| 2152-18 | 10-18.5mm | digital indicator, range 12.7mm/0.5", resolution 0.002mm/0.0001" (code 2108-10F) | ±0.012mm | 0.003mm |

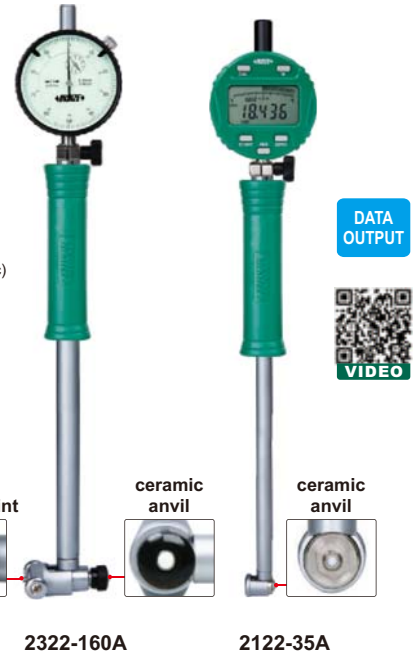
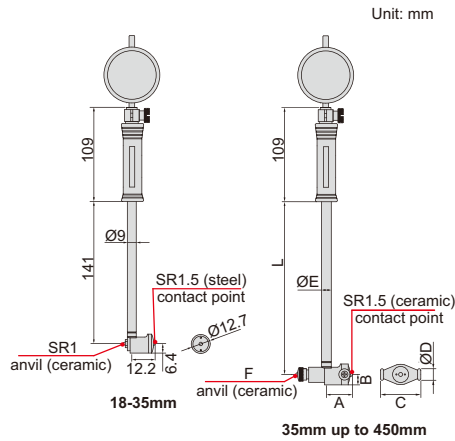
BORE GAGES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



(mm)

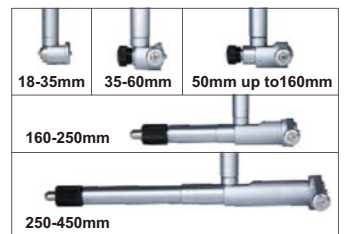
| Range | A | B | C | ØD | ØE | F | L |
|-----------|------|----|-------|----|------|-------|-----|
| 35-60mm | 22 | 9 | 27 | 13 | 12.8 | SR2 | 141 |
| 50-100mm | 26 | 9 | 35 | 13 | 12.8 | SR2 | 141 |
| 50-160mm | 26 | 9 | 35 | 13 | 12.8 | SR2 | 141 |
| 100-160mm | 26 | 9 | 35 | 13 | 12.8 | SR2 | 141 |
| 160-250mm | 56.5 | 13 | 74.5 | 15 | 12.8 | SR2 | 241 |
| 250-450mm | 86.5 | 15 | 101.5 | 15 | 14.5 | SR2.5 | 241 |



| Code | Range | Indicator | Accuracy | Repeatability |
|-----------|-----------|--|----------|---------------|
| 2322-35A | 18-35mm | dial indicator, range 10mm, graduation 0.01mm (code 2308-10FA) | ±0.015mm | 0.003mm |
| 2322-60A | 35-60mm | | ±0.018mm | 0.003mm |
| 2322-100A | 50-100mm | | ±0.018mm | 0.003mm |
| 2322-160A | 50-160mm | | ±0.018mm | 0.003mm |
| 2322-161A | 100-160mm | | ±0.018mm | 0.003mm |
| 2322-250A | 160-250mm | | ±0.018mm | 0.003mm |
| 2322-450A | 250-450mm | | ±0.018mm | 0.003mm |

| Code | Range | Indicator | Accuracy | Repeatability |
|-----------|-----------|--|----------|---------------|
| 2122-35A | 18-35mm | digital indicator, range 12.7mm/0.5", resolution 0.002mm/0.0001" (code 2108-10F) | ±0.015mm | 0.003mm |
| 2122-60A | 35-60mm | | ±0.018mm | 0.003mm |
| 2122-100A | 50-100mm | | ±0.018mm | 0.003mm |
| 2122-160A | 50-160mm | | ±0.018mm | 0.003mm |
| 2122-161A | 100-160mm | | ±0.018mm | 0.003mm |
| 2122-250A | 160-250mm | | ±0.018mm | 0.003mm |
| 2122-450A | 250-450mm | | ±0.018mm | 0.003mm |

■ Optional accessory: setting ring (code 6312), long handle (code 7351)



ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



BORE GAGE SETS

packaging (code 2824-S3)

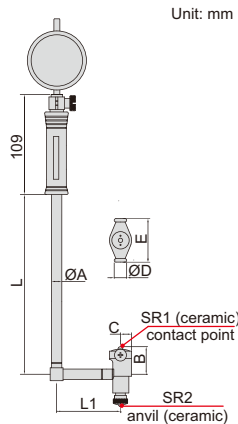


■ Optional accessory: setting ring (code 6312)

| Code | Range | Indicator | Bore gages included | Accuracy | Repeatability |
|-----------|----------|--|--|---|---------------|
| 2824-S160 | 35-160mm | dial indicator, code 2308-10FA range 10mm, graduation 0.01mm | ① 35-50mm (dial indicator and handle are not included) ② 50-160mm | 35-50mm ±0.018mm 50-160mm ±0.018mm | 0.003mm |
| 2824-S3 | 18-160mm | dial indicator, code 2308-10FA range 10mm, graduation 0.01mm | ① 18-35mm ② 35-60mm (dial indicator is not included) ③ 50-160mm (dial indicator is not included) | 18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm | 0.003mm |



2827-160A



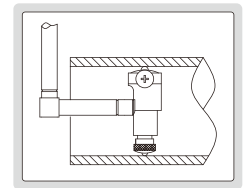
Unit: mm

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

■ Optional accessory: setting ring (code 6312)

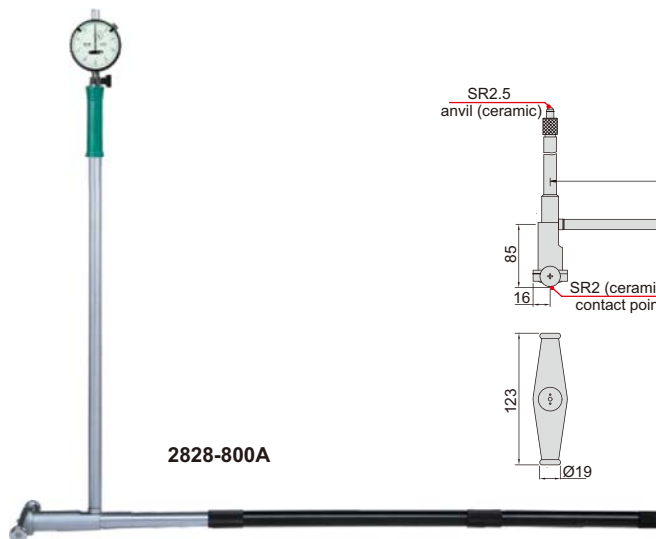
| Range | ØA | B | C | ØD | E | L | L1 |
|-----------|------|------|------|----|-------|-----|------|
| 35-60mm | 12.8 | 22 | 9 | 13 | 27 | 141 | 75 |
| 50-160mm | 12.8 | 28.5 | 9.2 | 13 | 35 | 141 | 76.2 |
| 160-250mm | 14.5 | 62.0 | 12.7 | 15 | 74.5 | 391 | 100 |
| 250-450mm | 14.5 | 91.5 | 15.0 | 15 | 101.5 | 391 | 100 |

BORE GAGES



| Code | Range | Indicator | Accuracy | Repeatability |
|-----------|-----------|---|----------|---------------|
| 2827-60A | 35-60mm | dial indicator code 2308-10FA range 10mm, graduation 0.01mm | ±0.018mm | 0.003mm |
| 2827-160A | 50-160mm | | ±0.018mm | 0.003mm |
| 2827-250A | 160-250mm | | ±0.018mm | 0.003mm |
| 2827-450A | 250-450mm | | ±0.018mm | 0.003mm |

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



2828-800A

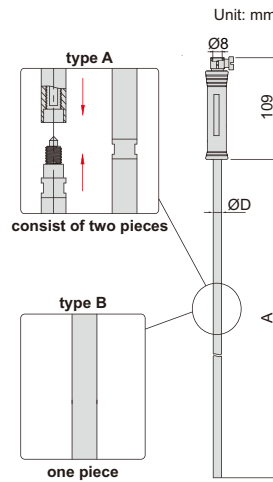
Unit: mm

| Code | Range | Indicator | Accuracy | Repeatability |
|-----------|-----------|--|----------|---------------|
| 2828-800A | 400-800mm | dial indicator code 2308-10FA, range 10mm, graduation 0.01mm | ±0.025mm | 0.003mm |

LONG HANDLES

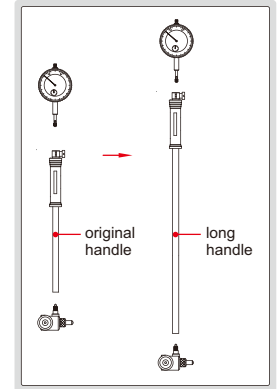
- To assist deep-hole measurement
- Can be used for bore gages 2322 and 2122

| Code | Applicable bore gages | A | ØD | Type |
|-----------|-------------------------|------|------|------|
| 7351-EX11 | 35-60mm, | 475 | 13 | B |
| 7351-EX12 | 50-100mm, | 980 | 13 | |
| 7351-EX13 | 50-160mm, | 1480 | 14.5 | A |
| 7351-EX14 | 100-160mm | 1980 | 14.5 | |
| 7351-EX21 | 160-250mm, 250-450mm | 480 | 14.5 | B |
| 7351-EX22 | | 980 | 14.5 | A |
| 7351-EX23 | | 1480 | 14.5 | |
| 7351-EX24 | | 1980 | 14.5 | |



7351-EX11

method of use (replace the original handle with long handle)



ANVILS FOR BORE GAGES



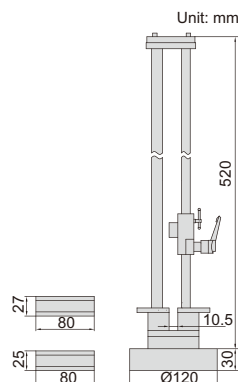
7350-160

- For 2852, 2152, 2322, 2122, 2824, 2827

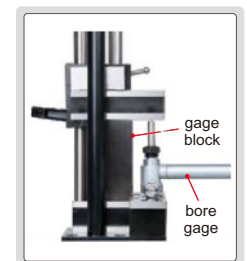
| Code | Applicable bore gages | Material of measuring face | Quantity per set | Measuring range of anvil (mm) |
|----------|-----------------------|----------------------------|------------------|--|
| 7350-10 | 6-10mm | steel | 9pcs | 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10 |
| 7350-18 | 10-18.5mm | ceramic | 9pcs | 10, 11, 12, 13, 14, 15, 16, 17, 18 |
| 7350-35 | 18-35mm | ceramic | 9pcs | 18, 20, 22, 24, 26, 28, 30, 32, 34 |
| 7350-60 | 35-60mm | ceramic | 6pcs | 35, 40, 45, 50, 55, 60 |
| 7350-100 | 50-100mm | ceramic | 11pcs | 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 |
| 7350-160 | 50-160mm | ceramic | 12pcs | 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105 |
| 7350-161 | 100-160mm | ceramic | 12pcs | 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105 |
| 7350-250 | 160-250mm | ceramic | 5pcs | 160, 170, 180, 190, 200 |
| 7350-450 | 250-450mm | ceramic | 5pcs | 250, 260, 270, 280, 290 |

BORE GAGE SETTER

- Used together with gage blocks to set bore gages



2395-400



| Code | Setting range |
|----------|---------------|
| 2395-400 | 18-400mm |

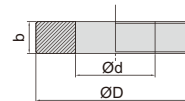
SETTING RINGS

CAN SUPPLY CUSTOM SETTING RING FROM Ø1.500MM TO Ø315.000MM, FOR EXAMPLE, Ø17.085MM

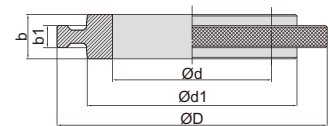


6312-20

- For zero setting of inside micrometers, three points internal micrometers and bore gages
- Deviation (difference between the ordered size and the size marked on the setting ring when supplied):
For example, the ordered size is Ø10.125mm, the size marked on the setting ring when supplied may be Ø10.127mm
- Meet DIN2250-1:2008



Ø1.5mm-100mm



Ø100mm-315mm

(mm)

| Diameter d** | b | D | Deviation | Roundness and cylindricity |
|--------------|----|-----|-----------|----------------------------|
| Ø1.5-2.5 | 4 | 22 | ±2.0µm | 0.3µm |
| Ø2.5-3 | 5 | 22 | ±2.0µm | 0.3µm |
| Ø3-5 | 5 | 22 | ±2.0µm | 0.4µm |
| Ø5-10 | 8 | 32 | ±2.0µm | 0.4µm |
| Ø10-15 | 10 | 38 | ±3.0µm | 0.5µm |
| Ø15-18 | 12 | 45 | ±3.0µm | 0.5µm |
| Ø18-20 | 12 | 45 | ±3.0µm | 0.6µm |
| Ø20-25 | 14 | 53 | ±3.0µm | 0.6µm |
| Ø25-30 | 16 | 63 | ±4.0µm | 0.6µm |
| Ø30-32 | 16 | 63 | ±4.0µm | 0.7µm |
| Ø32-40 | 18 | 71 | ±4.0µm | 0.7µm |
| Ø40-50 | 20 | 85 | ±4.0µm | 0.7µm |
| Ø50-60 | 20 | 100 | ±4.0µm | 0.8µm |
| Ø60-70 | 24 | 112 | ±4.0µm | 0.8µm |
| Ø70-80 | 24 | 125 | ±4.0µm | 0.8µm |
| Ø80-90 | 24 | 140 | ±4.0µm | 1.0µm |
| Ø90-100 | 24 | 160 | ±4.0µm | 1.0µm |

** For example Ø3-5mm means Ø3mm< diameter d ≤ 5mm

(mm)

| Diameter d** | b | b1 | d1 | D | Deviation | Roundness and cylindricity |
|--------------|----|----|-----|-----|-----------|----------------------------|
| Ø100-110 | 28 | 14 | 132 | 170 | ±5.0µm | 1.0µm |
| Ø110-120 | 28 | 16 | 140 | 180 | ±5.0µm | 1.0µm |
| Ø120-130 | 28 | 16 | 150 | 190 | ±6.0µm | 1.2µm |
| Ø130-140 | 28 | 18 | 160 | 200 | ±6.0µm | 1.2µm |
| Ø140-150 | 28 | 18 | 170 | 212 | ±6.0µm | 1.2µm |
| Ø150-160 | 28 | 20 | 180 | 224 | ±6.0µm | 1.2µm |
| Ø160-170 | 32 | 20 | 190 | 236 | ±6.0µm | 1.2µm |
| Ø170-180 | 32 | 20 | 200 | 250 | ±6.0µm | 1.2µm |
| Ø180-190 | 32 | 22 | 212 | 265 | ±7.0µm | 1.4µm |
| Ø190-200 | 32 | 22 | 224 | 280 | ±7.0µm | 1.4µm |
| Ø200-212 | 32 | 22 | 236 | 300 | ±7.0µm | 1.4µm |
| Ø212-224 | 32 | 25 | 250 | 315 | ±7.0µm | 1.4µm |
| Ø224-236 | 36 | 25 | 265 | 335 | ±7.0µm | 1.4µm |
| Ø236-250 | 36 | 28 | 280 | 355 | ±7.0µm | 1.4µm |
| Ø250-265 | 36 | 28 | 300 | 375 | ±8.0µm | 1.6µm |
| Ø265-280 | 36 | 28 | 315 | 400 | ±8.0µm | 1.6µm |
| Ø280-300 | 36 | 32 | 335 | 425 | ±8.0µm | 1.6µm |
| Ø300-315 | 36 | 32 | 355 | 450 | ±8.0µm | 1.6µm |

(mm)

| Code | Size |
|-----------|------|
| 6312-1D5* | Ø1.5 |
| 6312-2* | Ø2 |
| 6312-3* | Ø3 |
| 6312-4* | Ø4 |
| 6312-5* | Ø5 |
| 6312-6* | Ø6 |
| 6312-7* | Ø7 |
| 6312-8* | Ø8 |
| 6312-9* | Ø9 |
| 6312-10* | Ø10 |
| 6312-11* | Ø11 |
| 6312-12* | Ø12 |
| 6312-13* | Ø13 |
| 6312-14* | Ø14 |
| 6312-15* | Ø15 |
| 6312-16* | Ø16 |

(mm)

| Code | Size |
|----------|------|
| 6312-17* | Ø17 |
| 6312-18* | Ø18 |
| 6312-19* | Ø19 |
| 6312-20* | Ø20 |
| 6312-21* | Ø21 |
| 6312-22* | Ø22 |
| 6312-23* | Ø23 |
| 6312-24* | Ø24 |
| 6312-25* | Ø25 |
| 6312-26* | Ø26 |
| 6312-27* | Ø27 |
| 6312-28* | Ø28 |
| 6312-29* | Ø29 |
| 6312-30* | Ø30 |
| 6312-31* | Ø31 |
| 6312-32* | Ø32 |

(mm)

| Code | Size |
|----------|------|
| 6312-33* | Ø33 |
| 6312-34* | Ø34 |
| 6312-35* | Ø35 |
| 6312-36* | Ø36 |
| 6312-37* | Ø37 |
| 6312-38* | Ø38 |
| 6312-39* | Ø39 |
| 6312-40* | Ø40 |
| 6312-41* | Ø41 |
| 6312-42* | Ø42 |
| 6312-43* | Ø43 |
| 6312-44* | Ø44 |
| 6312-45* | Ø45 |
| 6312-46* | Ø46 |
| 6312-47* | Ø47 |
| 6312-48* | Ø48 |

(mm)

| Code | Size |
|------------|--------|
| 6312-49* | Ø49 |
| 6312-50* | Ø50 |
| 6312-55* | Ø55 |
| 6312-60* | Ø60 |
| 6312-62* | Ø62 |
| 6312-65* | Ø65 |
| 6312-70* | Ø70 |
| 6312-75* | Ø75 |
| 6312-80* | Ø80 |
| 6312-85* | Ø85 |
| 6312-87* | Ø87 |
| 6312-90* | Ø90 |
| 6312-95* | Ø95 |
| 6312-100* | Ø100 |
| 6312-112D5 | Ø112.5 |
| 6312-125* | Ø125 |

(mm)

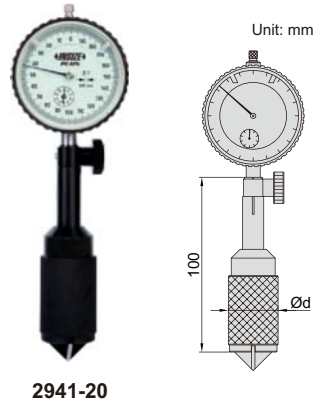
| Code | Size |
|-------------|--------|
| 6312-137D5* | Ø137.5 |
| 6312-150* | Ø150 |
| 6312-162D5* | Ø162.5 |
| 6312-175* | Ø175 |
| 6312-187D5* | Ø187.5 |
| 6312-200* | Ø200 |
| 6312-212D5* | Ø212.5 |
| 6312-225* | Ø225 |
| 6312-237D5* | Ø237.5 |
| 6312-250* | Ø250 |
| 6312-262D5* | Ø262.5 |
| 6312-275* | Ø275 |
| 6312-287D5* | Ø287.5 |
| 6312-300* | Ø300 |

* Supplied with manufacturer inspection certificate

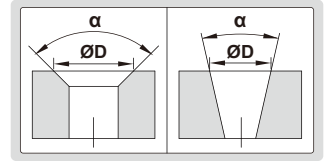
INTERNAL CHAMFER GAGES

- Measure end diameter of chamfer or taper holes
- With limit pointers

| Code | Range ØD | Applicable angle α | Graduation | Accuracy | Ød |
|----------|------------|--------------------|------------|----------|------|
| 2941-20 | 0.5-20.1mm | 0-90° | 0.01mm | ±0.02mm | 28.3 |
| 2941-40 | 20-40mm | 0-90° | 0.01mm | ±0.02mm | 50 |
| 2941-203 | 0.5-20.1mm | 90-127° | 0.02mm | ±0.04mm | 28.3 |
| 2941-403 | 20-40mm | 90-127° | 0.02mm | ±0.04mm | 50 |



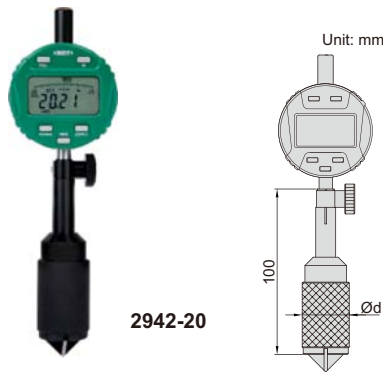
measure end diameter of chamfer or taper holes



DIGITAL INTERNAL CHAMFER GAGES

- Measure end diameter of chamfer or taper holes
- Resolution: 0.01mm/0.0005"

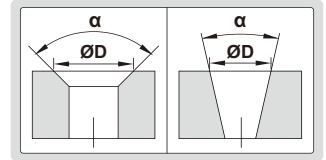
| Code | Range ØD | Applicable angle α | Accuracy | Ød |
|----------|------------|--------------------|----------|------|
| 2942-20 | 0.5-20.1mm | 0-90° | ±0.02mm | 28.3 |
| 2942-40 | 20-40mm | 0-90° | ±0.02mm | 50 |
| 2942-203 | 0.5-20.1mm | 90-127° | ±0.04mm | 28.3 |
| 2942-403 | 20-40mm | 90-127° | ±0.04mm | 50 |



DATA OUTPUT



measure end diameter of chamfer or taper holes

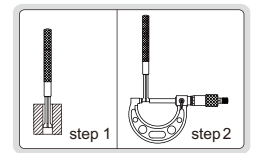
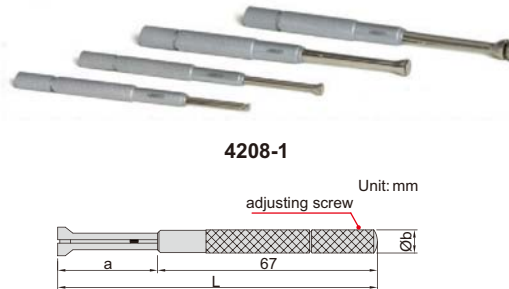


SMALL HOLE GAGE SET

- 4 gages per set
- For small holes, slots and grooves, etc.
- Satin chrome finish

| Range | L | a | Øb |
|----------|-------|------|-----|
| 3-5mm | 90 | 22.5 | 5.5 |
| 5-7.5mm | 97.6 | 30 | 5.5 |
| 7.5-10mm | 102.8 | 35 | 8.5 |
| 10-13mm | 108 | 40 | 8.5 |

| Code | Total range | Gages included |
|--------|-------------|-----------------------------------|
| 4208-1 | 3-13mm | 3-5mm, 5-7.5mm, 7.5-10mm, 10-13mm |

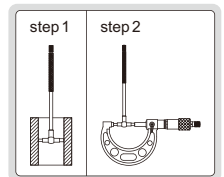


TELESCOPING GAGE SET

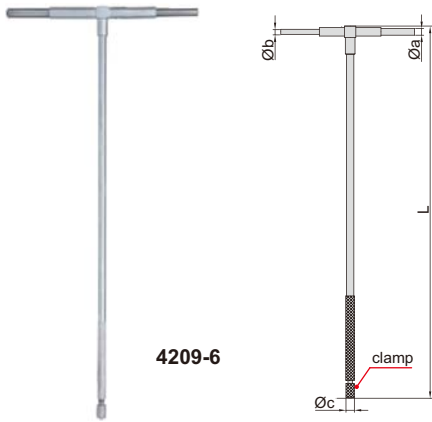
- 6 gages per set
- For quick measurement of inside diameter of holes and width of slots
- Satin chrome finish

| Range | L | Øa | Øb | Øc |
|-----------|-----|-----|-----|-----|
| 8-12.7mm | 115 | 3.9 | 2.9 | 6.2 |
| 12.7-19mm | 115 | 5.3 | 3.8 | 6.2 |
| 19-32mm | 115 | 5.3 | 3.8 | 6.2 |
| 32-54mm | 137 | 7.6 | 6.1 | 7.2 |
| 54-90mm | 137 | 7.6 | 6.1 | 7.2 |
| 90-150mm | 137 | 7.6 | 6.1 | 7.2 |

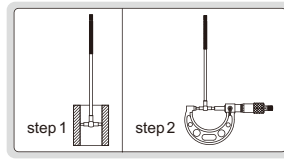
| Code | Total range | Gages included |
|--------|-------------|--|
| 4206-1 | 8-150mm | 8-12.7mm, 12.7-19mm, 19-32mm, 32-54mm, 54-90mm, 90-150mm |



LONG HANDLE TELESCOPING GAGES



4209-6



- For quick measurement of inside diameter of deep holes and width of slots
- Satin chrome finish

| (mm) | | | | | |
|--------|-----------|-----|-----|-----|-----|
| Code | Range | L | Øa | Øb | Øc |
| 4209-1 | 8-12.7mm | 250 | 3.9 | 2.9 | 6.2 |
| 4209-2 | 12.7-19mm | 250 | 5.3 | 3.8 | 6.2 |
| 4209-3 | 19-32mm | 250 | 5.3 | 3.8 | 6.2 |
| 4209-4 | 32-54mm | 300 | 7.6 | 6.1 | 7.2 |
| 4209-5 | 54-90mm | 300 | 7.6 | 6.1 | 7.2 |
| 4209-6 | 90-150mm | 300 | 7.6 | 6.1 | 7.2 |

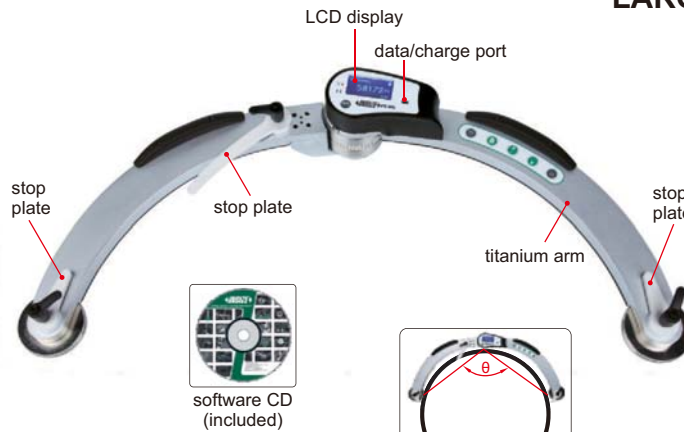


DATA OUTPUT



LARGE DIAMETER GAGE CODE ISQ-RA600

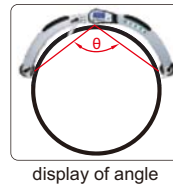
- To measure large external or internal diameters
- Automatic judgment and display external or internal diameter
- Titanium arm, light in weight
- Backlight LCD display, can rotate 180° for easy reading
- Memory of 12 readings and average calculation
- With minimum and maximum measurement mode
- Angle can be displayed



external diameter measurement



internal diameter measurement



display of angle



software (included), data output, save and print

SPECIFICATION

| | | |
|--------------|---|----------------------------|
| Range | external | Ø500~6000mm/19.69~236.22" |
| | internal | Ø1100~6000mm/43.31~236.22" |
| Resolution | 0.01mm/0.001" | |
| Accuracy | ±(0.01+D²/30)mm (D is the diameter to be measured, in meter) | |
| Power supply | rechargeable battery (for 8 hours working) | |
| Weight | 3.8kg | |

STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software | 1pc |

Accuracy sample by diameters

| Diameter | Accuracy |
|----------|----------|
| 500mm | ±0.018mm |
| 1000mm | ±0.043mm |
| 1500mm | ±0.085mm |
| 2000mm | ±0.143mm |
| 2500mm | ±0.218mm |
| 3000mm | ±0.310mm |
| 4000mm | ±0.543mm |
| 5000mm | ±0.843mm |
| 6000mm | ±1.210mm |

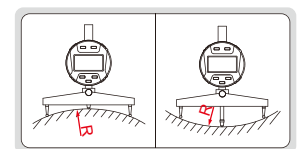
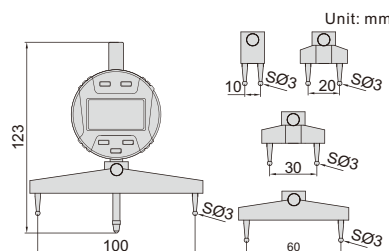
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Measure radius of internal or external arcs
- Display can be rotated by 320°
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032, automatic power off

ATTENTION: NO DATA OUTPUT



DIGITAL RADIUS GAGE

| Measuring jaw | Range of radius (R) |
|---------------|---------------------|
| 10mm | 5-11mm |
| 20mm | 11-22mm |
| 30mm | 22-83mm |
| 60mm | 83-250mm |
| 100mm | 250-910mm |



2183

| Code | Range of radius (R) | Resolution | Accuracy (mm) |
|------|---------------------|------------------|---------------|
| 2183 | 5-910mm/0.2-35.83" | 0.005mm/0.00005" | ±0.01R* |

* R is the radius to be measured

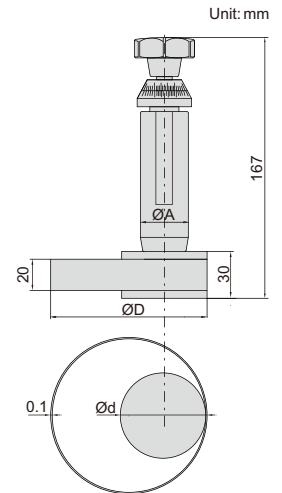
TAPE BORE GAGES



MEASURE INTERNAL DIAMETER OF FLEXIBLE MATERIALS (FOR EXAMPLE, BELT)

- Graduation: 0.1mm
- Accuracy: 0.2mm

| (mm) | | | | |
|----------|-----------|-------|------|-----------------|
| Code | Range ØD | Ød | ØA | Measuring depth |
| 2430-24 | 14-24mm | 13.5 | 13 | 15-60 |
| 2430-40 | 22-40mm | 21.5 | 21 | 15-60 |
| 2430-60 | 35-60mm | 34.5 | 30.5 | 15-96 |
| 2430-100 | 55-100mm | 54.5 | 30.5 | 15-106 |
| 2430-180 | 95-180mm | 94.5 | 30.5 | 15-106 |
| 2430-255 | 170-255mm | 169.5 | 30.5 | 15-106 |
| 2430-330 | 245-330mm | 244.5 | 30.5 | 15-106 |



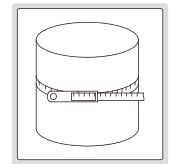
CIRCUMFERENCE TAPES

ATTENTION: BASIC MODEL

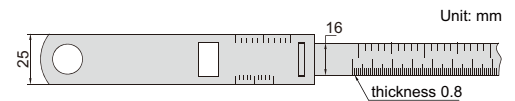
- Graduation: 0.1mm
- Measure diameter and circumference of pipes, trees, tires, etc.
- Laser engraved scale
- Made of stainless steel



7114-950



| Code | Circumference range | Diameter range | Accuracy | |
|-----------|---------------------|----------------|---------------|----------|
| | | | Circumference | Diameter |
| 7114-950 | 60-950mm | Ø20-300mm | ±1.5mm | ±0.5mm |
| 7114-2200 | 940-2200mm | Ø300-700mm | ±1.5mm | ±0.5mm |
| 7114-3460 | 2190-3460mm | Ø700-1100mm | ±1.5mm | ±0.5mm |



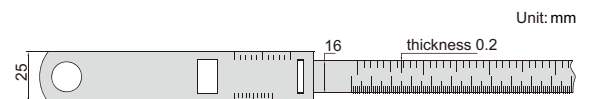
CIRCUMFERENCE TAPES



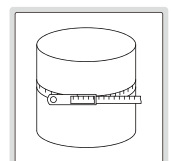
- Graduation: 0.1mm
- Measure diameter and circumference of pipes, trees, tires, etc.
- Laser engraved scale
- Made of stainless steel



7115-3460



| Code | Circumference range | Diameter range | Accuracy | |
|-----------|---------------------|----------------|---------------|----------|
| | | | Circumference | Diameter |
| 7115-950* | 150-950mm | Ø50-300mm | ±0.60mm | ±0.20mm |
| 7115-2200 | 940-2200mm | Ø300-700mm | ±0.60mm | ±0.20mm |
| 7115-3460 | 2190-3460mm | Ø700-1100mm | ±0.60mm | ±0.20mm |
| 7115-4720 | 3450-4720mm | Ø1100-1500mm | ±0.90mm | ±0.30mm |
| 7115-5980 | 4710-5980mm | Ø1500-1900mm | ±0.90mm | ±0.30mm |



* When diameter range Ø50-100mm, the accuracy of circumference is ±0.90mm, diameter is ±0.30mm.

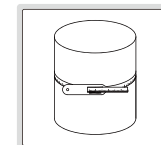


CIRCUMFERENCE TAPES

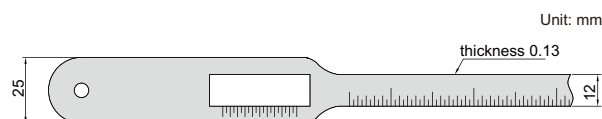
- Measure diameter of cables, thin plastic pipes, etc., which may deform
- Laser engraved scale
- Made of stainless steel



7116-115



| Code | Diameter range | Graduation | Accuracy |
|----------|----------------|------------|----------|
| 7116-115 | Ø20-115mm | 0.05mm | ±0.10mm |
| 7116-230 | Ø100-230mm | 0.05mm | ±0.10mm |
| 7116-330 | Ø200-330mm | 0.05mm | ±0.15mm |
| 7116-620 | Ø300-620mm | 0.05mm | ±0.20mm |



Unit: mm



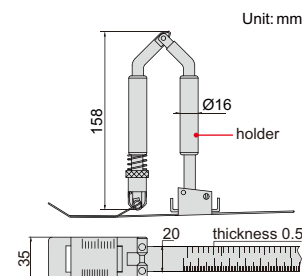
INTERNAL CIRCUMFERENCE TAPES

- Measure internal diameter and circumference of tubes, belts, etc.
- Laser engraved scale
- Made of stainless steel
- Optional accessory: Holder (code 7125-HOLDER)



7125-1550

| Code | Circumference range | Diameter range | Graduation | Accuracy | |
|-----------|---------------------|----------------|------------|---------------|----------|
| | | | | Circumference | Diameter |
| 7125-1550 | 720-1550mm | Ø230-490mm | 0.1mm | ±0.35mm | ±0.20mm |
| 7125-2200 | 940-2200mm | Ø300-700mm | 0.1mm | ±0.35mm | ±0.20mm |
| 7125-3620 | 2190-3620mm | Ø700-1100mm | 0.1mm | ±0.45mm | ±0.23mm |
| 7125-4720 | 3450-4720mm | Ø1100-1500mm | 0.1mm | ±0.45mm | ±0.23mm |
| 7125-5980 | 4710-5980mm | Ø1500-1900mm | 0.1mm | ±0.50mm | ±0.25mm |
| 7125-7230 | 5970-7230mm | Ø1900-2300mm | 0.1mm | ±0.55mm | ±0.27mm |
| 7125-8500 | 7220-8500mm | Ø2300-2700mm | 0.1mm | ±0.55mm | ±0.27mm |



Unit: mm

application



HOLDER (OPTIONAL)

| Code | Remark |
|-------------|--|
| 7125-HOLDER | Suitable for internal circumference taps |

- Button function:
 - in/mm: short press for inch/metric conversion
 - long press to change measuring direction
 - ABS: short press for absolute/incremental measurement
 - long press to preset data
 - 0/ON: short press to turn on when power is off
 - short press to set zero when power is on
 - long press to turn off
- CR1632 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A), contact points (page 102~103)

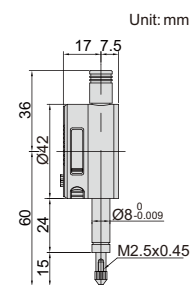


DATA OUTPUT

COMPACT DIGITAL INDICATORS



2114-51F



Unit: mm

| Code | Range | Resolution | Accuracy | Hysteresis | Remark |
|------------|----------|------------------|----------|------------|-----------|
| 2114-5F * | 5mm/0.2" | 0.01mm/0.0005" | 20µm | 10µm | flat back |
| 2114-51F * | 5mm/0.2" | 0.001mm/0.00005" | 5µm | 2µm | flat back |

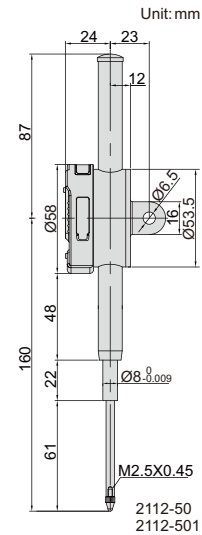
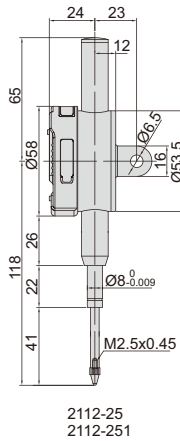
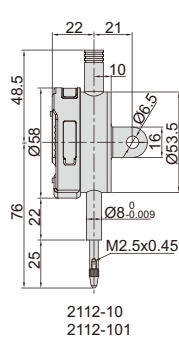
* Supplied with manufacturer inspection certificate traceable to NIST USA

DIGITAL INDICATORS (STANDARD MODEL)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

DATA OUTPUT

spindle lift knob is included



- Button function: on/off, inch/mm, zero
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A), backs (page 104~105), contact points (page 102~103)

Resolution 0.001mm/0.00005"

| Code | Range | Accuracy | Hysteresis | Remark |
|-------------|-------------|----------|------------|-----------|
| 2112-101F * | 12.7mm/0.5" | 5µm | 2µm | flat back |
| 2112-251F * | 25.4mm/1" | 5µm | 3µm | flat back |
| 2112-501F * | 50.8mm/2" | 6µm | 3µm | flat back |
| 2112-101 * | 12.7mm/0.5" | 5µm | 2µm | lug back |
| 2112-251 * | 25.4mm/1" | 5µm | 3µm | lug back |
| 2112-501 * | 50.8mm/2" | 6µm | 3µm | lug back |

Resolution 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | Remark |
|------------|-------------|----------|------------|-----------|
| 2112-10F * | 12.7mm/0.5" | 20µm | 10µm | flat back |
| 2112-25F * | 25.4mm/1" | 20µm | 10µm | flat back |
| 2112-50F * | 50.8mm/2" | 30µm | 10µm | flat back |
| 2112-10 * | 12.7mm/0.5" | 20µm | 10µm | lug back |
| 2112-25 * | 25.4mm/1" | 20µm | 10µm | lug back |
| 2112-50 * | 50.8mm/2" | 30µm | 10µm | lug back |

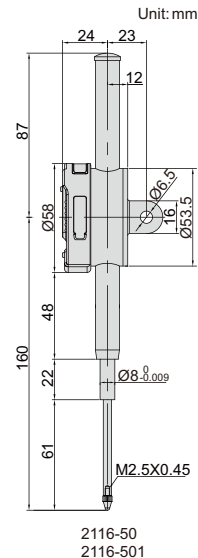
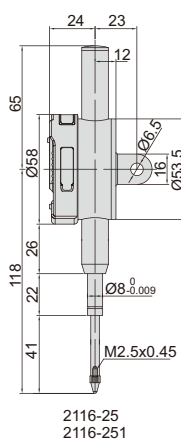
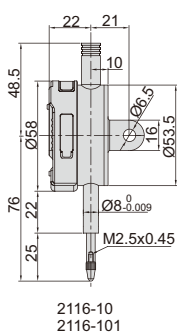
* Supplied with manufacturer inspection certificate traceable to NIST USA

METRIC DIGITAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

DATA OUTPUT

spindle lift knob is included



- Button function: on/off, +/-, zero
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A), backs (page 104~105), contact points (page 102~103)

Resolution 0.001mm

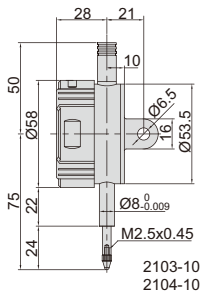
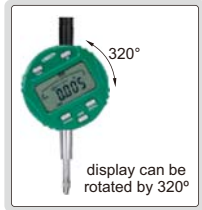
| Code | Range | Accuracy | Hysteresis | Remark |
|-------------|--------|----------|------------|-----------|
| 2116-101F * | 12.7mm | 5µm | 2µm | flat back |
| 2116-251F * | 25.4mm | 5µm | 3µm | flat back |
| 2116-501F * | 50.8mm | 6µm | 3µm | flat back |
| 2116-101 * | 12.7mm | 5µm | 2µm | lug back |
| 2116-251 * | 25.4mm | 5µm | 3µm | lug back |
| 2116-501 * | 50.8mm | 6µm | 3µm | lug back |

Resolution 0.01mm

| Code | Range | Accuracy | Hysteresis | Remark |
|------------|--------|----------|------------|-----------|
| 2116-10F * | 12.7mm | 20µm | 10µm | flat back |
| 2116-25F * | 25.4mm | 20µm | 10µm | flat back |
| 2116-50F * | 50.8mm | 30µm | 10µm | flat back |
| 2116-10 * | 12.7mm | 20µm | 10µm | lug back |
| 2116-25 * | 25.4mm | 20µm | 10µm | lug back |
| 2116-50 * | 50.8mm | 30µm | 10µm | lug back |

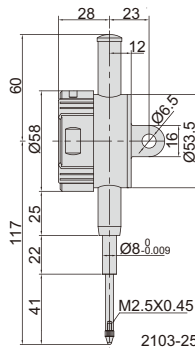
* Supplied with manufacturer inspection certificate traceable to NIST USA

INSPECTION CERTIFICATE
TRACEABLE TO NIST

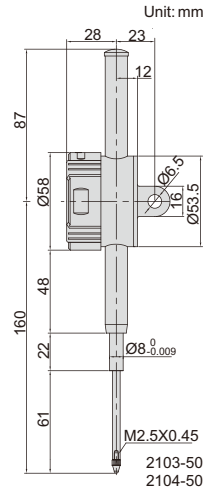


2103-10

DATA OUTPUT



2104-25



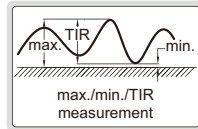
2103-50

- Reading in digital and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A), backs (page 104~105), contact points (page 102~103)

spindle lift knob is included



max./min./TIR



analog pointer



Resolution 0.001mm/0.00005"

| Code | Range | Accuracy | Hysteresis | Remark |
|-----------|-------------|----------|------------|-----------|
| 2103-10F* | 12.7mm/0.5" | 5µm | 2µm | flat back |
| 2103-25F* | 25.4mm/1" | 5µm | 3µm | flat back |
| 2103-50F* | 50.8mm/2" | 6µm | 3µm | flat back |
| 2103-10* | 12.7mm/0.5" | 5µm | 2µm | lug back |
| 2103-25* | 25.4mm/1" | 5µm | 3µm | lug back |
| 2103-50* | 50.8mm/2" | 6µm | 3µm | lug back |

Resolution 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | Remark |
|-----------|-------------|----------|------------|-----------|
| 2104-10F* | 12.7mm/0.5" | 20µm | 10µm | flat back |
| 2104-25F* | 25.4mm/1" | 20µm | 10µm | flat back |
| 2104-50F* | 50.8mm/2" | 30µm | 10µm | flat back |
| 2104-10* | 12.7mm/0.5" | 20µm | 10µm | lug back |
| 2104-25* | 25.4mm/1" | 20µm | 10µm | lug back |
| 2104-50* | 50.8mm/2" | 30µm | 10µm | lug back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

INSPECTION CERTIFICATE
TRACEABLE TO NIST

ONE BATTERY FOR 4000 WORKING HOURS

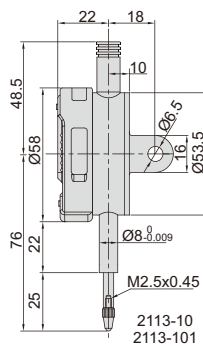
DATA OUTPUT

data output cable (optional)

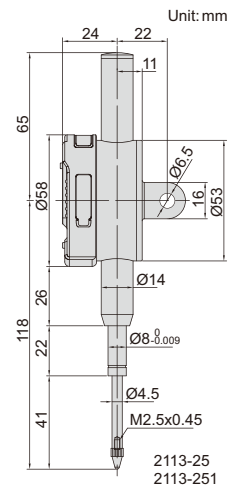


7305-SPC1A

spindle lift knob is included



2113-10



2113-251

- No auto power off, tracking the deformation of mould and steel structure for a long time
- Low power consumption
- Button function: on/off, zero, inch/mm
- CR2032 battery
- Data output
- Optional accessory: backs (page 104~105), contact points (page 102~103), data output cable (code 7305-SPC1A)

Resolution 0.001mm/0.00005"

| Code | Range | Accuracy | Hysteresis | Remark |
|------------|-------------|----------|------------|-----------|
| 2113-101F* | 12.7mm/0.5" | 5µm | 2µm | flat back |
| 2113-251F* | 25.4mm/1" | 5µm | 3µm | flat back |
| 2113-101* | 12.7mm/0.5" | 5µm | 2µm | lug back |
| 2113-251* | 25.4mm/1" | 5µm | 3µm | lug back |

Resolution 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | Remark |
|-----------|-------------|----------|------------|-----------|
| 2113-10F* | 12.7mm/0.5" | 20µm | 10µm | flat back |
| 2113-25F* | 25.4mm/1" | 20µm | 10µm | flat back |
| 2113-10* | 12.7mm/0.5" | 20µm | 10µm | lug back |
| 2113-25* | 25.4mm/1" | 20µm | 10µm | lug back |

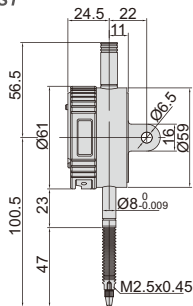
* Supplied with manufacturer inspection certificate traceable to NIST USA

WATERPROOF DIGITAL INDICATORS

**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

WATERPROOF

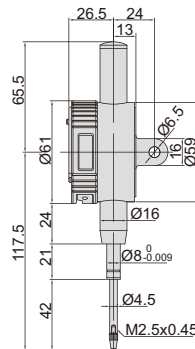
DATA
OUTPUT



2115-10
2115-101



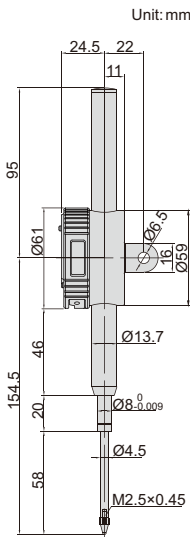
2115-10



2115-25
2115-251



2115-25



2115-50
2115-501



2115-50

spindle lift knob is included
(except 2115-101/101F, 2115-10/10F)



Resolution 0.001mm/0.00005"

| Code | Range | Dust/waterproof | Accuracy | Hysteresis | Remark |
|------------|-------------|-----------------|----------|------------|-----------|
| 2115-101* | 12.7mm/0.5" | IP65 | 5µm | 2µm | lug back |
| 2115-251* | 25.4mm/1" | IP54 | 5µm | 3µm | lug back |
| 2115-501* | 50.8mm/2" | IP54 | 6µm | 3µm | lug back |
| 2115-101F* | 12.7mm/0.5" | IP65 | 5µm | 2µm | flat back |
| 2115-251F* | 25.4mm/1" | IP54 | 5µm | 3µm | flat back |
| 2115-501F* | 50.8mm/2" | IP54 | 6µm | 3µm | flat back |

Resolution 0.01mm/0.0005"

| Code | Range | Dust/waterproof | Accuracy | Hysteresis | Remark |
|-----------|-------------|-----------------|----------|------------|-----------|
| 2115-10* | 12.7mm/0.5" | IP65 | 20µm | 10µm | lug back |
| 2115-25* | 25.4mm/1" | IP54 | 20µm | 10µm | lug back |
| 2115-50* | 50.8mm/2" | IP54 | 30µm | 10µm | lug back |
| 2115-10F* | 12.7mm/0.5" | IP65 | 20µm | 10µm | flat back |
| 2115-25F* | 25.4mm/1" | IP54 | 20µm | 10µm | flat back |
| 2115-50F* | 50.8mm/2" | IP54 | 30µm | 10µm | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

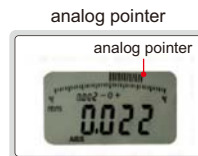
- Dust/waterproof
- Button function: on/off, zero, mm/inch
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A), backs (page 104~105), contact points (page 102~103)

DIGITAL INDICATORS FOR BORE GAGES

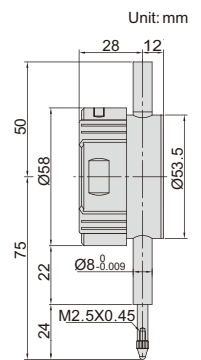
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

DATA
OUTPUT

- Specially designed for bore gages
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: minimum value tracking, calibration, data preset, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A), backs (page 104~105), contact points (page 102~103)



2108-10F



| Code | Range | Resolution | Accuracy | Hysteresis | Remark |
|------------|-------------|------------------|----------|------------|-----------|
| 2108-10F* | 12.7mm/0.5" | 0.002mm/0.0001" | 20µm | 10µm | flat back |
| 2108-101F* | 12.7mm/0.5" | 0.001mm/0.00005" | 5µm | 2µm | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA



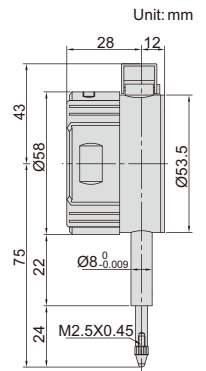
DIGITAL INDICATORS WITH LIFTING LEVER

DATA OUTPUT

- Reading in digital and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 104~105), contact points (page 102~103)



2109-10



| Code | Range | Resolution | Accuracy | Hysteresis | Remark |
|-----------|-----------|------------------|----------|------------|-----------|
| 2109-10* | 10mm/0.4" | 0.01mm/0.0005" | 20µm | 10µm | flat back |
| 2109-101* | 10mm/0.4" | 0.001mm/0.00005" | 5µm | 2µm | flat back |

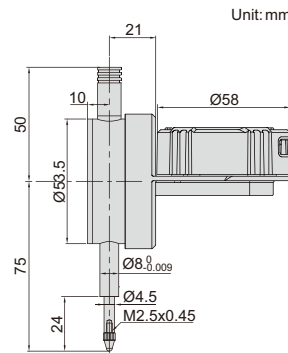
* Supplied with manufacturer inspection certificate traceable to NIST USA



BACK PLUNGER TYPE DIGITAL INDICATORS

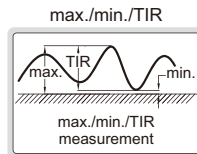


2118-10



DATA OUTPUT

- Display can rotate 320°, and display direction is changeable
- Reading in digital and analog
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 104~105), contact points (page 102~103)



spindle lift knob is included



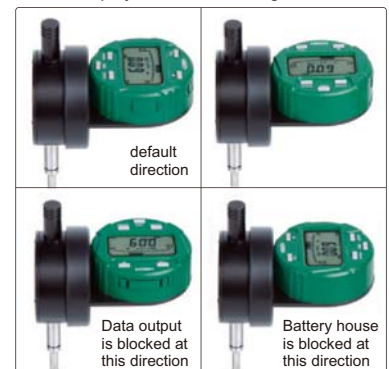
analog pointer



display can rotate 320°



display direction is changeable



| Code | Range | Resolution | Accuracy | Hysteresis | Remark |
|-----------|-------------|------------------|----------|------------|-----------|
| 2118-10* | 12.7mm/0.5" | 0.01mm/0.0005" | 20µm | 10µm | flat back |
| 2118-101* | 12.7mm/0.5" | 0.001mm/0.00005" | 5µm | 2µm | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

Remark: To change above direction, 4 fixing screws on the back of display need to be removed first.

LARGE STROKE DIGITAL INDICATORS

spindle lift knob is included



- Button function: on/off, zero, mm/inch
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40, 7302-SPC3A, 7305-SPC1A**), backs (page 104~105), contact points (page 102~103)

Resolution 0.01mm/0.0005"

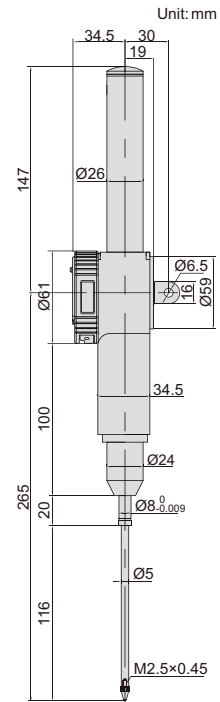
| Code | Range | Accuracy | Hysteresis | Remark |
|----------|----------|----------|------------|----------|
| 2117-100 | 100mm/4" | 30µm | 10µm | lug back |

Resolution 0.001mm/0.00005"

| Code | Range | Accuracy | Hysteresis | Remark |
|-----------|----------|----------|------------|----------|
| 2117-1001 | 100mm/4" | 9µm | 3µm | lug back |



2117-100



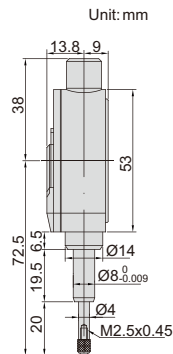
DATA OUTPUT

DIAL COMPARATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST



- Meet DIN879-1
- Shockproof
- Jeweled bearing
- Overtravel: 3mm
- Shadow free dial face cover
- Supplied with limit pointers
- Initial measuring force 1.2N
- Optional accessory: lifting lever (code **6289-150**)



2881-01

JEWELLED BEARING

SHOCK PROOF

lever construction

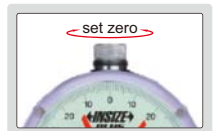
within the measuring range, the spindle is in contact with the lever



when the measuring range is exceeded, the spindle leaves the lever



lifting lever (optional)



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading | Remark |
|----------|-------|------------|----------|------------|--------------|-----------|
| 2881-01* | 0.1mm | 0.001mm | 1.2µm | 0.5µm | 50-0-50 | flat back |

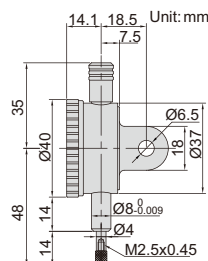
* Supplied with manufacturer inspection certificate traceable to NIST USA

HIGH PRECISION COMPACT DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST



- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103), lifting lever (code **6289-150**)



2890-1

SHOCK PROOF

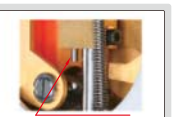
lifting lever (optional)



lever device



Within the measuring range, the spindle is in contact with the lever



When the measuring range is exceeded, the spindle leaves the lever

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|----------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2890-1* | 1mm | 0.001mm | 3µm | 1.5µm | 0.1mm | 0-100 | lug back |
| 2890-1F* | 1mm | 0.001mm | 3µm | 1.5µm | 0.1mm | 0-100 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

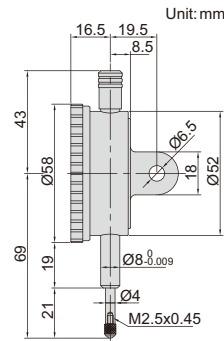
HIGH PRECISION DIAL INDICATORS



- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103), lifting lever (code 6289-150)



2891-1



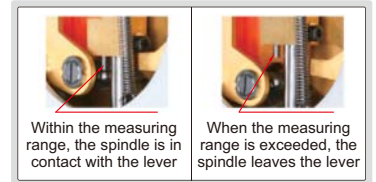
SHOCK PROOF

INSPECTION CERTIFICATE TRACEABLE TO NIST

lifting lever (optional)



lever device



| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|----------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2891-1* | 1mm | 0.001mm | 3µm | 1.5µm | 0.1mm | 0-100 | lug back |
| 2891-1F* | 1mm | 0.001mm | 3µm | 1.5µm | 0.1mm | 0-100 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

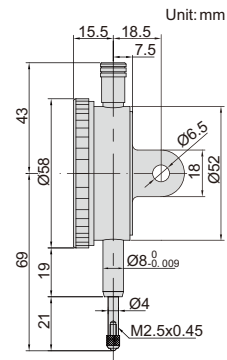
PRECISION DIAL INDICATORS



- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)



2830-1



JEWELLED BEARING

SHOCK PROOF

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|----------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2830-1* | 1mm | 0.001mm | 5µm | 2µm | 0.2mm | 0-100-0 | lug back |
| 2830-1F* | 1mm | 0.001mm | 5µm | 2µm | 0.2mm | 0-100-0 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

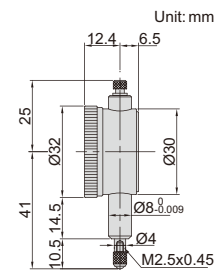
COMPACT DIAL INDICATOR



- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)



2886-3F



| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|----------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2886-3F* | 3mm | 0.01mm | 12µm | 3µm | 0.5mm | 0-50 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

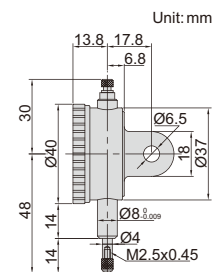
COMPACT DIAL INDICATORS



- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)



2887-5

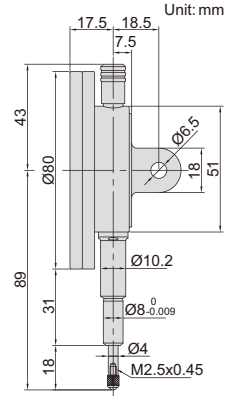


| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|----------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2887-5* | 5mm | 0.01mm | 14µm | 3µm | 0.5mm | 0-50 | lug back |
| 2887-5F* | 5mm | 0.01mm | 14µm | 3µm | 0.5mm | 0-50 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

LARGE DIAL FACE DIAL INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST



2888-10

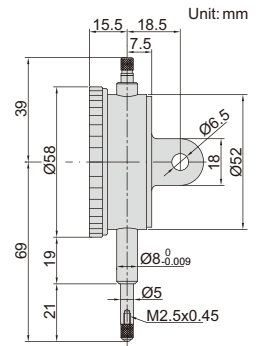
- Large, easy-to-read dial face
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|-----------|-------|------------|----------|------------|-----------|--------------|--------------------------------|
| 2888-10 * | 10mm | 0.01mm | 17µm | 5µm | 1mm | 0-100 | flat back, with spare lug back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST



2892-10

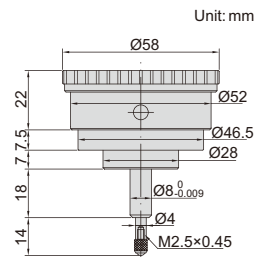
- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2892-10 * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | lug back |
| 2892-10F * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

BACK PLUNGER DIAL INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST



2893-3

- With limit pointers
- Optional accessory: contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading |
|----------|-------|------------|----------|------------|-----------|--------------|
| 2893-3 * | 3mm | 0.01mm | 15µm | 5µm | 1mm | 0-100 |

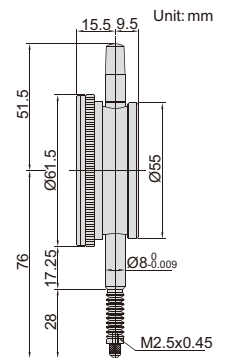
* Supplied with manufacturer inspection certificate traceable to NIST USA

WATERPROOF DIAL INDICATOR

INSPECTION CERTIFICATE
TRACEABLE TO NIST

SHOCK PROOF

IP67 WATERPROOF



2894-10F

- Meet DIN878
- Shockproof
- IP67 dust/waterproof
- Optional accessory: contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2894-10F * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

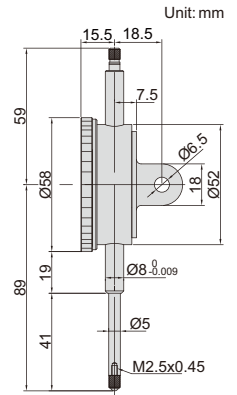


**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

DIAL INDICATORS (LONG STROKE)



2889-30



- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2889-30 * | 30mm | 0.01mm | 25µm | 5µm | 1mm | 0-100 | lug back |
| 2889-30F * | 30mm | 0.01mm | 25µm | 5µm | 1mm | 0-100 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

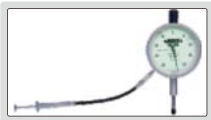
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

SHOCK
PROOF

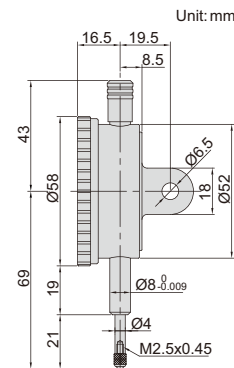
ONE REVOLUTION PRECISION DIAL INDICATORS



lifting lever (optional)



2885-008



- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Jeweled bearing
- Free stroke: 4.5mm
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103), lifting lever (code 6289-150)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|-------------|--------|------------|----------|------------|-----------|--------------|-----------|
| 2885-008 * | 0.08mm | 0.001mm | 3µm | 1.5µm | 1mm | 40-0-40 | lug back |
| 2885-008F * | 0.08mm | 0.001mm | 3µm | 1.5µm | 1mm | 40-0-40 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

lever device



Within the measuring range, the spindle is in contact with the lever



When the measuring range is exceeded, the spindle leaves the lever

**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

SHOCK
PROOF

ONE REVOLUTION DIAL INDICATORS

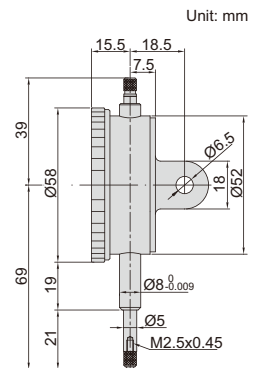


2882-08

- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Free stroke: 7mm
- With limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2882-08 * | 0.8mm | 0.01mm | 9µm | 3µm | 1mm | 40-0-40 | lug back |
| 2882-08F * | 0.8mm | 0.01mm | 9µm | 3µm | 1mm | 40-0-40 | flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA



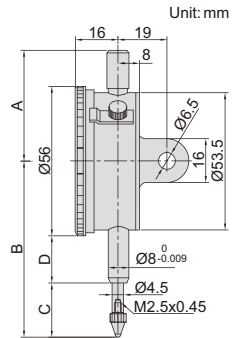
PRECISION DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELLED BEARING



2313-1A



- Graduation: 0.001mm
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

(mm)

| Code | Range | Accuracy | Hysteresis | Range/rev | Dial reading | Remark | A | B | C | D |
|------------|-------|----------|------------|-----------|--------------|-----------|----|------|------|----|
| 2313-1FA * | 1mm | 5µm | 2µm | 0.2mm | 0-100-0 | flat back | 45 | 62.5 | 19.5 | 15 |
| 2313-2FA * | 2mm | 8µm | 2.5µm | 0.2mm | 0-100-0 | flat back | 45 | 62.5 | 19.5 | 15 |
| 2313-1A * | 1mm | 5µm | 2µm | 0.2mm | 0-100-0 | lug back | 45 | 62.5 | 19.5 | 15 |
| 2313-2A * | 2mm | 8µm | 2.5µm | 0.2mm | 0-100-0 | lug back | 45 | 62.5 | 19.5 | 15 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

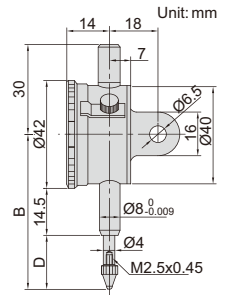
COMPACT DIAL INDICATORS

INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELLED BEARING



2311-5



- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

(mm)

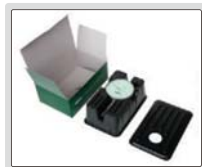
| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark | B | D |
|-----------|-------|------------|----------|------------|-----------|--------------|-----------|----|------|
| 2311-3F * | 3mm | 0.01mm | 14µm | 3µm | 0.5mm | 0-50 | flat back | 46 | 10.5 |
| 2311-5F * | 5mm | 0.01mm | 16µm | 3µm | 0.5mm | 0-50 | flat back | 48 | 12.5 |
| 2311-3 * | 3mm | 0.01mm | 14µm | 3µm | 0.5mm | 0-50 | lug back | 46 | 10.5 |
| 2311-5 * | 5mm | 0.01mm | 16µm | 3µm | 0.5mm | 0-50 | lug back | 48 | 12.5 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

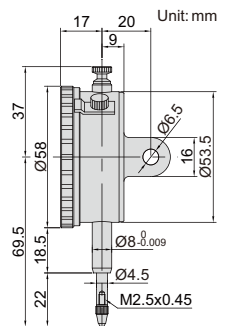
DIAL INDICATORS (PROMOTION MODEL)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

carton box



2301-10



- Meet DIN878
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|----------|------------|-----------|--------------|-------------------------------|
| 2301-10F * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | flat back |
| 2301-10 * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | lug back with spare flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

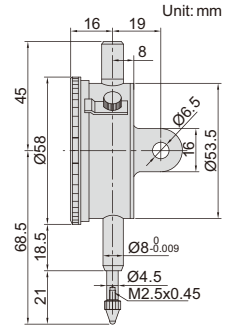
INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELLED BEARING

DIAL INDICATORS (STANDARD MODEL)



2308-10A



- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|-------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2308-3FA * | 3mm | 0.01mm | 14µm | 3µm | 1mm | 0-100 | flat back |
| 2308-5FA * | 5mm | 0.01mm | 16µm | 3µm | 1mm | 0-100 | flat back |
| 2308-10FA * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | flat back |
| 2308-3A * | 3mm | 0.01mm | 14µm | 3µm | 1mm | 0-100 | lug back |
| 2308-5A * | 5mm | 0.01mm | 16µm | 3µm | 1mm | 0-100 | lug back |
| 2308-10A * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | lug back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

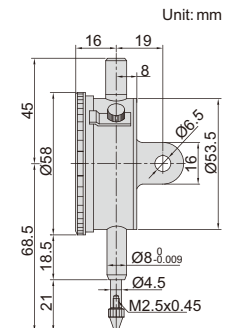
INSPECTION CERTIFICATE
TRACEABLE TO NIST

JEWELLED BEARING

REVERSE READING DIAL INDICATORS



2801-10



- Meet DIN878
- Suitable for depth and step measurements
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2801-10F * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 100-0 | flat back |
| 2801-10 * | 10mm | 0.01mm | 17µm | 3µm | 1mm | 100-0 | lug back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

INSPECTION CERTIFICATE
TRACEABLE TO NIST

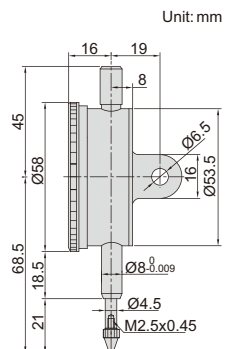
SHOCK PROOF

JEWELLED BEARING

SHOCKPROOF DIAL INDICATORS



2314-10A



- Meet DIN878
- Shockproof
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|-------------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2314-3FA * | 3mm | 0.01mm | 14µm | 3µm | 1mm | 0-100 | flat back |
| 2314-5FA * | 5mm | 0.01mm | 16µm | 3µm | 1mm | 0-100 | flat back |
| 2314-10FA * | 10mm | 0.01mm | 20µm | 3µm | 1mm | 0-100 | flat back |
| 2314-3A * | 3mm | 0.01mm | 14µm | 3µm | 1mm | 0-100 | lug back |
| 2314-5A * | 5mm | 0.01mm | 16µm | 3µm | 1mm | 0-100 | lug back |
| 2314-10A * | 10mm | 0.01mm | 20µm | 3µm | 1mm | 0-100 | lug back |

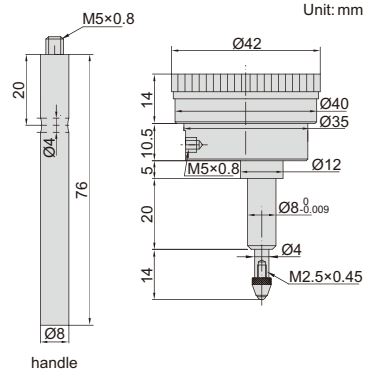
* Supplied with manufacturer inspection certificate traceable to NIST USA

BACK PLUNGER TYPE DIAL INDICATORS

**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST



2357-5



- Supplied with handle
- With limit pointers
- Optional accessory: contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading |
|---------|-------|------------|----------|------------|-----------|--------------|
| 2357-5* | 5mm | 0.01mm | 15µm | 5µm | 1mm | 0-100 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

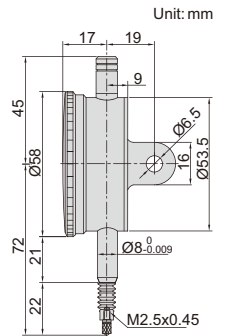
WATERPROOF DIAL INDICATORS

**IP54
WATERPROOF** **JEWELLED
BEARING**

**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST



2324-10



- Meet DIN878
- IP54 dust/waterproof
- Jeweled bearing

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|-----------|-------|------------|----------|------------|-----------|--------------|-----------|
| 2324-10F* | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | flat back |
| 2324-10* | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 | lug back |

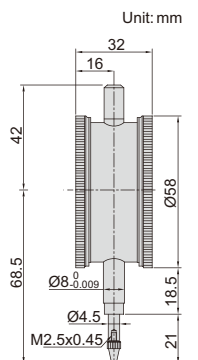
* Supplied with manufacturer inspection certificate traceable to NIST USA

DOUBLE FACE DIAL INDICATOR

**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST



2328-10



- Meet DIN878
- Read from both sides
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading |
|----------|-------|------------|----------|------------|-----------|--------------|
| 2328-10* | 10mm | 0.01mm | 17µm | 3µm | 1mm | 0-100 |

* Supplied with manufacturer inspection certificate traceable to NIST USA



DIAL INDICATORS (LONG STROKE)

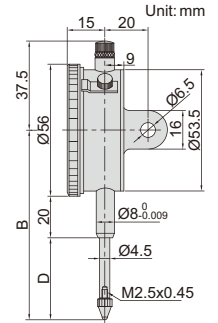


2310-30A

- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark | B | D |
|------------|-------|------------|----------|------------|-----------|--------------|-----------|----|----|
| 2310-20FA* | 20mm | 0.01mm | 25µm | 5µm | 1mm | 0-100 | flat back | 83 | 35 |
| 2310-30FA* | 30mm | 0.01mm | 35µm | 7µm | 1mm | 0-100 | flat back | 88 | 40 |
| 2310-20A* | 20mm | 0.01mm | 25µm | 5µm | 1mm | 0-100 | lug back | 83 | 35 |
| 2310-30A* | 30mm | 0.01mm | 35µm | 7µm | 1mm | 0-100 | lug back | 88 | 40 |

* Supplied with manufacturer inspection certificate traceable to NIST USA



DIAL INDICATORS (LONG STROKE)



2302-25

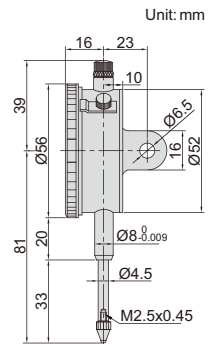
carton box



- Supplied with limit pointers and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|-----------|-------|------------|----------|------------|-----------|--------------|-------------------------------|
| 2302-25F* | 25mm | 0.01mm | 35µm | 7µm | 1mm | 0-100 | flat back |
| 2302-25* | 25mm | 0.01mm | 35µm | 7µm | 1mm | 0-100 | lug back with spare flat back |

* Supplied with manufacturer inspection certificate traceable to NIST USA



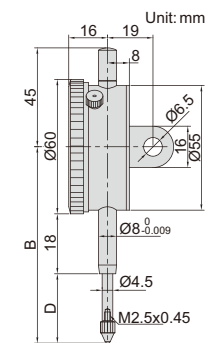
DIAL INDICATORS (GRADUATION 0.1mm)



2318-30

- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 104~105), contact points (page 102~103)

| Code | Range | Graduation | Accuracy | Hysteresis | Range/rev | Dial reading | Remark | B | D |
|----------|-------|------------|----------|------------|-----------|--------------|-----------|----|----|
| 2318-10F | 10mm | 0.1mm | 40µm | 20µm | 10mm | 0-10 | flat back | 70 | 20 |
| 2318-20F | 20mm | 0.1mm | 50µm | 20µm | 10mm | 0-10 | flat back | 85 | 35 |
| 2318-25F | 25mm | 0.1mm | 60µm | 20µm | 10mm | 0-10 | flat back | 85 | 35 |
| 2318-30F | 30mm | 0.1mm | 60µm | 20µm | 10mm | 0-10 | flat back | 90 | 40 |
| 2318-10 | 10mm | 0.1mm | 40µm | 20µm | 10mm | 0-10 | lug back | 70 | 20 |
| 2318-20 | 20mm | 0.1mm | 50µm | 20µm | 10mm | 0-10 | lug back | 85 | 35 |
| 2318-25 | 25mm | 0.1mm | 60µm | 20µm | 10mm | 0-10 | lug back | 85 | 35 |
| 2318-30 | 30mm | 0.1mm | 60µm | 20µm | 10mm | 0-10 | lug back | 90 | 40 |



ONE REVOLUTION DIAL INDICATORS

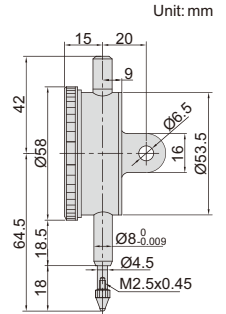
SHOCK PROOF

INSPECTION CERTIFICATE
TRACEABLE TO NIST

- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Supplied with limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)



2316-05



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading | Remark |
|------------|-------|------------|----------|------------|--------------|-----------|
| 2316-05F * | 0.5mm | 0.01mm | 9μm | 3μm | 25-0-25 | flat back |
| 2316-1F * | 1mm | 0.01mm | 9μm | 3μm | 50-0-50 | flat back |
| 2316-05 * | 0.5mm | 0.01mm | 9μm | 3μm | 25-0-25 | lug back |
| 2316-1 * | 1mm | 0.01mm | 9μm | 3μm | 50-0-50 | lug back |

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATORS (LONG STROKE)

INSPECTION CERTIFICATE
TRACEABLE TO NIST

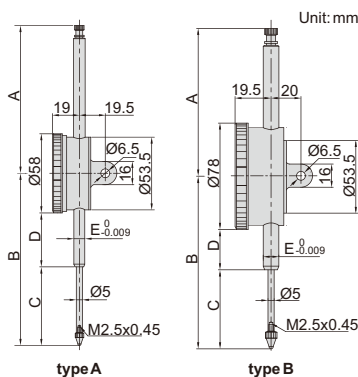
JEWELLED BEARING

SHOCK PROOF

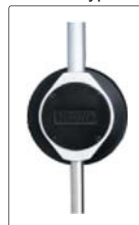
- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs (page 104~105), contact points (page 102~103)



2309-50



back of type B



stem clamp Ø10mm for 2309-100D



| Code | Type | A | B | C | D | E |
|-----------|------|-------|-------|------|------|-----|
| 2309-30F | A | 37.5 | 89.5 | 40.9 | 19.5 | Ø8 |
| 2309-30 | A | 37.5 | 89.5 | 40.9 | 19.5 | Ø8 |
| 2309-50 | A | 108.3 | 126.2 | 57.7 | 39.5 | Ø8 |
| 2309-50D | B | 108.3 | 126.2 | 57.7 | 29.5 | Ø8 |
| 2309-80 | A | 138.4 | 168.4 | 88 | 51.3 | Ø8 |
| 2309-80D | B | 138.4 | 168.4 | 88 | 41.3 | Ø8 |
| 2309-100D | B | 167.6 | 207.8 | 108 | 60.8 | Ø10 |

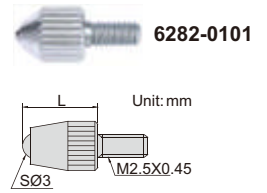
| Code | Range | Graduation | Type | Accuracy | Hysteresis | Range/rev | Dial reading | Remark |
|------------|-------|------------|------|----------|------------|-----------|--------------|-------------------------------|
| 2309-30F * | 30mm | 0.01mm | A | 35μm | 7μm | 1mm | 0-100 | flat back |
| 2309-30 * | 30mm | 0.01mm | A | 35μm | 7μm | 1mm | 0-100 | lug back |
| 2309-50 * | 50mm | 0.01mm | A | 40μm | 8μm | 1mm | 0-100 | flat back with spare lug back |
| 2309-50D * | 50mm | 0.01mm | B | 40μm | 8μm | 1mm | 0-100 | flat back with spare lug back |
| 2309-80 | 80mm | 0.01mm | A | 50μm | 9μm | 1mm | 0-100 | flat back with spare lug back |
| 2309-80D | 80mm | 0.01mm | B | 50μm | 9μm | 1mm | 0-100 | flat back with spare lug back |
| 2309-100D | 100mm | 0.01mm | B | 50μm | 9μm | 1mm | 0-100 | flat back with spare lug back |

Note: 1) 2309-80, 2309-80D and 2309-100D can only be used vertically
 2) 2309-100D is supplied with stem clamp Ø10mm for magnetic stands (code 6200-60, 6201-60, 6202-80, 6202-100)
 3) 2309-30 and 2309-30F can not accept optional backs (page 104~105)

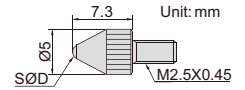
* Supplied with manufacturer inspection certificate traceable to NIST USA

BALL POINTS

| Code | Material of measuring face | L (mm) | Code | Material of measuring face | L (mm) | Code | Material of measuring face | L (mm) |
|-----------|----------------------------|--------|-----------|----------------------------|--------|-----------|----------------------------|--------|
| 6282-0101 | carbide | 7.3 | 6282-0109 | ceramic | 15 | 6282-0115 | carbide | 25 |
| 6282-0103 | ceramic | 7.3 | 6282-0110 | carbide | 17 | 6282-0116 | ceramic | 25 |
| 6282-0104 | carbide | 8.3 | 6282-0111 | carbide | 19.3 | 6282-0117 | carbide | 30 |
| 6282-0106 | carbide | 12.1 | 6282-0112 | carbide | 20 | 6282-0118 | ceramic | 30 |
| 6282-0107 | carbide | 14 | 6282-0113 | ceramic | 20 | | | |
| 6282-0108 | carbide | 15 | 6282-0114 | carbide | 22 | | | |

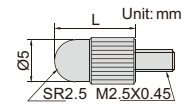


| Code | Material of measuring face | SØD (mm) | Code | Material of measuring face | SØD (mm) |
|-----------|----------------------------|----------|-----------|----------------------------|----------|
| 6282-0301 | steel | 1 | 6282-0304 | carbide | 2.5 |
| 6282-0302 | carbide | 1.5 | 6282-0305 | carbide | 4 |
| 6282-0303 | carbide | 1.8 | | | |



| Code | Material of measuring face | L (mm) | Code | Material of measuring face | L (mm) |
|-----------|----------------------------|--------|-----------|----------------------------|--------|
| 6282-0202 | steel | 5 | 6282-0207 | steel | 20 |
| 6282-0203 | steel | 10 | 6282-0208 | steel | 25 |
| 6282-0205 | steel | 15 | 6282-0210 | steel | 30 |

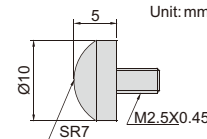
SHELL TYPE POINTS



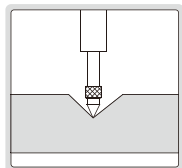
| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-0401 | steel |



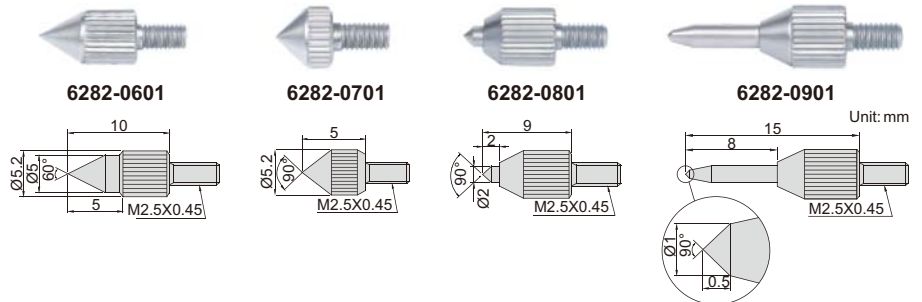
6282-0401



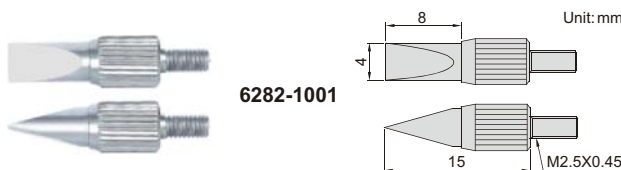
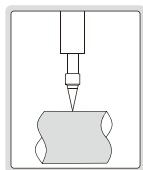
SPHERICAL POINT



| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-0601 | steel |
| 6282-0701 | steel |
| 6282-0801 | steel |
| 6282-0901 | steel |



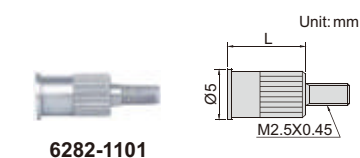
CONICAL POINTS



6282-1001

KNIFE EDGE POINT

| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-1001 | steel |



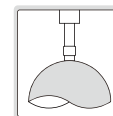
6282-1101

| Code | Material of measuring face | L (mm) |
|-----------|----------------------------|--------|
| 6282-1101 | steel | 8 |
| 6282-1102 | steel | 10 |



6282-1201

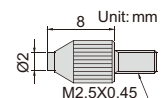
| Code | Material of measuring face | ØD (mm) |
|-----------|----------------------------|---------|
| 6282-1201 | steel | 10 |
| 6282-1202 | steel | 15 |
| 6282-1203 | steel | 20 |
| 6282-1204 | steel | 25 |
| 6282-1205 | steel | 30 |



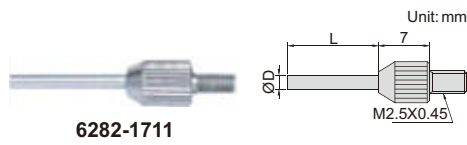
6282-1301

| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-1301 | carbide |

FLAT POINTS



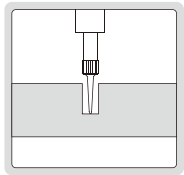
NEEDLE POINTS



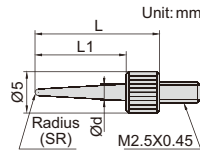
6282-1711

| Code | Material of measuring face | ØD | L |
|-----------|----------------------------|------|----|
| 6282-1701 | steel | 0.45 | 3 |
| 6282-1702 | steel | 0.45 | 5 |
| 6282-1703 | carbide | 1 | 3 |
| 6282-1704 | carbide | 1 | 5 |
| 6282-1705 | carbide | 1 | 8 |
| 6282-1706 | carbide | 1 | 10 |
| 6282-1707 | carbide | 1 | 20 |
| 6282-1708 | carbide | 1 | 40 |
| 6282-1709 | carbide | 1.5 | 5 |

| Code | Material of measuring face | ØD | L |
|-----------|----------------------------|-----|----|
| 6282-1710 | carbide | 1.5 | 10 |
| 6282-1711 | carbide | 1.5 | 13 |
| 6282-1712 | carbide | 1.5 | 20 |
| 6282-1713 | carbide | 1.5 | 40 |
| 6282-1714 | carbide | 2 | 8 |
| 6282-1715 | carbide | 2 | 18 |
| 6282-1716 | carbide | 2 | 28 |
| 6282-1717 | carbide | 2 | 40 |



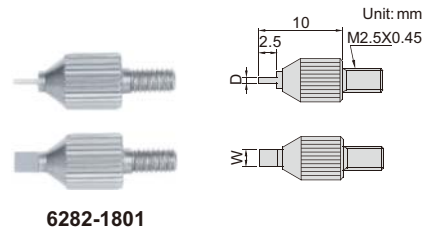
6282-1601



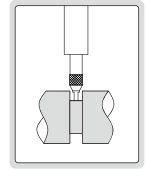
| Code | Material of measuring face | L1 | L | SR | Ød |
|-----------|----------------------------|----|----|-----|----|
| 6282-1601 | steel | 11 | 15 | 0.4 | 2 |
| 6282-1602 | steel | 13 | 17 | 0.2 | 2 |
| 6282-1603 | steel | 21 | 25 | 0.4 | 3 |
| 6282-1604 | steel | 31 | 35 | 0.4 | 3 |

BLADE POINTS

| Code | Material of measuring face | D | W |
|-----------|----------------------------|-----|---|
| 6282-1801 | steel | 0.4 | 2 |
| 6282-1802 | steel | 0.6 | 2 |
| 6282-1803 | steel | 1 | 4 |

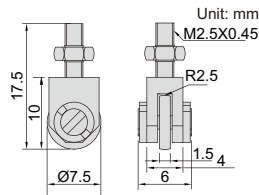


6282-1801



ROLLER POINT

| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-1901 | steel |



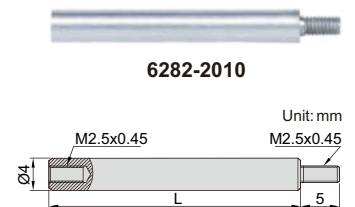
6282-1901

EXTENSION RODS

| Code | Material | L (mm) |
|-----------|----------|--------|
| 6282-2001 | steel | 10 |
| 6282-2002 | steel | 15 |
| 6282-2003 | steel | 20 |
| 6282-2004 | steel | 25 |
| 6282-2005 | steel | 30 |
| 6282-2006 | steel | 35 |

| Code | Material | L (mm) |
|-----------|----------|--------|
| 6282-2007 | steel | 40 |
| 6282-2008 | steel | 45 |
| 6282-2009 | steel | 50 |
| 6282-2010 | steel | 55 |
| 6282-2011 | steel | 60 |
| 6282-2012 | steel | 65 |

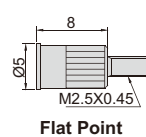
| Code | Material | L (mm) |
|-----------|----------|--------|
| 6282-2013 | steel | 70 |
| 6282-2014 | steel | 75 |
| 6282-2015 | steel | 80 |
| 6282-2016 | steel | 90 |
| 6282-2017 | steel | 100 |



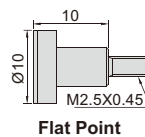
6282-2010

POINT SET

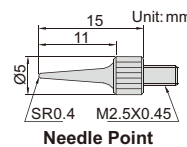
| Code | Material of measuring face |
|---------|----------------------------|
| 6282-S6 | steel |



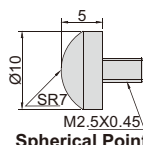
Flat Point



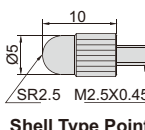
Flat Point



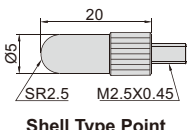
Needle Point



Spherical Point



Shell Type Point



Shell Type Point



6282-S6

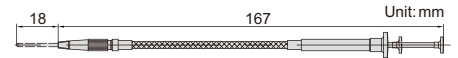
LIFTING LEVER



6289-150

Code
6289-150

- The lifting cable permits quick lifting of the spindle of 2881, 2890, 2891, 2885 series



SPINDLE LIFT KNOB



7332



Code
7332

- For dial/digital indicators with spindle diameter Ø4.5mm or Ø5mm

MAGNETIC BACKS

| Code | ØD | For digital/dial indicators (mm) |
|---------|------|----------------------------------|
| 7331-M1 | 51.5 | 2103 |
| | | 2104 |
| | | 2108 |
| | | 2109 |
| | | 2112 |
| | | 2113 |
| | | 2115 |
| | | 2116 |
| | | 2117 |
| | | 2118 |
| | | 2301 |
| | | 2302 |
| | | 2308 |
| | | 2309 (except 2309-30, 2309-30F) |
| 2313 | | |
| 2314 | | |
| 2316 | | |
| 2801 | | |
| 7331-M2 | 54 | 2318 |

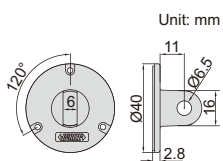
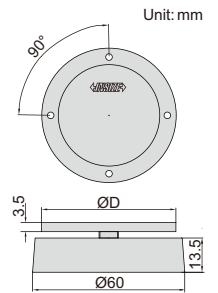


front



back

7331-M2



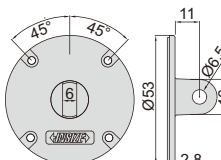
7330-L1



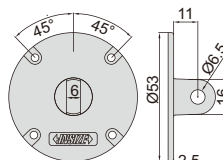
7330-L2



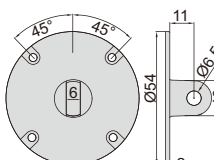
7330-L8



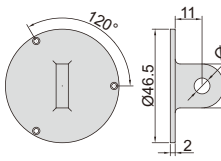
7330-L2 and 7330-L10



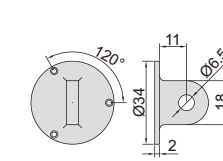
7330-L5



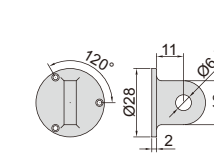
7330-L6



7330-L7



7330-L8



7330-L9

| Code | For digital/dial indicators | Code | For digital/dial indicators |
|---------|---------------------------------|---------|-----------------------------|
| 7330-L1 | 2311 | 7330-L5 | 2115 |
| | 2301 | | 2116 |
| | 2302 | | 2117 |
| | 2308 | | 2118 |
| 7330-L2 | 2309 (except 2309-30, 2309-30F) | 7330-L6 | 2318 |
| | 2313 | | 2830 |
| | 2314 | | 2882 |
| | 2316 | | 2885 |
| | 2801 | | 2888 |
| | 2801 | | 2889 |
| 7330-L5 | 2103 | 7330-L7 | 2891 |
| | 2104 | | 2892 |
| | 2108 | | 2890 |
| | 2109 | | 2887 |
| | 2112 | | 2886 |
| | 2113 | | 2310 |
| | 2113 | | 2887 |
| | 2112 | | 2886 |
| | 2109 | | 2888 |
| | 2108 | | 2889 |
| 2104 | 2890 | | |
| 2103 | 2891 | | |
| 2113 | 2887 | | |
| 2112 | 2886 | | |
| 2109 | 2888 | | |
| 2108 | 2889 | | |
| 2104 | 2890 | | |
| 2103 | 2891 | | |

LUG BACKS

FLAT BACKS



| Code | For digital/dial indicators | Code | For digital/dial indicators | |
|---------|---------------------------------|---------|-----------------------------|---------|
| 7330-F1 | 2311 | 7330-F5 | 2115 | |
| | 2301 | | 2116 | |
| | 2302 | | 2118 | |
| | 2308 | | 7330-F6 | 2318 |
| | 2309 (except 2309-30, 2309-30F) | | | 2830 |
| | 2313 | | | 2882 |
| 7330-F2 | 2314 | 7330-F7 | 2885 | |
| | 2316 | | 2888 | |
| | 2801 | | 2889 | |
| | 7330-F5 | | 2103 | 2891 |
| | | | 2104 | 2892 |
| | | | 2108 | 7330-F8 |
| 2109 | | 2887 | | |
| 2112 | 7330-F9 | 2886 | | |
| 2113 | 7330-F10 | 2310 | | |

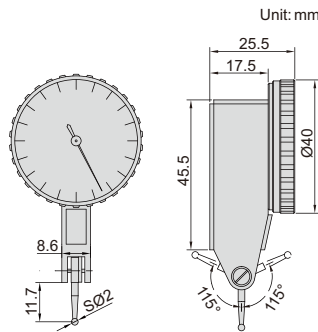
PRECISION DIAL TEST INDICATOR

ANTI MAGNETIC CARBIDE CONTACT POINT



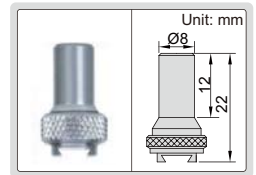
INSPECTION CERTIFICATE
TRACEABLE TO NIST

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 109)



2897-02

clamp (included)



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|-----------|-------|------------|----------|------------|--------------|
| 2897-02 * | 0.2mm | 0.001mm | 4µm | 2µm | 0-100-0 |

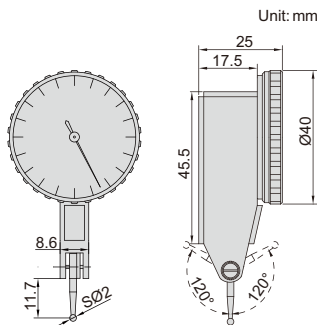
* Supplied with manufacturer inspection certificate traceable to NIST USA

PRECISION DIAL TEST INDICATORS



INSPECTION CERTIFICATE
TRACEABLE TO NIST

- Meet DIN2270
- Ceramic bearing
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 109)

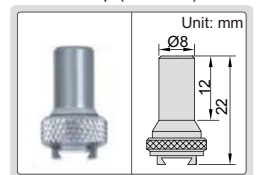


ruby contact point of 2880-02R



2880-02

clamp (included)



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading | Remark |
|------------|-------|------------|----------|------------|--------------|-------------------------------------|
| 2880-02 * | 0.2mm | 0.002mm | 4µm | 2µm | 0-100-0 | anti magnetic carbide contact point |
| 2880-02R * | 0.2mm | 0.002mm | 4µm | 2µm | 0-100-0 | ruby contact point |

* Supplied with manufacturer inspection certificate traceable to NIST USA



DIAL TEST INDICATOR

ANTI MAGNETIC
CARBIDE CONTACT POINT

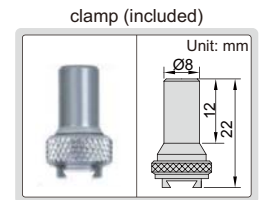
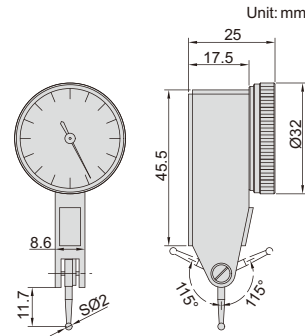


2895-08

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 109)

| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2895-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA



ANTI MAGNETIC
CARBIDE CONTACT POINT

LONG STYLI DIAL TEST INDICATOR

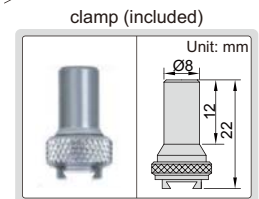
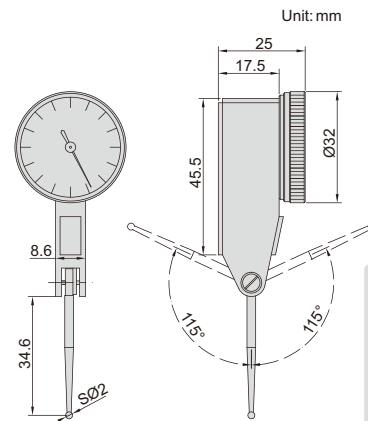


2896-05

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 109)

| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2896-05* | 0.5mm | 0.01mm | 13µm | 3µm | 0-25-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA



ANTI MAGNETIC
CARBIDE CONTACT POINT

BACK PLUNGER LONG STYLI DIAL TEST INDICATOR

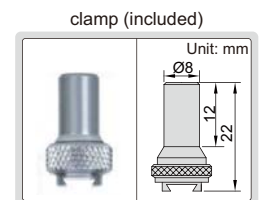
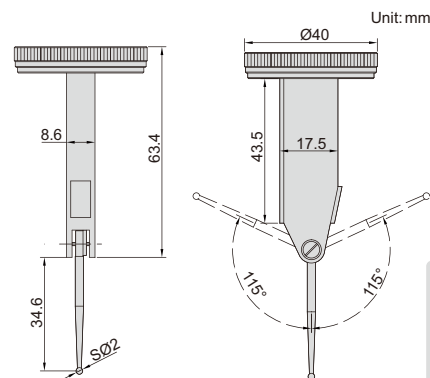


2899-05

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 109)

| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2899-05* | 0.5mm | 0.01mm | 13µm | 3µm | 0-25-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA



SIDE TYPE DIAL TEST INDICATOR

ANTI MAGNETIC
CARBIDE CONTACT POINT

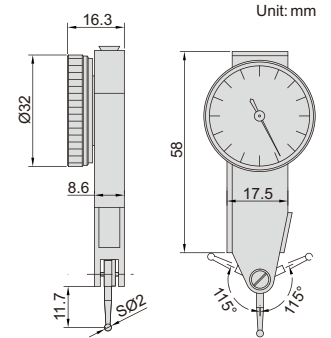
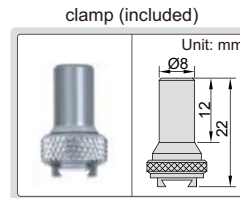


**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 109)



2898-08



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2898-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

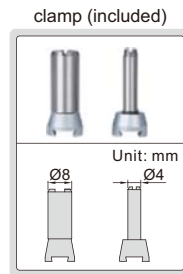
* Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL TEST INDICATORS

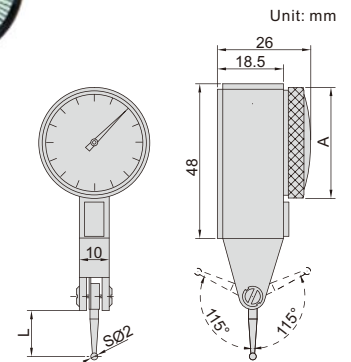
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

JEWELLED
BEARING

- Meet DIN2270 (except 2380-02, 2381-02)
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 109)



2380-08



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading | A | L |
|----------|-------|------------|----------|------------|--------------|-----|------|
| 2380-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 | Ø30 | 13.5 |
| 2381-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 | Ø37 | 13.5 |
| 2380-02* | 0.2mm | 0.002mm | 6µm | 2µm | 0-100-0 | Ø30 | 12.5 |
| 2381-02* | 0.2mm | 0.002mm | 6µm | 2µm | 0-100-0 | Ø37 | 12.5 |

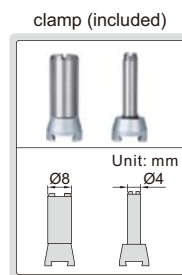
* Supplied with manufacturer inspection certificate traceable to NIST USA

BACK PLUNGER TYPE DIAL TEST INDICATOR

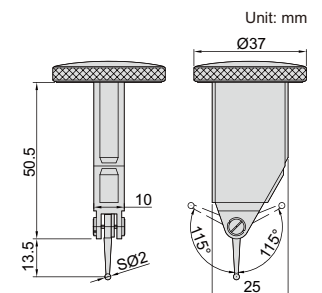
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

JEWELLED
BEARING

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 109)



2398-08



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2398-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

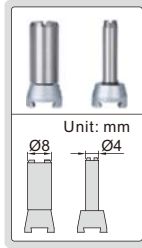
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

JEWELLED
BEARING

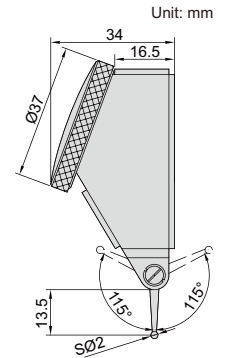
TILTED FACE TYPE DIAL TEST INDICATOR

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 109)

clamp (included)



2399-08



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2399-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

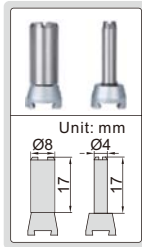
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

JEWELLED
BEARING

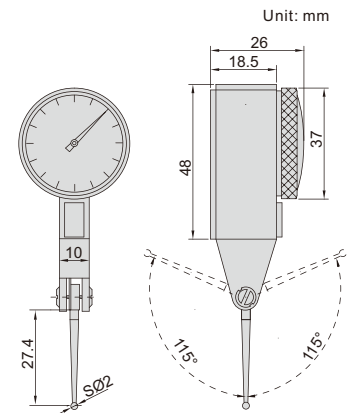
LONG STYLI DIAL TEST INDICATOR

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory:
styli (page 109)

clamp (included)



2383-08A



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|-----------|-------|------------|----------|------------|--------------|
| 2383-08A* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

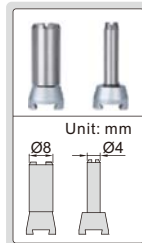
**INSPECTION
CERTIFICATE**
TRACEABLE TO NIST

JEWELLED
BEARING

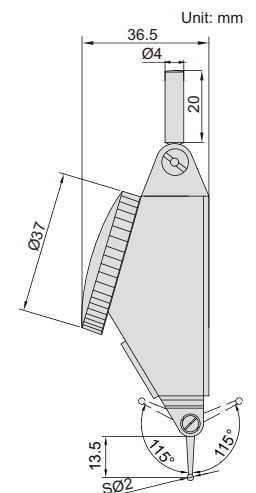
LARGE RANGE DIAL TEST INDICATOR

- Dial Reading: 0-40-0
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 109)

clamp (included)



2386-16A



| Code | Range | Graduation | Accuracy | Hysteresis |
|-----------|-------|------------|----------|------------|
| 2386-16A* | 1.6mm | 0.01mm | 25µm | 8µm |

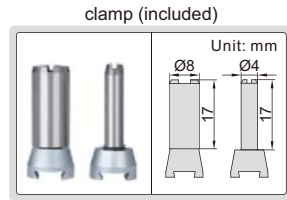
* Supplied with manufacturer inspection certificate traceable to NIST USA

ROUND BODY DIAL TEST INDICATOR

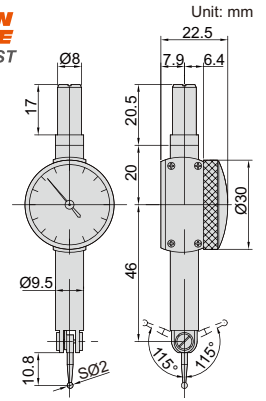
JEWELLED BEARING

INSPECTION CERTIFICATE
TRACEABLE TO NIST

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Adjustable two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 109)



2391-08



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|-----------|-------|------------|----------|------------|--------------|
| 2391-08 * | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

* Supplied with manufacturer inspection certificate traceable to NIST USA

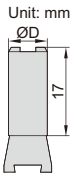
CLAMPS FOR DIAL TEST INDICATORS

| Code | ØD |
|--------|------|
| 6298-1 | Ø4mm |
| 6298-2 | Ø8mm |

6298-1



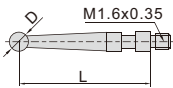
6298-2



STYLI FOR DIAL TEST INDICATORS



6284-3



| Code | For dial test indicator | Material of contact point | L (mm) | D (mm) |
|---------|-------------------------|---------------------------|--------|--------|
| 6284-1 | 2380-08, | steel | 13.5 | SØ1 |
| 6284-3 | 2398-08 | carbide | 13.5 | SØ2 |
| 6284-4 | 2381-08, | ruby | 13.5 | SØ2 |
| 6284-8 | 2399-08 | carbide | 13.5 | SØ3 |
| 6284-21 | 2380-02 | steel | 12.5 | SØ1 |
| 6284-22 | 2381-02 | carbide | 12.5 | SØ2 |
| 6284-23 | | carbide | 12.5 | SØ3 |
| 6284-44 | 2880-02 | carbide | 11.7 | SØ0.4 |
| 6284-41 | 2880-02R | carbide | 11.7 | SØ1 |
| 6284-42 | 2895-08 | carbide | 11.7 | SØ2 |
| 6284-45 | 2897-02 | ruby | 11.7 | SØ2 |
| 6284-43 | 2898-08 | carbide | 11.7 | SØ3 |
| 6284-71 | 2391-08 | carbide | 10.8 | SØ2 |

| Code | For dial test indicator | Material of contact point | L (mm) | D (mm) |
|---------|-------------------------|---------------------------|--------|--------|
| 6284-51 | | carbide | 34.6 | SØ1 |
| 6284-52 | 2896-05 | carbide | 34.6 | SØ2 |
| 6284-55 | 2899-05 | ruby | 34.6 | SØ2 |
| 6284-53 | | carbide | 34.6 | SØ3 |
| 6284-61 | | steel | 13.5 | SØ1 |
| 6284-62 | 2386-16A | carbide | 13.5 | SØ2 |
| 6284-63 | | ruby | 13.5 | SØ2 |
| 6284-64 | | carbide | 13.5 | SØ3 |
| 6284-81 | | steel | 27.4 | SØ1 |
| 6284-82 | 2383-08A | carbide | 27.4 | SØ2 |
| 6284-83 | | ruby | 27.4 | SØ2 |
| 6284-84 | | carbide | 27.4 | SØ3 |

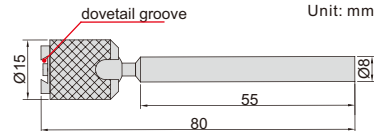
DIAL TEST INDICATOR UNIVERSAL HOLDER

- Set the indicators at the desired attitude to the workpiece

Code
6297-1



6297-1



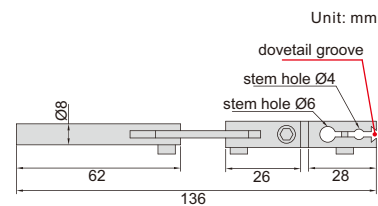
DIAL TEST INDICATOR HOLDER

- Supplied with hex key

Code
6296-1



6296-1



DIAL TEST INDICATOR HOLDERS



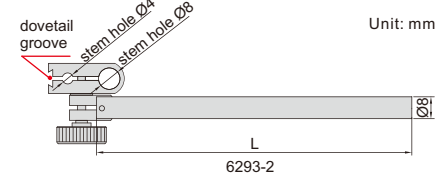
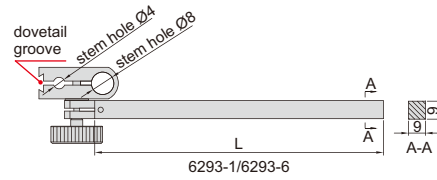
6293-1



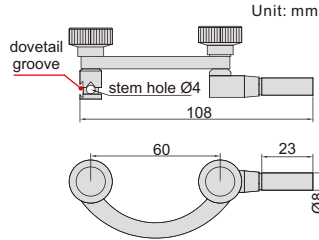
6293-2

Unit: mm

| Code | Stem section | Stem length (L) |
|--------|--------------|-----------------|
| 6293-1 | 9x9mm | 100mm |
| 6293-6 | 9x9mm | 50mm |
| 6293-2 | Ø8mm | 115mm |



- Center cylinders or holes on machine tools



Unit: mm

| Code |
|--------|
| 6291-1 |

DIAL TEST INDICATOR CENTERING HOLDER



6291-1

ATTENTION: NOT SUITABLE FOR GAGES WITH GRADUATION 0.001MM

- To calibrate dial indicators, test indicators and dial bore gages
- Dimension: 270x210x205mm
- Weight: 11kg



DIAL GAGE TESTER CODE 2396-25A

Micrometer head

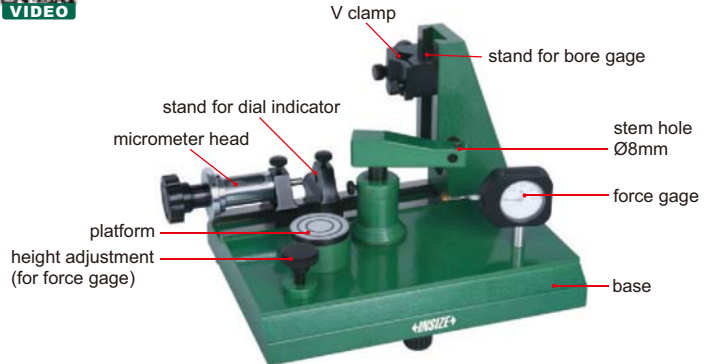
| Range | Sampling interval | Accuracy | Hysteresis |
|--------|-------------------|---|------------|
| 0-25mm | 0.1mm | 4µm (0-25mm), 3µm (0-10mm), 2µm (0-1mm) | 1µm |

Force gage

| Range | Graduation | Accuracy |
|--------|------------|------------------------|
| 0-1.6N | 0.05N | ±5% (of load capacity) |

Platform

| Diameter | Flatness | Roughness |
|----------|----------|-----------|
| 50mm | 1µm | 0.05µm |



2396-25A



half round gage block code 2396-block (optional)

Half round gage block (optional)

| Code | Parallelism |
|------------|-------------|
| 2396-block | 1µm |



Inspect accuracy of dial indicators (range 0-25mm)



Inspect accuracy of dial bore gages (range 0-450mm)



Inspect accuracy of test indicators



Test force of dial indicators



Test repeatability of dial indicators

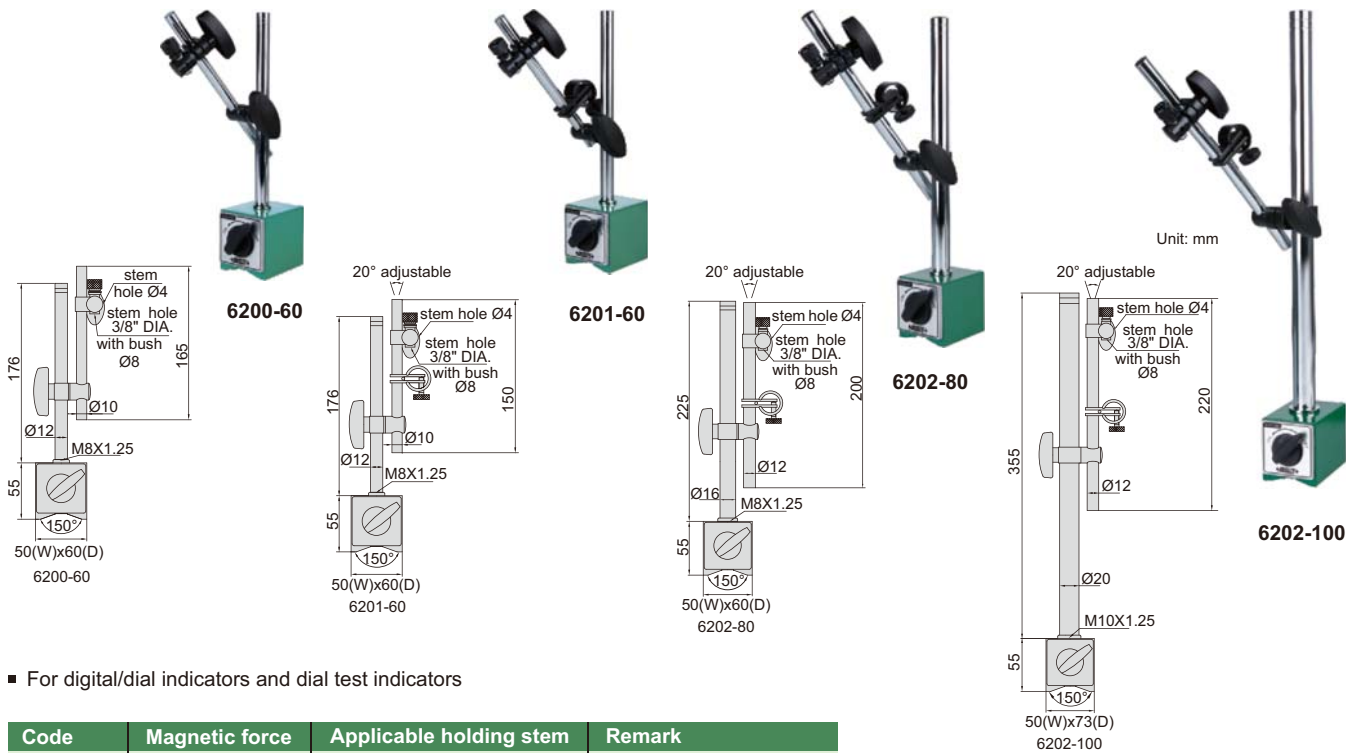


Test the effect of lateral force on accuracy of dial indicators (half round gage block is required)



Test the effect of lateral force on accuracy of test indicators (half round gage block is required)

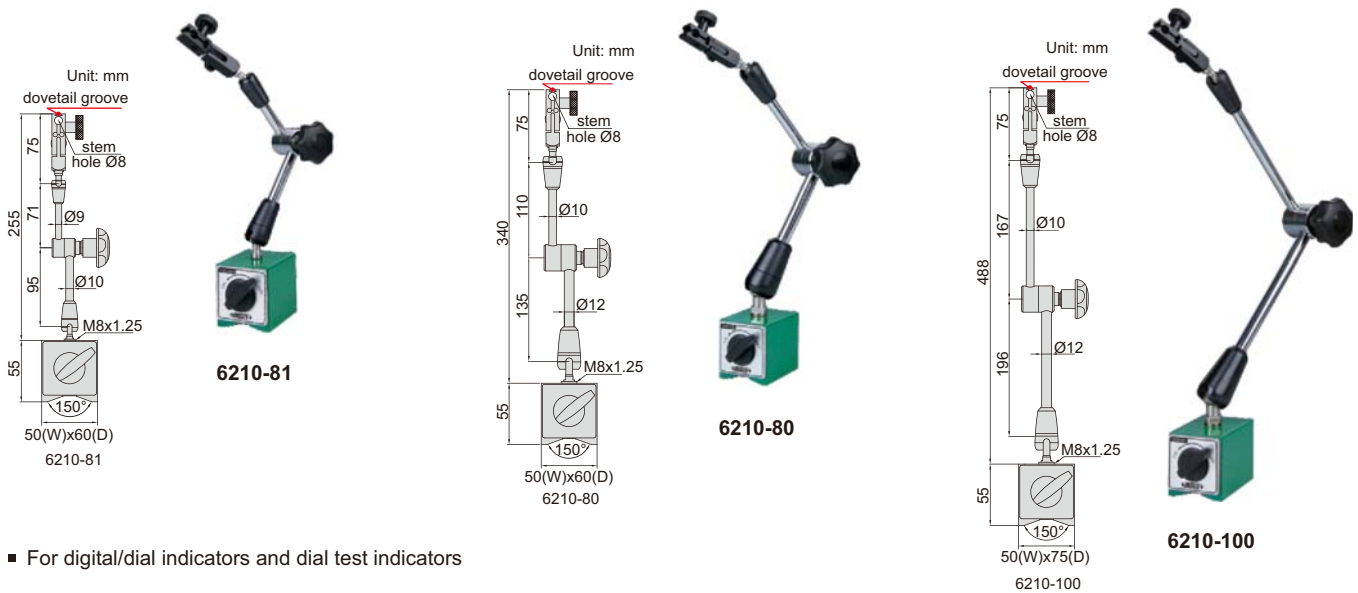
MAGNETIC STANDS



■ For digital/dial indicators and dial test indicators

| Code | Magnetic force | Applicable holding stem | Remark |
|----------|----------------|-------------------------|-------------------------|
| 6200-60 | 60kgf | Ø8mm, Ø4mm, 3/8" DIA. | without fine adjustment |
| 6201-60 | 60kgf | Ø8mm, Ø4mm, 3/8" DIA. | with fine adjustment |
| 6202-80 | 80kgf | Ø8mm, Ø4mm, 3/8" DIA. | with fine adjustment |
| 6202-100 | 100kgf | Ø8mm, Ø4mm, 3/8" DIA. | with fine adjustment |

UNIVERSAL MAGNETIC STANDS (HEAVY DUTY)



■ For digital/dial indicators and dial test indicators

| Code | Magnetic force | Applicable holding stem | Remark |
|----------|----------------|-------------------------|--|
| 6210-81 | 80kgf | Ø8mm | with fine adjustment and dovetail groove |
| 6210-80 | 80kgf | Ø8mm | with fine adjustment and dovetail groove |
| 6210-100 | 100kgf | Ø8mm | with fine adjustment and dovetail groove |

UNIVERSAL MAGNETIC STAND (LIGHT DUTY)

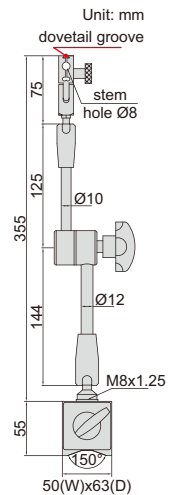
ATTENTION: LOW LOCKING FORCE

- For digital/dial indicators and dial test indicators

| Code | Magnetic force | Applicable holding stem | Remark |
|----------|----------------|-------------------------|--|
| 6208-80A | 80kgf | Ø8mm | with fine adjustment and dovetail groove |



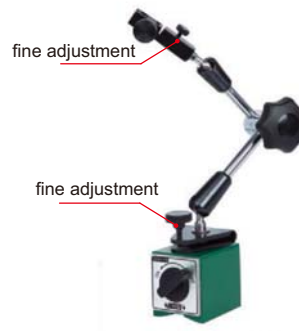
6208-80A



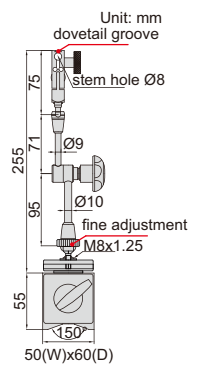
MAGNETIC STAND WITH DOUBLE FINE ADJUSTMENT

- With double fine adjustments on the head and on the base
- For digital/dial indicators and dial test indicators

| Code | Magnetic force | Applicable holding stem | Remark |
|---------|----------------|-------------------------|---|
| 6272-80 | 80kgf | Ø8mm | with double fine adjustment and dovetail groove |

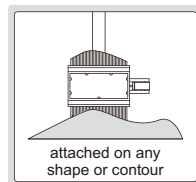


6272-80



MAGNETIC STAND FOR UNEVEN SURFACE

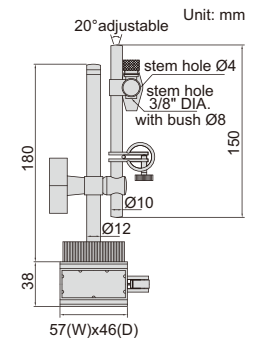
- For digital/dial indicators and dial test indicators
- With fine adjustment



| Code | Magnetic force | Applicable holding stem |
|---------|----------------|-------------------------|
| 6215-60 | 60kgf | Ø8mm, Ø4mm, 3/8" DIA. |



6215-60



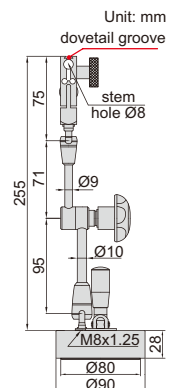
VACUUM STAND

- For granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

| Code | Diameter of vacuum disc | Vacuum force | Applicable holding stem | Remark |
|--------|-------------------------|--------------|-------------------------|--|
| 6217-B | Ø80mm | 80kgf | Ø8mm | with fine adjustment and dovetail groove |

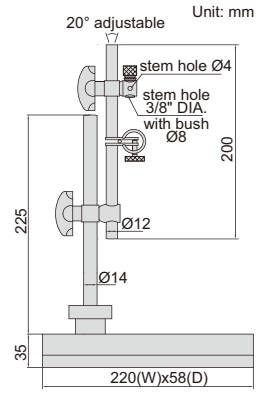


6217-B



UNIVERSAL STAND

- For digital/dial indicators and dial test indicators
- With fine adjustment

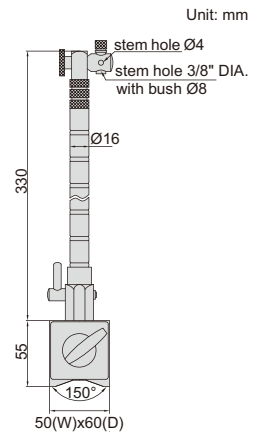


| Code | Applicable holding stem |
|--------|---|
| 6214-A | $\varnothing 8$ mm, $\varnothing 4$ mm, 3/8" DIA. |

FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators

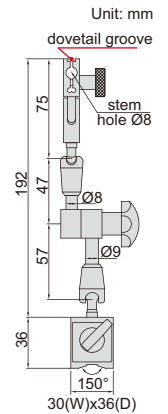


| Code | Magnetic force | Applicable holding stem |
|----------|----------------|---|
| 6207-80A | 80kgf | $\varnothing 8$ mm, $\varnothing 4$ mm, 3/8" DIA. |

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With fine adjustment and dovetail groove

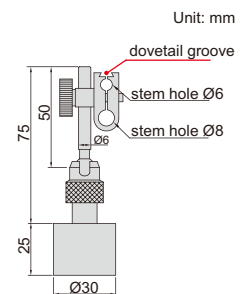


| Code | Magnetic force | Applicable holding stem |
|---------|----------------|-------------------------|
| 6224-40 | 40kgf | $\varnothing 8$ mm |

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

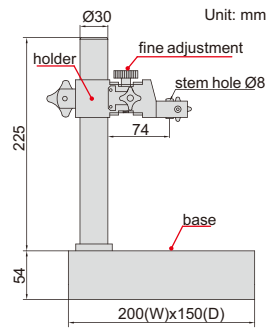
- For dial test indicators
- With dovetail groove



| Code | Magnetic force | Applicable holding stem |
|---------|----------------|--|
| 6211-10 | 10kgf | $\varnothing 6$ mm, $\varnothing 8$ mm |

GRANITE DIAL INDICATOR STAND

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover



dust cover (included)



6866-150

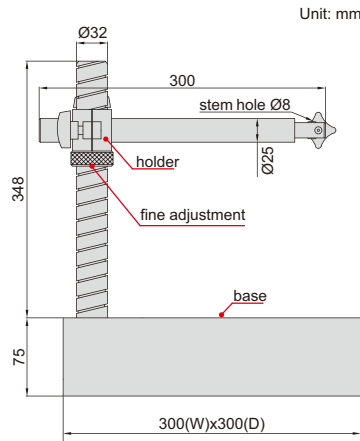
| Code | Applicable holding stem | Base |
|----------|-------------------------|----------------|
| 6866-150 | Ø8mm | flatness 2.5µm |

GRANITE DIAL INDICATOR STAND

dust cover (included)



- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

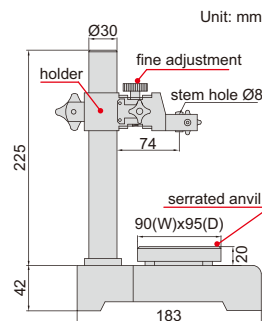


6867-250

| Code | Applicable holding stem | Base |
|----------|-------------------------|----------------|
| 6867-250 | Ø8mm | flatness 2.8µm |

DIAL INDICATOR STAND

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover



dust cover (included)



6863-150

| Code | Applicable holding stem | Anvil |
|----------|-------------------------|--|
| 6863-150 | Ø8mm | serrated, flatness 1.5µm, hardness HRC60±2 |

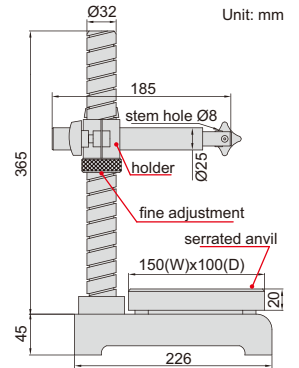
DIAL INDICATOR STAND

- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

dust cover (included)



6864-250



| Code | Applicable holding stem | Anvil |
|----------|-------------------------|--|
| 6864-250 | Ø8mm | serrated, flatness 1.5µm, hardness HRC60±2 |

DIAL INDICATOR STANDS

dust cover (included)



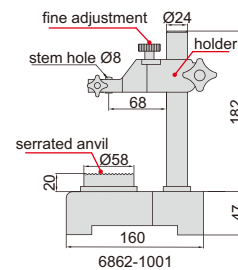
- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Supplied with dust cover



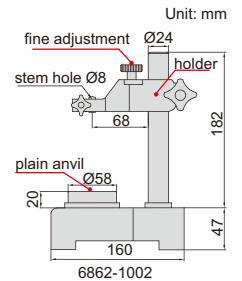
6862-1001



6862-1002



6862-1001



6862-1002

| Code | Applicable holding stem | Anvil |
|-----------|-------------------------|--|
| 6862-1001 | Ø8mm | serrated, flatness 1.5µm, hardness HRC60±2 |
| 6862-1002 | Ø8mm | plain, flatness 1.5µm, hardness HRC60±2 |

TRANSFER STAND

dust cover (included)



- Vertical travel of holder: 335mm
- Fine adjustment range: 2mm
- Supplied with dust cover

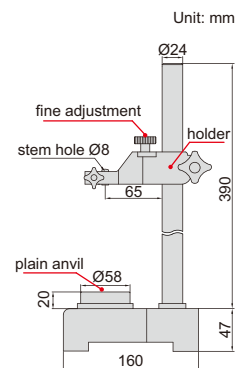


6865-300

Application



Rigid construction, designed to make comparison height measurement (set zero with gage block then measure height of workpiece) with dial indicators or digital indicators (variation of measuring force is high)

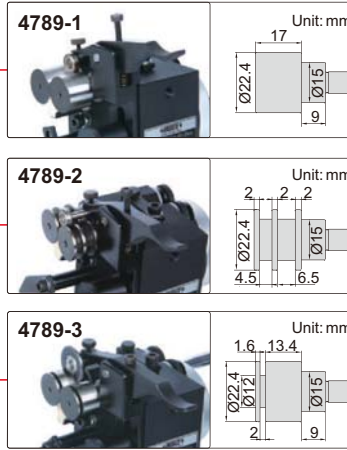


| Code | Applicable holding stem | Anvil |
|----------|-------------------------|---|
| 6865-300 | Ø8mm | plain, flatness 1.5µm, hardness HRC60±2 |

CONCENTRICITY GAGES



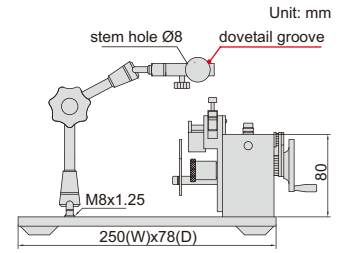
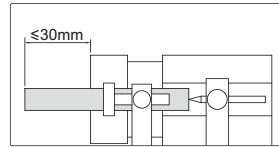
VIDEO



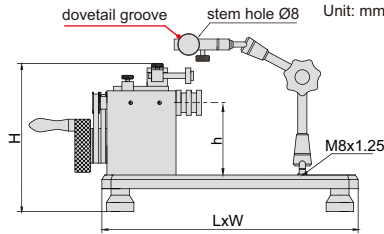
- Accuracy 2µm
- Optional accessory: dial test indicator, mini magnetic stand (code 6224-40)

| Code | Applicable diameter |
|--------|---------------------|
| 4789-1 | Ø3.5mm-25mm |
| 4789-2 | Ø1mm-25mm |
| 4789-3 | Ø1mm-25mm |

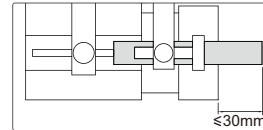
recommended outstretch length ≤ 30mm



CONCENTRICITY GAGE



recommended outstretch length ≤ 30mm



HIGH STABILITY, LONG WORKING LIFE

dial test indicator is not included



4725-45

- With ball bearing, high stability, long working life

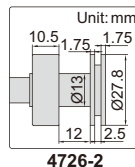
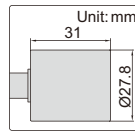
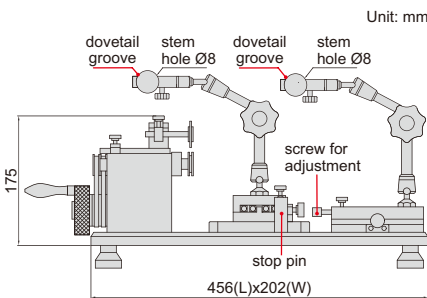
| Code | Accuracy | Diameter range | Center height (h) | LxHxW | Weight |
|---------|----------|----------------|-------------------|---------------|--------|
| 4725-45 | 2µm | 3-45mm | 80mm | 280x130x150mm | 6kg |
| 4725-60 | 2µm | 5-60mm | 90mm | 428x215x200mm | 16.5kg |
| 4725-80 | 2µm | 8-80mm | 130mm | 445x256x260mm | 29.5kg |

CONCENTRICITY GAGES

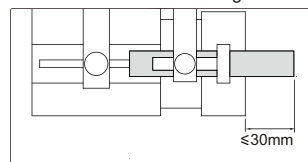
QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT



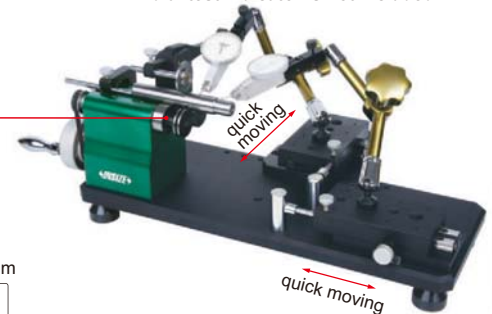
VIDEO



recommended outstretch length ≤ 30mm



dial test indicator is not included

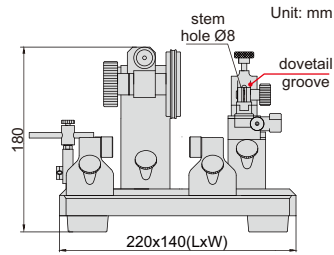


4726-2

- With ball bearing, high stability, long working life
- Accuracy: 2µm
- Optional accessory: dial test indicator

| Code | Applicable diameter |
|--------|---------------------|
| 4726-1 | Ø3-40mm |
| 4726-2 | Ø1-40mm |

CONCENTRICITY GAGE



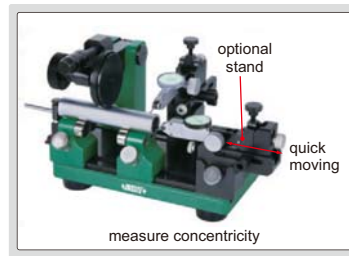
dial test indicator is not included



4724-25

| Code | Accuracy | Diameter range | Workpiece length | | Load |
|---------|----------|----------------|------------------------|---------------------|------|
| | | | Without optional stand | With optional stand | |
| 4724-25 | 3µm | 3-25mm | 0-220mm | 0-120mm | 5kg |

Application



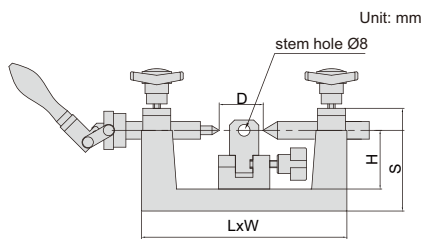
Stand (optional)

| Code |
|------------|
| 4724-STAND |



4724-STAND

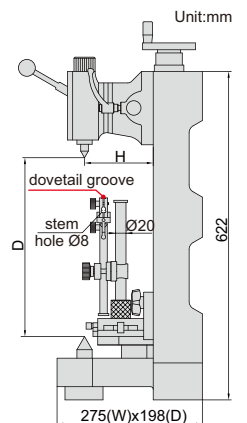
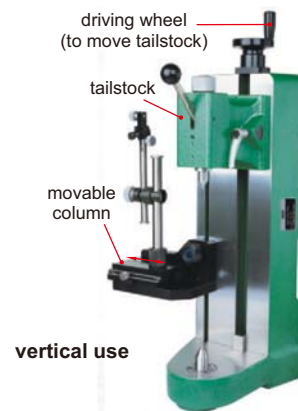
MINI BENCH CENTER



4721-75A

| Code | Runout accuracy | Center height (H) | Distance between two centers (D) | Taper of center | Size (LxWxS) | Weight | Load |
|----------|-----------------|-------------------|----------------------------------|-----------------|--------------|--------|------|
| 4721-75A | 2µm | 40mm | 35-100mm | MT1 | 175x119x70mm | 4.5kg | 4kg |

VERTICAL AND HORIZONTAL BENCH CENTER

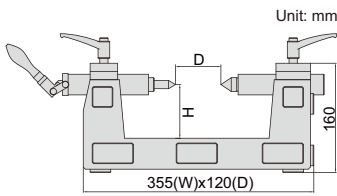


- For vertical and horizontal use
- Move tailstock by driving wheel

| Code | Parallelism* | Runout accuracy | Center height (H) | Distance between two centers (D) | Taper of upper center | Taper of lower center | Weight | Load |
|----------|--------------|-----------------|-------------------|----------------------------------|-----------------------|-----------------------|--------|------|
| 4783-380 | 0.01mm | 2µm | 130mm | 380mm | MT2 | MT3 | 80kg | 60kg |

* Parallelism of two centers to the guide surface

VERTICAL AND HORIZONTAL BENCH CENTER



horizontal use



side use

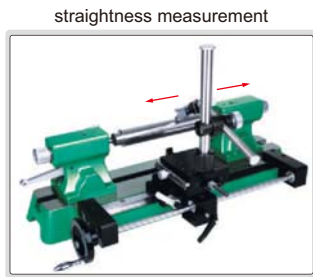


vertical use

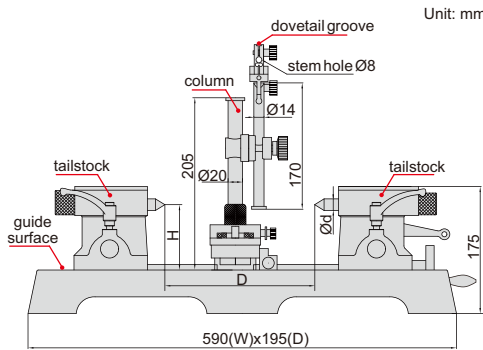
- For vertical, side and horizontal use

| Code | Runout accuracy | Center height (H) | Distance between two centers (D) | Taper of center | Weight | Load |
|----------|-----------------|-------------------|----------------------------------|-----------------|--------|------|
| 4722-200 | 2µm | 80mm | 200mm | MT1/MT3 | 22kg | 25kg |

BENCH CENTER WITH STRAIGHTNESS MEASUREMENT



straightness measurement



Unit: mm



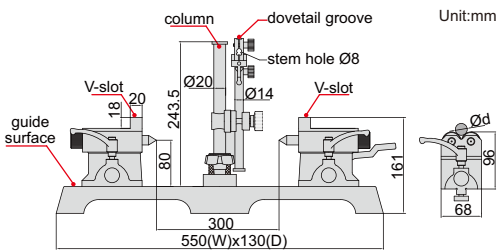
4723-300

- Hardened cast-iron guide surface

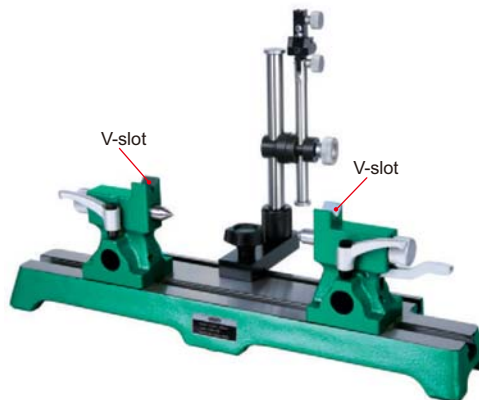
| Code | Parallelism* | Runout accuracy | Accuracy of straightness measurement | Center height (H) | Distance between two centers (D) | Diameter of center (Ød) | Taper of center | Weight | Load |
|----------|--------------|-----------------|--------------------------------------|-------------------|----------------------------------|-------------------------|-----------------|--------|------|
| 4723-300 | 4µm | 2µm | 0.01mm | 90mm | 300mm | 18mm | MT2 | 38kg | 25kg |

*Parallelism of two centers to the guide surface

BENCH CENTER WITH ROLLER TAILSTOCKS



Unit: mm



4720-300

roller tailstocks (included)



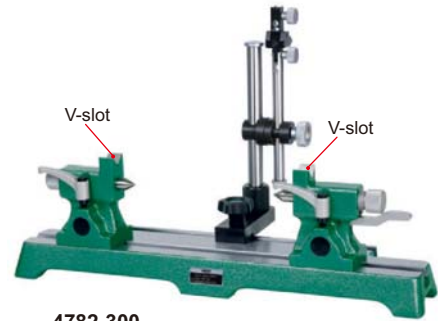
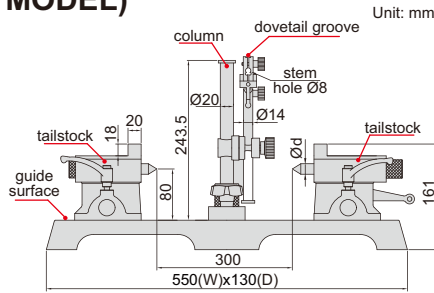
- Hardened cast-iron guide surface
- Supplied with V-slot/center tailstocks and roller tailstocks
- V-slot for cylinder Ø4~22mm
- Roller for cylinder Ø5~100mm

| Code | Parallelism* | Runout accuracy | Center height | Distance between two centers | Taper of center | Load |
|----------|--------------|-----------------|---------------|------------------------------|-----------------|-----------------------------------|
| 4720-300 | 0.01mm | 2µm | 80mm | 300mm | MT1 | 25kg (40kg for roller tailstocks) |

*Parallelism of two centers to the guide surface

BENCH CENTER (BASIC MODEL)

- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4~Ø22mm



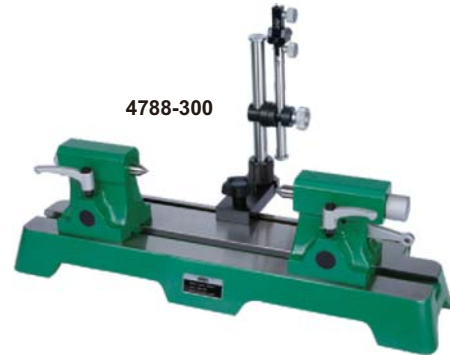
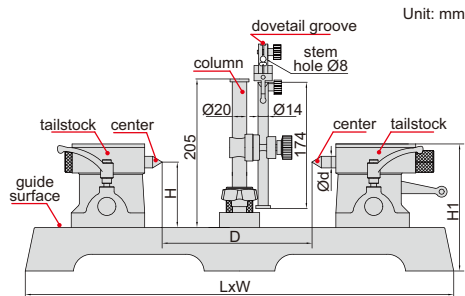
4782-300

| Code | Parallelism* | Runout accuracy | Center height | Distance between two centers | Diameter of center (Ød) | Load |
|----------|--------------|-----------------|---------------|------------------------------|-------------------------|------|
| 4782-300 | 0.01mm | 2µm | 80mm | 300mm | Ø16mm | 25kg |

* Parallelism of two centers to the guide surface

BENCH CENTERS

- Movable column



4788-300



High accuracy (heavy weight, hardened guide surface)

| Code | Parallelism* | Runout accuracy | Center height (H) | Distance between two centers(D) | LxW | Height (H1) | Diameter of center (Ød) | Taper of center | Weight | Load |
|-------------|--------------|-----------------|-------------------|---------------------------------|----------|-------------|-------------------------|-----------------|--------|------|
| 4788-300 | 0.010mm | 2µm | 90 | 300 | 590x192 | 175 | 18.0 | MT2 | 34kg | 25kg |
| 4788-400 | 0.010mm | 2µm | 130 | 400 | 770x206 | 241 | 24.1 | MT3 | 66kg | 60kg |
| 4788-600 | 0.010mm | 2µm | 130 | 600 | 930x220 | 250 | 24.1 | MT3 | 90kg | 60kg |
| 4788-600H2 | 0.010mm | 2µm | 200 | 600 | 930x220 | 325 | 24.1 | MT3 | 105kg | 60kg |
| 4788-1000 | 0.010mm | 3µm | 130 | 1000 | 1330x220 | 262 | 24.1 | MT3 | 112kg | 60kg |
| 4788-1000H2 | 0.010mm | 3µm | 200 | 1000 | 1330x220 | 337 | 24.1 | MT3 | 125kg | 85kg |
| 4788-1000H3 | 0.010mm | 3µm | 300 | 1000 | 1330x220 | 442 | 31.6 | MT4 | 165kg | 85kg |

* Parallelism of two centers to the guide surface

Low accuracy (light weight, guide surface is not hardened)

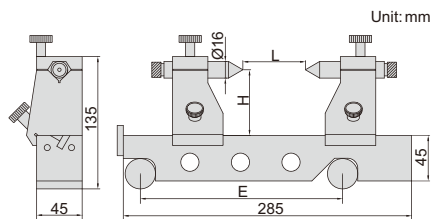
| Code | Parallelism* | Runout accuracy | Center height (H) | Distance between two centers(D) | LxW | Height (H1) | Diameter of center (Ød) | Taper of center | Weight | Load |
|----------|--------------|-----------------|-------------------|---------------------------------|----------|-------------|-------------------------|-----------------|--------|------|
| 4788-D2 | 0.010mm | 3µm | 90 | 200 | 490x180 | 175 | 18.0 | MT2 | 27kg | 25kg |
| 4788-D3 | 0.010mm | 3µm | 90 | 300 | 590x195 | 175 | 18.0 | MT2 | 36kg | 25kg |
| 4788-D4 | 0.012mm | 3µm | 130 | 400 | 730x205 | 241 | 24.1 | MT3 | 68kg | 60kg |
| 4788-D6 | 0.015mm | 3µm | 130 | 600 | 930x220 | 250 | 24.1 | MT3 | 91kg | 60kg |
| 4788-D8 | 0.015mm | 3µm | 130 | 800 | 1130x220 | 250 | 24.1 | MT3 | 99kg | 60kg |
| 4788-D10 | 0.015mm | 3µm | 130 | 1000 | 1330x220 | 262 | 24.1 | MT3 | 116kg | 60kg |

* Parallelism of two centers to the guide surface

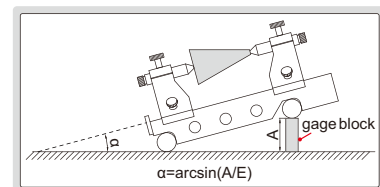
SINE BENCH CENTER



4157-200

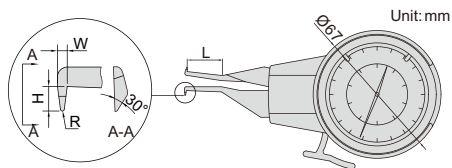


- Check taper or runout of taper bars
- Sine bar accuracy ($\alpha=30^\circ$): ± 5 seconds



| Code | Accuracy | Center height (H) | Center distance (L) |
|----------|----------|-------------------|---------------------|
| 4157-200 | 0.01mm | 65mm | 200mm |

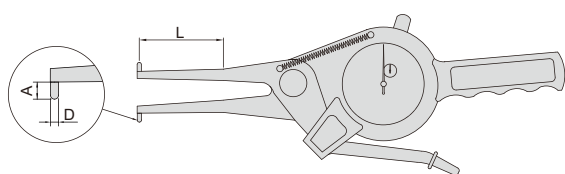
INTERNAL DIAL CALIPER GAGES



2222-15

| Code | Range | Graduation | Accuracy | L | H | W | R |
|----------|---------|------------|----------|----|-----|-----|------|
| 2222-15 | 5-15mm | 0.01mm | ±0.03mm | 20 | 2 | 2.5 | R0.3 |
| 2222-25 | 5-25mm | 0.01mm | ±0.03mm | 35 | 1.5 | 1.0 | R0.3 |
| 2222-301 | 10-30mm | 0.01mm | ±0.03mm | 55 | 5.5 | 2.5 | R0.5 |
| 2222-401 | 20-40mm | 0.01mm | ±0.03mm | 80 | 6.0 | 3.0 | R0.5 |
| 2222-501 | 30-50mm | 0.01mm | ±0.03mm | 80 | 8.0 | 3.0 | R0.5 |
| 2222-60 | 40-60mm | 0.01mm | ±0.03mm | 80 | 8.0 | 3.0 | R0.5 |

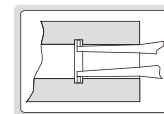
INTERNAL DIAL CALIPER GAGES



2321-35

| Code | Range | Graduation | Accuracy | L | A | D |
|-----------|-----------|------------|----------|-----|----|------|
| 2321-35 | 15-35mm | 0.01mm | ±0.04mm | 50 | 3 | Ø3 |
| 2321-AL35 | 15-35mm | 0.01mm | ±0.04mm | 200 | 3 | Ø3 |
| 2321-55 | 35-55mm | 0.01mm | ±0.04mm | 80 | 6 | Ø3 |
| 2321-AL55 | 35-55mm | 0.01mm | ±0.04mm | 250 | 8 | Ø3 |
| 2321-75 | 55-75mm | 0.01mm | ±0.04mm | 90 | 8 | Ø3 |
| 2321-AL75 | 55-75mm | 0.01mm | ±0.04mm | 250 | 8 | Ø3 |
| 2321-95 | 75-95mm | 0.01mm | ±0.04mm | 100 | 8 | Ø3 |
| 2321-115 | 95-115mm | 0.01mm | ±0.04mm | 120 | 10 | Ø3.2 |
| 2321-135 | 115-135mm | 0.01mm | ±0.04mm | 120 | 10 | Ø3.2 |

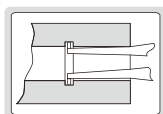
■ Carbide measuring tips



DATA OUTPUT



- Carbide measuring tips
- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

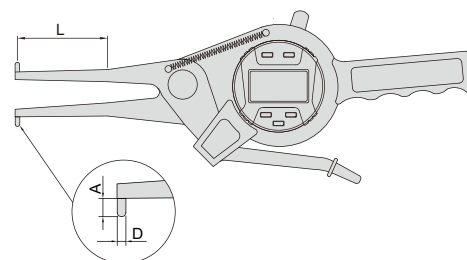


DIGITAL INTERNAL CALIPER GAGES



2151-35

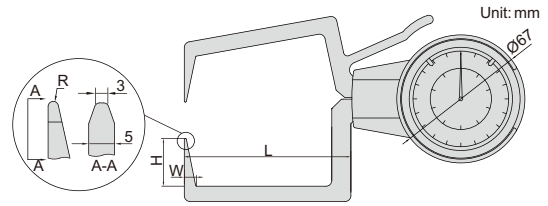
| Code | Range | Resolution | Accuracy | L | A | D |
|-----------|--------------------|----------------|----------|-----|----|------|
| 2151-35 | 15-35mm/0.6-1.4" | 0.01mm/0.0005" | ±0.04mm | 50 | 3 | Ø3 |
| 2151-AL35 | 15-35mm/0.6-1.4" | 0.01mm/0.0005" | ±0.04mm | 200 | 3 | Ø3 |
| 2151-55 | 35-55mm/1.4-2.2" | 0.01mm/0.0005" | ±0.04mm | 80 | 6 | Ø3 |
| 2151-AL55 | 35-55mm/1.4-2.2" | 0.01mm/0.0005" | ±0.04mm | 250 | 8 | Ø3 |
| 2151-75 | 55-75mm/2.2-3" | 0.01mm/0.0005" | ±0.04mm | 90 | 8 | Ø3 |
| 2151-AL75 | 55-75mm/2.2-3" | 0.01mm/0.0005" | ±0.04mm | 250 | 8 | Ø3 |
| 2151-95 | 75-95mm/3-3.8" | 0.01mm/0.0005" | ±0.04mm | 100 | 8 | Ø3 |
| 2151-115 | 95-115mm/3.8-4.6" | 0.01mm/0.0005" | ±0.04mm | 120 | 10 | Ø3.2 |
| 2151-135 | 115-135mm/4.6-5.4" | 0.01mm/0.0005" | ±0.04mm | 120 | 10 | Ø3.2 |



EXTERNAL DIAL CALIPER GAGES



2333-201

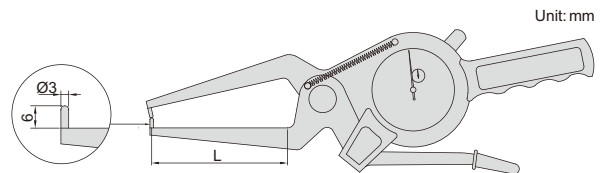


| Code | Range | Graduation | Accuracy | L | H | W | R |
|----------|---------|------------|----------|----|----|-----|------|
| 2333-201 | 0-20mm | 0.01mm | ±0.03mm | 80 | 25 | 6.5 | R0.5 |
| 2333-301 | 10-30mm | 0.01mm | ±0.03mm | 80 | 25 | 6.5 | R0.5 |
| 2333-401 | 20-40mm | 0.01mm | ±0.03mm | 80 | 25 | 6.5 | R0.5 |
| 2333-501 | 30-50mm | 0.01mm | ±0.03mm | 80 | 25 | 6.5 | R0.5 |
| 2333-601 | 40-60mm | 0.01mm | ±0.03mm | 80 | 25 | 6.5 | R0.5 |

EXTERNAL DIAL CALIPER GAGES

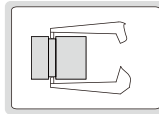


2332-20



| Code | Range | Graduation | Accuracy | L (mm) |
|----------|----------|------------|----------|--------|
| 2332-20 | 0-20mm | 0.01mm | ±0.04mm | 60 |
| 2332-40 | 20-40mm | 0.01mm | ±0.04mm | 60 |
| 2332-60 | 40-60mm | 0.01mm | ±0.04mm | 55 |
| 2332-80 | 60-80mm | 0.01mm | ±0.04mm | 55 |
| 2332-100 | 80-100mm | 0.01mm | ±0.04mm | 55 |

- Carbide measuring tips



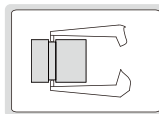
DIGITAL EXTERNAL CALIPER GAGES

DATA OUTPUT

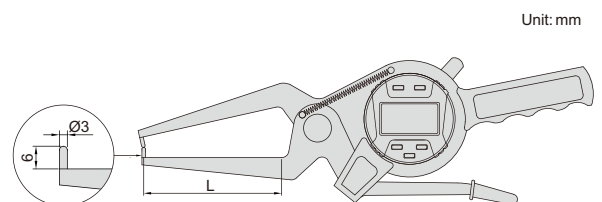
- Carbide measuring tips
- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)



2132-20



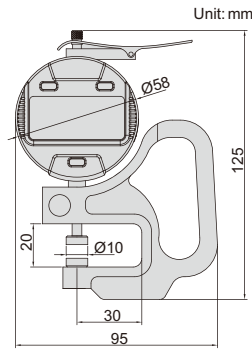
| Code | Range | Resolution | Accuracy | L (mm) |
|----------|------------------|----------------|----------|--------|
| 2132-20 | 0-20mm/0-0.8" | 0.01mm/0.0005" | ±0.04mm | 60 |
| 2132-40 | 20-40mm/0.8-1.6" | 0.01mm/0.0005" | ±0.04mm | 60 |
| 2132-60 | 40-60mm/1.6-2.4" | 0.01mm/0.0005" | ±0.04mm | 55 |
| 2132-80 | 60-80mm/2.4-3.2" | 0.01mm/0.0005" | ±0.04mm | 55 |
| 2132-100 | 80-100mm/3.2-4" | 0.01mm/0.0005" | ±0.04mm | 55 |



DIGITAL THICKNESS GAGES

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

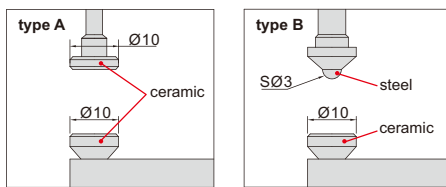
| Code | Range | Resolution | Accuracy |
|----------|---------------|------------------|----------|
| 2871-10 | 0-10mm/0-0.4" | 0.01mm/0.0005" | ±0.02mm |
| 2871-101 | 0-10mm/0-0.4" | 0.001mm/0.00005" | ±0.005mm |



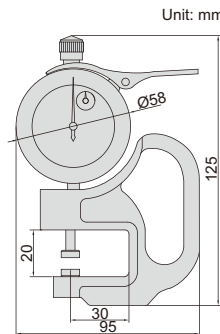
DATA OUTPUT

2871-101

THICKNESS GAGES

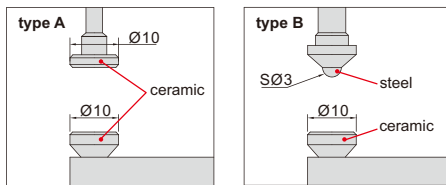


| Code | Range | Graduation | Accuracy | Type |
|----------|--------|------------|----------|------|
| 2364-10 | 0-10mm | 0.01mm | ±0.02mm | A |
| 2364-10B | 0-10mm | 0.01mm | ±0.02mm | B |

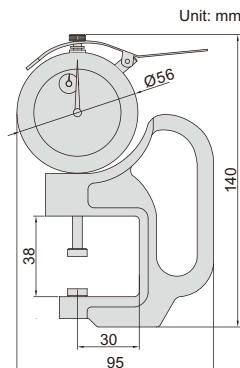


2364-10

THICKNESS GAGES



| Code | Range | Graduation | Accuracy | Type |
|----------|--------|------------|----------|------|
| 2366-30 | 0-30mm | 0.01mm | ±0.035mm | A |
| 2366-30B | 0-30mm | 0.01mm | ±0.035mm | B |

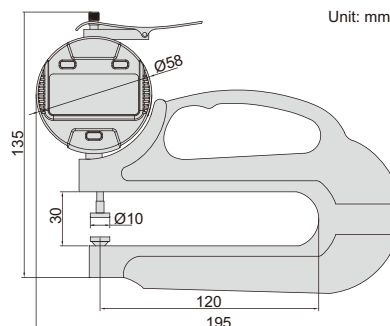


2366-30

DIGITAL THICKNESS GAGE

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

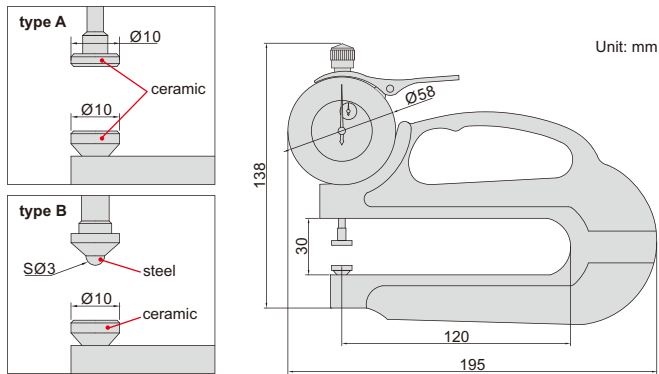
| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2872-10 | 0-10mm/0-0.4" | 0.01mm/0.0005" | ±0.02mm |



DATA OUTPUT

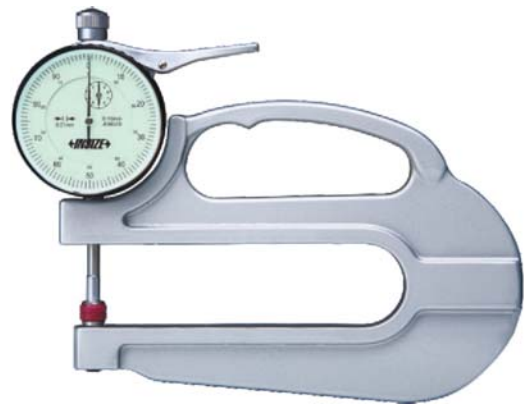
2872-10

THICKNESS GAGES



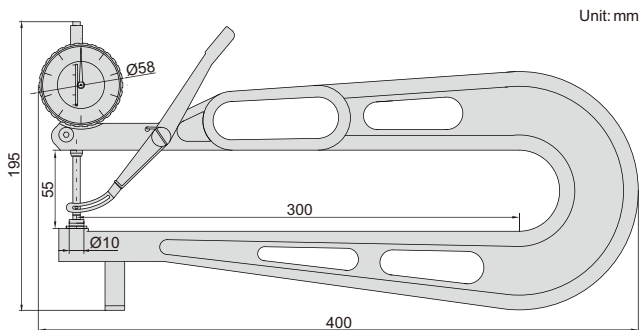
Unit: mm

| Code | Range | Graduation | Accuracy | Type |
|----------|--------|------------|----------|------|
| 2365-10 | 0-10mm | 0.01mm | ±0.02mm | A |
| 2365-20 | 0-20mm | 0.01mm | ±0.03mm | A |
| 2365-10B | 0-10mm | 0.01mm | ±0.02mm | B |
| 2365-20B | 0-20mm | 0.01mm | ±0.03mm | B |



2365-10

THICKNESS GAGE



Unit: mm



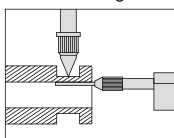
2875-30

| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 2875-30 | 0-30mm | 0.1mm | ±0.05mm |

DIGITAL TUBE THICKNESS GAGE

DATA OUTPUT

Measure wall thickness of groove

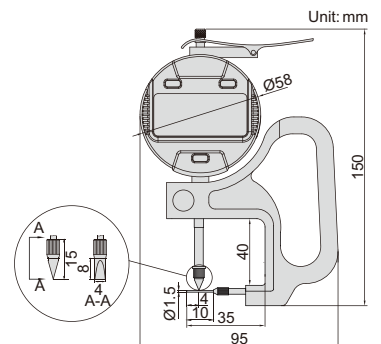


- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2873-10 | 0-10mm/0-0.4" | 0.01mm/0.0005" | ±0.02mm |

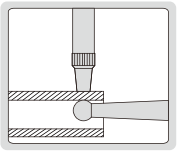


2873-10



Unit: mm

DATA
OUTPUT



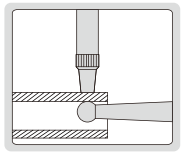
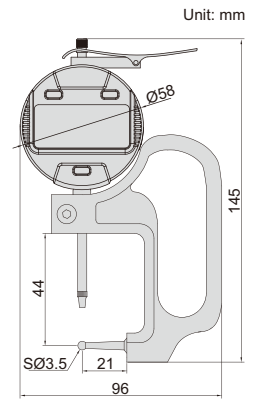
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2876-10 | 0-10mm/0-0.4" | 0.01mm/0.0005" | ±0.02mm |

DIGITAL TUBE THICKNESS GAGE



2876-10



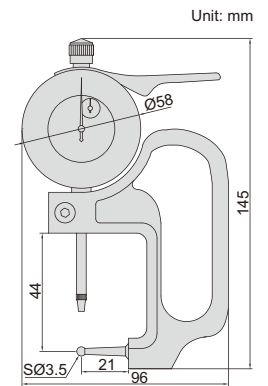
- Measure tube wall thickness

| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2367-10A | 0-10mm | 0.01mm | ±0.02mm |

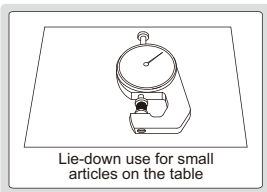
TUBE THICKNESS GAGE



2367-10A



SUITABLE FOR
JEWELLERY

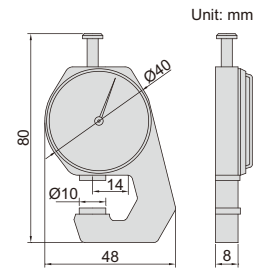


| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 2361-10 | 0-10mm | 0.1mm | ±0.05mm |

THICKNESS GAGE



2361-10



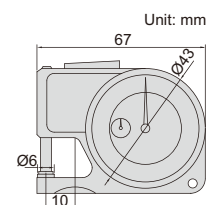
- Stainless steel spindle tip and anvil

| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 2363-10 | 0-10mm | 0.01mm | ±0.03mm |

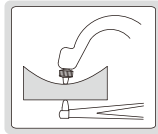


2363-10

THICKNESS GAGE



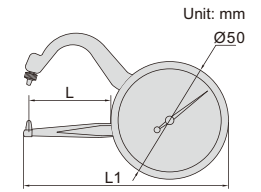
THICKNESS GAGES



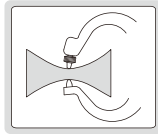
| Code | Range | Graduation | Accuracy | L | L1 |
|----------|--------|------------|----------|----|-----|
| 2862-101 | 0-10mm | 0.05mm | ±0.1mm | 35 | 85 |
| 2862-102 | 0-10mm | 0.05mm | ±0.1mm | 60 | 110 |



2862-101



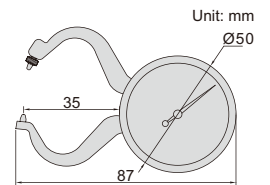
THICKNESS GAGE



| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 2863-10 | 0-10mm | 0.05mm | ±0.1mm |

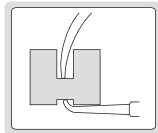


2863-10



THICKNESS GAGE WITH POINTED TIPS

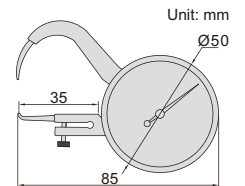
- Pointed tips fit into small grooves and recesses



| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 2866-10 | 0-10mm | 0.05mm | ±0.1mm |



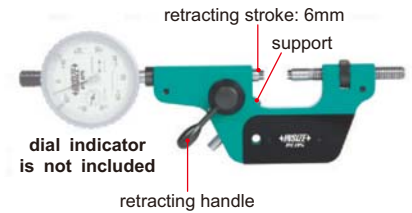
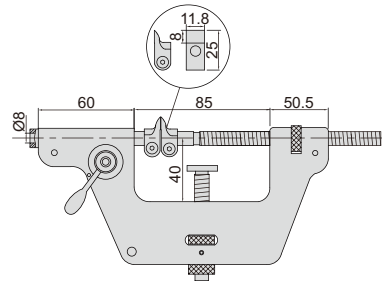
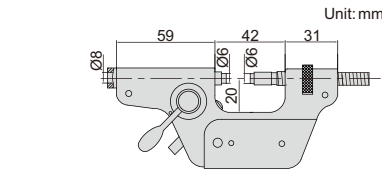
2866-10



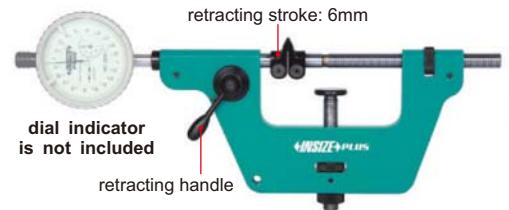
DIAL SNAP GAGES



- For quick Go/No-Go judgement
- Carbide measuring faces
- Height of support is adjustable
- Optional accessory: dial indicators (graduation 0.001mm) and digital indicators (resolution 0.001mm)



3337-40

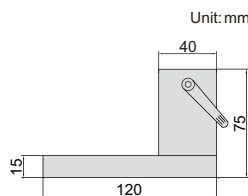


3337-60

| Code | Range | Parallelism of measuring faces | Retracting stroke | Remark |
|---------|--------|--------------------------------|-------------------|-------------------------|
| 3337-40 | 0-40mm | 1µm | 6mm | |
| 3337-60 | 0-60mm | 3µm | 6mm | jaw type measuring tips |

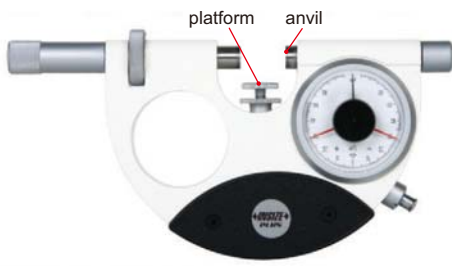
Stand (optional)

| Code |
|------------|
| 3337-STAND |



3337-STAND

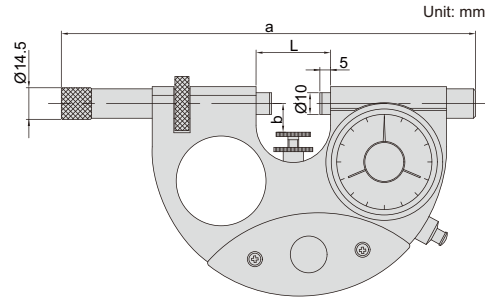
DIAL SNAP GAGES



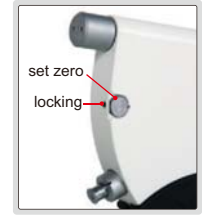
3335-25

(mm)

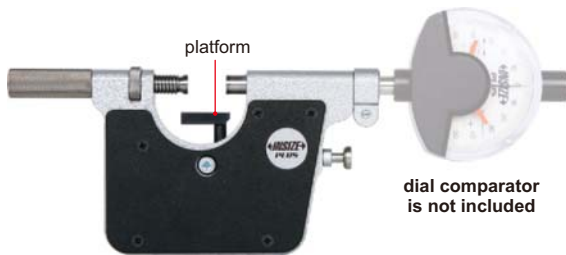
| Code | Range | L | a | b |
|----------|----------|-----|-----|-------|
| 3335-25 | 0-25mm | 35 | 191 | <15 |
| 3335-50 | 25-50mm | 60 | 215 | <25 |
| 3335-75 | 50-75mm | 84 | 239 | <37.5 |
| 3335-100 | 75-100mm | 110 | 265 | <50 |



IP54 WATERPROOF



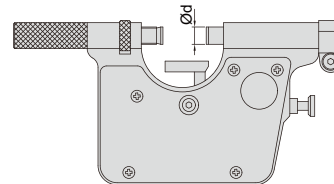
- Quick Go/No-Go measurement for mass production
- Anvil retracting stroke: 2.5mm
- Dial indicator: measuring range $\pm 0.07\text{mm}$, graduation $1\mu\text{m}$, accuracy $1\mu\text{m}$
- Constant measuring force over the whole range: 8.5N
- Carbide measuring faces
- IP54 dust/waterproof
- Zero position of dial indicator is adjustable and can be locked (supplied with locking wrench)
- Adjustable platform height



3336-25

dial comparator is not included

| Code | Range | Diameter of measuring faces ($\varnothing d$) |
|----------|----------|---|
| 3336-25 | 0-25mm | 8mm |
| 3336-50 | 25-50mm | 8mm |
| 3336-100 | 50-100mm | 15mm |



DIAL SNAP GAGES



- Quick Go/No-Go judgement for mass production
- Carbide measuring faces
- Adjustable platform height
- Optional accessory: dial comparator (code 2881-01)

DIAL SNAP GAGES

- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Flatness of anvil: $1.5\mu\text{m}$
- Repeatability: $1\mu\text{m}$
- Carbide measuring faces for anvils
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional accessory: dial indicators and digital indicators (reading 0.001mm or 0.01mm)

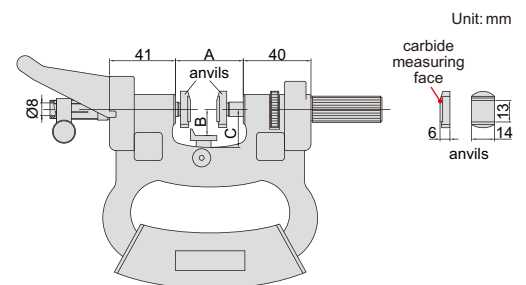


dial indicator is not included

2186-25

(mm)

| Code | Range | Parallelism of measuring faces | A | B | C |
|----------|-----------|--------------------------------|-----|---------|-----|
| 2186-25 | 0-25mm | $4\mu\text{m}$ | 42 | 11-18 | 20 |
| 2186-50 | 25-50mm | $4\mu\text{m}$ | 69 | 11-32 | 41 |
| 2186-75 | 50-75mm | $5\mu\text{m}$ | 94 | 17-41 | 51 |
| 2186-100 | 75-100mm | $6\mu\text{m}$ | 119 | 31-55 | 65 |
| 2186-125 | 100-125mm | $6\mu\text{m}$ | 144 | 42-70 | 75 |
| 2186-150 | 125-150mm | $8\mu\text{m}$ | 169 | 55-82 | 90 |
| 2186-175 | 150-175mm | $8\mu\text{m}$ | 194 | 68-95 | 100 |
| 2186-200 | 175-200mm | $10\mu\text{m}$ | 219 | 85-110 | 115 |
| 2186-225 | 200-225mm | $10\mu\text{m}$ | 244 | 95-120 | 130 |
| 2186-250 | 225-250mm | $10\mu\text{m}$ | 269 | 110-135 | 145 |
| 2186-275 | 250-275mm | $12\mu\text{m}$ | 294 | 120-150 | 160 |
| 2186-300 | 275-300mm | $12\mu\text{m}$ | 319 | 128-160 | 170 |



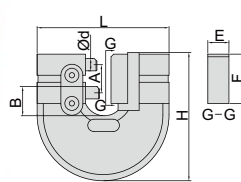
Unit: mm
carbide measuring face
6 13 14
anvils

ADJUSTABLE SNAP GAGES

- Used as Go/No-Go gage by setting upper and lower limits
- Flatness of anvil: 1.5µm
- Parallelism of measuring faces:
 - range 0-32mm: 3µm
 - range 32-89mm: 4µm
 - range 89-300mm: 5µm



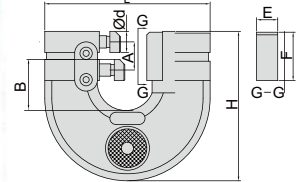
2187-6



0-6mm



2187-19



over 6mm

| Code | Range | L | A | B | E | F | H | Ød |
|----------|-----------|-----|----|------|------|------|------|------|
| 2187-6 | 0-6mm | 74 | 15 | 17.5 | 12.2 | 27.2 | 71.5 | 7 |
| 2187-13 | 6-13mm | 85 | 15 | 26 | 12.2 | 27.2 | 79.5 | 12.3 |
| 2187-19 | 13-19mm | 93 | 15 | 27 | 12.2 | 27.2 | 83 | 12.3 |
| 2187-25 | 19-25mm | 100 | 15 | 33.5 | 12.2 | 27.2 | 89.5 | 12.3 |
| 2187-32 | 25-32mm | 111 | 18 | 38.5 | 15.2 | 35.2 | 104 | 15.3 |
| 2187-38 | 32-38mm | 117 | 18 | 41.5 | 15.2 | 35.2 | 105 | 15.3 |
| 2187-44 | 38-44mm | 123 | 18 | 44.5 | 15.2 | 35.2 | 109 | 15.3 |
| 2187-51 | 44-51mm | 130 | 18 | 48 | 15.2 | 35.2 | 117 | 15.3 |
| 2187-57 | 51-57mm | 136 | 18 | 45 | 15.2 | 35.2 | 119 | 15.3 |
| 2187-63 | 57-63mm | 143 | 18 | 50 | 15.2 | 35.2 | 122 | 15.3 |
| 2187-70 | 63-70mm | 156 | 20 | 58 | 15.2 | 35.2 | 132 | 15.3 |
| 2187-76 | 70-76mm | 163 | 20 | 60.5 | 15.2 | 35.2 | 137 | 15.3 |
| 2187-82 | 76-82mm | 169 | 20 | 64.5 | 15.2 | 35.2 | 140 | 15.3 |
| 2187-89 | 82-89mm | 175 | 20 | 66.5 | 15.2 | 35.2 | 146 | 15.3 |
| 2187-95 | 89-95mm | 181 | 20 | 69.5 | 15.2 | 35.2 | 149 | 15.3 |
| 2187-101 | 95-101mm | 188 | 20 | 70 | 15.2 | 35.2 | 154 | 15.3 |
| 2187-108 | 101-108mm | 198 | 24 | 79 | 15.2 | 39.2 | 166 | 15.3 |
| 2187-114 | 108-114mm | 204 | 24 | 81 | 15.2 | 39.2 | 172 | 15.3 |

(mm)

| Code | Range | L | A | B | E | F | H | Ød |
|----------|-----------|-------|------|-------|------|------|-----|------|
| 2187-120 | 114-120mm | 210 | 24 | 86 | 15.2 | 39.2 | 179 | 15.3 |
| 2187-127 | 120-127mm | 217 | 24 | 89.5 | 15.2 | 39.2 | 186 | 15.3 |
| 2187-133 | 127-133mm | 223 | 24 | 92.5 | 15.2 | 39.2 | 192 | 15.3 |
| 2187-139 | 133-139mm | 229 | 24 | 95.5 | 15.2 | 39.2 | 197 | 15.3 |
| 2187-146 | 139-146mm | 235 | 24 | 98.5 | 15.2 | 39.2 | 201 | 15.3 |
| 2187-152 | 146-152mm | 242 | 24 | 102 | 15.2 | 39.2 | 205 | 15.3 |
| 2187-163 | 152-163mm | 273 | 21.4 | 106.7 | 18.2 | 39.2 | 211 | 18.3 |
| 2187-175 | 163-175mm | 273 | 21.4 | 106.7 | 18.2 | 39.2 | 211 | 18.3 |
| 2187-188 | 175-188mm | 298.5 | 21.4 | 119.7 | 18.2 | 39.2 | 227 | 18.3 |
| 2187-200 | 188-200mm | 298.5 | 21.4 | 119.7 | 18.2 | 39.2 | 227 | 18.3 |
| 2187-213 | 200-213mm | 324 | 21.4 | 131.7 | 18.2 | 39.2 | 242 | 18.3 |
| 2187-225 | 213-225mm | 324 | 21.4 | 131.7 | 18.2 | 39.2 | 242 | 18.3 |
| 2187-238 | 225-238mm | 349.5 | 21.4 | 144.7 | 18.2 | 39.2 | 250 | 18.3 |
| 2187-250 | 238-250mm | 349.5 | 21.4 | 149 | 18.2 | 39.2 | 250 | 18.3 |
| 2187-263 | 250-263mm | 375.5 | 21.4 | 157.7 | 18.2 | 39.2 | 278 | 18.3 |
| 2187-275 | 263-275mm | 375.5 | 21.4 | 157.7 | 18.2 | 39.2 | 278 | 18.3 |
| 2187-288 | 275-288mm | 400 | 21.4 | 170.7 | 18.2 | 39.2 | 291 | 18.3 |
| 2187-300 | 288-300mm | 400 | 21.4 | 170.7 | 18.2 | 39.2 | 291 | 18.3 |

(mm)

DIAL SNAP GAGES



dial indicator is not included

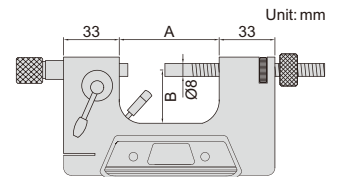
2184-50W

- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Optional accessory:
 - dial indicators (graduation 0.01mm),
 - digital indicators (resolution 0.01mm/0.0005")

ATTENTION: NOT SUITABLE FOR 0.001MM INDICATORS

| Code | Range | A | B |
|-----------|-----------|-----|-----|
| 2184-25W | 0-25mm | 34 | 18 |
| 2184-50W | 0-50mm | 62 | 32 |
| 2184-100W | 50-100mm | 112 | 62 |
| 2184-150W | 100-150mm | 162 | 85 |
| 2184-200W | 150-200mm | 212 | 110 |

(mm)



Unit: mm

DIAL SNAP GAGES



3334-25

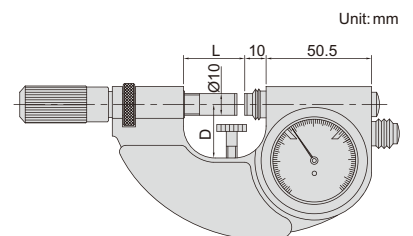
- Go/No-Go judgement for mass production
- Dial indicator: range ± 0.04 mm, graduation 0.001mm, accuracy 0.001mm
- IP54 dust/waterproof
- Measuring force: 5-10N
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

IP54 WATERPROOF

ATTENTION: BASIC MODEL

| Code | Range | L | D |
|----------|----------|-------|------|
| 3334-25 | 0-25mm | 28.5 | 25 |
| 3334-50 | 25-50mm | 53.5 | 35 |
| 3334-75 | 50-75mm | 78.5 | 47.5 |
| 3334-100 | 75-100mm | 103.5 | 60 |

(mm)



Unit: mm

DIGITAL SNAP GAGE

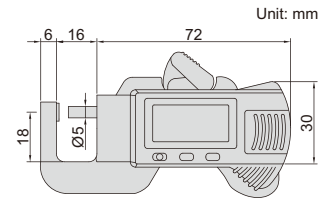
DATA OUTPUT

- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2)



2166-12

| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2166-12 | 0-12mm/0-0.5" | 0.01mm/0.0005" | ±0.03mm |



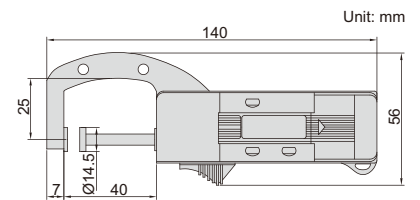
DIGITAL SNAP GAGE

ATTENTION: NO DATA OUTPUT



2167-25

| Code | Range | Resolution | Accuracy |
|---------|-------------|----------------|----------|
| 2167-25 | 0-25mm/0-1" | 0.01mm/0.0005" | ±0.03mm |



DIGITAL SNAP GAGE

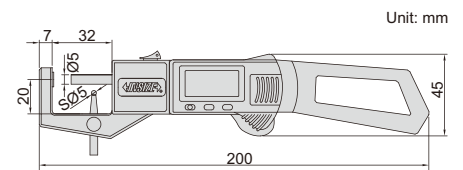
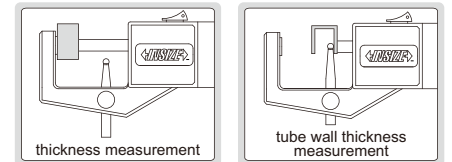
DATA OUTPUT



2163-25

- Resolution: 0.01mm/0.0005"
- Accuracy: ±0.04mm
- For thickness and tube wall thickness measurement
- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2A)

| Code | Thickness range | Tube wall thickness range |
|---------|-----------------|---------------------------|
| 2163-25 | 0-25mm/0-1" | 0-2mm/0.08" |



DIGITAL SNAP GAGE

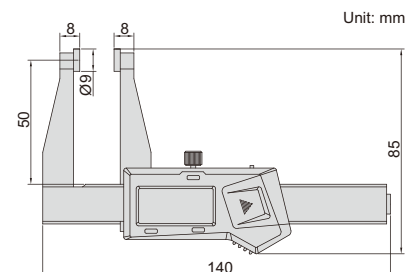
DATA OUTPUT

- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1163-50A

| Code | Range | Resolution | Accuracy |
|----------|-------------|----------------|----------|
| 1163-50A | 0-50mm/0-2" | 0.01mm/0.0005" | ±0.03mm |

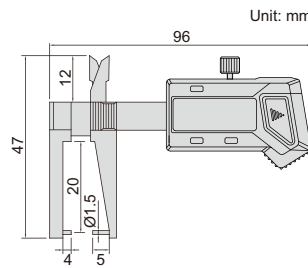
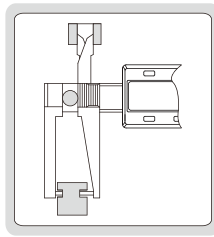


DIGITAL 3-PURPOSE SNAP GAGE



ATTENTION: NO DATA OUTPUT

SUITABLE FOR JEWELLERY



2164-25A

- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

| Code | Range | Resolution | Accuracy |
|----------|-------------|----------------|----------|
| 2164-25A | 0-25mm/0-1" | 0.01mm/0.0005" | ±0.03mm |

STEP AND GAP GAGE

DATA OUTPUT



zero setting block (included)



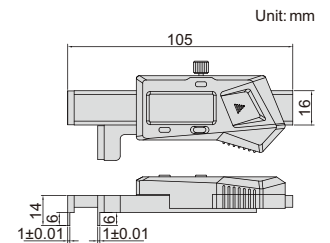
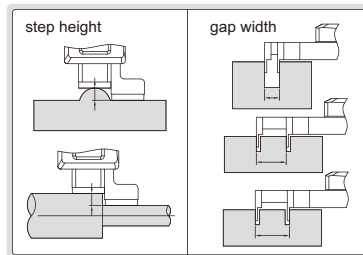
front

2168-12



back

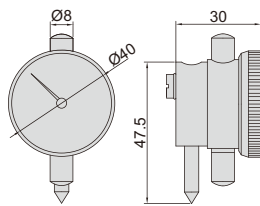
- Measure step height and gap width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with zero setting block
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



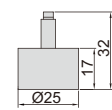
| Code | Range | Accuracy |
|---------|-----------------|----------|
| 2168-12 | 0-12.7mm/0-0.5" | ±0.03mm |

CRANKSHAFT TESTERS

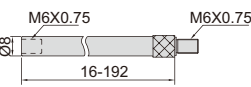
Unit: mm



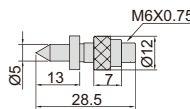
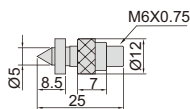
dial indicator



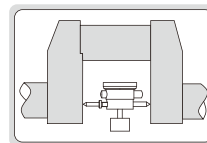
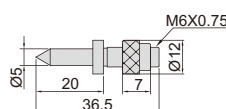
balance block



extension rods



anvils



2841-500

- To test crankshaft deflection
- The balance block is mounted on the back of dial indicator to keep the dial indicator facing up

| Code | Range | Dial indicator range | Graduation | Extension rods | Accuracy |
|----------|----------|----------------------|------------|--------------------------------------|----------|
| 2841-300 | 60-300mm | 3mm | 0.01mm | 16mm, 32mm, 64mm, 128mm | ±0.016mm |
| 2841-500 | 60-500mm | 3mm | 0.01mm | 16mm, 32mm, 64mm, 96mm, 128mm, 192mm | ±0.016mm |

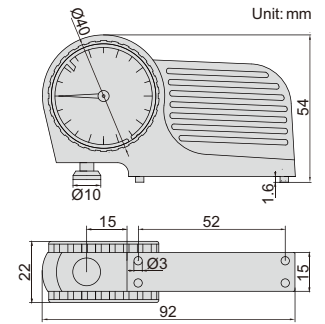
SAW TEETH SETTING GAGE



front

back

2874-02



- Supplied with limit pointer
- Read from both sides

| Code | Range | Graduation | Accuracy |
|---------|-------|------------|----------|
| 2874-02 | 0-2mm | 0.05mm | ±0.05mm |

GAGE BLOCKS

Accuracy according to ISO3650

| Nominal length (mm) | Grade 0 | | Grade 1 | | Grade 2 | |
|---------------------|---------------------------|---------------------------------------|---------------------------|---------------------------------------|---------------------------|---------------------------------------|
| | Limit deviation of length | Tolerance for the variation in length | Limit deviation of length | Tolerance for the variation in length | Limit deviation of length | Tolerance for the variation in length |
| over 0.5 to 10 | ±0.12µm | 0.10µm | ±0.20µm | 0.16µm | ±0.45µm | 0.30µm |
| over 10 to 25 | ±0.14µm | 0.10µm | ±0.30µm | 0.16µm | ±0.60µm | 0.30µm |
| over 25 to 50 | ±0.20µm | 0.10µm | ±0.40µm | 0.18µm | ±0.80µm | 0.30µm |
| over 50 to 75 | ±0.25µm | 0.12µm | ±0.50µm | 0.18µm | ±1.00µm | 0.35µm |
| over 75 to 100 | ±0.30µm | 0.12µm | ±0.60µm | 0.20µm | ±1.20µm | 0.35µm |
| over 100 to 150 | ±0.40µm | 0.14µm | ±0.80µm | 0.20µm | ±1.60µm | 0.40µm |
| over 150 to 200 | ±0.50µm | 0.16µm | ±1.00µm | 0.25µm | ±2.00µm | 0.40µm |
| over 200 to 250 | ±0.60µm | 0.16µm | ±1.20µm | 0.25µm | ±2.40µm | 0.45µm |
| over 250 to 300 | ±0.70µm | 0.18µm | ±1.40µm | 0.25µm | ±2.80µm | 0.50µm |
| over 300 to 400 | ±0.90µm | 0.20µm | ±1.80µm | 0.30µm | ±3.60µm | 0.50µm |
| over 400 to 500 | ±1.10µm | 0.25µm | ±2.20µm | 0.35µm | ±4.40µm | 0.60µm |
| over 500 to 600 | ±1.30µm | 0.25µm | ±2.60µm | 0.40µm | ±5.00µm | 0.70µm |
| over 600 to 700 | ±1.50µm | 0.30µm | ±3.00µm | 0.45µm | ±6.00µm | 0.70µm |
| over 700 to 800 | ±1.70µm | 0.30µm | ±3.40µm | 0.50µm | ±6.50µm | 0.80µm |
| over 800 to 900 | ±1.90µm | 0.35µm | ±3.80µm | 0.50µm | ±7.50µm | 0.90µm |
| over 900 to 1000 | ±2.00µm | 0.40µm | ±4.20µm | 0.60µm | ±8.00µm | 1.00µm |

Grade and application

| Grade | Application |
|-------|--|
| 0 | To be used as basic standards in calibration laboratories by skilled inspection staff, to calibrate or set high accuracy measuring instruments, to calibrate gage blocks of grade 1 and 2. |
| 1 | To be used in inspection rooms, to check gages, inspect high accuracy parts and set measuring instruments. |
| 2 | To be used in workshops, to check production gages, set measuring instruments and mount tools. |

Inspection certificate

INSPECTION CERTIFICATE

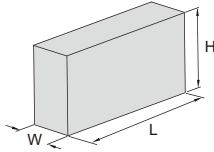
CODE: 4130-32
GRADE: 0

GAGE BLOCKS

| Nominal Size (mm) | Identification No. | Deviation (µm) | Nominal Size (mm) | Identification No. | Deviation (µm) | Nominal Size (mm) | Identification No. | Deviation (µm) |
|-------------------|--------------------|----------------|-------------------|--------------------|----------------|-------------------|--------------------|----------------|
| 1.005 | 119456 | +0.04 | 1.20 | 109950 | +0.08 | 4 | 119118 | +0.08 |
| 1.01 | 119496 | 0.00 | 1.30 | 091140 | +0.03 | 5 | 114033 | -0.02 |
| 1.02 | 101529 | +0.08 | 1.40 | 112170 | -0.02 | 6 | 111640 | +0.07 |
| 1.03 | 112855 | +0.08 | 1.5 | 116887 | -0.02 | 7 | 119970 | 0.00 |
| 1.04 | 112140 | 0.00 | 1.6 | 102449 | +0.05 | 8 | 119266 | +0.05 |
| 1.05 | 106748 | 0.00 | 1.7 | 114888 | +0.07 | 9 | 114547 | +0.02 |
| 1.06 | 113896 | -0.03 | 1.8 | 101023 | +0.02 | 10 | 111703 | +0.06 |
| 1.07 | 092953 | +0.03 | 1.9 | 111542 | +0.05 | 20 | 115536 | +0.02 |
| 1.08 | 111762 | 0.00 | 1 | 119273 | 0.00 | 30 | 101817 | +0.05 |
| 1.09 | 126008 | -0.02 | 2 | 114741 | +0.05 | 50 | 115454 | 0.00 |
| 1.10 | 110489 | +0.07 | 3 | 116518 | +0.05 | | | |

Set Serial No: 110019 Material: Steel Date: Jun 8th 2011
Standard: ISO3650 Standard reference temperature: 20°C Inspector:

CERAMIC GAGE BLOCK SETS



Dimension:

| Size (L) | W | H |
|-------------------------------|-----|------|
| $0.5 \leq L \leq 10\text{mm}$ | 9mm | 30mm |
| $L > 10\text{mm}$ | 9mm | 35mm |



4105-87

- Made of ceramic, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate

| Blocks per set | Gage blocks included in set | | | Code | |
|----------------|-----------------------------|-----------|----------|----------|-----------|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 |
| 112 | 1.0005 | | 1 | 4105-112 | 4105-1112 |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 0.5-24.5 | 0.5 | 49 | | |
| 103 | 25-100 | 25 | 4 | 4105-103 | 4105-1103 |
| | 1.005 | | 1 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 0.5-24.5 | 0.5 | 49 | | |
| 88 | 25-100 | 25 | 4 | 4105-88 | 4105-188 |
| | 1.0005 | | 1 | | |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| 87 | 0.5-9.5 | 0.5 | 19 | 4105-87 | 4105-187 |
| | 10-100 | 10 | 10 | | |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| 76 | 0.5-9.5 | 0.5 | 19 | 4105-76 | 4105-176 |
| | 10-40 | 10 | 4 | | |
| | 50-100 | 25 | 3 | | |
| | 1.005 | | 1 | | |
| 56 | 1.01-1.49 | 0.01 | 49 | 4105-56 | 4105-156 |
| | 0.5 | | 1 | | |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.09 | 0.01 | 9 | | |
| | 1.1-1.9 | 0.1 | 9 | | |
| | 1-24 | 1 | 24 | | |
| 25-100 | 25 | 4 | | | |

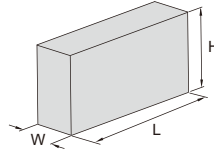
| Blocks per set | Gage blocks included in set | | | Code | |
|----------------|-----------------------------|-----------|----------|----------|-----------|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 |
| 47 | 1.005 | | 1 | 4105-47A | 4105-147A |
| | 1.01-1.09 | 0.01 | 9 | | |
| | 1.1-1.9 | 0.1 | 9 | | |
| | 1-24 | 1 | 24 | | |
| 47 | 25-100 | 25 | 4 | 4105-47 | 4105-147 |
| | 1.005 | | 1 | | |
| | 1.01-1.19 | 0.01 | 19 | | |
| | 1.2-1.9 | 0.1 | 8 | | |
| 46 | 1-9 | 1 | 9 | 4105-46 | 4105-146 |
| | 10-100 | 10 | 10 | | |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.09 | 0.01 | 9 | | |
| 34 | 1.1-1.9 | 0.1 | 9 | 4105-34 | 4105-134 |
| | 1-9 | 1 | 9 | | |
| | 10-100 | 10 | 10 | | |
| | 1.0005 | | 1 | | |
| 32 | 1.001-1.009 | 0.001 | 9 | 4105-32 | 4105-132 |
| | 1.01-1.09 | 0.01 | 9 | | |
| | 1.1-1.9 | 0.1 | 9 | | |
| | 1-9 | 1 | 9 | | |
| 8 | 10-30 | 10 | 3 | 4105-8 | 4105-18 |
| | 50 | | 1 | | |
| | 125-175 | 25 | 3 | | |
| 8 | 200-250 | 50 | 2 | 4105-8 | 4105-18 |
| | 300-500 | 100 | 3 | | |



INDIVIDUAL CERAMIC GAGE BLOCKS



4106-A80



Dimension:

| Size (L) | W | H |
|----------------|-----|------|
| 0.5 ≤ L ≤ 10mm | 9mm | 30mm |
| L > 10mm | 9mm | 35mm |

Code explanation:

4106-X□□□□□

- A for grade 0
- B for grade 1

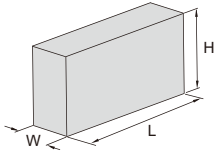
Code examples:

| Size (L) | Grade | Code |
|----------|-------|----------|
| 0.5mm | 0 | 4106-AD5 |
| 10mm | 1 | 4106-B10 |

- Made of ceramic, extremely wear resistance and corrosion resistance
- Meet ISO3650
- Supplied with manufacturer inspection certificate

| Size | Code | Size | Code | Size | Code | Size | Code |
|----------|--------------|--------|------------|--------|------------|---------|-------------|
| 0.5mm | 4106-XD5 | 1.23mm | 4106-X1D23 | 3mm | 4106-X3 | 17.6mm | 4106-X17D6 |
| 1mm | 4106-X1 | 1.24mm | 4106-X1D24 | 3.5mm | 4106-X3D5 | 18mm | 4106-X18 |
| 1.0005mm | 4106-X1D0005 | 1.25mm | 4106-X1D25 | 4mm | 4106-X4 | 18.5mm | 4106-X18D5 |
| 1.001mm | 4106-X1D001 | 1.26mm | 4106-X1D26 | 4.5mm | 4106-X4D5 | 19mm | 4106-X19 |
| 1.002mm | 4106-X1D002 | 1.27mm | 4106-X1D27 | 5mm | 4106-X5 | 19.5mm | 4106-X19D5 |
| 1.003mm | 4106-X1D003 | 1.28mm | 4106-X1D28 | 5.1mm | 4106-X5D1 | 20mm | 4106-X20 |
| 1.004mm | 4106-X1D004 | 1.29mm | 4106-X1D29 | 5.5mm | 4106-X5D5 | 20.2mm | 4106-X20D2 |
| 1.005mm | 4106-X1D005 | 1.3mm | 4106-X1D3 | 6mm | 4106-X6 | 20.5mm | 4106-X20D5 |
| 1.006mm | 4106-X1D006 | 1.31mm | 4106-X1D31 | 6.5mm | 4106-X6D5 | 21mm | 4106-X21 |
| 1.007mm | 4106-X1D007 | 1.32mm | 4106-X1D32 | 7mm | 4106-X7 | 21.5mm | 4106-X21D5 |
| 1.008mm | 4106-X1D008 | 1.33mm | 4106-X1D33 | 7.5mm | 4106-X7D5 | 22mm | 4106-X22 |
| 1.009mm | 4106-X1D009 | 1.34mm | 4106-X1D34 | 7.7mm | 4106-X7D7 | 22.5mm | 4106-X22D5 |
| 1.01mm | 4106-X1D01 | 1.35mm | 4106-X1D35 | 8mm | 4106-X8 | 22.8mm | 4106-X22D8 |
| 1.02mm | 4106-X1D02 | 1.36mm | 4106-X1D36 | 8.5mm | 4106-X8D5 | 23mm | 4106-X23 |
| 1.03mm | 4106-X1D03 | 1.37mm | 4106-X1D37 | 9mm | 4106-X9 | 23.5mm | 4106-X23D5 |
| 1.04mm | 4106-X1D04 | 1.38mm | 4106-X1D38 | 9.5mm | 4106-X9D5 | 24mm | 4106-X24 |
| 1.05mm | 4106-X1D05 | 1.39mm | 4106-X1D39 | 10mm | 4106-X10 | 24.5mm | 4106-X24D5 |
| 1.06mm | 4106-X1D06 | 1.4mm | 4106-X1D4 | 10.3mm | 4106-X10D3 | 25mm | 4106-X25 |
| 1.07mm | 4106-X1D07 | 1.41mm | 4106-X1D41 | 10.5mm | 4106-X10D5 | 30mm | 4106-X30 |
| 1.08mm | 4106-X1D08 | 1.42mm | 4106-X1D42 | 11mm | 4106-X11 | 40mm | 4106-X40 |
| 1.09mm | 4106-X1D09 | 1.43mm | 4106-X1D43 | 11.5mm | 4106-X11D5 | 41.3mm | 4106-X41D3 |
| 1.1mm | 4106-X1D1 | 1.44mm | 4106-X1D44 | 12mm | 4106-X12 | 50mm | 4106-X50 |
| 1.11mm | 4106-X1D11 | 1.45mm | 4106-X1D45 | 12.5mm | 4106-X12D5 | 60mm | 4106-X60 |
| 1.12mm | 4106-X1D12 | 1.46mm | 4106-X1D46 | 12.9mm | 4106-X12D9 | 70mm | 4106-X70 |
| 1.13mm | 4106-X1D13 | 1.47mm | 4106-X1D47 | 13mm | 4106-X13 | 75mm | 4106-X75 |
| 1.14mm | 4106-X1D14 | 1.48mm | 4106-X1D48 | 13.5mm | 4106-X13D5 | 80mm | 4106-X80 |
| 1.15mm | 4106-X1D15 | 1.49mm | 4106-X1D49 | 14mm | 4106-X14 | 90mm | 4106-X90 |
| 1.16mm | 4106-X1D16 | 1.5mm | 4106-X1D5 | 14.5mm | 4106-X14D5 | 100mm | 4106-X100 |
| 1.17mm | 4106-X1D17 | 1.6mm | 4106-X1D6 | 15mm | 4106-X15 | 125mm | 4106-X125 |
| 1.18mm | 4106-X1D18 | 1.7mm | 4106-X1D7 | 15.5mm | 4106-X15D5 | 131.4mm | 4106-X131D4 |
| 1.19mm | 4106-X1D19 | 1.8mm | 4106-X1D8 | 16mm | 4106-X16 | 150mm | 4106-X150 |
| 1.2mm | 4106-X1D2 | 1.9mm | 4106-X1D9 | 16.5mm | 4106-X16D5 | | |
| 1.21mm | 4106-X1D21 | 2mm | 4106-X2 | 17mm | 4106-X17 | | |
| 1.22mm | 4106-X1D22 | 2.5mm | 4106-X2D5 | 17.5mm | 4106-X17D5 | | |

STEEL GAGE BLOCK SETS



Dimension:

| Size (L) | W | H |
|-------------------------------|-----|------|
| $0.5 \leq L \leq 10\text{mm}$ | 9mm | 30mm |
| $L > 10\text{mm}$ | 9mm | 35mm |



4100-87

- Made of alloy steel
- Meet ISO3650
- Supplied with manufacturer inspection certificate

| Blocks per set | Gage blocks included in set | | | Code | | |
|----------------|-----------------------------|-----------|----------|-----------------|------------------|------------------|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 | Grade 2 |
| 122 | 1.0005 | | 1 | | | |
| | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.49 | 0.01 | 49 | | | |
| | 1.6-1.9 | 0.1 | 4 | 4100-122 | 4100-1122 | 4100-2122 |
| | 0.5-24.5 | 0.5 | 49 | | | |
| | 30-100 | 10 | 8 | | | |
| | 25-75 | 50 | 2 | | | |
| 112 | 1.0005 | | 1 | | | |
| | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.49 | 0.01 | 49 | 4100-112 | 4100-1112 | 4100-2112 |
| | 0.5-24.5 | 0.5 | 49 | | | |
| | 25-100 | 25 | 4 | | | |
| 103 | 1.005 | | 1 | | | |
| | 1.01-1.49 | 0.01 | 49 | 4100-103 | 4100-1103 | 4100-2103 |
| | 0.5-24.5 | 0.5 | 49 | | | |
| | 25-100 | 25 | 4 | | | |
| 88 | 1.0005 | | 1 | | | |
| | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.49 | 0.01 | 49 | 4100-88 | 4100-188 | 4100-288 |
| | 0.5-9.5 | 0.5 | 19 | | | |
| | 10-100 | 10 | 10 | | | |
| 87 | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.49 | 0.01 | 49 | 4100-87 | 4100-187 | 4100-287 |
| | 0.5-9.5 | 0.5 | 19 | | | |
| | 10-100 | 10 | 10 | | | |
| 83 | 0.5 | | 1 | | | |
| | 1 | | 1 | | | |
| | 1.005 | | 1 | | | |
| | 1.01-1.49 | 0.01 | 49 | 4100-83 | 4100-183 | 4100-283 |
| | 1.5-1.9 | 0.1 | 5 | | | |
| | 2-9.5 | 0.5 | 16 | | | |
| | 10-100 | 10 | 10 | | | |
| 76 | 1.005 | | 1 | | | |
| | 1.01-1.49 | 0.01 | 49 | | | |
| | 0.5-9.5 | 0.5 | 19 | 4100-76 | 4100-176 | 4100-276 |
| | 10-40 | 10 | 4 | | | |
| | 50-100 | 25 | 3 | | | |

| Blocks per set | Gage blocks included in set | | | Code | | |
|----------------|-----------------------------|-----------|----------|-----------------|------------------|------------------|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 | Grade 2 |
| 56 | 0.5 | | 1 | | | |
| | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.09 | 0.01 | 9 | | | |
| | 1.1-1.9 | 0.1 | 9 | 4100-56 | 4100-156 | 4100-256 |
| | 1-24 | 1 | 24 | | | |
| | 25-100 | 25 | 4 | | | |
| | 1.005 | | 1 | | | |
| 47 | 1.01-1.09 | 0.01 | 9 | | | |
| | 1.1-1.9 | 0.1 | 9 | 4100-47A | 4100-147A | 4100-247A |
| | 1-24 | 1 | 24 | | | |
| | 25-100 | 25 | 4 | | | |
| 47 | 1.005 | | 1 | | | |
| | 1.01-1.19 | 0.01 | 19 | | | |
| | 1.2-1.9 | 0.1 | 8 | 4100-47 | 4100-147 | 4100-247 |
| | 1-9 | 1 | 9 | | | |
| | 10-100 | 10 | 10 | | | |
| 46 | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.09 | 0.01 | 9 | | | |
| | 1.1-1.9 | 0.1 | 9 | 4100-46 | 4100-146 | 4100-246 |
| | 1-9 | 1 | 9 | | | |
| | 10-100 | 10 | 10 | | | |
| 34 | 1.0005 | | 1 | | | |
| | 1.001-1.009 | 0.001 | 9 | | | |
| | 1.01-1.09 | 0.01 | 9 | | | |
| | 1.1-1.9 | 0.1 | 9 | 4100-34 | 4100-134 | 4100-234 |
| | 1-5 | 1 | 5 | | | |
| 32 | 10 | | 1 | | | |
| | 1.005 | | 1 | | | |
| | 1.01-1.09 | 0.01 | 9 | | | |
| | 1.1-1.9 | 0.1 | 9 | | | |
| | 1-9 | 1 | 9 | 4100-32 | 4100-132 | 4100-232 |
| | 10-30 | 10 | 3 | | | |
| | 50 | | 1 | | | |
| 9 | 1.001-1.009 | 0.001 | 9 | 4100-9 | 4100-19 | 4100-29 |
| | 0.991-0.999 | 0.001 | 9 | 4100-9A | 4100-19A | 4100-29A |
| 8 | 125-175 | 25 | 3 | | | |
| | 200-250 | 50 | 2 | 4100-8 | 4100-18 | 4100-28 |
| | 300-500 | 100 | 3 | | | |

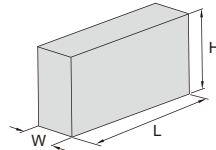
CUSTOM-MADE

CAN SUPPLY ANY SIZES FROM 0.5 TO 1000MM, SUCH AS 72.672MM
 SIZE<100MM: MOQ 6PCS PER SIZE
 SIZE>100MM: MOQ 3PCS PER SIZE

INDIVIDUAL STEEL GAGE BLOCKS



4101-A70

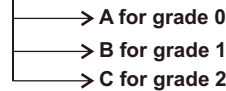


Dimension:

| Size (L) | W | H |
|----------------|-----|------|
| 0.5 ≤ L ≤ 10mm | 9mm | 30mm |
| L > 10mm | 9mm | 35mm |

Code explanation:

4101-X□□□□□



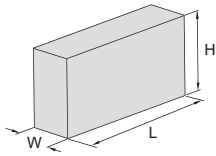
Code examples:

| Size (L) | Grade | Code |
|----------|-------|------------|
| 0.5mm | 0 | 4101-AD5 |
| 1mm | 1 | 4101-B1 |
| 10.5mm | 2 | 4101-C10D5 |

- Made of alloy steel
- Meet ISO3650
- Supplied with manufacturer inspection certificate

| Size | Code | Size | Code | Size | Code | Size | Code |
|----------|--------------|--------|------------|--------|------------|---------|-------------|
| 0.5mm | 4101-XD5 | 1.19mm | 4101-X1D19 | 3.5mm | 4101-X3D5 | 20.2mm | 4101-X20D2 |
| 0.991mm | 4101-XD991 | 1.2mm | 4101-X1D2 | 4mm | 4101-X4 | 20.5mm | 4101-X20D5 |
| 0.992mm | 4101-XD992 | 1.21mm | 4101-X1D21 | 4.5mm | 4101-X4D5 | 21mm | 4101-X21 |
| 0.993mm | 4101-XD993 | 1.22mm | 4101-X1D22 | 5mm | 4101-X5 | 21.5mm | 4101-X21D5 |
| 0.994mm | 4101-XD994 | 1.23mm | 4101-X1D23 | 5.1mm | 4101-X5D1 | 22mm | 4101-X22 |
| 0.995mm | 4101-XD995 | 1.24mm | 4101-X1D24 | 5.5mm | 4101-X5D5 | 22.5mm | 4101-X22D5 |
| 0.996mm | 4101-XD996 | 1.25mm | 4101-X1D25 | 6mm | 4101-X6 | 22.8mm | 4101-X22D8 |
| 0.997mm | 4101-XD997 | 1.26mm | 4101-X1D26 | 6.5mm | 4101-X6D5 | 23mm | 4101-X23 |
| 0.998mm | 4101-XD998 | 1.27mm | 4101-X1D27 | 7mm | 4101-X7 | 23.5mm | 4101-X23D5 |
| 0.999mm | 4101-XD999 | 1.28mm | 4101-X1D28 | 7.5mm | 4101-X7D5 | 24mm | 4101-X24 |
| 1mm | 4101-X1 | 1.29mm | 4101-X1D29 | 7.7mm | 4101-X7D7 | 24.5mm | 4101-X24D5 |
| 1.0005mm | 4101-X1D0005 | 1.3mm | 4101-X1D3 | 8mm | 4101-X8 | 25mm | 4101-X25 |
| 1.001mm | 4101-X1D001 | 1.31mm | 4101-X1D31 | 8.5mm | 4101-X8D5 | 30mm | 4101-X30 |
| 1.002mm | 4101-X1D002 | 1.32mm | 4101-X1D32 | 9mm | 4101-X9 | 35mm | 4101-X35 |
| 1.003mm | 4101-X1D003 | 1.33mm | 4101-X1D33 | 9.5mm | 4101-X9D5 | 40mm | 4101-X40 |
| 1.004mm | 4101-X1D004 | 1.34mm | 4101-X1D34 | 10mm | 4101-X10 | 41.3mm | 4101-X41D3 |
| 1.005mm | 4101-X1D005 | 1.35mm | 4101-X1D35 | 10.3mm | 4101-X10D3 | 45mm | 4101-X45 |
| 1.006mm | 4101-X1D006 | 1.36mm | 4101-X1D36 | 10.5mm | 4101-X10D5 | 50mm | 4101-X50 |
| 1.007mm | 4101-X1D007 | 1.37mm | 4101-X1D37 | 11mm | 4101-X11 | 60mm | 4101-X60 |
| 1.008mm | 4101-X1D008 | 1.38mm | 4101-X1D38 | 11.5mm | 4101-X11D5 | 70mm | 4101-X70 |
| 1.009mm | 4101-X1D009 | 1.39mm | 4101-X1D39 | 12mm | 4101-X12 | 75mm | 4101-X75 |
| 1.01mm | 4101-X1D01 | 1.4mm | 4101-X1D4 | 12.5mm | 4101-X12D5 | 80mm | 4101-X80 |
| 1.02mm | 4101-X1D02 | 1.41mm | 4101-X1D41 | 12.9mm | 4101-X12D9 | 90mm | 4101-X90 |
| 1.03mm | 4101-X1D03 | 1.42mm | 4101-X1D42 | 13mm | 4101-X13 | 100mm | 4101-X100 |
| 1.04mm | 4101-X1D04 | 1.43mm | 4101-X1D43 | 13.5mm | 4101-X13D5 | 125mm | 4101-X125 |
| 1.05mm | 4101-X1D05 | 1.44mm | 4101-X1D44 | 14mm | 4101-X14 | 131.4mm | 4101-X131D4 |
| 1.06mm | 4101-X1D06 | 1.45mm | 4101-X1D45 | 14.5mm | 4101-X14D5 | 150mm | 4101-X150 |
| 1.07mm | 4101-X1D07 | 1.46mm | 4101-X1D46 | 15mm | 4101-X15 | 175mm | 4101-X175 |
| 1.08mm | 4101-X1D08 | 1.47mm | 4101-X1D47 | 15.5mm | 4101-X15D5 | 200mm | 4101-X200 |
| 1.09mm | 4101-X1D09 | 1.48mm | 4101-X1D48 | 16mm | 4101-X16 | 250mm | 4101-X250 |
| 1.1mm | 4101-X1D1 | 1.49mm | 4101-X1D49 | 16.5mm | 4101-X16D5 | 300mm | 4101-X300 |
| 1.11mm | 4101-X1D11 | 1.5mm | 4101-X1D5 | 17mm | 4101-X17 | 400mm | 4101-X400 |
| 1.12mm | 4101-X1D12 | 1.6mm | 4101-X1D6 | 17.5mm | 4101-X17D5 | 500mm | 4101-X500 |
| 1.13mm | 4101-X1D13 | 1.7mm | 4101-X1D7 | 17.6mm | 4101-X17D6 | 600mm | 4101-X600 |
| 1.14mm | 4101-X1D14 | 1.8mm | 4101-X1D8 | 18mm | 4101-X18 | 700mm | 4101-X700 |
| 1.15mm | 4101-X1D15 | 1.9mm | 4101-X1D9 | 18.5mm | 4101-X18D5 | 750mm | 4101-X750 |
| 1.16mm | 4101-X1D16 | 2mm | 4101-X2 | 19mm | 4101-X19 | 800mm | 4101-X800 |
| 1.17mm | 4101-X1D17 | 2.5mm | 4101-X2D5 | 19.5mm | 4101-X19D5 | 900mm | 4101-X900 |
| 1.18mm | 4101-X1D18 | 3mm | 4101-X3 | 20mm | 4101-X20 | 1000mm | 4101-X1000 |

CARBIDE GAGE BLOCK SETS



Dimension:

| Size (L) | W | H |
|-------------------------------|-----|------|
| $0.5 \leq L \leq 10\text{mm}$ | 9mm | 30mm |
| $L > 10\text{mm}$ | 9mm | 35mm |

- Made of carbide, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate



4164-32

| Blocks per set | Gage blocks included in set | | | Code | |
|----------------|-----------------------------|-----------|----------|----------|-----------|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 |
| 122 | 1.0005 | | 1 | 4164-122 | 4164-1122 |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 1.6-1.9 | 0.1 | 4 | | |
| | 0.5-24.5 | 0.5 | 49 | | |
| | 30-100 | 10 | 8 | | |
| | 25-75 | 50 | 2 | | |
| 112 | 1.0005 | | 1 | 4164-112 | 4164-1112 |
| | 1.001-1.009 | 0.001 | 9 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 0.5-24.5 | 0.5 | 49 | | |
| | 25-100 | 25 | 4 | | |
| 103 | 1.005 | | 1 | 4164-103 | 4164-1103 |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 0.5-24.5 | 0.5 | 49 | | |
| | 25-100 | 25 | 4 | | |
| 87 | 1.001-1.009 | 0.001 | 9 | 4164-87 | 4164-187 |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 0.5-9.5 | 0.5 | 19 | | |
| | 10-100 | 10 | 10 | | |
| 83 | 0.5 | | 1 | 4164-83 | 4164-183 |
| | 1 | | 1 | | |
| | 1.005 | | 1 | | |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 1.5-1.9 | 0.1 | 5 | | |
| | 2-9.5 | 0.5 | 16 | | |
| | 10-100 | 10 | 10 | | |

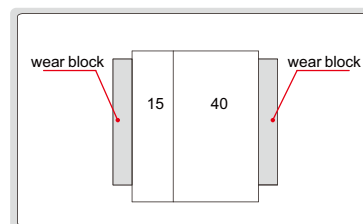
| Blocks per set | Gage blocks included in set | | | Code | |
|----------------|-----------------------------|-----------|----------|----------|-----------|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 |
| 76 | 1.005 | | 1 | 4164-76 | 4164-176 |
| | 1.01-1.49 | 0.01 | 49 | | |
| | 0.5-9.5 | 0.5 | 19 | | |
| | 10-40 | 10 | 4 | | |
| | 50-100 | 25 | 3 | | |
| 47 | 1.005 | | 1 | 4164-47A | 4164-147A |
| | 1.01-1.09 | 0.01 | 9 | | |
| | 1.1-1.9 | 0.1 | 9 | | |
| | 1-24 | 1 | 24 | | |
| 47 | 1.005 | | 1 | 4164-47 | 4164-147 |
| | 1.01-1.19 | 0.01 | 19 | | |
| | 1.2-1.9 | 0.1 | 8 | | |
| | 1-9 | 1 | 9 | | |
| | 10-100 | 10 | 10 | | |
| 46 | 1.001-1.009 | 0.001 | 9 | 4164-46 | 4164-146 |
| | 1.01-1.09 | 0.01 | 9 | | |
| | 1.1-1.9 | 0.1 | 9 | | |
| | 1-9 | 1 | 9 | | |
| | 10-100 | 10 | 10 | | |
| 32 | 1.005 | | 1 | 4164-32 | 4164-132 |
| | 1.01-1.09 | 0.01 | 9 | | |
| | 1.1-1.9 | 0.1 | 9 | | |
| | 1-9 | 1 | 9 | | |
| | 10-30 | 10 | 3 | | |
| | 50 | | 1 | | |

WEAR BLOCK SETS



- Protect the measuring surfaces of gage blocks from excessive wear
- Meet ISO3650
- Supplied with manufacturer inspection certificate

| Blocks per set | Size | Material | Code | |
|----------------|-------|-------------|---------|----------|
| | | | Grade 0 | Grade 1 |
| 2 | 1.0mm | ceramic | 4111-1 | 4111-11 |
| 2 | 1.0mm | alloy steel | 4111-1A | 4111-11A |
| 2 | 2.0mm | ceramic | 4111-2 | 4111-12 |
| 2 | 2.0mm | alloy steel | 4111-2A | 4111-12A |



4111-2



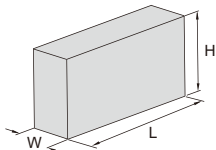
MICROMETER INSPECTION GAGE BLOCK SETS



4107-10

- One piece of optical flat is included in 4107-10, 4107-101
- Meet ISO3650/grade 0
- Supplied with manufacturer inspection certificate

| Code | Material | Gage blocks included in set | Applicable micrometer | Optical flat |
|----------|-------------|---|-----------------------|--------------|
| 4107-10 | ceramic | 2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm, optical flat | 0-25mm | included |
| 4107-101 | alloy steel | 2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm, optical flat | 0-25mm | included |
| 4107-112 | alloy steel | 25mm, 27.5mm, 30.1mm, 32.7mm, 35.3mm, 37.9mm, 40mm, 42.6mm, 45.2mm, 47.8mm, 50mm | 25-50mm | not included |
| 4107-113 | alloy steel | 50mm, 52.5mm, 55.1mm, 57.7mm, 60.3mm, 62.9mm, 65mm, 67.6mm, 70.2mm, 72.8mm, 75mm | 50-75mm | not included |
| 4107-114 | alloy steel | 75mm, 77.5mm, 80.1mm, 82.7mm, 85.3mm, 87.9mm, 90mm, 92.6mm, 95.2mm, 97.8mm, 100mm | 75-100mm | not included |



Dimension:

| Size (L) | W | H |
|-------------------------------|-----|------|
| $0.5 \leq L \leq 10\text{mm}$ | 9mm | 30mm |
| $L > 10\text{mm}$ | 9mm | 35mm |

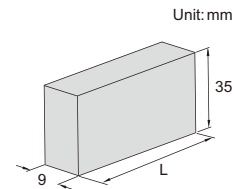


CALIPER INSPECTION GAGE BLOCK SET



4108-3005

- Meet ISO3650/grade 2
- Supplied with manufacturer inspection certificate



(mm)

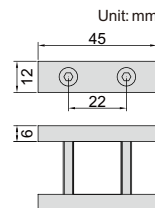
| Code | Material | Blocks per set | Gage blocks included in set (L) | Applicable calipers |
|-----------|-------------|----------------|---------------------------------|---------------------|
| 4108-3005 | alloy steel | 5 | 30, 41.3, 131.4, 243.5, 281.2 | 0-150, 0-200, 0-300 |

- Made of aluminum
- To be used with individual steel gage block (code 4101) as Go and No-Go gage

| Code | Applicable gage block size |
|--------|----------------------------|
| 6883-1 | 1.5-5mm |
| 6883-2 | 5-10mm |
| 6883-3 | 10-15mm |
| 6883-4 | 15-20mm |
| 6883-5 | 20-25mm |



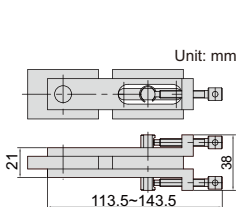
6883-4



To be used as Go and No-Go gage



GAGE BLOCK HOLDERS



Code
6886-1



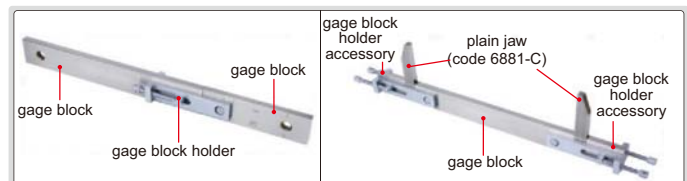
6886-1



GAGE BLOCK HOLDER

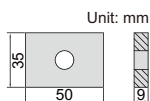
- For gage blocks over 100mm with clamping holes
- Optional accessory: gage block holder accessory, gage block accessory (code 6881)

application

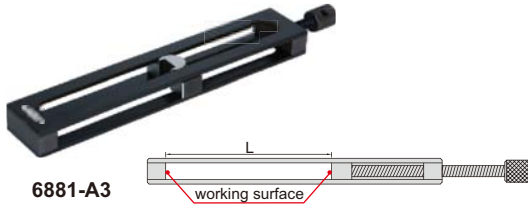


GAGE BLOCK HOLDER ACCESSORY

Code
6886-A



6886-A



6881-A3

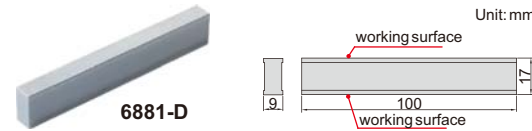
| Code | Name | Clamping range * (L) |
|-----------|--------|----------------------|
| 6881-A1 | holder | 0-25mm |
| 6881-A2 | holder | 25-50mm |
| 6881-A3 | holder | 50-100mm |
| 6881-A4 | holder | 100-200mm |
| 6881-A5 | holder | 200-300mm |
| 6881-A6** | holder | 300-500mm |

* The actual clamping range should deduct the width of jaws
 ** Not suitable for base 6881-B



6881-F

| Code | Name | Remark |
|--------|---------|-----------------|
| 6881-F | scraper | made of carbide |



6881-D

| Code | Name | Remark |
|--------|--------------|-----------------|
| 6881-D | parallel jaw | made of carbide |



6881-S17

GAGE BLOCK ACCESSORY SET

| Code | Mark |
|----------|-----------------------------------|
| 6881-S17 | 17pcs (including the below items) |

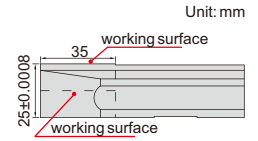
| | |
|--------------------------------------|--------|
| holder, 0-25mm (code 6881-A1) | 1pc |
| holder, 25-50mm (code 6881-A2) | 1pc |
| holder, 50-100mm (code 6881-A3) | 1pc |
| holder, 100-200mm (code 6881-A4) | 1pc |
| holder, 200-300mm (code 6881-A5) | 1pc |
| base (code 6881-B) | 1pc |
| plain jaw (code 6881-C) | 1 pair |
| parallel jaw (code 6881-D) | 1pc |
| half round jaw, 2.5mm (code 6881-E1) | 1 pair |
| half round jaw, 5.0mm (code 6881-E2) | 1 pair |
| half round jaw, 6.0mm (code 6881-E3) | 1 pair |
| scraper (code 6881-F) | 1pc |
| centre point (code 6881-G) | 1pc |

GAGE BLOCK ACCESSORIES

| Code | Name |
|--------|------|
| 6881-B | base |



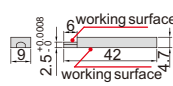
6881-B



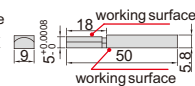
Unit: mm



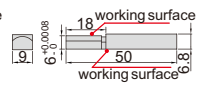
6881-E2



6881-E1



6881-E2



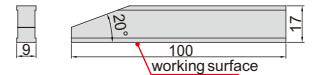
6881-E3

Unit: mm

| Code | Name | Size | Remark |
|---------|----------------|-------|-----------------------------------|
| 6881-E1 | half round jaw | 2.5mm | made of carbide, supplied in pair |
| 6881-E2 | half round jaw | 5.0mm | made of carbide, supplied in pair |
| 6881-E3 | half round jaw | 6.0mm | made of carbide, supplied in pair |



6881-C

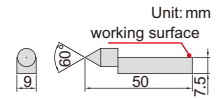


Unit: mm

| Code | Name | Remark |
|--------|-----------|-----------------------------------|
| 6881-C | plain jaw | made of carbide, supplied in pair |



6881-G

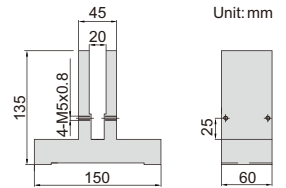


Unit: mm

| Code | Name | Remark |
|--------|--------------|----------------------------|
| 6881-G | centre point | the tip is made of carbide |



6881-H



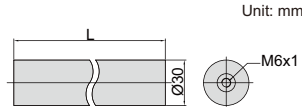
Unit: mm

| Code | Name | Remark |
|--------|-----------------|------------------|
| 6881-H | base for holder | supplied in pair |

application

**CUSTOM-MADE
CAN SUPPLY ANY LENGTH, SUCH AS 80.672MM**

CYLINDER GAGE BLOCKS



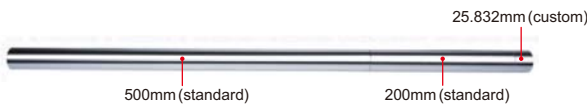
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Meet ISO3650 grade 1
- Can be connected with M6x1 screw and combined to any sizes up to 4m

| Code | Length (L) |
|-----------|------------|
| 4001-25* | 25mm |
| 4001-50* | 50mm |
| 4001-75* | 75mm |
| 4001-100* | 100mm |
| 4001-200* | 200mm |
| 4001-300* | 300mm |
| 4001-400* | 400mm |
| 4001-500* | 500mm |

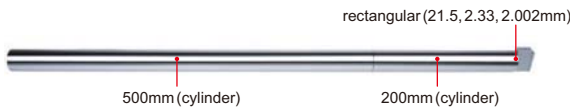
* Supplied with manufacturer inspection certificate

can be combined to any sizes up to 4m

Combination 1: combined by several standard size cylinder gage blocks and one custom size cylinder gage block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



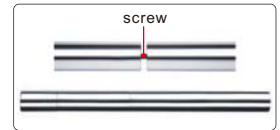
Combination 2: combined by standard size cylinder gage blocks and rectangular gage blocks
For example: 500 (cylinder) + 200 (cylinder) + 21.5 (rectangular) + 2.33 (rectangular) + 2.002 (rectangular)=725.832mm



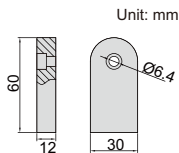
high stability in vertical position, suitable for checking height gages



connected with M6x1 screw



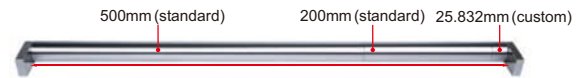
INTERNAL BLOCKS



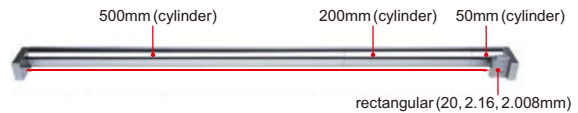
- Can be attached to cylinder and rectangular gage blocks
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Supplied in a matched pair

| Code | Size | Flatness |
|--------|------|----------|
| 4001-A | 12mm | 0.2µm |

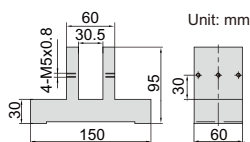
Combination 1: combined by several standard size cylinder gage blocks and one custom size cylinder gage block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



Combination 2: combined by standard size cylinder gage blocks and rectangular gage blocks
For example: 500 (cylinder) + 200 (cylinder) + 50 (rectangular) - 20 (rectangular) - 2.16 (rectangular) - 2.008 (rectangular)=725.832mm

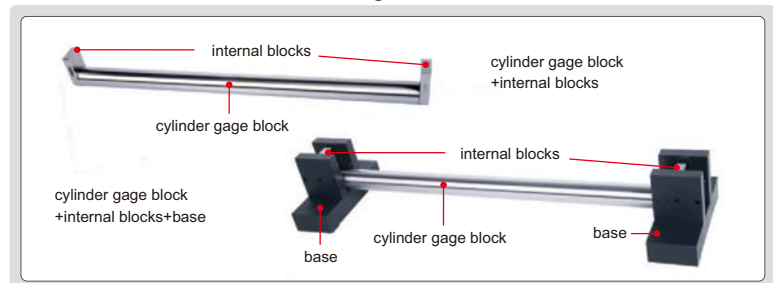


BASE



| Code | Remark |
|--------|------------------|
| 4001-B | supplied in pair |

working with base

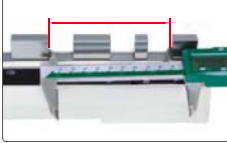


CALIPER/HEIGHT GAGE CHECKERS

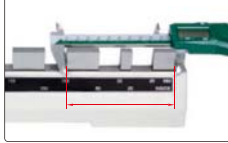


- To check calipers and height gages
- Constructed with steel gage blocks

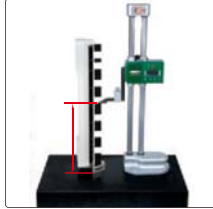
check upper jaws of caliper



check lower jaws of caliper



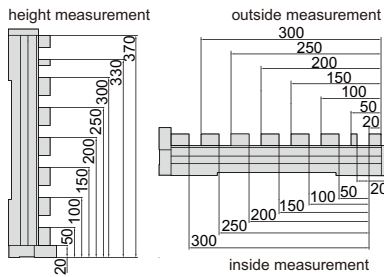
check height gage



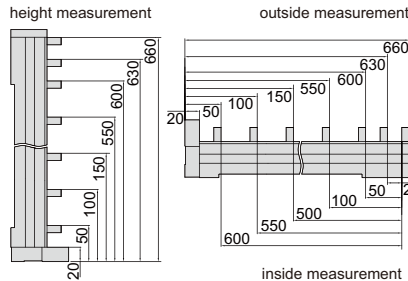
horizontal

6884-300

vertical

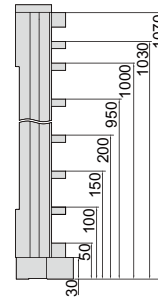


6884-300

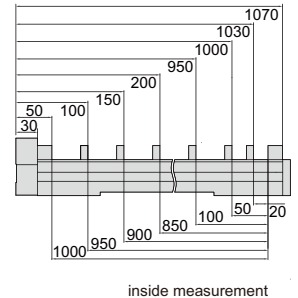


6884-600

height measurement



outside measurement



6884-1000

Unit: mm

| Code | Size | Range of inside measurement | Range of outside measurement | Range of height measurement | Accuracy |
|------------|----------|--|--|--|----------|
| 6884-300* | 0-300mm | 20,50,100,150,200,250,300 | 20, 50, 100, 150, 200, 250, 300 | 20,50,100,150,200,250,300,330,370 | ±5μm |
| 6884-600* | 0-600mm | 20,50,100,150,200,250,300,350,400,450,500,550,600 | 20,50,100,150,200,250,300,350,400,450,500,550,600,630,660 | 20,50,100,150,200,250,300,350,400,450,500,550,600,630,660 | ±7μm |
| 6884-1000* | 0-1000mm | 20,50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950,1000 | 30,50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950,1000,1030,1070 | 30,50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950,1000,1030,1070 | ±7μm |

(mm)

* Supplied with manufacturer inspection certificate

INSIDE MICROMETER ACCESSORIES



6884-A3

- Supplied with a pair of 5mm carbide gage blocks, ISO3650 grade 0

| Code | Applicable caliper/height gage checker |
|-----------|--|
| 6884-A3* | 0-300mm |
| 6884-A6* | 0-600mm |
| 6884-A10* | 0-1000mm |

* Supplied with manufacturer inspection certificate

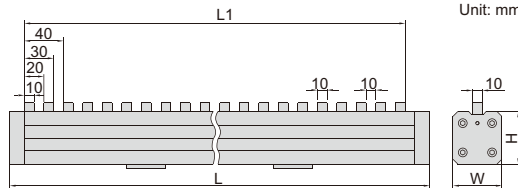
set inside micrometer



CHECK MASTERS



- To check the accuracy of table movement of machine tools, to calibrate height gages and CMMs
- Ceramic gage blocks
- Can be used in either vertical and horizontal orientation
- Supplied with manufacturer inspection certificate



(mm)

| Code | Range | Step | Accuracy | Parallelism of blocks | L | L1 | H | W |
|-----------|-------|------|----------|-----------------------|-----|-----|----|----|
| 6882-300A | 300mm | 10mm | ±2.5μm | 1.2μm | 350 | 310 | 49 | 45 |
| 6882-450A | 450mm | 10mm | ±3.5μm | 1.5μm | 510 | 470 | 54 | 50 |
| 6882-600A | 600mm | 10mm | ±3.5μm | 1.5μm | 650 | 610 | 54 | 50 |



6882-600A



horizontal orientation



vertical orientation

ANGLE GAGE BLOCK SETS



4109-7A

- Standard for angle measurement
- Accuracy $\pm 10''$

| Code | Blocks per set | Angle | Step | Quantity |
|----------|----------------|-----------------------------|------|----------|
| 4109-7A | 7 | 15°10' | | 1 |
| | | 30°20' | | 1 |
| | | 45°30' | | 1 |
| | | 50° | | 1 |
| | | 60°40' | | 1 |
| | | 75°50' | | 1 |
| | | 90°/90°/90°/90° | | 1 |
| 4109-36A | 36 | 10°-20° | 1° | 11 |
| | | 30°-70° | 10° | 5 |
| | | 45° | | 1 |
| | | 15°10'-15°50' | 10' | 5 |
| | | 15°1'-15°9' | 1' | 9 |
| | | 10°00'30" | | 1 |
| | | 80°/81°/100°/99° | | 1 |
| | | 89°10'/89°20'/90°50'/90°40' | | 1 |
| | | 89°30'/89°40'/90°30'/90°20' | | 1 |
| | | 90°/90°/90°/90° | | 1 |

ANGLE GAGE BLOCKS



4002-15



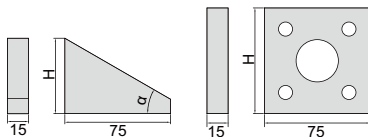
Individual

| Code | Angle (α) | H (mm) |
|------------|--------------------|--------|
| 4002-A1 * | 1° | 11.5 |
| 4002-A3 * | 3° | 14.0 |
| 4002-A5 * | 5° | 16.5 |
| 4002-A9 * | 9° | 22.0 |
| 4002-A15 * | 15° | 30.5 |
| 4002-A27 * | 27° | 48.0 |
| 4002-A30 * | 30° | 53.5 |
| 4002-A41 * | 41° | 75.0 |
| 4002-A45 * | 45° | 84.0 |
| 4002-B1 * | 1' | 10.0 |
| 4002-B3 * | 3' | 10.0 |
| 4002-B5 * | 5' | 10.0 |
| 4002-B9 * | 9' | 10.0 |
| 4002-B20 * | 20' | 10.0 |
| 4002-B27 * | 27' | 10.0 |
| 4002-B30 * | 30' | 10.0 |
| 4002-C6 * | 6" | 10.0 |
| 4002-C12 * | 12" | 10.0 |
| 4002-C18 * | 18" | 10.0 |
| 4002-C30 * | 30" | 10.0 |
| 4002-D * | 90°/90°/90°/90° | 75.0 |

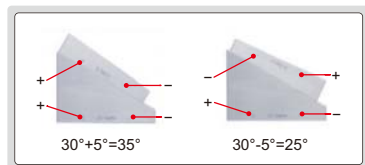
set angle of plate



Unit: mm



combination



inspect angle



- Accuracy: $\pm 2''$
- To inspect protractor, taper gage, index plate, index head and goniometer, can also be used to set angle
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Can be combined to any angle with interval 6 seconds after combination (6", 12", 18", ... , 360°)

Set

| Code | Angle (α) | Total Quantity |
|-----------|--|----------------|
| 4002-13 * | 1°, 3°, 9°, 27°, 41°, 1', 3', 9', 27', 6", 18", 30", 90°/90°/90°/90° | 13 |
| 4002-15 * | 1°, 3°, 5°, 15°, 30°, 45°, 1', 3', 5', 20', 30', 6", 12", 30", 90°/90°/90°/90° | 15 |

* Supplied with manufacturer inspection certificate

PIN GAGE SETS

- Meet DIN2267, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: $\pm 1\mu\text{m}$



4166-6D

| Code | Diameter $\varnothing d$ (mm) | Step | Pin gages per set |
|----------|-------------------------------|--------|-------------------|
| 4166-2S | 1.00, 1.01, 1.02, ..., 2.00 | 0.01mm | 101 |
| 4166-3S | 2.00, 2.01, 2.02, ..., 3.00 | 0.01mm | 101 |
| 4166-4S | 3.00, 3.01, 3.02, ..., 4.00 | 0.01mm | 101 |
| 4166-5S | 4.00, 4.01, 4.02, ..., 5.00 | 0.01mm | 101 |
| 4166-6S | 5.00, 5.01, 5.02, ..., 6.00 | 0.01mm | 101 |
| 4166-7S | 6.00, 6.01, 6.02, ..., 7.00 | 0.01mm | 101 |
| 4166-8S | 7.00, 7.01, 7.02, ..., 8.00 | 0.01mm | 101 |
| 4166-9S | 8.00, 8.01, 8.02, ..., 9.00 | 0.01mm | 101 |
| 4166-10S | 9.00, 9.01, 9.02, ..., 10.00 | 0.01mm | 101 |

| Code | Diameter $\varnothing d$ (mm) | Step | Pin gages per set |
|----------|-------------------------------|-------|-------------------|
| 4166-411 | 1.0, 1.1, 1.2, ..., 5.0 | 0.1mm | 41 |
| 4166-511 | 5.0, 5.1, 5.2, ..., 10.0 | 0.1mm | 51 |
| 4166-512 | 10.0, 10.1, 10.2, ..., 15.0 | 0.1mm | 51 |
| 4166-513 | 15.0, 15.1, 15.2, ..., 20.0 | 0.1mm | 51 |

| Code | Diameter $\varnothing d$ (mm) | Step | Pin gages per set |
|---------|-------------------------------|--------|-------------------|
| 4166-0D | 0.20, 0.21, 0.22, ..., 0.50 | 0.01mm | 31 |
| 4166-1 | 0.50, 0.51, 0.52, ..., 1.00 | 0.01mm | 51 |
| 4166-1D | 1.00, 1.01, 1.02, ..., 1.50 | 0.01mm | 51 |
| 4166-2 | 1.50, 1.51, 1.52, ..., 2.00 | 0.01mm | 51 |
| 4166-2D | 2.00, 2.01, 2.02, ..., 2.50 | 0.01mm | 51 |
| 4166-3 | 2.50, 2.51, 2.52, ..., 3.00 | 0.01mm | 51 |
| 4166-3D | 3.00, 3.01, 3.02, ..., 3.50 | 0.01mm | 51 |
| 4166-4 | 3.50, 3.51, 3.52, ..., 4.00 | 0.01mm | 51 |
| 4166-4D | 4.00, 4.01, 4.02, ..., 4.50 | 0.01mm | 51 |
| 4166-5 | 4.50, 4.51, 4.52, ..., 5.00 | 0.01mm | 51 |
| 4166-5D | 5.00, 5.01, 5.02, ..., 5.50 | 0.01mm | 51 |
| 4166-6 | 5.50, 5.51, 5.52, ..., 6.00 | 0.01mm | 51 |
| 4166-6D | 6.00, 6.01, 6.02, ..., 6.50 | 0.01mm | 51 |
| 4166-7 | 6.50, 6.51, 6.52, ..., 7.00 | 0.01mm | 51 |
| 4166-7D | 7.00, 7.01, 7.02, ..., 7.50 | 0.01mm | 51 |
| 4166-8 | 7.50, 7.51, 7.52, ..., 8.00 | 0.01mm | 51 |
| 4166-8D | 8.00, 8.01, 8.02, ..., 8.50 | 0.01mm | 51 |
| 4166-9 | 8.50, 8.51, 8.52, ..., 9.00 | 0.01mm | 51 |
| 4166-9D | 9.00, 9.01, 9.02, ..., 9.50 | 0.01mm | 51 |
| 4166-10 | 9.50, 9.51, 9.52, ..., 10.00 | 0.01mm | 51 |

| Code | Diameter $\varnothing d$ (mm) | Step | Pin gages per set |
|----------|---------------------------------|--------|-------------------|
| 4166-10D | 10.00, 10.01, 10.02, ..., 10.50 | 0.01mm | 51 |
| 4166-11 | 10.50, 10.51, 10.52, ..., 11.00 | 0.01mm | 51 |
| 4166-11D | 11.00, 11.01, 11.02, ..., 11.50 | 0.01mm | 51 |
| 4166-12 | 11.50, 11.51, 11.52, ..., 12.00 | 0.01mm | 51 |
| 4166-12D | 12.00, 12.01, 12.02, ..., 12.50 | 0.01mm | 51 |
| 4166-13 | 12.50, 12.51, 12.52, ..., 13.00 | 0.01mm | 51 |
| 4166-13D | 13.00, 13.01, 13.02, ..., 13.50 | 0.01mm | 51 |
| 4166-14 | 13.50, 13.51, 13.52, ..., 14.00 | 0.01mm | 51 |
| 4166-14D | 14.00, 14.01, 14.02, ..., 14.50 | 0.01mm | 51 |
| 4166-15 | 14.50, 14.51, 14.52, ..., 15.00 | 0.01mm | 51 |
| 4166-15D | 15.00, 15.01, 15.02, ..., 15.50 | 0.01mm | 51 |
| 4166-16 | 15.50, 15.51, 15.52, ..., 16.00 | 0.01mm | 51 |
| 4166-16D | 16.00, 16.01, 16.02, ..., 16.50 | 0.01mm | 51 |
| 4166-17 | 16.50, 16.51, 16.52, ..., 17.00 | 0.01mm | 51 |
| 4166-17D | 17.00, 17.01, 17.02, ..., 17.50 | 0.01mm | 51 |
| 4166-18 | 17.50, 17.51, 17.52, ..., 18.00 | 0.01mm | 51 |
| 4166-18D | 18.00, 18.01, 18.02, ..., 18.50 | 0.01mm | 51 |
| 4166-19 | 18.50, 18.51, 18.52, ..., 19.00 | 0.01mm | 51 |
| 4166-19D | 19.00, 19.01, 19.02, ..., 19.50 | 0.01mm | 51 |
| 4166-20 | 19.50, 19.51, 19.52, ..., 20.00 | 0.01mm | 51 |

Unit: mm



CAN SUPPLY PIN GAGE
LENGTH FROM 10 TO 150mm



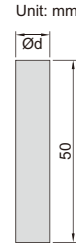
CUSTOM-MADE PIN GAGES

- Meet DIN2267, grade 1
- Custom-made pin gages, diameter range $\varnothing 0.200\sim\varnothing 30.000\text{mm}$ with three decimal, for example 0.211mm, 5.562mm, 16.298mm
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box

Ordering examples:

| Diameter | Code |
|----------|-------------|
| 0.211mm | 4118-0D211 |
| 5.562mm | 4118-5D562 |
| 16.298mm | 4118-16D298 |

Note: "D" stands for "."



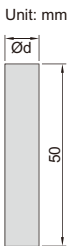
4118-8D015

| Code | Diameter range $\varnothing d$ (mm) |
|-------------|-------------------------------------|
| 4118-xxxx * | 0.200~30.000 |

* Supplied with manufacturer inspection certificate

INDIVIDUAL PIN GAGES

- Meet DIN2267, grade 1
- Diameter range: $\varnothing 0.20\sim\varnothing 20.00\text{mm}$
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box



4110-9D98

| Diameter $\varnothing d$ (mm) | Diameter $\varnothing d$ (mm) |
|------------------------------------|--|
| 0.20, 0.21, 0.22, 0.23, ..., 1.00 | 10.01, 10.02, 10.03, 10.04, ..., 11.00 |
| 1.01, 1.02, 1.03, 1.04, ..., 2.00 | 11.01, 11.02, 11.03, 11.04, ..., 12.00 |
| 2.01, 2.02, 2.03, 2.04, ..., 3.00 | 12.01, 12.02, 12.03, 12.04, ..., 13.00 |
| 3.01, 3.02, 3.03, 3.04, ..., 4.00 | 13.01, 13.02, 13.03, 13.04, ..., 14.00 |
| 4.01, 4.02, 4.03, 4.04, ..., 5.00 | 14.01, 14.02, 14.03, 14.04, ..., 15.00 |
| 5.01, 5.02, 5.03, 5.04, ..., 6.00 | 15.01, 15.02, 15.03, 15.04, ..., 16.00 |
| 6.01, 6.02, 6.03, 6.04, ..., 7.00 | 16.01, 16.02, 16.03, 16.04, ..., 17.00 |
| 7.01, 7.02, 7.03, 7.04, ..., 8.00 | 17.01, 17.02, 17.03, 17.04, ..., 18.00 |
| 8.01, 8.02, 8.03, 8.04, ..., 9.00 | 18.01, 18.02, 18.03, 18.04, ..., 19.00 |
| 9.01, 9.02, 9.03, 9.04, ..., 10.00 | 19.01, 19.02, 19.03, 19.04, ..., 20.00 |

| Code |
|-----------|
| 4110-xxxx |

Ordering examples:

| Diameter | Code |
|----------|------------|
| 0.21mm | 4110-0D21 |
| 5.56mm | 4110-5D56 |
| 16.00mm | 4110-16D00 |

Note : "D" stands for "."

BOXES FOR PIN GAGES

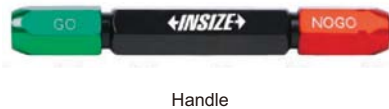
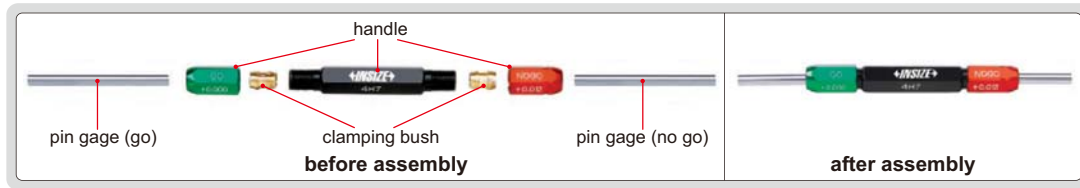
- For individual pin gages (4110 and 4118 series)



7340

| Code | Applicable pin gage diameter $\varnothing d$ (mm) | Quantity of pin gages |
|----------|---|-----------------------|
| 7340 | 0.20-10.00 | 51pcs |
| 7340-101 | 0.20-10.00 | 101pcs |
| 7340-201 | 10.00-15.00 | 51pcs |
| 7340-202 | 15.00-20.00 | 51pcs |

PIN GAGE HANDLES



clamping bush

- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~20.62mm) are made of aluminum

| Code | Applicable pin gage diameter (mm) | Including | |
|---------|-----------------------------------|-----------|---|
| | | Handle | Clamping bush (mm) |
| 7341-0S | 0.2-1.02 | 1pc | 6 pairs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02) |
| 7341-1S | 1.02-1.91 | 1pc | 7 pairs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91) |
| 7341-2S | 1.91-3.33 | 1pc | 8 pairs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15-3.33) |
| 7341-3S | 3.33-4.57 | 1pc | 7 pairs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57) |
| 7341-4S | 4.57-5.79 | 1pc | 6 pairs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79) |
| 7341-5S | 5.79-7.14 | 1pc | 6 pairs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14) |

| Code | Applicable pin gage diameter (mm) | Including | |
|----------|-----------------------------------|-----------|---|
| | | Handle | Clamping bush (mm) |
| 7341-6S | 7.14-8.66 | 1pc | 6 pairs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66) |
| 7341-7S | 8.66-10.31 | 1pc | 6 pairs (the clamping range are 8.66-8.92, 8.9-9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31) |
| 7341-8S | 10.31-11.81 | 1pc | 4 pairs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81) |
| 7341-9S | 11.81-12.95 | 1pc | 3 pairs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95) |
| 7341-10S | 12.95-14.71 | 1pc | 4 pairs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71) |
| 7341-11S | 14.71-16.13 | 1pc | 4 pairs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13) |
| 7341-12S | 16.13-17.88 | 1pc | 4 pairs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88) |
| 7341-13S | 17.88-19.30 | 1pc | 4 pairs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30) |
| 7341-14S | 19.30-20.62 | 1pc | 2 pairs (the clamping range are 19.30-19.84, 19.84-20.62) |

PLAIN PLUG GAGES

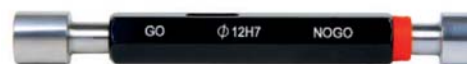
CUSTOM-MADE

OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm

- Supplied with Go and No-Go gages together
- Class H7
- Hardness HRC 60±2
- Standard DIN7150-2

Size tolerance of H7

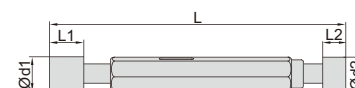
| Diameter Ød | Size tolerance of Go gage (µm) | Size tolerance of No-Go gage (µm) | L1 | L2 | L | S1, S2 |
|-------------|--------------------------------|-----------------------------------|-----|-----|-----|----------|
| ≥2, ≤3 | +0.5 / +2.5 | +9 / +11 | 6.5 | 4.5 | 62 | – |
| >3, ≤6 | +0.75 / +3.25 | +10.75 / +13.25 | 8 | 6 | 74 | – |
| >6, ≤10 | +0.75 / +3.25 | +13.75 / +16.25 | 10 | 7 | 87 | – |
| >10, ≤14 | +1 / +4 | +16.5 / +19.5 | 12 | 8 | 99 | – |
| >14, ≤18 | +1 / +4 | +16.5 / +19.5 | 14 | 10 | 114 | – |
| >18, ≤24 | +1 / +5 | +19 / +23 | 16 | 12 | 132 | – |
| >24, ≤30 | +1 / +5 | +19 / +23 | 18 | 14 | 136 | – |
| >30, ≤40 | +1.5 / +5.5 | +23 / +27 | 20 | 15 | 155 | – |
| >40, ≤50 | +1.5 / +5.5 | +23 / +27 | 25 | 18 | 169 | – |
| >50, ≤65 | +1.5 / +6.5 | +27.5 / +32.5 | 30 | 18 | – | 164, 152 |
| >65, ≤80 | +1.5 / +6.5 | +27.5 / +32.5 | 35 | 25 | – | 169, 159 |
| >80, ≤100 | +2 / +8 | +32 / +38 | 35 | 25 | – | 169, 159 |



4124-12



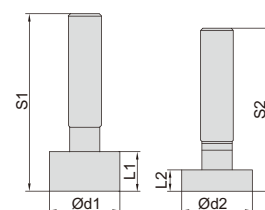
Type A



Type A



Type B



Type B

| Code | Diameter (mm) | Type | Code | Diameter (mm) | Type | Code | Diameter (mm) | Type | Code | Diameter (mm) | Type |
|---------|---------------|------|---------|---------------|------|---------|---------------|------|----------|---------------|------|
| 4124-2 | 2 | A | 4124-17 | 17 | A | 4124-32 | 32 | A | 4124-47 | 47 | A |
| 4124-3 | 3 | A | 4124-18 | 18 | A | 4124-33 | 33 | A | 4124-48 | 48 | A |
| 4124-4 | 4 | A | 4124-19 | 19 | A | 4124-34 | 34 | A | 4124-49 | 49 | A |
| 4124-5 | 5 | A | 4124-20 | 20 | A | 4124-35 | 35 | A | 4124-50 | 50 | A |
| 4124-6 | 6 | A | 4124-21 | 21 | A | 4124-36 | 36 | A | 4124-52 | 52 | B |
| 4124-7 | 7 | A | 4124-22 | 22 | A | 4124-37 | 37 | A | 4124-55 | 55 | B |
| 4124-8 | 8 | A | 4124-23 | 23 | A | 4124-38 | 38 | A | 4124-60 | 60 | B |
| 4124-9 | 9 | A | 4124-24 | 24 | A | 4124-39 | 39 | A | 4124-65 | 65 | B |
| 4124-10 | 10 | A | 4124-25 | 25 | A | 4124-40 | 40 | A | 4124-70 | 70 | B |
| 4124-11 | 11 | A | 4124-26 | 26 | A | 4124-41 | 41 | A | 4124-75 | 75 | B |
| 4124-12 | 12 | A | 4124-27 | 27 | A | 4124-42 | 42 | A | 4124-80 | 80 | B |
| 4124-13 | 13 | A | 4124-28 | 28 | A | 4124-43 | 43 | A | 4124-85 | 85 | B |
| 4124-14 | 14 | A | 4124-29 | 29 | A | 4124-44 | 44 | A | 4124-90 | 90 | B |
| 4124-15 | 15 | A | 4124-30 | 30 | A | 4124-45 | 45 | A | 4124-95 | 95 | B |
| 4124-16 | 16 | A | 4124-31 | 31 | A | 4124-46 | 46 | A | 4124-100 | 100 | B |



ATTENTION:
BASIC MODEL

METRIC THREAD PLUG GAGES

- Supplied with Go and No-Go end
- Class 6H
- Standard ISO1502



4130-10

Individual

| Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) |
|-----------|-----------|----------|-----------|----------|-----------|----------|-----------|------|-----------|
| 4130-2* | M2x0.4 | 4130-7* | M7x1 | 4130-18* | M18x2.5 | 4130-39* | M39x4 | | |
| 4130-2D2* | M2.2x0.45 | 4130-8* | M8x1.25 | 4130-20* | M20x2.5 | 4130-42* | M42x4.5 | | |
| 4130-2D5* | M2.5x0.45 | 4130-9* | M9x1.25 | 4130-22* | M22x2.5 | 4130-45* | M45x4.5 | | |
| 4130-3* | M3x0.5 | 4130-10* | M10x1.5 | 4130-24* | M24x3 | 4130-48* | M48x5 | | |
| 4130-3D5* | M3.5x0.6 | 4130-11* | M11x1.5 | 4130-27* | M27x3 | 4130-52* | M52x5 | | |
| 4130-4* | M4x0.7 | 4130-12* | M12x1.75 | 4130-30* | M30x3.5 | 4130-56* | M56x5.5 | | |
| 4130-5* | M5x0.8 | 4130-14* | M14x2 | 4130-33* | M33x3.5 | 4130-60* | M60x5.5 | | |
| 4130-6* | M6x1 | 4130-16* | M16x2 | 4130-36* | M36x4 | | | | |

Set

| Code | Thread plug gages included |
|----------|--|
| 4130-S7* | M3x0.5(4130-3), M4x0.7(4130-4), M5x0.8(4130-5), M6x1(4130-6), M8x1.25(4130-8), M10x1.5(4130-10), M12x1.75(4130-12) |

* Supplied with manufacturer inspection certificate

METRIC FINE THREAD PLUG GAGES

ATTENTION:
BASIC MODEL



- Supplied with Go and No-Go end
- Class 6H
- Standard ISO1502



4139-20G

| Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 4139-2B* | M2x0.25 | 4139-11L* | M11x0.75 | 4139-20L* | M20x0.75 | 4139-33L* | M33x0.75 | 4139-45X* | M45x4 |
| 4139-2D2B* | M2.2x0.25 | 4139-11P* | M11x1 | 4139-20P* | M20x1 | 4139-33P* | M33x1 | 4139-48P* | M48x1 |
| 4139-2D5D* | M2.5x0.35 | 4139-12G* | M12x0.5 | 4139-20R* | M20x1.5 | 4139-33R* | M33x1.5 | 4139-48R* | M48x1.5 |
| 4139-3D* | M3x0.35 | 4139-12L* | M12x0.75 | 4139-20T* | M20x2 | 4139-33T* | M33x2 | 4139-48T* | M48x2 |
| 4139-3D5D* | M3.5x0.35 | 4139-12P* | M12x1 | 4139-22G* | M22x0.5 | 4139-33V* | M33x3 | 4139-48V* | M48x3 |
| 4139-4G* | M4x0.5 | 4139-12Q* | M12x1.25 | 4139-22L* | M22x0.75 | 4139-36P* | M36x1 | 4139-48X* | M48x4 |
| 4139-5G* | M5x0.5 | 4139-12R* | M12x1.5 | 4139-22P* | M22x1 | 4139-36R* | M36x1.5 | 4139-52P* | M52x1 |
| 4139-6G* | M6x0.5 | 4139-14G* | M14x0.5 | 4139-22R* | M22x1.5 | 4139-36T* | M36x2 | 4139-52R* | M52x1.5 |
| 4139-6L* | M6x0.75 | 4139-14L* | M14x0.75 | 4139-22T* | M22x2 | 4139-36V* | M36x3 | 4139-52T* | M52x2 |
| 4139-7G* | M7x0.5 | 4139-14P* | M14x1 | 4139-24L* | M24x0.75 | 4139-39P* | M39x1 | 4139-52V* | M52x3 |
| 4139-7L* | M7x0.75 | 4139-14Q* | M14x1.25 | 4139-24P* | M24x1 | 4139-39R* | M39x1.5 | 4139-52X* | M52x4 |
| 4139-8G* | M8x0.5 | 4139-14R* | M14x1.5 | 4139-24R* | M24x1.5 | 4139-39T* | M39x2 | 4139-56P* | M56x1 |
| 4139-8L* | M8x0.75 | 4139-16G* | M16x0.5 | 4139-24T* | M24x2 | 4139-39V* | M39x3 | 4139-56R* | M56x1.5 |
| 4139-8P* | M8x1 | 4139-16L* | M16x0.75 | 4139-27L* | M27x0.75 | 4139-42P* | M42x1 | 4139-56T* | M56x2 |
| 4139-9G* | M9x0.5 | 4139-16P* | M16x1 | 4139-27P* | M27x1 | 4139-42R* | M42x1.5 | 4139-56V* | M56x3 |
| 4139-9L* | M9x0.75 | 4139-16R* | M16x1.5 | 4139-27R* | M27x1.5 | 4139-42T* | M42x2 | 4139-56X* | M56x4 |
| 4139-9P* | M9x1 | 4139-18G* | M18x0.5 | 4139-27T* | M27x2 | 4139-42V* | M42x3 | 4139-60P* | M60x1 |
| 4139-10G* | M10x0.5 | 4139-18L* | M18x0.75 | 4139-30L* | M30x0.75 | 4139-42X* | M42x4 | 4139-60R* | M60x1.5 |
| 4139-10L* | M10x0.75 | 4139-18P* | M18x1 | 4139-30P* | M30x1 | 4139-45P* | M45x1 | 4139-60T* | M60x2 |
| 4139-10P* | M10x1 | 4139-18R* | M18x1.5 | 4139-30R* | M30x1.5 | 4139-45R* | M45x1.5 | 4139-60V* | M60x3 |
| 4139-10Q* | M10x1.25 | 4139-18T* | M18x2 | 4139-30T* | M30x2 | 4139-45T* | M45x2 | 4139-60X* | M60x4 |
| 4139-11G* | M11x0.5 | 4139-20G* | M20x0.5 | 4139-30V* | M30x3 | 4139-45V* | M45x3 | | |

* Supplied with manufacturer inspection certificate

METRIC THREAD RING GAGES



- Go and No-Go gages are supplied separately
- Class 6g
- Standard ISO1502



4120-16



4120-16N

ATTENTION:
BASIC MODEL

Individual

| Code (GO) | Code (NOGO) | Size (mm) | Code (GO) | Code (NOGO) | Size (mm) | Code (GO) | Code (NOGO) | Size (mm) |
|-----------|-------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|
| 4120-2* | 4120-2N* | M2x0.4 | 4120-10* | 4120-10N* | M10x1.5 | 4120-33* | 4120-33N* | M33x3.5 |
| 4120-2D2* | 4120-2D2N* | M2.2x0.45 | 4120-11* | 4120-11N* | M11x1.5 | 4120-36* | 4120-36N* | M36x4 |
| 4120-2D5* | 4120-2D5N* | M2.5x0.45 | 4120-12* | 4120-12N* | M12x1.75 | 4120-39* | 4120-39N* | M39x4 |
| 4120-3* | 4120-3N* | M3x0.5 | 4120-14* | 4120-14N* | M14x2 | 4120-42* | 4120-42N* | M42x4.5 |
| 4120-3D5* | 4120-3D5N* | M3.5x0.6 | 4120-16* | 4120-16N* | M16x2 | 4120-45* | 4120-45N* | M45x4.5 |
| 4120-4* | 4120-4N* | M4x0.7 | 4120-18* | 4120-18N* | M18x2.5 | 4120-48* | 4120-48N* | M48x5 |
| 4120-5* | 4120-5N* | M5x0.8 | 4120-20* | 4120-20N* | M20x2.5 | 4120-52* | 4120-52N* | M52x5 |
| 4120-6* | 4120-6N* | M6x1 | 4120-22* | 4120-22N* | M22x2.5 | 4120-56* | 4120-56N* | M56x5.5 |
| 4120-7* | 4120-7N* | M7x1 | 4120-24* | 4120-24N* | M24x3 | 4120-60* | 4120-60N* | M60x5.5 |
| 4120-8* | 4120-8N* | M8x1.25 | 4120-27* | 4120-27N* | M27x3 | | | |
| 4120-9* | 4120-9N* | M9x1.25 | 4120-30* | 4120-30N* | M30x3.5 | | | |

Go ring gage set

| Code | Thread ring gages included |
|----------|--|
| 4120-S7* | M3x0.5(4120-3), M4x0.7(4120-4), M5x0.8(4120-5), M6x1(4120-6), M8x1.25(4120-8), M10x1.5(4120-10), M12x1.75(4120-12) |

No Go ring gage set

| Code | Thread ring gages included |
|-----------|---|
| 4120-S7N* | M3x0.5(4120-3N), M4x0.7(4120-4N), M5x0.8(4120-5N), M6x1(4120-6N), M8x1.25(4120-8N), M10x1.5(4120-10N), M12x1.75(4120-12N) |

* Supplied with manufacturer inspection certificate

METRIC FINE THREAD RING GAGES



4129-10P



4129-10PN

- Go and No-Go gages are supplied separately
- Class 6g
- Standard ISO1502

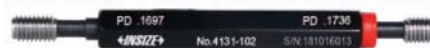
| Code (GO) | Code (NOGO) | Size (mm) | Code (GO) | Code (NOGO) | Size (mm) | Code (GO) | Code (NOGO) | Size (mm) |
|------------|-------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|
| 4129-2B* | 4129-2BN* | M2x0.25 | 4129-16R* | 4129-16RN* | M16x1.5 | 4129-36V* | 4129-36VN* | M36x3 |
| 4129-2D2B* | 4129-2D2BN* | M2.2x0.25 | 4129-18G* | 4129-18GN* | M18x0.5 | 4129-39P* | 4129-39PN* | M39x1 |
| 4129-2D5D* | 4129-2D5DN* | M2.5x0.35 | 4129-18L* | 4129-18LN* | M18x0.75 | 4129-39R* | 4129-39RN* | M39x1.5 |
| 4129-3D* | 4129-3DN* | M3x0.35 | 4129-18P* | 4129-18PN* | M18x1 | 4129-39T* | 4129-39TN* | M39x2 |
| 4129-3D5D* | 4129-3D5DN* | M3.5x0.35 | 4129-18R* | 4129-18RN* | M18x1.5 | 4129-39V* | 4129-39VN* | M39x3 |
| 4129-4G* | 4129-4GN* | M4x0.5 | 4129-18T* | 4129-18TN* | M18x2 | 4129-42P* | 4129-42PN* | M42x1 |
| 4129-5G* | 4129-5GN* | M5x0.5 | 4129-20G* | 4129-20GN* | M20x0.5 | 4129-42R* | 4129-42RN* | M42x1.5 |
| 4129-6G* | 4129-6GN* | M6x0.5 | 4129-20L* | 4129-20LN* | M20x0.75 | 4129-42T* | 4129-42TN* | M42x2 |
| 4129-6L* | 4129-6LN* | M6x0.75 | 4129-20P* | 4129-20PN* | M20x1 | 4129-42V* | 4129-42VN* | M42x3 |
| 4129-7G* | 4129-7GN* | M7x0.5 | 4129-20R* | 4129-20RN* | M20x1.5 | 4129-42X* | 4129-42XN* | M42x4 |
| 4129-7L* | 4129-7LN* | M7x0.75 | 4129-20T* | 4129-20TN* | M20x2 | 4129-45P* | 4129-45PN* | M45x1 |
| 4129-8G* | 4129-8GN* | M8x0.5 | 4129-22G* | 4129-22GN* | M22x0.5 | 4129-45R* | 4129-45RN* | M45x1.5 |
| 4129-8L* | 4129-8LN* | M8x0.75 | 4129-22L* | 4129-22LN* | M22x0.75 | 4129-45T* | 4129-45TN* | M45x2 |
| 4129-8P* | 4129-8PN* | M8x1 | 4129-22P* | 4129-22PN* | M22x1 | 4129-45V* | 4129-45VN* | M45x3 |
| 4129-9G* | 4129-9GN* | M9x0.5 | 4129-22R* | 4129-22RN* | M22x1.5 | 4129-45X* | 4129-45XN* | M45x4 |
| 4129-9L* | 4129-9LN* | M9x0.75 | 4129-22T* | 4129-22TN* | M22x2 | 4129-48P* | 4129-48PN* | M48x1 |
| 4129-9P* | 4129-9PN* | M9x1 | 4129-24L* | 4129-24LN* | M24x0.75 | 4129-48R* | 4129-48RN* | M48x1.5 |
| 4129-10G* | 4129-10GN* | M10x0.5 | 4129-24P* | 4129-24PN* | M24x1 | 4129-48T* | 4129-48TN* | M48x2 |
| 4129-10L* | 4129-10LN* | M10x0.75 | 4129-24R* | 4129-24RN* | M24x1.5 | 4129-48V* | 4129-48VN* | M48x3 |
| 4129-10P* | 4129-10PN* | M10x1 | 4129-24T* | 4129-24TN* | M24x2 | 4129-48X* | 4129-48XN* | M48x4 |
| 4129-10Q* | 4129-10QN* | M10x1.25 | 4129-27L* | 4129-27LN* | M27x0.75 | 4129-52P* | 4129-52PN* | M52x1 |
| 4129-11G* | 4129-11GN* | M11x0.5 | 4129-27P* | 4129-27PN* | M27x1 | 4129-52R* | 4129-52RN* | M52x1.5 |
| 4129-11L* | 4129-11LN* | M11x0.75 | 4129-27R* | 4129-27RN* | M27x1.5 | 4129-52T* | 4129-52TN* | M52x2 |
| 4129-11P* | 4129-11PN* | M11x1 | 4129-27T* | 4129-27TN* | M27x2 | 4129-52V* | 4129-52VN* | M52x3 |
| 4129-12G* | 4129-12GN* | M12x0.5 | 4129-30L* | 4129-30LN* | M30x0.75 | 4129-52X* | 4129-52XN* | M52x4 |
| 4129-12L* | 4129-12LN* | M12x0.75 | 4129-30P* | 4129-30PN* | M30x1 | 4129-56P* | 4129-56PN* | M56x1 |
| 4129-12P* | 4129-12PN* | M12x1 | 4129-30R* | 4129-30RN* | M30x1.5 | 4129-56R* | 4129-56RN* | M56x1.5 |
| 4129-12Q* | 4129-12QN* | M12x1.25 | 4129-30T* | 4129-30TN* | M30x2 | 4129-56T* | 4129-56TN* | M56x2 |
| 4129-12R* | 4129-12RN* | M12x1.5 | 4129-30V* | 4129-30VN* | M30x3 | 4129-56V* | 4129-56VN* | M56x3 |
| 4129-14G* | 4129-14GN* | M14x0.5 | 4129-33L* | 4129-33LN* | M33x0.75 | 4129-56X* | 4129-56XN* | M56x4 |
| 4129-14L* | 4129-14LN* | M14x0.75 | 4129-33P* | 4129-33PN* | M33x1 | 4129-60P* | 4129-60PN* | M60x1 |
| 4129-14P* | 4129-14PN* | M14x1 | 4129-33R* | 4129-33RN* | M33x1.5 | 4129-60R* | 4129-60RN* | M60x1.5 |
| 4129-14Q* | 4129-14QN* | M14x1.25 | 4129-33T* | 4129-33TN* | M33x2 | 4129-60T* | 4129-60TN* | M60x2 |
| 4129-14R* | 4129-14RN* | M14x1.5 | 4129-33V* | 4129-33VN* | M33x3 | 4129-60V* | 4129-60VN* | M60x3 |
| 4129-16G* | 4129-16GN* | M16x0.5 | 4129-36P* | 4129-36PN* | M36x1 | 4129-60X* | 4129-60XN* | M60x4 |
| 4129-16L* | 4129-16LN* | M16x0.75 | 4129-36R* | 4129-36RN* | M36x1.5 | | | |
| 4129-16P* | 4129-16PN* | M16x1 | 4129-36T* | 4129-36TN* | M36x2 | | | |

* Supplied with manufacturer inspection certificate

| Code | Size | Code | Size |
|-----------|------------|-----------|------------|
| 4131-41* | 4-40UNC | 4131-3C2* | 3/8-24UNF |
| 4131-61* | 6-32UNC | 4131-7D2* | 7/16-20UNF |
| 4131-81* | 8-32UNC | 4131-1A1* | 1/2-13UNC |
| 4131-102* | 10-32UNF | 4131-1A2* | 1/2-20UNF |
| 4131-1B1* | 1/4-20UNC | 4131-9D2* | 9/16-18UNF |
| 4131-1B2* | 1/4-28UNF | 4131-5C1* | 5/8-11UNC |
| 4131-5D1* | 5/16-18UNC | 4131-5C2* | 5/8-18UNF |
| 4131-5D2* | 5/16-24UNF | 4131-3B1* | 3/4-10UNC |
| 4131-3C1* | 3/8-16UNC | 4131-3B2* | 3/4-16UNF |

* Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD PLUG GAGES



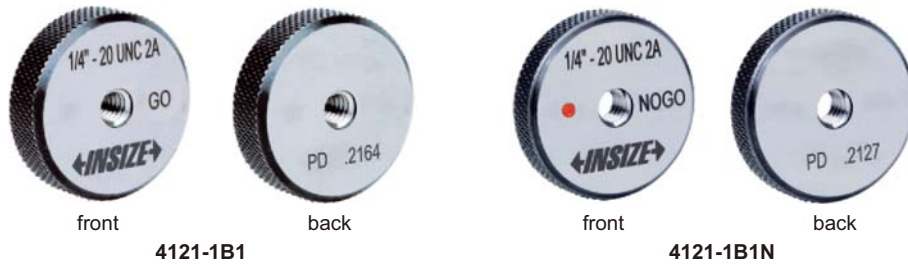
4131-102

- Supplied with Go and No-Go end
- Class 2B
- Standard ANSI B1.2

AMERICAN STANDARD THREAD RING GAGES

INSIZE
CERTIFICATE

ATTENTION:
BASIC MODEL



- Class 2A
- Standard ANSI B1.2

| Code (GO) | Code (NOGO) | Size | Code (GO) | Code (NOGO) | Size | Code (GO) | Code (NOGO) | Size |
|------------|-------------|-----------|------------|-------------|------------|------------|-------------|------------|
| 4121-41 * | 4121-41N * | 4-40UNC | 4121-5D1 * | 4121-5D1N * | 5/16-18UNC | 4121-1A2 * | 4121-1A2N * | 1/2-20UNF |
| 4121-61 * | 4121-61N * | 6-32UNC | 4121-5D2 * | 4121-5D2N * | 5/16-24UNF | 4121-9D2 * | 4121-9D2N * | 9/16-18UNF |
| 4121-81 * | 4121-81N * | 8-32UNC | 4121-3C1 * | 4121-3C1N * | 3/8-16UNC | 4121-5C1 * | 4121-5C1N * | 5/8-11UNC |
| 4121-102 * | 4121-102N * | 10-32UNF | 4121-3C2 * | 4121-3C2N * | 3/8-24UNF | 4121-5C2 * | 4121-5C2N * | 5/8-18UNF |
| 4121-1B1 * | 4121-1B1N * | 1/4-20UNC | 4121-7D2 * | 4121-7D2N * | 7/16-20UNF | 4121-3B1 * | 4121-3B1N * | 3/4-10UNC |
| 4121-1B2 * | 4121-1B2N * | 1/4-28UNF | 4121-1A1 * | 4121-1A1N * | 1/2-13UNC | 4121-3B2 * | 4121-3B2N * | 3/4-16UNF |

* Supplied with manufacturer inspection certificate

METRIC THREAD PLUG GAGES

INSIZE
CERTIFICATE



- Supplied with Go and No-Go end
- Class 6H
- Standard ISO1502
- Material: OHNS
(Oil Hardened Non-shrinking Steel),
stable dimension and wear resistance
- Hardness HRC60-62



4641-6

CLASS 5H OF M1.0, M1.1,
M1.2, M1.4 ARE AVAILABLE

| Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 4641-1D6 * | M1.6x0.35 | 4641-4 * | M4x0.7 | 4641-12 * | M12x1.75 | 4641-22 * | M22x2.5 | 4641-36 * | M36x4 |
| 4641-2 * | M2x0.4 | 4641-5 * | M5x0.8 | 4641-14 * | M14x2 | 4641-24 * | M24x3 | 4641-42 * | M42x4.5 |
| 4641-2D5 * | M2.5x0.45 | 4641-6 * | M6x1 | 4641-16 * | M16x2 | 4641-27 * | M27x3 | 4641-48 * | M48x5 |
| 4641-3 * | M3x0.5 | 4641-8 * | M8x1.25 | 4641-18 * | M18x2.5 | 4641-30 * | M30x3.5 | | |
| 4641-3D5 * | M3.5x0.6 | 4641-10 * | M10x1.5 | 4641-20 * | M20x2.5 | 4641-33 * | M33x3.5 | | |

* Supplied with manufacturer inspection certificate

METRIC FINE THREAD PLUG GAGES

INSIZE
CERTIFICATE



- Supplied with Go and No-Go end
- Class 6H
- Standard ISO1502
- Material: OHNS
(Oil Hardened Non-shrinking Steel),
stable dimension and wear resistance
- Hardness HRC60-62



4642-12R

| Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) | Code | Size (mm) |
|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
| 4642-8G * | M8x0.5 | 4642-14R * | M14x1.5 | 4642-25R * | M25x1.5 | 4642-35R * | M35x1.5 | 4642-48T * | M48x2 |
| 4642-8L * | M8x0.75 | 4642-16P * | M16x1 | 4642-26R * | M26x1.5 | 4642-36R * | M36x1.5 | 4642-50R * | M50x1.5 |
| 4642-8P * | M8x1 | 4642-16R * | M16x1.5 | 4642-27R * | M27x1.5 | 4642-36T * | M36x2 | 4642-50T * | M50x2 |
| 4642-10L * | M10x0.75 | 4642-18P * | M18x1 | 4642-27T * | M27x2 | 4642-38R * | M38x1.5 | 4642-52R * | M52x1.5 |
| 4642-10P * | M10x1 | 4642-18R * | M18x1.5 | 4642-28R * | M28x1.5 | 4642-40R * | M40x1.5 | 4642-52T * | M52x2 |
| 4642-10Q * | M10x1.25 | 4642-20P * | M20x1 | 4642-30P * | M30x1 | 4642-40T * | M40x2 | 4642-55R * | M55x1.5 |
| 4642-12P * | M12x1 | 4642-20R * | M20x1.5 | 4642-30R * | M30x1.5 | 4642-42R * | M42x1.5 | 4642-55T * | M55x2 |
| 4642-12Q * | M12x1.25 | 4642-22R * | M22x1.5 | 4642-30T * | M30x2 | 4642-42T * | M42x2 | 4642-58R * | M58x1.5 |
| 4642-12R * | M12x1.5 | 4642-24P * | M24x1 | 4642-32R * | M32x1.5 | 4642-45R * | M45x1.5 | 4642-60T * | M60x2 |
| 4642-14P * | M14x1 | 4642-24R * | M24x1.5 | 4642-33R * | M33x1.5 | 4642-45T * | M45x2 | | |
| 4642-14Q * | M14x1.25 | 4642-24T * | M24x2 | 4642-33T * | M33x2 | 4642-48R * | M48x1.5 | | |

* Supplied with manufacturer inspection certificate



METRIC THREAD RING GAGES

CLASS 6h OF M1.2, M1.4
ARE AVAILABLE



4631-12



4631-12N

- Class 6g
- Standard ISO1502
- Material: OHNS
(Oil Hardened Non-shrinking Steel),
stable dimension and wear resistance
- Hardness HRC60-62

| Code (GO) | Code (NOGO) | Size(mm) |
|------------|-------------|-----------|
| 4631-1D6 * | 4631-1D6N * | M1.6x0.35 |
| 4631-2 * | 4631-2N * | M2x0.4 |
| 4631-2D5 * | 4631-2D5N * | M2.5x0.45 |
| 4631-3 * | 4631-3N * | M3x0.5 |
| 4631-3D5 * | 4631-3D5N * | M3.5x0.6 |
| 4631-4 * | 4631-4N * | M4x0.7 |
| 4631-5 * | 4631-5N * | M5x0.8 |
| 4631-6 * | 4631-6N * | M6x1 |

| Code (GO) | Code (NOGO) | Size (mm) |
|-----------|-------------|-----------|
| 4631-8 * | 4631-8N * | M8x1.25 |
| 4631-10 * | 4631-10N * | M10x1.5 |
| 4631-12 * | 4631-12N * | M12x1.75 |
| 4631-14 * | 4631-14N * | M14x2 |
| 4631-16 * | 4631-16N * | M16x2 |
| 4631-18 * | 4631-18N * | M18x2.5 |
| 4631-20 * | 4631-20N * | M20x2.5 |
| 4631-22 * | 4631-22N * | M22x2.5 |

| Code (GO) | Code (NOGO) | Size (mm) |
|-----------|-------------|-----------|
| 4631-24 * | 4631-24N * | M24x3 |
| 4631-27 * | 4631-27N * | M27x3 |
| 4631-30 * | 4631-30N * | M30x3.5 |
| 4631-33 * | 4631-33N * | M33x3.5 |
| 4631-36 * | 4631-36N * | M36x4 |
| 4631-42 * | 4631-42N * | M42x4.5 |
| 4631-48 * | 4631-48N * | M48x5 |

* Supplied with manufacturer inspection certificate



METRIC FINE THREAD RING GAGES

- Class 6g
- Standard ISO1502
- Material: OHNS (Oil Hardened Non-shrinking Steel),
stable dimension and wear resistance
- Hardness HRC60-62



4632-10Q



4632-10QN

| Code (GO) | Code (NOGO) | Size (mm) |
|------------|-------------|-----------|
| 4632-8G * | 4632-8GN * | M8x0.5 |
| 4632-8L * | 4632-8LN * | M8x0.75 |
| 4632-8P * | 4632-8PN * | M8x1 |
| 4632-10L * | 4632-10LN * | M10x0.75 |
| 4632-10P * | 4632-10PN * | M10x1 |
| 4632-10Q * | 4632-10QN * | M10x1.25 |
| 4632-12P * | 4632-12PN * | M12x1 |
| 4632-12Q * | 4632-12QN * | M12x1.25 |
| 4632-12R * | 4632-12RN * | M12x1.5 |
| 4632-14P * | 4632-14PN * | M14x1 |
| 4632-14Q * | 4632-14QN * | M14x1.25 |
| 4632-14R * | 4632-14RN * | M14x1.5 |
| 4632-16P * | 4632-16PN * | M16x1 |
| 4632-16R * | 4632-16RN * | M16x1.5 |
| 4632-18P * | 4632-18PN * | M18x1 |
| 4632-18R * | 4632-18RN * | M18x1.5 |
| 4632-20P * | 4632-20PN * | M20x1 |
| 4632-20R * | 4632-20RN * | M20x1.5 |

| Code (GO) | Code (NOGO) | Size (mm) |
|------------|-------------|-----------|
| 4632-22R * | 4632-22RN * | M22x1.5 |
| 4632-24P * | 4632-24PN * | M24x1 |
| 4632-24R * | 4632-24RN * | M24x1.5 |
| 4632-24T * | 4632-24TN * | M24x2 |
| 4632-25R * | 4632-25RN * | M25x1.5 |
| 4632-26R * | 4632-26RN * | M26x1.5 |
| 4632-27R * | 4632-27RN * | M27x1.5 |
| 4632-27T * | 4632-27TN * | M27x2 |
| 4632-28R * | 4632-28RN * | M28x1.5 |
| 4632-30P * | 4632-30PN * | M30x1 |
| 4632-30R * | 4632-30RN * | M30x1.5 |
| 4632-30T * | 4632-30TN * | M30x2 |
| 4632-32R * | 4632-32RN * | M32x1.5 |
| 4632-33R * | 4632-33RN * | M33x1.5 |
| 4632-33T * | 4632-33TN * | M33x2 |
| 4632-35R * | 4632-35RN * | M35x1.5 |
| 4632-36R * | 4632-36RN * | M36x1.5 |
| 4632-36T * | 4632-36TN * | M36x2 |

| Code (GO) | Code (NOGO) | Size (mm) |
|------------|-------------|-----------|
| 4632-38R * | 4632-38RN * | M38x1.5 |
| 4632-40R * | 4632-40RN * | M40x1.5 |
| 4632-40T * | 4632-40TN * | M40x2 |
| 4632-42R * | 4632-42RN * | M42x1.5 |
| 4632-42T * | 4632-42TN * | M42x2 |
| 4632-45R * | 4632-45RN * | M45x1.5 |
| 4632-45T * | 4632-45TN * | M45x2 |
| 4632-48R * | 4632-48RN * | M48x1.5 |
| 4632-48T * | 4632-48TN * | M48x2 |
| 4632-50R * | 4632-50RN * | M50x1.5 |
| 4632-50T * | 4632-50TN * | M50x2 |
| 4632-52R * | 4632-52RN * | M52x1.5 |
| 4632-52T * | 4632-52TN * | M52x2 |
| 4632-55R * | 4632-55RN * | M55x1.5 |
| 4632-55T * | 4632-55TN * | M55x2 |
| 4632-58R * | 4632-58RN * | M58x1.5 |
| 4632-60T * | 4632-60TN * | M60x2 |

* Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD PLUG GAGES



4643-102

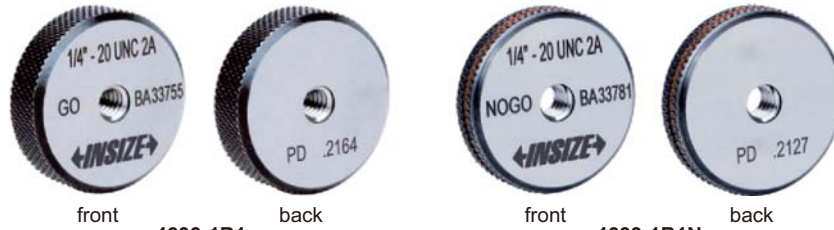
- Supplied with Go and No-Go end
- Class 2B
- Standard ANSI B1.2
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

| Code | Size | Code | Size | Code | Size |
|-----------|-----------|-----------|------------|-----------|------------|
| 4643-41* | 4-40UNC | 4643-5D1* | 5/16-18UNC | 4643-1A2* | 1/2-20UNF |
| 4643-61* | 6-32UNC | 4643-5D2* | 5/16-24UNF | 4643-9D2* | 9/16-18UNF |
| 4643-81* | 8-32UNC | 4643-3C1* | 3/8-16UNC | 4643-5C1* | 5/8-11UNC |
| 4643-102* | 10-32UNF | 4643-3C2* | 3/8-24UNF | 4643-5C2* | 5/8-18UNF |
| 4643-1B1* | 1/4-20UNC | 4643-7D2* | 7/16-20UNF | 4643-3B1* | 3/4-10UNC |
| 4643-1B2* | 1/4-28UNF | 4643-1A1* | 1/2-13UNC | 4643-3B2* | 3/4-16UNF |

* Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD RING GAGES

- Class 2A
- Standard ANSI B1.2
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62



| Code (GO) | Code (NOGO) | Size | Code (GO) | Code (NOGO) | Size | Code (GO) | Code (NOGO) | Size |
|-----------|-------------|-----------|-----------|-------------|------------|-----------|-------------|------------|
| 4633-41* | 4633-41N* | 4-40UNC | 4633-5D1* | 4633-5D1N* | 5/16-18UNC | 4633-1A2* | 4633-1A2N* | 1/2-20UNF |
| 4633-61* | 4633-61N* | 6-32UNC | 4633-5D2* | 4633-5D2N* | 5/16-24UNF | 4633-9D2* | 4633-9D2N* | 9/16-18UNF |
| 4633-81* | 4633-81N* | 8-32UNC | 4633-3C1* | 4633-3C1N* | 3/8-16UNC | 4633-5C1* | 4633-5C1N* | 5/8-11UNC |
| 4633-102* | 4633-102N* | 10-32UNF | 4633-3C2* | 4633-3C2N* | 3/8-24UNF | 4633-5C2* | 4633-5C2N* | 5/8-18UNF |
| 4633-1B1* | 4633-1B1N* | 1/4-20UNC | 4633-7D2* | 4633-7D2N* | 7/16-20UNF | 4633-3B1* | 4633-3B1N* | 3/4-10UNC |
| 4633-1B2* | 4633-1B2N* | 1/4-28UNF | 4633-1A1* | 4633-1A1N* | 1/2-13UNC | 4633-3B2* | 4633-3B2N* | 3/4-16UNF |

* Supplied with manufacturer inspection certificate

NPT THREAD PLUG GAGES



4644-1B18

- American tapered pipe thread for threads with sealant
- Standard ANSI / ASME B1.20.1
- Taper 1:16
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

| Code | Size | Code | Size | Code | Size |
|------------|------------|------------|---------------|-----------|------------|
| 4644-1D27* | 1/16x27NPT | 4644-3B14* | 3/4x14NPT | 4644-1J8* | 2-1/2x8NPT |
| 4644-1C27* | 1/8x27NPT | 4644-112* | 1x11.5NPT | 4644-38* | 3x8NPT |
| 4644-1B18* | 1/4x18NPT | 4644-1G12* | 1-1/4x11.5NPT | 4644-1N8* | 3-1/2x8NPT |
| 4644-3C18* | 3/8x18NPT | 4644-1H12* | 1-1/2x11.5NPT | 4644-48* | 4x8NPT |
| 4644-1A14* | 1/2x14NPT | 4644-212* | 2x11.5NPT | | |

* Supplied with manufacturer inspection certificate

NPT THREAD RING GAGES



- American tapered pipe thread for threads with sealant
- Standard ANSI / ASME B1.20.1
- Taper 1:16
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

| Code | Size | Code | Size |
|------------|------------|------------|---------------|
| 4634-1D27* | 1/16x27NPT | 4634-1G12* | 1-1/4x11.5NPT |
| 4634-1C27* | 1/8x27NPT | 4634-1H12* | 1-1/2x11.5NPT |
| 4634-1B18* | 1/4x18NPT | 4634-212* | 2x11.5NPT |
| 4634-3C18* | 3/8x18NPT | 4634-1J8* | 2-1/2x8NPT |
| 4634-1A14* | 1/2x14NPT | 4634-38* | 3x8NPT |
| 4634-3B14* | 3/4x14NPT | 4634-1N8* | 3-1/2x8NPT |
| 4634-112* | 1x11.5NPT | 4634-48* | 4x8NPT |

* Supplied with manufacturer inspection certificate



INSIZE
CERTIFICATE

WHITWORTH PIPE THREAD PLUG GAGES (G SERIES)

| Code | Size | Code | Size |
|-------------|----------|-------------|------------|
| 4645-1C28 * | G 1/8-28 | 4645-111 * | G 1-11 |
| 4645-1B19 * | G 1/4-19 | 4645-1G11 * | G 1.1/4-11 |
| 4645-3C19 * | G 3/8-19 | 4645-1H11 * | G 1.1/2-11 |
| 4645-1A14 * | G 1/2-14 | 4645-211 * | G 2-11 |
| 4645-3B14 * | G 3/4-14 | | |

* Supplied with manufacturer inspection certificate



4645-1A14

- Supplied with Go and No-Go end
- Standard ISO 228



INSIZE
CERTIFICATE

WHITWORTH PIPE THREAD RING GAGES (G SERIES)

| Code (GO) | Code (NOGO) | Size | Code (GO) | Code (NOGO) | Size |
|-------------|--------------|----------|-------------|--------------|------------|
| 4635-1C28 * | 4635-1C28N * | G 1/8-28 | 4635-111 * | 4635-111N * | G 1-11 |
| 4635-1B19 * | 4635-1B19N * | G 1/4-19 | 4635-1G11 * | 4635-1G11N * | G 1.1/4-11 |
| 4635-3C19 * | 4635-3C19N * | G 3/8-19 | 4635-1H11 * | 4635-1H11N * | G 1.1/2-11 |
| 4635-1A14 * | 4635-1A14N * | G 1/2-14 | 4635-211 * | 4635-211N * | G 2-11 |
| 4635-3B14 * | 4635-3B14N * | G 3/4-14 | | | |

* Supplied with manufacturer inspection certificate



4635-1A14



4635-1A14N

- Class A
- Standard ISO 228



INSIZE
CERTIFICATE

BSPT TAPER THREAD PLUG GAGES

| Code | Size | Code | Size |
|-------------|---------------|-------------|---------------|
| 4646-1C28 * | 1/8-28 BSPT | 4646-1H11 * | 1.1/2-11 BSPT |
| 4646-1B19 * | 1/4-19 BSPT | 4646-211 * | 2-11 BSPT |
| 4646-3C19 * | 3/8-19 BSPT | 4646-2H11 * | 2.1/2-11 BSPT |
| 4646-1A14 * | 1/2-14 BSPT | 4646-311 * | 3-11 BSPT |
| 4646-3B14 * | 3/4-14 BSPT | 4646-411 * | 4-11 BSPT |
| 4646-111 * | 1-11 BSPT | 4646-511 * | 5-11 BSPT |
| 4646-1G11 * | 1.1/4-11 BSPT | 4646-611 * | 6-11 BSPT |

* Supplied with manufacturer inspection certificate



4646-1A14

- Standard BS 21-1985



INSIZE
CERTIFICATE

BSPT TAPER THREAD RING GAGES

| Code | Size | Code | Size |
|-------------|---------------|-------------|---------------|
| 4636-1C28 * | 1/8-28 BSPT | 4636-1H11 * | 1.1/2-11 BSPT |
| 4636-1B19 * | 1/4-19 BSPT | 4636-211 * | 2-11 BSPT |
| 4636-3C19 * | 3/8-19 BSPT | 4636-2H11 * | 2.1/2-11 BSPT |
| 4636-1A14 * | 1/2-14 BSPT | 4636-311 * | 3-11 BSPT |
| 4636-3B14 * | 3/4-14 BSPT | 4636-411 * | 4-11 BSPT |
| 4636-111 * | 1-11 BSPT | 4636-511 * | 5-11 BSPT |
| 4636-1G11 * | 1.1/4-11 BSPT | 4636-611 * | 6-11 BSPT |

* Supplied with manufacturer inspection certificate



front



back

4636-1A14

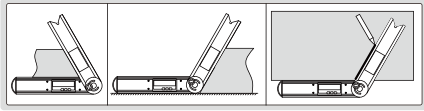
- Standard BS 21-1985

WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

IP54
WATERPROOF

ABSOLUTE
LEVEL

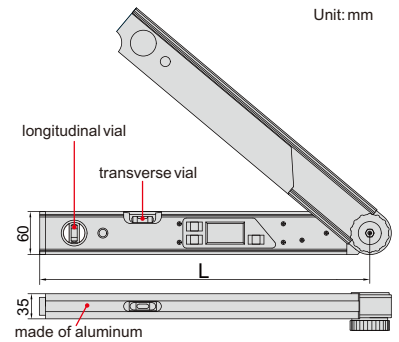
AUTOMATIC
BACKLIGHT



- Suitable for setting horizontal and vertical mitre angles of cutting machine
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight will turn off in one minute after no data changing, automatic power off in 5 minutes



2174-225

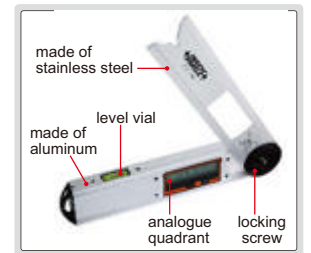
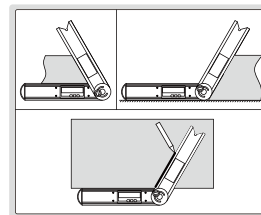
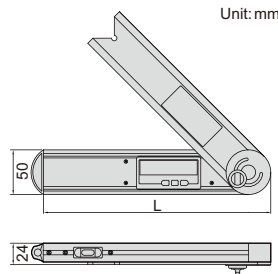


| Code | Size (L) | Range | Resolution | Accuracy |
|----------|----------|--------|------------|----------|
| 2174-225 | 460mm | 0-225° | 0.05° | ±0.10° |

DIGITAL PROTRACTOR



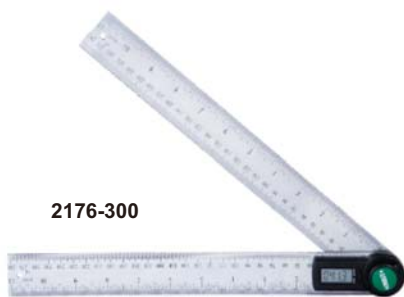
2171-250



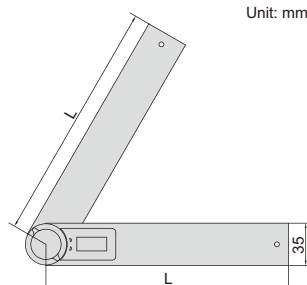
- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032
- Automatic power off

| Code | Size (L) | Range | Resolution | Accuracy |
|----------|----------|--------|------------|----------|
| 2171-250 | 250mm | 0-360° | 0.05° | ±0.15° |

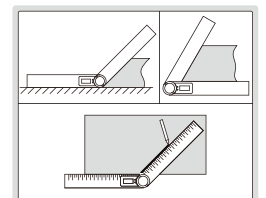
DIGITAL PROTRACTORS



2176-300



- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- Made of stainless steel
- CR2032 battery
- Automatic power off



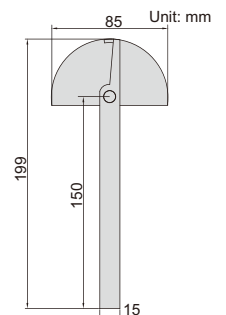
| Code | Size(L) | Range | Resolution | Accuracy |
|----------|---------|--------|------------|----------|
| 2176-200 | 200mm | 0-360° | 0.1° | ±0.3° |
| 2176-300 | 300mm | 0-360° | 0.1° | ±0.3° |

PROTRACTOR

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



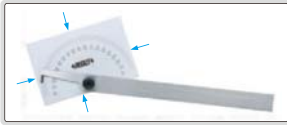
4780-85



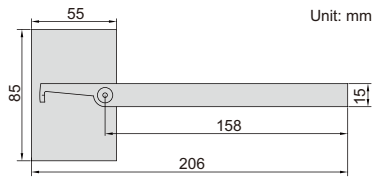
| Code | Size | Range | Graduation | Accuracy |
|---------|----------|--------|------------|----------|
| 4780-85 | 85x150mm | 0-180° | 1° | ±0.3° |

PROTRACTOR

4 working edges



- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



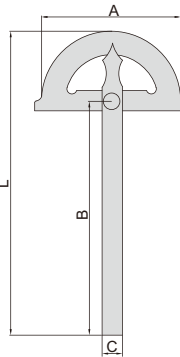
4781-85

| Code | Size | Range | Graduation | Accuracy |
|---------|----------|--------|------------|----------|
| 4781-85 | 85x158mm | 0-180° | 1° | ±0.3° |

PROTRACTORS

- Graduation: 1°
- Made of stainless steel (4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw

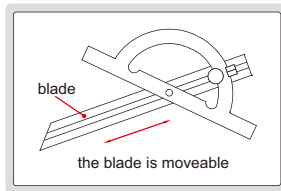
| Code | Size (AxB) | Range | Accuracy | L | C |
|-----------|------------|--------|----------|-----|----|
| 4799-180 | 80x120mm | 0-180° | ±0.3° | 168 | 11 |
| 4799-1120 | 120x150mm | 0-180° | ±0.3° | 220 | 14 |
| 4799-1150 | 150x200mm | 0-180° | ±0.3° | 285 | 16 |
| 4799-1200 | 200x300mm | 0-180° | ±0.3° | 413 | 20 |
| 4799-1300 | 300x500mm | 0-180° | ±0.3° | 675 | 30 |



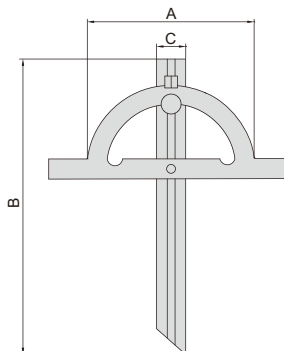
4799-180

PROTRACTORS

- Graduation: 1°
- Made of carbon steel
- Satin chrome plated
- With clamping screw
- The blade is moveable

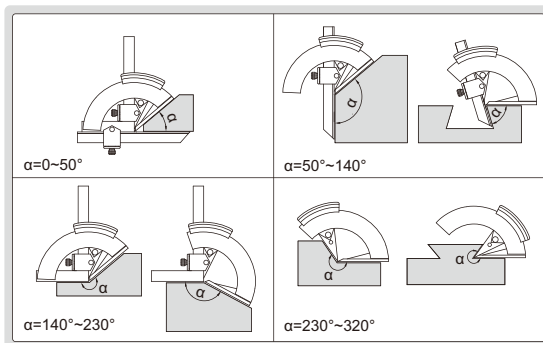


| Code | Size (AxB) | Range | Accuracy | C |
|----------|------------|---------|----------|----|
| 4797-100 | 100x150mm | 10-170° | ±0.3° | 18 |
| 4797-150 | 150x300mm | 10-170° | ±0.3° | 22 |
| 4797-200 | 200x400mm | 10-170° | ±0.3° | 24 |
| 4797-250 | 250x500mm | 10-170° | ±0.3° | 28 |
| 4797-300 | 300x600mm | 10-170° | ±0.3° | 32 |

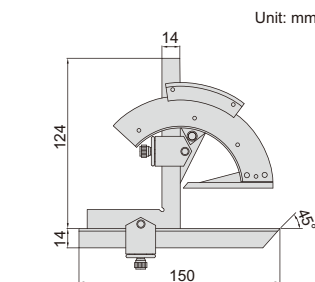


4797-100

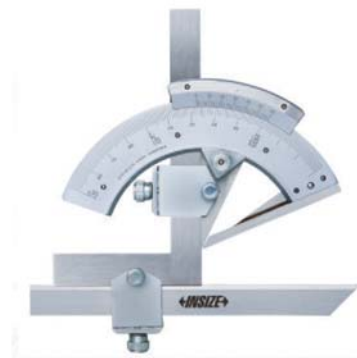
PROTRACTOR



| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2374-320 | 0-320° | 2' | ±2' |

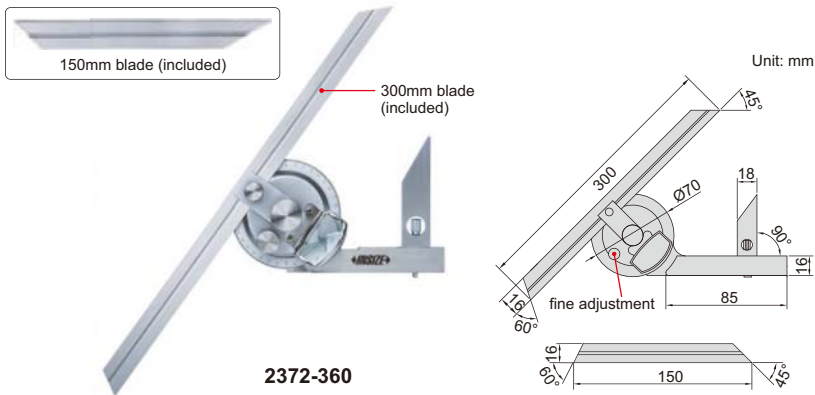


- Made of stainless steel
- Satin chrome plated scale



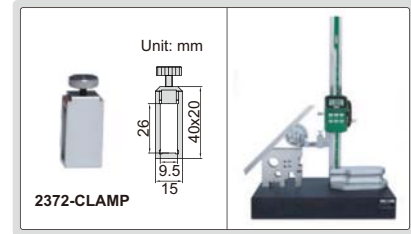
2374-320

UNIVERSAL PROTRACTOR



2372-360

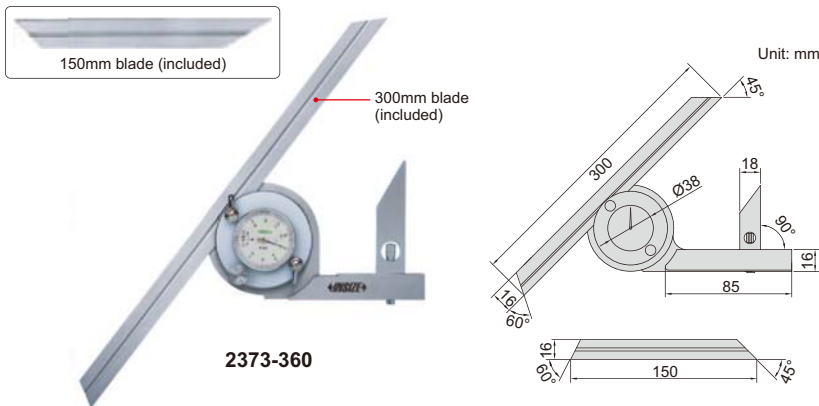
clamp for height gages (optional)



- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code 2372-CLAMP), suitable for height gages 1156, 1351 and 1250

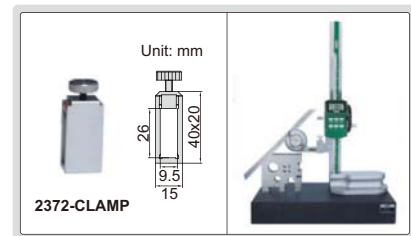
| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2372-360 | 0-360° | 5' | ±5' |

DIAL PROTRACTOR



2373-360

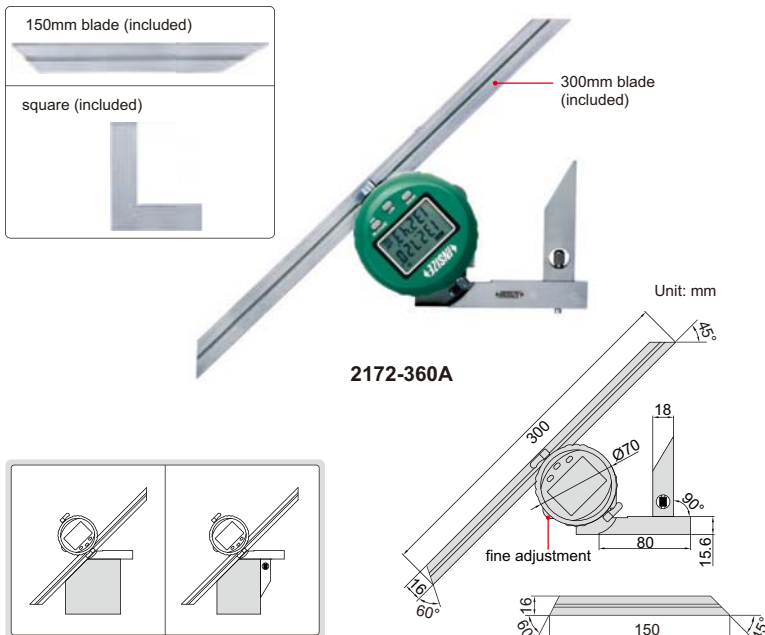
clamp for height gages (optional)



- Made of stainless steel
- Optional accessory: clamp (code 2372-CLAMP), suitable for height gages 1156, 1351 and 1250

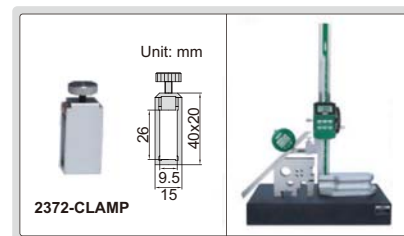
| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2373-360 | 0-360° | 5' | ±5' |

DIGITAL PROTRACTOR



2172-360A

clamp for height gages (optional)



DATA
OUTPUT

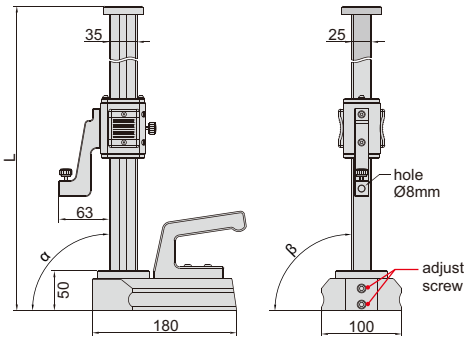
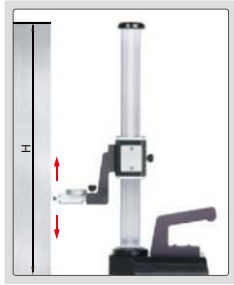


VIDEO

- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0~90°, 0~180° or 0~360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- Supplied with square to set 90°
- Made of stainless steel
- Optional accessory: data output cable (code 7305-SPC1A), clamp (code 2372-CLAMP), suitable for height gages 1156, 1351 and 1250

| Code | Range | Resolution | Accuracy |
|-----------|--------|------------|----------|
| 2172-360A | 0-360° | 10"/0.005° | ±5' |

PERPENDICULARITY TESTERS



dial test indicator is not included



- Optional accessory: dial test indicators (graduation: 1μm or 2μm), cylinder square (code 4710, for calibration), granite square (code 4141, for calibration)

| Code | Range (H) | Perpendicularity (α) | Side perpendicularity (β) | L |
|----------|-----------|----------------------|---------------------------|-------|
| 4770-300 | 0-300mm | 3μm | 10μm | 460mm |
| 4770-600 | 0-600mm | 5μm | 20μm | 760mm |

CYLINDER SQUARES



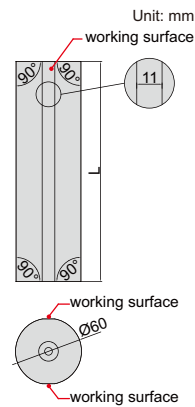
- Made of special alloy steel, hardness HRC58-60
- The handle can be removed

| Code | Length (L) | Squareness |
|-----------|------------|------------|
| 4710-200* | 200mm | 1μm |
| 4710-300* | 300mm | 2μm |

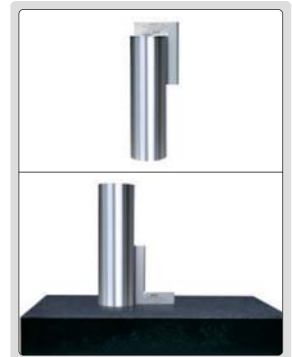
* Supplied with manufacturer inspection certificate



4710-200



inspect 90° internal and external angles

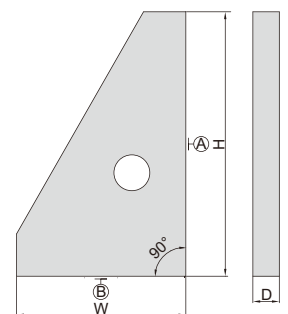


GRANITE SQUARES

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST

| Code | Size (HxW) | Flatness of A | Flatness of B | Squareness of A to B | D |
|----------|------------|---------------|---------------|----------------------|------|
| 4141-250 | 250x160mm | 1μm | 1μm | 2μm | 25mm |
| 4141-400 | 400x250mm | 1.5μm | 1μm | 3μm | 40mm |
| 4141-630 | 630x400mm | 2μm | 1.5μm | 4μm | 63mm |

4141-250



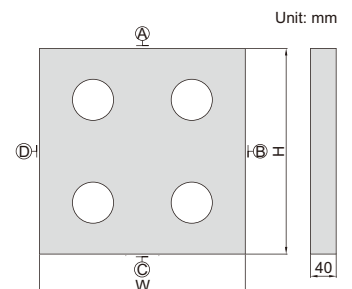
GRANITE SQUARE

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST

| Code | Size (HxW) | Flatness of A, B, C and D | Squareness and parallelism between A, B, C and D |
|----------|------------|---------------------------|--|
| 4144-315 | 315x315mm | 1.1μm | 2.6μm |



4144-315

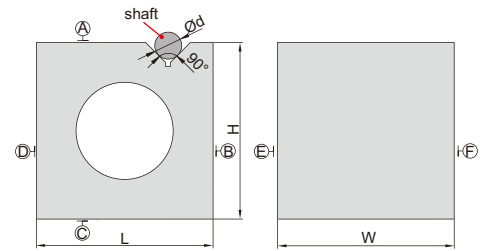


GRANITE SQUARE WITH V GROOVE

- Parallelism and squareness of A, B, C, D, E and F: 6µm
- Parallelism and squareness of V groove to A, B, C, D, E and F: 6µm



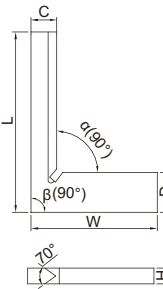
4142-200



| Code | Size (LxWxH) | Range of shaft (Ød) |
|----------|---------------|---------------------|
| 4142-200 | 200x200x200mm | 9~70mm |

90° TOOL MAKER SQUARES

- DIN875 grade 00
- Beveled edge for inside measurement
- Made of hardened stainless steel



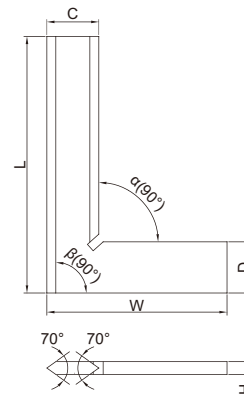
4794-040

| Code | Size (LxW) | Squareness | | C | D | H |
|----------|------------|------------|-------------|-----|-----|-----|
| | | Inside (α) | Outside (β) | | | |
| 4794-025 | 25x20mm | 2.2µm | 2.3µm | 4 | 6.5 | 3.5 |
| 4794-040 | 40x28mm | 2.3µm | 2.4µm | 5.5 | 8.5 | 3.5 |

(mm)

90° BEVELED EDGE SQUARES

- Satin chrome plating
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel



4790-0100

DIN875 grade 00 (mm)

| Code | Size (LxW) | Squareness | | C | D | H |
|-----------|------------|------------|-------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4790-050 | 50x40mm | 2.4µm | 2.5µm | 13 | 13 | 4 |
| 4790-075 | 75x50mm | 2.6µm | 2.8µm | 15 | 15 | 4 |
| 4790-0100 | 100x70mm | 2.8µm | 3.0µm | 20 | 20 | 5 |
| 4790-0150 | 150x100mm | 3.2µm | 3.5µm | 30 | 30 | 6 |
| 4790-0200 | 200x130mm | 3.7µm | 4.0µm | 34 | 34 | 7 |
| 4790-0250 | 250x165mm | 4.2µm | 4.5µm | 35 | 35 | 7 |
| 4790-0300 | 300x200mm | 4.6µm | 5.0µm | 40 | 40 | 8 |

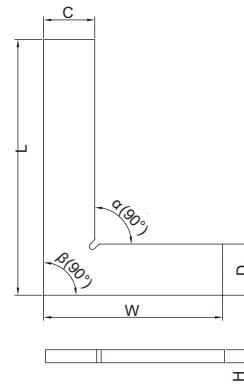
DIN875 grade 0 (mm)

| Code | Size (LxW) | Squareness | | C | D | H |
|-----------|------------|------------|-------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4790-500 | 50x40mm | 6µm | 6µm | 13 | 13 | 4 |
| 4790-750 | 75x50mm | 6µm | 7µm | 15 | 15 | 4 |
| 4790-1000 | 100x70mm | 7µm | 7µm | 20 | 20 | 5 |
| 4790-1500 | 150x100mm | 7µm | 8µm | 30 | 30 | 6 |
| 4790-2000 | 200x130mm | 8µm | 9µm | 34 | 34 | 7 |
| 4790-2500 | 250x165mm | 9µm | 10µm | 35 | 35 | 7 |
| 4790-3000 | 300x200mm | 10µm | 11µm | 40 | 40 | 8 |

90° FLAT EDGE SQUARES

- DIN875 grade 0
- Made of hardened stainless steel

| Code | Size (LxW) | Squareness | | C | D | H | (mm) |
|----------|------------|---------------------|---------------------|----|----|---|------|
| | | Inside (α) | Outside (β) | | | | |
| 4791-50 | 50x40mm | 6 μ m | 6 μ m | 15 | 15 | 4 | |
| 4791-75 | 75x50mm | 6 μ m | 7 μ m | 15 | 15 | 4 | |
| 4791-100 | 100x70mm | 7 μ m | 7 μ m | 20 | 20 | 5 | |
| 4791-150 | 150x100mm | 7 μ m | 8 μ m | 30 | 30 | 6 | |
| 4791-200 | 200x130mm | 8 μ m | 9 μ m | 30 | 30 | 7 | |
| 4791-250 | 250x165mm | 9 μ m | 10 μ m | 35 | 35 | 7 | |
| 4791-300 | 300x200mm | 10 μ m | 11 μ m | 40 | 40 | 8 | |

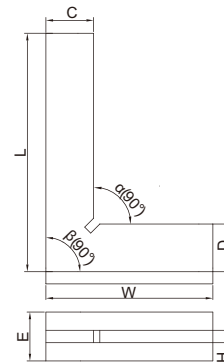


4791-100

90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

| Code | Size (LxW) | Squareness | | C | D | H | E | (mm) |
|----------|------------|---------------------|---------------------|----|----|---|----|------|
| | | Inside (α) | Outside (β) | | | | | |
| 4793-50 | 50x40mm | 6 μ m | 6 μ m | 13 | 13 | 4 | 13 | |
| 4793-75 | 75x50mm | 6 μ m | 7 μ m | 15 | 15 | 4 | 15 | |
| 4793-100 | 100x70mm | 7 μ m | 7 μ m | 20 | 20 | 5 | 20 | |
| 4793-150 | 150x100mm | 7 μ m | 8 μ m | 30 | 30 | 6 | 30 | |
| 4793-200 | 200x130mm | 8 μ m | 9 μ m | 30 | 30 | 7 | 30 | |
| 4793-250 | 250x165mm | 9 μ m | 10 μ m | 35 | 35 | 7 | 35 | |
| 4793-300 | 300x200mm | 10 μ m | 11 μ m | 40 | 40 | 8 | 40 | |

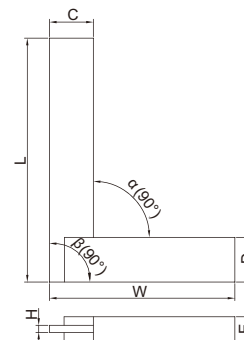


4793-100

90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

| Code | Size (LxW) | Squareness | | C | D | H | E | (mm) |
|----------|------------|---------------------|---------------------|----|----|---|----|------|
| | | Inside (α) | Outside (β) | | | | | |
| 4792-50 | 50x40mm | 6 μ m | 6 μ m | 12 | 12 | 3 | 10 | |
| 4792-75 | 75x50mm | 6 μ m | 7 μ m | 14 | 14 | 3 | 10 | |
| 4792-100 | 100x70mm | 7 μ m | 7 μ m | 18 | 18 | 3 | 10 | |
| 4792-150 | 150x100mm | 8 μ m | 8 μ m | 22 | 22 | 4 | 12 | |
| 4792-200 | 200x130mm | 9 μ m | 9 μ m | 25 | 25 | 4 | 12 | |

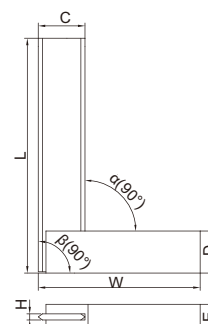


4792-100

90° BEVELED EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel

| Code | Size (LxW) | Squareness | | C | D | H | E | (mm) |
|----------|------------|---------------------|---------------------|----|----|---|----|------|
| | | Inside (α) | Outside (β) | | | | | |
| 4795-50 | 50x40mm | 6 μ m | 6 μ m | 12 | 12 | 3 | 10 | |
| 4795-75 | 75x50mm | 6 μ m | 7 μ m | 14 | 14 | 3 | 10 | |
| 4795-100 | 100x70mm | 7 μ m | 7 μ m | 18 | 18 | 3 | 10 | |
| 4795-150 | 150x100mm | 8 μ m | 8 μ m | 22 | 22 | 4 | 12 | |
| 4795-200 | 200x130mm | 9 μ m | 9 μ m | 25 | 25 | 4 | 12 | |



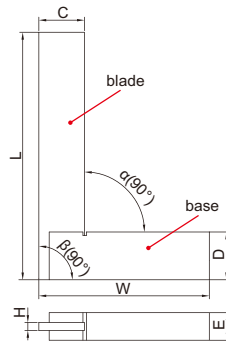
4795-100

MACHINIST SQUARES WITH WIDE BASE

ATTENTION:
LOW ACCURACY



4707-100



- Economic model
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardened

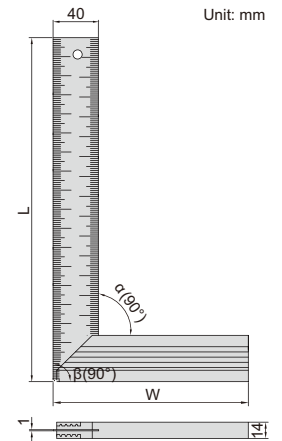
| Code | Size (LxW) | Squareness | | (mm) | | | |
|-----------|------------|---------------------|---------------------|------|----|---|----|
| | | Inside (α) | Outside (β) | C | D | H | E |
| 4707-50 | 50x40mm | 24 μ m | 25 μ m | 16 | 12 | 3 | 9 |
| 4707-75 | 75x50mm | 26 μ m | 28 μ m | 16 | 16 | 3 | 9 |
| 4707-100 | 100x70mm | 28 μ m | 30 μ m | 19 | 19 | 3 | 12 |
| 4707-150 | 150x100mm | 33 μ m | 35 μ m | 25 | 25 | 3 | 16 |
| 4707-200 | 200x130mm | 37 μ m | 40 μ m | 30 | 32 | 4 | 16 |
| 4707-250 | 250x165mm | 42 μ m | 45 μ m | 30 | 32 | 4 | 19 |
| 4707-300 | 300x200mm | 47 μ m | 50 μ m | 32 | 32 | 4 | 19 |
| 4707-400 | 400x250mm | 56 μ m | 60 μ m | 38 | 38 | 5 | 22 |
| 4707-500 | 500x300mm | 65 μ m | 70 μ m | 45 | 50 | 6 | 25 |
| 4707-600 | 600x350mm | 75 μ m | 80 μ m | 50 | 50 | 6 | 30 |
| 4707-750 | 750x400mm | 90 μ m | 95 μ m | 55 | 55 | 6 | 50 |
| 4707-900 | 900x500mm | 103 μ m | 110 μ m | 65 | 75 | 9 | 50 |
| 4707-1000 | 1000x550mm | 113 μ m | 120 μ m | 65 | 75 | 9 | 50 |

TRY SQUARE

- Graduation: 1mm
- Stainless steel blade, aluminum base



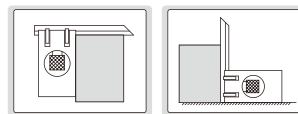
2275-300



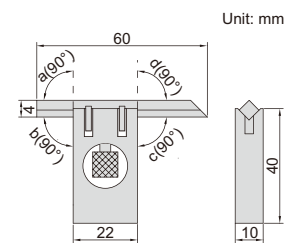
| Code | Size (LxW) | Squareness | |
|----------|------------|---------------------|---------------------|
| | | Inside (α) | Outside (β) |
| 2275-300 | 300x170mm | 0.5mm | 0.5mm |

ADJUSTABLE SQUARE

- The straight edge can move and can be locked by the clamping screw
- Made of hardened stainless steel



4701-1



| Code | Squareness (a, b, c, d) |
|--------|-------------------------|
| 4701-1 | 7 μ m |

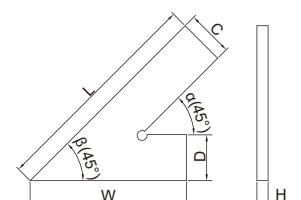
45° SQUARES

- Made of hardened stainless steel

| Code | Size (LxW) | Accuracy | | (mm) | | |
|-----------|------------|---------------------|---------------------|------|----|---|
| | | Inside (α) | Outside (β) | C | D | H |
| 4745-1100 | 100x70mm | 27 μ m | 30 μ m | 20 | 20 | 5 |
| 4745-1120 | 120x80mm | 29 μ m | 32 μ m | 20 | 20 | 5 |
| 4745-1150 | 150x100mm | 32 μ m | 35 μ m | 20 | 20 | 5 |
| 4745-1200 | 200x130mm | 36 μ m | 40 μ m | 25 | 25 | 5 |



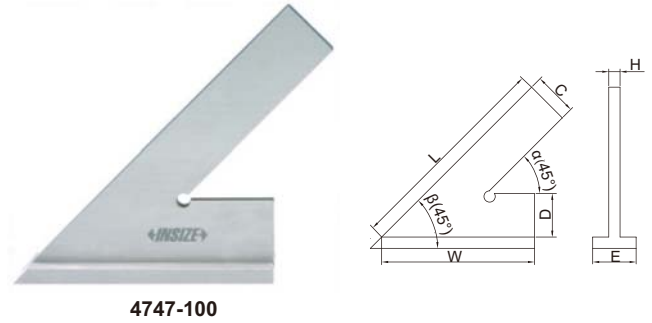
4745-1100



45° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

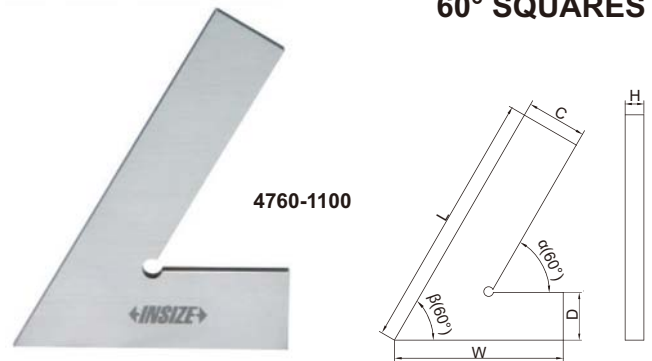
| Code | Size (LxW) | Accuracy | | C | D | H | E |
|----------|------------|---------------------|---------------------|----|----|---|----|
| | | Inside (α) | Outside (β) | | | | |
| 4747-100 | 100x70mm | 27 μ m | 31 μ m | 20 | 20 | 5 | 20 |
| 4747-120 | 120x80mm | 29 μ m | 33 μ m | 20 | 20 | 5 | 20 |
| 4747-150 | 150x100mm | 32 μ m | 36 μ m | 20 | 20 | 5 | 20 |
| 4747-200 | 200x130mm | 36 μ m | 41 μ m | 25 | 25 | 5 | 25 |



60° SQUARES

- Made of hardened stainless steel

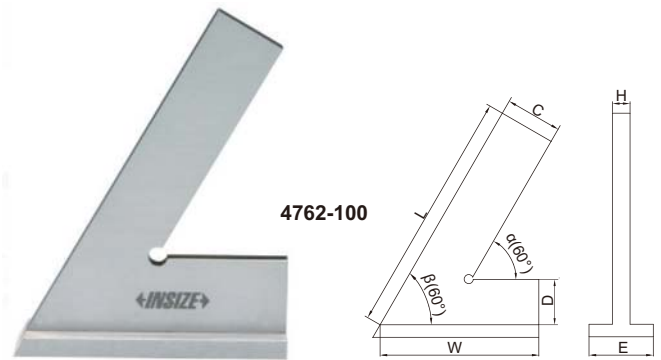
| Code | Size (LxW) | Accuracy | | C | D | H |
|-----------|------------|---------------------|---------------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4760-1100 | 100x70mm | 28 μ m | 30 μ m | 20 | 20 | 5 |
| 4760-1120 | 120x80mm | 30 μ m | 32 μ m | 20 | 20 | 5 |
| 4760-1150 | 150x100mm | 32 μ m | 35 μ m | 20 | 20 | 5 |
| 4760-1200 | 200x130mm | 37 μ m | 40 μ m | 25 | 25 | 5 |



60° SQUARES WITH WIDE BASE

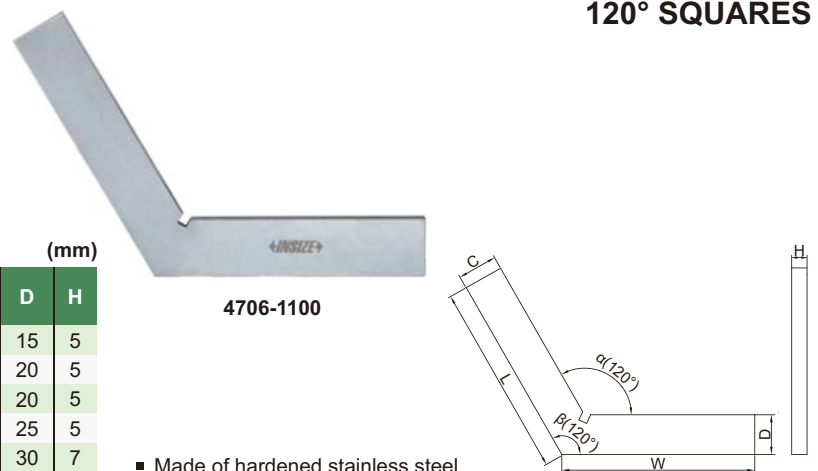
- Made of hardened stainless steel

| Code | Size (LxW) | Accuracy | | C | D | H | E |
|----------|------------|---------------------|---------------------|----|----|---|----|
| | | Inside (α) | Outside (β) | | | | |
| 4762-100 | 100x70mm | 28 μ m | 31 μ m | 20 | 20 | 5 | 20 |
| 4762-120 | 120x80mm | 30 μ m | 33 μ m | 20 | 20 | 5 | 20 |
| 4762-150 | 150x100mm | 33 μ m | 36 μ m | 20 | 20 | 5 | 20 |
| 4762-200 | 200x130mm | 37 μ m | 41 μ m | 25 | 25 | 5 | 25 |



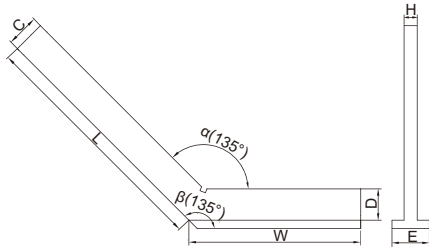
120° SQUARES

| Code | Size (LxW) | Accuracy | | C | D | H |
|-----------|------------|---------------------|---------------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4706-150 | 50x50mm | 24 μ m | 25 μ m | 15 | 15 | 5 |
| 4706-175 | 75x75mm | 26 μ m | 28 μ m | 20 | 20 | 5 |
| 4706-1100 | 100x100mm | 29 μ m | 30 μ m | 20 | 20 | 5 |
| 4706-1150 | 150x150mm | 34 μ m | 35 μ m | 25 | 25 | 5 |
| 4706-1200 | 200x200mm | 38 μ m | 40 μ m | 30 | 30 | 7 |



- Made of hardened stainless steel

135° SQUARES WITH WIDE BASE



(mm)

| Code | Size (LxW) | Accuracy | | C | D | H | E |
|-----------|------------|---------------------|---------------------|----|----|---|----|
| | | Inside (α) | Outside (β) | | | | |
| 4754-3100 | 100x70mm | 29 μ m | 31 μ m | 20 | 20 | 5 | 20 |
| 4754-3120 | 120x80mm | 31 μ m | 33 μ m | 20 | 20 | 5 | 20 |
| 4754-3150 | 150x100mm | 34 μ m | 36 μ m | 20 | 20 | 5 | 20 |
| 4754-3200 | 200x130mm | 39 μ m | 41 μ m | 30 | 30 | 7 | 30 |
| 4754-3250 | 250x165mm | 44 μ m | 46 μ m | 30 | 30 | 7 | 30 |
| 4754-3300 | 300x175mm | 49 μ m | 51 μ m | 35 | 35 | 7 | 35 |



4754-3120

- Made of hardened stainless steel

STRAIGHT EDGES



4700-100

- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating

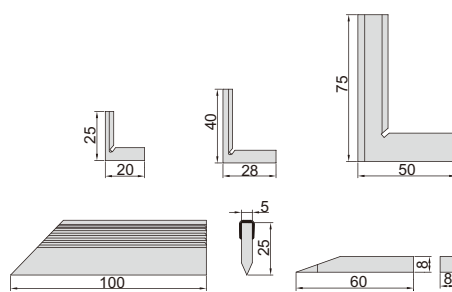
(mm)

| Code | Size (L) | Straightness | W | H |
|----------|----------|--------------|----|----|
| 4700-50 | 50mm | 2.2 μ m | 5 | 20 |
| 4700-75 | 75mm | 2.3 μ m | 5 | 25 |
| 4700-100 | 100mm | 2.4 μ m | 5 | 25 |
| 4700-125 | 125mm | 2.5 μ m | 6 | 30 |
| 4700-150 | 150mm | 2.6 μ m | 6 | 30 |
| 4700-200 | 200mm | 2.8 μ m | 6 | 30 |
| 4700-250 | 250mm | 3.0 μ m | 8 | 40 |
| 4700-300 | 300mm | 3.2 μ m | 8 | 40 |
| 4700-400 | 400mm | 3.6 μ m | 10 | 50 |
| 4700-500 | 500mm | 4.0 μ m | 10 | 50 |

SQUARE SET

- Includes:
 - 90° tool maker square 25x20mm DIN875 grade 00 (code **4794-025**)
 - 90° tool maker square 40x28mm DIN875 grade 00 (code **4794-040**)
 - 90° beveled edge square 75x50mm DIN875 grade 00 (code **4790-075**)
 - straight edge 100mm DIN874 (code **4700-100**)
 - scraper
- Made of hardened stainless steel

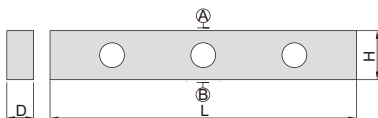
Unit: mm



4702-1

Code
4702-1

GRANITE STRAIGHT EDGES



(mm)

| Code | Length (L) | Flatness of A and B | Parallelism between A and B | D | H |
|------------|------------|---------------------|-----------------------------|----|-----|
| 4147-500A | 500mm | 2.1 μ m | 3.2 μ m | 50 | 80 |
| 4147-1000A | 1000mm | 3 μ m | 4.5 μ m | 60 | 120 |



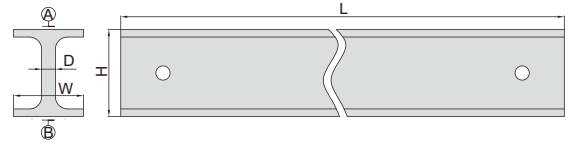
4147-500A

MAGNALIUM STRAIGHT EDGES



4180-500

- Made of magnalium, light weight, non-deform, no rusty



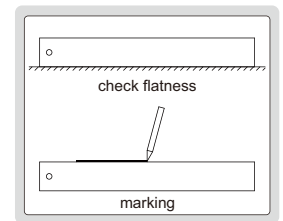
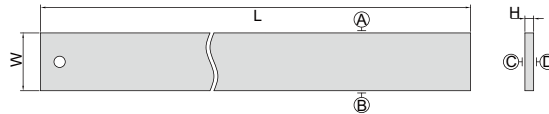
| Code | Length (L) | Flatness of A and B | Parallelism between A and B | H | W | D |
|-----------|------------|---------------------|-----------------------------|-------|------|-----|
| 4180-500 | 500mm | 3 μ m | 4 μ m | 60mm | 30mm | 5mm |
| 4180-1000 | 1000mm | 5 μ m | 8 μ m | 60mm | 30mm | 5mm |
| 4180-1500 | 1500mm | 15 μ m | 22 μ m | 100mm | 40mm | 5mm |
| 4180-2000 | 2000mm | 18 μ m | 27 μ m | 100mm | 40mm | 8mm |

PRECISION STRAIGHT EDGES



7117-300

- Check flatness, straightness and for marking
- Made of tool steel



| Code | Range (L) | Straightness and parallelism of A and B | Straightness and parallelism of C and D | W | H |
|----------|-----------|---|---|----|-----|
| 7117-300 | 305 | 0.005 | 0.05 | 41 | 6.3 |
| 7117-600 | 610 | 0.006 | 0.06 | 51 | 7.9 |
| 7117-900 | 914 | 0.007 | 0.06 | 64 | 9.5 |

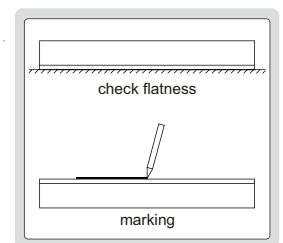
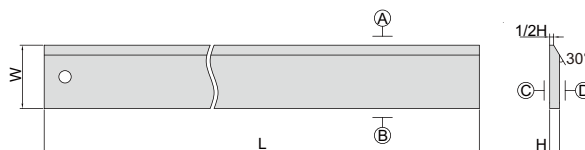
(mm)

PRECISION STRAIGHT EDGES WITH BEVELED EDGE



7118-300

- Check flatness, straightness and for marking
- Made of tool steel



| Code | Range (L) | Straightness and parallelism of A and B | Straightness and parallelism of C and D | W | H |
|----------|-----------|---|---|----|-----|
| 7118-300 | 305 | 0.005 | 0.05 | 41 | 6.3 |
| 7118-600 | 610 | 0.006 | 0.06 | 51 | 7.9 |
| 7118-900 | 914 | 0.007 | 0.06 | 64 | 9.5 |

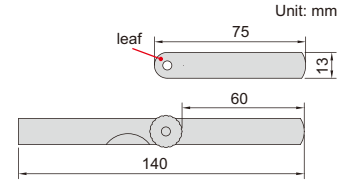
(mm)

FEELER GAGE

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm ,
'T' is the thickness of leaves in μm



4601-25



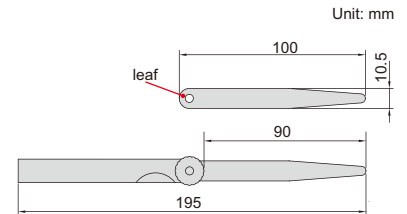
| Code | Range | Thickness of leaves included (mm) | Quantity of leaves |
|---------|-------------|--|--------------------|
| 4601-25 | 0.04-1.00mm | 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00 | 25 |

FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm ,
'T' is the thickness of leaves in μm



4602-20



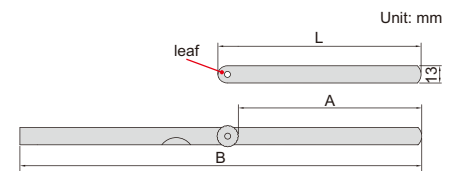
| Code | Range | Thickness of leaves included (mm) | Quantity of leaves |
|----------|-------------|--|--------------------|
| 4602-13A | 0.03-0.50mm | 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50 | 13 |
| 4602-13 | 0.05-1.00mm | 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00 | 13 |
| 4602-17 | 0.02-1.00mm | 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00 | 17 |
| 4602-20 | 0.05-1.00mm | 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00 | 20 |
| 4602-28 | 0.05-1.00mm | 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.12, 0.13, 0.14, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00 | 28 |
| 4602-32 | 0.03-1.00mm | 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00 | 32 |

LONG FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm ,
'T' is the thickness of leaves in μm



4605-20

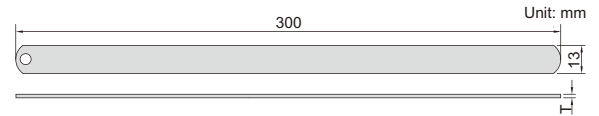


| Code | Range | Thickness of leaves included (mm) | Quantity of leaves | L | A | B |
|----------|-------------|--|--------------------|-----|-----|-----|
| 4605-13 | 0.05-1.00mm | 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00 | 13 | 150 | 135 | 295 |
| 4605-131 | 0.05-1.00mm | | 13 | 200 | 185 | 395 |
| 4605-132 | 0.05-1.00mm | | 13 | 300 | 285 | 590 |
| 4605-20 | 0.05-1.00mm | 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00 | 20 | 150 | 135 | 295 |
| 4605-201 | 0.05-1.00mm | | 20 | 200 | 185 | 395 |
| 4605-202 | 0.05-1.00mm | | 20 | 300 | 285 | 590 |

FEELER GAGE STOCKS



4622-10



- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 300mm
- Width 13mm
- 10pcs/package

| Code | Thickness (T) | Accuracy |
|---------|---------------|----------|
| 4622-02 | 0.02mm | ±3µm |
| 4622-03 | 0.03mm | ±3µm |
| 4622-04 | 0.04mm | ±3µm |
| 4622-05 | 0.05mm | ±3µm |
| 4622-06 | 0.06mm | ±3µm |
| 4622-07 | 0.07mm | ±4µm |
| 4622-08 | 0.08mm | ±4µm |
| 4622-09 | 0.09mm | ±4µm |
| 4622-10 | 0.10mm | ±4µm |
| 4622-12 | 0.12mm | ±5µm |

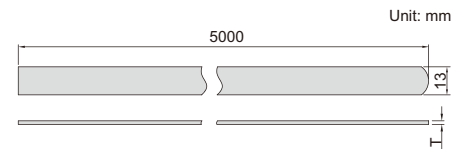
| Code | Thickness (T) | Accuracy |
|---------|---------------|----------|
| 4622-15 | 0.15mm | ±5µm |
| 4622-18 | 0.18mm | ±6µm |
| 4622-20 | 0.20mm | ±6µm |
| 4622-25 | 0.25mm | ±6µm |
| 4622-30 | 0.30mm | ±7µm |
| 4622-35 | 0.35mm | ±7µm |
| 4622-40 | 0.40mm | ±8µm |
| 4622-45 | 0.45mm | ±8µm |
| 4622-50 | 0.50mm | ±9µm |
| 4622-55 | 0.55mm | ±9µm |

| Code | Thickness (T) | Accuracy |
|----------|---------------|----------|
| 4622-60 | 0.60mm | ±9µm |
| 4622-65 | 0.65mm | ±9µm |
| 4622-70 | 0.70mm | ±12µm |
| 4622-75 | 0.75mm | ±12µm |
| 4622-80 | 0.80mm | ±13µm |
| 4622-85 | 0.85mm | ±13µm |
| 4622-90 | 0.90mm | ±14µm |
| 4622-95 | 0.95mm | ±14µm |
| 4622-100 | 1.00mm | ±16µm |

FEELER GAGE TAPES



4621-30



- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm

| Code | Thickness (T) | Accuracy |
|---------|---------------|----------|
| 4621-02 | 0.02mm | ±4µm |
| 4621-03 | 0.03mm | ±4µm |
| 4621-04 | 0.04mm | ±4µm |
| 4621-05 | 0.05mm | ±4µm |
| 4621-06 | 0.06mm | ±4µm |
| 4621-07 | 0.07mm | ±5µm |
| 4621-08 | 0.08mm | ±5µm |
| 4621-09 | 0.09mm | ±5µm |
| 4621-10 | 0.10mm | ±5µm |
| 4621-12 | 0.12mm | ±5µm |

| Code | Thickness (T) | Accuracy |
|---------|---------------|----------|
| 4621-15 | 0.15mm | ±6µm |
| 4621-18 | 0.18mm | ±7µm |
| 4621-20 | 0.20mm | ±8µm |
| 4621-25 | 0.25mm | ±9µm |
| 4621-30 | 0.30mm | ±9µm |
| 4621-35 | 0.35mm | ±11µm |
| 4621-40 | 0.40mm | ±12µm |
| 4621-45 | 0.45mm | ±12µm |
| 4621-50 | 0.50mm | ±14µm |
| 4621-55 | 0.55mm | ±14µm |

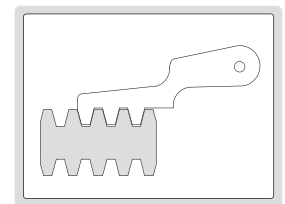
| Code | Thickness (T) | Accuracy |
|----------|---------------|----------|
| 4621-60 | 0.60mm | ±14µm |
| 4621-65 | 0.65mm | ±14µm |
| 4621-70 | 0.70mm | ±17µm |
| 4621-75 | 0.75mm | ±17µm |
| 4621-80 | 0.80mm | ±19µm |
| 4621-85 | 0.85mm | ±19µm |
| 4621-90 | 0.90mm | ±22µm |
| 4621-95 | 0.95mm | ±22µm |
| 4621-100 | 1.00mm | ±24µm |

PITCH GAGES

- Check the pitch of screw thread
- Accuracy: ±0.07mm
- Made of medium carbon steel



4824-12



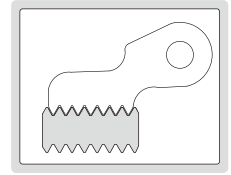
| Code | Range | Thread type | Pitch of leaves included | Quantity of leaves |
|---------|---------|-------------|---|--------------------|
| 4824-12 | 2-20mm | Tr30° | 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm | 12 |
| 4824-16 | 1-12TPI | ACME29° | 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI | 16 |

PITCH GAGES

- Check the pitch of screw thread
- Accuracy: $\pm 0.07\text{mm}$
- Made of medium carbon steel



4820-122



Metric 60° screw

| Code | Range | Pitch of leaves included (mm) | Quantity of leaves |
|-----------|------------|--|--------------------|
| 4820-122 | 0.4-7.0mm | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7 | 22 |
| 4820-124 | 0.25-7.0mm | 0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7 | 24 |
| 4820-1241 | 0.25-6.0mm | 0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6 | 24 |

Unified 60° screw

| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|---------|---|--------------------|
| 4820-230 | 4-42TPI | 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI | 30 |

Whitworth 55° screw

| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|---------|---|--------------------|
| 4820-330 | 4-42TPI | 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI | 30 |
| 4820-328 | 4-62TPI | 4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI | 28 |

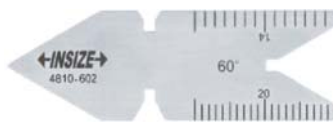
Metric 60° and Whitworth 55° screw

| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|------------|--|--------------------|
| 4820-452 | 0.25-6.0mm | 0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm | 52 |
| | 4-62TPI | 4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI | |
| 4820-450 | 0.4-7.0mm | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm | 50 |
| | 4-62TPI | 4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI | |

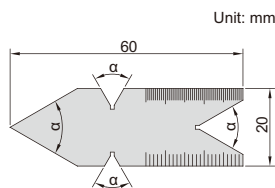
Metric 60° and Unified 60° screw

| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|-----------|---|--------------------|
| 4820-552 | 0.4-7.0mm | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm | 52 |
| | 4-42TPI | 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI | |

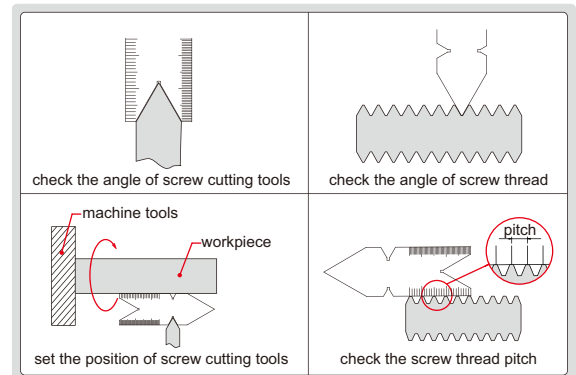
CENTER GAGES



4810-602



- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: $\pm 30\text{min}$.
- Made of stainless steel



| Code | Thread type | Angle (α) | Graduation |
|----------|---------------|--------------------|---|
| 4810-601 | METRIC 60° | 60° | 0.5mm and 1mm |
| 4810-602 | UNIFIED 60° | 60° | 14ths and 20ths on front side, 24ths and 32ths on back side |
| 4810-55 | WHITWORTH 55° | 55° | 14ths and 20ths on front side, 24ths and 32ths on back side |

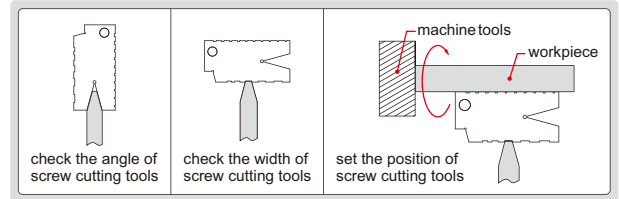
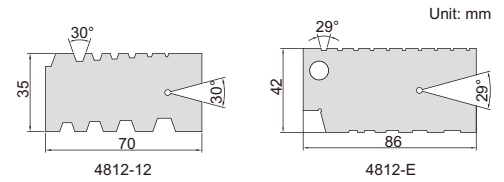
THREAD GAGES



4812-E

- To check and set screw cutting tools
- Angle accuracy: $\pm 10\text{min}$.
- Made of medium carbon steel

| Code | Range | Thread type | Pitch |
|---------|---------|-------------|--|
| 4812-12 | 2-12mm | Tr30° | 2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm |
| 4812-E | 1-10TPI | ACME29° | 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI |

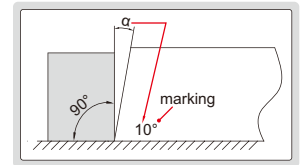


ANGLE GAGE



4806-20

- To check complementary angles
- Made of stainless steel



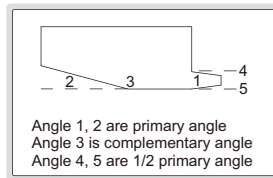
| Code | Range | Angle of leaves included | Quantity of leaves | Accuracy |
|---------|--------|---|--------------------|-----------|
| 4806-20 | 1°-45° | 1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45° | 20 | $\pm 30'$ |

ANGLE GAGE SET

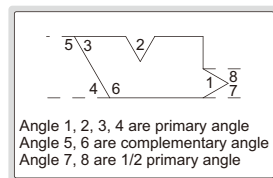


4807

- Each blade checks primary, 1/2 primary and complementary angles
- Made of medium carbon steel



type A



type B

| Code | Quantity of leaves | Accuracy |
|------|--------------------|-----------|
| 4807 | 18 | $\pm 10'$ |

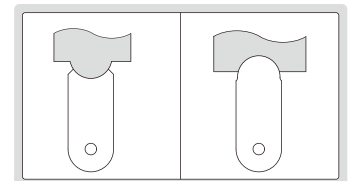
| Primary angle | 1/2 primary angle | Complementary angle | Type |
|---------------|-------------------|---------------------|------|
| 5° | 2°30' | 175° | A |
| 10° | 5° | 170° | A |
| 15° | 7°30' | 165° | A |
| 20° | 10° | 160° | B |
| 25° | 12°30' | 155° | B |
| 30° | 15° | 150° | B |
| 35° | 17°30' | 145° | B |
| 40° | 20° | 140° | B |
| 45° | 22°30' | 135° | B |
| 50° | 25° | 130° | B |
| 55° | 27°30' | 125° | B |
| 60° | 30° | 120° | B |
| 65° | 32°30' | 115° | B |
| 70° | 35° | 110° | B |
| 75° | 37°30' | 105° | B |
| 80° | 40° | 100° | B |
| 85° | 42°30' | 95° | B |
| 90° | 45° | 90° | B |

RADIUS GAGES



4801-17

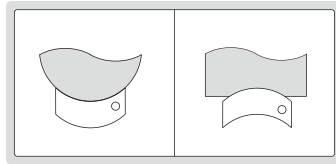
- Made of medium carbon steel



| Code | Range | Radius of leaves included (mm) | Quantity of leaves (internal + external) | Accuracy |
|---------|-----------|---|--|----------------------|
| 4801-17 | 1-7mm | 1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7 | 17+17 | $\pm 0.03\text{mm}$ |
| 4801-16 | 7.5-15mm | 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15 | 16+16 | $\pm 0.035\text{mm}$ |
| 4801-15 | 15.5-25mm | 15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25 | 15+15 | $\pm 0.042\text{mm}$ |

RADIUS GAGE

- Made of stainless steel

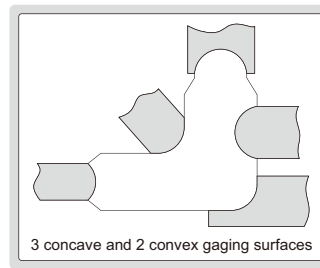


4802-31

| Code | Range | Radius of leaves included (mm) | Quantity of leaves | Accuracy |
|---------|---------|--|--------------------|----------|
| 4802-31 | 25-40mm | 25, 25.5, 26, 26.5, 27, 27.5, 28, 28.5, 29, 29.5, 30, 30.5, 31, 31.5, 32, 32.5, 33, 33.5, 34, 34.5, 35, 35.5, 36, 36.5, 37, 37.5, 38, 38.5, 39, 39.5, 40 | 31pcs | ±0.06mm |

RADIUS GAGE SET

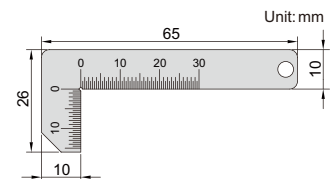
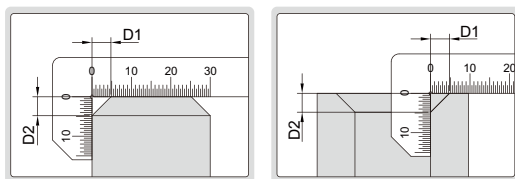
- Each piece has 3 concave and 2 convex gauging surfaces
- Supplied with handle
- Made of medium carbon steel



4804-26

| Code | Range | Radius of leaves included (mm) | Quantity of leaves | Accuracy |
|---------|------------|---|--------------------|----------|
| 4804-26 | 0.5 - 13mm | 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13 | 26 | ±0.05mm |

CHAMFER GAGE



- To measure internal and external chamfers
- Made of stainless steel

4844-1

| Code | Graduation | Accuracy |
|--------|------------|----------|
| 4844-1 | 0.5mm | ±0.25mm |

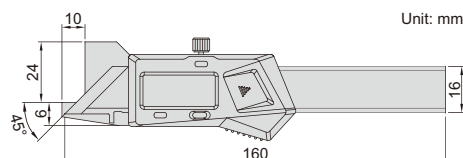
DIGITAL CHAMFER GAGE

- Measure 45° chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1180-6

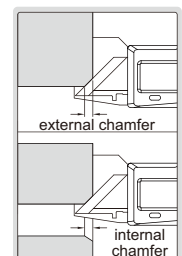
preset buttons



Unit: mm

DATA OUTPUT

measure 45° chamfer dimension

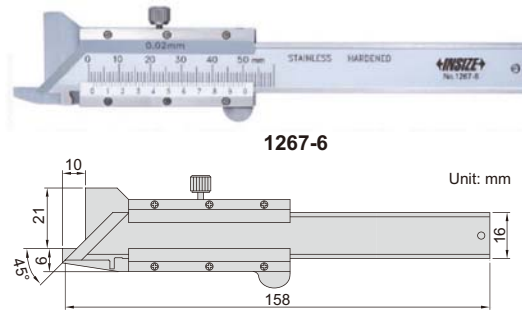


| Code | Range | Accuracy |
|--------|---------------|----------|
| 1180-6 | 0-6mm/0-0.24" | ±0.06mm |

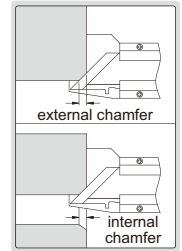
CHAMFER GAGE

- Measure 45° chamfer dimension
- Graduation 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

| Code | Range | Accuracy |
|--------|-------|----------|
| 1267-6 | 0-6mm | ±0.06mm |

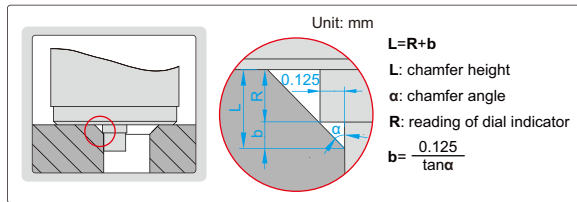


measure 45° chamfer dimension



CHAMFER HEIGHT GAGE

principle of measurement

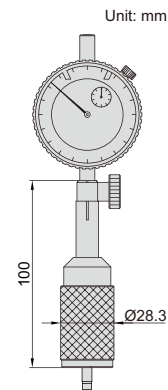


- Measure outside or inside chamfer height
- Suitable for diameter of bores ≥ 6mm, chamfer angle α ≥ 30°
- Setting gage is included

| Code | Range (L) | Graduation | Accuracy |
|--------|-----------|------------|----------|
| 2943-1 | 0.2-5mm | 0.01mm | ±0.02mm |



2943-1

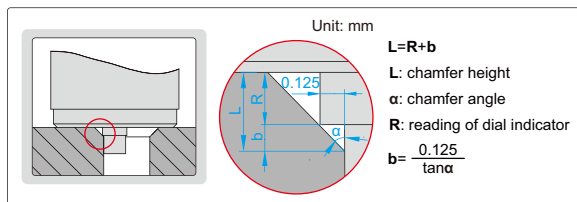


setting gage (included)



DIGITAL CHAMFER HEIGHT GAGE

principle of measurement

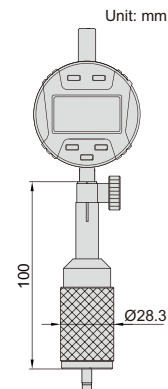


- Measure outside or inside chamfer height
- Suitable for diameter of bores ≥ 6mm, chamfer angle α ≥ 30°
- Resolution: 0.01mm/0.0005"
- Setting gage is included

| Code | Range (L) | Accuracy |
|--------|----------------------|----------|
| 2944-1 | 0.2-5mm/0.008-0.197" | ±0.02mm |



2944-1



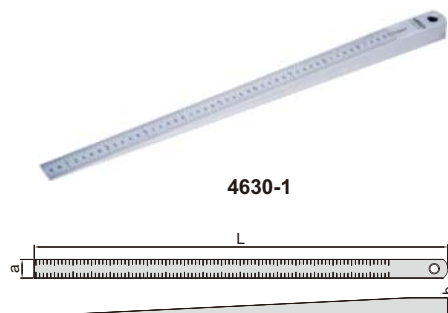
setting gage (included)



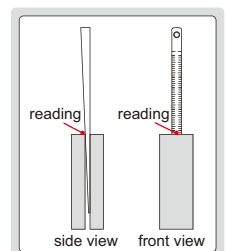
TAPER GAGES

- For quick measurement of gap width
- Stain chrome plated reading surface
- Made of stainless steel

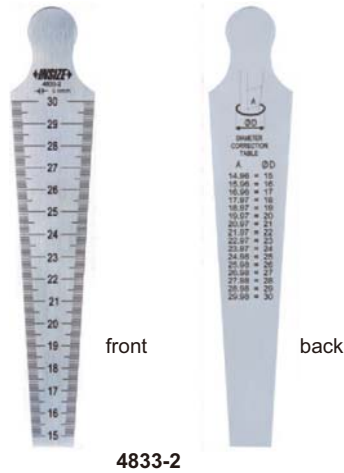
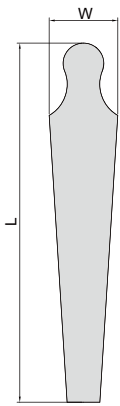
| Code | Range | Graduation | Accuracy | L | a | b |
|--------|----------|------------|----------|-----|------|------|
| 4630-3 | 0.4-6mm | 0.05mm | ±0.04mm | 164 | 12.5 | 6.5 |
| 4630-1 | 0.5-10mm | 0.05mm | ±0.07mm | 220 | 10 | 10.5 |
| 4630-2 | 0.5-15mm | 0.1mm | ±0.08mm | 184 | 12.5 | 16.5 |



4630-1

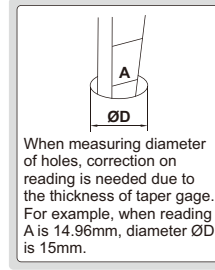


TAPER GAGES

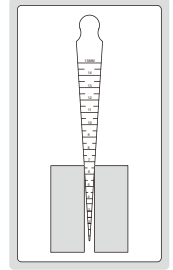


front
back
4833-2

measure diameter of hole



measure slot width

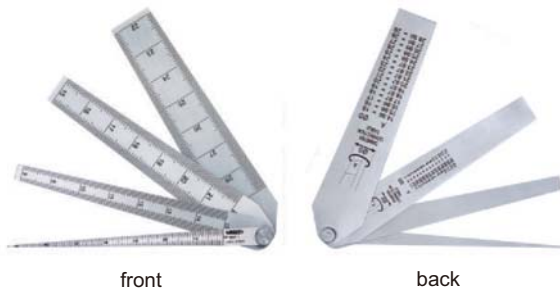


- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for 4833-1, 4833-2)
- Made of stainless steel

| Code | Range | Graduation | Accuracy | L | W |
|--------|----------|------------|----------|-----|------|
| 4833-1 | 0.8-15mm | 0.1mm | ±0.1mm | 146 | 17 |
| 4833-2 | 15-30mm | 0.1mm | ±0.1mm | 159 | 30.4 |
| 4833-3 | 30-45mm | 0.1mm | ±0.1mm | 166 | 45.4 |
| 4833-4 | 45-60mm | 0.1mm | ±0.1mm | 170 | 60.5 |

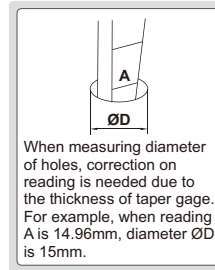
(mm)

TAPER GAGE SET

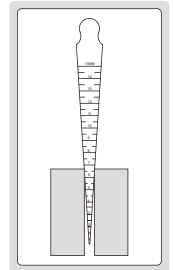


front
back
4837-1

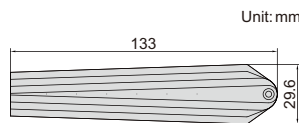
measure diameter of hole



measure slot width



- Include 4pcs (1-8mm, 8-15mm, 15-22mm, 22-29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

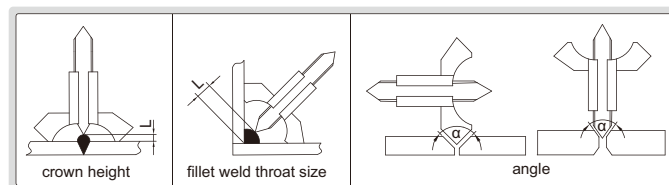
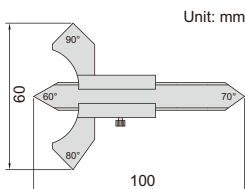


| Code | Range | Graduation | Accuracy |
|--------|--------|------------|----------|
| 4837-1 | 1-29mm | 0.05mm | ±0.05mm |

WELDING GAGE



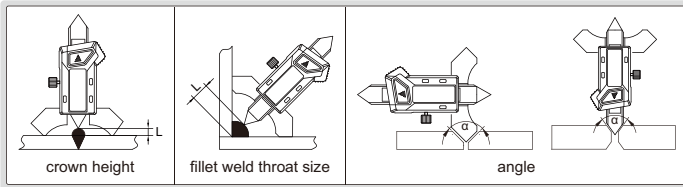
4830



- Made of stainless steel
- Stain chrome plated reading surface

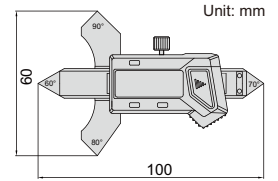
| Code | Measurement | Range | Graduation | Accuracy |
|------|-------------------------|--------------------|------------|----------|
| 4830 | crown height | 0-8mm | 0.1mm | ±0.1mm |
| | fillet weld throat size | 0-20mm | 0.1mm | ±0.3mm |
| | angle | 60°, 70°, 80°, 90° | — | ±1° |

DIGITAL WELDING GAGE



ATTENTION:
NO DATA OUTPUT

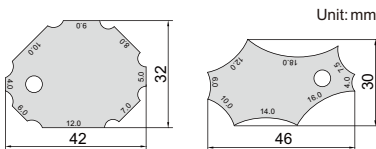
4831-20A



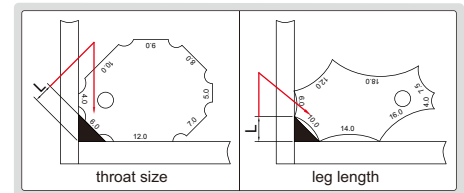
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

| Code | Measurement | Range | Resolution | Accuracy |
|----------|-------------------------|--------------------|----------------|----------|
| 4831-20A | crown height | 0-7mm | 0.01mm/0.0005" | ±0.03mm |
| | fillet weld throat size | 0-20mm | 0.01mm/0.0005" | ±0.1mm |
| | angle | 60°, 70°, 80°, 90° | — | ±1° |

FILLET WELDING GAGE



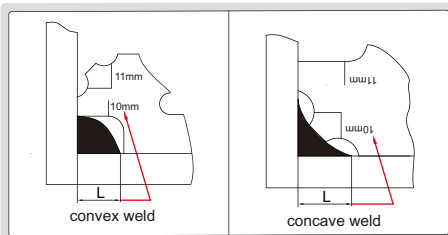
4832-1



- Made of stainless steel
- Sizes marked on both faces

| Code | Throat size | Leg length | Accuracy |
|--------|----------------------------|---------------------------------|----------|
| 4832-1 | 4, 5, 6, 7, 8, 9, 10, 12mm | 4, 6, 7.5, 10, 12, 14, 16, 18mm | ±0.5mm |

FILLET WELDING GAGES



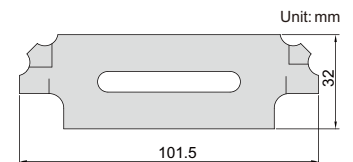
4836-1



4836-2

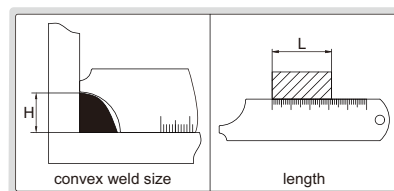
- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

| Code | Size | Accuracy |
|--------|---|----------------|
| 4836-1 | 3mm, 4mm, 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 14mm, 16mm, 19mm, 22mm, 25mm | ±0.5mm |
| 4836-2 | 1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm) | ±0.02" (0.5mm) |



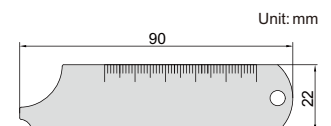
FILLET WELDING GAGE

- Measure convex weld sizes
- 3 blades are included
- Made of stainless steel

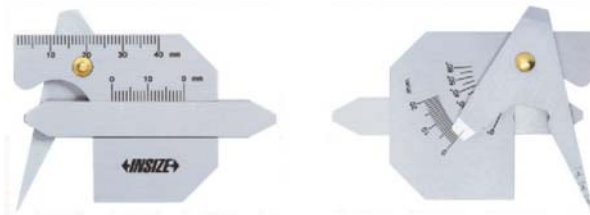


4847-1

| Code | Measurement | Range | Graduation | Accuracy |
|--------|------------------|-----------------------|------------|----------|
| 4847-1 | convex weld size | 4, 6, 8, 10, 12, 14mm | — | ±0.5mm |
| | length | 0 - 50mm | 1mm | ±0.5mm |



WELDING GAGE



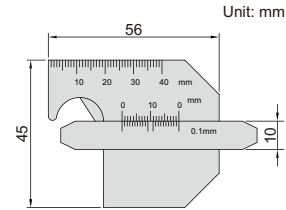
front

back

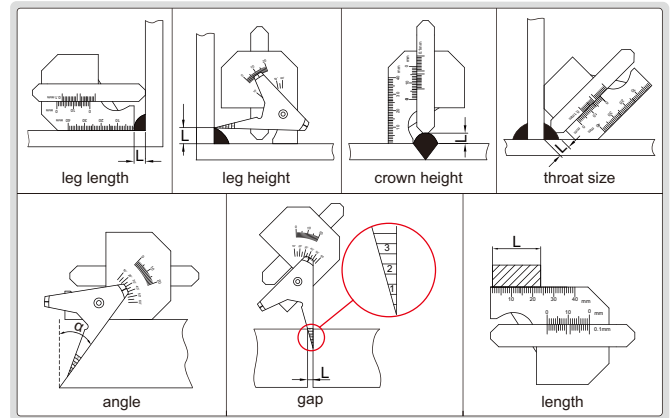
6832-1

- Made of stainless steel
- Stain chrome plated surface

| Code | Measurement | Range | Graduation | Accuracy |
|--------|--------------|---------|------------|----------|
| 6832-1 | leg length | 0-10mm | 0.1mm | ±0.1mm |
| | leg height | 0-20mm | 1mm | ±0.5mm |
| | crown height | 0-10mm | 0.1mm | ±0.1mm |
| | throat size | 0-10mm | 0.1mm | ±0.1mm |
| | angle | 0°-60° | 5° | ±1° |
| | gap | 1-3.5mm | 0.5mm | ±0.5mm |
| | length | 0-40mm | 1mm | ±0.5mm |



Unit: mm



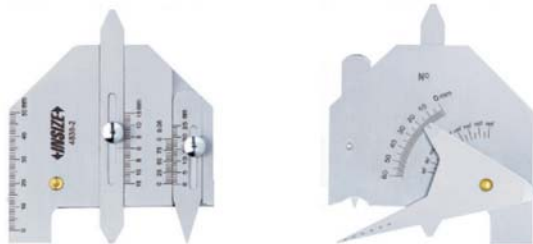
WELDING GAGES



front

back

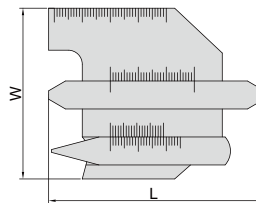
4838-1



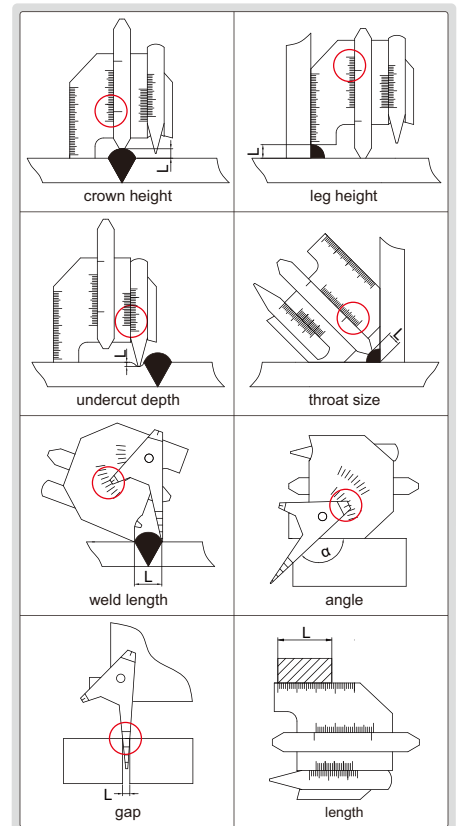
front

back

4838-2



- Made of stainless steel



| Code | 4838-1 | | | | 4838-2 | | |
|------|----------------|----------|------------|----------|----------|------------|----------|
| | Measurement | Range | Graduation | Accuracy | Range | Graduation | Accuracy |
| | crown height | 0-10mm | 1mm | ±0.5mm | 0-15mm | 1mm | ±0.5mm |
| | leg height | 0-14mm | 1mm | ±0.5mm | 0-15mm | 1mm | ±0.5mm |
| | undercut depth | 0-5mm | 0.05mm | ±0.05mm | 0-5mm | 0.05mm | ±0.05mm |
| | throat size | 0-13mm | 1mm | ±0.5mm | 0-13mm | 1mm | ±0.5mm |
| | weld length | 0-40mm | 1mm | ±1mm | 0-60mm | 1mm | ±1mm |
| | angle | 90°-150° | 5° | ±1° | 80°-160° | 5° | ±1° |
| | gap | 0.5-5mm | 1mm | ±0.5mm | 1-6mm | 1mm | ±0.5mm |
| | length | 0-40mm | 1mm | ±0.5mm | 0-50mm | 1mm | ±0.5mm |
| LxW | 62x77mm | | | | 99x84mm | | |

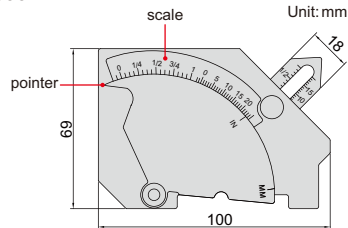
WELDING GAGE



front

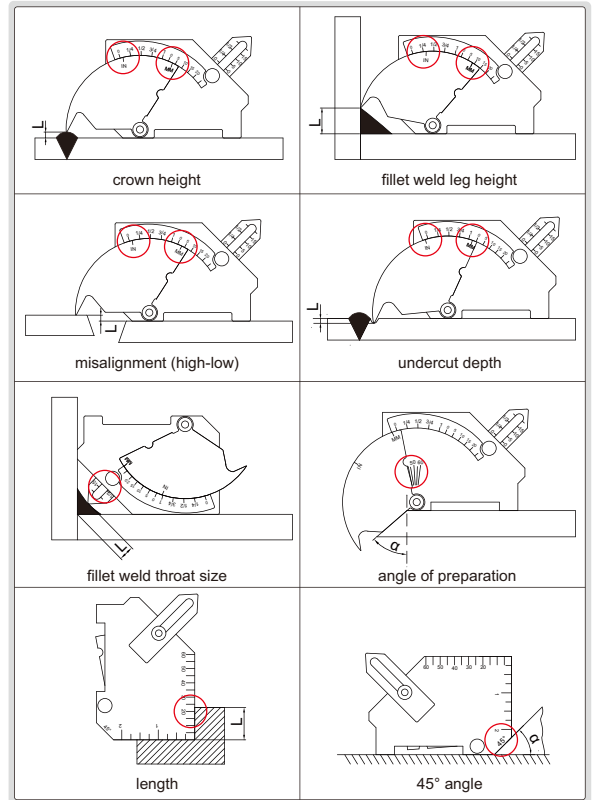
back

4835-1

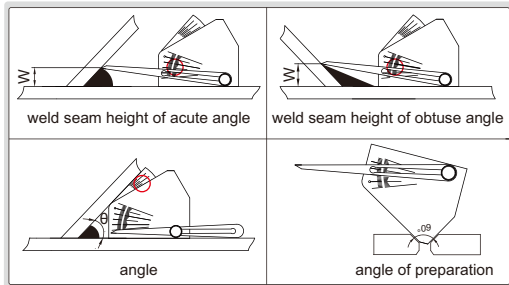


- Adjustable scale to compensate pointer wear
- Made of stainless steel

| Code | Measurement | Range | Graduation | Accuracy |
|--------|-------------------------|-----------------|-------------|----------|
| 4835-1 | crown height | 0-25mm (0-1") | 1mm (1/16") | ±0.5mm |
| | fillet weld leg height | 0-25mm (0-1") | 1mm (1/16") | ±0.5mm |
| | misalignment (high-low) | 0-25mm (0-1") | 1mm (1/16") | ±0.5mm |
| | undercut depth | 0-2mm (0-1/8") | 1mm (1/16") | ±0.5mm |
| | fillet weld throat size | 0-20mm (0-3/4") | 1mm (1/16") | ±0.5mm |
| | angle of preparation | 0-60° | 5° | ±1° |
| | length | 0-60mm (0-2") | 1mm (1/16") | ±0.5mm |
| | 45° angle | — | — | ±1° |



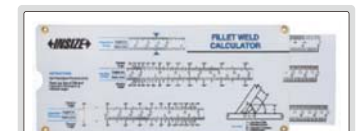
FILLET WELDING GAGE



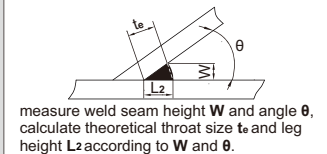
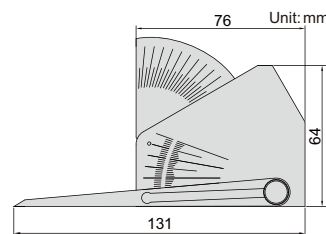
4846-1

- Calculating card is included
- Made of stainless steel

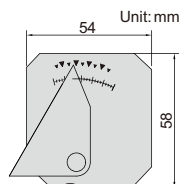
calculating card (included)



| Code | Measurement | Range | Graduation | Accuracy |
|--------|----------------------|-------------|------------|----------|
| 4846-1 | weld seam height W | 0-50mm/0-2" | 2mm/.050" | ±1mm |
| | angle θ | 30°- 90° | 2.5° | ±1° |
| | 60° angle | — | — | ±0.5° |



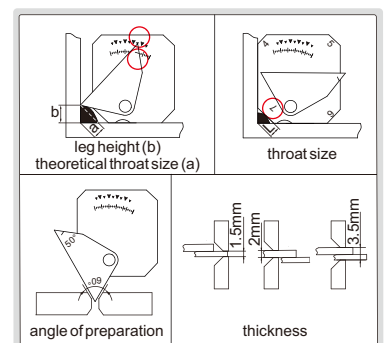
WELDING GAGE



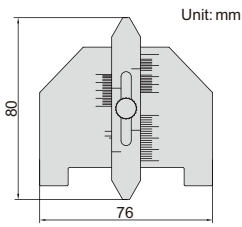
4850-1

- Made of stainless steel

| Code | Measurement | Range | Graduation | Accuracy |
|--------|-----------------------------|---------------|------------|----------|
| 4850-1 | leg height (b) | 2-12mm | 1mm | ±0.5mm |
| | theoretical throat size (a) | 0-18mm | 1mm | ±0.5mm |
| | throat size | 4, 5, 6, 7mm | — | ±0.5mm |
| | angle of preparation | 50°, 60° | — | ±1° |
| | thickness | 1.5, 2, 3.5mm | — | ±0.2mm |



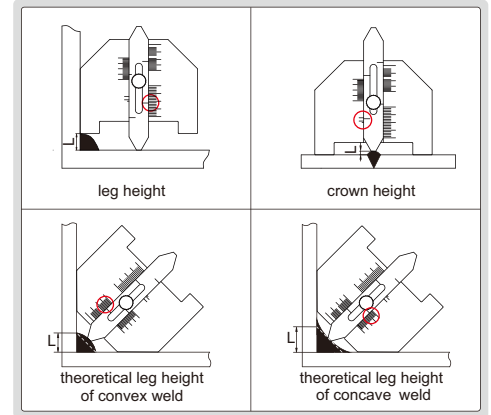
WELDING GAGE



4851-1

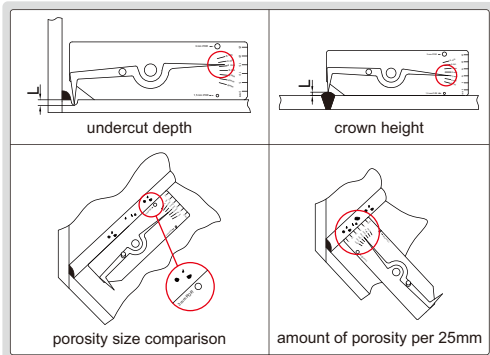
- Made of stainless steel

| Code | Measurement | Range | Graduation | Accuracy |
|--------|--|--------|------------|----------|
| 4851-1 | leg height | 0-20mm | 1mm | ±0.5mm |
| | crown height | 0-3mm | — | ±0.5mm |
| | theoretical leg height of convex weld | 0-20mm | 1mm | ±0.5mm |
| | theoretical leg height of concave weld | 0-20mm | 1mm | ±0.5mm |

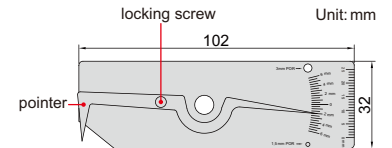


WELDING GAGE

- Pointer can be locked for later reference
- Made of stainless steel



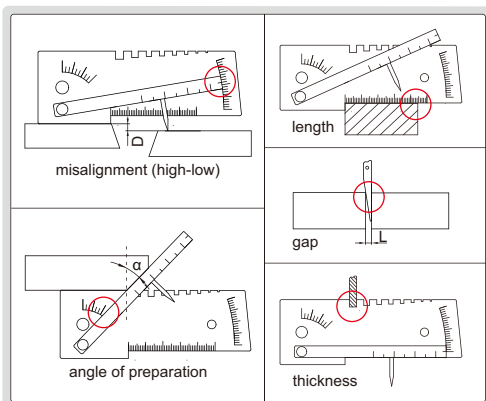
4834-1



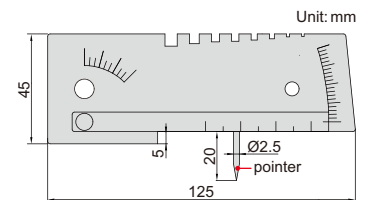
| Code | Measurement | Range | Graduation | Accuracy |
|--------|-----------------------------|------------|------------|----------|
| 4834-1 | undercut depth | 0-6mm | 0.5mm | ±0.5mm |
| | crown height | 0-6mm | 0.5mm | ±0.5mm |
| | porosity size comparison | 1.5mm, 3mm | — | ±0.2mm |
| | amount of porosity per 25mm | 25mm | 1mm | — |

WELDING GAGE

- Made of stainless steel

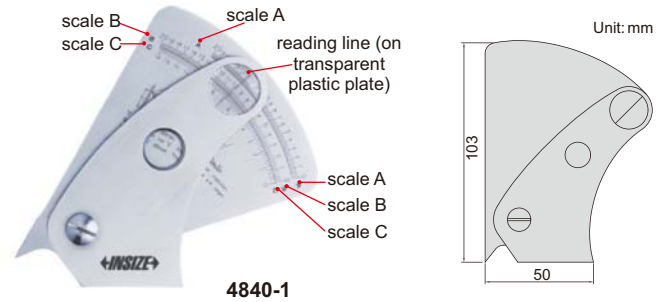
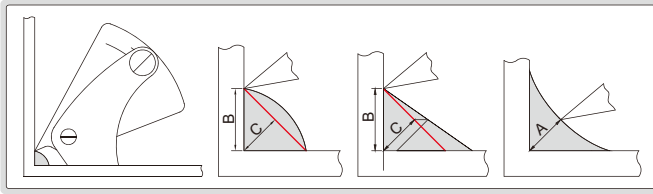


4848-1



| Code | Measurement | Range | Graduation | Accuracy |
|--------|-------------------------|---|------------|----------|
| 4848-1 | misalignment (high-low) | -5mm~+15mm | 1mm | ±0.5mm |
| | angle of preparation | 0°-45° | 5° | ±2.5° |
| | length | 0-50mm | 1mm | ±0.5mm |
| | gap | 1-4mm | 0.5mm | ±0.25mm |
| | thickness | 1, 1.2, 2.0, 2.5, 3.0, 3.25, 4.0, 5.0mm | — | ±0.1mm |

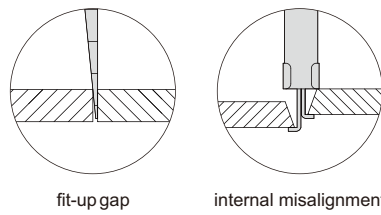
WELDING GAGE



■ Made of stainless steel

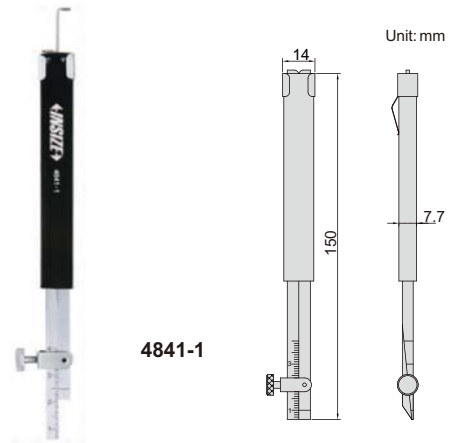
| Code | Graduation | Accuracy |
|--------|------------|----------|
| 4840-1 | 0.2mm | ±0.3mm |

PIPE WELDING GAGE

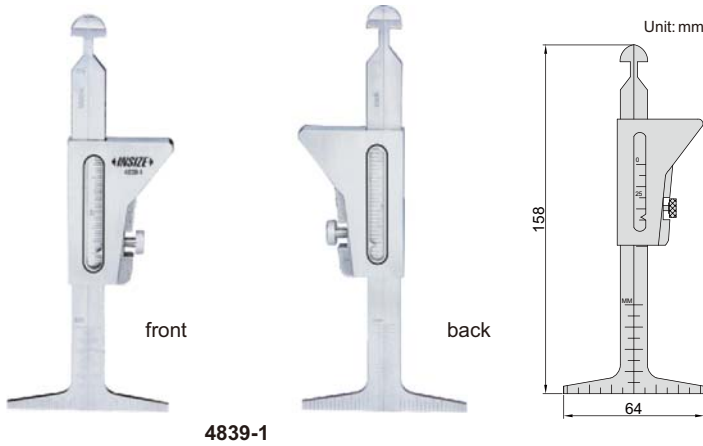


■ Made of stainless steel

| Code | Measurement | Range | Graduation | Accuracy |
|--------|-----------------------|---------|------------|----------|
| 4841-1 | internal misalignment | 0-30mm | 1mm | ±0.5mm |
| | fit-up gap | 0.7-4mm | 0.1mm | ±0.1mm |

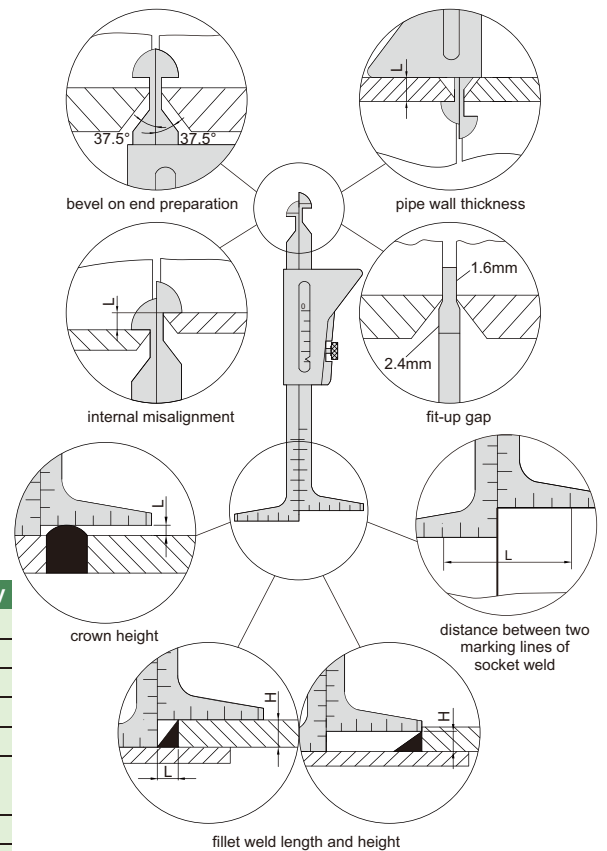


PIPE WELDING GAGE



■ Made of stainless steel

| Code | Measurement | Range | Graduation | Accuracy |
|--------|---|-------------------|-------------|----------|
| 4839-1 | bevel on end preparation | 37.5° | — | ±1° |
| | pipe wall thickness | 0-45mm (0-1-3/4") | 1mm (1/16") | ±0.5mm |
| | internal misalignment | 0-35mm (0-1-3/8") | 1mm (1/32") | ±0.5mm |
| | fit-up gap | 1.6mm, 2.4mm | — | ±0.1mm |
| | crown height | 0-35mm (0-1-3/8") | 1mm (1/32") | ±0.5mm |
| | distance between two marking lines of socket weld | 0-60mm (0-2-3/8") | 1mm (1/16") | ±0.5mm |
| | fillet weld length | 0-30mm (0-1-1/4") | 1mm (1/16") | ±0.5mm |
| | fillet weld height | 0-35mm (0-1-3/8") | 1mm (1/32") | ±0.5mm |



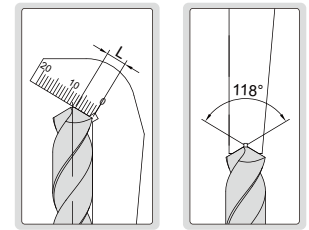
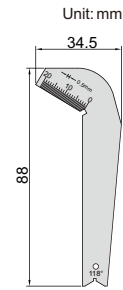
DRILL POINT GAGE

- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

| Code | Accuracy | |
|--------|----------|--------|
| | Angle | Length |
| 4843-1 | ±0.5° | ±0.5mm |



4843-1



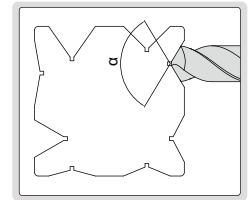
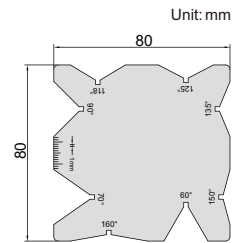
DRILL ANGLE GAGE

- Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- Made of stainless steel

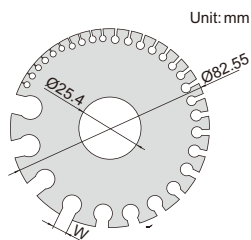
| Code | Accuracy |
|--------|----------|
| 4842-1 | ±0.5° |



4842-1



AMERICAN STANDARD WIRE GAGE



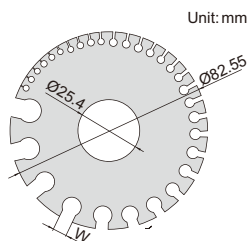
4808

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened and satin chrome finish

| Code | Range |
|------|------------------------------------|
| 4808 | 0-36 (8.250-0.127mm/ .3249-.0050") |

| No. | W | No. | W | No. | W |
|-----|------------------|-----|------------------|-----|------------------|
| 0 | 8.250mm (.3249") | 13 | 1.820mm (.0720") | 26 | 0.404mm (.0159") |
| 1 | 7.350mm (.2893") | 14 | 1.630mm (.0641") | 27 | 0.361mm (.0142") |
| 2 | 6.540mm (.2576") | 15 | 1.450mm (.0571") | 28 | 0.320mm (.0126") |
| 3 | 5.830mm (.2294") | 16 | 1.290mm (.0508") | 29 | 0.287mm (.0113") |
| 4 | 5.190mm (.2043") | 17 | 1.150mm (.0453") | 30 | 0.254mm (.0100") |
| 5 | 4.620mm (.1819") | 18 | 1.020mm (.0403") | 31 | 0.226mm (.0089") |
| 6 | 4.110mm (.1620") | 19 | 0.912mm (.0359") | 32 | 0.203mm (.0080") |
| 7 | 3.670mm (.1443") | 20 | 0.813mm (.0320") | 33 | 0.180mm (.0071") |
| 8 | 3.260mm (.1285") | 21 | 0.724mm (.0285") | 34 | 0.160mm (.0063") |
| 9 | 2.910mm (.1144") | 22 | 0.643mm (.0253") | 35 | 0.142mm (.0056") |
| 10 | 2.590mm (.1019") | 23 | 0.574mm (.0226") | 36 | 0.127mm (.0050") |
| 11 | 2.300mm (.0907") | 24 | 0.511mm (.0201") | | |
| 12 | 2.050mm (.0808") | 25 | 0.440mm (.0179") | | |

U.S. STANDARD SHEET METAL GAGE



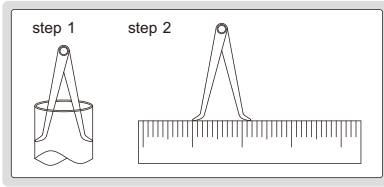
4809

- For gaging sheet metal, plate iron and steel
- Hardened and satin chrome finish

| Code | Range |
|------|-----------------------------------|
| 4809 | 0-36 (7.938-0.179mm/.3125-.0070") |

| No. | W | No. | W | No. | W |
|-----|------------------|-----|------------------|-----|------------------|
| 0 | 7.938mm (.3125") | 13 | 2.381mm (.0938") | 26 | 0.476mm (.0188") |
| 1 | 7.144mm (.2813") | 14 | 1.984mm (.0781") | 27 | 0.437mm (.0172") |
| 2 | 6.747mm (.2656") | 15 | 1.786mm (.0703") | 28 | 0.397mm (.0156") |
| 3 | 6.350mm (.2500") | 16 | 1.588mm (.0625") | 29 | 0.357mm (.0141") |
| 4 | 5.953mm (.2344") | 17 | 1.429mm (.0563") | 30 | 0.318mm (.0125") |
| 5 | 5.556mm (.2188") | 18 | 1.270mm (.0500") | 31 | 0.278mm (.0109") |
| 6 | 5.159mm (.2031") | 19 | 1.111mm (.0438") | 32 | 0.258mm (.0102") |
| 7 | 4.763mm (.1875") | 20 | 0.953mm (.0375") | 33 | 0.238mm (.0094") |
| 8 | 4.366mm (.1719") | 21 | 0.873mm (.0344") | 34 | 0.218mm (.0086") |
| 9 | 3.969mm (.1563") | 22 | 0.794mm (.0313") | 35 | 0.198mm (.0078") |
| 10 | 3.572mm (.1406") | 23 | 0.714mm (.0281") | 36 | 0.179mm (.0070") |
| 11 | 3.175mm (.1250") | 24 | 0.635mm (.0250") | | |
| 12 | 2.778mm (.1094") | 25 | 0.556mm (.0219") | | |

INSIDE CALIPERS

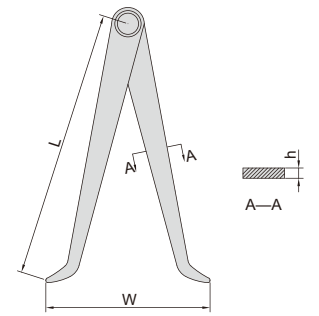


■ Made of carbon steel

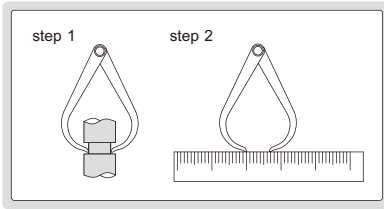
| Code | Size (L) | Range (W) | h |
|----------|----------|-----------|-----|
| 7240-150 | 150mm | 17-150mm | 2mm |
| 7240-200 | 200mm | 17-200mm | 3mm |
| 7240-300 | 300mm | 18-300mm | 3mm |



7240-150



OUTSIDE CALIPERS

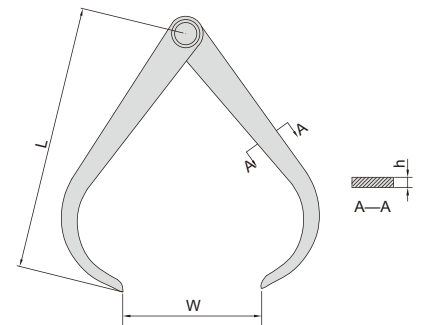


■ Made of carbon steel

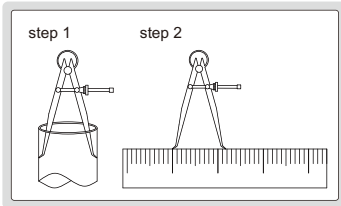
| Code | Size (L) | Range (W) | h |
|----------|----------|-----------|-----|
| 7241-150 | 150mm | 0-150mm | 2mm |
| 7241-200 | 200mm | 0-200mm | 3mm |
| 7241-300 | 300mm | 0-300mm | 3mm |



7241-150



INSIDE SPRING CALIPERS

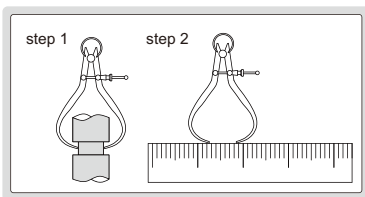
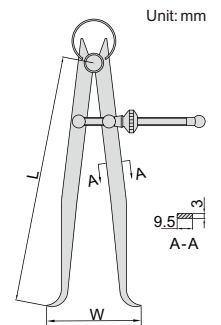


| Code | Size (L) | Range (W) |
|----------|----------|-----------|
| 7261-150 | 150mm | 20-170mm |
| 7261-200 | 200mm | 22-220mm |
| 7261-250 | 245mm | 30-270mm |
| 7261-300 | 300mm | 30-320mm |

■ Made of carbon steel



7261-150



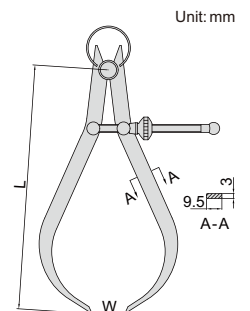
| Code | Size (L) | Range (W) |
|----------|----------|-----------|
| 7262-150 | 155mm | 0-140mm |
| 7262-200 | 210mm | 0-210mm |
| 7262-250 | 265mm | 0-270mm |
| 7262-300 | 310mm | 0-320mm |

■ Made of carbon steel



7262-150

OUTSIDE SPRING CALIPERS

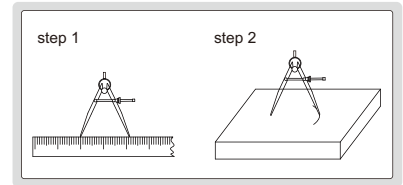
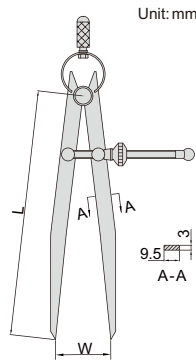


SPRING DIVIDERS

- Made of carbon steel
- Hardened points



7260-150



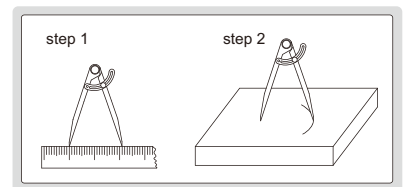
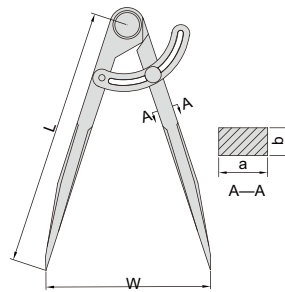
| Code | Size (L) | Range (W) |
|----------|----------|-----------|
| 7260-150 | 150mm | 0-150mm |
| 7260-200 | 200mm | 0-210mm |
| 7260-250 | 245mm | 0-260mm |
| 7260-300 | 300mm | 0-320mm |

DIVIDERS

- Made of carbon steel
- Hardened points



7247-150



| Code | Size (L) | Range (W) | (mm) | |
|----------|----------|-----------|------|---|
| | | | a | b |
| 7247-150 | 150mm | 0-140mm | 8.5 | 7 |
| 7247-200 | 200mm | 0-190mm | 10 | 7 |
| 7247-300 | 300mm | 0-290mm | 12 | 7 |

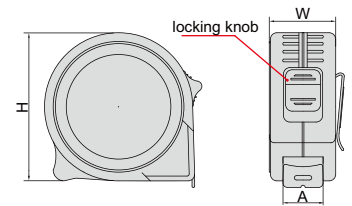
MEASURING TAPES

EG II



7140-5

packaging



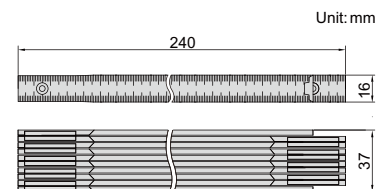
| Code | Range | Graduation | Width of tape A | W | H |
|--------|-------|------------|-----------------|----|----|
| 7140-3 | 0-3m | 1mm | 16mm | 28 | 62 |
| 7140-5 | 0-5m | 1mm | 19mm | 30 | 68 |
| 7140-8 | 0-8m | 1mm | 25mm | 38 | 78 |

WOODEN FOLDING RULE

closed



7124-210



| Code | Range | Graduation |
|----------|-------|------------|
| 7124-210 | 2m | 1mm |



FLEXIBLE RULES

- Flexible use
- Graduation on both sides
- Made of special alloy steel
- Satin chrome plated

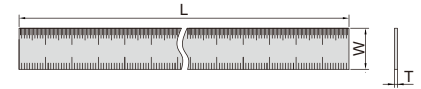


7121-150

flexible use



| Code | Range (L) | Graduation | Accuracy | W | T |
|----------|-----------|------------|---------------|---------|--------|
| 7121-150 | 150mm | 0.5mm/1mm | +0.10/-0.09mm | 12.50mm | 0.40mm |
| 7121-300 | 300mm | 0.5mm/1mm | +0.13/-0.09mm | 12.50mm | 0.40mm |
| 7121-600 | 600mm | 0.5mm/1mm | +0.18/-0.09mm | 19.50mm | 0.50mm |



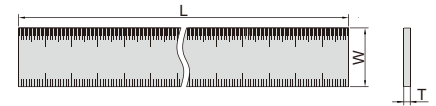
RIGID RULES

- Rigid rule
- Graduation on both sides
- Made of special alloy steel
- Satin chrome plated



7122-300

| Code | Range (L) | Graduation | Accuracy | W | T |
|----------|-----------|------------|---------------|---------|-----|
| 7122-150 | 150mm | 0.5mm/1mm | +0.10/-0.09mm | 18.50mm | 1mm |
| 7122-300 | 300mm | 0.5mm/1mm | +0.13/-0.09mm | 24.50mm | 1mm |
| 7122-600 | 600mm | 0.5mm/1mm | +0.18/-0.09mm | 29.50mm | 1mm |



RIGID RULE

- Rigid rules
- With groove on the back, suitable for combination square set (code 2278-180)
- Satin chrome plated

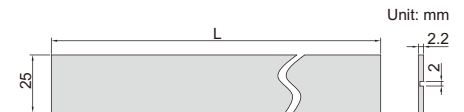


7113-300A



groove on the back

| Code | Range | Graduation | | Accuracy | L |
|-----------|-----------|-----------------|---------------|----------|-------|
| | | front | back | | |
| 7113-300A | 300mm/12" | 0.5mm and 1/32" | 1mm and 1/64" | ±0.15mm | 300mm |



Unit: mm

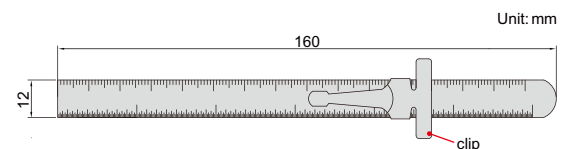
POCKET RULE WITH SLIDING CLIP

- With sliding clip, clip also can be used as depth gage base
- With inch/metric conversion table on the back
- Made of stainless steel



7119-150

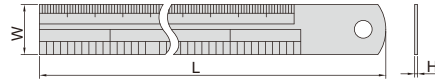
| Code | Range | Graduation | Accuracy |
|----------|----------|------------|----------|
| 7119-150 | 150mm/6" | 1mm, 1/64" | ±0.15mm |



Unit: mm

STEEL RULES

ATTENTION:
BASIC MODEL



7110-300

(mm)

- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Semi-flexible rules
- Made of stainless steel
- Non-glare surface

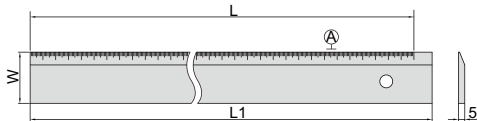
| Code | Range | Accuracy | L | W | H | Remark |
|-----------|------------|----------|------|----|-----|------------------------------|
| 7110-150 | 150mm/6" | ±0.15mm | 170 | 18 | 1.0 | graduation on front and back |
| 7110-200 | 200mm/8" | ±0.15mm | 220 | 18 | 1.0 | graduation on front and back |
| 7110-300 | 300mm/12" | ±0.15mm | 330 | 25 | 1.0 | graduation on front and back |
| 7110-3001 | 300mm/12" | ±0.15mm | 325 | 30 | 1.0 | graduation on front and back |
| 7110-500 | 500mm/20" | ±0.15mm | 530 | 30 | 1.2 | graduation on front and back |
| 7110-600 | 600mm/24" | ±0.20mm | 630 | 30 | 1.2 | graduation on front and back |
| 7110-1000 | 1000mm/40" | ±0.20mm | 1040 | 32 | 1.5 | graduation on front and back |
| 7110-1200 | 1200mm/48" | ±0.22mm | 1240 | 35 | 1.8 | graduation on front |
| 7110-1500 | 1500mm/60" | ±0.25mm | 1550 | 38 | 1.8 | graduation on front |
| 7110-2000 | 2000mm/80" | ±0.30mm | 2065 | 40 | 2.0 | graduation on front |

STRAIGHT EDGES

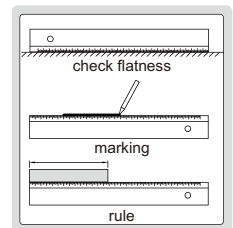


7111-300A

Unit: mm



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated



(mm)

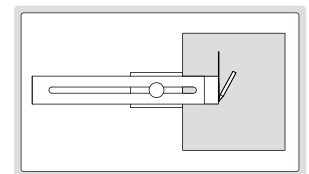
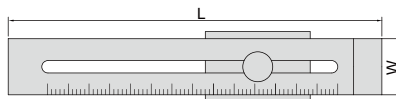
| Code | Range (L) | Straightness of A | L1 | W |
|------------|-----------|-------------------|------|----|
| 7111-300A | 300mm | 0.02mm | 320 | 40 |
| 7111-500A | 500mm | 0.03mm | 520 | 40 |
| 7111-1000A | 1000mm | 0.04mm | 1020 | 50 |

MARKING GAGES



7120-200A

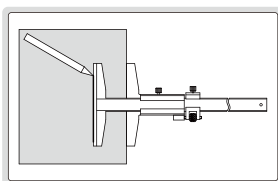
- Made of carbon steel
- Satin chrome plated



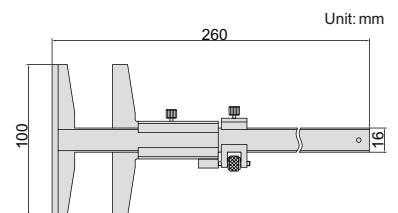
(mm)

| Code | Range | Graduation | Accuracy | L | W |
|-----------|---------|------------|----------|-----|----|
| 7120-200A | 0-200mm | 0.1mm | ±0.1mm | 250 | 40 |
| 7120-250A | 0-250mm | 0.1mm | ±0.1mm | 300 | 40 |
| 7120-300A | 0-300mm | 0.1mm | ±0.1mm | 350 | 40 |

T-SHAPE MARKING GAGE



1275-150A



Unit: mm

- Made of stainless steel
- Satin chrome plated reading surface

| Code | Range | Graduation | Accuracy |
|-----------|---------|------------|----------|
| 1275-150A | 0-150mm | 0.05mm | ±0.05mm |

COMBINATION SQUARE SETS



2278-2

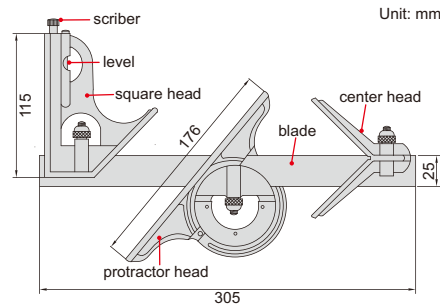


2278-3

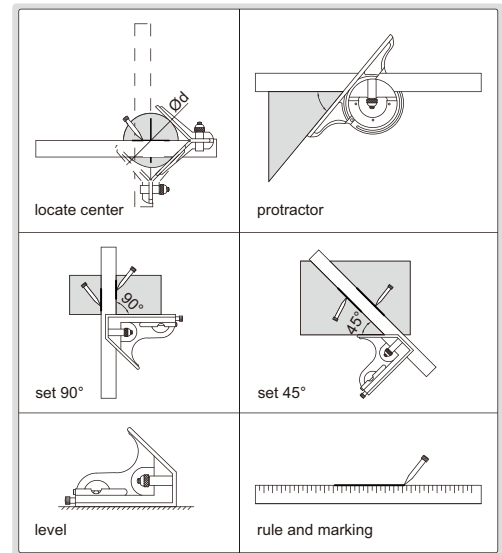


2278-180

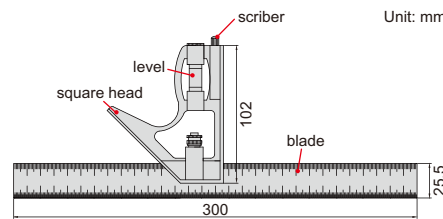
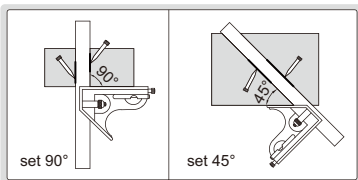
- Center head (made of cast iron):
To locate center of cylinder with diameter (Ød): 30-100mm
Accuracy: ±0.15mm
- Protractor head (made of cast iron):
To set the blade at desired angle to an edge of a workpiece, and can be used to measure angles
Range: 0-180°
Accuracy: ±7min.
- Square head (made of cast iron):
To set the blade at 90° or 45° to an edge of a workpiece
Accuracy: ±8min for 90° square, ±10min for 45° square
- Blade (made of stainless steel):
Range: 300mm/12",
Graduation: 0.5mm and 1/32" on front face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code 7113)



| Code | Remark |
|----------|-------------|
| 2278-2 | 2-piece set |
| 2278-3 | 3-piece set |
| 2278-180 | 4-piece set |



- Square head (made of zinc):
To set the blade at 90° or 45° to an edge of a workpiece
Accuracy: ±0.5°
- Blade (made of stainless steel):
Range: 300mm,
Graduation: 0.5mm and 1mm on front and back sides



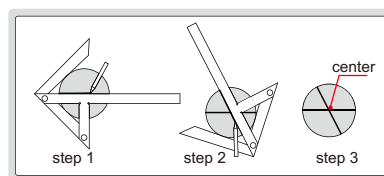
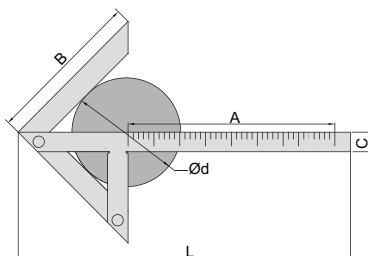
Code
2276-300

LIGHT DUTY COMBINATION SQUARE



2276-300

CENTER MARKING GAGES



(mm)

| Code | Size (AxB) | Diameter of shafts (Ød) | Accuracy | C | L |
|----------|------------|-------------------------|----------|----|-----|
| 7205-100 | 100X70mm | 4-90mm | ±0.15mm | 12 | 153 |
| 7205-150 | 150x130mm | 4-190mm | ±0.15mm | 15 | 245 |
| 7205-200 | 200x150mm | 6-220mm | ±0.15mm | 15 | 310 |



7205-100

- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

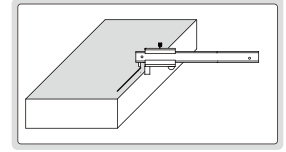
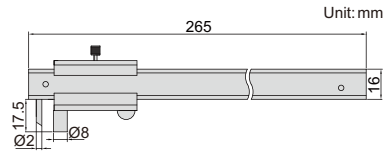
SCRIBING CALIPER

- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip

the position of scriber tip can be adjusted



7202-200A



| Code | Range | Graduation | Accuracy |
|-----------|--------------|---------------|----------|
| 7202-200A | 0-200mm/0-8" | 0.1mm, 1/128" | ±0.1mm |

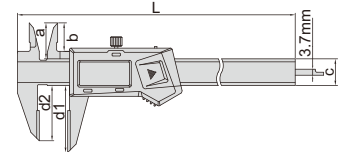
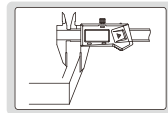
DIGITAL SCRIBING CALIPERS

- The carbide-tipped jaws facilitate scribing on workpieces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



DATA OUTPUT

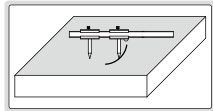
1166-150A



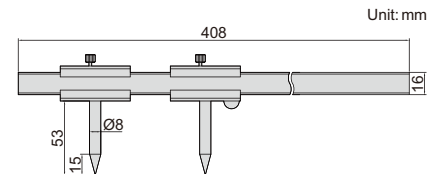
| Code | Range | Accuracy | L | a | b | c | d1 | d2 |
|-----------|---------------|----------|-----|----|------|----|----|----|
| 1166-150A | 0-150mm/0-6" | ±0.03mm | 236 | 21 | 16.5 | 16 | 40 | 33 |
| 1166-200A | 0-200mm/0-8" | ±0.03mm | 286 | 24 | 19.5 | 16 | 50 | 43 |
| 1166-300A | 0-300mm/0-12" | ±0.04mm | 400 | 25 | 20.5 | 17 | 60 | 53 |

SCRIBING CALIPER

- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips



7203-300A

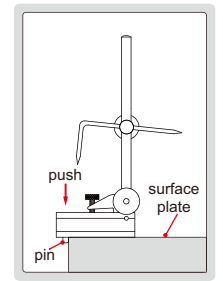
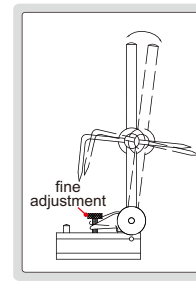
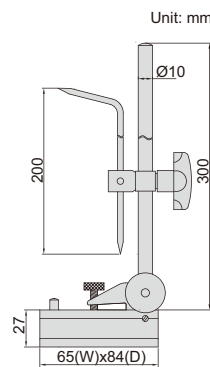


| Code | Range | Graduation | Accuracy |
|-----------|----------|------------|----------|
| 7203-300A | 51-300mm | 0.1mm | ±0.1mm |

HEIGHT SCRIBER

- Grooved bottom for cylinder
- Two pins to be set against the edge of surface plate

6990-300A



| Code |
|-----------|
| 6990-300A |

SCRIBERS

- Nickel plated

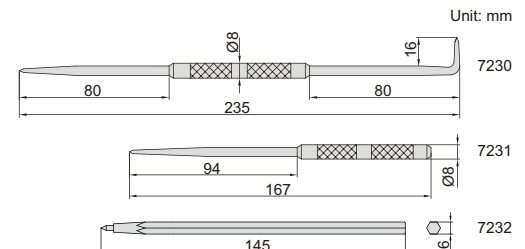
| Code | Tip |
|------|---------------|
| 7230 | hardened tips |
| 7231 | hardened tip |
| 7232 | carbide tip |



7230

7231

7232



2-PIECE MEASURING TOOL SETS

- Includes:
 - 1) Vernier caliper, range 0-150mm/0-6"
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code 3202-25A)

| Code | Remark |
|--------|---|
| 5021 | Vernier caliper, graduation 0.05mm/1/128" (code 1205-150S) |
| 5021-2 | Vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S) |



5021

2-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code 1108-150)
 - 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code 3109-25B)

| Code |
|------|
| 5022 |



5022

2-PIECE MEASURING TOOL SET

- Includes:
 - 1) Dial test indicator, range 0.8mm, graduation 0.01mm (code 2380-08)
 - 2) Magnetic stand

| Code |
|------|
| 5023 |



5023

2-PIECE MEASURING TOOL SET

- Includes:
 - 1) Dial indicator, range 10mm, graduation 0.01mm (code 2308-10A)
 - 2) Magnetic stand (code 6201-60)

| Code |
|------|
| 5024 |



5024

3-PIECE MEASURING TOOL SET

Includes:

- 1) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
- 2) Flex arm
- 3) Locking pliers, adjustable jaw opening from 0 to 25mm



5031

Code

5031

4-PIECE MEASURING TOOL SETS

Includes:

- 1) Vernier caliper, range 0-150mm/0-6"
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 4) Steel rule, 150mm/6" (code **7110-150**)

| Code | Remark |
|--------|---|
| 5041 | Vernier caliper, graduation 0.05mm/1/128" (code 1205-150S) |
| 5041-2 | Vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S) |



5041

4-PIECE MEASURING TOOL SET

Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm, (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 4) Steel rule, 150mm/6" (code **7110-150**)

Code

5042



5042

5-PIECE MEASURING TOOL SET

Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 4) Magnetic stand (code **6201-60**)
- 5) Micrometer stand (code **6300**)

Code

5051



5051

5-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
 - 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25B**)
 - 3) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
 - 4) Magnetic stand (code **6201-60**)
 - 5) Micrometer stand (code **6300**)

Code
5052



5052

6-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
 - 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
 - 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)
 - 4) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
 - 5) Scriber (code **7230**)
 - 6) Steel rule, 150mm/6" (code **7110-150**)

Code
5061



5061

6-PIECE MEASURING TOOL SET

- Includes:
 - 1) Digital caliper, range 0-150mm/0-6" resolution 0.01mm/0.0005" (code **1108-150**)
 - 2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
 - 3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
 - 4) Straight edge, 100mm (code **4700-100**)
 - 5) Spring divider, 150mm (code **7260-150**)
 - 6) Steel rule, 200mm/8" (code **7110-200**)

Code
5062



5062

6-PIECE MEASURING TOOL SETS

■ Includes:

- 1) Vernier caliper, range 0-150mm/0-6"
- 2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
- 4) Straight edge, 100mm (code **4700-100**)
- 5) Spring divider, 150mm (code **7260-150**)
- 6) Steel rule, 200mm/8" (code **7110-200**)

| Code | Remark |
|---------------|---|
| 5063 | Vernier caliper, graduation 0.05mm/1/128" (code 1205-150S) |
| 5063-2 | Vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S) |



5063

9-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Protractor, range 0-180°, graduation 1° (code **4799-180**)
- 4) Pitch gauge, range 0.25-7mm, 24pcs, metric 60° thread (code **4820-124**)
- 5) Radius gauge, range 1-7mm (code **4801-17**)
- 6) Feeler gauge, range 0.05-1.00mm, 20pcs (code **4602-20**)
- 7) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 8) Scriber (code **7230**)
- 9) Steel rule, 150mm/6" (code **7110-150**)

| Code |
|-------------|
| 5091 |



5091

13-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 4) Magnetic stand (code **6201-60**)
- 5) Protractor, range 0-180°, graduation 1° (code **4799-180**)
- 6) Pitch gauge, range 0.25-7mm, 24pcs, metric 60° thread (code **4820-124**)
- 7) Radius gauge, range 1-7mm (code **4801-17**)
- 8) Feeler gauge, range 0.05-1.00mm, 20pcs (code **4602-20**)
- 9) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 10) Scriber (code **7230**)
- 11) Steel rule, 150mm/6" (code **7110-150**)
- 12) Depth base attachment (code **6140**)
- 13) Zero setting bar

| Code |
|-------------|
| 5013 |



5013

GRANITE SURFACE PLATES



CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST



VIDEO



6900-132

- Made of granite, free from deterioration or dimensional change over time, minimal changes in dimension due to temperature changes
- Meet DIN876, grade 00 is for inspection room or lab, grade 0 is for workshop
- Optional accessory: stand for granite surface plate (code **6902**), jack for granite surface plate (code **6903**)

Grade 00

| Code | Size (LxWxH) | Flatness | Weight (Kg) | Load (Kg) |
|------------|-----------------|----------|-------------|-----------|
| 6900-132* | 300x200x60mm | 2.7µm | 11 | 30 |
| 6900-142* | 400x250x60mm | 2.9µm | 18 | 50 |
| 6900-144* | 400x400x60mm | 3.1µm | 29 | 60 |
| 6900-153* | 500x315x70mm | 3.2µm | 33 | 60 |
| 6900-164* | 630x400x80mm | 3.5µm | 60 | 65 |
| 6900-166* | 630x630x100mm | 3.8µm | 119 | 75 |
| 6900-185* | 800x500x100mm | 3.9µm | 120 | 100 |
| 6900-1106* | 1000x630x140mm | 4.4µm | 265 | 200 |
| 6900-1101* | 1000x1000x150mm | 4.8µm | 450 | 400 |
| 6900-1128* | 1200x800x160mm | 4.9µm | 461 | 500 |
| 6900-1161* | 1600x1000x180mm | 5.8µm | 864 | 600 |
| 6900-1201* | 2000x1000x220mm | 6.5µm | 1320 | 650 |
| 6900-1202* | 2000x1500x250mm | 7.0µm | 2250 | 750 |

Grade 0

| Code | Size (LxWxH) | Flatness | Weight (Kg) | Load (Kg) |
|------------|-----------------|----------|-------------|-----------|
| 6900-032* | 300x200x60mm | 5.4µm | 11 | 60 |
| 6900-042* | 400x250x60mm | 5.9µm | 18 | 100 |
| 6900-044* | 400x400x60mm | 6.3µm | 29 | 120 |
| 6900-053* | 500x315x70mm | 6.4µm | 33 | 120 |
| 6900-064* | 630x400x80mm | 7.0µm | 60 | 130 |
| 6900-066* | 630x630x100mm | 7.6µm | 119 | 150 |
| 6900-085* | 800x500x100mm | 7.8µm | 120 | 200 |
| 6900-0106* | 1000x630x140mm | 8.7µm | 265 | 400 |
| 6900-0101* | 1000x1000x150mm | 9.7µm | 450 | 800 |
| 6900-0128* | 1200x800x160mm | 9.8µm | 461 | 1000 |
| 6900-0161* | 1600x1000x180mm | 11.5µm | 864 | 1200 |
| 6900-0201* | 2000x1000x220mm | 12.9µm | 1320 | 1300 |
| 6900-0202* | 2000x1500x250mm | 14.0µm | 2250 | 1500 |

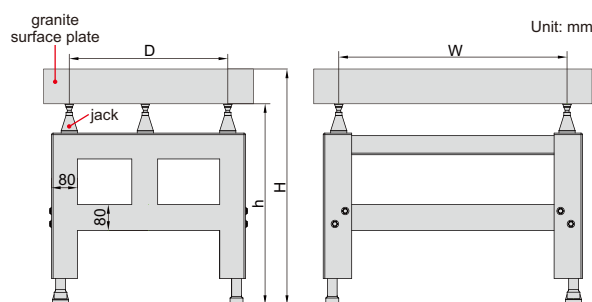
* Supplied with manufacturer inspection certificate



VIDEO

STANDS FOR GRANITE SURFACE PLATES

- For medium size granite surface plates
- 5 jacks are included
- Adjusting range of jacks: 25mm
- One foot on the bottom is adjustable



6902-64A

adjustable foot

Low stands

| Code | For granite surface plate | W | D | H (with granite surface plate) | h (without granite surface plate) |
|-----------|---|-----|-----|--------------------------------|-----------------------------------|
| 6902-64A | 630x400x80mm (code 6900-064 and 6900-164) | 352 | 224 | 775-800 | 695-720 |
| 6902-66A | 630x630x100mm (code 6900-066 and 6900-166) | 352 | 352 | 775-800 | 675-700 |
| 6902-85A | 800x500x100mm (code 6900-085 and 6900-185) | 448 | 280 | 775-800 | 675-700 |
| 6902-106A | 1000x630x140mm (code 6900-0106 and 6900-1106) | 560 | 352 | 755-780 | 615-640 |
| 6902-101A | 1000x1000x150mm (code 6900-0101 and 6900-1101) | 560 | 560 | 755-780 | 605-630 |
| 6902-128A | 1200x800x160mm (code 6900-0128 and 6900-1128) | 672 | 448 | 755-780 | 595-620 |
| 6902-161A | 1600x1000x180mm (code 6900-0161 and 6900-1161) | 896 | 560 | 755-780 | 575-600 |

(mm)

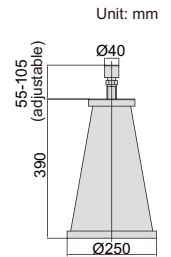
High stands

| Code | For granite surface plate | W | D | H (with granite surface plate) | h (without granite surface plate) |
|-----------|---|-----|-----|--------------------------------|-----------------------------------|
| 6902-64H | 630x400x80mm (code 6900-064 and 6900-164) | 352 | 224 | 1000-1025 | 920-945 |
| 6902-66H | 630x630x100mm (code 6900-066 and 6900-166) | 352 | 352 | 1000-1025 | 900-925 |
| 6902-85H | 800x500x100mm (code 6900-085 and 6900-185) | 448 | 280 | 1000-1025 | 900-925 |
| 6902-106H | 1000x630x140mm (code 6900-0106 and 6900-1106) | 560 | 352 | 1000-1025 | 860-885 |
| 6902-101H | 1000x1000x150mm (code 6900-0101 and 6900-1101) | 560 | 560 | 1000-1025 | 850-875 |
| 6902-128H | 1200x800x160mm (code 6900-0128 and 6900-1128) | 672 | 448 | 1000-1025 | 840-865 |
| 6902-161H | 1600x1000x180mm (code 6900-0161 and 6900-1161) | 896 | 560 | 1000-1025 | 820-845 |

(mm)

JACK SET FOR GRANITE SURFACE PLATES

- 5 jacks per set
- Adjustable height
- For large granite surface plates:
2000x1000x220mm
(code **6900-0201** and **6900-1201**)
2000x1500x250mm
(code **6900-0202** and **6900-1202**)



Code

6903-B

6903-B

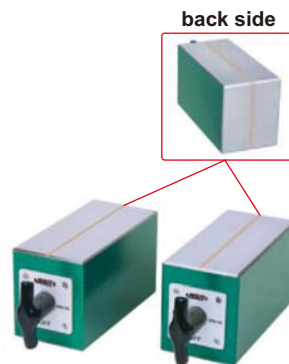
MAGNETIC RECTANGULAR BLOCKS

HARDENED SURFACES

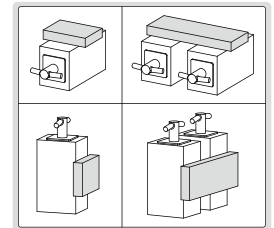
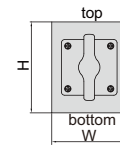
HIGH PRECISION

STRONG MAGNETIC FORCE

- For grinding, light milling, drilling and inspection of round and square jobs
- Hardened, high accuracy, strong magnetic force
- Working surfaces are hardened to HRC58-62
- Magnetic force on top, bottom and back sides
- Supplied in matched pair

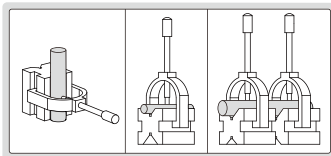


6898-150



| Code | Size (LxWxH) | Magnetic force | Parallelism of top to bottom side | Squareness of top and bottom to back side | Height difference of a matched pair |
|-----------------|--------------|----------------|-----------------------------------|---|-------------------------------------|
| 6898-100 | 100x70x70mm | 100kgf | 5µm | 5µm | 5µm |
| 6898-150 | 150x70x85mm | 125kgf | 5µm | 5µm | 5µm |

V-BLOCK SETS

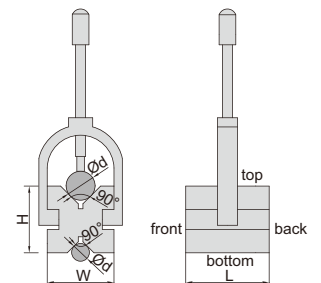


- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts (except **6896-10**)



6896-10

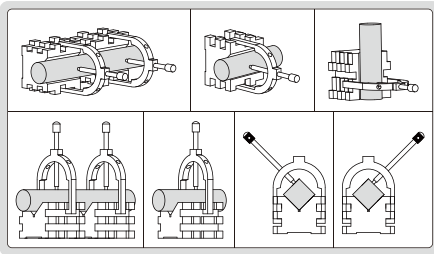
6896-11



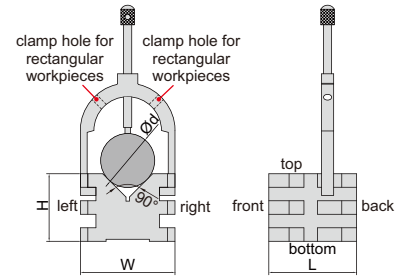
| Code | Size (LxWxH) | Range of shafts (Ød) | Parallelism of both V grooves to top and bottom sides | Squareness of both V grooves to front and back sides | Height difference of a matched pair |
|----------------|--------------|----------------------|---|--|-------------------------------------|
| 6896-10 | 25x20x20mm | 3-20mm | 3µm | 3µm | 3µm |
| 6896-11 | 50x40x40mm | 5-30mm | 5µm | 5µm | 5µm |
| 6896-12 | 80x63x63mm | 7-63mm | 5µm | 5µm | 5µm |
| 6896-13 | 100x80x80mm | 7-80mm | 5µm | 5µm | 5µm |
| 6896-14 | 70x140x140mm | 9-140mm | 5µm | 5µm | 5µm |

SIDE LIE-DOWN USE IS POSSIBLE

V-BLOCK SET

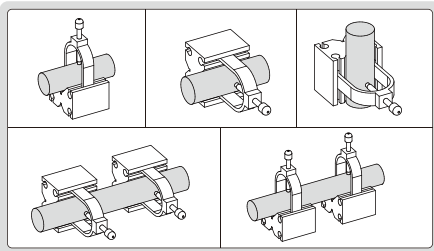


6802-1



- Hold cylindrical or rectangular workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for cylinder with diameter (Ød): 5-50mm
- Applicable for rectangular workpieces with thickness: ≤35mm

| Code | Size (LxWxH) | Parallelism of V groove to top, bottom, left, right sides | Squareness of V groove to front and back sides | Height difference of a matched pair |
|--------|--------------|---|--|-------------------------------------|
| 6802-1 | 65x70x50mm | 5µm | 5µm | 5µm |



side lie-down use is possible

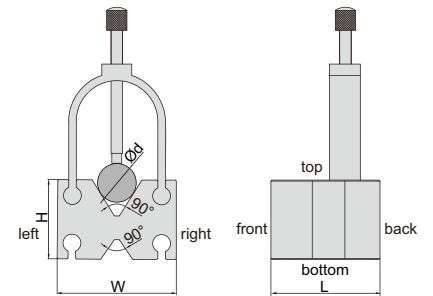


V-BLOCK SETS

SIDE LIE-DOWN USE IS POSSIBLE

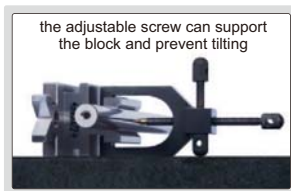


6803-1



- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts

| Code | Size (LxWxH) | Range of shafts (Ød) | Parallelism of both V grooves to top, bottom, left, right sides | Squareness of both V grooves to front and back sides | Height difference of a matched pair |
|--------|--------------|----------------------|---|--|-------------------------------------|
| 6803-1 | 25x20x20mm | 4-35mm | 5µm | 5µm | 5µm |
| 6803-2 | 50x40x40mm | 4-47mm | 5µm | 5µm | 5µm |



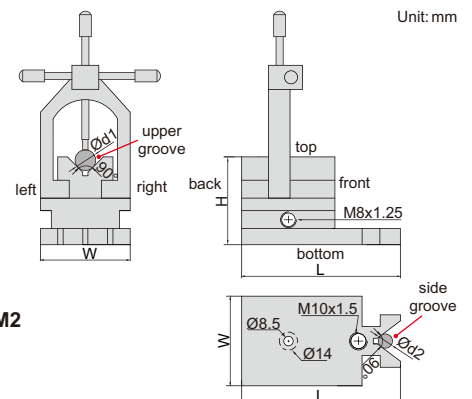
the adjustable screw can support the block and prevent tilting



side groove is for shouldered studs and pins



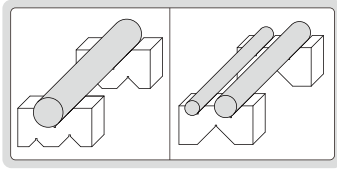
6804-M2



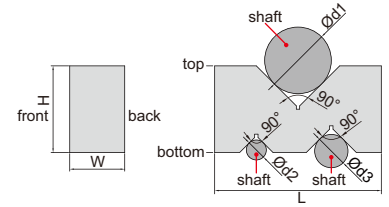
- Hold cylindrical workpieces for inspection and machining
- Made of alloy steel
- Hardened to HRC60±2

| Code | Size (LxWxH) | Range of shafts (Ød1 and Ød2) | Parallelism of upper groove to bottom, left and right sides | Squareness of upper groove to back side | Parallelism of side groove to back side |
|---------|--------------|-------------------------------|---|---|---|
| 6804-M2 | 90x48x48mm | 5-33mm | 5µm | 5µm | 5µm |

V-BLOCK SETS



6887-3



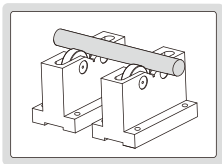
- Two V-blocks per set
- Made of hardened tool steel

(mm)

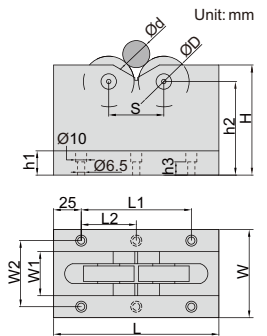
| Code | Size (LxWxH) | Range of shafts (Ød1) | Range of shafts (Ød2) | Range of shafts (Ød3) |
|--------|--------------|-----------------------|-----------------------|-----------------------|
| 6887-1 | 50x19x24 | 3-32 | 3-16 | 3-22 |
| 6887-2 | 75x24x35 | 3-50 | 3-20 | 3-32 |
| 6887-3 | 100x33x52 | 3-68 | 3-26 | 3-40 |
| 6887-4 | 125x44x69 | 3-87 | 3-34 | 3-50 |

| Code | Parallelism of three V grooves to top and bottom sides | Height difference of a matched pair |
|--------|--|-------------------------------------|
| 6887-1 | 5µm | 5µm |
| 6887-2 | 5µm | 5µm |
| 6887-3 | 5µm | 5µm |
| 6887-4 | 5µm | 5µm |

ROLLER BEARING V-BLOCK SETS



6888-1



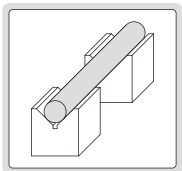
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces

| Code | Size (LxWxH) | Diameter of bearings (ØD) | Range of shafts (Ød) | Parallelism of bearings to bottom | Load capacity |
|--------|---------------|---------------------------|----------------------|-----------------------------------|---------------|
| 6888-1 | 150x60x100mm | 42mm | 25-70mm | 12µm | 500kg |
| 6888-2 | 150x80x100mm | 47mm | 5-55mm | 12µm | 1000kg |
| 6888-3 | 230x100x150mm | 72mm | 70-200mm | 12µm | 1000kg |

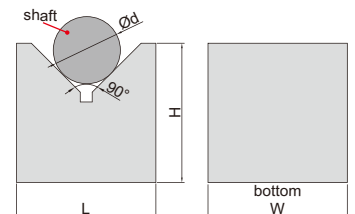
| Code | W1 | W2 | h1 | h2 | h3 | L1 | L2 | S |
|--------|----|----|----|-----|----|-----|----|-----|
| 6888-1 | 22 | 44 | 20 | 85 | 12 | 100 | - | 60 |
| 6888-2 | 40 | 60 | 22 | 85 | 12 | 100 | - | 50 |
| 6888-3 | 60 | 80 | 30 | 124 | 20 | 180 | 90 | 120 |

(mm)

GRANITE V-BLOCK SETS



6897-1



- Two V-blocks per set

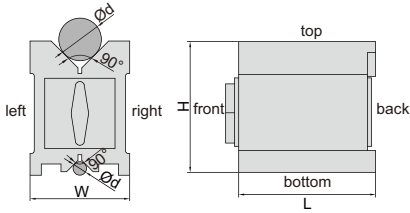
| Code | Size (LxWxH) | Range of shafts (Ød) | Parallelism of V groove to bottom | Height difference of a matchet pair |
|--------|--------------|----------------------|-----------------------------------|-------------------------------------|
| 6897-1 | 70x50x70mm | 6-75mm | 4µm | 5µm |
| 6897-2 | 100x50x70mm | 6-99mm | 4µm | 5µm |

HARDENED SURFACES

HIGH PRECISION

STRONG MAGNETIC FORCE

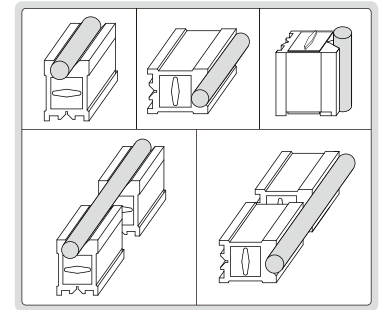
MAGNETIC V-BLOCKS



6889-11



6889-1



- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square jobs
- All working surfaces are hardened to HRC60±2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Suitable for cast iron surface plates and granite surface plates

Individual

| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Parallelism of V groove to top, bottom, left, right sides | Squareness of V groove to back side |
|---------|---------------|----------------------|----------------|---|-------------------------------------|
| 6889-11 | 75x56x75mm | 5-40mm | 75kgf | 5µm | 5µm |
| 6889-22 | 100x70x95mm | 5-65mm | 100kgf | 5µm | 5µm |
| 6889-33 | 150x75x100mm | 5-70mm | 125kgf | 5µm | 5µm |
| 6889-44 | 200x124x150mm | 10-140mm | 175kgf | 10µm | 10µm |

Matched pair

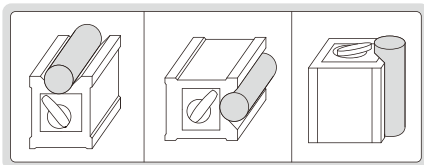
| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Parallelism of V grooves to top, bottom, left, right sides | Squareness of V grooves to back side | Height difference of a matched pair |
|--------|---------------|----------------------|----------------|--|--------------------------------------|-------------------------------------|
| 6889-1 | 75x56x75mm | 5-40mm | 75kgf | 5µm | 5µm | 5µm |
| 6889-2 | 100x70x95mm | 5-65mm | 100kgf | 5µm | 5µm | 5µm |
| 6889-3 | 150x75x100mm | 5-70mm | 125kgf | 5µm | 5µm | 5µm |
| 6889-4 | 200x124x150mm | 10-140mm | 175kgf | 10µm | 10µm | 10µm |

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACE

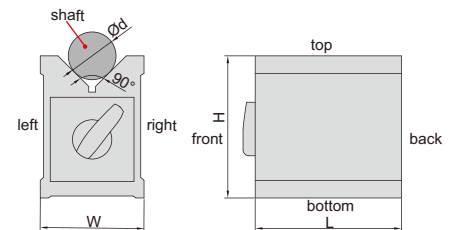
ATTENTION: NOT HARDENED

MAGNETIC V-BLOCK

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surface



6890-702



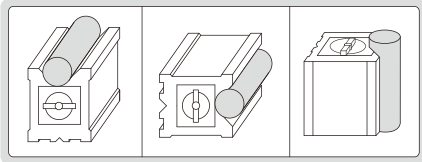
| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Parallelism of V groove to top, bottom, left and right sides | Squareness of V groove to back side |
|----------|--------------|----------------------|----------------|--|-------------------------------------|
| 6890-702 | 70x60x73mm | 6-44mm | 56kgf | 10µm | 10µm |

MAGNETIC V-BLOCKS

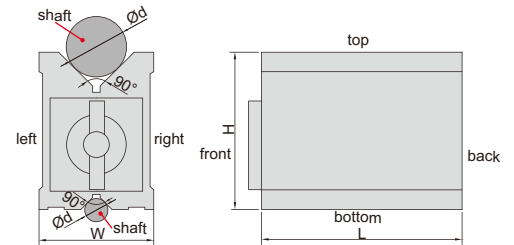
ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACE

ATTENTION: NOT HARDENED

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface



6801-1201



| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Parallelism of V grooves to top, bottom, left, right side | Squareness of V grooves to back side |
|-----------|--------------|----------------------|----------------|---|--------------------------------------|
| 6801-1201 | 80x70x95mm | 6-67mm | 64kgf | 10µm | 10µm |
| 6801-1202 | 100x70x95mm | 6-67mm | 80kgf | 10µm | 10µm |
| 6801-1203 | 120x70x95mm | 6-67mm | 96kgf | 10µm | 10µm |

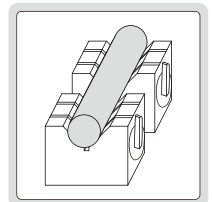
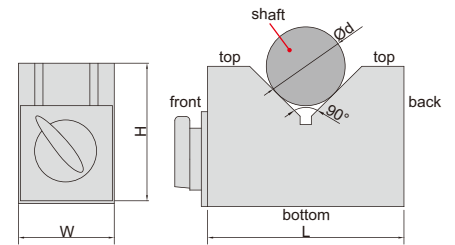
MAGNETIC V-BLOCK SETS

ATTENTION: LOW MAGNETIC FORCE

- Hold cylindrical workpieces for inspection, not suitable for machining due to low magnetic force
- Two V-blocks per set



6891-1



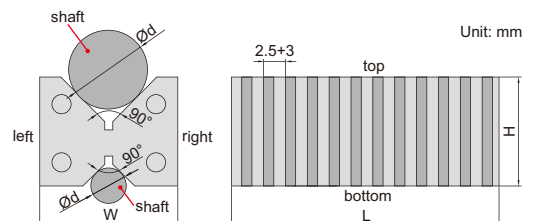
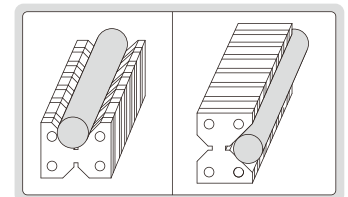
| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Parallelism of V groove to bottom and back sides | Height difference of a matched pair |
|--------|--------------|----------------------|----------------|--|-------------------------------------|
| 6891-1 | 70x40x50mm | 6-46mm | 8kgf | 10µm | 10µm |
| 6891-3 | 150x50x100mm | 6-125mm | 14kgf | 10µm | 10µm |

MAGNETIC INDUCTION V-BLOCK

- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Supplied in single piece
- V groove on the top for large shafts
- V groove on the bottom for small shafts



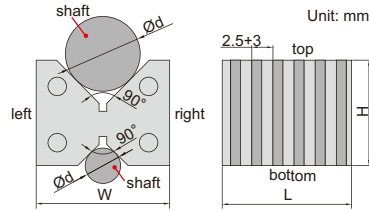
6892-1



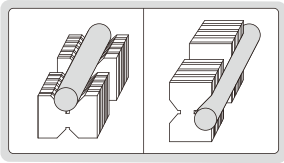
| Code | Size (LxWxH) | Range of shafts (Ød) | Pole pitch | Parallelism of both V grooves to top, bottom, left, right sides |
|--------|--------------|----------------------|------------|---|
| 6892-1 | 110x60x48mm | 6-50mm | 2.5+3mm | 10µm |

MAGNETIC INDUCTION V-BLOCK SET

- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Two V-blocks per set
- V groove on the top for large shafts
- V groove on the bottom for small shafts



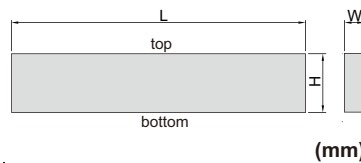
6899-1



| Code | Size (LxWxH) | Range of shafts (Ød) | Pole pitch | Parallelism of both V grooves to top, bottom, left and right sides | Height difference of a matched pair |
|--------|--------------|----------------------|------------|--|-------------------------------------|
| 6899-1 | 55x60x48mm | 6-50mm | 2.5+3mm | 10µm | 10µm |

PARALLEL SETS

- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Made of alloy tool steel
- Hardened to HRC55-60



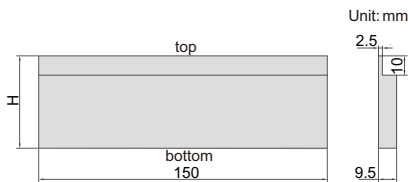
(mm)

| Code | Parallels per set | Length (L) | Thickness (W) | Height (H) |
|----------|-------------------|------------|---------------|--|
| 6533-10 | 10 pairs | 150 | 3 | 13, 16, 19, 22, 25, 28, 31, 35, 38, 41 |
| 6533-144 | 14 pairs | 150 | 10 | 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50 |
| 6533-6 | 6 pairs | 200 | 9.5 | 35, 40, 45, 50, 55, 58 |



6533-144

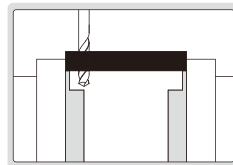
PARALLEL SET



(mm)

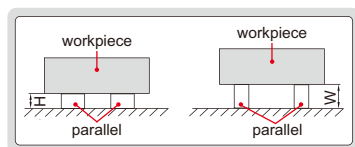
- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Made of alloy tool steel
- Hardened to HRC55-60

| Code | Parallels per set | Height (H) |
|--------|-------------------|------------------------|
| 6534-6 | 6 pairs | 25, 30, 35, 40, 45, 48 |

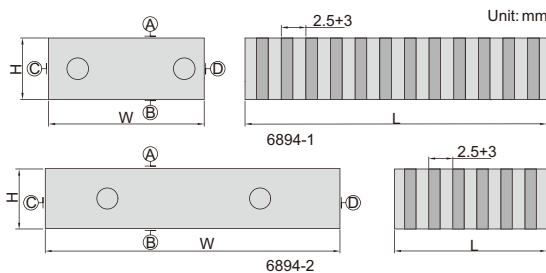


6534-6

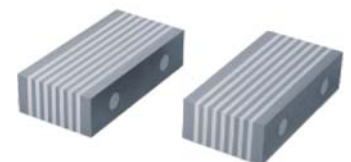
MAGNETIC INDUCTION PARALLEL SETS



- To be used on magnetic chucks
- Two parallels per set



6894-1



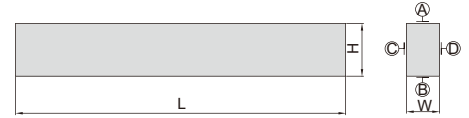
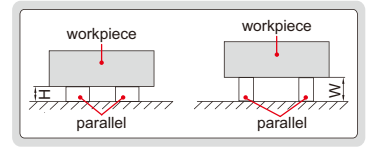
6894-2

| Code | Size (LxWxH) | Pole pitch | Parallelism between A and B | Parallelism between C and D | Height difference of a matched pair |
|--------|--------------|------------|-----------------------------|-----------------------------|-------------------------------------|
| 6894-1 | 100x50x25mm | 2.5+3mm | 10µm | 10µm | 10µm |
| 6894-2 | 50x100x25mm | 2.5+3mm | 10µm | 10µm | 10µm |

GRANITE PARALLEL SET



4143-250



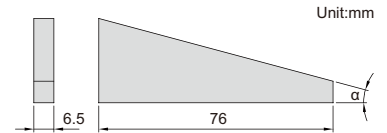
- Made of granite, hard and no rusty, no dimensional change over time or temperature change
- Two parallels per set

| Code | Size (LxWxH) | Parallelism between A and B | Parallelism between C and D | Height difference of a matched pair |
|----------|--------------|-----------------------------|-----------------------------|-------------------------------------|
| 4143-250 | 250x25x40mm | 3μm | 3μm | 3μm |

ANGLE PLATE SETS



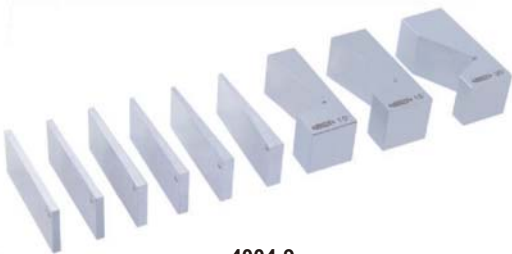
4003-12



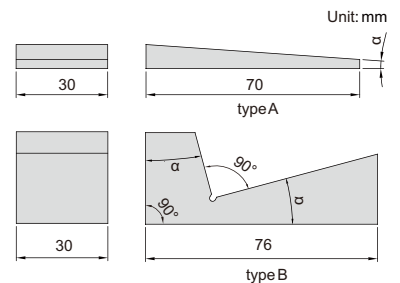
- For angle set-up in tooling, production and inspection
- Made of tool steel
- Hardness HRC55

| Code | Angle plates included | Angle α | Accuracy |
|---------|-----------------------|---|----------|
| 4003-10 | 10 pcs | 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30° | ±9" |
| 4003-12 | 12 pcs | 1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30° | ±9" |

UNIVERSAL ANGLE PLATE SET



4004-9



- For angle set-up in tooling, production and inspection
- Made of tool steel
- Hardness HRC55

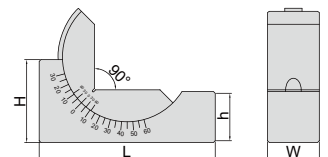
| Code | Angle plates included | Angle α | Type | Accuracy |
|--------|-----------------------|--------------------------|-------|----------|
| 4004-9 | 9 pcs | 1/2°, 1°, 2°, 3°, 4°, 5° | typeA | ±9" |
| | | 10°, 15°, 30° | typeB | |

ADJUSTABLE ANGLE BLOCKS



6535-30

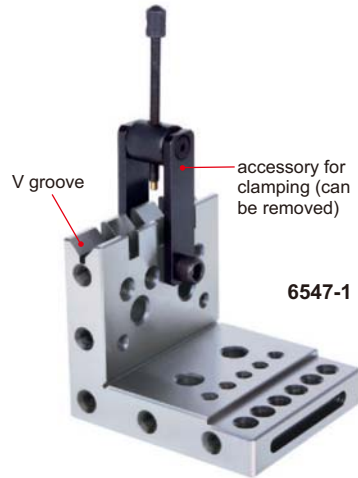
- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 10'



| Code | Size (LxWxH) | h | Adjustable angle | Graduation of angle |
|---------|--------------|------|------------------|---------------------|
| 6535-25 | 75x25x36mm | 25mm | 30°~0°~60° | 10' |
| 6535-30 | 102x30x49mm | 30mm | 30°~0°~60° | 10' |

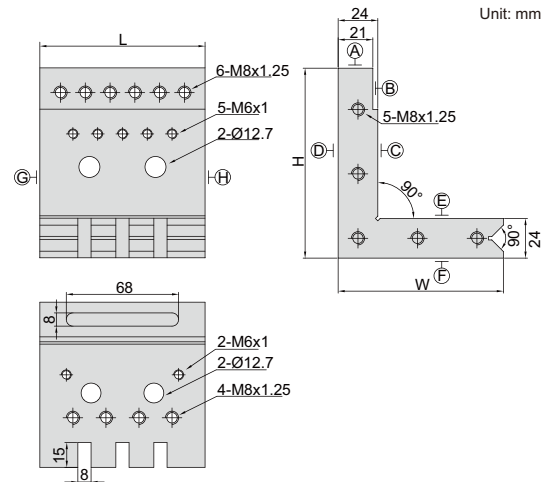
RIGHT ANGLE PLATE

- Made of alloy steel
- Hardened to HRC60±2
- V groove for cylinders
- Parallelism and squareness between A, B, C, D, E, F, G and H: 6µm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 6µm



6547-1

| Code | Size (LxWxH) |
|--------|---------------|
| 6547-1 | 100x100x115mm |



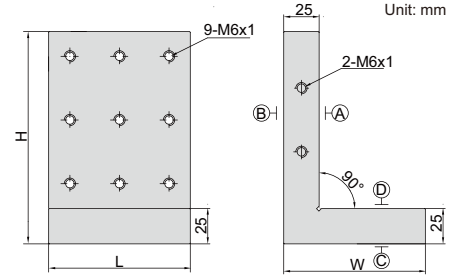
RIGHT ANGLE PLATE

- Made of tool steel
- Hardened to HRC60±2
- Squareness or parallelism between A, B, C and D: 5µm



6548-1

| Code | Size (LxWxH) |
|--------|---------------|
| 6548-1 | 100x100x150mm |



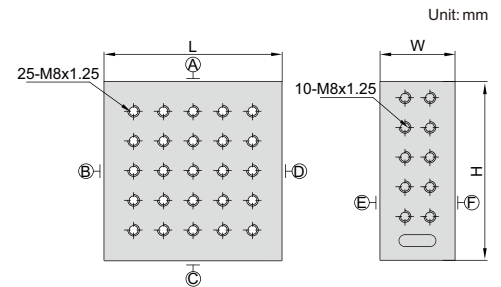
RIGHT ANGLE PLATE

- Made of tool steel
- Hardened to HRC56-58
- Parallelism between A, B, C, D, E and F: 3µm
- Squareness between A, B, C, D, E and F: 5µm

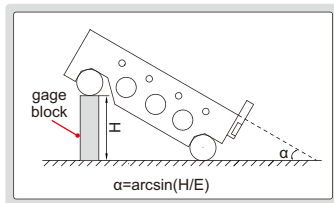


6549-1

| Code | Size (LxWxH) |
|--------|--------------|
| 6549-1 | 150x63x150mm |



- Made of alloy tool steel

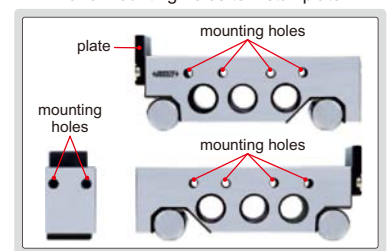


4155-100

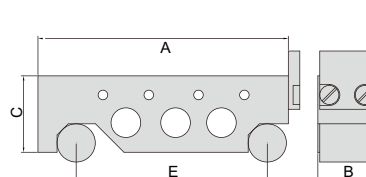
SINE BARS

HIGH PRECISION

The front and back ends and two sides have mounting holes to install plate



| Code | Roller distance (E) | Table size (AxB) | C | Accuracy of α at 30° |
|----------|---------------------|------------------|----|-----------------------------|
| 4155-100 | 100 | 130x30 | 40 | ±5 seconds |
| 4155-200 | 200 | 230x30 | 40 | ±5 seconds |
| 4155-300 | 300 | 345x40 | 50 | ±8 seconds |



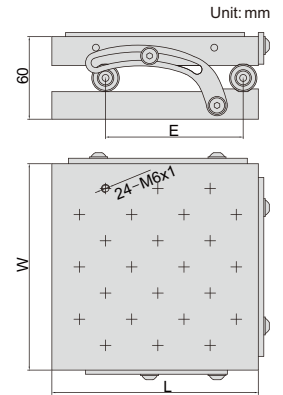
SINE TABLE



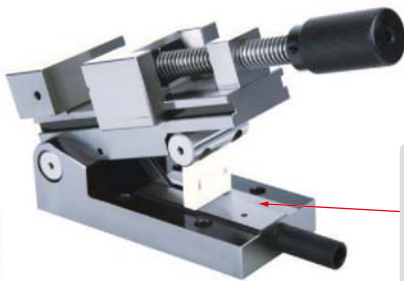
6527-100

- Accuracy of angle: $\pm 15''$
- Made of alloy tool steel
- Hardness HRC58-60

| Code | Roller distance (E) | Table size (LxW) | Adjustable angle |
|----------|---------------------|------------------|------------------|
| 6527-100 | 100mm | 150x150mm | 0-60° |

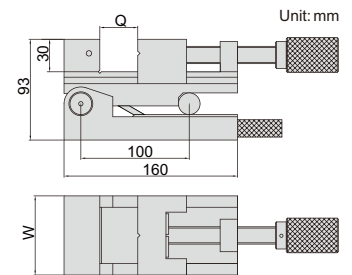
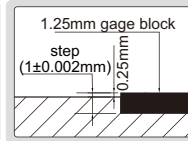


PRECISION SINE VISE



6522-80

There is a 1mm step (accuracy $\pm 0.002\text{mm}$). Gage blocks smaller than 0.5mm are not available. If small gage blocks are needed (for example, 0.25mm), a gage block 1.25mm can be used in order to make $1.25\text{mm} - 1\text{mm} = 0.25\text{mm}$.

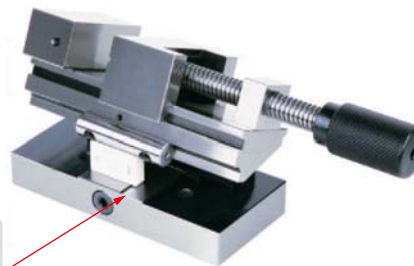
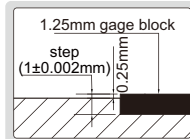


- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: $\pm 15''$
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

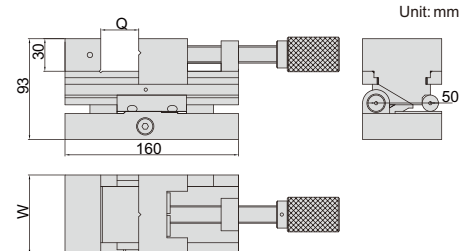
| Code | Jaw opening (Q) | Jaw width (W) | Adjustable angle |
|---------|-----------------|---------------|------------------|
| 6522-80 | 0-80mm | 73mm | 0-46° |

PRECISION SINE VISE

There is a 1mm step (accuracy $\pm 0.002\text{mm}$). Gage blocks smaller than 0.5mm are not available. If small gage blocks are needed (for example, 0.25mm), a gage block 1.25mm can be used in order to make $1.25\text{mm} - 1\text{mm} = 0.25\text{mm}$.



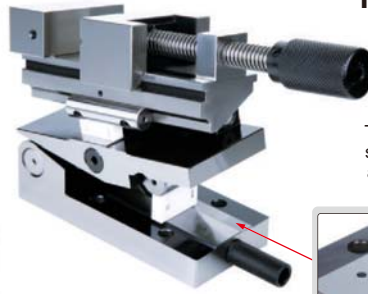
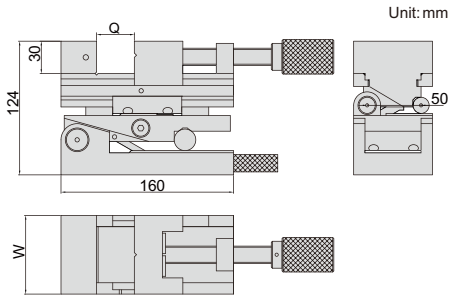
6523-80



- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: $\pm 15''$
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

| Code | Jaw opening (Q) | Jaw width (W) | Adjustable angle |
|---------|-----------------|---------------|------------------|
| 6523-80 | 0-80mm | 73mm | 0-46° |

PRECISION COMPOUND SINE VISE



6524-80

There is a 1mm step (accuracy $\pm 0.002\text{mm}$). Gage blocks smaller than 0.5mm are not available. If small gage blocks are needed (for example, 0.25mm), a gage block 1.25mm can be used in order to make $1.25\text{mm} - 1\text{mm} = 0.25\text{mm}$.

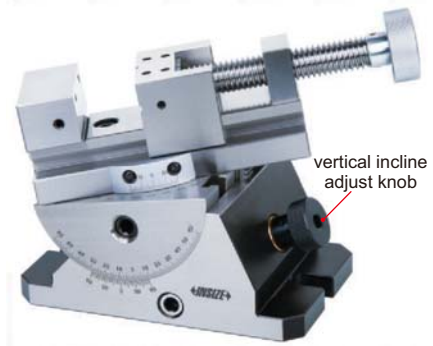
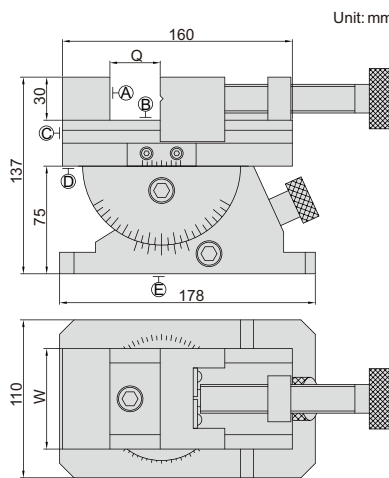


- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: $\pm 15''$
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

| Code | Jaw opening (Q) | Jaw width (W) | Adjustable angle |
|---------|-----------------|---------------|------------------|
| 6524-80 | 0-80mm | 73mm | 0-46° |

PRECISION UNIVERSAL VISE

- Horizontal rotary: range 360° , graduation 0.05°
- Vertical incline: range 45° , graduation 0.05°
- With vertical incline adjust knob
- Parallelism and squareness between A, B, C and D: $5\mu\text{m}/100\text{mm}$, parallelism between D and E at 0° : $10\mu\text{m}/100\text{mm}$
- Made of tool steel
- Hardness HRC56-58

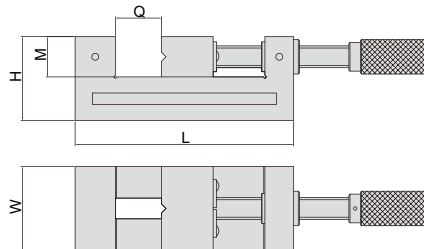


6521-80

| Code | Jaw opening(Q) | Jaw width(W) |
|---------|----------------|--------------|
| 6521-80 | 0-80mm | 70mm |

PRECISION VISES

- Parallelism: $4\mu\text{m}/100\text{mm}$
- Squareness: $6\mu\text{m}/100\text{mm}$
- Made of SK2 tool steel
- Hardness HRC52-58



6525-76

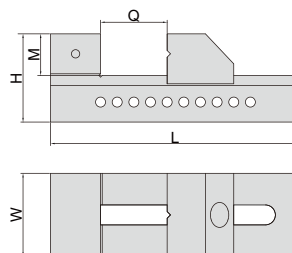
| Code | Jaw opening (Q) | Jaw width (W) | L | H | M |
|----------|-----------------|---------------|-----|----|----|
| 6525-73 | 0-73mm | 63mm | 176 | 63 | 30 |
| 6525-76 | 0-76mm | 73mm | 190 | 73 | 35 |
| 6525-120 | 0-120mm | 98mm | 255 | 82 | 40 |

PRECISION VISES

- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Made of SK2 tool steel
- Hardness HRC55-60

(mm)

| Code | Jaw opening (Q) | Jaw width (W) | Overall length (L) | H | M |
|----------|-----------------|---------------|--------------------|----|----|
| 6526-80 | 0-80mm | 50mm | 150mm | 53 | 25 |
| 6526-100 | 0-100mm | 73mm | 190mm | 70 | 35 |



6526-80

3D TESTER

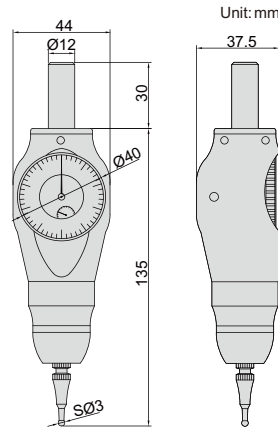


2842-3D

| Code | Range | Graduation | Accuracy |
|---------|-------|------------|----------|
| 2842-3D | 1.5mm | 0.01mm | 0.01mm |

Probe (optional) (mm)

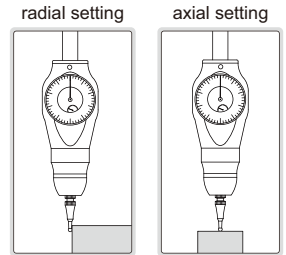
| Code | Name | L | D |
|---------|----------------|----|-----|
| 2842-N1 | standard probe | 27 | SØ3 |
| 2842-N2 | long probe | 62 | SØ6 |



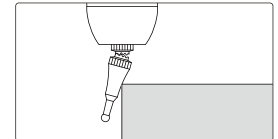
COMPACT DESIGN



ANTI MAGNETIC CARBIDE CONTACT POINT



If probe tip is pressed too much, the probe breaks at the breaking point, in order to prevent damage of main body



CENTERING INDICATOR

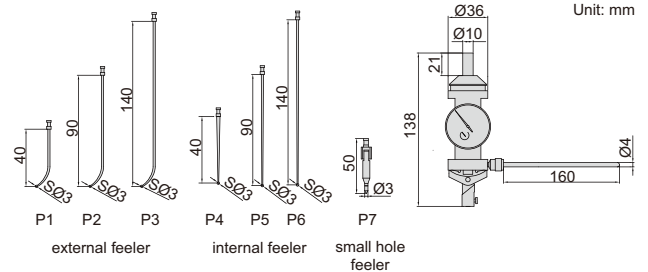
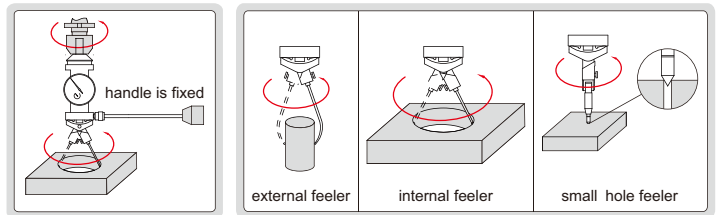


2385-3

Provides quick and accurate centering in boring and milling set-up

Code
2385-3

| Feeler | Measuring diameter | Accuracy |
|--------|--------------------|----------|
| P1 | Ø0-60mm | ±0.04mm |
| P2 | Ø0-160mm | ±0.06mm |
| P3 | Ø0-250mm | ±0.08mm |
| P4 | Ø3.2-80mm | ±0.04mm |
| P5 | Ø3.2-180mm | ±0.06mm |
| P6 | Ø3.2-280mm | ±0.08mm |
| P7 | Ø0-2.8mm | ±0.04mm |



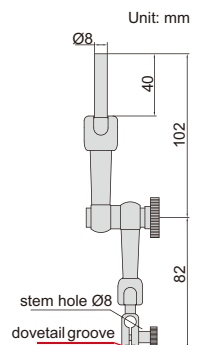
DIAL TEST INDICATOR CENTERING HOLDER

Center cylinders or holes on machine tools
Can be used with dial test indicators

Code
6295-1A

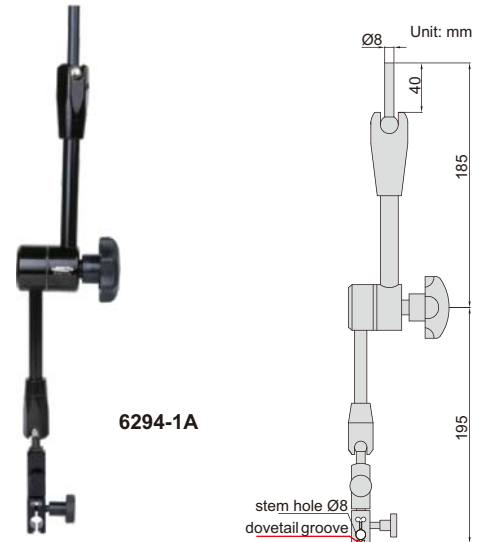


6295-1A



INDICATOR CENTERING HOLDER

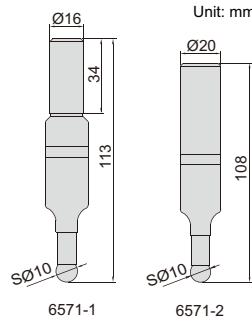
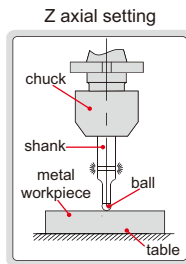
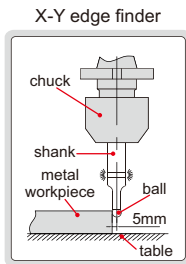
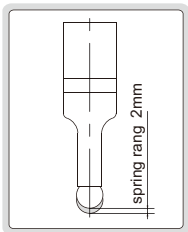
- Center cylinders or holes on machine tools
- Can be used with dial test indicators or dial indicators



Code
6294-1A



3D ELECTRONIC EDGE FINDERS

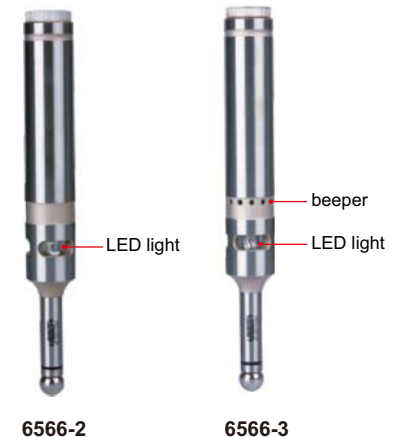
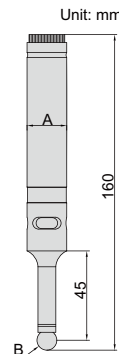
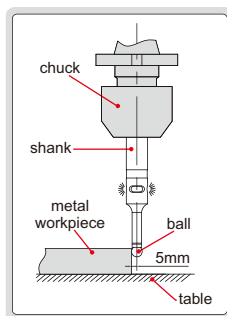


| Code | Shank | Contact ball | Accuracy | Battery |
|--------|-------|--------------|----------|---------------|
| 6571-1 | Ø16mm | SØ10mm | 10µm | A23S, 12Vx1pc |
| 6571-2 | Ø20mm | SØ10mm | 10µm | A23S, 12Vx1pc |

- The shank is electrically conducted to the metal workpiece through the chuck and table, the LED lights up, when the ball touches the workpiece
- Not suitable for rotary use
- Hardened contact ball

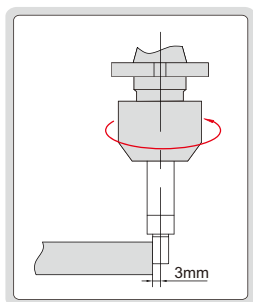
ELECTRONIC EDGE FINDERS

- The shank is electrically conducted to the metal workpiece through the chuck and table, the LED lights up and the beeper sounds (only for 6566-3), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball

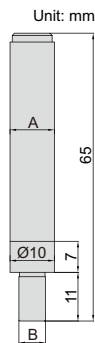


| Code | Shank (A) | Contact ball (B) | Accuracy | Beeper | Battery |
|--------|-----------|------------------|----------|---------|---------------|
| 6566-2 | Ø20mm | SØ10mm | 5µm | without | 23AE, 12Vx1pc |
| 6566-3 | Ø20mm | SØ10mm | 5µm | with | 23AE, 12Vx1pc |

EDGE FINDER



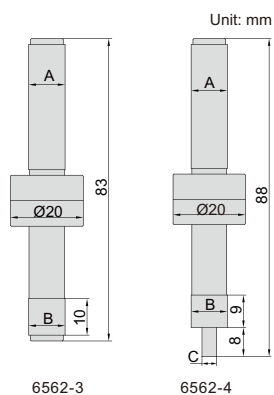
6567-1



- Hardened shank and contact point

| Code | Shank (A) | Contact point (B) | Accuracy |
|--------|-----------|-------------------|----------|
| 6567-1 | Ø10mm | Ø6mm | 8µm |

EDGE FINDERS



6562-3

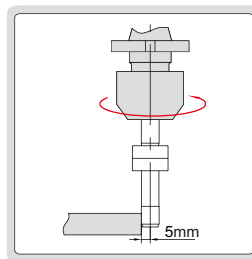
6562-4



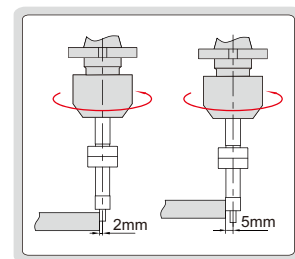
6562-3



6562-4



6562-3

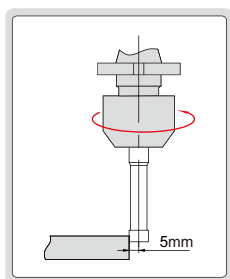


6562-4

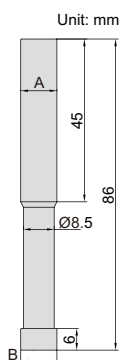
- Hardened shank and contact point

| Code | Shank (A) | Contact point (B) | Contact point (C) | Accuracy |
|--------|-----------|-------------------|-------------------|----------|
| 6562-3 | Ø10mm | Ø10mm | — | 5µm |
| 6562-4 | Ø10mm | Ø10mm | Ø4mm | 5µm |

CERAMIC EDGE FINDER



6568-1

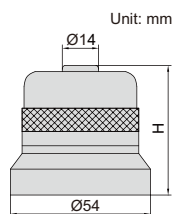


- Ceramic contact point, non magnetic

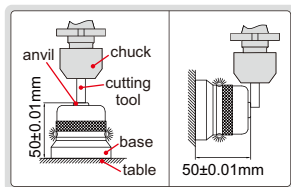
| Code | Shank (A) | Contact point (B) | Accuracy |
|--------|-----------|-------------------|----------|
| 6568-1 | Ø10mm | Ø10mm | 8µm |

ELECTRONIC ZERO SETTER

ATTENTION:
HIGH TEST FORCE



6550-50A



- The base is electrically conducted to the cutting tools through the table and chuck, the LED lights up when the cutting tool touches the anvil
- Magnetic base
- Battery LR44

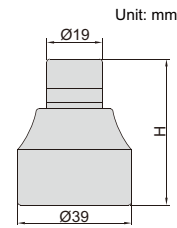
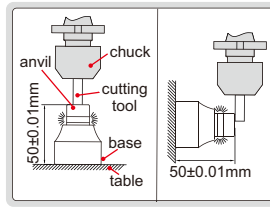
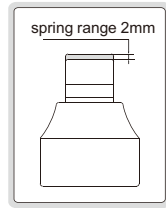
| Code | Height (H) | Accuracy | Test force |
|----------|------------|----------|---------------|
| 6550-50A | 50mm | ±10µm | 27N (at 49mm) |



LOW TEST FORCE

ELECTRONIC ZERO SETTER

- The base is electrically conducted to the cutting tools through the table and chuck, the LED lights up when the cutting tool touches the anvil
- Magnetic base
- Two batteries LR44

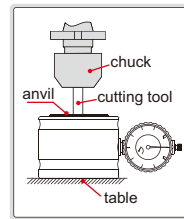
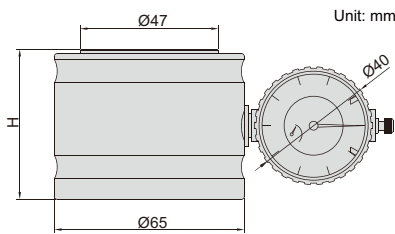


6553-50

| Code | Height (H) | Accuracy | Test force |
|---------|------------|----------|--------------|
| 6553-50 | 50mm | ±10µm | 7N (at 49mm) |



ZERO SETTER

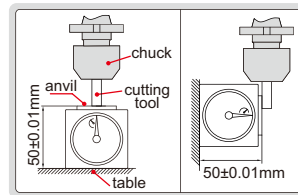
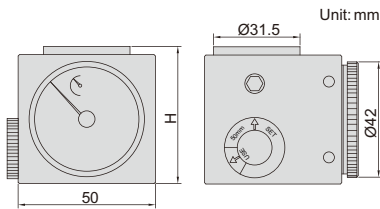


6554-50

| Code | Height (H) | Accuracy | Test force |
|---------|------------|----------|--------------|
| 6554-50 | 50mm | ±10µm | 9N (at 50mm) |

ZERO SETTER

- Magnetic base

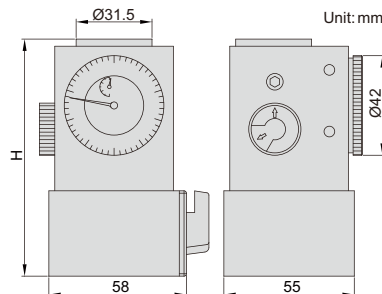
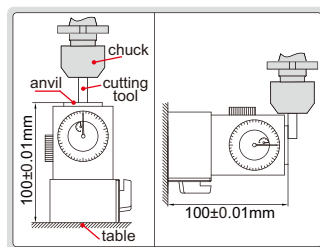


2397-502A

| Code | Height (H) | Accuracy | Test force |
|-----------|------------|----------|--------------|
| 2397-502A | 50mm | ±10µm | 9N (at 50mm) |

ZERO SETTER

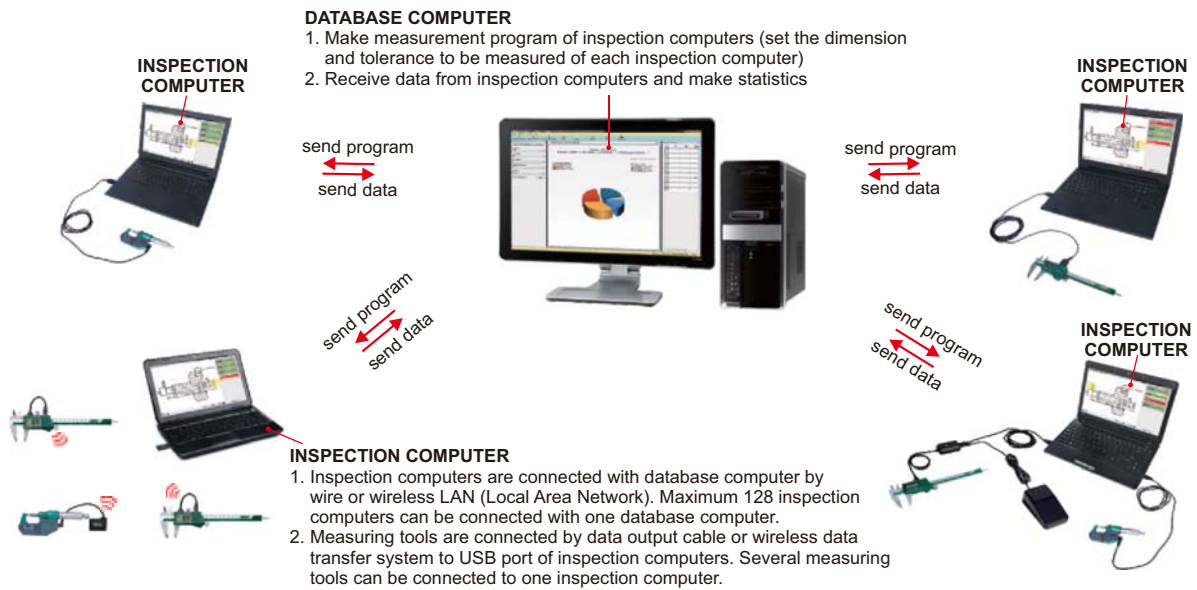
- Magnetic base with on-off switch



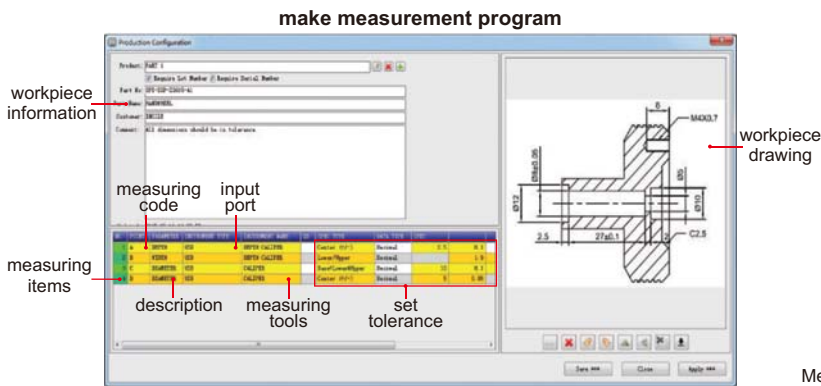
2394-100A

| Code | Height (H) | Accuracy | Test force |
|-----------|------------|----------|---------------|
| 2394-100A | 100mm | ±10µm | 9N (at 100mm) |

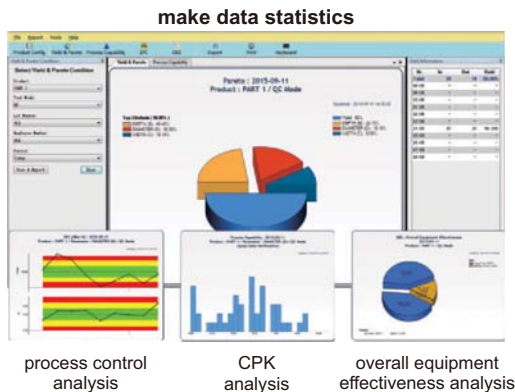
MEASURING DATA MANAGEMENT SOFTWARE



SOFTWARE FOR DATABASE COMPUTER CODE 7311-1



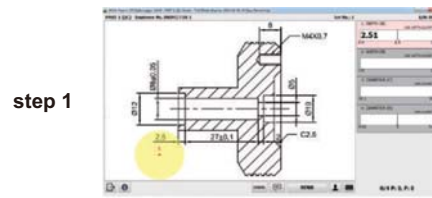
Make measurement program for each one inspection computer.
Maximum 200 dimensions can be measured by one inspection computer.



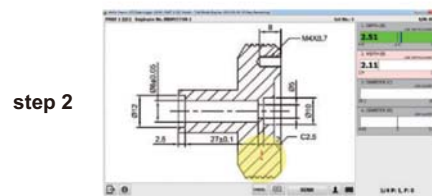
report

| Item | Dimension | Value | Tolerance | Status |
|------|-----------|-------|-----------|--------|
| 1 | 2.51 | 2.51 | ±0.05 | OK |
| 2 | 2.11 | 2.11 | ±0.05 | OK |
| 3 | 18.35 | 18.35 | ±0.1 | OK |
| 4 | 8.03 | 8.03 | ±0.05 | OK |

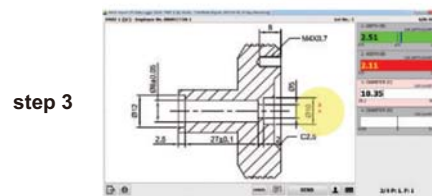
SOFTWARE FOR INSPECTION COMPUTER CODE 7311-2



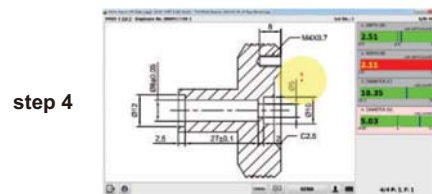
Measure the 1st dimension by following the yellow position indication.



Measure the 2nd dimension by following the yellow position indication.
The 1st data will be shown in red or green according its tolerance.



Measure the 3rd dimension by following the yellow position indication.
The 2nd data will be shown in red or green according its tolerance.



Measure the 4th dimension by following the yellow position indication.
The 3rd data will be shown in red or green according its tolerance.
The data of four measurements will be sent to the database computer.

| Code | Description | Applicable products |
|----------|---------------|--|
| 7306-2 | receiver | USB and RS232 connection ports, strong transmission signal, the maximum distance is 100m |
| 7306-1 | mini receiver | USB connection port, for short distance (within 20m) or barrier-free area |
| 7306-20 | transmitter | digital calipers, digital depth gages and digital height gages (not for 1103, 1150) |
| 7306-30 | transmitter | digital micrometers, digital three point internal micrometers (not for 3631, 3632, 3108, 3109, 3635) |
| 7306-30A | transmitter | digital micrometers, digital three point internal micrometers (not for 3631, 3632, 3108, 3109, 3635) |
| 7306-40 | transmitter | digital indicators |
| | | digital protractors |

WIRELESS DATA TRANSFER SYSTEM



APPLICABLE FOR OTHER BRANDS



protecting cap (optional)
code 7306-CAP

receiver
7306-2

transmitter
7306-20

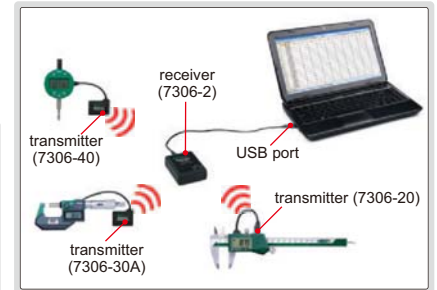
■ **CONNECTION:** one receiver can be connected to 30 transmitters.



software CD (included)



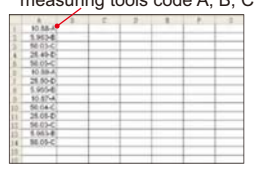
read button



■ **DATA COLLECTION:**

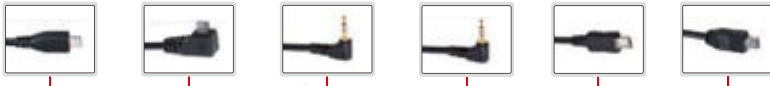
- 1) Single collection: press the read button once to collect the reading from measuring tool once.
- 2) Multi collection: press the read button once to start collecting readings from measuring tools continuously, press the button again to stop collecting. Total collection times and interval time can be adjusted.

■ **DISPLAY:** data can be input to Excel as keyboard signal.



All data are displayed in the same column. Each measuring tool can be coded such as A, B, C, etc.

7302-SPC5A 7302-SPC5B 7302-SPC2A 7302-SPC6 7302-SPC3A 7302-SPC4



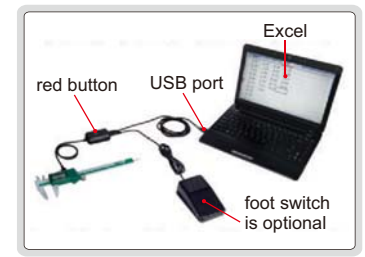
USB DATA OUTPUT CABLES



7304-2

| Code | Description | Remark |
|------------|--------------------------------------|--|
| 7302-SPC5A | cable (length 2.5m) | for digital calipers and digital depth gages (not for 1103) |
| 7302-SPC5B | cable (length 2.5m) | for digital calipers and digital depth gages (not for 1103) |
| 7302-SPC2A | cable (length 2.5m) | for digital micrometers (not for 3631, 3632, 3108, 3109, 3635) |
| 7302-SPC6 | cable (length 2.5m) | for digital micrometers (not for 3631, 3632, 3108, 3109, 3635) |
| 7302-SPC3A | cable (length 2.5m) | for digital indicators |
| | | digital protractors |
| 7302-SPC4 | cable (length 2.5m) | for digital calipers 1103 series (for 1103 only) |
| 7304-2 | foot switch with cable (length 1.5m) | optional |

- Connect to USB port of computer
- Without software, data can be input as keyboard signal to Excel, Word, etc.
- Press the red button or foot switch (optional) to input data

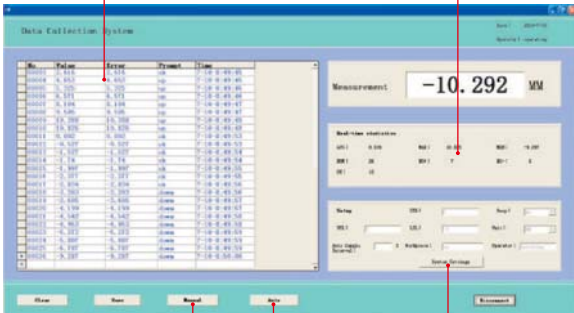


RS232 DATA OUTPUT CABLES



automatic judgment by setting tolerance

test result display (maximum value, minimum value, total quantity of workpiece, quantity of Go and No-Go, quantity of exceed upper tolerance and exceed lower tolerance)



manual sampling automatic sampling set auto sampling interval and tolerance



7305-SPC1A



7305-SPC2A



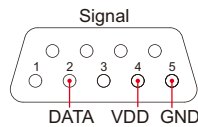
USB power port

7305-SPC3



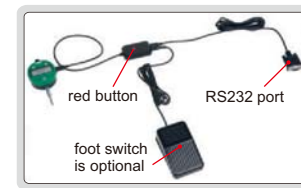
foot switch (optional)

7304-2



- Manual sampling and automatic sampling
- Press manual sampling button in software or red button on cable or foot switch once to collect the reading from measuring tool once
- Can be used in Windows Hyperterminal
- Supplied with software
- Voltage required: 5-10V
- Cable length 2.5m

| Code | Applicable products |
|------------|--|
| 7305-SPC1A | digital indicators digital protractors |
| 7305-SPC2A | digital calipers and digital depth gages (not for 1103) |
| 7305-SPC3 | digital micrometers (not for 3631, 3632, 3108, 3109, 3635) |
| 7305-SPC3A | digital micrometers (not for 3631, 3632, 3108, 3109, 3635) |
| 7304-2 | foot switch with cable (length 1.5m), optional |



software CD (included)

DIGITAL HORIZONTAL SCALES

DATA OUTPUT

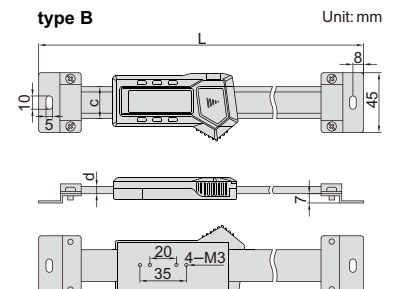
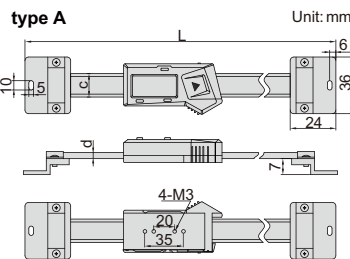
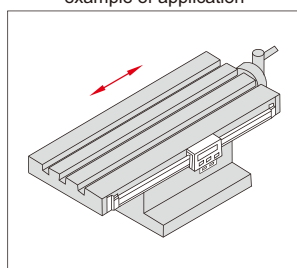
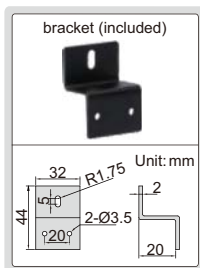


7101-300A



7101-400A

example of application



(mm)

| Code | Range | Type | Accuracy | L | c | d |
|------------|--------|------|----------|------|----|------|
| 7101-100A | 100mm | A | ±0.02mm | 215 | 16 | 4 |
| 7101-150A | 150mm | A | ±0.03mm | 265 | 16 | 4 |
| 7101-200A | 200mm | A | ±0.03mm | 315 | 16 | 4 |
| 7101-300A | 300mm | A | ±0.04mm | 445 | 16 | 4 |
| 7101-400A | 400mm | B | ±0.05mm | 590 | 24 | 5.5 |
| 7101-500A | 500mm | B | ±0.05mm | 690 | 24 | 5.5 |
| 7101-600A | 600mm | B | ±0.08mm | 790 | 24 | 5.5 |
| 7101-800A | 800mm | B | ±0.10mm | 990 | 24 | 5.5 |
| 7101-1000A | 1000mm | B | ±0.10mm | 1190 | 31 | 10.5 |

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

DATA OUTPUT

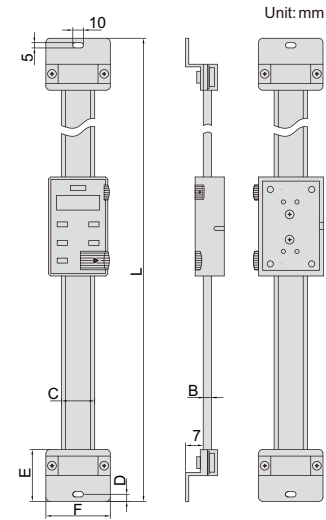
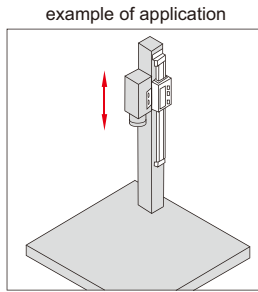
data output cable



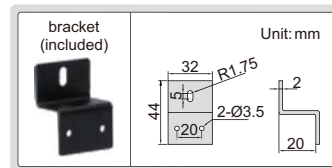
7301-SPC5

DIGITAL VERTICAL SCALES

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Battery LR44
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable (code 7301-SPC5)



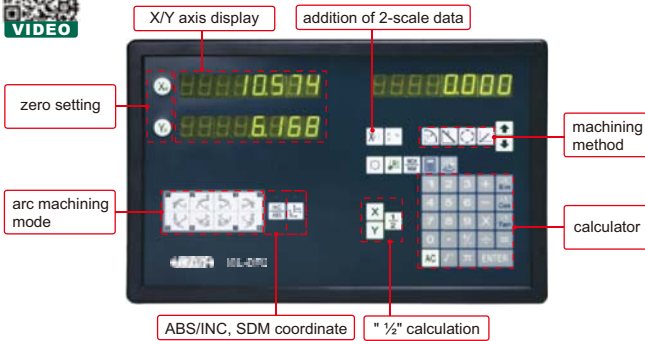
| Code | Range | Accuracy | B | C | D | E | F | L | (mm) |
|-----------|------------|----------|-----|----|---|----|----|------|------|
| 7102-100 | 100mm/4" | ±0.02mm | 4 | 20 | 6 | 24 | 40 | 245 | |
| 7102-150 | 150mm/6" | ±0.03mm | 4 | 20 | 6 | 24 | 40 | 296 | |
| 7102-200 | 200mm/8" | ±0.03mm | 4 | 20 | 6 | 24 | 40 | 345 | |
| 7102-300 | 300mm/12" | ±0.04mm | 4 | 20 | 6 | 24 | 40 | 445 | |
| 7102-400 | 400mm/16" | ±0.05mm | 4 | 20 | 6 | 24 | 40 | 545 | |
| 7102-500 | 500mm/20" | ±0.05mm | 5.5 | 24 | 8 | 32 | 45 | 685 | |
| 7102-600 | 600mm/24" | ±0.08mm | 5.5 | 24 | 8 | 32 | 45 | 785 | |
| 7102-800 | 800mm/32" | ±0.10mm | 5.5 | 24 | 8 | 32 | 45 | 985 | |
| 7102-1000 | 1000mm/40" | ±0.10mm | 5.5 | 24 | 8 | 32 | 45 | 1185 | |



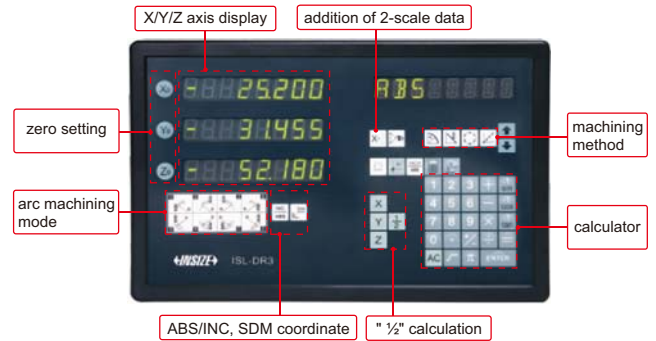
7102-300



COUNTERS



ISL-DR2



ISL-DR3

SPECIFICATION

| Code | ISL-DR2 | ISL-DR3 |
|-------------------|---|------------|
| Application | two-axis | three-axis |
| Scale input ports | 2 | 3 |
| Resolution | 0.05µm, 0.1µm, 0.2µm, 0.5µm, 1µm, 2µm, 5µm, 10µm, 20µm, 50µm | |
| Functions | addition of 2-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/contraction coefficient setting, "1/2" calculation, detecting RI, bolt-hole circle machining, ramp circle machining | |
| Power supply | 110/220V, 50/60Hz | |
| Dimension | 295×185×45mm | |
| Weight | 1.45kg | |

STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| Mounting bracket | 1pc |
| Ground cable | 1pc |
| RS232C cable | 1pc |
| Software CD for RS232C | 1pc |



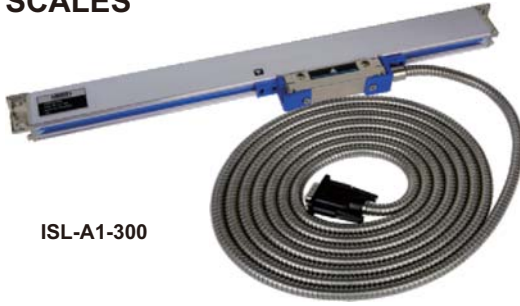
software CD (included)



mounting bracket (included)

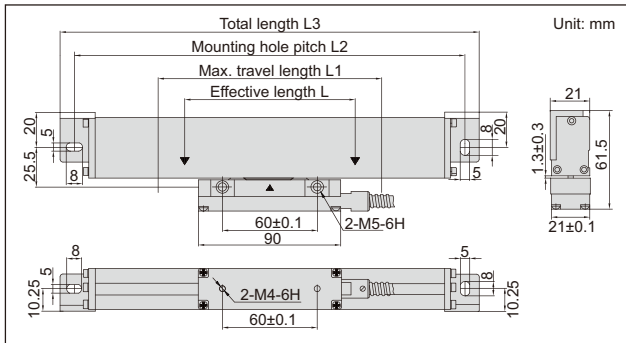


LINEAR SCALES

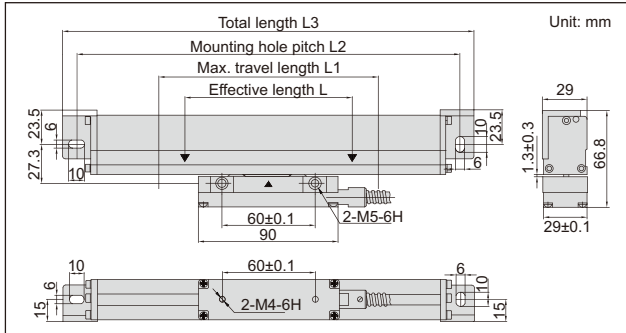


ISL-A1-300

Series ISL-A1 and ISL-A5

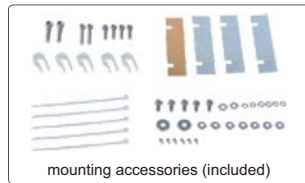
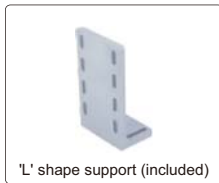


Series ISL-B5



STANDARD DELIVERY

| | |
|----------------------|----------------------|
| Main unit | 1pc |
| 'L' shape support | 1pc |
| Anti-dust cover | 1pc |
| Plain base | 1pc (for L ≥ 1500mm) |
| Mounting accessories | 1 package |



| Effective length (L) | Code | | |
|----------------------|---------------|---------------|---------------|
| | Series ISL-A1 | Series ISL-A5 | Series ISL-B5 |
| 50mm | ISL-A1-50 | ISL-A5-50 | ISL-B5-50 |
| 100mm | ISL-A1-100 | ISL-A5-100 | ISL-B5-100 |
| 150mm | ISL-A1-150 | ISL-A5-150 | ISL-B5-150 |
| 200mm | ISL-A1-200 | ISL-A5-200 | ISL-B5-200 |
| 250mm | ISL-A1-250 | ISL-A5-250 | ISL-B5-250 |
| 300mm | ISL-A1-300 | ISL-A5-300 | ISL-B5-300 |
| 350mm | ISL-A1-350 | ISL-A5-350 | ISL-B5-350 |
| 400mm | ISL-A1-400 | ISL-A5-400 | ISL-B5-400 |
| 450mm | ISL-A1-450 | ISL-A5-450 | ISL-B5-450 |
| 500mm | ISL-A1-500 | ISL-A5-500 | ISL-B5-500 |
| 550mm | ISL-A1-550 | ISL-A5-550 | ISL-B5-550 |
| 600mm | ISL-A1-600 | ISL-A5-600 | ISL-B5-600 |
| 650mm | ISL-A1-650 | ISL-A5-650 | ISL-B5-650 |
| 700mm | ISL-A1-700 | ISL-A5-700 | ISL-B5-700 |
| 750mm | ISL-A1-750 | ISL-A5-750 | ISL-B5-750 |
| 800mm | ISL-A1-800 | ISL-A5-800 | ISL-B5-800 |
| 850mm | ISL-A1-850 | ISL-A5-850 | ISL-B5-850 |
| 900mm | ISL-A1-900 | ISL-A5-900 | ISL-B5-900 |
| 950mm | ISL-A1-950 | ISL-A5-950 | ISL-B5-950 |
| 1000mm | ISL-A1-1000 | ISL-A5-1000 | ISL-B5-1000 |
| 1100mm | | ISL-A5-1100 | ISL-B5-1100 |
| 1200mm | | | ISL-B5-1200 |
| 1300mm | | | ISL-B5-1300 |
| 1400mm | | | ISL-B5-1400 |
| 1500mm | | | ISL-B5-1500 |
| 1600mm | | | ISL-B5-1600 |
| 1700mm | | | ISL-B5-1700 |
| 1800mm | | | ISL-B5-1800 |
| 1900mm | | | ISL-B5-1900 |
| 2000mm | | | ISL-B5-2000 |
| 2100mm | | | ISL-B5-2100 |
| 2200mm | | | ISL-B5-2200 |
| 2300mm | | | ISL-B5-2300 |
| 2400mm | | | ISL-B5-2400 |
| 2500mm | | | ISL-B5-2500 |
| 2600mm | | | ISL-B5-2600 |
| 2700mm | | | ISL-B5-2700 |
| 2800mm | | | ISL-B5-2800 |
| 2900mm | | | ISL-B5-2900 |
| 3000mm | | | ISL-B5-3000 |
| 3100mm | | | ISL-B5-3100 |
| 3200mm | | | ISL-B5-3200 |

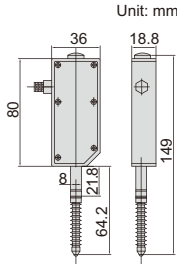
SPECIFICATION

| Code | Series ISL-A1 | | Series ISL-A5 | | Series ISL-B5 | |
|-----------------------------|---|---------------|---------------|---------------|---------------|---------------|
| L1 (mm) | L+30(L<950) | L+50(L≥ 950) | L+30(L<950) | L+50(L≥ 950) | L+30(L<950) | L+50(L≥ 950) |
| L2 (mm) | L+132(L<950) | L+152(L≥ 950) | L+132(L<950) | L+152(L≥ 950) | L+136(L<950) | L+156(L≥ 950) |
| L3 (mm) | L+149(L<950) | L+169(L≥ 950) | L+149(L<950) | L+169(L≥ 950) | L+154(L<950) | L+174(L≥ 950) |
| Resolution | 1μm | | 5μm | | 5μm | |
| Max. response speed | 50m/min | | 90m/min | | 60m/min | |
| Scale grating pitch | 20μm | | | | | |
| Scale reference point pitch | 50mm | | | | | |
| Accuracy | ±(5+5L/1000)μm L is the effective length in mm | | | | | |
| Cable length | 3.5m (L: 50-950mm), 5m (L: 1000-1500mm), 10m (L: 1600-3200mm) | | | | | |

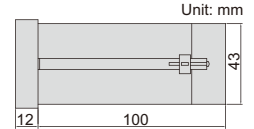
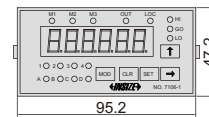
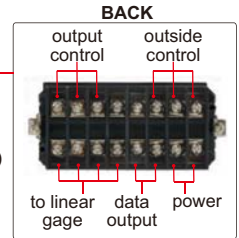
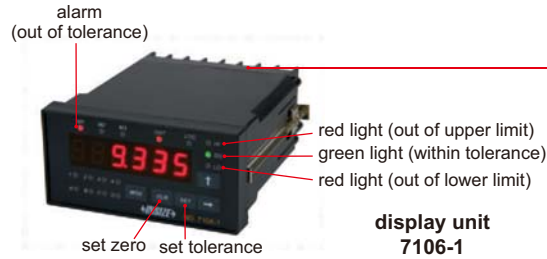
LINEAR GAGE
IP65
WATERPROOF



linear gage



LINEAR GAGES AND DISPLAY UNIT



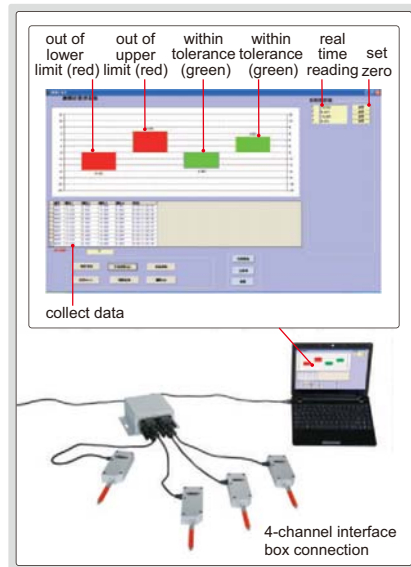
- Linear gage: shock-proof, water proof, dust proof, suitable for high speed movement, long working life
- Display unit: set tolerance and make judgment (out of upper limit, within tolerance, out of lower limit), output the judgment to control outside devices, set zero and hold reading from outside

LINEAR GAGE SPECIFICATION

| Code | 7106-11 | 7106-12 |
|---------------------|-------------------|---------|
| Measuring range | 12mm | 12mm |
| Resolution | 0.01mm | 0.001mm |
| Accuracy | 20μm | 5μm |
| Hysteresis | 10μm | 2μm |
| Measuring principle | capacity system | |
| Voltage | 5V | |
| Sampling frequency | 100 times/sec. | |
| Working life | ten million times | |
| Dust/waterproof | IP65 | |
| Measuring force | 1.5N | |
| Cable length | 2m | |
| Data output | four-core wire | |

DISPLAY UNIT SPECIFICATION

| Code | 7106-1 |
|--|---|
| Display | 6 digits |
| Quantity of linear gages to be connected | 1pc |
| Tolerance | set tolerance and make judgment with alarm and lights (out of upper limit, within tolerance, out of lower limit) |
| Output control | output the tolerance judgment (out of upper tolerance, within tolerance, out of lower tolerance) to control outside devices |
| Outside control | control the display units from outside (set zero, hold reading) |
| Data output | connect to PC |
| Power supply | DC 9~24V |

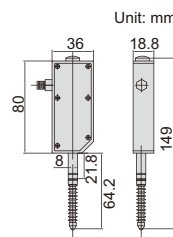


INTERFACE BOX SPECIFICATION

| Code | 7107-1 | 7107-2 |
|--|-----------------|--------|
| Quantity of linear gages to be connected | 4pcs | 8pcs |
| Data port | RS232 and RS485 | |
| Power supply | DC 9~24V | |



linear gage

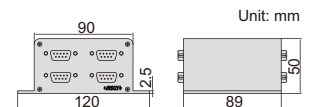


MULTI LINEAR GAGE SYSTEM

LINEAR GAGE
IP65
WATERPROOF



4-channel interface box
7107-1

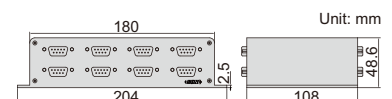


LINEAR GAGE SPECIFICATION

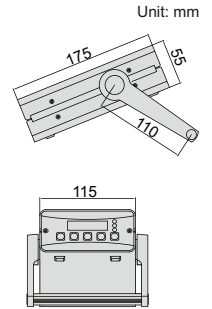
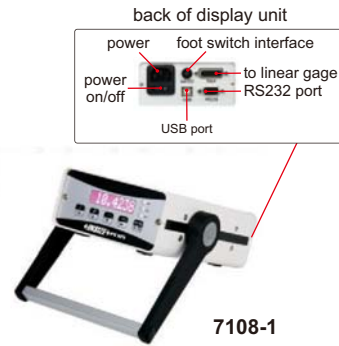
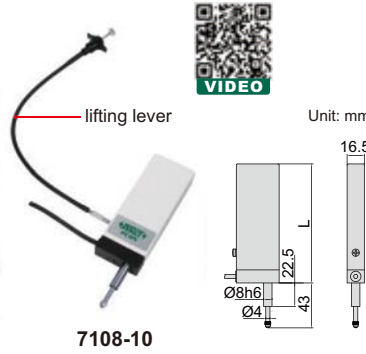
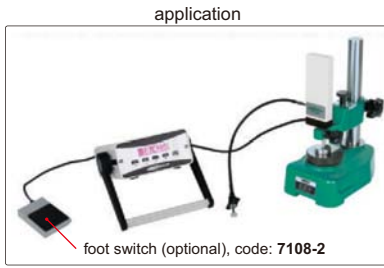
| Code | 7107-11 | 7107-12 |
|---------------------|-------------------|---------|
| Measuring range | 12mm | 12mm |
| Resolution | 0.01mm | 0.001mm |
| Accuracy | 20μm | 5μm |
| Hysteresis | 10μm | 2μm |
| Measuring principle | capacity system | |
| Voltage | 5V | |
| Sampling frequency | 100 times/sec. | |
| Working life | ten million times | |
| Dust/waterproof | IP65 | |
| Measuring force | 1.5N | |
| Cable length | 2m | |
| Data output | RS232 | |



8-channel interface box
7107-2



HIGH PRECISION LINEAR GAGES AND DISPLAY UNIT



LINEAR GAGE SPECIFICATION

| Code | 7108-10 | 7108-30 |
|------------------------|---|---------|
| Measuring range | 10mm | 30mm |
| Resolution | 0.01µm | |
| Accuracy | (0.5+L/60)µm, L is measuring length in mm | |
| Dust/waterproof | IP50 | |
| Output signal | 1Vss | |
| Grating pitch | 8µm | |
| Measuring force | 0.7~1.6N | |
| Cable length | 1.5m | |
| Linear gage length (L) | 113.5mm | 133.5mm |

DISPLAY UNIT SPECIFICATION

| Code | 7108-1 |
|--|--|
| Display | 8 digits |
| Character height | 9mm |
| Quantity of linear gages to be connected | single channel, to connect one linear gage * |
| Dust/waterproof | IP20 |
| Display unit | mm, inch, grad |
| Resolution | 1µm, 0.1µm, 0.01µm |
| Data output | USB, RS232 |
| Power supply | AC 85~264V, 150mA |

- Linear gage:
 - Incremental glass scale sensor, with built-in roller bearing, high precision
 - With lifting lever, for quick measurement
- Display unit:
 - Set zero or output data through foot switch (optional)
 - Measuring direction can be changed
 - The reading can be preset
 - Can make accuracy compensation

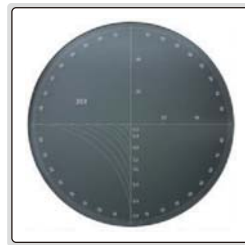
* Double channel display is optional

TOOL PRESETTER CODE ISP-TP300

projection screen Ø120mm with scale
(protractor with 1° graduation,
radius with 0.2, 0.4, 0.8, 1.2,
1.5, 2, 2.5, 3mm)



- Projection screen
- Measure radius, angle, height and squareness
- 99 presetting data can be saved and selected quickly



SPECIFICATION

| | | |
|---------------------------------|----------------------|-------|
| Maximum tool diameter (X axis) | Ø300mm | |
| Height measuring range (Z axis) | 45~450mm | |
| Accuracy | X axis | ±6µm |
| | Z axis | ±13µm |
| Resolution | 0.5µm | |
| Diameter of projection screen | Ø120mm | |
| Lens | magnification | 20X |
| | view filed | Ø6mm |
| Illumination | 24V/20W halogen lamp | |
| Spindle holder | BT50 | |
| Air source pressure | 0.6Mpa | |
| Dimension (L×W×H) | 690×620×922mm | |
| Weight | 160kg | |

STANDARD DELIVERY

| | |
|---------------------|-----|
| Main unit | 1pc |
| BT50 spindle holder | 1pc |
| Standard rod | 1pc |
| Foot-switch | 1pc |
| Anti-dust cover | 1pc |



BT50/BT40 converter (optional)



BT50/BT30 converter (optional)



OPTIONAL ACCESSORY

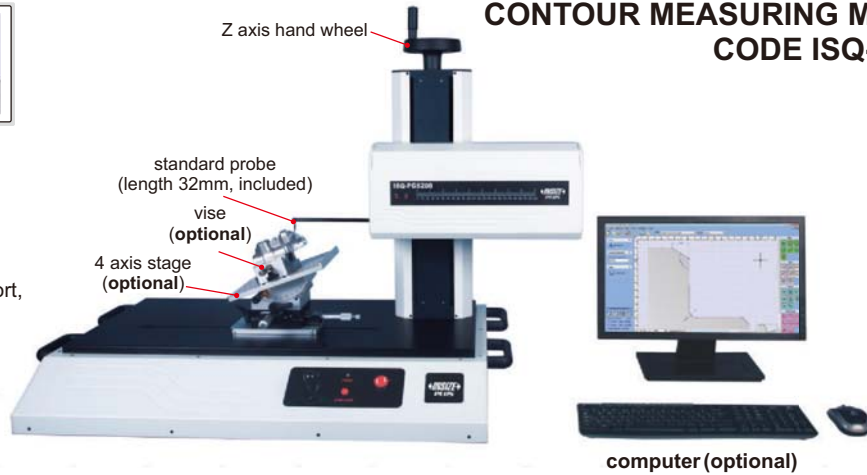
| | |
|---------------------|--------------|
| BT50/BT30 converter | ISP-TP300-C1 |
| BT50/BT40 converter | ISP-TP300-C2 |



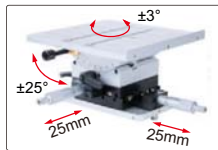
CONTOUR MEASURING MACHINE CODE ISQ-PGS200



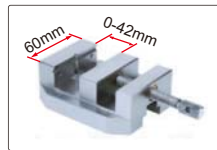
- Include the software, for contour measurement and data output
- Programmable for automatic cycle measuring, automatically scan contour, mark dimensions, make report, save and print results)
- Operation system: Windows XP, Windows Vista, Windows 7, Windows 8, Windows 8.1
- Output as format pdf, jpg, dxf, etc.



calibration block
(optional)



4 axis stage
(optional)



vise
(optional)



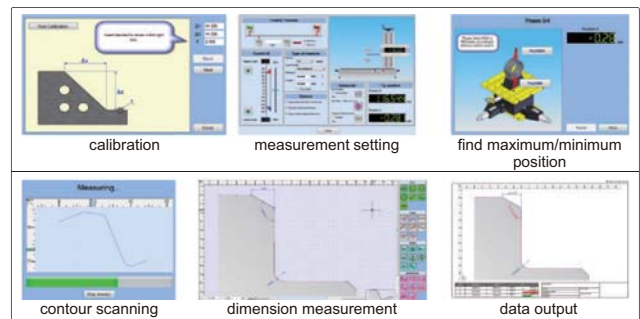
standard probe
(length 32mm, included)



software CD
(included)

SPECIFICATION

| | | |
|---------------------|--------------------------------|--|
| X axis | Measuring range | 200mm |
| | Resolution | 0.5µm |
| | Accuracy | ±(1+L/80)µm, L is the measuring length in mm |
| Z axis | Measuring range | 50mm |
| | Resolution | 0.2µm |
| | Accuracy | ±(1+H/30)µm, H is the measuring height in mm |
| Traverse speed | 0~10mm/s | |
| Measuring speed | 0.2mm/s, 0.5mm/s, 1mm/s, 2mm/s | |
| Radius of probe tip | 20µm | |
| Measuring unit | mm/inch | |
| Traverse direction | backward | |
| Measuring force | 30mN | |
| Traceable angle | 75°(upward), 85°(downward) | |
| Travel of Z axis | 300mm | |
| Dimension (L×W×H) | 1100×570×720mm | |
| Power supply | 110~240V/50 ~ 60Hz | |
| Weight | 42kg | |



STANDARD DELIVERY

| | |
|------------------------------|-----|
| Main unit | 1pc |
| Standard probe (ISQ-PGS-T01) | 1pc |
| Software CD | 1pc |
| USB cable | 1pc |

OPTIONAL ACCESSORY

| | |
|-------------------|---------------|
| Calibration block | ISQ-PGS-CLB |
| 4 axis stage | ISQ-PGS-TABLE |
| Vise | ISQ-PGS-VISE |
| Probe | see details |

SPECIFICATION OF PROBES

Unit: mm

| | | | |
|---|---|--|---|
| <p>chisel probes</p> <p>code ISQ-PGS-T01 (L=32mm, included)</p> <p>code ISQ-PGS-T02 (L=22mm, optional)</p> <p>code ISQ-PGS-T03 (L=52mm, optional)</p> <p>code ISQ-PGS-T04 (L=42mm, optional)</p> | <p>Ø1mm ruby ball probe</p> <p>code ISQ-PGS-R01 (optional)</p> <p>Ø2mm ruby ball probe</p> <p>code ISQ-PGS-R02 (optional)</p> | <p>carbide ball probe</p> <p>code ISQ-PGS-C01 (Ø1mm ball, optional)</p> <p>code ISQ-PGS-R02 (Ø2mm ball, optional)</p> | <p>measuring arm and probe for small holes (optional), code ISQ-PGS-SBP</p> <p>measure the contour of holes with diameter>Ø8mm</p> <p>transverse measuring arm and probe ISQ-PGS-T01 (optional), code ISQ-PGS-LP</p> <p>measure the contour of holes in radial direction</p> |
|---|---|--|---|

PROFILE PROJECTORS

Screen diameter: 300mm

X-Y travel: 150x50mm



ISP-Z3015



ISP-A1000E

digital readout of ISP-A1000E

- touch buttons
- USB data output to Excel and CAD
- show diagram directly



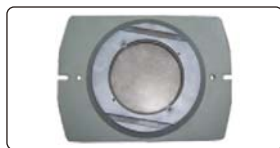


software CD (included, only for ISP-A1000E)

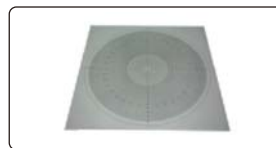
OPTIONAL ACCESSORY



lens



rotary table (glass plate diameter 100mm)



overlay chart (protractor with 1° graduation, radius with 1mm increment)



holder with clamp



swivel center support



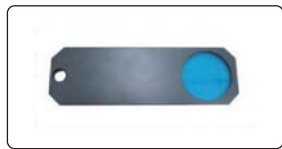
V-block with clamp



50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



blue filter



demo sample



printer (only for ISP-A1000E)

To be continued

Continued from previous page

SPECIFICATION

| Code | | ISP-Z3015 | | ISP-A1000E | | |
|---|------------------------|---|------------------------------------|---|-----------------------------|--|
| Edge detector | | not included | | included | | |
| Lens | magnification | 10X (included) | 20X (optional) | 50X (optional) | 100X (optional) | |
| | view field | Ø30mm | Ø15mm | Ø6mm | Ø3mm | |
| | working distance | 77.7mm | 44.3mm | 38.4mm | 25.3mm | |
| Max. workpiece height | | 90mm | 90mm | 90mm | 90mm | |
| Magnification accuracy | | ±0.08% | | | | |
| Image | | erect image | | | | |
| Projector screen | | diameter: Ø300mm | | | | |
| | | rotation range: 0°~360°, resolution: 1" or 0.01° | | | | |
| | | reference lines: cross-hairs | | | | |
| Stage | metal stage size | 340×152mm | | | | |
| | glass stage size | 196×96mm | | | | |
| | X-Y stage travel | range: 150×50mm | | | | |
| | | resolution: 0.5µm | | | | |
| | Z (focus) travel range | accuracy: (4+L/25)µm L is the measuring length in mm | | | | |
| max. load capacity | 90mm | | | | | |
| Illumination | | contour illumination: 24V/150W halogen lamp, brightness is adjustable | | | | |
| | | surface illumination: 24V/150W halogen lamp | | | | |
| Data processing unit | display | X-Y stage travel, screen rotation | | | | |
| | output | RS232C | | RS232C, USB (data output to Excel and CAD) | | |
| | function | measure coordinate of point | measure coordinate of point | | measure coordinate of point | |
| | | measure coordinate of line | measure coordinate of line | | measure coordinate of line | |
| measure center coordinate, radius of circle with three points | | measure center coordinate, radius of circle with three points | | measure center coordinate, radius of circle with three points | | |
| measure distance between two objects | | measure distance between two objects | | measure distance between two objects | | |
| measure angle with four points or two lines | | measure angle with four points or two lines | | measure angle with four points or two lines | | |
| set origin of coordinate | | set origin of coordinate | | set origin of coordinate | | |
| coordinate transform | | coordinate transform | | coordinate transform | | |
| set midpoint of coordinate | | set midpoint of coordinate | | choose measurement object automatically according to the selective point and display the result | | |
| advanced function | — | | programming for batch measurements | | | |
| Power supply | | 110/220V, 50/60Hz | | | | |
| Dimension (L×W×H) | | 550×770×1100mm | | | | |
| Weight | | 135kg | | | | |

STANDARD DELIVERY

| | |
|---|------|
| Main unit | 1pc |
| 10X lens with half-reflection mirror and oblique illuminator mirror | 1pc |
| Overlay chart clip | 4pcs |
| Foot-switch | 1pc |
| Anti-dust cover | 1pc |
| USB cable and software (only for ISP-A1000E) | 1pc |

OPTIONAL ACCESSORY

| | | | |
|---|--------------------|-------------------------------|-------------------|
| 20X lens with half-reflection mirror and oblique illuminator mirror | ISP-Z3015-LENS20X | Swivel center support | ISP-Z3015-SUPPORT |
| 50X lens with half-reflection mirror | ISP-Z3015-LENS50X | V-block with clamp | ISP-Z3015-VBLOCK |
| 100X lens with half-reflection mirror | ISP-Z3015-LENS100X | 50mm reading scale | ISP-Z3015-SCALE50 |
| Rotary table | ISP-Z3015-TABLE | 300mm calibration scale | ISP-Z3015-RULE |
| Overlay chart | ISP-Z3015-CHART | Blue filter | ISP-Z3015-FILTER |
| Holder with clamp | ISP-Z3015-HOLDER | Demo sample | ISP-Z3015-DEMO |
| | | Printer (only for ISP-A1000E) | ISP-A1000-PRINTER |

PROFILE PROJECTORS

Screen diameter: 300mm

X-Y travel: 200x100mm



ISP-AZ3020



ISP-A5000E

digital readout of ISP-A5000E

- Adjust the focus by ascending and descending the projector head, the stage doesn't move up and down
- Maximum workpiece weight 50kg

- touch buttons
- USB data output to Excel and CAD
- show diagram directly

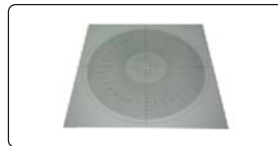


software CD (included, only for ISP-A5000E)

OPTIONAL ACCESSORY



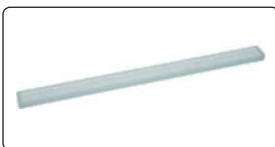
lens



overlay chart (protractor with 1° graduation, radius with 1mm increment)



50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



demo sample



printer (only for ISP-A5000E)

To be continued

Continued from previous page

SPECIFICATION

| Code | | ISP-AZ3020 | ISP-A5000E | |
|---|-----------------------|---|---|-----------------------------|
| Edge detector | | not included | included | |
| Lens | magnification | 10X (included) 20X (optional) | 50X (optional) 100X (optional) | |
| | view field | Ø30mm Ø15mm | Ø6mm Ø3mm | |
| | working distance | 77.7mm 44.3mm | 38.4mm 25.3mm | |
| Max. workpiece height | | 100mm 100mm | 100mm 100mm | |
| Magnification accuracy | | ±0.08% | | |
| Image | | erect image | | |
| Projector screen | | diameter: Ø300mm | | |
| | | rotation range: 0°~360°, resolution: 1' or 0.01° | | |
| | | reference lines: cross-hairs | | |
| Stage | metal stage size | 404×228mm | | |
| | glass stage size | 260×160mm | | |
| | X-Y stage travel | range: 200×100mm | | |
| | | resolution: 0.5µm | | |
| | Z(focus) travel range | 100mm | | |
| max. load capacity | 50kg | | | |
| Illumination | | contour illumination: 24V/150W halogen lamp, brightness is adjustable | | |
| | | surface illumination: 24V/150W halogen lamp, brightness is adjustable | | |
| Data processing unit | display | X-Y stage travel, screen rotation | | |
| | output | RS232C | RS232C, USB (data output to Excel and CAD) | |
| | function | measure coordinate of point | | measure coordinate of point |
| | | measure coordinate of line | | measure coordinate of line |
| measure center coordinate, radius of circle with three points | | | measure center coordinate, radius of circle with three points | |
| measure distance between two objects | | | measure distance between two objects | |
| measure angle with four points or two lines | | | measure angle with four points or two lines | |
| set origin of coordinate | | | coordinate transform | |
| coordinate transform | | | choose measurement object automatically according to the selective point and display the result | |
| set midpoint of coordinate | | | | |
| advanced function | — | programming for batch measurements | | |
| Powersupply | | 110/220V, 50/60Hz | | |
| Dimension (L×W×H) | | 780×780×1100mm | | |
| Weight | | 160kg | | |

STANDARD DELIVERY

| | |
|---|------|
| Main unit | 1pc |
| 10X lens with half-reflection mirror and oblique illuminator mirror | 1pc |
| Overlay chart clip | 4pcs |
| Foot-switch | 1pc |
| Anti-dust cover | 1pc |
| USB cable and software (only for ISP-A5000E) | 1pc |

OPTIONAL ACCESSORY

| | |
|---|--------------------|
| 20X lens with half-reflection mirror and oblique illuminator mirror | ISP-A5000-LENS20X |
| 50X lens with half-reflection mirror | ISP-A5000-LENS50X |
| 100X lens with half-reflection mirror | ISP-A5000-LENS100X |
| Overlay chart | ISP-A5000-CHART |

| | |
|-------------------------------|-------------------|
| 50mm reading scale | ISP-A5000-SCALE50 |
| 300mm calibration scale | ISP-A5000-RULE |
| Demo sample | ISP-A5000-DEMO |
| Printer (only for ISP-A5000E) | ISP-A5000-PRINTER |

HORIZONTAL PROFILE PROJECTORS

Screen diameter: 300mm

X-Z travel: 200x100mm



ISP-W3020



ISP-A3000E

digital readout of ISP-A3000E

- touch buttons
- USB data output to Excel and CAD
- show diagram directly



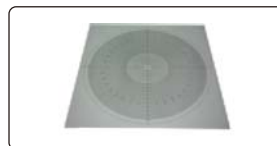


software CD
(included, only for ISP-A3000E)

OPTIONAL ACCESSORY



lens



overlay chart (protractor with 1° graduation, radius with 1mm increment)



50mm reading scale
(check magnification accuracy)



demo sample



V-block with clamp



rotary table



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



vise



printer (only for ISP-A3000E)

To be continued

Continued from previous page

SPECIFICATION

| Code | | ISP-W3020 | ISP-A3000E | |
|---|------------------|---|--|-----------------|
| Edge detector | | not included | included | |
| Lens | magnification | 10X (included) 20X (optional) | 50X (optional) | 100X (optional) |
| | view field | Ø30mm | Ø15mm | Ø6mm |
| | working distance | 77.7mm | 44.3mm | 38.4mm |
| Magnification accuracy | | ±0.08% | | |
| Projector screen | | diameter: Ø300mm | | |
| | | rotation range: 0°~360°, resolution: 1' or 0.01° | | |
| | | reference lines: cross-hairs | | |
| Stage | metal stage size | 400×150mm | | |
| | turning range | ±15° | | |
| | X-Z stage travel | range: 200×100mm | | |
| | | resolution: 0.5µm | | |
| | | accuracy: (4+L/25)µm L is the measuring length in mm | | |
| Y (focus) travel range | 75mm | | | |
| max. load capacity | 50kg | | | |
| Illumination | | contour illumination: 24V/150W halogen lamp, brightness is adjustable | | |
| | | surface illumination: 12V/150W halogen lamp(with 2 fibers), position is adjustable | | |
| Data processing unit | display | X-Z stage travel, screen rotation | | |
| | output | RS232C | RS232C, USB (data output to Excel and CAD) | |
| | function | measure coordinate of point | measure coordinate of point | |
| | | measure coordinate of line | measure coordinate of line | |
| measure center coordinate, radius of circle with three points | | measure center coordinate, radius of circle with three points | | |
| measure distance between two objects | | measure distance between two objects | | |
| measure angle with four points or two lines | | measure angle with four points or two lines | | |
| set origin of coordinate | | coordinate transform | | |
| coordinate transform | | choose measurement object automatically according to the selective point and display the result | | |
| set midpoint of coordinate | | | | |
| advanced function | — | programming for batch measurements | | |
| Power supply | | 110/220V, 50/60Hz | | |
| Dimension (L×W×H) | | 1090×830×1010mm | | |
| Weight | | 160kg | | |

STANDARD DELIVERY

| | |
|--|------|
| Main unit | 1pc |
| 10X lens | 1pc |
| Overlay chart clip | 4pcs |
| Foot-switch | 1pc |
| Anti-dust cover | 1pc |
| USB cable and software (only for ISP-A3000E) | 1pc |

OPTIONAL ACCESSORY

| | |
|-------------------------|--------------------|
| 20X lens | ISP-A3000-LENS20X |
| 50X lens | ISP-A3000-LENS50X |
| 100X lens | ISP-A3000-LENS100X |
| Overlay chart | ISP-A3000-CHART |
| 50mm reading scale | ISP-A3000-SCALE50 |
| 300mm calibration scale | ISP-A3000-RULE |

| | |
|-------------------------------|-------------------|
| Demo sample | ISP-A3000-DEMO |
| V-block with clamp | ISP-A1000-VBLOCK |
| Rotary table | ISP-A3000-RTABLE |
| Vice | ISP-A3000-VICE |
| Printer (only for ISP-A3000E) | ISP-A3000-PRINTER |

HORIZONTAL PROFILE PROJECTORS

Screen diameter: 400mm

X-Z travel: 250x150mm



ISP-W4025



ISP-A7000E

digital readout of ISP-A7000E

- touch buttons
- USB data output to Excel and CAD
- show diagram directly






software CD (included, only for ISP-A7000E)

OPTIONAL ACCESSORY



lens



V-block with clamp



rotary table



demo sample (need rotary table)



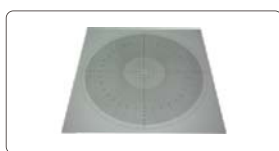
vise



printer (only for ISP-A7000E)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



Ø300mm overlay chart (protractor with 1° graduation, radius with 1mm increment)



50mm reading scale (check magnification accuracy)

To be continued

Continued from previous page

SPECIFICATION

| Code | | ISP-W4025 | | | ISP-A7000E | |
|------------------------|------------------------|---|----------------|----------------|--|-----------------|
| Edge detector | | not included | | | included | |
| Lens | magnification | 5X (optional) | 10X (standard) | 20X (optional) | 50X (optional) | 100X (optional) |
| | view field | Ø80mm | Ø40mm | Ø20mm | Ø8mm | Ø4mm |
| | working distance | 93.7mm | 103.9mm | 95.1mm | 65.7mm | 35mm |
| Magnification accuracy | | ±0.08% | | | | |
| Image | | erect image | | | | |
| Projector screen | | diameter: Ø400mm | | | | |
| | | rotation range: 0°~360°, resolution: 1' or 0.01° | | | | |
| | | reference lines: cross-hairs | | | | |
| Stage | metal stage size | 450×200mm | | | | |
| | turning range | ±15° | | | | |
| | X-Z stage travel | range: 250×150mm | | | | |
| | | resolution: 0.5µm | | | | |
| | Y (focus) travel range | accuracy: (4+L/25)µm L is the measuring length in mm | | | | |
| max. load capacity | 100mm | | | | | |
| Illumination | | contour illumination: 24V/150W halogen lamp, brightness is adjustable | | | | |
| | | surface illumination: 12V/150W halogen lamp(with 2 fibers), position is adjustable | | | | |
| Data processing unit | display | X-Z stage travel, screen rotation | | | | |
| | output | RS232C | | | RS232C, USB(data output to Excel and CAD) | |
| | function | measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines set origin of coordinate coordinate transform set midpoint of coordinate | | | measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate transform choose measurement object automatically according to the selective point and display the result | |
| | | — | | | programming for batch measurements | |
| Power supply | | 110/220V, 50/60Hz | | | | |
| Dimension (L×W×H) | | 1215×646×1210mm | | | | |
| Weight | | 240kg | | | | |

STANDARD DELIVERY

| | |
|--|------|
| Main unit | 1pc |
| 10X lens | 1pc |
| Overlay chart clip | 4pcs |
| Foot-switch | 1pc |
| Anti-dust cover | 1pc |
| USB cable and software (only for ISP-A7000E) | 1pc |

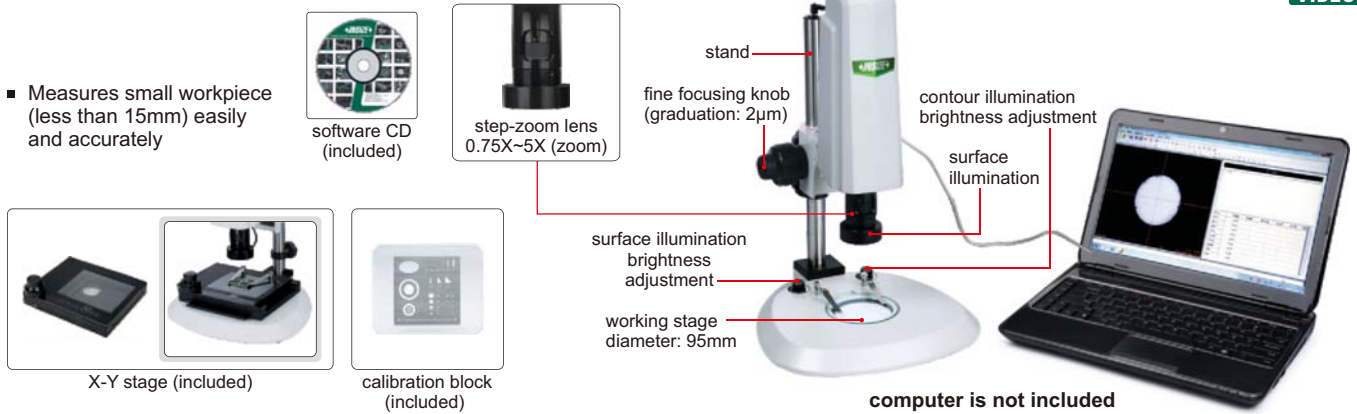
OPTIONAL ACCESSORY

| | |
|----------------------|--------------------|
| 5X lens | ISP-W4025-LENS5X |
| 20X lens | ISP-W4025-LENS20X |
| 50X lens | ISP-W4025-LENS50X |
| 100X lens | ISP-W4025-LENS100X |
| Ø300mm overlay chart | ISP-A3000-CHART |
| 50mm reading scale | ISP-A3000-SCALE50 |

| | |
|-------------------------------|-------------------|
| 300mm calibration scale | ISP-A3000-RULE |
| Demo sample | ISP-A3000-DEMO |
| V-block with clamp | ISP-A1000-VBLOCK |
| Rotary table | ISP-A3000-RTABLE |
| Vice | ISP-A3000-VISE |
| Printer (only for ISP-A7000E) | ISP-A3000-PRINTER |

VISION MEASURING SYSTEM CODE ISD-A100**

INSPECTION
CERTIFICATE



SPECIFICATION

| | | |
|--|---|-----------------|
| Objective | 0.75X~5X (zoom) | |
| Auxiliary objective | 1X (included) | 0.5X (included) |
| Focus distance | 82mm | 175mm |
| View field (diagonal length) | 1.15mm~7.5mm | 2.3mm~15mm |
| Magnification (19" widescreen display) | 44X~280X | 22X~140X |
| Camera | CMOS (color) | |
| Resolution (pixel) | 1280×1024 (1.3M) | |
| Output | USB2.0 | |
| Accuracy | 4µm | |
| Repeatability | 2µm | |
| Illumination | surface: adjustable ring LED contour: adjustable LED | |
| Demension (L×W×H) | 300×350×450mm | |
| Weight | 2.8kg | |

STANDARD DELIVERY

| | |
|-----------------------------|-----|
| Main unit | 1pc |
| Software disc | 1pc |
| X-Y stage (travel: 74×60mm) | 1pc |
| Calibration block | 1pc |
| 0.5X auxiliary objective | 1pc |
| 1X auxiliary objective | 1pc |
| Ø95mm glass plate | 1pc |
| Ø95mm white/black plate | 1pc |
| Anti-dust cover | 1pc |

** Add "-P" on code No. when power supply is 220V, 50/60Hz
Add "-U" on code No. when power supply is 110V, 50/60Hz

SOFTWARE

- Operation system: Windows 7/8/10
- Language: English, Chinese
- Output to CAD, EXCEL and WORD
- Input CAD, to compare with workpieces

- coordinate transform

Focus indicator:

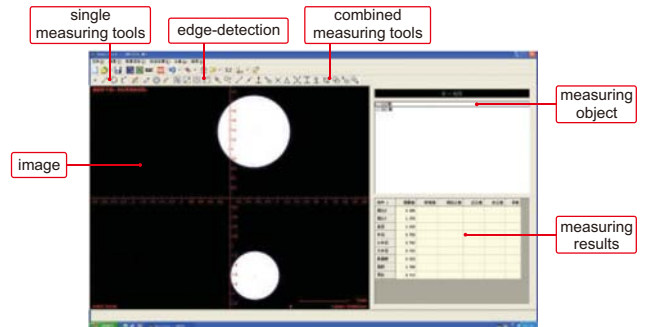
- fast and accurately find the focus distance, eliminate the visual error

Single measuring tools:

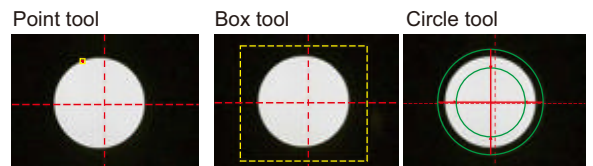
- measure coordinate of point
- measure center coordinate, radius, diameter and area of circle
- measure length of line
- measure length and diameter of arc

Combined measuring tools:

- find midpoint of a line
- measure angle between two lines
- measure distance from point to line
- measure distance from circle to line
- measure distance between two lines
- measure distance between two circles
- find tangent lines between two circles
- measure distance between two points
- find angular bisector between two lines
- find tangent lines between point and circle
- find intersection points between two circles
- measure intersection point between two lines
- find intersection points between circle and line



Edge-detection:

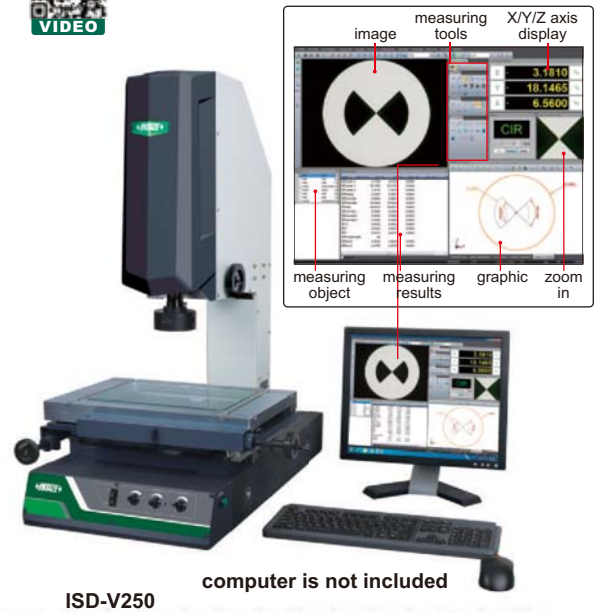


SPECIFICATION

| Code | ISD-V150 | ISD-V250 | ISD-V300 |
|---------------------------|--|---------------|---------------|
| Measuring range (X×Y×Z) | 150×100×200mm | 250×150×200mm | 300×200×200mm |
| Stage size | 354×228mm | 450×280mm | 500×330mm |
| Stage glass size | 210×160mm | 306×196mm | 350×250mm |
| Resolution of X/Y/Z axis | 0.5μm | | |
| Accuracy of X/Y axis | ≤(2.5+L/100)μm (L is the measuring length in mm) | | |
| Repeatability of X/Y axis | 2μm | | |
| Objective | 0.7X~4.5X (zoom) | | |
| Working distance | 92mm | | |
| Magnification | 33X~195X (on 19" monitor) | | |
| Camera | 1/3" color CCD, 1.5M pixel | | |
| Illumination | surface and contour with adjustable LED | | |
| Max. height of workpiece | 160mm | | |
| Max. weight of workpiece | 20kg | | |
| Operation system | Windows 7 | | |
| Drive method | manual | | |
| Power supply | 110/220V, 50/60Hz | | |
| Dimension (L×W×H) | 560×540×850mm | 760×600×900mm | 760×600×900mm |
| Weight | 100kg | 120kg | 140kg |



VISION MEASURING SYSTEM

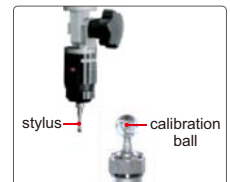


STANDARD DELIVERY

| | |
|-------------------------|-----|
| Main unit | 1pc |
| Video card with dongle | 1pc |
| Software disc | 1pc |
| Calibration glass chart | 1pc |
| Laser positioner | 1pc |
| Clay | 1pc |
| Foot switch | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

| | |
|--|---|
| 0.5X auxiliary objective | Code: ISD-V-OB05X Working distance: 175mm Magnification: 16.5~97.5X (on 19" monitor) |
| 2X auxiliary objective | Code: ISD-V-OB2X Working distance: 36mm Magnification: 66~390X (on 19" monitor) |
| Probe | Code: ISD-V-PROBE Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball |
| Lens with coaxial light | Code: ISD-V-LENS (must be installed in factory) |
| Vision measuring system with computer | Code: ISD-V150A, ISD-V250A, ISD-V300A |



probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



software CD (included)



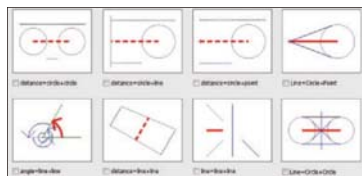
lens with coaxial light (optional, must be installed in factory)

SOFTWARE

- Operation system: Windows 7
- Language: English
- Single measuring tools:

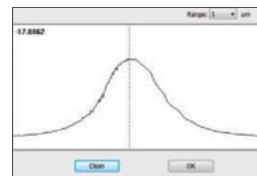
| | | | | |
|-----------------------------------|--|--|------------------------------------|--|
| measure coordinate of point | measure center coordinate, diameter and area of circle | measure distance between two points | measure length and diameter of arc | measure angle of two lines |
| measure distance of two elements | measure length, width and diameter of key slot | measure width and diameter of ring | measure length of open curve | measure length and area of close curve |
| measure focus distance of surface | measure length, width and area of rectangle | measure center coordinate and axis length of ellipse | | |

Combined measuring tools:

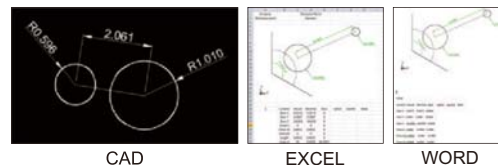


measure distance and angle of two elements

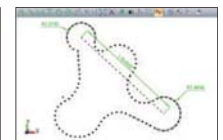
Focus indicator:



Data export to CAD, EXCEL and WORD:



Contour scanning:



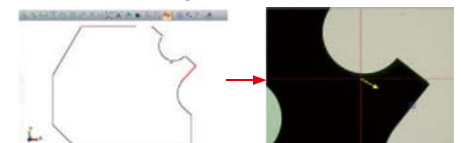
Coordinate transfer:



Edge-detection:



CAD measuring:

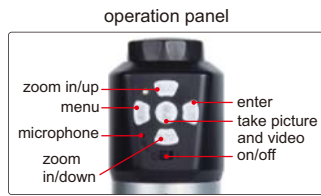


Input CAD drawing and set reference, then move the stage to make the target box in the center of crosshair, the software will do automatic measurement

Profile detection:



DIGITAL MEASURING MICROSCOPE CODE ISM-DM40



- Connected to TV and computer
- Take pictures and videos, saved to memory card
- Measurement on computer with accuracy $\pm 0.01\text{mm}$
- Large working distance because focus distance of camera is adjustable
- Automatic white balance and exposure, white-black display mode
- Automatic power off



TAKE PICTURES AND VIDEOS

MEASUREMENT (ON COMPUTER)

FOCUS DISTANCE OF CAMERA IS ADJUSTABLE



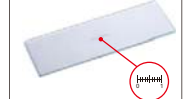
8G memory card and holder (included)



calibration rule (included, graduation 1mm)



software CD (included)



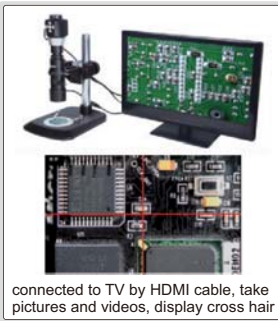
calibration rule (included, graduation 0.1mm)



connected to computer by USB cable, take pictures and videos, make measurement



measuring stage (optional) measure with micrometers by referring to the cross hair on TV screen (X-Y travel: 25×25mm, accuracy: $\pm 2\mu\text{m}$, resolution: 0.001mm)



connected to TV by HDMI cable, take pictures and videos, display cross hair

SPECIFICATION

| | | |
|-------------------|---------------------------|--|
| Magnification | 15X~205X (on 19" monitor) | |
| Pixel | 3.5M | |
| Sensor | 1/3" CMOS | |
| Resolution | HDMI output | 1920×1080, 1280×720, 640×480 |
| | picture | 2304×1536, 2304×1296, 1920×1080, 1280×720, 800×480 |
| | video | 1920×1080, 1280×720, 800×480 |
| Output | USB/HDMI | |
| Power supply | 5V (>500mA) | |
| Dimension (L×W×H) | 273×205×310mm | |
| Weight | 3.5kg | |

STANDARD DELIVERY

| | |
|---------------------------------------|-----|
| Main unit | 1pc |
| 8G memory card and holder | 1pc |
| HDMI cable (for TV) | 1pc |
| USB cable and software (for computer) | 1pc |
| Calibration rule (graduation 0.1mm) | 1pc |
| Calibration rule (graduation 1mm) | 1pc |

LENS SCALE, MAGNIFICATION AND FOCUS DISTANCE

| Lens scale | Magnification (on 19" monitor) | Focus distance (mm) |
|------------|--------------------------------|---------------------|
| 0.7X | 15~40X | 24~252 |
| 1X | 30~50X | 27~155 |
| 2X | 70~80X | 81~117 |
| 3X | 110~120X | 94~111 |
| 4X | 140~160X | 101~110 |
| 5X | 180~205X | 103~109 |

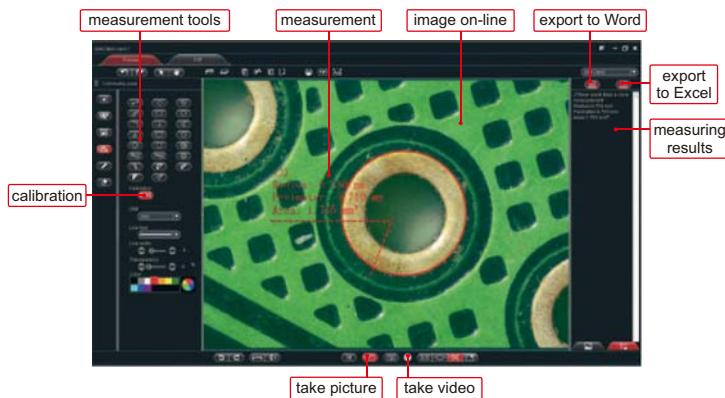
MAGNIFICATION, VIEW FIELD AND FOCUS DISTANCE

| Magnification (on 19" monitor) | View filed (mm) | Focus distance |
|--------------------------------|-----------------|----------------|
| 15X | 28×16 | 252mm |
| 30X | 13.5×7.5 | 155mm |
| 50X | 8×4.8 | 124mm |
| 100X | 4.2×2.4 | 110mm |
| 150X | 2.7×1.5 | 108mm |
| 200X | 2.1×1.2 | 105mm |

OPTIONAL ACCESSORY

| | |
|-----------------|----------------|
| Measuring stage | ISM-DM40-STAGE |
|-----------------|----------------|

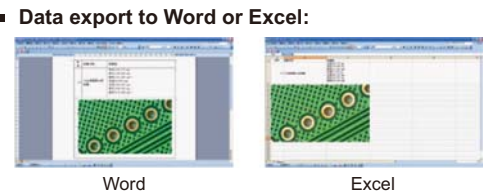
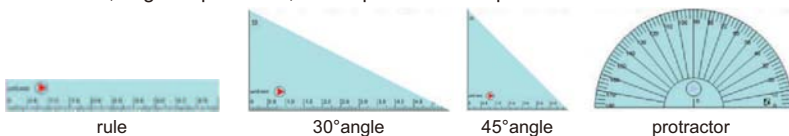
SOFTWARE FOR COMPUTER



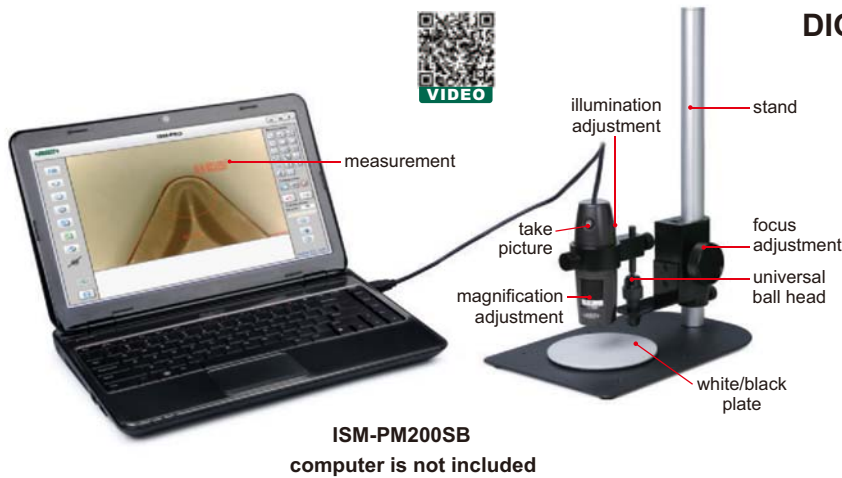
- **Language:** Chinese, English, Japanese, German, French
- **Operation system:** Windows XP/7/8/10
- **Measurement tools:**

- measure length of continuous line
- measure radius, length and angle of arc
- measure angle with three points
- measure distance between two circles
- measure distance between point and line
- measure angle with two lines
- measure radius, girth and area of circle
- measure length of line or distance between two points
- measure distance between two parallel lines
- measure length, width, girth and area of rectangle
- measure center distance between parallel lines
- measure axis lengths, girth and area of ellipse
- measure circumference and area of polygon

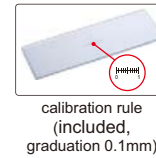
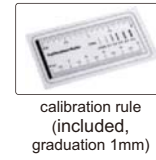
- **Comparison tools:**
Create rule, angle or protractor, to compare with workpieces.



DIGITAL MEASURING MICROSCOPES



ISM-PM200SB
computer is not included



OPTIONAL ACCESSORY

| | |
|---------------|---------------|
| Green filter | ISM-PM-GREEN |
| Yellow filter | ISM-PM-YELLOW |
| Blue filter | ISM-PM-BLUE |

- Can take pictures and videos
- Supplied with software

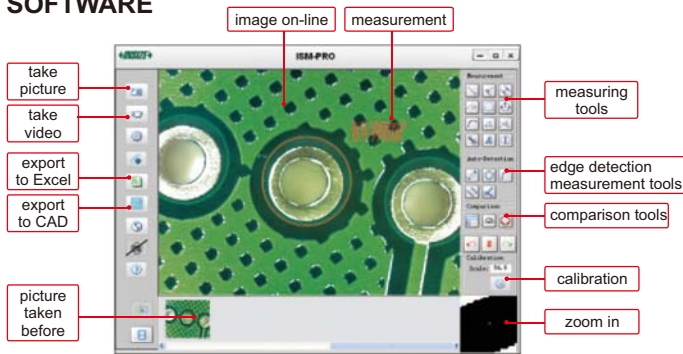
SPECIFICATION

| Code | ISM-PM200SB | ISM-PM600SB | ISM-PM160LA |
|------------------|--|----------------------|------------------------|
| Magnification | 10X~200X | 450X~600X | 35X~160X |
| Type | short focus distance | short focus distance | long focus distance |
| Focus support | included | not included | not included |
| Calibration rule | graduation 0.1 and 1mm | graduation 0.1mm | graduation 0.1 and 1mm |
| Pixel | 2M (resolution: 1600×1200) | | |
| Illumination | built-in adjustable LED | | |
| Power supply | USB 2.0 cable (voltage required: 5±0.1V) | | |

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

| ISM-PM200SB | | | | ISM-PM600SB | | | | ISM-PM160LA | | | |
|---------------|----------------|-----------------|----------|---------------|----------------|-----------------|----------|---------------|----------------|-----------------|----------|
| Magnification | Focus distance | View field (mm) | Accuracy | Magnification | Focus distance | View field (mm) | Accuracy | Magnification | Focus distance | View field (mm) | Accuracy |
| 50X | 21mm | 8.1×6.4 | 30µm | 450X | 1.4mm | 0.85×0.67 | 6µm | 50X | 62mm | 8.1×6.4 | 30µm |
| 100X | 13mm | 3.9×3.1 | 15µm | 500X | 5.5mm | 0.76×0.61 | 6µm | 100X | 45mm | 3.9×3.1 | 15µm |
| 150X | 16mm | 2.6×2.1 | 10µm | 550X | 8.6mm | 0.69×0.55 | 5µm | 160X | 50mm | 2.4×1.9 | 10µm |
| 200X | 19mm | 1.8×1.5 | 8µm | 600X | 11.5mm | 0.63×0.51 | 5µm | | | | |

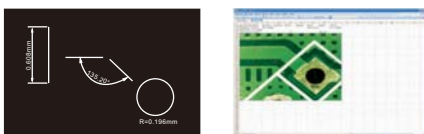
SOFTWARE



Edge detection measurement tools:

- detect two parallel lines automatically and calculate distance
- detect two lines automatically, and calculate angle
- detect circle automatically, and calculate radius, girth and area
- detect line automatically, and calculate length
- detect arc automatically, and calculate radius, angle and arc length

Data export to CAD or Excel:



- Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese

- Operation system:** Windows 7/8/XP/Vista

Measuring tools:

- measure length of line or distance between two points
- measure distance between point and line
- measure area of rectangle
- measure length of continuous line
- measure radius, length and angle of arc
- measure distance between two parallel lines
- measure angle with three points
- measure radius, girth and area of circle
- add number with circle
- add text
- measure distance between two circles

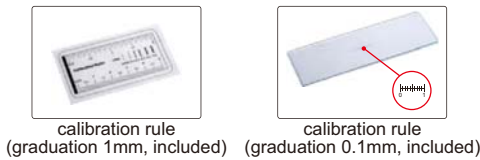
Comparison tools:

- Create line, angle or circle with desired size, to compare with workpieces

- create line
- create angle
- create circle with tolerance



WiFi DIGITAL MEASURING MICROSCOPE CODE ISM-WF200



- Maximum working distance is 5m under WiFi mode
- Can be connected to multiple iPads, Android devices or computers at the same time under WiFi mode
- Take pictures and videos
- Supplied with software

SPECIFICATION

| | |
|---------------|-------------------------------|
| Magnification | 10X~200X |
| Pixel | 1.3M (resolution: 1280×1024) |
| Illumination | built-in adjustable LED |
| Power supply | built-in rechargeable battery |

STANDARD DELIVERY

| | |
|-------------------------------------|-----|
| Microscope | 1pc |
| Base support | 1pc |
| Focus support ring for 80X/150X | 1pc |
| Focus support ring for 60X/200X | 1pc |
| Calibration rule (graduation 0.1mm) | 1pc |
| Calibration rule (graduation 1mm) | 1pc |
| USB cable and software | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|---------------|---------------|
| Stand | ISM-WSTD |
| Green filter | ISM-PM-GREEN |
| Yellow filter | ISM-PM-YELLOW |
| Blue filter | ISM-PM-BLUE |



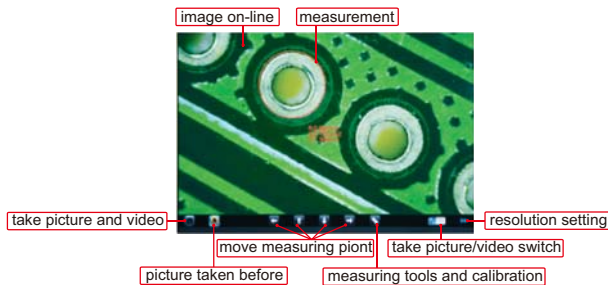
MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

| Magnification | Focus distance | View field | Accuracy |
|---------------|----------------|------------|----------|
| 50X | 21mm | 8.1×6.4mm | 30μm |
| 100X | 13mm | 3.9×3.1mm | 15μm |
| 150X | 16mm | 2.6×2.1mm | 10μm |
| 200X | 19mm | 1.8×1.5mm | 8μm |

1 Software ISM-PAD (for iPad by WiFi)

Measuring tools:

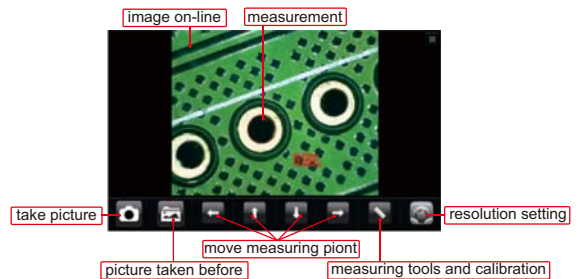
- measure length of line or distance between two points
- measure angle
- measure radius, girth and area of circle with three points



2 Software ISM-APK (for Android devices by WiFi)

Measuring tools:

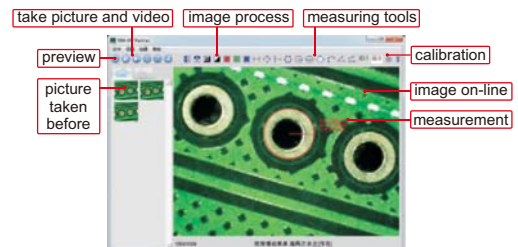
- measure length of line or distance between two points
- measure angle
- measure radius, girth and area of circle with three points



3 Software ISM-WF Partner (for computer by WiFi)

Measuring tools:

- measure length of line or distance between two points
- measure area of polygon
- measure angle with three points
- measure radius, girth and area of circle with center point
- measure length of continuous line
- measure radius, girth and area of circle with three points
- measure angle with two lines
- measure radius, girth and area of circle with two points
- measure distance between point and line
- measure radius, length and angle of arc
- measure area of rectangle



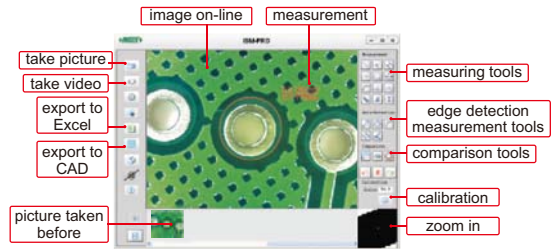
To be continued

Continued from previous page

4 Software ISM-PRO (for computer by USB cable)

Measuring tools:

- measure length of line or distance between two points
- measure length of continuous line
- measure radius, length and angle of arc
- measure distance between two circles
- measure distance between two parallel lines
- measure radius, girth and area of circle
- measure distance between point and line
- measure area of rectangle
- measure angle with three points
- add text
- measure angle with two lines
- add number with circle



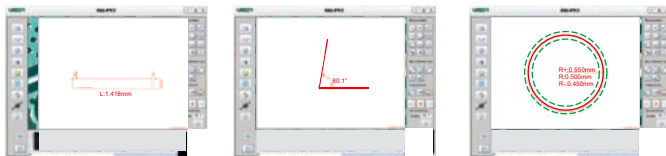
Edge detection measurement tools:

- detect line automatically, and calculate length
- detect circle automatically, and calculate radius, girth and area
- detect two lines automatically, and calculate angle
- detect arc automatically, and calculate radius, angle and arc length
- detect two parallel lines automatically, and calculate distance

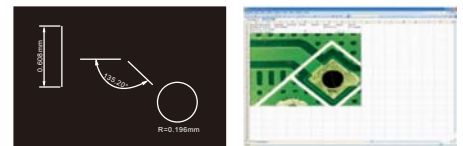
Comparison tools:

Create line, angle or circle with desired size, to compare with workpieces

- create line
- create angle
- create circle with tolerance



Data export to CAD or Excel:



ATTENTION: NOT FOR MEASUREMENT, NOT SUITABLE FOR COMPUTERS



stand (code: ISM-WSTD, optional)



- Connected to TV directly
- For observation, cannot take pictures and videos



ISM-TV200 (with wire)

TV DIGITAL MICROSCOPES

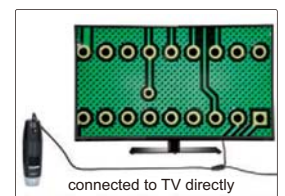


ISM-TV200W (wireless)

SPECIFICATION

| Code | ISM-TV200 | ISM-TV200W |
|---------------|--|---|
| Type | with wire | wireless (maximum transmission distance 5m) |
| Magnification | 10X-200X (on 17" TV) | |
| Pixel | 0.35M | |
| Illumination | adjustable brightness LED | |
| Focus | supplied with focus ring, stand (ISM-WSTD) is optional | |
| Power supply | DC | built-in rechargeable battery |

filter (optional)



MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

| ISM-TV200 | | | ISM-TV200W | | |
|---------------|----------------|------------|---------------|----------------|------------|
| Magnification | Focus distance | View field | Magnification | Focus distance | View field |
| 50X | 21mm | 8.1×6.4mm | 60X | 19mm | 6.9×5.2mm |
| 100X | 13mm | 3.9×3.1mm | 80X | 16mm | 5.0×3.8mm |
| 150X | 16mm | 2.6×2.1mm | 150X | 16mm | 2.6×2.1mm |
| 200X | 19mm | 1.8×1.5mm | 200X | 19mm | 1.8×1.5mm |

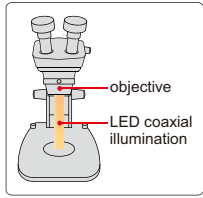
OPTIONAL ACCESSORY

| | |
|---------------|---------------|
| Green filter | ISM-PM-GREEN |
| Yellow filter | ISM-PM-YELLOW |
| Blue filter | ISM-PM-BLUE |

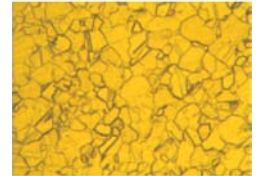
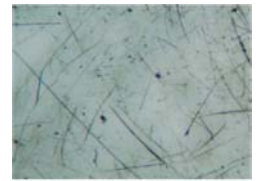
DIGITAL ZOOM MICROSCOPE CODE ISM-ZS60

COAXIAL ILLUMINATION

MEASUREMENT (ON COMPUTER)



computer is not included

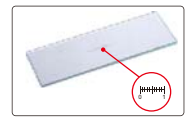


SPECIFICATION

| | | |
|------------------------------|---------------------------|---|
| Magnification | 38X~230X (on 19" monitor) | |
| Pixel | 5M | |
| Sensor | 1/2.5" CMOS | |
| Resolution | picture | 2592×1944, 1920×1080, 1600×1200, 1280×960, 1280×720, 1024×768, 800×600, 640×480 |
| | video | 1920×1080, 1600×1200, 1280×960, 1280×720, 1024×768, 800×600, 640×480 |
| Max. workpiece height | 215mm | |
| Illumination | LED coaxial illumination | |
| Output | USB | |
| Power supply | 5V, >500mA | |
| Dimension (L×W×H) | 290×260×480mm | |
| Weight | 5.1kg | |

OBJECTIVE SCALE, MAGNIFICATION, VIEW FIELD AND FOCUS DISTANCE

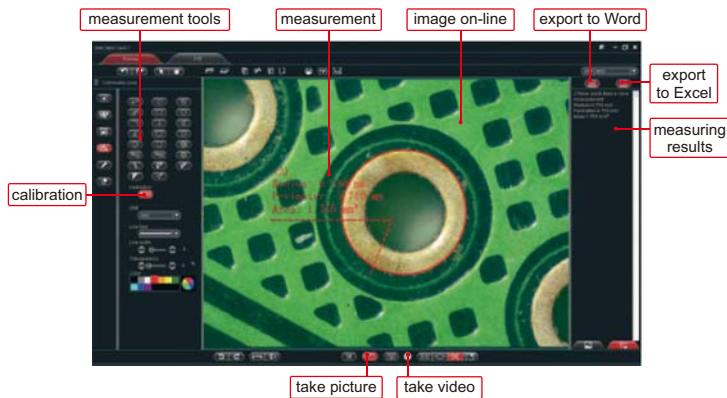
| Objective scale | Magnification (on 19" monitor) | View filed | Focus distance |
|-----------------|--------------------------------|------------|----------------|
| 0.8X | 38X | 7×5mm | 130mm |
| 1X | 46X | 5.5×4.1mm | 125mm |
| 2X | 92X | 2.7×2mm | 118mm |
| 3X | 144X | 1.8×1.3mm | 116mm |
| 4X | 184X | 1.3×1mm | 115mm |
| 5X | 230X | 1.1×0.8mm | 114mm |



STANDARD DELIVERY

| | |
|-------------------------------------|------|
| Main unit | 1pc |
| Digital camera | 1pc |
| LED illumination | 1pc |
| 10X objective | 2pcs |
| Calibration rule (graduation 0.1mm) | 1pc |
| Calibration rule (graduation 1mm) | 1pc |
| Software CD | 1pc |
| Anti-dust cover | 1pc |

SOFTWARE FOR COMPUTER



■ **Language:** Chinese, English, Japanese, German, French

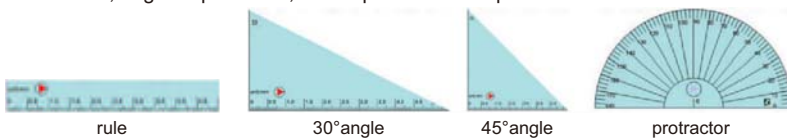
■ **Operation system:** Windows XP/7/8/10

■ **Measurement tools:**

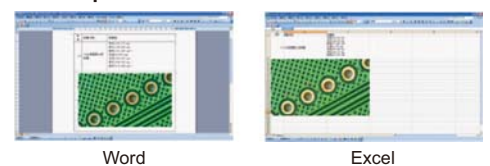
- measure length of continuous line
- measure length of line or distance between two points
- measure radius, length and angle of arc
- measure distance between two parallel lines
- measure angle with three points
- measure length, width, girth and area of rectangle
- measure distance between two circles
- measure center distance between parallel lines
- measure distance between point and line
- measure axis lengths, girth and area of ellipse
- measure angle with two lines
- measure circumference and area of polygon
- measure radius, girth and area of circle

■ **Comparison tools:**

Create rule, angle or protractor, to compare with workpieces.

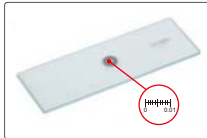


■ **Data export to Word or Excel:**





adapter 0.5X
(included)



calibration rule
(included, graduation 0.01mm)

- For high magnification observation and metallurgical image analysis
- Infinite optical system, can add optical accessories like polarizer, analyzer, DIC (code ISM-M2000-DIC) into optical path without image quality influence
- Objective can be used in both bright field and dark field
- Kohler illumination system provides uniform illumination field
- Three working modes: 100% eyepiece observation, 100% camera observation, both eyepiece and camera observation (80% illuminance for camera and 20% illuminance for eyepiece)

SPECIFICATION

| | | | | | |
|------------------------------------|--|----------------|----------------|----------------|-----------------|
| Eyepiece (wide field) | 10X (view field: Ø22mm) | | | | |
| Objective (plan achromatic) | 5X (included) | 10X (included) | 20X (included) | 50X (included) | 100X (included) |
| Numerical aperture | 0.12 | 0.25 | 0.40 | 0.75 | 0.90 |
| Working distance | 10mm | 10mm | 5mm | 1.3mm | 0.7mm |
| Stage | double layer, size: 160×140mm, travel: 75×50mm (graduation: 0.1mm) | | | | |
| Kohler illumination | 12V/50W halogen lamp, brightness is adjustable with polarizer and analyzer, built-in green, yellow, blue, gray and frosted glass | | | | |
| Pupil distance | 48~75mm | | | | |
| Diopter adjustment | ±5 diopter (two eyepieces) | | | | |
| Power supply | 110/220V, 50/60Hz | | | | |
| Dimension (L×W×H) | 647×268×376mm | | | | |
| Weight | 12kg | | | | |

METALLURGICAL MICROSCOPE CODE ISM-M2000



STANDARD DELIVERY

| | |
|--------------------------------------|-----|
| Main unit | 1pc |
| 10X dividing eyepiece (0.1mm/div.) | 1pc |
| Calibration rule (graduation 0.01mm) | 1pc |
| Camera adapter | 1pc |
| Adapter 0.5X | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

| | |
|--|---------------|
| 15X eyepiece (view field: Ø16mm) | ISM-M2000-15X |
| 20X eyepiece (view field: Ø12mm) | ISM-M2000-20X |
| DIC | ISM-M2000-DIC |
| Metallurgical image analysis software and camera | ISM-MAS100 |

SPECIFICATION

| Code | ISM-ZS50 | ISM-ZS50T |
|--------------------------------------|--|------------|
| Optical tube | binocular | trinocular |
| Eyepiece (wide field) | 10X (view field: Ø22mm) | |
| Objective | 0.8X~5X (zoom) | |
| Zoom ratio | 1:6.3 | |
| Pupil distance | 55~75mm (adjustable) | |
| Diopter adjustment | ±5 diopter (two eyepieces) | |
| Working distance of objective | 115mm | |
| Max. workpiece height | 215mm | |
| Illumination | adjustable reflected and transmitted LED light | |
| Power supply | 110/220V, 50/60Hz | |
| Dimension (L×W×H) | 290×260×480mm | |
| Weight | 4.9kg | |

ZOOM STEREO MICROSCOPES



ISM-ZS50

STANDARD DELIVERY

| | |
|--------------------------|------|
| Main unit | 1pc |
| WF 10X eyepiece | 2pcs |
| Ø100mm glass plate | 1pc |
| Ø100mm white/black plate | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

| | | |
|----------------------------|------------------------------------|-----------------|
| Auxiliary objective | 0.5X | ISM-ZS50-OB05X |
| | 2X | ISM-ZS50-OB2X |
| Eyepiece | 10X dividing eyepiece (0.1mm/div.) | ISM-ZS50-EPD10X |
| | WF 15X (view field: Ø16mm) | ISM-ZS50-EP15X |
| | WF 20X (view field: Ø12mm) | ISM-ZS50-EP20X |
| Digital camera | | ISM-D500 |

ZOOM STEREO MICROSCOPE CODE ISM-ZS30

SPECIFICATION

| | |
|-------------------------------|--|
| Optical tube | binocular |
| Eyepiece (wide field) | 10X (view field: Ø20mm) |
| Objective | 1X~4.5X (zoom) |
| Zoom ratio | 1:4.5 |
| Pupil distance | 55~75mm (adjustable) |
| Diopter adjustment | ±5 diopter (two eyepieces) |
| Working distance of objective | 97mm |
| Max. workpiece height | 147mm |
| Illumination | adjustable reflected and transmitted LED light |
| Power supply | 110/220V, 50/60Hz |
| Dimension (L×W×H) | 260×190×400mm |
| Weight | 4.3kg |



STANDARD DELIVERY

| | |
|-------------------------|------|
| Main unit | 1pc |
| WF 10X eyepiece | 2pcs |
| Ø95mm glass plate | 1pc |
| Ø95mm white/black plate | 1pc |
| Anti-dust cover | 1pc |

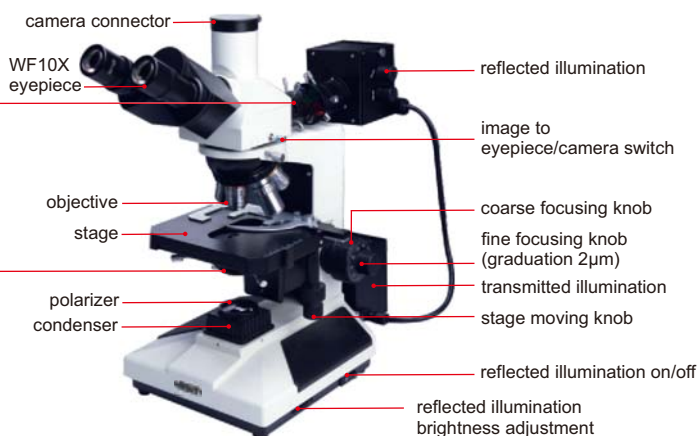
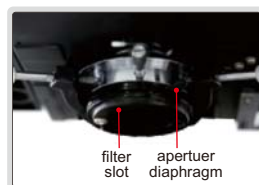
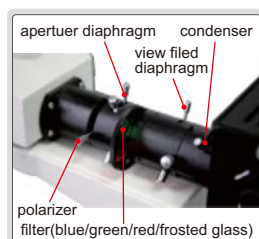
OPTIONAL ACCESSORY

| | | |
|---------------------|------------------------------------|-----------------|
| Auxiliary objective | 0.5X | ISM-ZS30-OB05X |
| | 0.63X | ISM-ZS30-OB06X |
| | 0.75X | ISM-ZS30-OB07X |
| | 2X | ISM-ZS30-OB2X |
| Eyepiece | 10X dividing eyepiece (0.1mm/div.) | ISM-ZS30-EPD10X |
| | WF15X (view field: Ø16mm) | ISM-ZS50-EP15X |
| | WF20X (view field: Ø12mm) | ISM-ZS50-EP20X |
| Digital camera | | ISM-D500 |

HIGH MAGNIFICATION MICROSCOPE CODE ISM-M600**



- For high magnification observation
- Reflected and transmitted illumination can work at the same time
- Objectives 40X, 60X are spring type



SPECIFICATION

| | | | | | |
|-----------------------------|--|-------|-------|-------|--------|
| Eyepiece (wide field) | 10X (view field: Ø18mm) | | | | |
| Objective (plan achromatic) | 5X | 10X | 20X | 40X | 60X |
| Numerical aperture | 0.12 | 0.25 | 0.40 | 0.60 | 0.75 |
| Working distance | 18.4mm | 8.8mm | 8.6mm | 3.7mm | 1.34mm |
| Stage | double layer with sample clamp | | | | |
| | size: 160×140mm | | | | |
| | travel: 75×50mm (graduation: 0.1mm) | | | | |
| Pupil distance | 53~75mm | | | | |
| Diopter adjustment | ±5 diopter (one eyepiece) | | | | |
| Illumination | reflected and transmitted: 6V/20W halogen lamp, brightness is adjustable | | | | |
| Dimension (L×W×H) | 450×300×350mm | | | | |
| Weight | 11kg | | | | |

** Add "-P" on code No. when power supply is 220V, 50/60Hz
Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

| | |
|-----------------------------------|-------------|
| Main unit | 1pc |
| Anti-dust cover | 1pc |
| Filter (blue/green/frosted glass) | 1pc of each |

OPTIONAL ACCESSORY

| | | |
|------------------------------------|-------------------|------------------|
| Objective | PL80X | ISM-MTM-OB80X |
| | PL100X (dry type) | ISM-MTM-OB100X |
| 10X dividing eyepiece (0.1mm/div.) | | ISM-MTM-EPD10X |
| WF16X eyepiece | | ISM-MTM-EP16X |
| WF20X eyepiece | | ISM-MTM-EP20X |
| Camera adapter (1X) | | ISM-M600-ADAPTER |
| Digital camera | | ISM-D500 |

HIGH MAGNIFICATION MICROSCOPE CODE ISM-M1000**

- For high magnification observation
- Kohler illumination system provides uniform illumination field
- Objectives 20X, 40X, 100X are spring type

STANDARD DELIVERY

| | |
|----------------------------|-------------|
| Main unit | 1pc |
| Oil for 100X objective | 1bottle |
| Anti-dust cover | 1pc |
| Filter (blue/green/yellow) | 1pc of each |

SPECIFICATION

| | | | | |
|-----------------------------|---------------------------|-------|-------|-----------------|
| Eyepiece (wide field) | 10X (view field: Ø18mm) | | | |
| Objective (plan achromatic) | 10X | 20X | 40X | 100X (oil type) |
| Numerical aperture | 0.25 | 0.40 | 0.60 | 1.25 |
| Working distance | 8.8mm | 8.6mm | 3.3mm | 0.33mm |
| Stage | double layer | | | |
| | size: 180×150mm | | | |
| | travel: 15×15mm | | | |
| Pupil distance | 53~75mm | | | |
| Diopter adjustment | ±5 diopter (one eyepiece) | | | |
| Illumination | 6V/20W halogen lamp | | | |
| Power supply | 220V, 50/60Hz ** | | | |
| Dimension (L×W×H) | 385×300×440mm | | | |
| Weight | 11kg | | | |

** Add "-U" on code No. when power supply is 110V, 50/60Hz



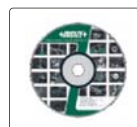
OPTIONAL ACCESSORY

| | | |
|------------------------------------|-------------------|-------------------|
| Objective | PL50X | ISM-MTM-OB50X |
| | PL60X | ISM-MTM-OB60X |
| | PL80X | ISM-MTM-OB80X |
| | PL100X (dry type) | ISM-MTM-OB100X |
| 10X dividing eyepiece (0.1mm/div.) | | ISM-MTM-EPD10X |
| WF16X eyepiece | | ISM-MTM-EP16X |
| WF20X eyepiece | | ISM-MTM-EP20X |
| Camera adapter (1X) | | ISM-M1000-ADAPTER |
| Digital camera | | ISM-D500 |

DIGITAL CAMERA CODE ISM-D500



- Inserted into eyepiece tube or camera connector of microscopes
- Supplied with software



software CD (included)

application

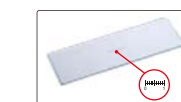


SPECIFICATION

| | |
|--------------|---|
| Sensor | 1/2.5" CMOS |
| Pixel | 5M |
| Resolution | 2592×1944 or 1296×972 |
| Frame rate | 3fps (2592×1944) |
| | 12fps (1296×972) |
| Exposure | manual or auto, exposure time is adjustable |
| SNR | 41dB |
| Power supply | USB |
| Weight | 400g |

STANDARD DELIVERY

| | |
|-------------------------------------|-----|
| Main unit | 1pc |
| Adapter 0.45X | 1pc |
| Calibration rule (graduation 0.1mm) | 1pc |
| Connector Ø23.2/Ø30mm | 1pc |
| USB cable | 1pc |
| Software disc | 1pc |



calibration rule (included, graduation 0.1mm)

OPTIONAL ACCESSORY

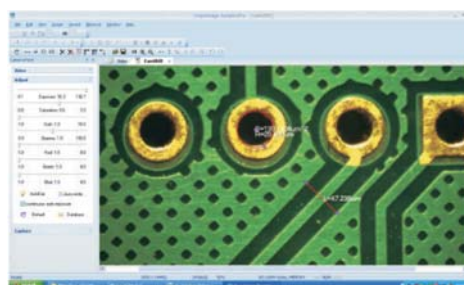
| | |
|-------------------------|-------------|
| Connector Ø23.2/Ø30.5mm | ISM-DCA-CON |
|-------------------------|-------------|

SOFTWARE FOR DIGITAL CAMERA (INCLUDED)

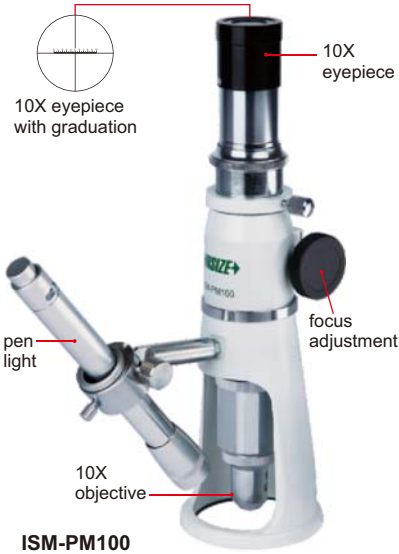
Measuring Tools:

- measure distance between two points
- measure rectangle
- measure angle with three points
- calibration
- measure circle

- Can take pictures and videos
- Exposure/gain/gamma/saturation/colour adjustment
- Image process feature: zoom in/out, image flip and so on



PORTABLE MEASURING MICROSCOPES



SPECIFICATION

| Code | ISM-PM20 | ISM-PM40 | ISM-PM50 | ISM-PM100 |
|------------------------|-------------------------------|------------------------------|-------------------------------|--------------------------------|
| Total magnification | 20X | 40X | 50X | 100X |
| Eyepiece | 10X with graduation | 10X with graduation | 10X with graduation | 10X with graduation |
| Objective (achromatic) | 2X (numerical aperture: 0.05) | 4X (numerical aperture: 0.1) | 5X (numerical aperture: 0.12) | 10X (numerical aperture: 0.25) |
| Working distance | 17.2mm | 18mm | 17.6mm | 7mm |
| Graduation | 0.05mm | 0.025mm | 0.02mm | 0.01mm |
| Viewing field | Ø9mm | Ø4.5mm | Ø3.6mm | Ø1.8mm |
| Focus range | 30mm | | | |
| Illumination | LED light | | | |
| Diameter of base | Ø63mm | | | |
| Height | 210mm | | | |
| Weight | 650g | | | |

STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1pc |
| Pen light | 1pc |
| Battery (AAA) | 2pcs |

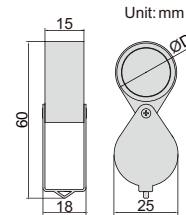
FOLDING MAGNIFIER

- Glass lens

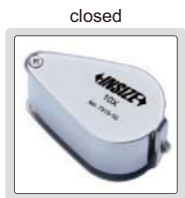
| Code | Magnification | Lens diameter (ØD) |
|--------|---------------|--------------------|
| 7511-8 | 8X | Ø21mm |



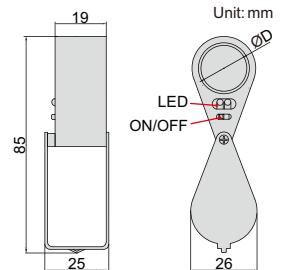
7511-8



FOLDING MAGNIFIER WITH ILLUMINATION



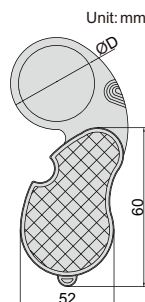
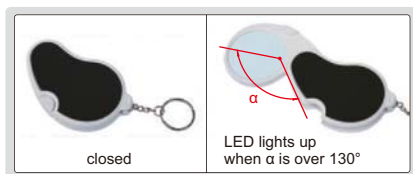
7515-10



| Code | Magnification | Lens diameter (ØD) |
|---------|---------------|--------------------|
| 7515-10 | 10X | Ø21mm |

- Glass lens
- Powered by 3xLR927 batteries (included)

FOLDING MAGNIFIER WITH ILLUMINATION



7514-1

- Plastic lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when α is over 130°

| Code | Magnification | Lens diameter (ØD) |
|--------|---------------|--------------------|
| 7514-1 | 2.5X | Ø45mm |



MAGNIFIERS WITH ILLUMINATION

- Glass lens
- Powered by 3xAAA batteries (included)



(mm)

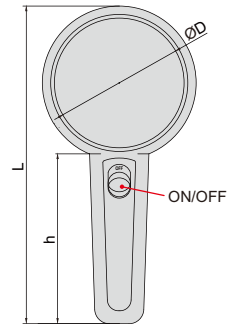
| Code | Magnification | Lens diameter (ØD) | L | h |
|--------|---------------|--------------------|-----|----|
| 7513-2 | 2X | Ø75mm | 170 | 90 |
| 7513-4 | 4X | Ø50mm | 145 | 90 |



7513-2

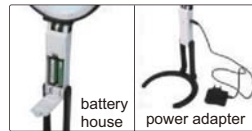


7513-4



THREE WAYS MAGNIFIER WITH ILLUMINATION

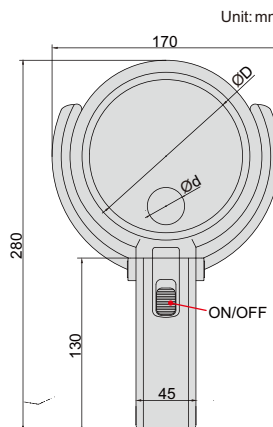
- Plastic lens
- Powered by 2xAA batteries (included) or power adapter (110~240V, 50~60Hz)



three-way use



| Code | Magnification | Lens diameter (ØD) | Lens diameter (Ød) |
|--------|---------------|--------------------|--------------------|
| 7512-1 | 2X/4X | Ø120mm | Ø28mm |



7512-1



MOTORIZED 360° SWIVEL VIDEOSCOPIES

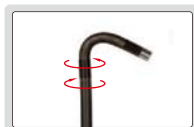
IP65
WATERPROOF

ATTENTION: THE CABLE CAN BE BENT BUT CAN'T BE SET AT A FIXED SHAPE

TUNGSTEN WIRE WEAVED CABLE RESISTANCE TO BREAK AND WEAR



bend in any direction



360° swivel in clockwise and counter-clockwise



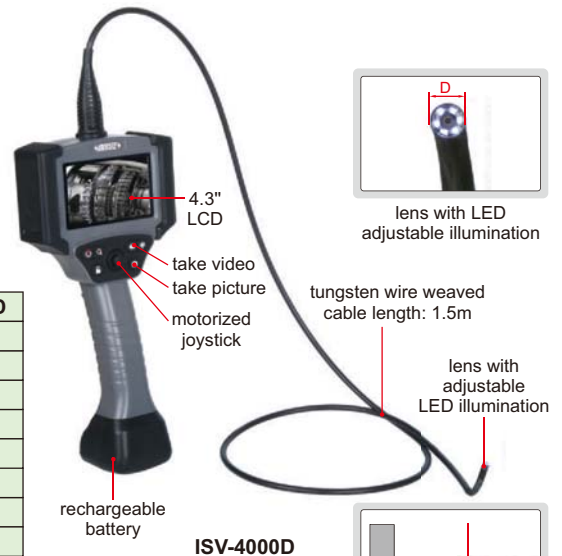
bend within ±120°



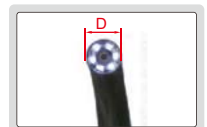
- Motorized joystick to bend the probe at any direction

SPECIFICATION

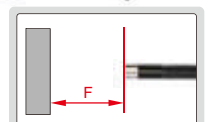
| Code | ISV-4000D | ISV-4001D | ISV-5000D | ISV-5001D | |
|--------------|--|---|-----------|-----------|--|
| Lens | diameter (D) | 6mm | | 4.5mm | |
| | focus distance (F) | 15mm~∞ | | 8~80mm | |
| | illumination | 6pcs LED | | 6pcs LED | |
| | pixel | 0.41M | | | |
| | resolution | 720x576 | | | |
| | dust/waterproof | IP65 | | | |
| | bend control | motorized joystick | | | |
| Cable | length | 1.5m | 3m | 1.5m 3m | |
| | type | tungsten wire weaved cable | | | |
| Main unit | function | take picture, take video | | | |
| | file format | picture: JPG, video: AVI | | | |
| | image process | brightness, image quality zoom (1X, 2X, 3X) | | | |
| | memory | 8G SD card | | | |
| | output | TV, USB | | | |
| power supply | rechargeable battery (for 4 hours working) AC/DC adapter (for continuous working) | | | | |
| Weight | 1kg | 1.2kg | 0.95kg | 1.1kg | |



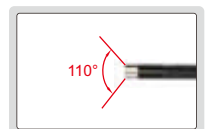
ISV-4000D



lens with LED adjustable illumination



focus distance



angle of view: 110°

STANDARD DELIVERY

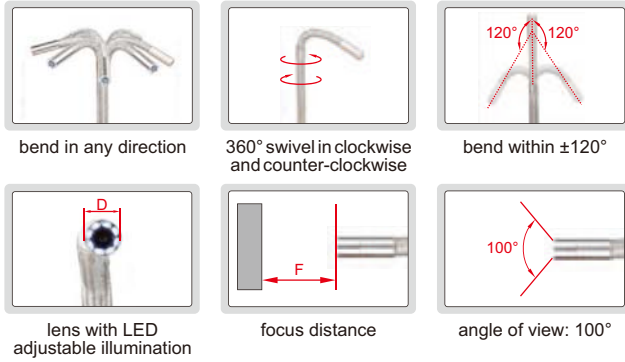
| | |
|--------------------|-----|
| Main unit | 1pc |
| Cable with lens | 1pc |
| 8G SD card | 1pc |
| AC/DC adapter | 1pc |
| Video output cable | 1pc |
| USB cable | 1pc |

ATTENTION: THE CABLE CAN BE BENT BUT CAN'T BE SET AT A FIXED SHAPE

STEEL WIRE WEAVED CABLE RESISTANCE TO BREAK AND WEAR

IP65 WATERPROOF

MANUAL 360° SWIVEL VIDEOSCOPIES



ISV-2000D

SPECIFICATION

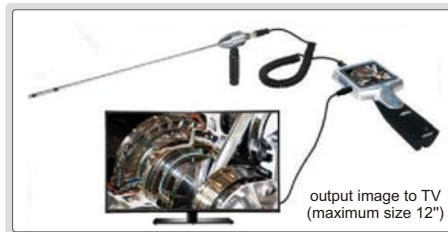
| Code | ISV-2002D | ISV-2000D | ISV-2001D | ISV-3002D | ISV-3000D | ISV-3001D | |
|--------------|--|---|-----------|-----------|-----------|-----------|----|
| Lens | diameter (D) | 6.5mm | | | 4.5mm | | |
| | focus distance (F) | 15mm~∞ | | | 8~80mm | | |
| | illumination | 8pcs LED | | | 6pcs LED | | |
| | pixel | 0.3M | | | | | |
| | resolution | 640x480 | | | | | |
| | dust/waterproof | IP65 | | | | | |
| | bend control | manual joystick | | | | | |
| Cable | length | 1m | 1.5m | 3m | 1m | 1.5m | 3m |
| | type | steel wire weaved cable | | | | | |
| Main unit | function | take picture, take video | | | | | |
| | file format | picture: JPG, video: AVI | | | | | |
| | image process | brightness, image quality zoom (1X, 2X, 3X, 4X, 5X) | | | | | |
| | memory | 8G SD card | | | | | |
| | output | TV, USB | | | | | |
| power supply | rechargeable battery (for 2 hours working) AC/DC adapter (for continuous working) | | | | | | |
| Weight | 600g | 650g | 800g | 550g | 600g | 700g | |

STANDARD DELIVERY

| | |
|--------------------|-----|
| Main unit | 1pc |
| Cable with lens | 1pc |
| 8G SD card | 1pc |
| AC/DC adapter | 1pc |
| Video output cable | 1pc |
| USB cable | 1pc |

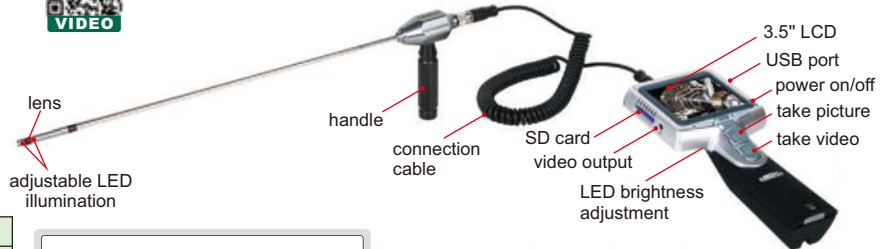
OPTIONAL ACCESSORY

| | |
|------|----------------|
| Base | ISV-2000D-BASE |
|------|----------------|



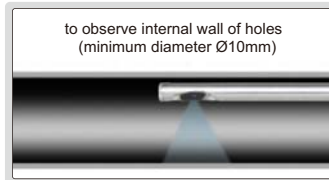
IP57 WATERPROOF

SIDE VIEW VIDEOSCOPE (RIGID) CODE ISV-RV



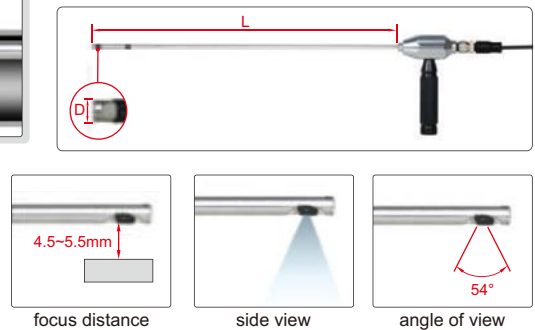
SPECIFICATION

| | |
|-----------------------|--|
| Diameter (D) | 5.5mm |
| Length (L) | 350mm |
| Dust/waterproof probe | IP57 |
| Pixel | 0.3M |
| Resolution | 640x480 |
| Frame rate | 30fps |
| Function | take picture, take video |
| File format | picture: JPG, video: AVI |
| Memory | 2G SD card |
| Output | TV, USB |
| Power supply | rechargeable battery (for 3 hours working) |
| Weight | 570g |



STANDARD DELIVERY

| | |
|--------------------|-----|
| Main unit | 1pc |
| 2G SD card | 1pc |
| AC/DC adapter | 1pc |
| Video output cable | 1pc |
| USB cable | 1pc |



ATTENTION: THE CABLE CAN BE BENT BUT CAN'T BE SET AT A FIXED SHAPE

STEEL WIRE WEAVED CABLE RESISTANCE TO BREAK AND WEAR

OPTIONAL CABLE LENGTH 3M, 5M AND 10M

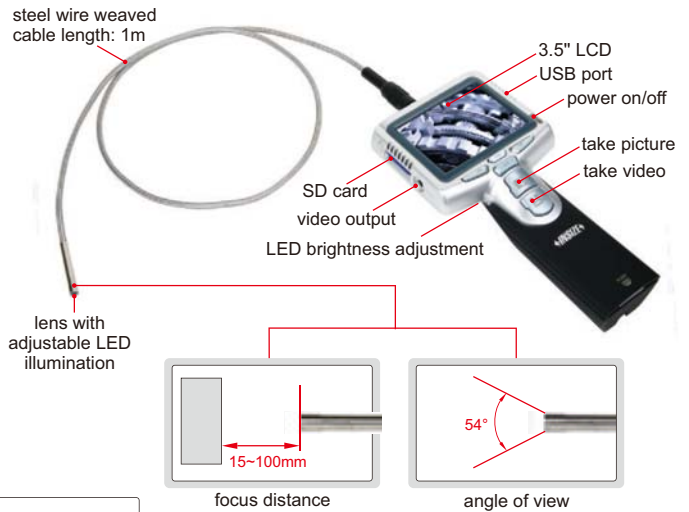
IP65 WATERPROOF



VIDEOSCOPE CODE ISV-E10

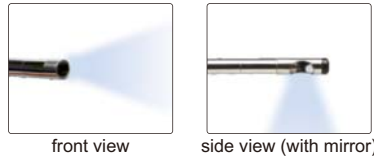
SPECIFICATION

| | | |
|-----------|---------------|--|
| Lens | diameter | 5.5mm |
| | pixel | 0.3M |
| | resolution | 640×480 |
| | frame rate | 30fps |
| Cable | length | 1m |
| | type | steel wire weaved cable |
| Main unit | function | take picture, take video |
| | file format | picture: JPG, video: AVI |
| | image process | brightness, contrast, color saturation |
| | memory | 2G SD card |
| | output | TV, USB |
| | power supply | rechargeable battery (for 3 hours working) |
| Weight | | 450g |



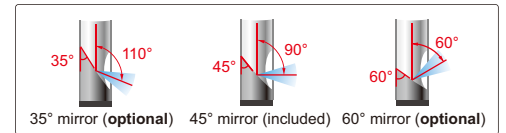
STANDARD DELIVERY

| | |
|--------------------|-----|
| Main unit | 1pc |
| Cable with lens | 1pc |
| 2G SD card | 1pc |
| 45° mirror | 1pc |
| AC/DC adapter | 1pc |
| Video output cable | 1pc |
| USB cable | 1pc |
| Lens cleaning kit | 1pc |



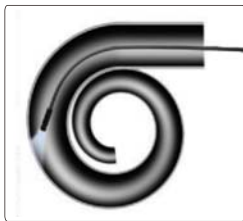
OPTIONAL ACCESSORY

| | |
|------------|-------------|
| 35° mirror | ISV-E55-M35 |
| 60° mirror | ISV-E55-M60 |

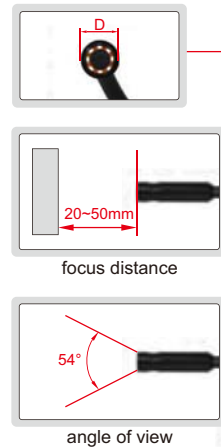


IP57 WATERPROOF

the cable has high illumination and can be set at any shape. it is suitable to observe large internal space like turbocharger.



lens with 8pcs LED adjustable illumination



memory cable length: 1m



VIDEOSCOPE CODE ISV-E20

SPECIFICATION

| | | |
|-----------|---------------|--|
| Lens | diameter (D) | 12mm |
| | pixel | 0.4M |
| | resolution | 720×682 |
| | frame rate | 30fps |
| Cable | length | 1m |
| | type | memory (can be set at any shape) |
| Main unit | function | take picture, take video |
| | file format | picture: JPG, video: AVI |
| | image process | brightness, contrast, color saturation |
| | memory | 2G SD card |
| | output | TV, USB |
| | power supply | rechargeable battery (for 3 hours working) |
| Weight | | 600g |

STANDARD DELIVERY

| | |
|--------------------|-----|
| Main unit | 1pc |
| Cable with lens | 1pc |
| 2G SD card | 1pc |
| AC/DC adapter | 1pc |
| Video output cable | 1pc |
| USB cable | 1pc |
| Lens cleaning kit | 1pc |

OPTIONAL ACCESSORY

| | |
|----------------|----------------|
| 45° mirror | ISV-E20-MIRROR |
| Hook | ISV-E20-HOOK |
| Magnet pick up | ISV-E20-MAGNET |



PIPE VIDEOSCOPE CODE ISV-VP280

ATTENTION: RESISTANCE TO ACID AND ALKALI LIQUID (CONSULT IS NEEDED)

SPECIFICATION

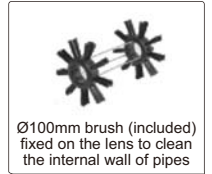
| | | |
|-----------|-----------------|---------------------------------|
| Lens | diameter | 28mm |
| | dust/waterproof | IP68 |
| | pixel | 0.3M |
| | resolution | 640×480 |
| Cable | frame | 30fps |
| | length | 22m |
| | dust/waterproof | IP68 |
| Main unit | type | semi-rigid |
| | function | take picture and video |
| | file format | picture: JPG, video: ASF |
| | image process | mirror, rotate, zoom (1.5X, 2X) |
| | memory | 4G SD card |
| | output | TV, USB |
| | power supply | 4×AA batteries |
| Weight | 5kg | |



lens with adjustable LED illumination

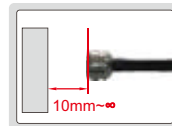


IP68
WATERPROOF

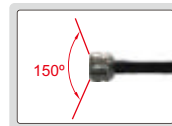


STANDARD DELIVERY

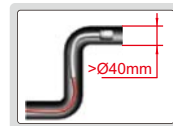
| | |
|--------------------|------|
| Main unit | 1pc |
| Cable with lens | 1pc |
| Stand | 1pc |
| 4G SD card | 1pc |
| Ø100mm brush | 1pc |
| AA battery | 4pcs |
| AAA battery | 2pcs |
| Video output cable | 1pc |
| USB cable | 1pc |



focus distance



angle of view



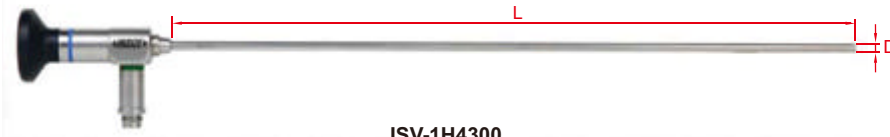
can turn at least two times in the pipe (>Ø40mm)

OPTIONAL ACCESSORY

| | |
|----------------------|----------------|
| Ø50mm centering ring | ISV-VP280-R50 |
| Ø150mm brush | ISV-VP280-B150 |

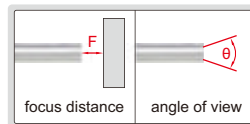
RIGID BORESCOPIES

IP67
WATERPROOF

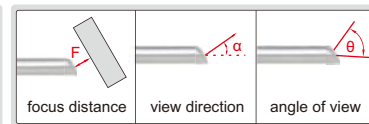


ISV-1H4300

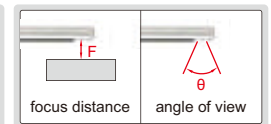
- Focus distance: 2mm, depth of view: 5~100mm
- Dust/waterproof level: IP67
- Can be used in the liquid with temperature -10°C~85°C



view direction 0°



view direction 30° and 70°



view direction 90°

SPECIFICATION

| Code | Length (L) | View direction (α) | Diameter (D) | Angle of view (θ) |
|------------|------------|--------------------|--------------|-------------------|
| ISV-1H4170 | 174mm | 0° | 4mm | ≥60° |
| ISV-1H4173 | 174mm | 30° | | |
| ISV-1H4177 | 174mm | 70° | | |
| ISV-1H4179 | 166mm | 90° | | |
| ISV-1H4300 | 302mm | 0° | | |
| ISV-1H4303 | 302mm | 30° | | |
| ISV-1H4307 | 302mm | 70° | | |
| ISV-1H4309 | 297mm | 90° | | |

| Code | Length (L) | View direction (α) | Diameter (D) | Angle of view (θ) |
|------------|------------|--------------------|--------------|-------------------|
| ISV-1H6200 | 209mm | 0° | 6mm | ≥70° |
| ISV-1H6203 | 209mm | 30° | | |
| ISV-1H6207 | 209mm | 70° | | |
| ISV-1H6209 | 166mm | 90° | | |
| ISV-1H6320 | 328mm | 0° | | |
| ISV-1H6323 | 328mm | 30° | | |
| ISV-1H6327 | 328mm | 70° | | |
| ISV-1H6329 | 330mm | 90° | | |

OPTIONAL ACCESSORY

| | |
|-----------------------------|-----------|
| LED light handle | ISV-1HLED |
| Adjustable LED light source | ISV-1LED1 |
| Camera | ISV-1CAM |



LED light handle (optional)



adjustable LED light source (optional)



camera (optional)

- For rigid borescopes (code **ISV-1Hxx**, **ISV-HF4030**, **ISV-HMxx**, **ISV-HPxx**, **ISV-HR6032**)



battery (included)



charger (included)



LED LIGHT HANDLE CODE ISV-1HLED



SPECIFICATION

| | |
|-----------|---|
| Power | 3W |
| Battery | 3.7V rechargeable battery (for 2 hours working) |
| Dimension | 120×27×27mm |
| Weight | 300g |

STANDARD DELIVERY

| | |
|-----------|-----|
| Main unit | 1pc |
| Battery | 1pc |
| Charger | 1pc |

- For rigid borescopes (code **ISV-1Hxx**)
- High LED illumination and brightness is adjustable
- For long time work with low noise



ADJUSTABLE LED LIGHT SOURCE CODE ISV-1LED1

SPECIFICATION

| | |
|-------------------|---------------------|
| Color temperature | 5600K |
| Cooling | fan cooling |
| Power | AC110~220V, 50/60Hz |
| Dimension | 400×300×112mm |
| Weight | 7kg |

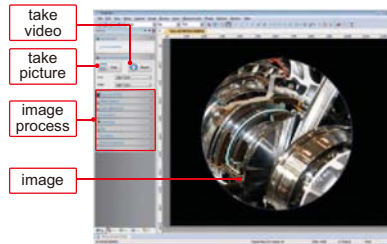
STANDARD DELIVERY

| | |
|--------------------------|-----|
| Main unit | 1pc |
| 1.8m optical fiber cable | 1pc |

- For rigid borescopes (code **ISV-1Hxx**)
- Connected to computer USB port
- Auto-exposure, auto-gain, auto white balance
- Focus is adjustable



software CD (included)



STANDARD DELIVERY

| | |
|------------------------|-----|
| Camera | 1pc |
| Connector | 1pc |
| USB cable and software | 1pc |

CAMERA CODE ISV-1CAM



SPECIFICATION

| | |
|--------------|---|
| Sensor | color CMOS |
| Pixel | 1.3M |
| Resolution | 1280×1024 |
| Frame rate | 15~50fps |
| Software | take picture, take video, zoom in, zoom out, image rotation |
| Power supply | USB |

IP67
WATERPROOF

- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature -10°C~100°C
- LED light source is needed



camera (optional)



LED light source (optional)



FRONT VIEW BORESCOPE (RIGID) CODE ISV-HF4030

SPECIFICATION

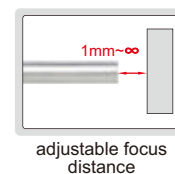
| | |
|----------------------|--------------|
| Diameter (D) | 4mm |
| Length (L) | 300mm |
| Depth of view | >15mm |
| Dust/waterproof lens | IP67 |
| Dimension | 410×105×30mm |
| Weight | 220g |

STANDARD DELIVERY

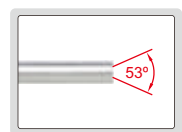
| | |
|-----------|-----|
| Main unit | 1pc |
| Handle | 1pc |

OPTIONAL ACCESSORY

| | |
|---------------------|------------|
| LED light source | ISV-HL3000 |
| Camera and software | ISV-HCAM |



adjustable focus distance

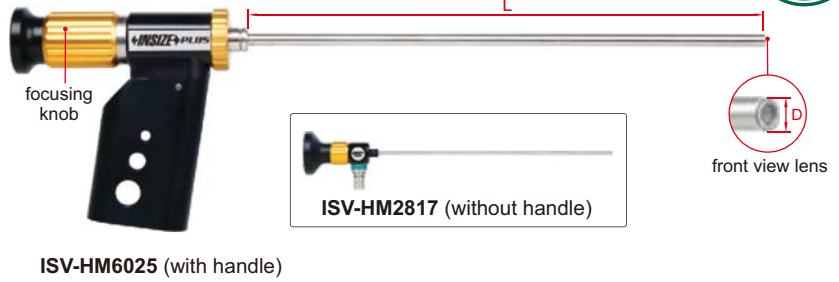
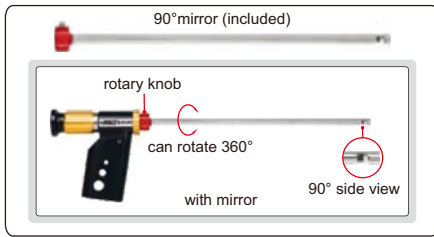


angle of view

BORESCOPIES WITH MIRROR (RIGID)

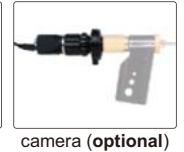
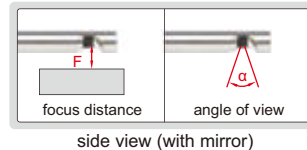
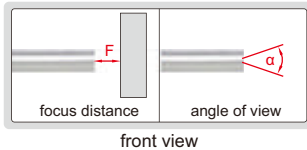


IP67
WATERPROOF



ISV-HM6025 (with handle)

- Front view, side view with mirror
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature -10°C~80°C
- LED light source is needed



SPECIFICATION

| Code | ISV-HM2817 | ISV-HM4023 | ISV-HM6025 | ISV-HM6051 |
|----------------------|--------------------|--------------------|--------------------|--------------------|
| Diameter (D) | 2.8mm | 4mm | 6mm | 6mm |
| Length (L) | 175mm | 240mm | 258mm | 490mm |
| Focus distance (F) | 2mm~∞ (adjustable) | 6mm~∞ (adjustable) | 4mm~∞ (adjustable) | 3mm~∞ (adjustable) |
| Angle of view (α) | 22° | 22° | 34° | 48° |
| Depth of view | >15mm | | | |
| Dust/waterproof lens | IP67 | | | |
| Handle | without | included | included | included |
| Dimension | 235×33×30mm | 368×105×30mm | 368×105×30mm | 610×105×30mm |
| Weight | 55g | 250g | 260g | 300g |

STANDARD DELIVERY

| | |
|----------------------------|-----|
| Main unit | 1pc |
| Handle (except ISV-HM2817) | 1pc |
| 90° mirror | 1pc |

OPTIONAL ACCESSORY

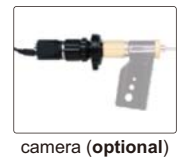
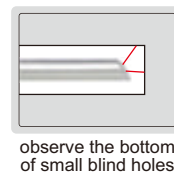
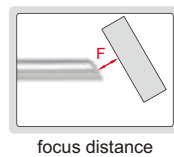
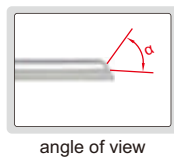
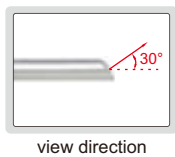
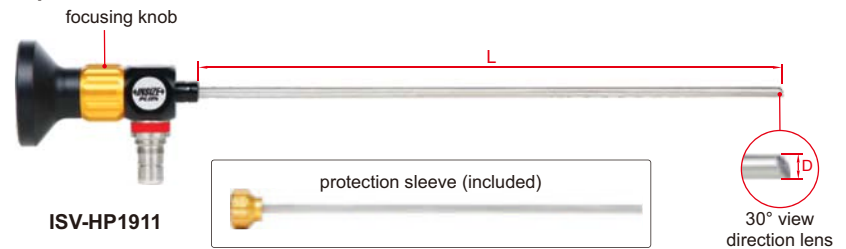
| | |
|---------------------|------------|
| LED light source | ISV-HL3000 |
| Camera and software | ISV-HCAM |

OBLIQUE VIEW BORESCOPES (RIGID)



IP67
WATERPROOF

- Small diameter, used to observe small space
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature -10°C~100°C
- Supplied with protection sleeve
- LED light source is needed



SPECIFICATION

| Code | ISV-HP1911 | ISV-HP2811 | ISV-HP2817 |
|----------------------|----------------------|----------------------|----------------------|
| Diameter (D) | 1.9mm | 2.8mm | 2.8mm |
| Length (L) | 110mm | 110mm | 175mm |
| Focus distance (F) | 0.5mm~∞ (adjustable) | 0.5mm~∞ (adjustable) | 0.5mm~∞ (adjustable) |
| View direction | 30° | | |
| Angle of view (α) | 70° | 80° | 80° |
| Depth of view | 3~40mm | | |
| Dust/waterproof lens | IP67 | | |
| Dimension | 162×33×30mm | 228×33×30mm | 228×33×30mm |
| Weight | 55g | 60g | 65g |

STANDARD DELIVERY

| | |
|-------------------|-----|
| Main unit | 1pc |
| Protection sleeve | 1pc |

OPTIONAL ACCESSORY

| | |
|---------------------|------------|
| LED light source | ISV-HL3000 |
| Camera and software | ISV-HCAM |

IP67
WATERPROOF



VIDEO

- Lens can rotate 350°
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature -10°C~100°C
- LED light source is needed

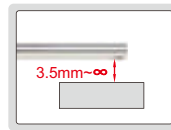
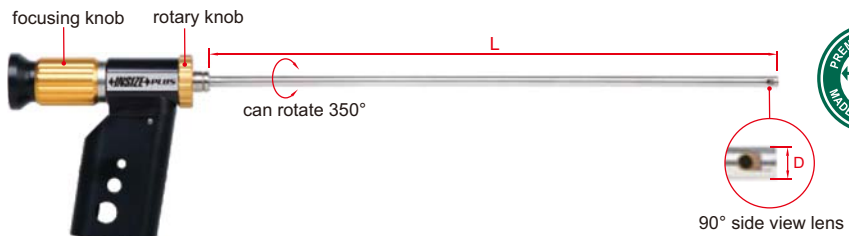


camera (optional)

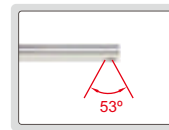


LED light source (optional)

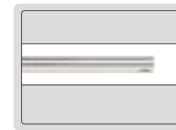
ROTARY SIDE VIEW BORESCOPE (RIGID) CODE ISV-HR6032



adjustable focus distance



angle of view



observe internal wall of small holes

SPECIFICATION

| | |
|----------------------|--------------|
| Diameter (D) | 6mm |
| Length (L) | 320mm |
| Depth of view | >15mm |
| Dust/waterproof lens | IP67 |
| Dimension | 430x105x30mm |
| Weight | 300g |

STANDARD DELIVERY

| | |
|-----------|-----|
| Main unit | 1pc |
| Handle | 1pc |

OPTIONAL ACCESSORY

| | |
|---------------------|------------|
| LED light source | ISV-HL3000 |
| Camera and software | ISV-HCAM |



- For rigid borescopes (code ISV-HF4030, ISV-HMxx, ISV-HPxx, ISV-HR6032)
- High LED illumination and brightness is adjustable
- For long time work with low noise

SPECIFICATION

| | |
|-----------------------|----------------|
| Brightness | 470lm |
| Color temperature | 5800K |
| Cooling method | fan cooling |
| Operating temperature | 10~40°C |
| Working life | 30000h |
| Power supply | 12V DC, 5420mA |
| Dimension | 170x196x98mm |
| Weight | 3.8kg |

STANDARD DELIVERY

| | |
|--------------------------|-----|
| Main unit | 1pc |
| 2.3m optical fiber cable | 1pc |

LED LIGHT SOURCE CODE ISV-HL3000



filter (optional)

OPTIONAL ACCESSORY

| | |
|--------------------------------|-------------------|
| Red filter | ISV-HL3000-RED |
| Green filter | ISV-HL3000-GREEN |
| Yellow filter | ISV-HL3000-YELLOW |
| Blue filter | ISV-HL3000-BLUE |
| 3500K color temperature filter | ISV-HL3000-3500K |



software CD (included)

SPECIFICATION

| | |
|----------------|---|
| Sensor | 1/3" color CCD |
| Pixel | 1.3M |
| Resolution | 1280x960 |
| Frame rate | 22fps |
| Focus distance | 18~35mm |
| Software | take picture, take video, zoom in, zoom out, mirror, image rotation |
| Power supply | USB |
| Dimension | 95x50x50mm |
| Weight | 150g |



CAMERA CODE ISV-HCAM

- For rigid borescopes (code ISV-HF4030, ISV-HMxx, ISV-HPxx, ISV-HR6032)
- Connected to computer USB port
- High quality CCD
- Auto-exposure, auto-gain, auto white balance
- Focus is adjustable

STANDARD DELIVERY

| | |
|------------------------|-----|
| Camera | 1pc |
| Connector | 1pc |
| USB cable and software | 1pc |

SURFACE ROUGHNESS TESTER CODE ISR-S1000B



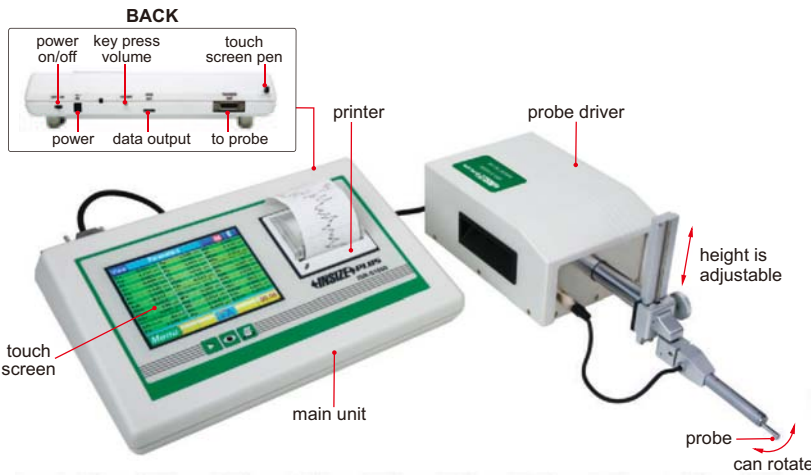
CAN MEASURE WAVINESS AND CURVED SURFACE WITH RADIUS>5MM

DATA OUTPUT

CUSTOM-MADE PROBES ARE AVAILABLE

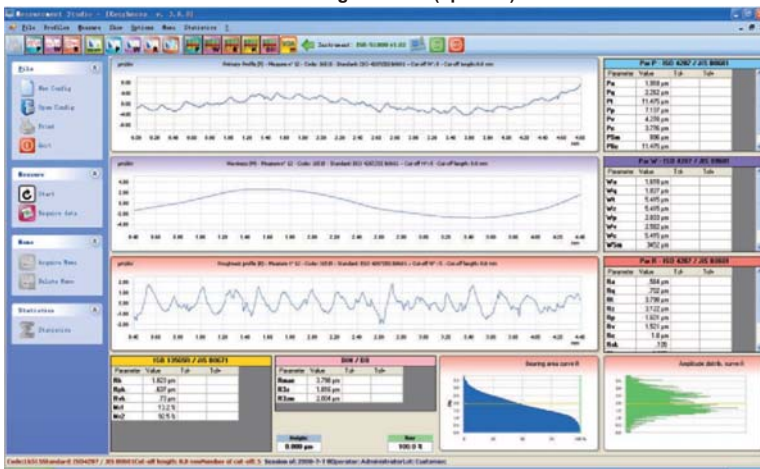


THE PROBE CAN BE WITH SKID OR WITHOUT SKID

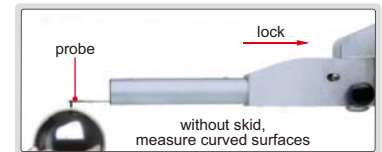
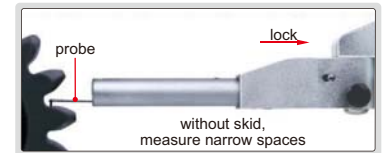
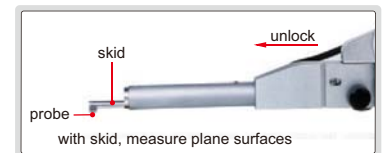


- 48 roughness parameters according to ISO-4287, JIS-B0601, ISO-12085, JIS-B0631
- Automatic probe leveling
- Measuring range up to 1000µm, can measure grit and shot blasting
- Traverse length up to 50mm
- The probe can rotate from -90° to +90°
- Color touch screen, display roughness values, profile and curves
- Can print roughness values, profile and curves
- Memory of maximum 1000 results
- Can set tolerance

measuring software (optional)



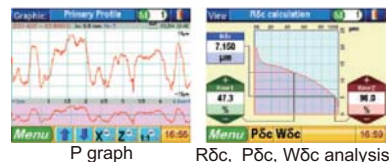
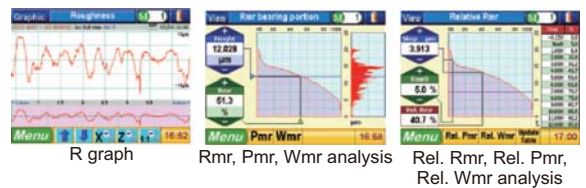
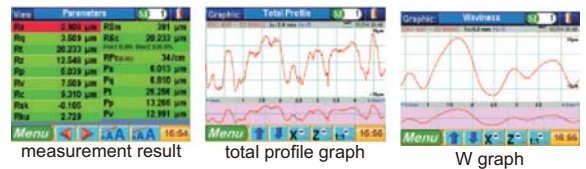
measuring software (optional), can control the roughness tester, display roughness values, profile and curve, data statistics



SPECIFICATION

| | | |
|--------------------|--|-----------|
| Parameters | Ra, Rq, Rt, Rz, Rp, Rv, Rc, Rsk, Rku, RSm, Rδc, RPa, Pa, Pq, Pt, Pp, Pv, Pc, Psm, Pδc, PPa, Pk, Pvk, Mr1, Mr2, Rmax, R3z, R3zm, R, AR, Rx, Aw, Rke, Rpke, Rvke, Mr1e, Mr2e | |
| Range | 1000µm | |
| Accuracy | ±3% | |
| Resolution (Ra) | 0.001µm | |
| Probe | type | inductive |
| | stylus radius/angle | 5µm/90° |
| | stylus material | diamond |
| Measuring force | 0.75mN | |
| Measuring unit | µm/µin | |
| Cut off | 0.08/0.25/0.8/2.5/8mm | |
| Number of cut-offs | 1-19 (cut off 0.08/0.25/0.8/2.5mm) 1-5 (cut off 8mm) | |
| Traverse speed | 0.5mm/s or 1mm/s | |
| Memory | 1000 measurement results | |
| Output | USB | |
| Power | built-in rechargeable battery | |
| Dimension (LxWxH) | 320x210x80mm | |
| Weight | 2.2kg | |

ROUGHNESS VALUE, PROFILE AND DATA ANALYSIS



To be continued

Continued from previous page

SURFACE ROUGHNESS TESTER CODE ISR-S1000B

STANDARD DELIVERY

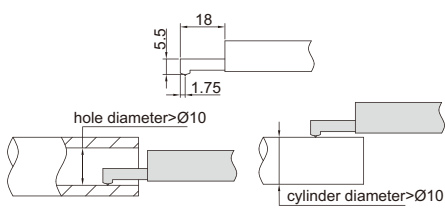
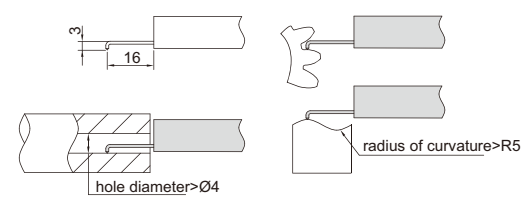
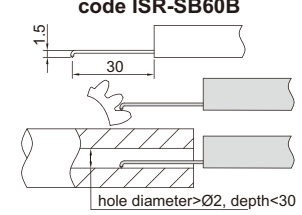
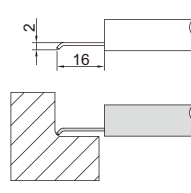
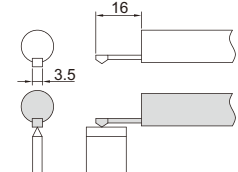
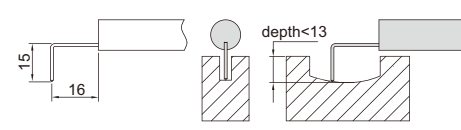
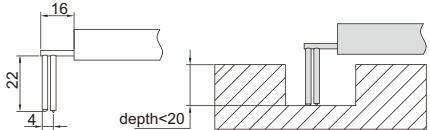
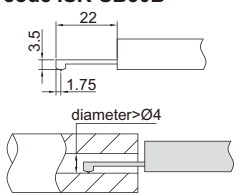
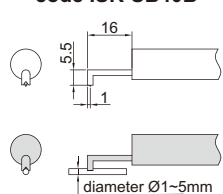
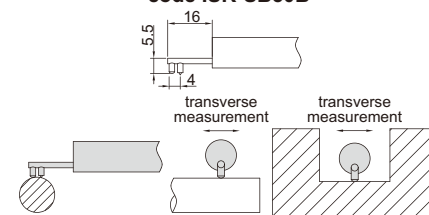
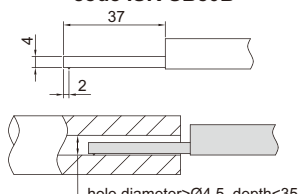
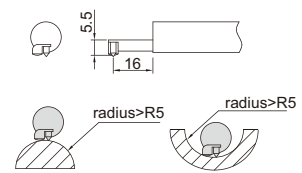
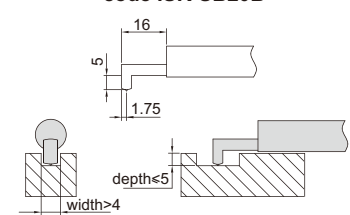
| | |
|-------------------|-----|
| Main unit | 1pc |
| Probe driver | 1pc |
| Standard probe | 1pc |
| Calibration block | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|------------------------|----------------|
| Probe | see details |
| USB cable and software | ISR-S-SOFTWARE |

SPECIFICATION OF PROBES

Unit: mm

| | | |
|--|---|--|
| standard probe (included, support is removable), code ISR-SB10B | | |
|  <p style="text-align: center;">with probe support, measure plane surfaces, holes and cylinders with diameter >Ø10mm</p> |  <p style="text-align: center;">without probe support, measure holes with diameter >Ø4mm, can measure curved surfaces, narrow spaces and waviness</p> | |
| small hole probe (optional), code ISR-SB60B  <p style="text-align: center;">without probe support, measure holes with diameter >Ø2mm and depth <30mm, can measure curved surfaces, narrow spaces and waviness</p> | internal angle probe (optional), code ISR-SB70B  <p style="text-align: center;">without probe support, measure internal angles, can measure curved surfaces, narrow spaces and waviness</p> | knife edge probe (optional), code ISR-SB130B  <p style="text-align: center;">without probe support, measure knife edges and small rods</p> |
| deep groove probe (optional), code ISR-SB150B  <p style="text-align: center;">without probe support, measure curved surfaces and grooves with depth <13mm, can measure curved surfaces, narrow spaces and waviness</p> | deep groove probe (optional), code ISR-SB120B  <p style="text-align: center;">measure grooves with depth <20mm</p> | |
| hole probe (optional), code ISR-SB30B  <p style="text-align: center;">measure plane surfaces and holes with diameter >Ø4mm and depth <20mm</p> | small rod probe (optional), code ISR-SB40B  <p style="text-align: center;">measure small rods with diameter 1~5mm</p> | transverse probe (optional), code ISR-SB50B  <p style="text-align: center;">transverse measurement for plane surfaces, cylinders and grooves</p> |
| deep hole probe (optional), code ISR-SB80B  <p style="text-align: center;">measure holes with diameter >Ø4.5mm and depth <35mm</p> | cylinder/hole probe (optional), code ISR-SB110B  <p style="text-align: center;">measure cylinders and holes with radius >R5mm</p> | groove probe (optional), code ISR-SB20B  <p style="text-align: center;">measure plane surfaces and grooves</p> |

ROUGHNESS TESTER CODE ISR-S400



software CD
(included)

PROBE CAN
BE CHANGED

DATA
OUTPUT

CUSTOM-MADE
PROBES ARE AVAILABLE



adjustable stand (included)

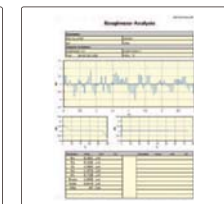


transverse measurement

- Automatic probe leveling
- Language: English, French, German, Italian, Spanish, Portuguese
- 12 roughness parameters
- Can set tolerance
- Measuring range up to 400µm, can measure grit and shot blasting
- Traverse length up to 16mm
- The probe can be set at 90° or 270°, for transverse measurement
- Memory of maximum 100 results



probe cover (included), can put the small
workpieces directly on the
probe for measurement



Output software (included),
output data and graphic to
Excel, make report



measuring software (optional), can control the roughness tester,
display roughness values, profile and curve, data statistics



heavy duty test stand (optional)



light duty test stand (optional)

SPECIFICATION

| | | |
|--------------------|--|-----------|
| Parameters | Ra, Rq, Rt, Rz, Rc, Rmax, Rsm, Rpc, Rmr, R, AR, Rx | |
| Range | Ra: 0~100µm, Rt: 0.05~400µm | |
| Accuracy | ±3% | |
| Resolution (Ra) | 0.001µm | |
| Probe | type | inductive |
| | stylus radius/angle | 5µm/90° |
| | stylus material | diamond |
| Measuring force | 0.75mN | |
| Measuring unit | µm/µin | |
| Cut off | 0.25/0.8/2.5mm | |
| Number of cut-offs | 1 to 5 | |
| Traverse speed | 1mm/s | |
| Memory | 100 measurement results | |
| Output | USB | |
| Power | built-in rechargeable battery | |
| Dimension (L×W×H) | 122×52×68mm | |
| Weight | 650g | |

STANDARD DELIVERY

| | |
|-------------------------------|-----|
| Main unit | 1pc |
| Standard probe | 1pc |
| Calibration block | 1pc |
| Adjustable stand | 1pc |
| AC/DC adapter | 1pc |
| Probe cover | 1pc |
| USB cable and output software | 1pc |

OPTIONAL ACCESSORY

| | |
|----------------------------------|----------------|
| Extension rod | ISR-S400-ER100 |
| Probe | see details |
| USB cable and measuring software | ISR-S-SOFTWARE |
| Heavy duty test stand | ISR-S400-DK |
| Light duty test stand | ISR-S400-STAND |

To be continued

Continued from previous page

**ROUGHNESS TESTER
CODE ISR-S400**

Unit: mm

SPECIFICATION OF PROBES

| | |
|--|--|
| <p>standard probe (included)</p> <p>measure plane surfaces, holes and cylinders with diameter > Ø10mm</p> | <p>small roughness probe (optional) code ISR-S400-SB10R2</p> <p>measure surfaces with small roughness</p> |
| <p>extension rod (optional) code ISR-S400-ER100</p> <p>for long holes</p> | |
| <p>groove probe (optional) code ISR-S400-SB20</p> <p>measure plane surfaces and grooves</p> | <p>deep groove probe (optional) code ISR-S400-SB120</p> <p>measure grooves with depth < 20mm</p> |
| <p>small hole probe (optional) code ISR-S400-SB30</p> <p>measure plane surfaces and holes with diameter > Ø4mm and depth < 20mm</p> | <p>deep hole probe (optional) code ISR-S400-SB80</p> <p>measure holes with diameter > Ø4.5mm and depth < 35mm</p> |
| <p>small rod probe (optional) code ISR-S400-SB40</p> <p>measure small rods with diameter Ø1~5mm</p> | <p>cylinder/hole probe (optional) code ISR-S400-SB110</p> <p>measure cylinders and holes with radius > R5mm</p> |
| <p>transverse probe (optional) code ISR-S400-SB50</p> <p>transverse measurement for plane surfaces, cylinders and grooves</p> | <p>internal angle probe (optional) code ISR-S400-SB140</p> <p>measure internal angles</p> |

ROUGHNESS TESTER CODE ISR-C100



software CD
(included)



VIDEO

DATA
OUTPUT

- 16 roughness parameters
- With probe position indicator
- Connected with printer via bluetooth
- Can display roughness values, profile and curve
- Memory of maximum 100 results
- Automatic power off

probe cover (included)



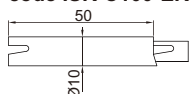
can put the small workpieces
directly on the probe for measurement

adjustable stand (included)

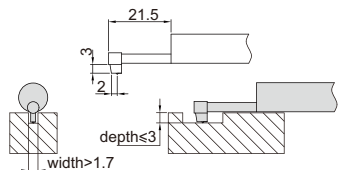


Unit: mm

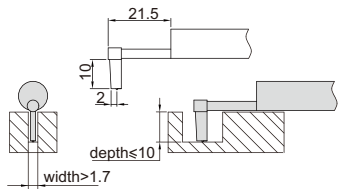
extension rod (optional),
code ISR-C100-ER



groove probe (optional),
code ISR-C100-130



deep groove probe (optional),
code ISR-C100-131



wireless printer (optional)



test stand (optional)



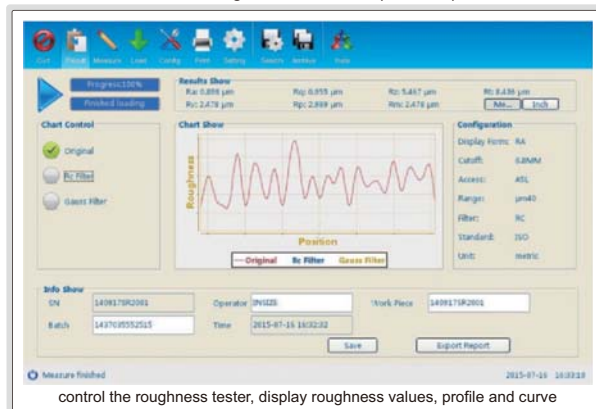
the maximum workpiece
height is 310mm

remote control (included)



Android APP for mobile device (included), the roughness tester can be controlled
by mobile phone or tablet via bluetooth, the maximum working distance is 5m

measuring software for PC (included)



control the roughness tester, display roughness values, profile and curve

SPECIFICATION

| | | |
|--------------------|--|-----------|
| Parameters | Ra, Rq, Rz, Rv, Rp, Rm, Rt, RS, Rsm, R3z, R3y, Rz (JIS), Rku, Rsk, Rmax, Rpc | |
| Range | 160µm | |
| Accuracy | ±10% | |
| Resolution (Ra) | 0.001µm | |
| Probe | type | inductive |
| | stylus radius/angle | 5µm/90° |
| | stylus material | diamond |
| Measuring force | 4mN | |
| Measuring unit | µm/µin | |
| Cut off | 0.25/0.8/2.5mm | |
| Number of cut-offs | 1 to 5 | |
| Traverse speed | 0.5mm/s, 1mm/s | |
| Memory | 100 measurement results | |
| Output | USB and bluetooth | |
| Power | built-in rechargeable battery | |
| Dimension (L×W×H) | 140×52×48mm | |
| Weight | 440g | |

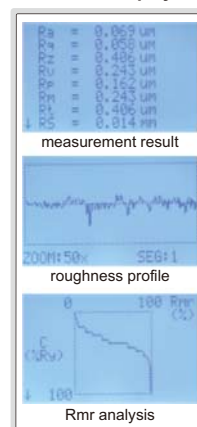
STANDARD DELIVERY

| | |
|-------------------------------|-------------|
| Main unit | 1pc |
| Standard probe | 1pc |
| Calibration block and support | 1pc of each |
| Adjustable stand | 1pc |
| Probe cover | 1pc |
| USB cable and software for PC | 1pc |
| Android APP for mobile device | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|-------------------|------------------|
| Extension rod | ISR-C100-ER |
| Groove probe | ISR-C100-130 |
| Deep groove probe | ISR-C100-131 |
| Test stand | ISR-C100-STAND |
| Wireless printer | ISR-C100-PRINTER |

screen display



ROUGHNESS TESTER CODE ISR-C002

DATA
OUTPUT



VIDEO



software CD
(included)

probe cover (included)



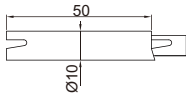
put the small workpieces directly
under the probe for measurement

adjustable stand (included)

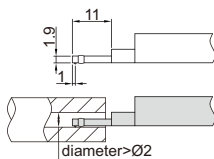


Unit: mm

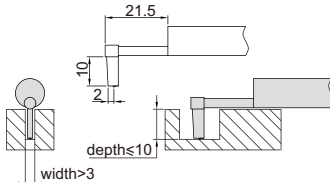
extension rod (optional),
code ISR-C002-ER



small hole probe (optional),
code ISR-C002-SBP



deep groove probe (optional),
code ISR-C002-DGP



wireless printer (optional)



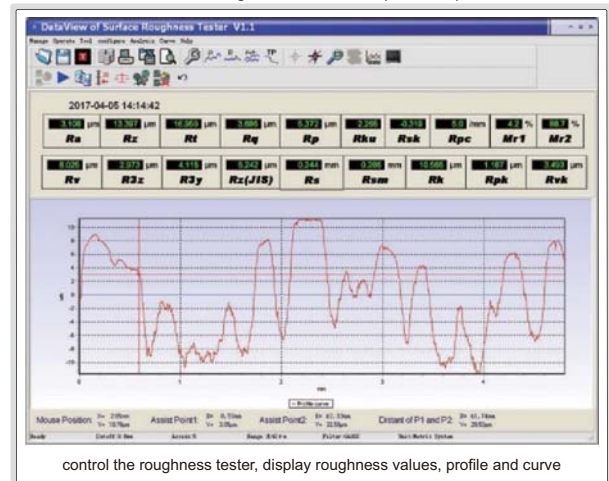
test stand (optional)



the maximum workpiece
height is 310mm

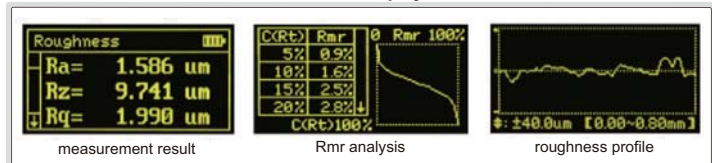
- 21 roughness parameters
- Connected with printer via bluetooth
- Display roughness values, profile and curve
- Memory of maximum 100 results
- Automatic power off

measuring software for PC (included)



control the roughness tester, display roughness values, profile and curve

screen display



SPECIFICATION

| | | |
|--------------------|--|-----------|
| Parameters | Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax | |
| Range | 160μm | |
| Accuracy | ±10% | |
| Resolution (Ra) | 0.001μm | |
| Probe | type | inductive |
| | stylus radius/angle | 5μm/90° |
| | stylus material | diamond |
| Measuring force | 4mN | |
| Measuring unit | μm/μin | |
| Cut off | 0.25/0.8/2.5mm | |
| Number of cut-offs | 1 to 5 | |
| Traverse speed | 0.5mm/s, 1mm/s | |
| Memory | 100 measurement results | |
| Output | USB and bluetooth | |
| Power | built-in rechargeable battery | |
| Dimension (L×W×H) | 141×55×40mm | |
| Weight | 400g | |

STANDARD DELIVERY

| | |
|-------------------------------|-------------|
| Main unit | 1pc |
| Standard probe | 1pc |
| Calibration block and support | 1pc of each |
| Adjustable stand | 1pc |
| Probe cover | 1pc |
| USB cable and software for PC | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|-------------------|------------------|
| Extension rod | ISR-C002-ER |
| Deep groove probe | ISR-C002-DGP |
| Small hole probe | ISR-C002-SBP |
| Test stand | ISR-C002-STAND |
| Wireless printer | ISR-C002-PRINTER |

ROUGHNESS TESTER CODE ISR-C003

- Unit: μm , μin
- Automatic power off

SPECIFICATION

| | | |
|-------------------|---------------------|---|
| Parameters | | Ra, Rz, Rq, Rt |
| Range | | Ra, Rq: 0.05 ~ 15 μm Rz, Rt: 0.1 ~ 50 μm |
| Accuracy | | $\pm 10\%$ |
| Resolution (Ra) | | 0.01 μm |
| Probe | type | piezoelectric |
| | stylus radius/angle | 10 $\mu\text{m}/90^\circ$ |
| | stylus material | diamond |
| Measuring force | | 5mN |
| Measuring unit | | $\mu\text{m}/\mu\text{in}$ |
| Cut off | | 0.25/0.8/2.5mm |
| Evaluation length | | 1.25mm for cut off 0.25mm 4mm for cut off 0.8mm 5mm for cut off 2.5mm |
| Traverse speed | | 0.75mm/s |
| Power | | built-in rechargeable battery |
| Dimension (L×W×H) | | 106×70×24mm |
| Weight | | 200g |



VIDEO



calibration block and support (included)

STANDARD DELIVERY

| | |
|-------------------------------|-------------|
| Main unit | 1pc |
| Calibration block and support | 1pc of each |
| AC/DC adapter | 1pc |

SURFACE ROUGHNESS SPECIMENS



- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel



ISR-CS315

| Code | Machining method | Roughness (Ra) | Roughness (Rz) | Quantity |
|-----------|--------------------------|---|---|-------------------------------------|
| ISR-CS315 | Surface grinding | 0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2 μm | 0.29, 0.55, 0.91, 1.74, 2.6, 4.65, 7.87, 15.6 μm | 8pcs |
| ISR-CS316 | Cylindrical grinding | 0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2 μm | 0.3, 0.53, 0.88, 1.56, 2.64, 4.4, 7.71, 15.3 μm | 8pcs |
| ISR-CS317 | Flat lapping | Criss-cross | 0.025, 0.05, 0.1, 0.2 μm | 0.4, 0.6, 0.74, 1.26 μm |
| | | Parallel | 0.025, 0.05, 0.1, 0.2 μm | 0.34, 0.56, 1.12, 1.5 μm |
| ISR-CS318 | Cylindrical lapping | 0.025, 0.05, 0.1, 0.2 μm | 0.46, 0.54, 0.63, 1.23 μm | 4pcs |
| | Superfinishing | 0.025, 0.05, 0.1, 0.2 μm | 0.36, 0.7, 1, 1.4 μm | 4pcs |
| ISR-CS319 | Face turning | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm | 1.92, 3.2, 6.15, 12.5, 23.7, 48.7, 102, 185 μm | 8pcs |
| ISR-CS320 | Cylindrical turning | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm | 1.7, 3.2, 6.1, 12.2, 23.7, 47.5, 95, 190 μm | 8pcs |
| ISR-CS321 | End milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm | 1.92, 3.82, 6.45, 12.2, 25.2, 49.8, 92.6, 191 μm | 8pcs |
| ISR-CS322 | Reaming | 0.4, 0.8, 1.6, 3.2 μm | 1.7, 3.2, 6.4, 12.8 μm | 4pcs |
| | Drilling | 1.6, 3.2, 6.3, 12.5 μm | 7.5, 15.5, 31, 60 μm | 4pcs |
| ISR-CS323 | Horizontal milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm | 1.8, 3.68, 6.63, 12.8, 25.6, 53, 97.5, 197 μm | 8pcs |
| ISR-CS325 | Shaping (planing) | 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50, 100 μm | 3.84, 6.7, 12.2, 25.2, 48.7, 99.9, 190, 361 μm | 8pcs |
| ISR-CS326 | Linishing (belt sanding) | 0.1, 0.2, 0.4, 0.8, 1.6, 3.2 μm | 0.9, 1.55, 3.37, 7.42, 18.5, 31 μm | 6pcs |
| ISR-CS328 | Vertical grinding | 0.2, 0.4, 0.8, 1.6, 3.2, 6.3 μm | 1.1, 3.5, 6.15, 8.78, 22.19, 40.8 μm | 6pcs |
| ISR-CS329 | Grit blasting | 3.2, 10.5, 18, 25 μm | 19.2, 63, 108, 150 μm | 4pcs |
| | Shot blasting | 3.2, 8, 13, 18 μm | 19.2, 48, 78, 108 μm | 4pcs |
| ISR-CS331 | Spark erosion (EDM) | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm | 2.5, 4.5, 7.2, 14.2, 24.7, 51.2, 105, 196 μm | 8pcs |
| ISR-CS333 | Hand filing | 0.4, 0.8, 1.6, 3.2, 6.3 μm | 3, 5.6, 12.4, 22.5, 61 μm | 5pcs |
| ISR-CS334 | Castings | 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm | 3.2, 8, 16, 32, 56, 112, 225 μm | 7pcs |
| ISR-CS335 | Honing | 0.05, 0.1, 0.2, 0.4, 0.8, 1.6 μm | 0.31, 0.56, 1, 2, 4, 2, 9 μm | 6pcs |
| ISR-CS336 | Polishing | 0.0125, 0.025, 0.05, 0.1, 0.2 μm | 0.29, 0.35, 0.67, 0.72, 1.52 μm | 5pcs |

ATTENTION: PLEASE APPLY ANTI-RUST OIL AFTER USE

SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS2



| Machining method | Roughness (Ra) | Roughness (Rz) | Quantity |
|--------------------|--|--------------------------------|----------|
| Horizontal milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm 16, 32, 63, 125, 250, 500µm | 1.6, 3.2, 6.3, 12.5, 25, 50µm | 6pcs |
| Vertical milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm 16, 32, 63, 125, 250, 500µm | 1.6, 3.2, 6.3, 12.5, 25, 50µm | 6pcs |
| Turning | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm 16, 32, 63, 125, 250, 500µm | 1.6, 3.2, 6.3, 12.5, 25, 50µm | 6pcs |
| Plain grinding | 0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm 2, 4, 8, 16, 32, 63µm | 0.2, 0.4, 0.8, 1.6, 3.2, 6.3µm | 6pcs |
| Flat lapping | 0.05, 0.1µm 2, 4µm | 0.2, 0.4µm | 2pcs |
| External grinding | 0.2, 0.4, 0.8, 1.6µm 8, 16, 32, 63µm | 0.8, 1.6, 3.2, 6.3µm | 4pcs |

- For checking, identifying and specifying the roughness by symbol
- Made of carbon steel

SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS130

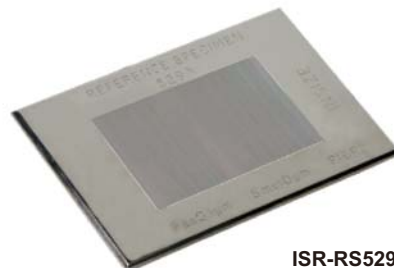
- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel



| Machining method | Roughness (Ra) | Roughness (Rz) | Quantity |
|--------------------|--|--------------------------|----------|
| Flat lapping | 0.05, 0.1, 0.2µm 2, 4, 8µm | 0.55, 1, 1.6µm | 3pcs |
| Reaming | 0.4, 0.8, 1.6µm 16, 32, 63µm | 3, 6, 10µm | 3pcs |
| Plain grinding | 0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm 2, 4, 8, 16, 32, 63µm | 0.55, 1, 1.6, 3, 6, 10µm | 6pcs |
| Horizontal milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm 16, 32, 63, 125, 250, 500µm | 2.5, 4, 8, 16, 32, 50µm | 6pcs |
| Vertical milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm 16, 32, 63, 125, 250, 500µm | 2.5, 4, 8, 16, 32, 50µm | 6pcs |
| Turning | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm 16, 32, 63, 125, 250, 500µm | 2.5, 4, 8, 16, 32, 50µm | 6pcs |

SURFACE ROUGHNESS REFERENCE SPECIMENS

MEASURING ACCURACY CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED



ISR-RS529X

| Code | Roughness (Ra) |
|------------|------------------------------------|
| ISR-RS525X | 6.25µm* |
| ISR-RS526X | 3.15µm* |
| ISR-RS527X | 3.0µm* |
| ISR-RS528X | 0.5µm* |
| ISR-RS529X | 0.1µm* (not suitable for ISR-S400) |
| ISR-RS530X | 1.0µm* |
| ISR-RS531X | 0.3µm* (not suitable for ISR-S400) |

* The actual value may be slightly different

- To calibrate roughness testers
- Meets ISO 5436-1: 2000
- Rust proof, made of pure Nickel

SHOT AND GRIT BLASTING SURFACE ROUGHNESS SPECIMENS



- To check the roughness of steel surfaces which have been blast cleaned before painting
- Meets ISO 8503/1
- Rust-proof, made of pure Nickel
- Each piece contains 4 parts



ISR-CS017

| Code | Machining method | Roughness (Ra) | Roughness (Rz) |
|-----------|------------------|---------------------------|----------------------------|
| ISR-CS017 | Shot blasting | 3.2, 8, 13, 18 μ m | 19.2, 48, 78, 108 μ m |
| ISR-CS018 | Grit blasting | 3.2, 10.5, 18, 25 μ m | 19.2, 63, 108, 150 μ m |

COATING THICKNESS GAGE

SUITABLE FOR SMALL SURFACES, CONCAVE OR CONVEX SURFACES

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES

- Suitable for small surfaces, concave or convex surfaces
- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome-tin, plastic powder, paint (does not include nickel)
- Eddy current probe (NFe) is to measure the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic powder, paint, anodizing



MAIN UNIT SPECIFICATION

| Code | | ISO-2000FN |
|-----------------------------|---|----------------|
| Measuring range | magnetic induction probe (Fe) | 0~2000 μ m |
| | eddy current probe (NFe) | 0~800 μ m |
| Accuracy | $\pm(1.5+2\%L)\mu$ m L is measuring thickness in μ m | |
| Resolution | 0.1 μ m (range<100 μ m) | |
| | 1 μ m (range 100~1000 μ m) | |
| | 10 μ m (range \geq 1000 μ m) | |
| Repeatability | 1 μ m (range 0~1000 μ m) | |
| | 10 μ m (range \geq 1000 μ m) | |
| Measuring mode | continuous or single | |
| Calibration mode | four points calibration | |
| Minimum substrate thickness | magnetic induction probe (Fe): 0.2mm, eddy current probe (NFe): 0.05mm | |
| Minimum measuring area | 5x5mm, calibration should be made on workpiece without coating, test stand (optional) is recommended in order to have same position for calibration and measurement | |
| Power supply | 2x1.5V AA batteries | |
| Dimension of main unit | 122x65x22mm | |
| Weight of main unit | 150g | |



magnetic induction probe Fe (optional)
ISO-2000FN-FE



eddy current probe NFe (optional)
ISO-2000FN-NFE

connected to probe



main unit
ISO-2000FN



standard foil (included)

STANDARD DELIVERY

| | |
|--------------------------------------|------|
| Main unit | 1pc |
| Zero calibration block for Fe probe | 1pc |
| Zero calibration block for NFe probe | 1pc |
| Standard foil | 7pcs |
| Battery (AA) | 2pcs |

PROBE (OPTIONAL) SPECIFICATION

| | |
|-------------------------------|----------------|
| Magnetic induction probe (Fe) | ISO-2000FN-FE |
| Eddy current probe (NFe) | ISO-2000FN-NFE |

COATING THICKNESS GAGE

main unit
ISO-3000FN



probe interface

magnetic induction and eddy current integrated probe (optional)
ISO-3000FN-52DS



probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces

magnetic induction probe (optional), for bores and grooves
ISO-3000FN-3T



Software for PC (included), connected to PC by wireless, upload the memory to PC

DATA OUTPUT

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES



VIDEO



- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic powder, paint (does not include nickel)
- Eddy current probe (NFe) is to measure the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic powder, paint, anodizing
- Low and high limits with judgement
- Two points calibration
- Memory of 10000 measurement values for browsing and output
- Power off automatically



software CD (included)

MAIN UNIT SPECIFICATION

| Code | ISO-3000FN |
|-----------------------------|--|
| Accuracy | ±1μm (range<100μm) ±(1%L)μm (range 100~1000μm) ±(3%L)μm (range 1000~2000μm) ±(5%L)μm (range>2000μm) L is measuring thickness in μm |
| Resolution | 0.1μm (range<100μm) 1μm (range 100~1000μm) 10μm (range>1000μm) |
| Repeatability | 1μm (range<1000μm) 10μm (range>1000μm) |
| Measuring mode | single and continuous |
| Calibration mode | two points calibration |
| Minimum substrate thickness | magnetic induction (Fe): 0.3mm eddy current (NFe): 0.05mm |
| Output | wireless |
| Power supply | 3×1.5V AA battery |
| Dimension | 198×92×35mm |
| Weight | 265g |

PROBE (OPTIONAL) SPECIFICATION

| Code | ISO-3000FN-52DS | ISO-3000FN-3T |
|---------------------------------------|-------------------------------|---------------|
| Measuring range | magnetic induction probe (Fe) | 0~5000μm |
| | eddy current probe (NFe) | 0~2500μm |
| Minimum measuring area | | Ø6mm |
| Minimum curvature radius of workpiece | concave | 38mm |
| | convex | 6mm |
| | | Ø3mm |
| | | 13mm |
| | | 2mm |

STANDARD DELIVERY

| | |
|--------------------------------------|------|
| Main unit | 1pc |
| Zero calibration block for Fe probe | 1pc |
| Zero calibration block for NFe probe | 1pc |
| USB wireless receiver and software | 1pc |
| Standard foil | 2pcs |
| 1.5V AA battery | 3pcs |



USB wireless receiver (included)



standard foils (included)

OPTIONAL DELIVERY

| | |
|--|-----------------|
| Magnetic induction and eddy current integrated probe | ISO-3000FN-52DS |
| Magnetic induction probe (for bores and grooves) | ISO-3000FN-3T |

COATING THICKNESS GAGE CODE ISO-5000F

probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces



- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic powder, paint (does not include nickel)
- Two points calibration
- Probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces
- Power off automatically

STANDARD DELIVERY

| | |
|-------------------------------------|------|
| Main unit | 1pc |
| Zero calibration block for Fe probe | 1pc |
| Standard foil | 2pcs |
| 1.5V AA battery | 1pc |



standard foils (included)

FOR MAGNETIC SUBSTRATES



VIDEO



SPECIFICATION

| | | |
|---------------------------------------|--|------|
| Measuring range | 0~5000μm | |
| Accuracy | ±1μm (range<100μm) ±(1%L)μm (range 100~1000μm) ±(3%L)μm (range 1000~2000μm) ±(5%L)μm (range>2000μm) L is measuring thickness in μm | |
| Resolution | 0.1μm (range<100μm) 1μm (range 100~1000μm) 10μm (range>1000μm) | |
| Repeatability | 1μm (range<1000μm) 10μm (range>1000μm) | |
| Measuring mode | single | |
| Calibration mode | two points calibration | |
| Minimum substrate thickness | 0.3mm | |
| Minimum measuring area | Ø8mm | |
| Minimum curvature radius of workpiece | concave | 38mm |
| | convex | 3mm |
| Power supply | 1×1.5V AA battery | |
| Dimension | 98×28×28mm | |
| Weight | 72g | |



DATA OUTPUT

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES



Software for PC (included), connected to PC by Bluetooth, upload the memory to PC



Android APP (included), connected to mobile device by Bluetooth, display measurement value and data statistics

COATING THICKNESS GAGE CODE ISO-5000FN



VIDEO

probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces



SPECIFICATION

| | | |
|---------------------------------------|--------------------------------------|--|
| Measuring range | magnetic induction probe (Fe) | 0~5000µm |
| | eddy current probe (NFe) | 0~2000µm |
| Accuracy | | ±1µm (range<100µm) ±(1%L)µm (range 100~1000µm) ±(3%L)µm (range 1000~2000µm) ±(5%L)µm (range>2000µm) L is measuring thickness in µm |
| | Resolution | 0.1µm (range<100µm) |
| | | 1µm (range 100~1000µm) |
| | | 10µm (range>1000µm) |
| Repeatability | 1µm (range<1000µm) | |
| | 10µm (range>1000µm) | |
| Measuring mode | single | |
| Calibration mode | two points calibration | |
| Minimum substrate thickness | magnetic induction probe (Fe): 0.3mm | |
| | eddy current probe (NFe): 0.05mm | |
| Minimum measuring area | Ø8mm | |
| Minimum curvature radius of workpiece | concave | 38mm |
| | convex | 3mm |
| Output | Bluetooth | |
| Power supply | 1×1.5V AA battery | |
| Dimension | 98x28x28mm | |
| Weight | 72g | |

- Integrated with magnetic-induction probe (Fe) and eddy current probe (NFe), switch to the suitable probe automatically according to the material to be measured
- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic powder, paint (does not include nickel)
- Eddy current probe (NFe) is to measure the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic powder, paint, anodizing
- Two points calibration
- Probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces
- Memory of 500 measurement values for browsing and output
- Power off automatically



software CD (included)



standard foils (included)

STANDARD DELIVERY

| | |
|--------------------------------------|------|
| Main unit | 1pc |
| Zero calibration block for Fe probe | 1pc |
| Zero calibration block for NFe probe | 1pc |
| USB wireless receiver and software | 1pc |
| Standard foil | 2pcs |
| 1.5V AA battery | 1pc |

- To measure the thickness of any non-magnetic coating on magnetic substrate
substrate: steel, iron, magnetic stainless steel (non-magnetic stainless steel is not included)
coating: zinc, copper, chrome, tin, plastic, paint (nickel is not included)
- Low and high limits with judgement
- Calculate average value automatically

MEASURE NON-MAGNETIC COATING ON MAGNETIC SUBSTRATES



VIDEO

COATING THICKNESS GAGE CODE ISO-1500F



software CD (included)



zero calibration block (included)



calibration foil (included)



printer (optional)

SPECIFICATION

| | | |
|---------------------------------------|---|------|
| Measuring range | 0~1500µm | |
| Accuracy | ±(2%L+2)µm L is measuring thickness in µm | |
| Resolution | 0.1µm (range<1000µm) | |
| | 1µm (range≥1000µm) | |
| Repeatability | ±1µm (range<100µm) | |
| | ±(1%L)µm (range≥100µm) | |
| | L is measuring thickness in µm | |
| Measuring mode | continuous and single | |
| Calibration mode | zero calibration, one point calibration, two points calibration | |
| Minimum substrate thickness | 0.5mm | |
| Minimum measuring area | 10×10mm | |
| Minimum curvature radius of workpiece | concave | 30mm |
| | convex | 5mm |
| Output | USB | |
| Memory | 1200 | |
| Power supply | 3×1.5V AAA batteries (power off automatically) | |
| Dimension | 88×67×30mm | |
| Weight | 120g | |

STANDARD DELIVERY

| | |
|---|------|
| Main unit | 1pc |
| Zero calibration block | 1pc |
| Calibration foil (50µm, 100µm, 500µm, 1000µm, 1500µm) | 1set |
| 1.5V AAA battery | 3pcs |
| Software and USB cable | 1pc |

OPTIONAL ACCESSORY

| | |
|---------|----------------|
| Printer | ISH-DS-PRINTER |
|---------|----------------|

MEASURE NON-MAGNETIC COATING ON MAGNETIC SUBSTRATES



eddy current probe Nfe (optional) with zero calibration block



VIDEO



zero calibration block for Fe (included)



calibration foils (included)



magnetic induction probe Fe (included)

- Magnetic induction probe (Fe, included) is to measure the thickness of non-magnetic coating on magnetic substrate: steel, iron, magnetic stainless steel (non-magnetic stainless steel is not included) coating: zinc, copper, chrome, tin, plastic, paint (nickel is not included)
- Eddy current induction probe (NFe, optional) is to measure the thickness of non-conductive coating on non-magnetic substrate substrate: copper, aluminum, zinc, non-magnetic stainless steel coating: plastic, power, paint, anodizing
- Low and high limits with judgement
- Calculate average value automatically
- Automatic power off

COATING THICKNESS GAGE (BASIC MODEL) CODE ISO-1000F

SPECIFICATION

| Probe type | Fe (included) | NFe (optional) |
|--|--|----------------|
| Measuring range | 0~1250µm | |
| Accuracy | ±(3%L+1)µm L is measuring thickness in µm | |
| Resolution | 0.1µm (range<50µm) | |
| | 1µm (range≥50µm) | |
| Repeatability | ±(2%L)µm L is measuring thickness in µm | |
| Measuring mode | continuous and single | |
| Minimum substrate thickness | 0.5mm | 0.3mm |
| Minimum measuring area | Ø7mm | |
| Minimum curvature radius of convex workpiece | 1.5mm | |
| | 3mm | |
| Memory | 500 | |
| Power supply | 3x1.5V AAA batteries | |
| Dimension | 155×72×27mm | |
| Weight | 230g | |

STANDARD DELIVERY

| | |
|---|------|
| Main unit | 1pc |
| Magnetic induction probe (Fe) | 1pc |
| Zero calibration block for Fe probe | 1pc |
| Calibration foils (50µm, 100µm, 250µm, 500µm, 1000µm) | 1set |
| 1.5V AAA battery | 3pcs |

OPTIONAL ACCESSORY

| | |
|--|---------------|
| Eddy current probe (Nfe) with zero calibration block | ISO-1000F-NFE |
|--|---------------|



VIDEO



CROSS CUT ADHESION TESTER CODE ISQ-PK100

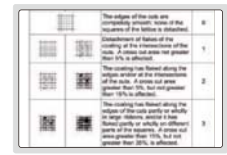
- To test the adhesion of paint coating on metal, wood, plastic, etc.
- According to ISO 2409, ASTM D3359, DIN53151



step 1: make grid cutting on surface



step 2: paste and remove the tape



step 3: according to the shedding status, judge the adhesion grade

SPECIFICATION

| Blade | | 1mm pitch blade | 2mm pitch blade | 3mm pitch blade |
|-----------------------------|-------------------------------------|-----------------|-----------------|-----------------|
| Applied paint thickness | hard substrate (like metal) | 0~60µm | 61~120µm | 121~250µm |
| | soft substrate (like wood, plaster) | - | 0~120µm | 121~250µm |
| Minimum substrate thickness | hard substrate (like metal) | 0.25mm | 0.25mm | 0.25mm |
| | soft substrate (like wood, plaster) | - | 10mm | 10mm |
| Minimum size of test sample | | 150×100mm | 150×100mm | 150×100mm |
| Dimension | | 170×28×40mm | | |
| Weight | | 430g | | |



2X magnifier (included)



brush (included)

STANDARD DELIVERY

| | | | |
|-----------------|-----|-------------------------|-----|
| Handle | 1pc | 3mm pitch blade | 1pc |
| 1mm pitch blade | 1pc | Test tape (ISQ-PK100-1) | 1pc |
| 2mm pitch blade | 1pc | 2X magnifier | 1pc |
| | | Brush | 1pc |



test tape (included) ISQ-PK100-1



1mm pitch blade (included)



2mm pitch blade (included)



3mm pitch blade (included)

PULL OFF ADHESION TESTER CODE ISQ-PF200



- To measure the pull off adhesion of paint coating on metal, wood, plastic, etc.
- According to ISO 4624, EN13144

SPECIFICATION

| | | |
|-----------------------------|--------------------|---------|
| Test range | Ø15.1mm flat dolly | 1~10Mpa |
| | Ø19.5mm flat dolly | 2~6Mpa |
| Minimum size of test sample | 30×30mm | |
| Dimension | 70×70×150mm | |
| Weight | 1kg | |

STANDARD DELIVERY

| | |
|--------------------------------------|------|
| Main unit | 1pc |
| Ø15.1mm flat dolly | 3pcs |
| Ø19.5mm flat dolly | 3pcs |
| Ring cutter | 1pc |
| Glue (ISQ-PF200-1) | 3g |
| Glue for rough surface (ISQ-PF200-2) | 6ml |



DIGITAL SURFACE PROFILE GAGE

- Measure peak-to-valley height of blast cleaned surface. If the profile is too low, the adhesion of the coating to the surface will be reduced. If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Stainless steel base
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)



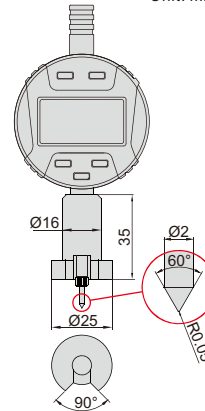
2844-10



DATA OUTPUT

DISPLAY MAXIMUM, MINIMUM, DIFFERENCE VALUE BETWEEN MAXIMUM AND MINIMUM

Unit: mm

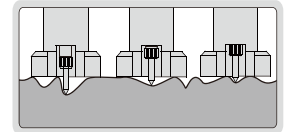


set zero



zero set block (included)

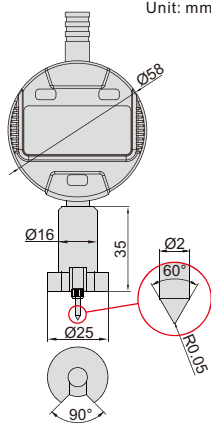
measure peak-to-valley height of blast cleaned surfaces



| Code | Range | Digital indicator stroke | Digital indicator resolution | Accuracy |
|---------|-----------------|--------------------------|------------------------------|----------|
| 2844-10 | 0-12.7mm/0-0.5" | 12.7mm/0.5" | 0.001mm/0.00005" | ±0.005mm |

DIGITAL SURFACE PROFILE GAGE

- Measure peak-to-valley height of blast cleaned surface. If the profile is too low, the adhesion of the coating to the surface will be reduced. If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Button function: on/off, zero, mm/inch, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Stainless steel base
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)



Unit: mm



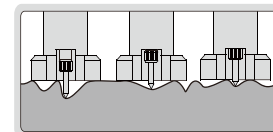
DATA OUTPUT

set zero



zero set block (included)

measure peak-to-valley height of blast cleaned surfaces



2843-10

| Code | Range | Digital indicator stroke | Digital indicator resolution | Accuracy |
|---------|-----------------|--------------------------|------------------------------|----------|
| 2843-10 | 0-12.7mm/0-0.5" | 12.7mm/0.5" | 0.001mm/0.00005" | ±0.005mm |

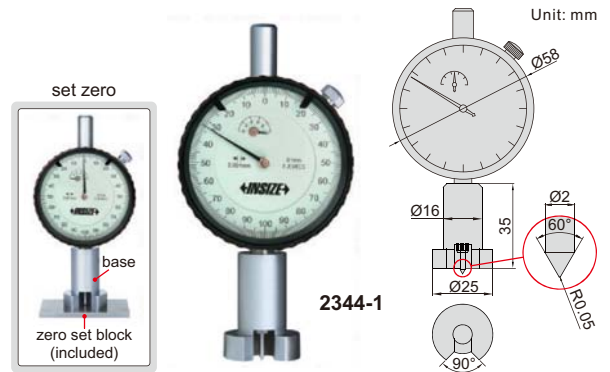
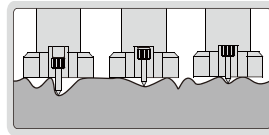
SURFACE PROFILE GAGE

- Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Stainless steel base



VIDEO

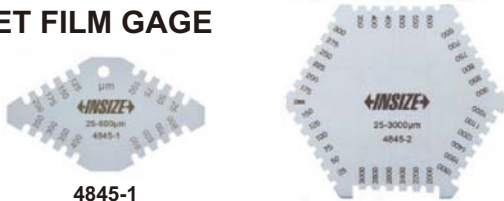
measure peak-to-valley height of blast cleaned surfaces



2344-1

| Code | Range | Dial indicator stroke | Dial indicator graduation | Accuracy |
|--------|-------|-----------------------|---------------------------|----------|
| 2344-1 | 0-1mm | 1mm | 0.001mm | ±0.005mm |

WET FILM GAGE



4845-1

4845-2

- Made of stainless steel

| Code | Range | Accuracy | Thickness |
|--------|-----------|-------------------------------------|-----------|
| 4845-1 | 25-800µm | ±5µm | 1.8mm |
| 4845-2 | 25-3000µm | 25-100µm: ±5µm 100µm-3000µm: ±5% | 1mm |

ULTRASONIC THICKNESS GAGE (THROUGH COATING) CODE ISU-300D

- Two measuring modes, Echo-Echo (E-E) and Transmit-Echo (T-E):
 - E-E is applicable for non-metallic coating (such as paint, plastic resin, etc.) on metal substrate, can penetrate coating and measure the thickness of substrate
 - T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, ice, etc.
- Low and high limits with judgment
- Average calculation of maximum 9 readings
- Memory of maximum 500 readings



VIDEO

INSPECTION CERTIFICATE



PENETRATE NON-METALLIC COATING AND MEASURE THE THICKNESS OF METAL SUBSTRATE

DATA OUTPUT

software CD (included)



couplant (included)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



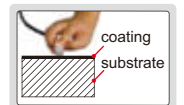
transducer ISU-T12 (optional)



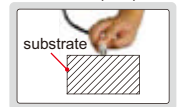
transducer ISU-T13 (optional)



Echo-Echo mode (E-E)



Transmit-Echo mode (T-E)



SPECIFICATION

| | |
|-----------------|---|
| Measuring range | E-E mode: coating thickness 0~1mm, substrate thickness 4~25mm |
| | T-E mode: substrate thickness 1.5~200mm |
| Resolution | 0.01mm (range<100mm) |
| | 0.1mm (range≥100mm) |
| Repeatability | 0.03mm (range<100mm) |
| | 0.1mm (range≥100mm) |
| Accuracy | ±0.04mm (range<10mm) |
| | ±(0.04+H/1000)mm (range 10~100mm) |
| | ±H/333mm (range≥100mm) |
| | H is the thickness to be measured in mm |
| Velocity | 1000~9999m/s |
| Power supply | 2×1.5V AAA batteries |
| Dimension | 116×64×27mm |
| Weight | 220g |

STANDARD DELIVERY

| | |
|---|---------|
| Main unit | 1pc |
| Transducer ISU-T07 | 1pc |
| Battery (AAA) | 2pcs |
| Couplant (for ISU-T04, ISU-T06, ISU-T07, ISU-T12) | 1bottle |
| USB cable and software disc | 1pc |

OPTIONAL ACCESSORY

| | |
|------------------------|------------------------------------|
| Transducer | ISU-T04, ISU-T06, ISU-T12, ISU-T13 |
| Couplant (for ISU-T13) | ISU-HT5-COUPPLANT |

SPECIFICATION OF TRANSDUCERS

| Code | Mode | Frequency | Diameter (Ød) | Measuring range | Minimum size of pipe for measurement (diameter × wall thickness) | Applicable temperature | Application |
|---------|------------|-----------|---------------|---|--|------------------------|----------------------|
| ISU-T07 | T-E E-E | 5.0MHz | 10.8mm | T-E mode: 1.5~200mm E-E mode: 4~25mm | T-E mode: 20×1.2mm E-E mode: 20×4mm | <60°C | general use |
| ISU-T04 | T-E | 10.0MHz | 6mm | 0.7~20mm | 10×1mm | <60°C | for small tube |
| ISU-T06 | T-E | 7.5MHz | 8.5mm | 0.7~50mm | 15×1.2mm | <60°C | for thin material |
| ISU-T12 | T-E | 2.0MHz | 16.3mm | 2~400mm | 30×4mm | <60°C | for casting iron |
| ISU-T13 | T-E | 5.0MHz | 13mm | 2~200mm | 25×3mm | <350°C | for high temperature |

ULTRASONIC THICKNESS GAGE CODE ISU-250C

**INSPECTION
CERTIFICATE**

**DATA
OUTPUT**



VIDEO

- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice
- Low and high limits with judgement
- Average calculation of maximum 9 readings
- Memory of maximum 5000 readings with location number



software CD (included)



couplant (included)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



transducer ISU-T12 (optional)



transducer ISU-T13 (optional)

SPECIFICATION

| | |
|---------------|---|
| Resolution | 0.01mm (range<100mm) |
| | 0.1mm (range≥100mm) |
| Repeatability | 0.03mm (range<100mm) |
| | 0.1mm (range≥100mm) |
| Accuracy | ±0.04mm (range<10mm) |
| | ±(0.04+H/1000)mm (range 10~100mm) |
| | ±H/333mm (range≥100mm) |
| | H is the thickness to be measured in mm |
| Velocity | 1000-9999m/s |
| Power supply | 2×1.5V AAA batteries |
| Dimension | 64×116×27mm |
| Weight | 220g |

STANDARD DELIVERY

| | |
|---|---------|
| Main unit | 1pc |
| Transducer ISU-T08 | 1pc |
| Battery (AAA) | 2pcs |
| Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12) | 1bottle |
| USB cable and software disc | 1pc |

OPTIONAL ACCESSARY

| | |
|------------------------|------------------------------------|
| Transducer | ISU-T04, ISU-T06, ISU-T12, ISU-T13 |
| Couplant (for ISU-T13) | ISU-HT5-COULPLANT |

SPECIFICATION OF TRANSDUCERS

| Code | Frequency | Diameter (Ød) | Measuring range | Minimum size of pipe for measurement (diameter × wall thickness) | Applicable temperature | Application |
|---------|-----------|---------------|-----------------|--|------------------------|----------------------|
| ISU-T08 | 5.0MHz | 10.8mm | 0.8~300mm | 20×1.2mm | <60°C | general use |
| ISU-T04 | 10.0MHz | 6mm | 0.7~20mm | 10×1mm | <60°C | for small tube |
| ISU-T06 | 7.5MHz | 8.5mm | 0.7~50mm | 15×1.2mm | <60°C | for thin material |
| ISU-T12 | 2.0MHz | 16.3mm | 2~400mm | 30×4mm | <60°C | for casting steel |
| ISU-T13 | 5.0MHz | 13mm | 2~200mm | 25×3mm | <350°C | for high temperature |

ULTRASONIC THICKNESS GAGE (BASIC MODEL) CODE ISU-100D

- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice



SPECIFICATION

| | | |
|--------------------------------------|---|--------|
| Measuring range | 0.8~300mm | |
| Resolution | 0.01mm (range<100mm) | |
| | 0.1mm (range≥100mm) | |
| Accuracy | ±0.04mm (range<10mm) | |
| | ±(0.04+H/1000)mm (range 10~100mm) | |
| | ±H/333mm (range≥100mm) | |
| | H is the thickness to be measured in mm | |
| Transducer | frequency | 5MHz |
| | diameter (Ød) | 10.8mm |
| Minimum size of pipe for measurement | 20×1.2mm (diameter × wall thickness) | |
| Applicable temperature | <60°C | |
| Velocity | 1000-9999m/s | |
| Power supply | 2×AAA batteries | |
| Dimension | 114×64×28mm | |
| Weight | 200g | |

ATTENTION: NOT SUITABLE FOR CASTING WORKPIECES

**INSPECTION
CERTIFICATE**



VIDEO



STANDARD DELIVERY

| | |
|---------------|---------|
| Main unit | 1pc |
| Transducer | 1pc |
| Couplant | 1bottle |
| Battery (AAA) | 2pcs |

proximity trigger (included)



make LED flash frequency same as the rotation or vibration (power supply from AC/DC adapter when external trigger is used)

DIGITAL LED TACHOMETER/STROBOSCOPE CODE ISQ-TS120K



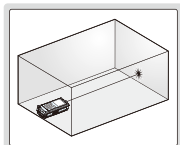
- Make cyclical motion (rotation, vibration, etc.) objects to appear slow-moving or stationary
- On-line inspection or observation for moving objects
- Measure the rotation or vibration speed and frequency
- Can be triggered from outside by moving objects, make LED flash frequency same as the rotation or vibration

SPECIFICATION

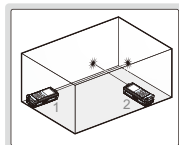
| | | |
|---------------------------|--|--|
| Flash frequency range | 60~120000FPM (Flash Per Minute), 1~2000Hz | |
| Resolution | FPM | 0.1FPM (<100000FPM), 1FPM (≥100000FPM) |
| | HZ | 0.01Hz (<200Hz), 0.1Hz (≥200Hz) |
| Setting accuracy | ±0.01% | |
| Phase shift increment | 3° | |
| Flash pulse duration time | 0.1~2.5° | |
| LED light | 3pcs CREE 10W lamp | |
| LED life | 3~5 years | |
| Trigger mode | internal and external | |
| Power supply | built-in rechargeable battery or AC/DC adapter | |
| Dimension | 208×70×60mm | |
| Weight | 380g | |

STANDARD DELIVERY

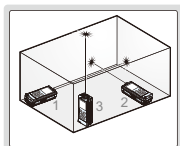
| | |
|-------------------|-----|
| Main unit | 1pc |
| AC/DC adapter | 1pc |
| Proximity trigger | 1pc |



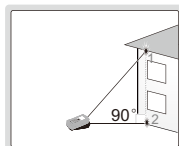
distance measurement



area measurement



volume measurement



height measurement

LASER DISTANCE METER CODE ISN-L70



IP52
WATERPROOF



SPECIFICATION

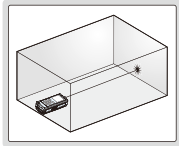
| | |
|-------------------|--|
| Measuring range | 0.05~70m |
| Accuracy | ±1.5mm |
| Resolution | 1mm |
| Measuring speed | 0.5 second |
| Dust/waterproof | IP52 |
| Laser type | 650nm, Class II, <1mW |
| Beam size | 25mm@30m |
| Memory | 20 measuring data |
| Power supply | 2xAA batteries, for 10000 measurements |
| Dimension (L×W×H) | 110×45×30mm |
| Weight | 130g |

- Large display with backlight
- Unit: m, ft, in
- Distance, area, volume and height measurement
- With continuous measuring mode to track maximum and minimum value
- Automatic power-off: laser 30s, main unit 180s

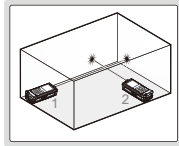
STANDARD DELIVERY

| | |
|--------------|------|
| Main unit | 1pc |
| Battery (AA) | 2pcs |
| Strap | 1pc |
| Carrying bag | 1pc |

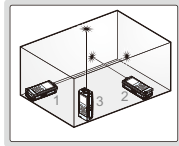
LASER DISTANCE METER CODE 9561-80



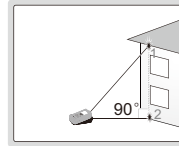
distance measurement



area measurement



volume measurement



height measurement

- Large display with backlight
- Unit: m, ft, in
- Distance, area, volume and height measurement
- Continuous measuring mode to track maximum and minimum value
- Memory of 99 measurement values
- Automatic power off: laser 20s, main unit 150s

SPECIFICATION

| | |
|-------------------|--|
| Measuring range | 0.05 ~ 80m |
| Accuracy | ±3mm |
| Resolution | 1mm, 10mm, 0.1", 0.01ft |
| Measuring speed | 0.5 second |
| Laser type | 635nm, Class II, <1mW |
| Power supply | 3×AAA batteries, for 4000 measurements |
| Dimension (L×W×H) | 120×60×28mm |
| Weight | 175g |



STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1pc |
| Battery (AAA) | 3pcs |

INFRARED THERMOMETER CODE 9110-500



- Fast measurement with infrared or k-type sensor
- Maximum, minimum, average and difference modes
- Low and high limits with judgement
- Memory 20 measurement values
- Automatic power off

SPECIFICATION

| | | |
|------------------------------|--|-------------------------|
| Measuring range | infrared | -60~500°C/-76~932°F |
| | k-type sensor | -40~1080°C/-40~1976°F |
| Accuracy | infrared | ±(1.5%+2)°C/±(1.5%+4)°F |
| | k-type sensor | ±(1%+2)°C/±(1%+4)°F |
| Resolution | 0.1°C/0.1°F (range<199.9), 1°C/1°F (range>199.9) | |
| Distance to spot ratio (D:S) | 12:1 | |
| Emissivity | 0.1 ~ 1 (adjustable) | |
| Laser type | 630 ~ 670nm, Class II, <1mW | |
| Response time | <500ms | |
| Power supply | 9V battery | |
| Dimension | 176×132×49mm | |
| Weight | 223g | |

STANDARD DELIVERY

| | |
|---------------|-----|
| Main unit | 1pc |
| K-type sensor | 1pc |
| 9V battery | 1pc |



k-type sensor (included)





DATA
OUTPUT



software (included), display measurement values and graph, save and output data

DIGITAL ANEMOMETER CODE 9331-40



software CD
(included)

- Measure velocity, flow, temperature and relative humidity
- Velocity unit: m/s, km/h, mil/h, ft/m, ft/s, knots
- Flow unit: CMS (cubic meter per second), CMM (cubic meter per minute), CFM (cubic feet per minute)
- Temperature type: ambient, dew point, wet bulb
- Maximum and minimum modes
- Automatic power off

SPECIFICATION

| | | |
|------------------------|----------------------|---|
| Measuring range | velocity | 0.8~30m/s, 1.4~108km/h, 0.9~67.2mil/h, 1.3~98.5ft/s, 78~5900ft/m, 0.8~58.3knots |
| | flow | 0~9999CMS, 0~99990CMM, 0~99990CFM |
| | temperature | -20~60°C/-4~140°F |
| | relative humidity | 0~100%RH |
| Accuracy | velocity | ±(2%+0.5) for m/s, km/h, mil/h, ft/s, knots ±(2%+50) for ft/m |
| | temperature | ±1.5°C/±2.7°F |
| | relative humidity | ±3% (20~80%RH), ±5% (<20%RH or >80%RH) |
| Resolution | velocity | 0.01m/s, 0.01km/h, 0.01mil/h, 0.01ft/s, 1ft/m, 0.01knots |
| | flow | 0.01CMS, 0.1CMM, 0.1CFM |
| | temperature | 0.1°C/0.1°F |
| | relative humidity | 0.1%RH |
| Flowing area range | 0~9.999m²/0~9.999ft² | |
| Sampling time | 0.4s | |
| Maximum working height | 2000m | |
| Output | USB | |
| Power supply | 9V battery | |
| Dimension | 165×85×38mm | |
| Weight | 200g | |

STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| USB cable and software | 1pc |
| 9V battery | 1pc |



cover (included)



- Suitable for wood, smooth cement, hard gypsum, mixed mortar, brick, etc.
- Measure moisture, temperature and relative humidity
- Temperature type: ambient, dew point, wet bulb
- Maximum and minimum modes
- Automatic power off

SPECIFICATION

| | | |
|-----------------|--|-------------------|
| Measuring depth | 0~50mm | |
| Measuring range | Moisture | 0~60% |
| | temperature | -10~50°C/14~122°F |
| | relative humidity | 0~100%RH |
| Accuracy | Moisture | ±2% |
| | temperature | ±2% |
| | relative humidity | ±5%RH |
| Resolution | Moisture | 0.1% |
| | temperature | 0.1°C/0.1°F |
| | relative humidity | 0.1%RH |
| Sampling time | 0.5s for moisture | |
| | 1s for temperature and relative humidity | |
| Power supply | 2×AAA batteries | |
| Dimension | 130×56×29mm | |
| Weight | 206g | |

DIGITAL MOISTURE METER CODE 9341-50



STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1pc |
| Battery (AAA) | 2pcs |

DIGITAL SOUND LEVEL METER CODE 9351-130

- Automatically select best range: 30~80dB, 40~90dB, 50~100dB, 60~110dB, 70~120dB, 80~130dB
- Over range indicator
- Real time, average, maximum modes
- Memory 16000 measurement values
- AC signal output: 0.707 Vrms at FS, impedance approx. 600Ω
- DC signal output: 10mV/dB, impedance approx. 100Ω
- Automatic power off

SPECIFICATION

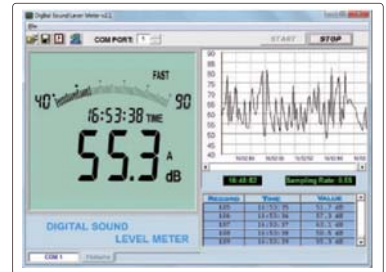
| | |
|---------------------|--------------------------------------|
| Measuring range | 30~130dB |
| Accuracy | ±2dB |
| Resolution | 0.1dB |
| Sampling time | 0.5s for digital, 0.05s for analogue |
| Response time | fast: 125ms, slow: 1s |
| Frequency | 30Hz~8KHz |
| Frequency weighting | A/C |
| Microphone | electret condenser type |
| Output | RS232, AC/DC |
| Power supply | 6×AAA batteries |
| Dimension | 265×80×69mm |
| Weight | 317g |



software CD
(included)



DATA
OUTPUT



software (included), display measurement values and graph, save and output data

STANDARD DELIVERY

| | |
|--------------------------|------|
| Main unit | 1pc |
| RS232 cable and software | 1pc |
| Output connector | 1pc |
| Battery (AAA) | 6pcs |

NON-CONTACT DIGITAL TACHOMETER CODE 9221-999

- Maximum and minimum modes
- Memory 100 measurement values
- Automatic power off

SPECIFICATION

| | |
|--------------------|------------------------------|
| Measuring range | 50~99999RPM |
| Accuracy | ±(0.03%+2) RPM |
| Resolution | 0.01RPM (range 50~99.99RPM) |
| | 0.1RPM (range 100~9999.9RPM) |
| Measuring distance | 1RPM (range 10000~99999RPM) |
| | 50~250mm |
| Power supply | 4×AAA batteries |
| Dimension | 155×60×27mm |
| Weight | 118g |



reflection sticker (included)

STANDARD DELIVERY

| | |
|--------------------|-------|
| Main unit | 1pc |
| Reflection sticker | 1roll |
| Battery (AAA) | 4pcs |



CONTACT DIGITAL TACHOMETER CODE 9222-199

- Unit: RPM, m/min, m/sec, ft/min, ft/sec, in/min
- Maximum and minimum modes
- Memory 100 measurement values
- Automatic power off



wheel with 0.1m
perimeter (included)



wheel with 6"
perimeter (included)



cone cavity head
(included)



cone head
(included)



Extension rod
(included)

SPECIFICATION

| | |
|-----------------|------------------------------|
| Measuring range | 50~19999RPM |
| Accuracy | ±(0.03%+2) RPM |
| Resolution | 0.01RPM (range 50~99.99RPM) |
| | 0.1RPM (range 100~9999.9RPM) |
| | 1RPM (range 10000~19999RPM) |
| Power supply | 4×AAA batteries |
| Dimension | 183×60×27mm |
| Weight | 122g |

STANDARD DELIVERY

| | |
|---------------------------|------|
| Main unit | 1pc |
| Wheel with 0.1m perimeter | 1pc |
| Wheel with 6" perimeter | 1pc |
| Cone cavity head | 1pc |
| Cone head | 1pc |
| Extension rod | 1pc |
| Battery (AAA) | 4pcs |





VIDEO

60° GLOSS METER CODE ISQ-DG6

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ASTM D2457, ASTM D523
- Automatic power off

SPECIFICATION

| | |
|-----------------|-------------------|
| Incidence angle | 60° |
| Measuring range | 0~150GU |
| Resolution | 0.1GU |
| Accuracy | ±1.2GU |
| Repeatability | 0.4GU |
| Zero set error | 0.2GU |
| Measuring area | 20×10mm |
| Power supply | 1×1.5V AA battery |
| Dimension | 123×38×65mm |
| Weight | 300g |



base with calibration block (included)

STANDARD DELIVERY

| | |
|-----------------------------|-----|
| Main unit | 1pc |
| Base with calibration block | 1pc |
| Spare calibration block | 1pc |

DATA OUTPUT



VIDEO

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ASTM D2457, ASTM D523
- Memory of 10000 measurement results for browsing and output
- Automatic power off

SPECIFICATION

| | | | |
|-----------------|------------------------|----------|---------|
| Incidence angle | 20° | 60° | 85° |
| Measuring range | 0~2000GU | 0~1000GU | 0~160GU |
| Resolution | 0.1GU (range≤119.9GU) | | |
| | 1GU (range>119.9GU) | | |
| Accuracy | ±1.5GU (range≤119.9GU) | | |
| | ±1.5% (range>119.9GU) | | |
| Repeatability | 0.2GU (range≤119.9GU) | | |
| | 0.2% (range>119.9GU) | | |
| Zero set error | 0.2GU | | |
| Measuring area | 10×9mm | 16×9mm | 39×5mm |
| Power supply | 1×1.5V AA battery | | |
| Dimension | 155×48×75mm | | |
| Weight | 400g | | |



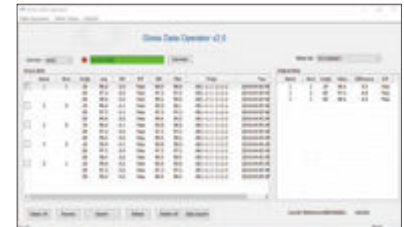
20°/60°/85° GLOSS METER CODE ISQ-DG8



base with calibration block (included)



software CD (included)



software (included), output to Excel

STANDARD DELIVERY

| | |
|-----------------------------|-----|
| Main unit | 1pc |
| Base with calibration block | 1pc |
| USB cable and software | 1pc |

SUITABLE FOR WATER
BASED COOLANT

- Quickly measure the concentration of coolant
- Refer to the refraction factor of coolant, for example: the refraction factor of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is $(2.1 \times 6\%) = 12.6\%$

SPECIFICATION

| | |
|-----------------|-------------|
| Measuring range | 0~32% |
| Graduation | 0.2% |
| Dimension | 27×40×160mm |
| Weight | 175g |

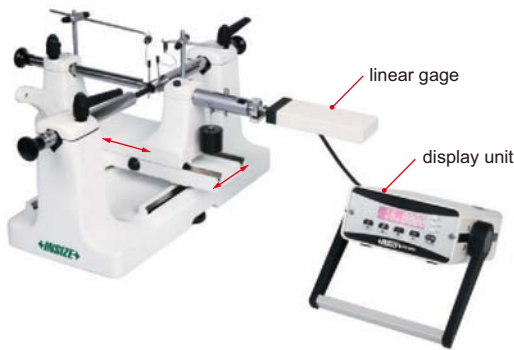


VIDEO

PORTABLE REFRACTOMETER CODE ISQ-RM30

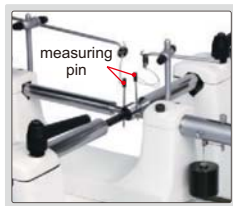


EXTERNAL THREAD MEASURING DEVICE CODE ISQ-TE100



- Quickly measure major, pitch and minor diameters of external thread
- Suitable for metric, inch, Whitworth, NPT and BSPT

measure pitch diameter of thread



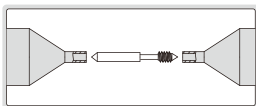
Measuring pin (optional)

- To measure pitch diameter of external thread
- Each size is supplied in pair
- Hardness: 60±2HRC



| Code | Pins included | Pin diameter (mm) |
|-------------|---------------|---|
| ISQ-TE100-A | 21 pairs | 0.170, 0.195, 0.220, 0.250, 0.290, 0.335, 0.390, 0.455, 0.530, 0.620, 0.725, 0.895, 1.100, 1.350, 1.650, 2.050, 2.550, 3.200, 4.000, 5.050, 6.350 |

Female center (optional)

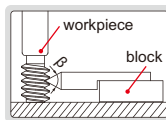


- With small holes to support small workpieces without female centers
- Supplied in pair

| Code |
|-------------|
| ISQ-TE100-C |

Find pointer (optional)

- To find measuring point of NPT or BSPT



| Code | Angle β | Applicable thread |
|-------------|---------|-------------------|
| ISQ-TE100-F | 60° | NPT |
| ISQ-TE100-G | 55° | BSPT |

Display unit (optional)

| | |
|------------------|----------|
| Code | 7108-1* |
| Display | 8 digits |
| Character height | 9mm |
| Dust/waterproof | IP20 |
| Resolution | 0.1μm |



7108-1

* Refer to 7108-1 for details

| Code | Range | Resolution | Accuracy | Repeatability |
|-----------|---------|------------|----------|---------------|
| ISQ-TE100 | 0-100mm | 0.1μm | 2μm | 0.5μm |

OPTIONAL ACCESSORY

| | |
|------------------|-------------|
| Measuring pin | ISQ-TE100-A |
| Measuring prism | ISQ-TE100-B |
| Female center | ISQ-TE100-C |
| Clamp | ISQ-TE100-D |
| Setting disc | ISQ-TE100-E |
| 60° find pointer | ISQ-TE100-F |
| 55° find pointer | ISQ-TE100-G |
| Display unit | 7108-30 |
| Linear gage | 7108-1 |

Setting disc (optional)

- To set initial value



| Code | Discs included | Disc diameter (mm) |
|-------------|----------------|--|
| ISQ-TE100-E | 22 pcs | 3, 5, 8, 12, 16, 20, 24, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 |

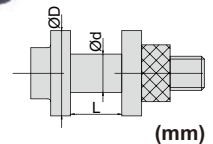
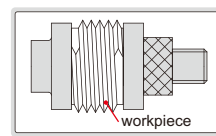
Measuring prism (optional)

- To measure minor diameter of external thread
- Each size is supplied in pair



| Code | Prisms included | Size |
|-------------|-----------------|--|
| ISQ-TE100-B | 4 pairs | A, B, C, D (for different types and sizes of thread) |

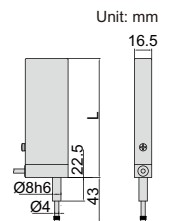
Clamp (optional)



- To hold large workpieces with inner bore

| Code | Clamps included | d | D | L |
|-------------|-----------------|------|----|------|
| ISQ-TE100-D | 3 pcs | 13.5 | 30 | 0-18 |
| | | 23 | 60 | 0-18 |
| | | 23 | 75 | 0-18 |

Linear gage (optional)



| | |
|-----------------|--|
| Code | 7108-30* |
| Measuring range | 30mm |
| Resolution | 0.01μm |
| Accuracy | (0.5+L/60)μm L is measuring length in mm |
| Dust/waterproof | IP50 |

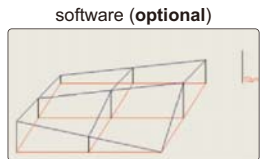
* Refer to 7108-30 for details



ELECTRONIC LEVEL CODE ISE-L051

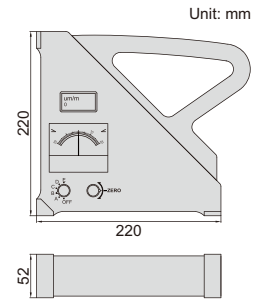
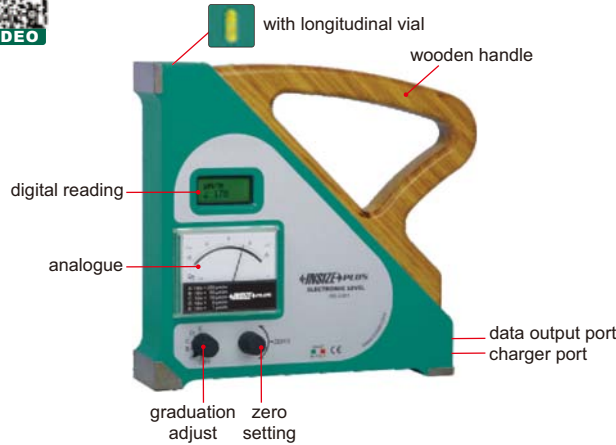
DATA
OUTPUT

SHOCK
PROOF



measure flatness of surface plates

- Shockproof
- Analogue and digital reading modes



SPECIFICATION

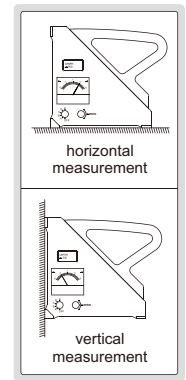
| | | | | | |
|--------------------------------|---|--------------|-------------|------------|--------------|
| Graduation of analogue reading | 250µm/m(=0.014°) | 50µm/m(=10") | 10µm/m(=2") | 5µm/m(=1") | 1µm/m(=0.2") |
| Range of analogue reading | 5000µm/m | 1000µm/m | 200µm/m | 100µm/m | 20µm/m |
| Resolution of digital reading | 1µm/m(=0.2") | | | | |
| Range of digital reading | 5000µm/m | | | | |
| Accuracy | ±2% | | | | |
| Range of zero setting | ±1500µm/m | | | | |
| Response time | <3 sec | | | | |
| Data output | RS232 | | | | |
| Power supply | rechargeable battery, for 100 hours working | | | | |
| Dimension | 220x220x52mm | | | | |
| Weight | 4.4kg | | | | |

STANDARD DELIVERY

| | |
|---------------|-----|
| Main unit | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

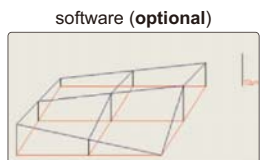
| | |
|------------------------|-------------------|
| USB Cable and software | ISE-L050-SOFTWARE |
|------------------------|-------------------|



ELECTRONIC LEVEL CODE ISE-L050

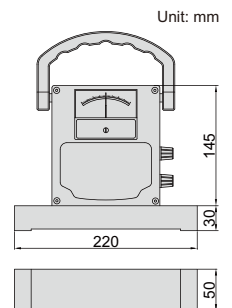
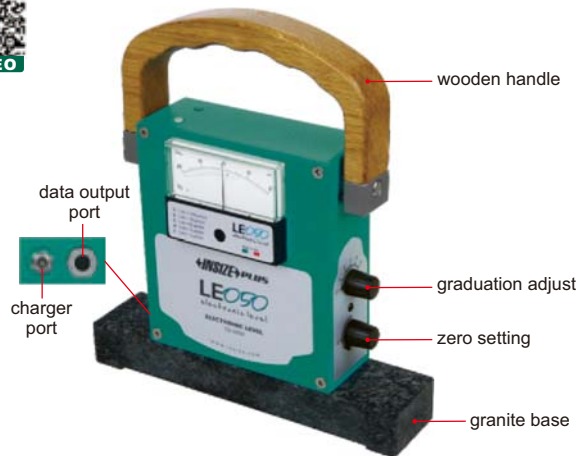
DATA
OUTPUT

SHOCK
PROOF



measure flatness of surface plates

- Shockproof



SPECIFICATION

| | | | | | |
|-------------------------|---|--------------|-------------|------------|--------------|
| Graduation (adjustable) | 250µm/m(=0.014°) | 50µm/m(=10") | 10µm/m(=2") | 5µm/m(=1") | 1µm/m(=0.2") |
| Range | 5000µm/m | 1000µm/m | 200µm/m | 100µm/m | 20µm/m |
| Accuracy | ±2% | | | | |
| Range of zero setting | ±1500µm/m | | | | |
| Response time | <3 sec | | | | |
| Data output | RS232 | | | | |
| Power supply | rechargeable battery, for 100 hours working | | | | |
| Dimension | 220x236x50mm | | | | |
| Weight | 2.8kg | | | | |

STANDARD DELIVERY

| | |
|---------------|-----|
| Main unit | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|------------------------|-------------------|
| USB Cable and software | ISE-L050-SOFTWARE |
|------------------------|-------------------|

DIGITAL LEVEL CODE ISE-2DT

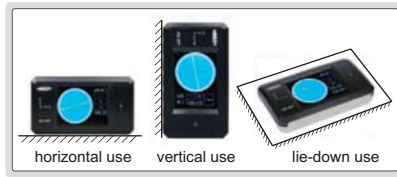
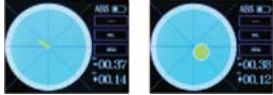


- Color LCD, touch panel
- X-Y axis measurement
- Set the tolerance and the display is shown in different colors



within the tolerance (green) slightly out of the tolerance (yellow) seriously out of the tolerance (red)

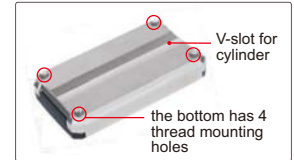
- To show the incline with line or bubble



absolute/incremental mode

angle of incline

DATA OUTPUT



SPECIFICATION

| | |
|-----------------|---|
| Measuring range | ±30° |
| Resolution | 0.01°, 0.1mm/m |
| Accuracy | ±0.03° (range 0~3°) ±0.05° (range >3°) |
| Power supply | rechargeable battery |
| Dimension | 115×66×23mm |
| Weight | 224g |

STANDARD DELIVERY

| | |
|-----------|-----|
| Main unit | 1pc |
| USB cable | 1pc |

OPTIONAL ACCESSORY

| | |
|----------|------------------|
| Software | ISE-2DT-SOFTWARE |
|----------|------------------|

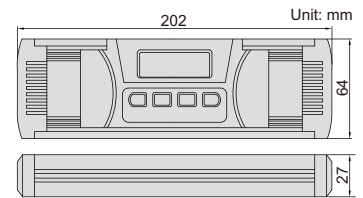
DIGITAL LEVEL AND PROTRACTOR

- IP67 WATERPROOF
- ABSOLUTE LEVEL
- BACKLIGHT
- BUZZER ALARM AT 0° AND 90°

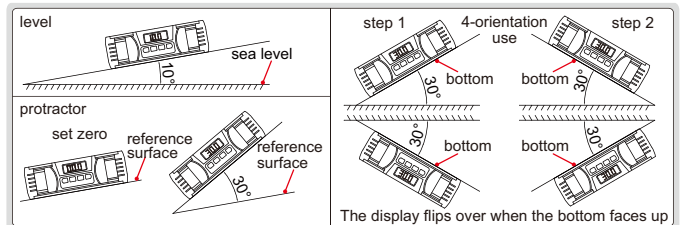
- IP67 dust/waterproof
- Aluminum frame, shock absorbing rubber end caps
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, backlight/buzzer alarm, absolute and incremental measurement, unit (mm/m, %, °), HOLD (keep the reading)
- Three AAA batteries
- Automatic power off



2175-360



| Code | Range | Resolution | Accuracy |
|----------|----------------|--------------------|------------------------------|
| 2175-360 | 0-360° (90°x4) | 0.05° (=0.873mm/m) | 0°: ±0.05°; others: ±0.1° |



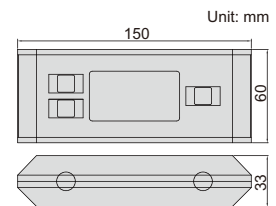
DIGITAL LEVEL AND PROTRACTOR

- IP54 WATERPROOF
- ABSOLUTE LEVEL
- BACKLIGHT
- BUZZER ALARM AT 0° AND 90°

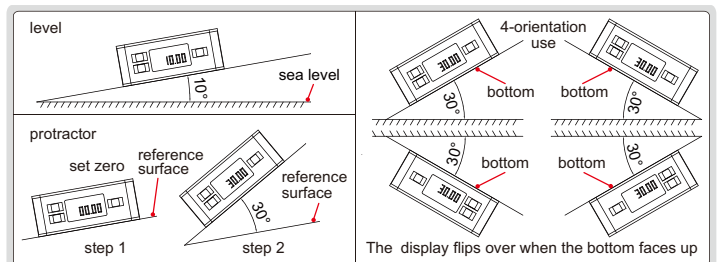


2179-360

- IP54 dust/waterproof
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), backlight
- Two AAA batteries
- Automatic power off



| Code | Range | Resolution | Accuracy |
|----------|----------------|--------------------|-------------------------------------|
| 2179-360 | 0-360° (90°x4) | 0.05° (=0.873mm/m) | 0° and 90°: ±0.1°; others: ±0.2° |

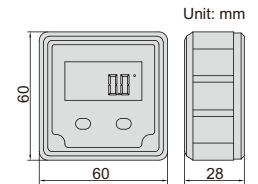


- BACKLIGHT
- ABSOLUTE LEVEL
- MAGNETIC BOTTOM
- DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP

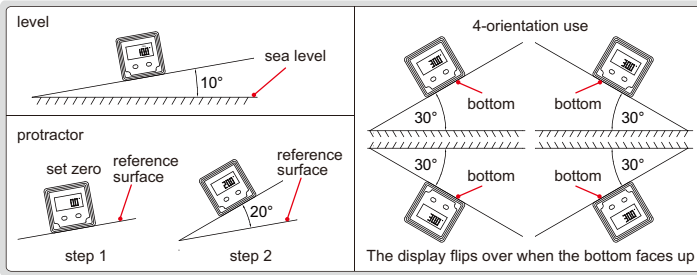


DIGITAL LEVEL AND PROTRACTOR

- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 minutes after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, absolute and incremental measurement
- One AAA battery
- Automatic power off in 5 minutes



2170-1

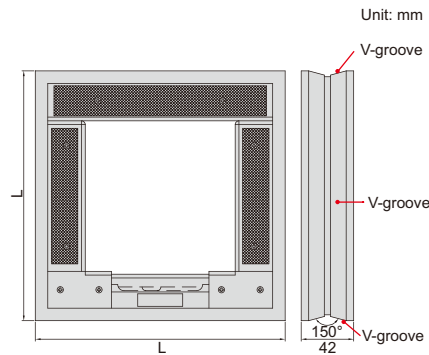


| Code | Range | Resolution | Accuracy |
|--------|-------|----------------------|--|
| 2170-1 | 4x90° | 0.1° (=1.745mm/m) | at 0° and 90°: ±0.1°; others: ±0.2° |



NO NEED TO SET ZERO BEFORE USE

- No need to set zero before use
- Three V-grooves for shafts (shafts dia. 19.3~115.9mm)
- With longitudinal vial



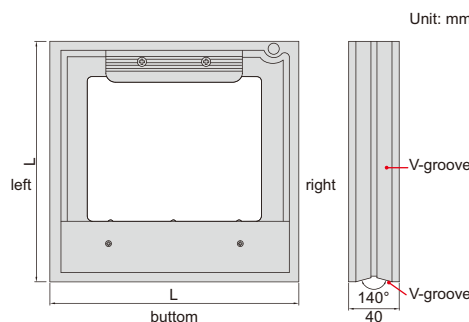
4906-200

| Code | | Size (LxL) |
|--------------------------------|--------------------------------|------------|
| Sensitivity 0.02mm/m (=0.001°) | Sensitivity 0.1mm/m (=0.0057°) | |
| 4906-150 | 4906-B150 | 150x150mm |
| 4906-200 | 4906-B200 | 200x200mm |
| 4906-300 | 4906-B300 | 300x300mm |

ATTENTION: BASIC MODEL



- V-groove on bottom and left for shafts (shafts dia. 15~70mm)
- With transverse vial
- Supplied with adjusting wrench



4902-200

| Code | | Size(LxL) |
|--------------------------------|---------------------------------|-----------|
| Sensitivity 0.02mm/m (=0.001°) | Sensitivity 0.05mm/m (=0.0029°) | |
| 4902-150 | 4902-C150 | 150x150mm |
| 4902-200 | 4902-C200 | 200x200mm |
| 4902-300 | 4902-C300 | 300x300mm |

BLOCK LEVELS

- No need to set zero before use
- V-groove on bottom for shafts (shafts dia. 19.3~115.9mm)
- With longitudinal vial

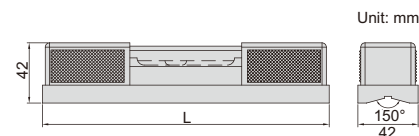


4905-200

NO NEED TO SET ZERO BEFORE USE



| Code | | Size (L) |
|-------------------------------|-------------------------------|----------|
| Sensitivity 0.02mm/m(=0.001°) | Sensitivity 0.1mm/m(=0.0057°) | |
| 4905-160 | 4905-B160 | 160mm |
| 4905-200 | 4905-B200 | 200mm |
| 4905-300 | 4905-B300 | 300mm |
| 4905-500 | 4905-B500 | 500mm |



Unit: mm

BLOCK LEVELS



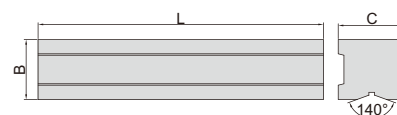
- V-groove on bottom for shafts (shafts dia. 15~70mm)
- With transverse vial
- Supplied with adjusting wrench



4903-200A

ATTENTION: BASIC MODEL

| Code | | Length (L) | B | C |
|--------------------------------|---------------------------------|------------|----|----|
| Sensitivity 0.02mm/m (=0.001°) | Sensitivity 0.05mm/m (=0.0029°) | | | |
| 4903-150A | 4903-C150 | 150mm | 40 | 45 |
| 4903-200A | 4903-C200 | 200mm | 42 | 47 |
| 4903-300A | 4903-C300 | 300mm | 45 | 50 |



(mm)

SHORT LEVEL

- No need to set zero before use
- Suitable for small spaces like crankshaft
- Longitudinal and transverse V-grooves on bottom for shafts (shafts dia. 19.3~115.9mm)
- With transverse vial

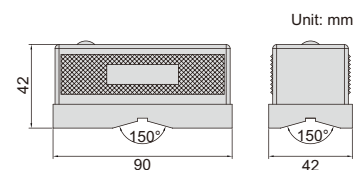


4907-90

NO NEED TO SET ZERO BEFORE USE



| Code | Length | Sensitivity |
|---------|--------|-------------------|
| 4907-90 | 90mm | 0.1mm/m(=0.0057°) |



Unit: mm

MINI LEVEL

- No need to set zero before use
- With mounting holes (for M5 screws)

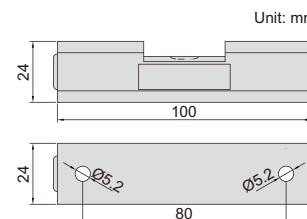


4908-100

NO NEED TO SET ZERO BEFORE USE



| Code | Length | Sensitivity |
|----------|--------|-------------------|
| 4908-100 | 100mm | 0.1mm/m(=0.0057°) |



Unit: mm

DIGITAL LEVEL

ABSOLUTE LEVEL

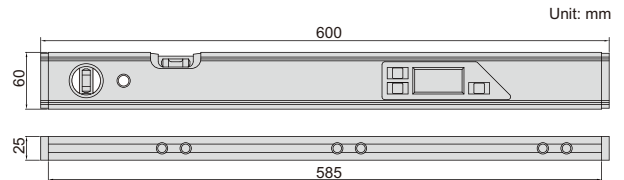
BACKLIGHT

BUZZER ALARM AT 0° AND 90°

- With transverse and longitudinal vials
- Used as level and protractor
- Aluminum frame
- Magnetic bottom
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft) conversion, backlight
- The display flips over when the bottom faces up
- Two AAA batteries
- Automatic power off



4910-600



| Code | Range | Resolution | Accuracy |
|----------|----------------|----------------------|-------------------------------------|
| 4910-600 | 0-360° (90°x4) | 0.1° (=1.745mm/m) | 0° and 90°: ±0.1°; others: ±0.2° |

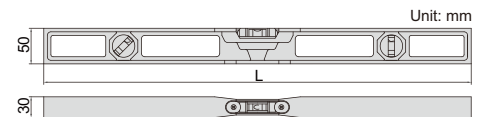
ALUMINUM ALLOY LEVELS

- Die casting aluminum alloy frame
- With three vials: 180°, 90° and 45°
- Zero position of vial 180° can be set



4911-600

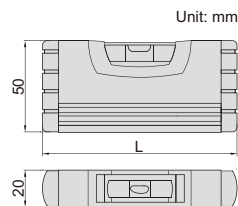
| Code | Length (L) | Accuracy |
|----------|------------|----------|
| 4911-400 | 400mm | 0.75mm/m |
| 4911-600 | 600mm | 0.75mm/m |
| 4911-800 | 800mm | 0.75mm/m |



MAGNETIC BASE

VIALS MADE IN ISRAEL
LIFETIME WARRANTY

- Shockproof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C ~ 55°C



packaging



4912-100

| Code | Size (L) | Accuracy |
|----------|----------|---------------------|
| 4912-100 | 100mm | 0.5mm/m (.006in/ft) |

CAST ALUMINUM LEVEL

MAGNETIC BASE

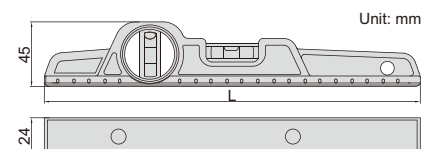
VIALS MADE IN ISRAEL
LIFETIME WARRANTY

- Shockproof horizontal and vertical vials
- Magnetic base
- Working temperature: -15°C~55°C
- Cast aluminum body

packaging



4913-250



| Code | Size (L) | Accuracy |
|----------|----------|---------------------|
| 4913-250 | 250mm | 0.5mm/m (.006in/ft) |

ALUMINUM LEVELS

MAGNETIC BASE

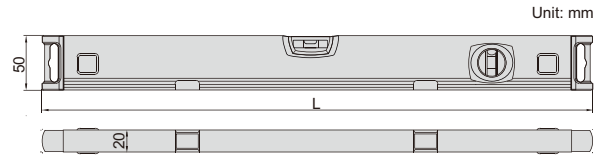
VIALS MADE IN ISRAEL
LIFETIME WARRANTY

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



4914-600

| Code | Size (L) | Accuracy |
|-----------|----------|---------------------|
| 4914-600 | 600mm | 0.5mm/m (.006in/ft) |
| 4914-800 | 800mm | 0.5mm/m (.006in/ft) |
| 4914-1000 | 1000mm | 0.5mm/m (.006in/ft) |
| 4914-1200 | 1200mm | 0.5mm/m (.006in/ft) |



AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-RSR400**

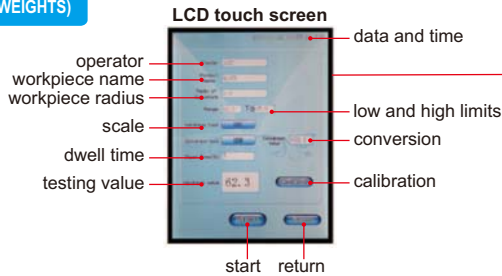
INSPECTION
CERTIFICATE

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

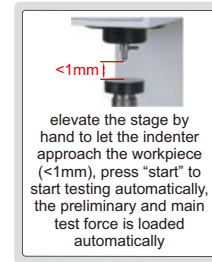
DATA
OUTPUT



VIDEO



automatic testing



for cylinders with diameter Ø4~60mm



small V-type anvil (optional) for cylinders with diameter Ø2~4mm

- Automatic testing, the preliminary and main test force is loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Low and high limits
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale

SPECIFICATION

| | |
|------------------------|--|
| Hardness scale | HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) |
| | HRE, HRH, HRK, HRL, HRM, HRP HRR, HRS, HRV (with optional indenter) |
| Preliminary test force | 98N |
| Test force | 588N, 980N, 1471N |
| Stage elevation | manual |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 0~60 second |
| Resolution | 0.1HR |
| Output | USB |
| Max. workpiece height | 220mm |
| Max. workpiece depth | 200mm (from the center of indenter) |
| Power supply | 220V, 50/60Hz ** |
| Dimension | 510×260×780mm |
| Weight | 70kg |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø63mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| USB flash disk (8G) | 1pc |
| Level | 1pc |
| Touch pen | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

| | |
|------------------------------|-----------------|
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Small V-type anvil | ISH-SMALL ANVIL |

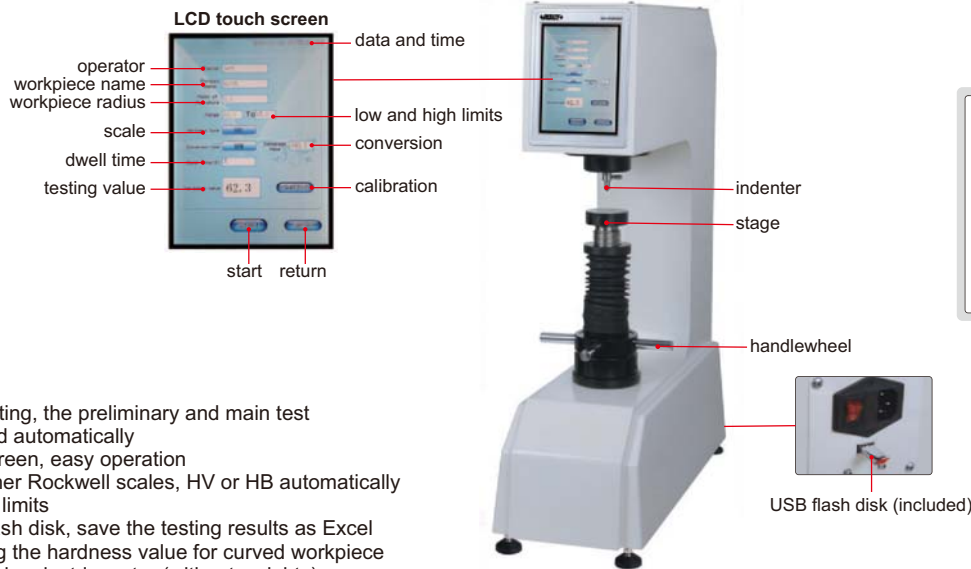
FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

AUTOMATIC DIGITAL SUPERFICIAL ROCKWELL HARDNESS TESTER CODE ISH-RSR500**

DATA OUTPUT



INSPECTION CERTIFICATE



- Automatic testing, the preliminary and main test force is loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Low and high limits
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale



SPECIFICATION

| | |
|------------------------|--|
| Hardness scale | HR15N, HR30N, HR45N, HR15T, HR30T, HR45T (with standard indenters) |
| | HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y (with optional indenter) |
| Preliminary test force | 29.4N/3kgf |
| Test force | 147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf |
| Stage elevation | manual |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 0~60 second |
| Resolution | 0.1HR |
| Output | USB |
| Max. workpiece height | 220mm |
| Max. workpiece depth | 200mm (from the center of indenter) |
| Power supply | 220V, 50/60Hz ** |
| Dimension | 510×260×780mm |
| Weight | 70kg |

STANDARD DELIVERY

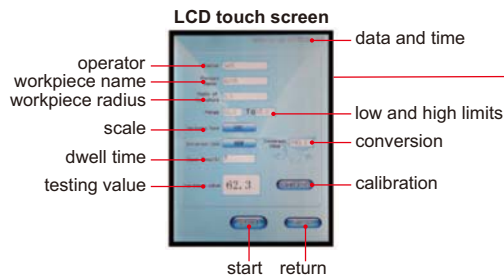
| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø63mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block 78~88HR15N | 1pc |
| Hardness test block 55~73HR30N | 1pc |
| Hardness test block 57~69HR30T | 1pc |
| USB flash disk (8G) | 1pc |
| Level | 1pc |
| Touch pen | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

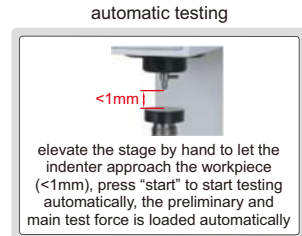
| | |
|--------------------------------|-----------------|
| Hardness test block 78~88HR15N | ISH-BHR15N1 |
| Hardness test block 55~73HR30N | ISH-BHR30N1 |
| Hardness test block 57~69HR30T | ISH-BHR30T1 |
| Small V-type anvil | ISH-SMALL ANVIL |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

AUTOMATIC DIGITAL ROCKWELL AND SUPERFICIAL ROCKWELL HARDNESS TESTER CODE ISH-RSR600**



- Automatic testing, the preliminary and main test force is loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Low and high limits
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale



SPECIFICATION

| | |
|------------------------|---|
| Hardness scale | HRA, HRB, HRC, HRD, HRF, HRG, HR15N/T, HR30N/T, HR45N/T (with standard indenters) |
| | HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W/X/Y, HR30W/X/Y, HR45W/X/Y (with optional indenter) |
| Preliminary test force | 29.4N/3kgf for superficial Rockwell 98N/10kgf for Rockwell |
| Test force | 147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf, 588N/60kgf, 980N/100kgf, 1471N/150kgf |
| Stage elevation | manual |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 0~60 second |
| Resolution | 0.1HR |
| Output | USB |
| Max. workpiece height | 220mm |
| Max. workpiece depth | 200mm (from the center of indenter) |
| Power supply | 220V, 50/60Hz ** |
| Dimension | 510×260×780mm |
| Weight | 70kg |

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø63mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Hardness test block 78~88HR15N | 1pc |
| Hardness test block 55~73HR30N | 1pc |
| Hardness test block 57~69HR30T | 1pc |
| USB flash disk (8G) | 1pc |
| Level | 1pc |
| Touch pen | 1pc |
| Anti-dust cover | 1pc |

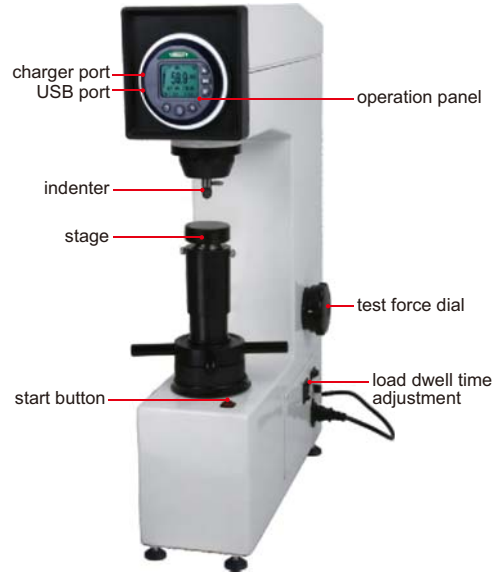
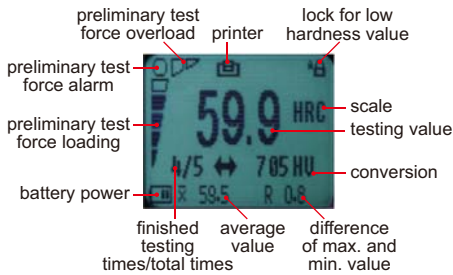
OPTIONAL ACCESSORY

| | |
|--------------------------------|-----------------|
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Hardness test block 78~88HR15N | ISH-BHR15N1 |
| Hardness test block 55~73HR30N | ISH-BHR30N1 |
| Hardness test block 57~69HR30T | ISH-BHR30T1 |
| Small V-type anvil | ISH-SMALL ANVIL |

** Add "-U" on code No. when power supply is 110V, 50/60Hz



AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200**



software CD (included)

- Low and high limits with alarm
- Set testing times (2~9) to have average value and the difference of max. and min. value
- Convert to HV or HB automatically
- Memory of 1000 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable. The lock function can obtain the value automatically
- Display unit is automatic power off



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



small V-type anvil (optional) for cylinders with diameter Ø2~4mm



wireless printer (optional)

SPECIFICATION

| | |
|----------------------------------|--|
| Hardness scale | HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) HRE, HRH, HRK (with optional indenter) |
| Preliminary test force | 98N |
| Test force | 588N, 980N, 1471N |
| Stage elevation | manual |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 1~99 second |
| Resolution | 0.1HR |
| Output | wireless and USB |
| Memory | 1000 |
| Max. workpiece height | 170mm |
| Max. workpiece depth | 165mm (from the center of indenter) |
| Power supply of the display unit | built-in rechargeable battery |
| Power supply | 220V, 50/60Hz** |
| Dimension | 520×160×700mm |
| Weight | 60kg |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø60mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Anti-dust cover | 1pc |
| USB cable and software | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|--------------------------------|------------------|
| Wireless printer | ISH-DS-PRINTER |
| Ø3.175mm carbide ball indenter | ISH-EHK-INDENTER |
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Small V-type anvil | ISH-SMALL ANVIL |

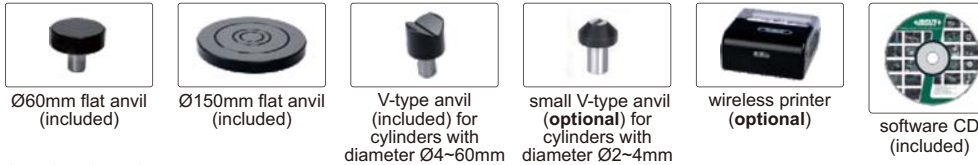
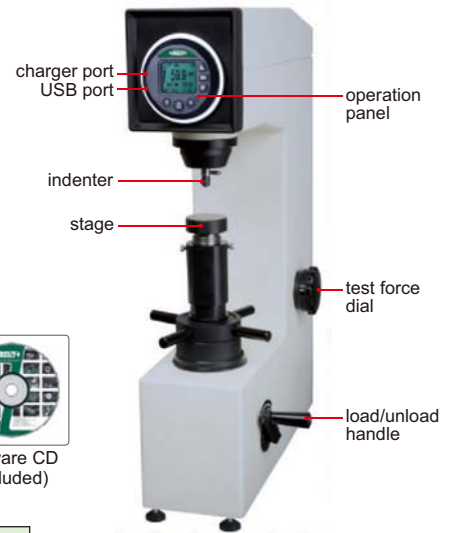
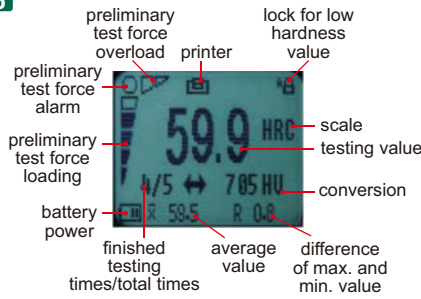


DATA OUTPUT



MANUAL DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-RD200

- Low and high limits with alarm
- Set testing times (2~9) to have average value and the difference of max. and min. value
- Convert to HV or HB automatically
- Memory of 1000 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable. The lock function can obtain the value automatically
- Automatic power off



SPECIFICATION

| | |
|------------------------|--|
| Hardness scale | HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) HRE, HRH, HRK (with optional indenter) |
| Preliminary test force | 98N |
| Test force | 588N, 980N, 1471N |
| Stage elevation | manual |
| Load control | manual |
| Resolution | 0.1HR |
| Output | wireless and USB |
| Memory | 1000 |
| Max. workpiece height | 170mm |
| Max. workpiece depth | 165mm (from the center of indenter) |
| Power supply | built-in rechargeable battery |
| Dimension | 520×160×700mm |
| Weight | 60kg |

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø60mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |

| | |
|------------------------------|-----|
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Anti-dust cover | 1pc |
| USB cable and software | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|--------------------------------|------------------|
| Wireless printer | ISH-DS-PRINTER |
| Ø3.175mm carbide ball indenter | ISH-EHK-INDENTER |
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Small V-type anvil | ISH-SMALL ANVIL |

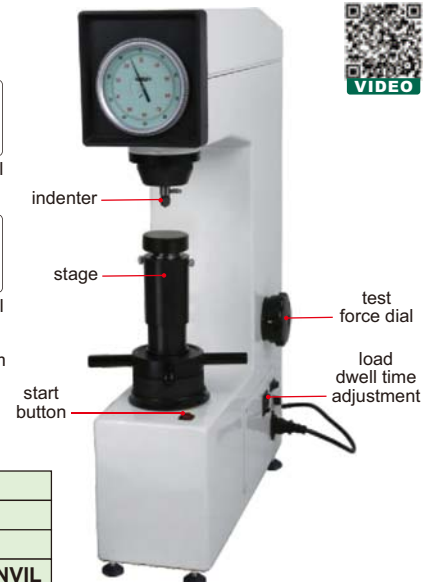
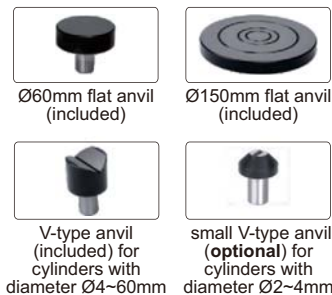
SPECIFICATION

| | |
|------------------------|-------------------------------------|
| Hardness scale | HRA, HRB, HRC, HRD, HRF, HRG |
| Preliminary test force | 98N |
| Test force | 588N, 980N, 1471N |
| Display | analogue |
| Stage elevation | manual |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 1~99 second |
| Min. reading | 0.5HR |
| Max. workpiece height | 170mm |
| Max. workpiece depth | 165mm (from the center of indenter) |
| Power supply | 220V, 50/60Hz ** |
| Dimension | 520×160×700mm |
| Weight | 60kg |

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø60mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Anti-dust cover | 1pc |

AUTOMATIC ROCKWELL HARDNESS TESTER CODE ISH-MR150**



OPTIONAL ACCESSORY

| | |
|------------------------------|-----------------|
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Small V-type anvil | ISH-SMALL ANVIL |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

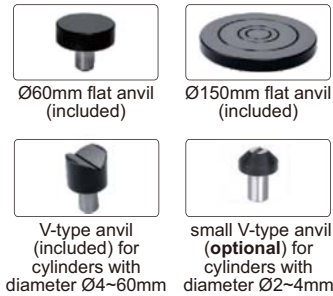
SPECIFICATION

| | |
|------------------------|-------------------------------------|
| Hardness scale | HRA, HRB, HRC, HRD, HRF, HRG |
| Preliminary test force | 98N |
| Test force | 588N, 980N, 1471N |
| Display | analogue |
| Stage elevation | manual |
| Load control | manual |
| Min. reading | 0.5HR |
| Max. workpiece height | 170mm |
| Max. workpiece depth | 165mm (from the center of indenter) |
| Dimension | 520×160×700mm |
| Weight | 60kg |

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Ø60mm flat anvil | 1pc |
| Ø150mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Anti-dust cover | 1pc |

MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150

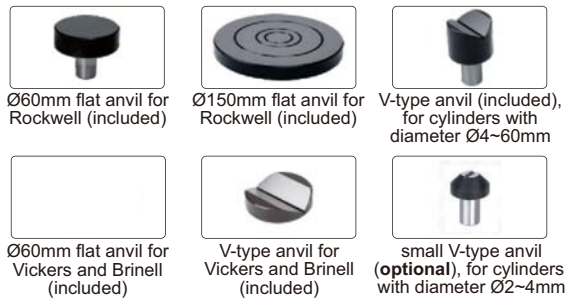


OPTIONAL ACCESSORY

| | |
|------------------------------|-----------------|
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Small V-type anvil | ISH-SMALL ANVIL |



BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE ISH-BRV**



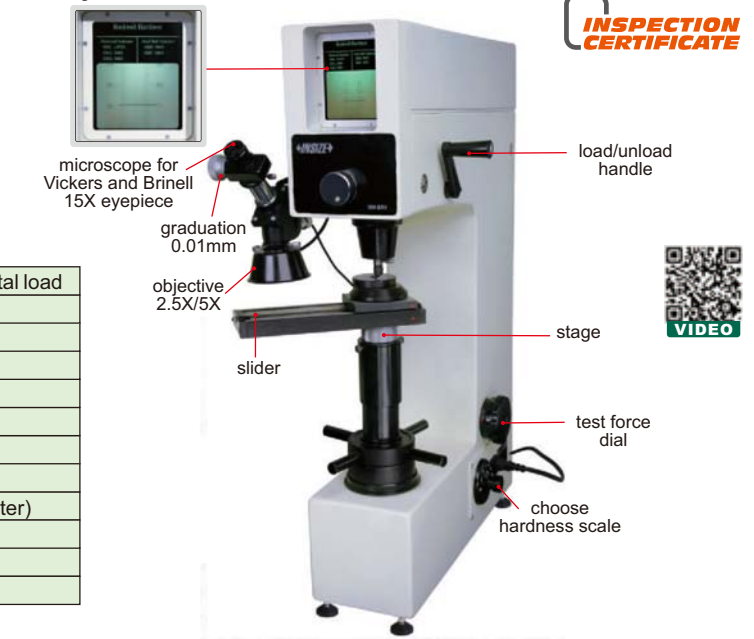
SPECIFICATION

| | |
|-----------------------------|---|
| Rockwell test load | 98N preload, 588, 980, 1471N total load |
| Min. Rockwell reading | 0.5HR |
| Brinell test load | 306, 613, 1839N |
| Vickers test load | 294N |
| Stage elevation | manual |
| Load control | manual |
| Magnification of microscope | 37.5X/75X (selectable) |
| Max. workpiece height | 180mm |
| Max. workpiece depth | 200mm (from the center of indenter) |
| Power supply | 220V, 50/60Hz** |
| Dimension | 546×300×767mm |
| Weight | 90kg |

STANDARD DELIVERY

| | |
|--|-----|
| Main unit | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Diamond Rockwell indenter | 1pc |
| Ø5mm Brinell indenter | 1pc |
| Ø2.5mm Brinell indenter | 1pc |
| Vickers indenter | 1pc |
| Ø60mm flat anvil for Rockwell | 1pc |
| Ø150mm flat anvil for Rockwell | 1pc |
| V-anvil for Rockwell | 1pc |
| Ø60mm flat anvil for Vickers and Brinell | 1pc |
| V-type anvil for Vickers and Brinell | 1pc |
| Hardness test block HRB88~95 | 1pc |

projection screen with scale, for reading Rockwell hardness



| | |
|---|-----|
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Hardness test block 400~500HV30 | 1pc |
| Hardness test block 180~200HBW2.5/187.5 | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

| | |
|---|-----------------|
| Hardness test block HRB88~95 | ISH-BHRB |
| Hardness test block HRC60~65 | ISH-BHRC3 |
| Hardness test block HRC20~30 | ISH-BHRC1 |
| Hardness test block 400~500HV30 | ISH-BHV30 |
| Hardness test block 180~220HBW2.5/187.5 | ISH-BHB25B |
| Small V-type anvil | ISH-SMALL ANVIL |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

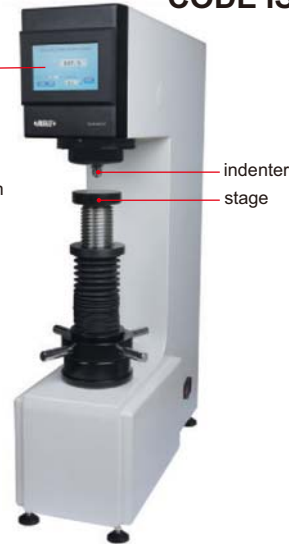
INSPECTION CERTIFICATE

AUTOMATIC BRINELL HARDNESS TESTER CODE ISHB-M100**

- LCD touch screen, easy operation
- Automatic testing after preliminary test force is loaded by hand
- Measure indentation diameter by measuring microscope, input the diameters, the hardness value is shown on screen automatically
- Force loading by electric motor, without weights



test force
dwell time
test force calibration
zero test force
hardness calculation



SPECIFICATION

| | |
|--------------------------|---|
| Range | 8~650HBW |
| Reading mode | directly read from LCD |
| Test force | 62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf |
| Max. height of workpiece | 230mm |
| Max. depth of workpiece | 160mm (from the center of indenter) |
| Stage elevation | manual |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 5~60 second |
| Measuring microscope | magnification 20X graduation 0.01mm |
| Power supply | 220V, 50/60Hz** |
| Dimension | 550×210×750mm |
| Weight | 90kg |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

OPTIONAL ACCESSORY

| | |
|---|--------------|
| Hardness test block 150~250HBW2.5/187.5 | ISH-BHB25B |
| Hardness test block 75~125HBW10/1000 | ISH-BHB10A |
| Hardness test block 175~250HBW10/3000 | ISH-BHB10B |
| Brinell indentation measuring system | ISHB-TSA/TSB |

STANDARD DELIVERY

| | |
|------------------------------|-----|
| Main unit | 1pc |
| Ø80mm flat anvil | 1pc |
| Ø180mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Ø2.5mm carbide ball indenter | 1pc |
| Ø5mm carbide ball indenter | 1pc |

| | |
|---|-----|
| Ø10mm carbide ball indenter | 1pc |
| Hardness test block 150~250HBW2.5/187.5 | 1pc |
| Hardness test block 75~125HBW10/1000 | 1pc |
| Hardness test block 175~250HBW10/3000 | 1pc |
| Measuring microscope | 1pc |
| Anti-dust cover | 1pc |

INSPECTION CERTIFICATE

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND

AUTOMATIC DIGITAL BRINELL HARDNESS TESTERS

- Automatic testing after preliminary test force is loaded by hand
- Measure indentation by measuring microscope then read the hardness value from LCD
- Can take tests up to 40 times and display maximum, minimum and average value
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights

SPECIFICATION

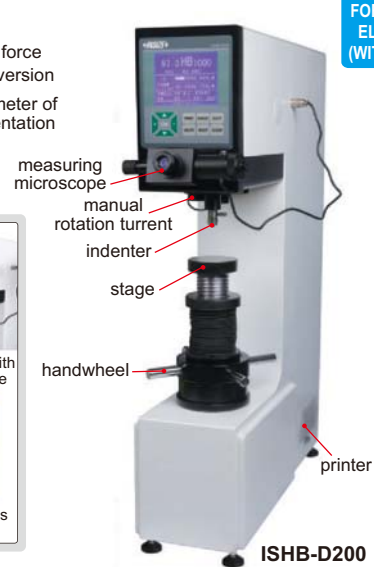
| | | |
|--------------------------|---|-------------|
| Code | ISHB-D200** | ISHB-D300** |
| Turret rotation | manual | automatic |
| Range | 8~650HBW | |
| Reading mode | directly read from LCD | |
| Test force | 62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf | |
| Max. height of workpiece | 200mm | |
| Max. depth of workpiece | 135mm (from the center of indenter) | |
| Stage elevation | manual | |
| Load control | automatic (load/dwell/unload) | |
| Load dwell time | 5~60 second | |
| Measuring microscope | magnification 20X resolution 0.625mm | |
| Power supply | 220V, 50/60Hz** | |
| Dimension | 550x210x750mm | |
| Weight | 90kg | |

OPTIONAL ACCESSORY

| | |
|---|--------------|
| Hardness test block 150~250HBW2.5/187.5 | ISH-BHB25B |
| Hardness test block 75~125HBW10/1000 | ISH-BHB10A |
| Hardness test block 175~250HBW10/3000 | ISH-BHB10B |
| Brinell indentation measuring system | ISHB-TSA/TSB |

hardness value
diameter of indenter
dwell time
finished test times

test force
conversion
diameter of indentation



FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)



STANDARD DELIVERY

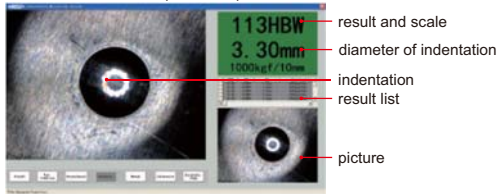
| | |
|------------------------------|-----|
| Main unit | 1pc |
| Ø80mm flat anvil | 1pc |
| Ø180mm flat anvil | 1pc |
| V-type anvil | 1pc |
| Ø2.5mm carbide ball indenter | 1pc |
| Ø5mm carbide ball indenter | 1pc |

| | |
|---|-----|
| Ø10mm carbide ball indenter | 1pc |
| Hardness test block 150~250HBW2.5/187.5 | 1pc |
| Hardness test block 75~125HBW10/1000 | 1pc |
| Hardness test block 175~250HBW10/3000 | 1pc |
| Anti-dust cover | 1pc |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

BRINELL INDENTATION MEASURING SYSTEM

software (included)



- Connected to computer USB port
- Automatically measure the indentation
- Result saved to Excel automatically
- Low and high limits with judgement
- Calibration with indentation on standard hardness block



magnetic anvil

ISHB-TSA

application



software CD (included)

STANDARD DELIVERY

| | |
|---------------------|-------------|
| Main unit | 1pc |
| Software and dongle | 1pc of each |

SPECIFICATION

| Code | ISHB-TSA | ISHB-TSB |
|-------------------------------|------------------------------------|-------------------------------|
| Applicable Brinell indenter | Ø10mm | Ø2.5mm, Ø5mm |
| Hardness range | 8~650HB | |
| Range of indentation diameter | Ø2.4~6mm | Ø0.6~3mm |
| Test force | 100, 250, 500, 1000, 1500, 3000kgf | 62.5, 125, 187.5, 250, 750kgf |
| Hardness resolution | 1HB | |
| Length resolution | 0.01mm | |
| Length accuracy | ±1%(diameter of indentation) | |
| Camera | Sensor | 1/3.2" CMOS |
| | Pixel | 2M (resolution 1024x768) |
| | View filed | 9×6.8mm 4.5×3.4mm |
| Dimension | 170×54×54mm | |
| Weight | 420g | |

AUTOMATIC DIGITAL MICRO-VICKERS HARDNESS TESTER CODE ISHV-D120**

- Based on Vickers (HV), can be converted to HRA, HRB, HRC, HRD, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HK, HBW
- Can take tests up to 99 times, display average value and the difference of max. and mini. value
- Low and high limits with judgement
- Also for Knoop hardness test, Knoop indenter is needed (optional)



slice holder (included)



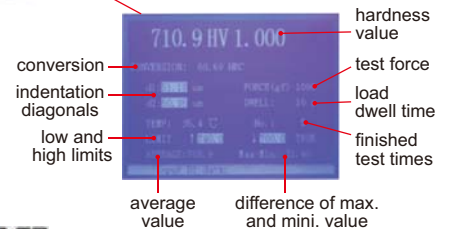
vice (included)



cylinder holder (included)



level (included)



VIDEO

SPECIFICATION

| | | |
|--------------------------|---|--|
| Range | 10~3000HV | |
| Test force | 0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf | |
| Vickers scales | HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1 | |
| Load control | automatic (load/dwell/unload) | |
| Load dwell time | 0~60 second | |
| Eyepiece | magnification | 10X |
| | resolution | 0.01µm (D≥10µm), 0.001µm (D<10µm) D is diagonal length of indentation |
| Objective | 10X, 40X | |
| Total magnification | 100X (for observation), 400X (for measurement) | |
| Max. height of workpiece | 210mm | |
| Max. depth of workpiece | 135mm (from the center of indenter) | |
| X-Y stage | dimension: 100×100mm, travel range: 25×25mm, graduation: 0.01mm | |
| Power supply | 220V, 50/60Hz ** | |
| Dimension | 490×320×530mm | |
| Weight | 45kg | |

STANDARD DELIVERY

| | |
|------------------------------------|-----|
| Main unit | 1pc |
| Micro Vickers indenter | 1pc |
| Hardness test block (400~500HV0.2) | 1pc |
| Hardness test block (700~800HV1) | 1pc |
| Slice holder | 1pc |
| Vice | 1pc |
| Cylinder holder | 1pc |
| Level | 1pc |
| Anti-dust cover | 1pc |

OPTIONAL ACCESSORY

| | |
|------------------------------------|-------------------|
| Hardness test block (400~500HV0.2) | ISH-BHV02A |
| Hardness test block (700~800HV1) | ISH-BHV1 |
| Knoop indenter | ISHV-D120-KNOOP |
| Measuring system | 9631-130 |
| Camera adapter | ISHV-D120-ADAPTER |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

DIGITAL VICKERS HARDNESS TESTERS

- Based on Vickers (HV), converted to Rockwell (HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK), Brinell (HB), Superficial Rockwell (HR15N, HR15T, HR30N, HR30T, HR45N, HR45T), Shore (HS) and Strength (MPa)
- Memory of 27 measurement values for print, browsing and output
- LCD display with backlight
- Can measure Knoop hardness, Knoop indenter is needed



INSPECTION CERTIFICATE



SPECIFICATION

| Code | ISH-DV10 | ISH-DV50 |
|-----------------------|--|--|
| Measuring range | 8HV0.3 ~ 2500HV10 | 5HV1 ~ 2500HV50 |
| Test force | 0.3, 0.5, 1, 3, 5, 10kgf | 1, 5, 10, 20, 30, 50kgf |
| Accuracy | ±3% | ±3% (test force 1, 5, 10, 20kgf) ±2% (test force 30, 50kgf) |
| Eyepiece | magnification | 10X |
| | resolution | 0.0625µm |
| Objective | 10X, 20X | 10X |
| Total magnification | 100X (for observation) 200X (for measuring) | 100X (for measuring) |
| Stage elevation | manual | |
| Load control | automatic (load/dwell/unload) | |
| Dwell time | 5~60 second | |
| Max. workpiece height | 160mm | |
| Max. workpiece depth | 135mm | |
| Data output | RS232C | |
| Power supply | 220V, 50/60Hz ** | |
| Dimension | 540×270×650mm | |
| Weight | 35kg | 45kg |

STANDARD DELIVERY

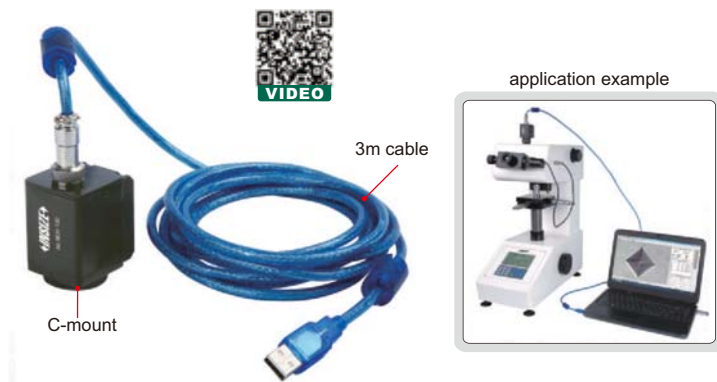
| | | | |
|-------------------|-----|--------------------|--------------------|
| Main unit | 1pc | 10X objective | 1pc |
| Ø60mm flat anvil | 1pc | 20X objective | 1pc (for ISH-DV10) |
| Ø150mm flat anvil | 1pc | Vickers test block | 2pcs |
| V-type anvil | 1pc | Anti-dust cover | 1pc |
| Vickers indenter | 1pc | | |

OPTIONAL ACCESSORY

| | |
|---------------------------------|----------------|
| Knoop indenter | ISH-KNOOP |
| Measuring system | 9631-130 |
| Hardness test block 400~500HV5 | ISH-BHV5B |
| Hardness test block 400~500HV10 | ISH-BHV10A |
| Hardness test block 400~500HV30 | ISH-BHV30 |
| Camera adapter | ISH-DV-ADAPTER |

** Add "-U" on code No. when power supply is 110V, 50/60Hz

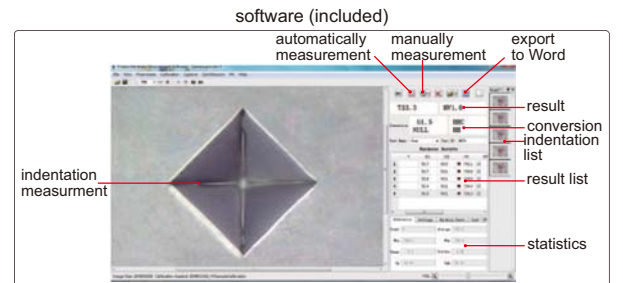
VICKERS HARDNESS MEASURING SYSTEM CODE 9631-130



SPECIFICATION

| | |
|---------------------------------|--|
| Sensor | 1/2" CMOS |
| Pixel | 1.3M (resolution 1280×1024) |
| Hardness measurement resolution | 0.1HV |
| Length measurement resolution | 0.1µm |
| Hardness measurement accuracy | ±3% |
| Test force | 0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 20, 30, 50, 100kgf |
| Dimension | 36×33×32mm |
| Weight | 500g |

- Connected to computer USB port
- Measure the indentation size automatically or manually
- Multiple measurements to have average value, max. value and min. value
- Low and high limits with judgement
- Convert to HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15T/30T/45T, HR15N/30N/45N, HK, HV, HB, HS, HSD
- Calibration with standard test block
- Measurement result can be exported to Word or Excel



STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| USB dongle | 1pc |
| USB cable and software | 1pc |



ULTRASONIC HARDNESS TESTER (ADVANCED MODEL) CODE ISHU-460

Application:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces



test flat surfaces (with the cover)



test cylinder surfaces (use V-groove on the cover)



software CD (included)



test narrow areas (remove the cover)

- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Memory of 1000 test results
- Automatic power off
- Anti-dust and waterproof

SPECIFICATION OF MAIN UNIT

| | | |
|-----------------------------------|--|-------|
| Hardness scale | HV, HB, HRB, HRC, HS, Mpa | |
| Range | 100~940HV, 80~650HB, 20~93HRB, 20~70HRC, 25~100HS, 370~1740Mpa | |
| Resolution | 1HV, 1HB, 1HRB, 0.1HRC, 1HS | |
| Accuracy | HB | ±3% |
| | HV | ±3% |
| | HRC | ±1.5% |
| Data output | USB | |
| Operating temperature | -20°C ~ +40°C | |
| Power supply | built-in rechargeable battery | |
| Dimension and weight of main unit | 160×80×40mm, 315g | |

SPECIFICATION OF PROBE

| Type | A (standard) | B (optional) |
|---|-----------------|-------------------|
| Measuring force | 50N | 10N (small force) |
| Application | general use | plating |
| Maximum roughness of workpiece (Ra) | 2.5µm | 1.5µm |
| Minimum weight of workpiece (direct measurement) | 0.1kg * | 0.1kg * |
| Minimum thickness of workpiece (direct measurement) | 1mm * | 1mm * |
| Minimum radius of workpiece (direct measurement) | 5mm | 5mm |
| Minimum thickness of surface hardening layer or plating | 0.1mm | 0.03mm |
| Minimum measuring area | Ø1mm | Ø1mm |
| Dimension and weight of probe | 140×Ø37mm, 271g | 145×Ø37mm, 271g |

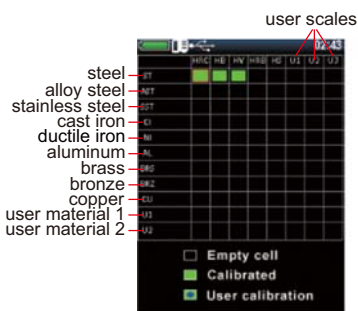
STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| Probe A | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software | 1pc |

OPTIONAL ACCESSORY

| | |
|----------|---------------|
| Probe B | ISHU-460-B |
| Couplant | ISH-COULPLANT |

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



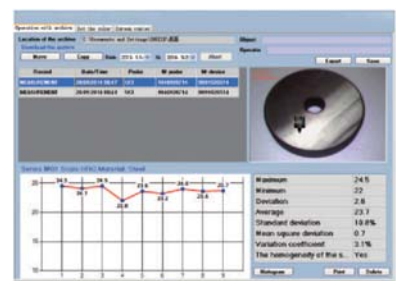
select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)



can take a picture on the workpiece and get a report with testing result and picture, the report can be sent to computer



back



software (included), output data, make and print reports, screen capture, set screen colors of hardness tester



Graph display mode, show average value, relative range and test times



Histogram display mode, show average value, relative range and relative standard deviation



Statistics display mode, show maximum, minimum, deviation, average, relative range and test times




Smart display mode, can set tolerance, automatically reject the result when out of tolerance

ULTRASONIC/LEEB HARDNESS TESTER (ADVANCED MODEL) CODE ISHU-470



DATA OUTPUT

INSPECTION CERTIFICATE



Application and features:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces
9. Small test indentation
10. Test force and time are not affected by the operator
11. Quick test, only 2 seconds

Ultrasonic hardness tester




main unit (included)



ultrasonic probe A (included)



Leeb probe type D (included)



Application and features:

1. Suitable for large and heavy workpieces, such as casting parts, molds, machine guides, etc.
2. For steel, non-ferrous metal and alloy
3. Based on Leeb (HLD), converted to Rockwell (HRC), Vickers (HV), Brinell (HB) and strength (Mpa)
4. Impact direction is adjustable
5. According to ASTM A956

Leeb hardness tester

- Automatic detect the ultrasonic probe or Leeb probe type D
- Memory of 1000 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof



software CD (included)

ultrasonic probe to test flat surfaces (with the cover)

ultrasonic probe to test cylinder surfaces (use V-groove on the cover)

ultrasonic probe to test narrow areas (remove the cover)

APPLICATION OF ULTRASONIC HARDNESS TESTER AND LEEB HARDNESS TESTER

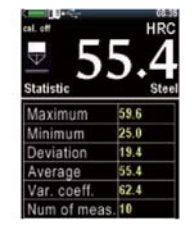
| Application | Ultrasonic | Leeb |
|---|-------------------|-------------------|
| Solid parts, molds, etc. | well suited | especially suited |
| Coarse grain materials, cast iron parts, etc. | not recommended | especially suited |
| Steel and aluminum cast alloys | suited sometimes | especially suited |
| HAZ with welds | especially suited | not recommended |
| Tubes: wall thickness > 10 mm | especially suited | especially suited |
| Tubes: wall thickness < 10 mm | especially suited | not recommended |
| Rough surfaces | not recommended | well suited |
| Thin workpieces | especially suited | not recommended |
| Difficult to access positions, like turbine blades, gears, etc. | especially suited | well suited |



Graph display mode, show average value, relative range and test times



Histogram display mode, show average value, relative range and relative standard deviation



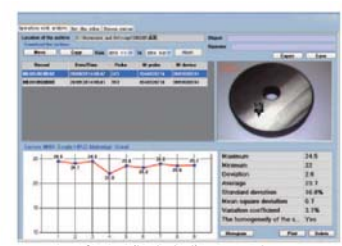
Statistics display mode, show maximum, minimum, deviation, average, relative range and test times

SPECIFICATION OF MAIN UNIT

| | | |
|-----------------------------|---|-------|
| Hardness scale | HV, HB, HRB, HRC, HS, HL, Mpa | |
| Range | 100~940HV, 80~650HB, 20~93HRB, 20~70HRC, 25~100HS, 170~960HL, 370~1740Mpa | |
| Resolution | 1HV, 1HB, 1HRB, 0.1HRC, 1HS, 1HL, 1Mpa | |
| Accuracy of ultrasonic test | HB | ±3% |
| | HV | ±3% |
| | HRC | ±1.5% |
| Accuracy of Leeb test | HL | ±6HL |
| Data output | USB | |
| Operating temperature | -20°C ~ +40°C | |
| Power supply | built-in rechargeable battery | |
| Dimension of main unit | 160×80×40mm | |
| Weight of main unit | 315g | |



Smart display mode, can set tolerance, automatically reject the result when out of tolerance



software (included), output data, make and print reports, screen capture, set screen colors of hardness tester

SPECIFICATION OF PROBE

| Type | ultrasonic A (standard) | ultrasonic B (optional) | Leeb type D (standard) |
|---|-------------------------|-------------------------|----------------------------|
| Test force | 50N | 10N (small force) | - |
| Application | general use | plating | large and heavy workpieces |
| Maximum roughness of workpiece (Ra) | 2.5µm | 1.5µm | 1.6µm |
| Minimum weight of workpiece (direct measurement) | 0.1kg* | 0.1kg* | 5kg* |
| Minimum thickness of workpiece (direct measurement) | 1mm* | 1mm* | 5mm* |
| Minimum radius of workpiece | 5mm | 5mm | 30mm |
| Minimum thickness of surface hardening layer or plating | 0.1mm | 0.03mm | - |
| Minimum test area | Ø1mm | Ø1mm | Ø20mm |
| Dimension and weight of probe | 140×Ø37mm, 271g | 145×Ø37mm, 271g | 148×Ø20mm, 100g |

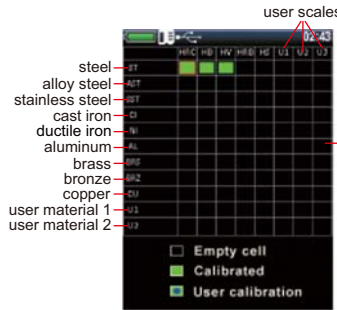
* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.

To be continued

Continued from previous page

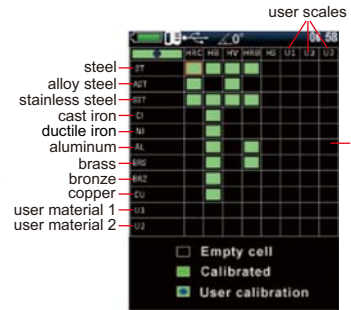


take a picture on the workpiece and get a report with testing result and picture, the report can be sent to computer



steel
alloy steel
stainless steel
cast iron
ductile iron
aluminum
brass
bronze
copper
user material 1
user material 2

ultrasonic hardness calibration



steel
alloy steel
stainless steel
cast iron
ductile iron
aluminum
brass
bronze
copper
user material 1
user material 2

Leeb hardness calibration

STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| Ultrasonic probe A | 1pc |
| Leeb probe type D | 1pc |
| Hardness test block D | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software | 1pc |

select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration ("■" means the calibration is already made, calibration is needed before using other materials and scales)

OPTIONAL ACCESSORY

| | |
|--------------------|---------------|
| Ultrasonic probe B | ISHU-460-B |
| Leeb support rings | see details |
| Couplant | ISH-COULPLANT |

Application:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces

- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof

SPECIFICATION OF MAIN UNIT

| | |
|------------------------|--|
| Hardness scale | HV, HB, HRC, Mpa |
| Range | 100~940HV, 80~650HB, 20~70HRC, 370~1740Mpa |
| Resolution | 1HV, 1HB, 0.1HRC, 1Mpa |
| Accuracy | HB ±3% |
| | HV ±3% |
| | HRC ±1.5% |
| Data output | USB |
| Operating temperature | -20°C ~ +40°C |
| Power supply | built-in rechargeable battery |
| Dimension of main unit | 120×60×25mm |
| Weight of main unit | 200g |

SPECIFICATION OF PROBE

| Type | A (standard) | B (optional) |
|---|-----------------|-------------------|
| Test force | 50N | 10N (small force) |
| Application | general use | plating |
| Maximum roughness of workpiece (Ra) | 2.5µm | 1.5µm |
| Minimum weight of workpiece (direct measurement) | 0.1kg * | 0.1kg * |
| Minimum thickness of workpiece (direct measurement) | 1mm * | 1mm * |
| Minimum radius of workpiece | 5mm | 5mm |
| Minimum thickness of surface hardening layer or plating | 0.1mm | 0.03mm |
| Minimum test area | Ø1mm | Ø1mm |
| Dimension and weight of probe | 140×Ø37mm, 271g | 145×Ø37mm, 271g |

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



**ULTRASONIC HARDNESS TESTER
CODE ISHU-330**



cover



software CD (included)



test flat surfaces (with the cover)



test cylinder surfaces (use V-groove on the cover)



test narrow areas (remove the cover)

| | | | | | | |
|------------|-------------|-----------------|----|----|----|---------------|
| | alloy steel | aluminum | | | | |
| | steel | stainless steel | | | | |
| HRC | ST | AST | ST | AL | U1 | user material |
| HB | ■ | | | | | |
| HV | ■ | | | | | |
| user scale | U1 | | | | | |

select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)

STANDARD DELIVERY

| | |
|------------------------|------|
| Main unit | 1pc |
| Probe A | 1pc |
| Rechargeable battery | 2pcs |
| Charger | 1pc |
| USB cable and software | 1pc |

OPTIONAL ACCESSORY

| | |
|----------|---------------|
| Probe B | ISHU-460-B |
| Couplant | ISH-COULPLANT |

ULTRASONIC/LEEB HARDNESS TESTER CODE ISHU-340

- Automatic detect the ultrasonic probe or Leeb probe type D
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof

**INSPECTION
CERTIFICATE**



**DATA
OUTPUT**



**main unit
(included)**



**ultrasonic probe A
(included)**




**Leeb probe type D
(included)**



Application and features:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces
9. Small test indentation
10. Test force and time are not affected by the operator
11. Quick test, only 2 seconds



Application and features:

1. Suitable for large and heavy workpieces, such as casting parts, molds, machine guides, etc.
2. For steel, non-ferrous metal and alloy
3. Based on Leeb (HLD), converted to Rockwell (HRC), Vickers (HV), Brinell (HB) and strength (Mpa)
4. Impact direction is adjustable
5. According to ASTM A956



**software CD
(included)**



**ultrasonic probe to test flat surfaces
(with the cover)**



ultrasonic probe to test cylinder surfaces (use V-groove on the cover)



**ultrasonic probe to test narrow areas
(remove the cover)**

APPLICATION OF ULTRASONIC HARDNESS TESTER AND LEEB HARDNESS TESTER

| Application | Ultrasonic | Leeb |
|--|--------------------|-------------------|
| Solid parts, molds, etc. | well suited | especially suited |
| Coarse grain materials, cast iron parts, etc. | not recommended | especially suited |
| Steel and aluminum cast alloys | suitable sometimes | especially suited |
| HAZ with welds | especially suited | not recommended |
| Tubes: wall thickness > 10 mm | especially suited | especially suited |
| Tubes: wall thickness < 10 mm | especially suited | not recommended |
| Rough surfaces | not recommended | well suited |
| Thin workpieces | especially suited | not recommended |
| Difficult to access positions, like turbine blades, gears, etc. | especially suited | well suited |

| | alloy steel | aluminum | |
|-----|-------------|-----------------|---------------------------------|
| | steel | stainless steel | |
| ST | ■ | ■ | user material |
| AST | ■ | ■ | ultrasonic hardness calibration |
| SST | ■ | ■ | |
| AL | ■ | ■ | |
| U1 | ■ | ■ | |
| HRC | ■ | ■ | |
| HB | ■ | ■ | |
| HV | ■ | ■ | |
| U1 | ■ | ■ | user scale |

| | alloy steel | aluminum | |
|-----|-------------|-----------------|---------------------------|
| | steel | stainless steel | |
| ST | ■ | ■ | user material |
| AST | ■ | ■ | Leeb hardness calibration |
| SST | ■ | ■ | |
| AL | ■ | ■ | |
| U1 | ■ | ■ | |
| HRC | ■ | ■ | |
| HB | ■ | ■ | |
| HV | ■ | ■ | |
| U1 | ■ | ■ | user scale |

SPECIFICATION OF MAIN UNIT

| | | |
|------------------------------------|---|-------|
| Hardness scale | HV, HB, HRC, HL, Mpa | |
| Range | 100~940HV, 80~650HB, 20~70HRC, 170~960HL, 370~1740Mpa | |
| Resolution | 1HV, 1HB, 0.1HRC, 1HL, 1Mpa | |
| Accuracy of ultrasonic test | HB | ±3% |
| | HV | ±3% |
| | HRC | ±1.5% |
| Accuracy of Leeb test | HL | ±6HL |
| Data output | USB | |
| Operating temperature | -20°C ~ +40°C | |
| Power supply | built-in rechargeable battery | |
| Dimension of main unit | 120×60×25mm | |
| Weight of main unit | 200g | |

STANDARD DELIVERY

| | |
|-------------------------------|------|
| Main unit | 1pc |
| Ultrasonic probe A | 1pc |
| Leeb probe type D | 1pc |
| Hardness test block D | 1pc |
| Rechargeable battery | 2pcs |
| Charger | 1pc |
| USB cable and software | 1pc |

OPTIONAL ACCESSORY

| | |
|---------------------------|----------------------|
| Ultrasonic probe B | ISHU-460-B |
| Leeb support rings | see details |
| Couplant | ISH-COULPLANT |

select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration ("■" means the calibration is already made, calibration is needed before using other materials and scales)



software (included), output data, make and print reports

SPECIFICATION OF PROBE

| Type | ultrasonic A (standard) | ultrasonic B (optional) | Leeb type D (standard) |
|--|-------------------------|-------------------------|----------------------------|
| Test force | 50N | 10N (small force) | - |
| Application | general use | plating | large and heavy workpieces |
| Maximum roughness of workpiece (Ra) | 2.5µm | 1.5µm | 1.6µm |
| Minimum weight of workpiece (direct measurement) | 0.1kg* | 0.1kg* | 5kg* |
| Minimum thickness of workpiece (direct measurement) | 1mm* | 1mm* | 5mm* |
| Minimum radius of workpiece | 5mm | 5mm | 30mm |
| Minimum thickness of surface hardening layer or plating | 0.1mm | 0.03mm | - |
| Minimum test area | Ø1mm | Ø1mm | Ø20mm |
| Dimension and weight of probe | 140×Ø37mm, 271g | 145×Ø37mm, 271g | 148×Ø20mm, 100g |

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



DATA OUTPUT



PORTABLE LEEB HARDNESS TESTER CODE ISH-SPHA

- Based on Leeb (HL), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 800 test results can be saved
- Low and high limits with judgement
- Touch screen operation, large display with backlight
- Language: English, Chinese, Italian, German, French and Portuguese
- Automatic power off
- According to ASTM A 956



software CD (included)



hardness test block D (included)



small support ring (included)



printer (included)

SPECIFICATION

| | |
|--------------|---|
| Min. reading | 1HL, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa |
| Accuracy | ±6HL (when HL=800) |
| Display | Leeb (HL), converted hardness, material, impact direction, test times, average value, deviation, time |
| Output | bluetooth and USB |
| Power supply | built-in rechargeable battery |
| Dimension | 135×83×24mm |
| Weight | 350g |

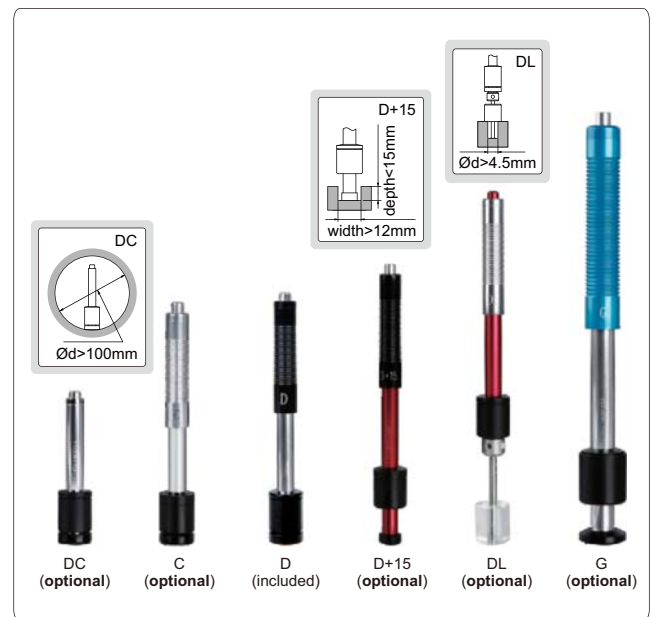
STANDARD DELIVERY

| | |
|-----------------------------|-----|
| Main unit | 1pc |
| Impact device D | 1pc |
| Printer | 1pc |
| Hardness test block D | 1pc |
| Small support ring | 1pc |
| Cleaning brush | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software disc | 1pc |
| Pen for touch screen | 1pc |

OPTIONAL ACCESSORY

| | |
|------------------------|---------------|
| Impact device DC | ISH-SPHA-DC |
| Impact device C | ISH-SPHA-C |
| Impact device D+15 | ISH-SPHA-D15 |
| Impact device DL | ISH-SPHA-DL |
| Impact device G | ISH-SPHA-G |
| Hardness test block D* | ISH-BHLD |
| Hardness test block G* | ISH-BHLG |
| Couplant | ISH-COUPPLANT |
| Support rings | see details |

* Hardness test block G (ISH-BHLG) is for impact device G (ISH-SPHA-G).
Hardness test block D (ISH-BHLD) is for all others impact devices.



APPLICABLE WORKPIECE

| Impact device | DC | C | D | D+15 | DL | G |
|-------------------------------------|---------------------------|--|-------------|-------------|---------------------------|------------------------------|
| Application | inner wall of small space | small or thin workpiece, coating layer | general use | deep groove | narrow slot or small hole | casting or forging workpiece |
| Maximum roughness of workpiece (Ra) | 1.6µm | 0.4µm | 1.6µm | 1.6µm | 1.6µm | 7µm |
| Minimum weight of workpiece | direct measurement | 5kg | 1.5kg | 5kg | 5kg | 15kg |
| | on solid support | 2kg | 0.5kg | 2kg | 2kg | 5kg |
| | coupled on plate | 0.1kg | 0.02kg | 0.1kg | 0.1kg | 0.5kg |
| Minimum thickness of workpiece | 5mm | 1mm | 5mm | 5mm | 5mm | 10mm |

PORTABLE LEEB HARDNESS TESTER (BASIC MODEL) CODE ISHL-P100



hardness test block D (included)



small support ring (included)



VIDEO

- Supplied with impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Set test times (1~32) to have average value
- Memory of 100 test values for browsing
- Automatic power off

SPECIFICATION

| | | |
|-----------------------------|--|---|
| Min. reading | 1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa | |
| Accuracy | ±8HLD (when HLD=760±30) | |
| Display | Leeb, conversion hardness, material, impact direction, test times, average value, time | |
| Applicable workpiece | minimum weight | 5kg 2kg (on solid support) 0.1kg (coupled on plate) |
| | minimum thickness: | 5mm |
| | minimum radius of curved surface: | 30mm |
| | maximum roughness (Ra): | 1.6µm |
| Power supply | 3×AAA batteries | |
| Dimension | 155×72×27mm | |
| Weight | 280g | |

STANDARD DELIVERY

| | |
|-----------------------|-----|
| Main unit | 1pc |
| Impact device D | 1pc |
| Hardness test block D | 1pc |
| Small support ring | 1pc |
| Cleaning brush | 1pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|-----------------|
| Couplant | ISH-COUPPLANT |
| Hardness test block D | ISHL-P100-BLOCK |
| Support rings | see details |

APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

| Material | HLD | HV | HB | HRC | HRB | HS | Tensile strength (MPa) |
|---------------------|---------|--------|--------|-------|--------|--------|------------------------|
| Steel & cast steel | 300-900 | 81-955 | 81-654 | 20-68 | 38-100 | 32-100 | 375-2639 |
| Tool steel | 300-840 | 80-898 | | 20-67 | | | |
| Stainless steel | 300-800 | 85-802 | 85-655 | | 46-101 | | |
| Cast iron | 360-650 | | 93-334 | | | | |
| Cast aluminum alloy | 170-570 | | 19-164 | | 23-84 | | |
| Brass | 200-550 | | 40-173 | | 13-95 | | |
| Bronze | 300-700 | | 60-290 | | | | |
| Copper | 200-690 | | 45-315 | | | | |

PORTABLE LEEB HARDNESS TESTER (BASIC MODEL) CODE ISHL-P200



VIDEO



hardness test block D (included)



software CD (included)



small support ring (included)



DATA OUTPUT



WITH BUILT-IN PRINTER

- Supplied with impact device D and built-in printer
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Set test times (1~32) to have average value
- Memory of 100 test values for browsing, print and output
- Low and high limits with judgement
- Automatic power off

SPECIFICATION

| | | |
|-----------------------------|--|---|
| Min. reading | 1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa | |
| Accuracy | ±8HLD (when HLD=760±30) | |
| Display | Leeb, conversion hardness, material, impact direction, test times, average value, time | |
| Applicable workpiece | minimum weight | 5kg 2kg (on solid support) 0.1kg (coupled on plate) |
| | minimum thickness: | 5mm |
| | minimum radius of curved surface: | 30mm |
| | maximum roughness (Ra): | 1.6µm |
| Power supply | built-in rechargeable battery | |
| Dimension | 198×82×30mm | |
| Weight | 320g | |

STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit with printer | 1pc |
| Impact device D | 1pc |
| Hardness test block D | 1pc |
| Printer paper | 1pc |
| Small support ring | 1pc |
| Cleaning brush | 1pc |
| USB cable and software | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|-----------------|
| Couplant | ISH-COUPPLANT |
| Hardness test block D | ISHL-P100-BLOCK |
| Printer paper | ISHL-P200-PAPER |
| Support rings | see details |

APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

| Material | HLD | HV | HB | HRC | HRB | HS | Tensile strength (MPa) |
|---------------------|---------|--------|--------|-------|--------|--------|------------------------|
| Steel & cast steel | 300-900 | 81-955 | 81-654 | 20-68 | 38-100 | 32-100 | 375-2639 |
| Tool steel | 300-840 | 80-898 | | 20-67 | | | |
| Stainless steel | 300-800 | 85-802 | 85-655 | | 46-101 | | |
| Cast iron | 360-650 | | 93-334 | | | | |
| Cast aluminum alloy | 170-570 | | 19-164 | | 23-84 | | |
| Brass | 200-550 | | 40-173 | | 13-95 | | |
| Bronze | 300-700 | | 60-290 | | | | |
| Copper | 200-690 | | 45-315 | | | | |

PORTABLE LEEB HARDNESS TESTER CODE ISH-PHB

SPECIFICATION

| | | |
|----------------------|---|--------------------------|
| Min. reading | 1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa | |
| Accuracy | ±6HLD (when HLD=800) | |
| Display | Leeb (HLD), converted hardness, material, impact direction, test times, average value, date | |
| Output | bluetooth | |
| Applicable workpiece | minimum weight | 5kg |
| | | 2kg (on solid support) |
| | | 0.1kg (coupled on plate) |
| | minimum thickness: 5mm | |
| | minimum radius of curved surface: 30mm | |
| | maximum roughness (Ra): 1.6µm | |
| Power supply | 3×AAA batteries | |
| Dimension | 150×84×28mm | |
| Weight | 200g | |

STANDARD DELIVERY

| | |
|-----------------------|-----|
| Main unit | 1pc |
| Impact device D | 1pc |
| Hardness test block D | 1pc |
| Small support ring | 1pc |
| Cleaning brush | 1pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|----------------|
| Wireless printer | ISH-DS-PRINTER |
| Couplant | ISH-COUPPLANT |
| Support rings | see details |
| Hardness test block D | ISH-BHLD |

- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Memory of 99 measurement values for browsing
- Set measurement times (1~9) to have average value
- Connected with printer via bluetooth
- Automatic power off
- According to ASTM A 956

APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

| Material | HLD | HV | HB | HRC | HRB | HS | Tensile strength (MPa) |
|---------------------|---------|--------|--------|-------|--------|--------|------------------------|
| Steel & cast steel | 300-900 | 81-955 | 81-654 | 20-68 | 38-100 | 32-100 | 375-2639 |
| Tool steel | 300-840 | 80-898 | | 20-67 | | | |
| Stainless steel | 300-800 | 85-802 | 85-655 | | 46-101 | | |
| Cast iron | 360-650 | | 93-334 | | | | |
| Cast aluminum alloy | 170-570 | | 19-164 | | 23-84 | | |
| Brass | 200-550 | | 40-173 | | 13-95 | | |
| Bronze | 300-700 | | 60-290 | | | | |
| Copper | 200-690 | | 45-315 | | | | |

- Impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Automatic direction correction
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 500 test results can be saved
- According to ASTM A 956

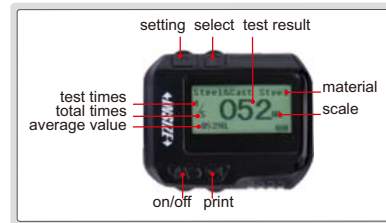
SPECIFICATION

| | | |
|----------------------|--|--------------------------|
| Min. reading | 1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS | |
| Accuracy | ±6HLD (when HLD=800) | |
| Output | USB and bluetooth | |
| Applicable workpiece | minimum weight | 5kg (direct measurement) |
| | | 2kg (on solid support) |
| | | 0.1kg (coupled on plate) |
| | minimum thickness: 5mm | |
| | minimum radius of curved surface: 30mm | |
| | maximum roughness (Ra): 1.6µm | |
| Power supply | built-in rechargeable battery | |
| Dimension | 147×35×22mm | |
| Weight | 65g | |

APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

| Material | HLD | HV | HB | HRC | HRB | HS |
|---------------------|---------|--------|--------|-------|--------|--------|
| Steel & cast steel | 300-900 | 81-955 | 81-654 | 20-68 | 38-100 | 32-100 |
| Tool steel | 300-840 | 80-898 | | 20-67 | | |
| Stainless steel | 300-800 | 85-802 | 85-655 | | 46-101 | |
| Cast iron | 360-650 | | 93-334 | | | |
| Cast aluminum alloy | 170-570 | | 19-164 | | 23-84 | |
| Brass | 200-550 | | 40-173 | | 13-95 | |
| Bronze | 300-700 | | 60-290 | | | |
| Copper | 200-690 | | 45-315 | | | |

PORTABLE LEEB HARDNESS TESTER CODE ISH-SPHD



STANDARD DELIVERY

| | |
|-----------------------------|-----|
| Main unit | 1pc |
| Printer | 1pc |
| Hardness test block D | 1pc |
| Small support ring | 1pc |
| Cleaning brush | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software disc | 1pc |

OPTIONAL ACCESSORY

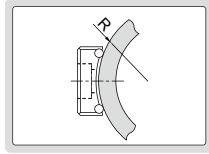
| | |
|-----------------------|---------------|
| Couplant | ISH-COUPPLANT |
| Support rings | see details |
| Hardness test block D | ISH-BHLD |

SUPPORT RING SET FOR PORTABLE LEEB HARDNESS TESTER CODE ISH-PH-SP9

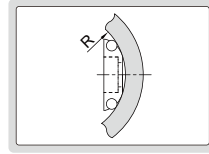


VIDEO

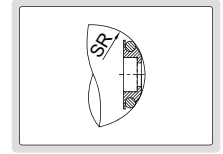
type A



type B



type C



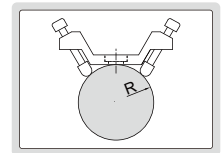
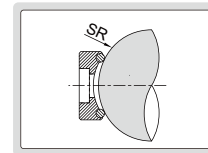
SPECIFICATION

| Type | Applicable workpiece | Range (mm) | Quantity |
|------|-----------------------------|------------|----------|
| A | cylindrical outside surface | R10-15 | 3pcs |
| | | R14.5-30 | |
| | | R25-50 | |
| B | cylindrical inside surface | R11-13 | 3pcs |
| | | R12.5-17 | |
| | | R16.5-30 | |
| C | spherical inside surface | SR11-13 | 3pcs |
| | | SR12.5-17 | |
| | | SR16.5-30 | |
| D | spherical outside surface | SR10-15 | 2pcs |
| | | SR14.5-30 | |
| E | cylindrical outside surface | R > 10 | 1pcs |

type D



type E



DIGITAL MAGNETIC ROCKWELL HARDNESS TESTER CODE ISHR-D121



VIDEO



flat anvil for test block
(included)

- Apply to large and heavy steel or iron workpieces
- With statistic function, display average, maximum and minimum values
- Convert to HV, HB and tensile strength
- According to ISO 6508, ASTM E18

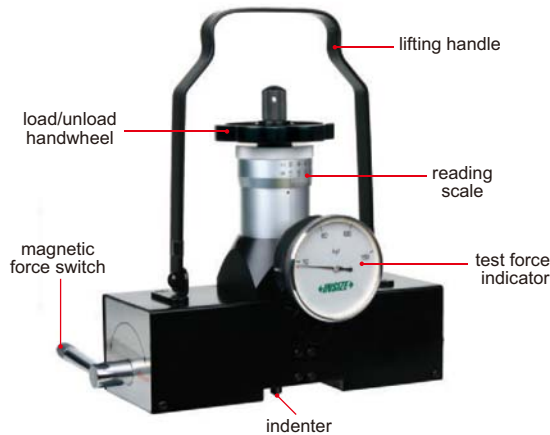
SPECIFICATION

| | |
|--|--|
| Hardness scale | HRA, HRB, HRC |
| Preliminary test force | 10kg |
| Test force | 60kg, 100kg, 150kg |
| Load control | manual |
| Min. reading | 0.1HR |
| Flat workpiece requirement | length>190mm, width>60mm, thickness>5mm |
| Cylinder or tube workpiece requirement | length>200mm, diameter>Ø50mm, wall thickness>8mm |
| Power supply | 3×AAA batteries |
| Dimension | 245×105×230mm |
| Weight | 5.3kg |

STANDARD DELIVERY

| | |
|---------------------------------|-----|
| Main unit | 1pc |
| Flat anvil | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Hardness test block HRB85~95 | 1pc |
| Hardness test block HRC60~70 | 1pc |
| Hardness test block HRC20~30 | 1pc |

MAGNETIC ROCKWELL HARDNESS TESTER CODE ISHR-M111



- Apply to large and heavy steel or iron workpieces
- According to ISO 6508, ASTM E18



flat anvil for test block
(included)



supports for cylinder or
tube workpieces (included)



magnifier with LED
(included)

SPECIFICATION

| | |
|--|--|
| Hardness scale | HRA, HRB, HRC, HRD, HRF, HRG |
| Preliminary test force | 10kg |
| Test force | 60kg, 100kg, 150kg |
| Load control | manual |
| Min. reading | 1HR |
| Flat workpiece requirement | length>180mm, width>60mm, thickness>5mm |
| Cylinder or tube workpiece requirement | length>180mm, diameter>Ø50mm, wall thickness>8mm |
| Dimension | 220×70×220mm |
| Weight | 4.7kg |

STANDARD DELIVERY

| | |
|---------------------------------|------|
| Main unit | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 2pcs |
| Hardness test block HRB85~95 | 1pc |
| Hardness test block HRC60~70 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Flat anvil | 1pc |
| Support | 4pcs |
| Magnifier with LED | 1pc |

MAGNETIC BRINELL/ROCKWELL HARDNESS TESTER CODE ISHR-B141



flat anvil for test block
(included)



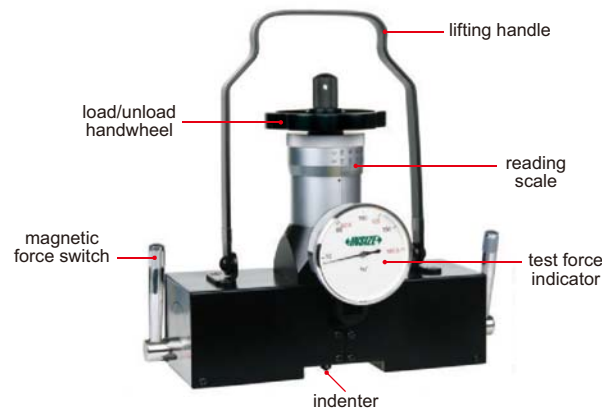
supports for cylinder or
tube workpieces (included)



magnifier with LED
(included)



measuring microscope
(included)



- Apply to large steel or iron workpieces
- According to ISO 6508, ASTM E18

SPECIFICATION

| | |
|---|---|
| Rockwell scale | HRA, HRB, HRC, HRD, HRF, HRG |
| Brinell measuring range | 20~650HBW |
| Rockwell test force | 10kg preload, 60kg, 100kg, 150kg total load |
| Brinell test force | 62.5kg, 125kg, 187.5kg |
| Load control | manual |
| Min. Rockwell reading | 1HR |
| Measuring microscope | 40X, graduation 0.01mm |
| Flat workpiece requirement | length>180mm, width>60mm, thickness>5mm |
| Cylinder and tube workpiece requirement | length>180mm, diameter>Ø50mm, thickness>8mm |
| Dimension | 220×70×220mm |
| Weight | 4.7kg |

STANDARD DELIVERY

| | |
|---------------------------------|------|
| Main unit | 1pc |
| Flat anvil | 1pc |
| Support | 4pcs |
| Diamond Rockwell indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 1pc |
| Ø2.5mm Brinell indenter | 1pc |
| Hardness test block HRB85~95 | 1pc |
| Hardness test block HRC60~70 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Brinell test block | 1pc |
| Measuring microscope | 1pc |
| Magnifier with LED | 1pc |

PORTABLE ROCKWELL HARDNESS TESTER CODE ISHR-P151

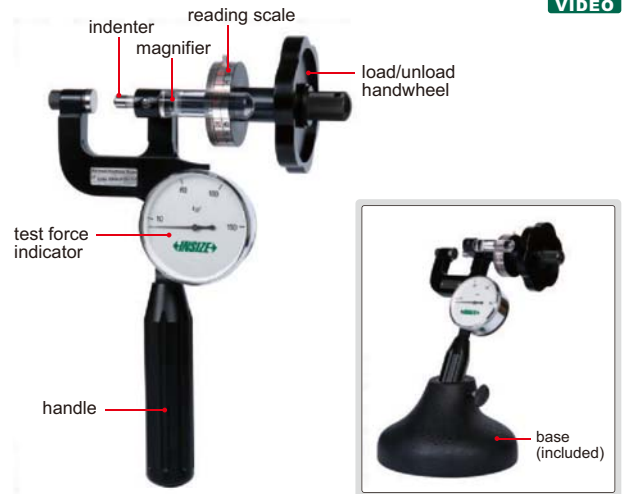
- According to ISO 6508, ASTM E18

SPECIFICATION

| | |
|--------------------------|------------------------------|
| Hardness scale | HRA, HRB, HRC, HRD, HRF, HRG |
| Preliminary test force | 10kg |
| Test force | 60kg, 100kg, 150kg |
| Load control | manual |
| Min. reading | 1HR |
| Max. workpiece thickness | 25mm |
| Max. workpiece depth | 25mm |
| Dimension | 240×70×160mm |
| Weight (with base) | 2.5kg |

STANDARD DELIVERY

| | |
|---------------------------------|------|
| Main unit | 1pc |
| Diamond indenter | 1pc |
| Ø1.5875mm carbide ball indenter | 2pcs |
| Hardness test block HRB88~95 | 1pc |
| Hardness test block HRC60~65 | 1pc |
| Hardness test block HRC20~30 | 1pc |
| Flat anvil | 1pc |
| V-type anvil | 1pc |
| Base | 1pc |
| Anvil extension | 1pc |
| Magnifier | 2pcs |



flat anvil (included)



V-type anvil (included)



anvil extension for thin workpieces (included)



VIDEO

PIN BRINELL HARDNESS TESTER CODE ISHB-P101

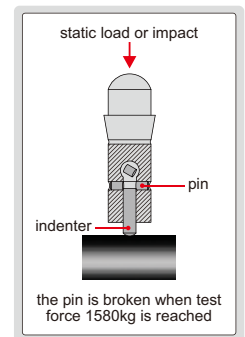
- Measure Brinell hardness of large and heavy workpieces
- 1580kg test force and Ø7.26mm ball indenter, equal to 3000kg test force and Ø10mm ball indenter
- Static and impact test modes
- According to ISO and ASTM standard



static test clamp



impact test clamp



static test



impact test



V-type anvil (included)



pins (included)



measuring microscope (included)

SPECIFICATION

| | |
|--------------------------------------|---|
| Measuring range | 100~350HBW (with Ø7.26mm indenter, included) 350~650HBW (with Ø4mm indenter, optional) |
| Test force | 1580kg |
| Accuracy | static test: ±3% impact test: ±5% |
| Measuring microscope | 20X, graduation 0.01mm |
| Max. workpiece height in static test | 150mm |
| Max. workpiece depth in static test | 80mm (from the center of indenter) |
| Dimension | 195×60×350mm |
| Weight | 4.2kg |

STANDARD DELIVERY

| | |
|----------------------|--------|
| Static test clamp | 1pc |
| Impact test clamp | 1pc |
| Flat anvil | 1pc |
| V-type anvil | 1pc |
| Ø7.26mm indenter | 1pc |
| Hardness test block | 1pc |
| Pin | 250pcs |
| Measuring microscope | 1pc |

OPTIONAL ACCESSORY

| | |
|---------------|--------------------|
| Ø4mm indenter | ISHB-P101-INDENTER |
| Pin (250pcs) | ISHB-P101-PIN |



VIDEO

HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-H131

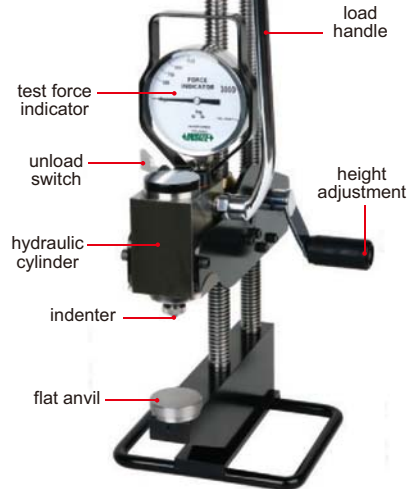
- According to ISO 6506, ASTM E10

SPECIFICATION

| | |
|-----------------------|------------------------------------|
| Measuring range | 16~650HBW |
| Test force | 3000kg |
| Indenter | Ø10mm carbide ball |
| Measuring microscope | 20X, graduation 0.01mm |
| Max. workpiece height | 350mm |
| Max. workpiece depth | 90mm (from the center of indenter) |
| Dimension | 270×225×570mm |
| Weight | 13.8kg |

STANDARD DELIVERY

| | |
|----------------------|------|
| Main unit | 1pc |
| Flat anvil | 1pc |
| V-type anvil | 1pc |
| Spherical anvil | 1pc |
| Ø10mm carbide ball | 2pcs |
| Brinell test block | 2pcs |
| Measuring microscope | 1pc |



V-type anvil (included)



spherical anvil (included)



measuring microscope (included)

CHAIN TYPE HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-C161



measuring microscope (included)

- To measure the hardness of cylinders or tubes
- According to ISO 6506, ASTM E10



SPECIFICATION

| | |
|--------------------------|------------------------|
| Measuring range | 32~650HBW |
| Workpiece diameter range | Ø150~Ø500mm |
| Test force | 3000kg |
| Indenter | Ø10mm carbide ball |
| Measuring microscope | 20X, graduation 0.01mm |
| Dimension | 270×225×570mm |
| Weight | 14.5kg |

STANDARD DELIVERY

| | |
|----------------------|------|
| Main unit | 1pc |
| 1.5m chain | 1pc |
| Ø10mm carbide ball | 2pcs |
| Brinell test block | 2pcs |
| Measuring microscope | 1pc |

BARCOL HARDNESS TESTER CODE ISHB-B300



- To measure the hardness of thick workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- According to ASTM B648-00, ASTM D2853-07



SPECIFICATION

| | |
|--------------------------|--|
| Hardness range | 0~100HBa (equal to 25~150HBW) |
| Min. reading | 1HBa |
| Accuracy | ±2HBa (at 42~52HBa) ±1HBa (at 84~88HBa) |
| Min. workpiece thickness | 0.8mm |
| Dimension | 142×65×90mm |
| Weight | 500g |

STANDARD DELIVERY

| | |
|---------------------|------|
| Main unit | 1pc |
| Spare indenter | 2pcs |
| Hardness test block | 2pcs |
| Wrench | 1pc |

WEBSTER HARDNESS TESTERS

- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-84 (2000)



VIDEO

STANDARD DELIVERY

| | |
|---------------------|-----|
| Main unit | 1pc |
| Spare indenter | 1pc |
| Hardness test block | 1pc |
| Wrench | 1pc |



ISHW-L20

SPECIFICATION

| Code | ISHW-L20 | ISHW-L20A | ISHW-L20B | ISHW-B70 | ISHW-B75 | ISHW-B92 |
|---|--------------------------------|---|-------------------------------|--|---------------------------|--------------------------------------|
| Application | for aluminum alloy general use | for aluminum alloy thick workpiece | for aluminum alloy small tube | for hard aluminum alloy and hard brass | for soft brass and copper | for soft steel and cold-rolled steel |
| Thickness requirement of flat workpiece | 0.6~6mm | 0.6~13mm | 0.6~8mm | 0.6~6mm | 0.6~6mm | 0.6~6mm |
| Internal diameter requirement of tube workpiece | >Ø10mm | >Ø10mm | >Ø6mm | >Ø10mm | >Ø10mm | >Ø10mm |
| Wall thickness requirement of tube workpiece | 0.6~6mm | 6~13mm (internal diameter Ø10~23.3mm) 0.6~6mm (internal diameter >Ø23.3mm) | 0.6~8mm | 0.6~6mm | 0.6~6mm | 0.6~6mm |
| Hardness range | 0~20HW | | | | | |
| Min. reading | 1HW | | | | | |
| Accuracy | ±0.5HW (at 5~17HW) | | | | | |
| Dimension | 205×30×85mm | | | | | |
| Weight | 500g | | | | | |

DIGITAL SHORE DUROMETERS

- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Low and high limits with judgement
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (code ISH-DS-STAND)
- Automatic power off

DATA OUTPUT



VIDEO

SPECIFICATION

| Code | ISH-DSA | ISH-DSD |
|---------------------|---------------------------------|---------------------------------|
| Unit | Shore A | Shore D |
| Test material | soft plastic, soft rubber, etc. | hard plastic, hard rubber, etc. |
| Measuring range* | 0~100HA | 0~100HD |
| Resolution | 0.1HA | 0.1HD |
| Accuracy | ±1HA | ±1HD |
| Indenter protrusion | 2.5mm | |
| Output | wireless and USB | |
| Power supply | built-in rechargeable battery | |
| Dimension | 153×50×29mm | |
| Weight | 170g | |

STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| Calibration block | 1pc |
| USB cable and software | 1pc |
| AC/DC adapter | 1pc |



blunt taper indenter

ISH-DSA

sharp point indenter

ISH-DSD



software CD (included)



calibration block (included)



printer (optional)

OPTIONAL ACCESSORY

| | |
|--------------------------------|----------------|
| Printer | ISH-DS-PRINTER |
| Test stand | ISH-DS-STAND |
| 1kg weight block (for ISH-DSA) | ISH-DSA-W1 |
| 5kg weight block (for ISH-DSD) | ISH-DSD-W5 |

- * Use ISH-DSD when measuring result is higher than 90HA
Use ISH-DSA when measuring result is lower than 20HD



TEST STAND FOR DIGITAL SHORE DUROMETERS CODE ISH-DS-STAND

- For digital shore durometers (code **ISH-DSA** and **ISH-DSD**)
- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- 1kg weight block is for **ISH-DSA**, 5kg weight block is for **ISH-DSD**

SPECIFICATION

| | |
|--------------------------|---------------|
| Stage diameter | Ø88mm |
| Maximum workpiece height | 75mm |
| Dimension | 125×163×350mm |
| Weight | 4kg |

STANDARD DELIVERY

| | |
|---------------------|-----|
| Test stand | 1pc |
| Durometer supporter | 1pc |

OPTIONAL ACCESSORY

| | |
|--------------------------------|------------|
| 1kg weight block (for ISH-DSA) | ISH-DSA-W1 |
| 5kg weight block (for ISH-DSD) | ISH-DSD-W5 |



5kg weight block (optional) for ISH-DSD



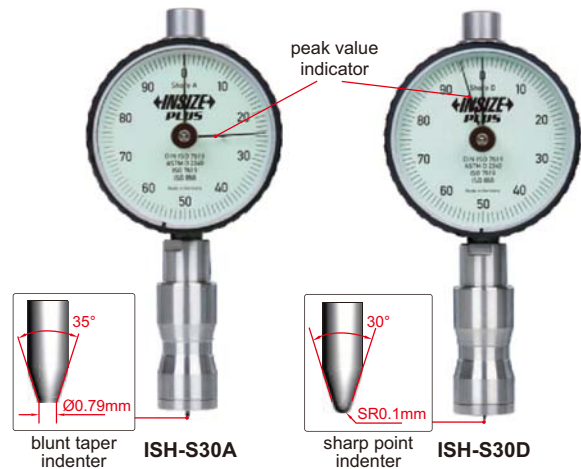
SHORE DUROMETERS

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Handhold use or work with test stand (code **ISH-OS2**)

SPECIFICATION

| Code | ISH-S30A | ISH-S30D |
|---------------------|---------------------------------|---------------------------------|
| Scale | Shore A | Shore D |
| Test material | soft plastic, soft rubber, etc. | hard plastic, hard rubber, etc. |
| Measuring range* | 0~100HA | 0~100HD |
| Resolution | 1HA | 1HD |
| Accuracy | ±0.5HA | ±0.5HD |
| Indenter protrusion | 2.5mm | |
| Bezel diameter | 57mm | |
| Overall height | 121mm | |
| Weight | 184g | |

* Use **ISH-S30D** when measuring result is higher than 90HA
Use **ISH-S30A** when measuring result is lower than 20HD



HARDNESS TEST BLOCKS FOR SHORE DUROMETERS

SPECIFICATION

| Code | ISH-S30A-BLOCK | ISH-S30D-BLOCK |
|----------------|--|------------------------|
| Type | Shore A | Shore D |
| Hardness value | 7pcs/set: 30, 40, 50, 60, 70, 80, 90HA | 3pcs/set: 60, 75, 85HD |



ISH-S30A-BLOCK



ISH-S30D-BLOCK

TEST STAND FOR SHORE DUROMETERS CODE ISH-OS2

- For shore durometers (code **ISH-S30A** and **ISH-S30D**)
- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- 1kg weight block is for **ISH-S30A**, 4kg weight block is for **ISH-S30D**

SPECIFICATION

| | |
|--------------------------|-----------------------------------|
| Stage diameter | Ø98mm |
| Maximum workpiece height | 180mm |
| Maximum workpiece depth | 115mm (from test point to column) |
| Weight block | 1kg (for ISH-S30A) |
| Dimension | Ø200×500mm |
| Weight | 18kg |

STANDARD DELIVERY

| | |
|-------------------|-----|
| Test stand | 1pc |
| Calibration block | 1pc |

OPTIONAL ACCESSORY

| | |
|---|-------------------|
| 4kg weight block (for ISH-S30D) | ISH-OS2-W4 |
|---|-------------------|



SHORE DUROMETERS

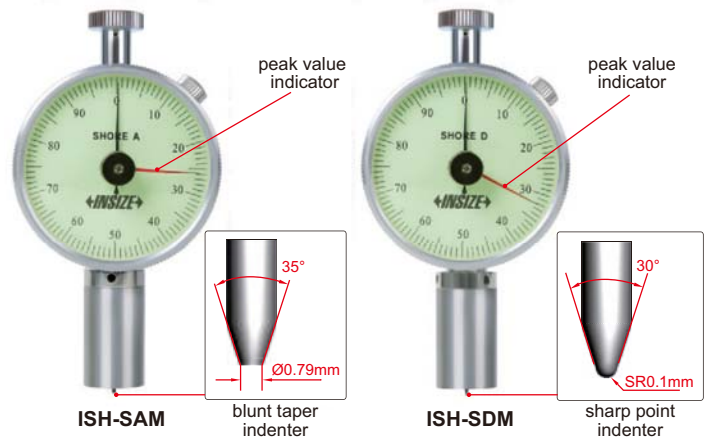


- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand **ISH-STAC** and **ISH-STD**

SPECIFICATION

| Code | ISH-SAM | ISH-SDM |
|---------------------|-------------------------------------|--|
| Scale | Shore A | Shore D |
| Application | nature rubber, soft elastomer, etc. | hard rubber, plastic, hard elastomer, etc. |
| Measuring range* | 10~90HA | 20~90HD |
| Graduation | 1HA | 1HD |
| Indenter protrusion | 2.5mm | |
| Dimension | 115×60×25mm | |
| Weight | 160g | |

- * Use **ISH-SDM** when measuring result is higher than 90HA
Use **ISH-SAM** when measuring result is lower than 20HD



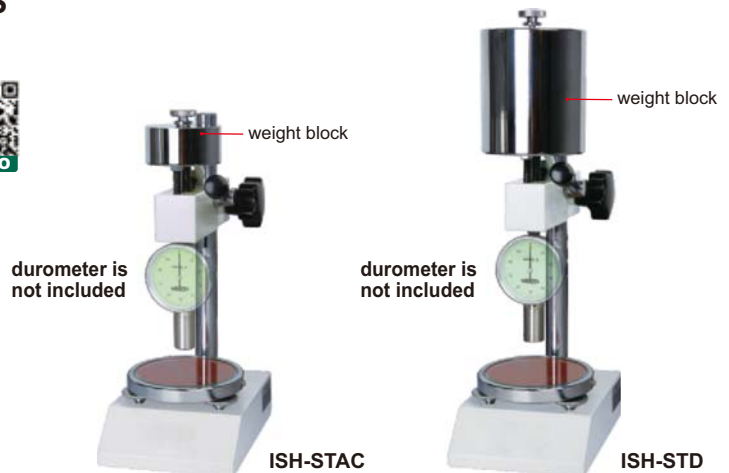
TEST STANDS FOR SHORE DUROMETERS



- For shore durometers (code **ISH-SAM** and **ISH-SDM**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations

SPECIFICATION

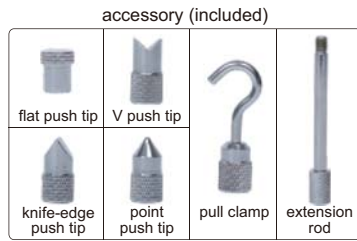
| Code | ISH-STAC | ISH-STD |
|--------------------------|----------|---------|
| Applicable durometer | ISH-SAM | ISH-SDM |
| Stage diameter | Ø100mm | Ø100mm |
| Maximum workpiece height | 75mm | 75mm |
| Weight block | 1kg | 5kg |



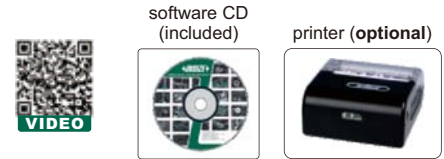


DIGITAL FORCE GAGES

- Push and pull test
- Units: N, gf, kgf, ozf, lbf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight, can turn 180°
- Overload alarm



ISF-1DF100



STANDARD DELIVERY

| | |
|------------------------|--|
| Main unit | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software | 1pc |
| Push/pull accessory | 6pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod) |

OPTIONAL ACCESSORY

| | |
|------------|----------------|
| Printer | ISF-DF-PRINTER |
| Test stand | ISF-MT1K |

SPECIFICATION

| Code | ISF-1DF10 | ISF-1DF50 | ISF-1DF100 | ISF-1DF500 | ISF-1DF1000 |
|-------------------|---|-----------|------------|------------|-------------|
| Load capacity (N) | 10 | 50 | 100 | 500 | 1000 |
| Resolution (N) | 0.01 | 0.01 | 0.1 | 0.1 | 1 |
| Accuracy | ±0.3% (of load capacity) | | | | |
| Measuring mode | tracking, peak (max.), low and high limits with judgement | | | | |
| Power supply | built-in rechargeable battery | | | | |
| Dimension | 150×73×33mm | | | | |
| Weight | 450g | | | | |



DIGITAL FORCE GAGES (HIGH ACCURACY)

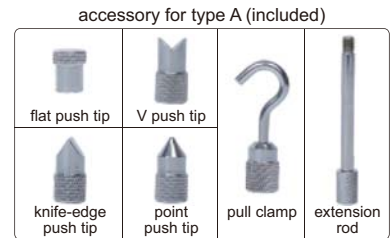


- Push and pull test
- Peak (max.) and tracking mode
- Units: mN, N, gf, kgf, ozf, lbf, MPa (only for type B)
- Low and high limits with judgement
- 1000 memories
- Automatic power off
- Metal case, touch buttons
- LCD display with backlight, can automatically turn 180°
- Overload alarm



ISF-DF100A
type A

ISF-DF5KA
type B



SPECIFICATION

| Code | ISF-DF 5A | ISF-DF 10A | ISF-DF 20A | ISF-DF 50A | ISF-DF 100A | ISF-DF 200A | ISF-DF 500A | ISF-DF 1KA | ISF-DF 2KA | ISF-DF 5KA | ISF-DF 10KA | ISF-DF 20KA |
|-------------------|-------------------------------|------------|------------|------------|-------------|-------------|-------------|------------|---------------------|------------|-------------|-------------|
| Type | A (internal sensor) | | | | | | | | B (external sensor) | | | |
| Load capacity (N) | 5 | 10 | 20 | 50 | 100 | 200 | 500 | 1000 | 2000 | 5000 | 10000 | 20000 |
| Resolution (N) | 0.0005 | 0.001 | 0.005 | 0.005 | 0.01 | 0.05 | 0.05 | 0.1 | 0.5 | 0.5 | 1 | 5 |
| Accuracy | ±0.2% (of load capacity) | | | | | | | | | | | |
| Power supply | built-in rechargeable battery | | | | | | | | | | | |

STANDARD DELIVERY

| Code | ISF-DF 5A | ISF-DF 10A | ISF-DF 20A | ISF-DF 50A | ISF-DF 100A | ISF-DF 200A | ISF-DF 500A | ISF-DF 1KA | ISF-DF 2KA | ISF-DF 5KA | ISF-DF 10KA | ISF-DF 20KA |
|------------------------|--|------------|------------|------------|-------------|-------------|-------------|------------|--|------------|-------------|-------------|
| Main unit | 1pc | | | | | | | | 1pc | | | |
| AC/DC adapter | 1pc | | | | | | | | 1pc | | | |
| USB cable and software | 1pc | | | | | | | | 1pc | | | |
| Push/pull accessory | 6pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod) | | | | | | | | 4pcs (flat push tip, adapter, pull clamps) | | | |

OPTIONAL ACCESSORY

| | |
|------------|----------------|
| Printer | ISF-DF-PRINTER |
| Test stand | ISF-MT1K |

TEST STAND FOR DIGITAL FORCE GAGES CODE ISF-MT1K

- For digital force gages (code ISF-1DFxx and ISF-DFxx)
- To be used in vertical and horizontal orientation



horizontal orientation test



digital scale (optional)



force gages are not included



SPECIFICATION

| | |
|---------------|---|
| Load capacity | 1000N |
| Travel | 200mm (3mm vertical movement per revolution of handwheel) |
| Dimension | 196 x 250 x 446mm |
| Weight | 13kg |

OPTIONAL ACCESSORY

Digital scale (range: 200mm, resolution: 0.01mm/0.0005")

ISF-MT1K-SCALE

FORCE GAGES

SPECIFICATION

| Code | ISF-F10 | ISF-F20 | ISF-F30 | ISF-F50 | ISF-F100 | ISF-F200 | ISF-F300 | ISF-F500 | |
|------------|------------------------|---------|---------|---------|----------|----------|----------|----------|-----|
| Capacity | N | 10 | 20 | 30 | 50 | 100 | 200 | 300 | 500 |
| | kgf | 1 | 2 | 3 | 5 | 10 | 20 | 30 | 50 |
| Graduation | N | 0.05 | 0.1 | 0.2 | 0.25 | 0.5 | 1 | 2 | 2.5 |
| Accuracy | ±1% (of load capacity) | | | | | | | | |



ISF-F500



STANDARD DELIVERY

| | |
|---------------|--|
| Main unit | 1pc |
| Push tip | 4pcs (flat, V type, knife-edge, point) |
| Pull clamp | 1pc |
| Extension rod | 1pc |

OPTIONAL ACCESSORY

Test stand ISF-MT500

- Push and pull test
- Peak (max.) or tracking mode



flat push tip (included)



V type push tip (included)



knife-edge push tip (included)



point push tip (included)



pull clamp (included)



extension rod (included)

TEST STAND FOR FORCE GAGES CODE ISF-MT500

- For force gages (code ISF-Fxx)
- To be used in vertical and horizontal orientation



horizontal orientation test



force gages are not included



SPECIFICATION

| | |
|---------------|---|
| Load capacity | 500N |
| Travel | 150mm (3mm vertical movement per revolution of handwheel) |
| Dimension | 160×240×460mm |
| Weight | 12kg |

DIAL TENSION GAGES

SPECIFICATION (Unit: N)

| Code | ISF-TGD1 | ISF-TGD3 | ISF-TGD5 | ISF-TG1 | ISF-TG1D5 | ISF-TG3 | ISF-TG5 |
|-------------------|------------------|----------|----------|---------|-----------|---------|---------|
| Capacity (N) | 0.1 | 0.3 | 0.5 | 1 | 1.5 | 3 | 5 |
| Graduation (N) | 0.002 | 0.005 | 0.01 | 0.02 | 0.025 | 0.05 | 0.1 |
| Accuracy | ±2% (full scale) | | | | | | |
| Dimension (L×W×H) | 90×47×19mm | | | | | | |
| Weight | 60g | | | | | | |

SPECIFICATION (Unit: gf)

| Code | ISF-TG10 | ISF-TG30 | ISF-TG50 | ISF-TG100 | ISF-TG150 | ISF-TG300 | ISF-TG500 |
|-------------------|------------------|----------|----------|-----------|-----------|-----------|-----------|
| Capacity (gf) | 10 | 30 | 50 | 100 | 150 | 300 | 500 |
| Graduation (gf) | 0.2 | 0.5 | 1 | 2 | 2.5 | 5 | 10 |
| Accuracy | ±2% (full scale) | | | | | | |
| Dimension (L×W×H) | 90×47×19mm | | | | | | |
| Weight | 60g | | | | | | |



ISF-TG3

- Clockwise and counter-clockwise use
- For electronic and precision mechanical industry, such as measure contact pressure of relay, adjust the tension or compression of spring

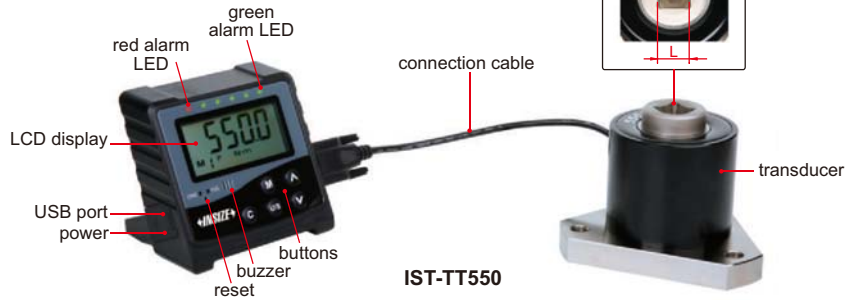
DATA OUTPUT

ATTENTION: NOT SUITABLE FOR ELECTRIC WRENCHES, IMPACT WRENCHES OR PNEUMATIC WRENCHES



DIGITAL TORQUE TESTERS

- With external sensor, to test torque wrenches, torque screwdrivers and other torque tools
- Clockwise and counter-clockwise operation
- Peak, track and first peak working modes
- Unit: cN.m, in.lb, kg.cm
- Low and high limits with judgement
- Target torque value can be set (10 target torque values can be saved and selected quickly), with audible and visible alarm:
 - Green LED light on and buzzer sounds when the value is 80%~100% of target torque
 - Both green and red LED light on and buzzer sounds when the target torque value is reached
- Memory of 2000 measurement values for browsing and output
- Automatic power off



SPECIFICATION

| Code | IST-TT5 | IST-TT50 | IST-TT220 | IST-TT550 | IST-TT2200 |
|----------------------|---------------------------------------|--------------|------------------------------|------------------------------|----------------------------|
| Range | 0.5~5N.m | 5~50N.m | 22~220N.m | 55~550N.m | 220~2200N.m |
| Accuracy | ±1% (clockwise and counter-clockwise) | | | | |
| Resolution | 0.001N.m | 0.01N.m | 0.1N.m | 0.1N.m | 1N.m |
| Square socket (L) | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| Power supply | DC | | | | |
| Adaptor | no | 3/8" to 1/4" | 1/2" to 3/8" 3/8" to 1/4" | 3/4" to 1/2" 1/2" to 3/8" | 1" to 3/4" 3/4" to 1/2" |
| Transducer dimension | 60×60×47 mm | 89×89×65 mm | 109×109×73 mm | 140×140×97 mm | 160×160×116 mm |
| Weight | 0.7kg | 1.1kg | 1.4kg | 2.8kg | 4.7kg |



STANDARD DELIVERY

| | |
|--------------------------|-------------------|
| Main unit | 1pc |
| Transducer with 1m cable | 1pc |
| AC/DC adaptor | 1pc |
| USB cable and software | 1pc |
| Adaptor | refer to the left |

application example



digital torque tester (optional)



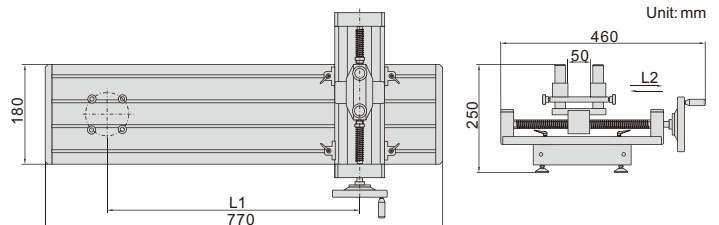
adaptor (optional, for digital torque tester IST-TT5, IST-TT50, IST-TT220)

- Work with digital torque testers (IST-TT5, IST-TT50, IST-TT220, IST-TT550)

SPECIFICATION

| Digital torque tester | IST-TT5 (optional) | IST-TT50 (optional) | IST-TT220 (optional) | IST-TT550 (optional) |
|----------------------------|-----------------------|---------------------|----------------------|----------------------|
| Applicable torque wrenches | 0.5~5N.m | 5~50N.m | 22~220N.m | 220~340N.m |
| Arm length (L1) | 150~550mm, adjustable | | | |
| Maximum travel (L2) | 200mm | | | |
| Weight | 12kg | | | |

TORQUE WRENCH TEST STAND CODE IST-TS500



OPTIONAL ACCESSORY

| | |
|-----------------------|---|
| Digital torque tester | IST-TT5, IST-TT50, IST-TT220, IST-TT550 |
| Adaptor | IST-TS500-BLOCK (necessary for IST-TT5, IST-TT50 and IST-TT220, not needed for IST-TT550) |

DIGITAL BOTTLE CAP TORQUE TESTERS

- Measure the open and tighten torque of bottle cap
- Unit: N.m, N.cm, kgf.cm, lbf.in, lbf.ft
- 1500 memories
- Wireless connection to printer
- Automatic power off
- LCD display with backlight
- Overload alarm
- With calibration function



IST-DCT20

SPECIFICATION

| Code | IST-DCT2 | IST-DCT5 | IST-DCT10 | IST-DCT20 |
|----------------|--|----------|-----------|-----------|
| Load capacity | 2N.m | 5N.m | 10N.m | 20N.m |
| Resolution | 0.001N.m | 0.001N.m | 0.01N.m | 0.01N.m |
| Clamping range | Ø19.5~190mm | | | |
| Accuracy | ±0.5% (of load capacity) | | | |
| Measuring mode | tracking, peak (max.), first peak, double peak, low and high limits with judgement | | | |
| Output | wireless and USB | | | |
| Power supply | built-in rechargeable battery | | | |
| Dimension | 200×197×142mm | | | |
| Weight | 2.5kg | | | |

two display modes



STANDARD DELIVERY

| | |
|------------------------|-----|
| Main unit | 1pc |
| AC/DC adapter | 1pc |
| USB cable and software | 1pc |

OPTIONAL ACCESSORY

| | |
|---------|----------------|
| Printer | ISH-DS-PRINTER |
|---------|----------------|

DIGITAL TORQUE SCREWDRIVERS

- Clockwise and counter-clockwise operation
- Unit: cN.m, in.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when target torque value is 90%~100% of target torque
 - Red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations



IST-SD200

SPECIFICATION

| Code | IST-SD50 | IST-SD200 | IST-SD400 |
|------------------------|-------------------|------------|------------|
| Range | 10~50cN.m | 40~200cN.m | 80~400cN.m |
| Accuracy | clockwise | ±3% | ±2.5% |
| | counter-clockwise | ±4% | ±3.5% |
| Resolution | 0.1cN.m | 0.1cN.m | 0.1cN.m |
| Size of hex socket (L) | 1/4" | 1/4" | 1/4" |
| Power supply | 1×AAA battery | | |
| Length | 193mm | 203mm | 203mm |
| Weight | 190g | 200g | 200g |

OPTIONAL ACCESSORY

| | |
|-------------------|--------------|
| Calibration cable | IST-SD-CABLE |
|-------------------|--------------|

SMALL RANGE TORQUE SCREWDRIVERS

- According to DIN ISO 6789, ASME B107.300-2010



SPECIFICATION

| Code | IST-MH1D2 | IST-MS1D2 |
|-------------------|------------|---------------|
| Head type | hex socket | square driver |
| Range (clockwise) | 0.1~1.2N.m | 0.1~1.2N.m |
| Graduation | 0.01N.m | 0.01N.m |
| Accuracy | ±6% | ±6% |
| Length | 180mm | 180mm |
| Weight | 230g | 230g |

ACCURACY ±6%

ATTENTION: CLOCKWISE OPERATION ONLY



ATTENTION: CLOCKWISE OPERATION ONLY

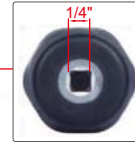
ACCURACY ±6%

INSPECTION CERTIFICATE



TORQUE SCREWDRIVERS

1/4" square socket, for T-bar wrench



- According to DIN ISO 6789, ASME B107.300-2010

Set torque:



step 1: lift the lock ring



step 2: rotate the handle to set torque



step 3: release the lock ring



T-bar wrench (optional)

SPECIFICATION

| Code | IST-MH3D5 | IST-MH6 | IST-MH9 | IST-MH10 | IST-MS3D5 | IST-MS6 | IST-MS9 | IST-MS10 |
|-------------------|------------|---------|---------|----------|---------------|---------|---------|----------|
| Range (clockwise) | 1~3.5N.m | 1~6N.m | 4~9N.m | 5~10N.m | 1~3.5N.m | 1~6N.m | 4~9N.m | 5~10N.m |
| Graduation | 0.05N.m | 0.1N.m | 0.1N.m | 0.1N.m | 0.05N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| Head type | hex socket | | | | square driver | | | |
| Accuracy | ±6% | | | | ±6% | | | |
| Length | 200mm | | | | 200mm | | | |
| Weight | 300g | | | | 300g | | | |

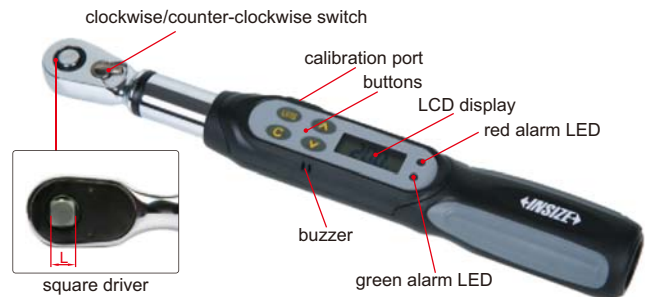
OPTIONAL ACCESSORY

| | |
|--------------|-------------|
| T-bar wrench | IST-M-T BAR |
|--------------|-------------|

INSPECTION CERTIFICATE

SMALL RANGE DIGITAL TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when target torque value is 90%~100% of target torque
 - Red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)



IST-WP20

SPECIFICATION

| Code | IST-WP6 | IST-WP12 | IST-WP20 |
|-------------------|-------------------|-----------|----------|
| Range | 1.2~6N.m | 2.4~12N.m | 4~20N.m |
| Accuracy | clockwise | ±3% | ±3% |
| | counter-clockwise | ±4% | ±4% |
| Resolution | 0.001N.m | 0.01N.m | 0.01N.m |
| Square driver (L) | 1/4" | 1/4" | 1/4" |
| Power supply | 1×AAA battery | | |
| Length | 260mm | 260mm | 260mm |
| Weight | 430g | 430g | 430g |



OPTIONAL ACCESSORY

| | |
|-------------------|--------------|
| Calibration cable | IST-SD-CABLE |
|-------------------|--------------|

SHORT HANDLE DIGITAL TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off in 5 minutes automatically
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



IST-WS60

SPECIFICATION

| Code | IST-WS30 | IST-WS30A | IST-WS60 | IST-WS85 |
|-------------------|-------------------|-----------|----------|----------|
| Range | 6~30N.m | 6~30N.m | 12~60N.m | 17~85N.m |
| Accuracy | clockwise | ±3% | | |
| | counter-clockwise | ±4% | | |
| Resolution | 0.01N.m | 0.01N.m | 0.01N.m | 0.1N.m |
| Square driver (L) | 1/4" | 3/8" | 3/8" | 3/8" |
| Power supply | 2×AAA batteries | | | |
| Length | 215mm | 215mm | 225mm | 271mm |
| Weight | 750g | 830g | 917g | 1000g |



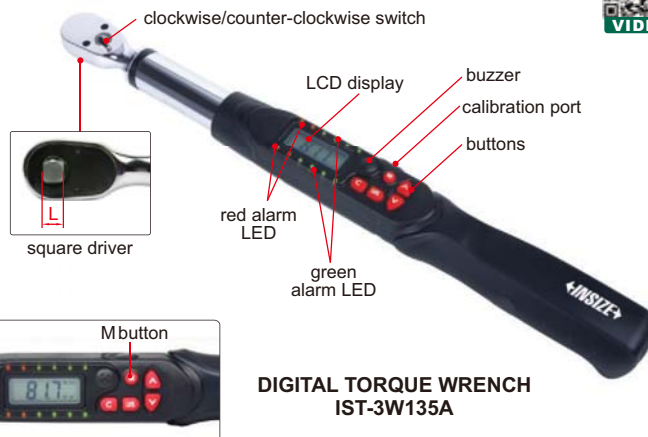
VIDEO

OPTIONAL ACCESSORY

Calibration cable IST-SD-CABLE

WIRELESS DATA TRANSFER DIGITAL TORQUE WRENCHES

- Wireless data transfer to computer
- Unit: N.m, in.lb, ft.lb, kg.cm
- Clockwise and counter-clockwise operation
- Peak and track working mode
- Can set tolerance with judgement in peak working mode
- 9 target torque values can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 80%~99.5% of target torque
 - Both green and red LED light on and buzzer sounds when torque value is over 99.5% of target torque
- Power off in 2 minutes automatically
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



DIGITAL TORQUE WRENCH
IST-3W135A



VIDEO



RECEIVER
IST-3WREC

DIGITAL TORQUE WRENCH SPECIFICATION

| Code | IST-3W30A | IST-3W135A | IST-3W200A | IST-3W340A |
|-------------------------|--|------------|------------|------------|
| Range | 6~30N.m | 27~135N.m | 40~200N.m | 68~340N.m |
| Accuracy | clockwise | ±2% | | |
| | counter-clockwise | ±3% | | |
| Tolerance setting range | -25% ~ +25% (target torque value) | | | |
| Resolution | 0.01N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| Square driver (L) | 1/4" | 3/8" | 1/2" | 1/2" |
| Working frequency | ISM433MHz (432.0~433.8MHz, adjustable) | | | |
| Power supply | 2xAA batteries, for 110 hours working | | | |
| Length | 390mm | 415mm | 530mm | 650mm |
| Weight | 760g | 940g | 1340g | 1540g |

RECEIVER SPECIFICATION

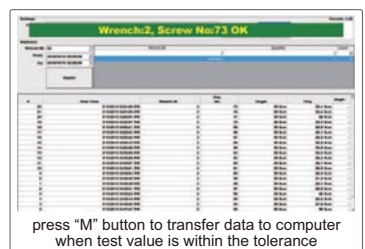
| | |
|-------------------|---------------------------------------|
| Code | IST-3WREC |
| Working frequency | ISM433MHz (432.0~433.8MHz adjustable) |
| Power supply | DC 24V, 0.5A |
| Dimension | 200×108×31mm |
| Weight | 500g |

OPTIONAL ACCESSORY

Calibration cable IST-SD-CABLE



up to 10pcs torque wrench can be connected to one receiver, the maximum working distance is 300m



press "M" button to transfer data to computer when test value is within the tolerance



DIGITAL TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



IST-W135A

SPECIFICATION

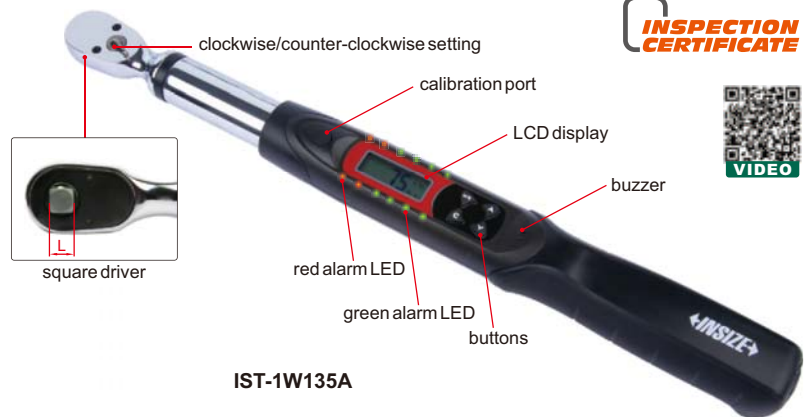
| Code | Range | Accuracy | Resolution | Square driver (L) | Power supply | Length | Weight |
|------------|-------------|--|------------|-------------------|----------------|--------|--------|
| IST-W30A | 6~30N.m | clockwise: $\pm 2\%$ counter-clockwise: $\pm 3\%$ | 0.01N.m | 1/4" | 2xAA batteries | 390mm | 830g |
| IST-W135A | 27~135N.m | | 0.1N.m | 3/8" | | 415mm | 950g |
| IST-W200A | 40~200N.m | | 0.1N.m | 1/2" | | 530mm | 1.4kg |
| IST-W340A | 68~340N.m | 0.1N.m | 1/2" | 650mm | | 1.6kg | |
| IST-W500A | 100~500N.m | clockwise: $\pm 2.5\%$ counter-clockwise: $\pm 3.5\%$ | 0.1N.m | 3/4" | | 950mm | 2.1kg |
| IST-W850A | 170~850N.m | | 0.1N.m | 3/4" | | 1220mm | 2.55kg |
| IST-W1200A | 240~1200N.m | | 1N.m | 1" | | 1800mm | 13kg |
| IST-W1500A | 300~1500N.m | | 1N.m | 1" | | 1800mm | 13kg |
| IST-W2000A | 400~2000N.m | 1N.m | 1" | 1" | 1800mm | 14kg | |

OPTIONAL ACCESSORY

| | |
|-------------------|-------------|
| Calibration cable | IST-W-CABLE |
|-------------------|-------------|

DIGITAL ANGLE TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Set the desired torque first. After reaching the desired torque, set the angle and turn the wrench at this angle to apply extra torque
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- Peak and track working mode
- Target torque or angle value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque or angle value is 90%~100% of target torque or angle
 - Both green and red LED light on and buzzer sounds when target torque or angle value is reached
- Power off in 5 minutes automatically
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



IST-1W135A

SPECIFICATION

| Code | IST-1W30A | IST-1W135A | IST-1W200A | IST-1W340A |
|-------------------|---------------------------------------|------------|------------|------------|
| Range | torque 6~30N.m | 27~135N.m | 40~200N.m | 68~340N.m |
| Accuracy | angle 0~999° | | | |
| | clockwise $\pm 2\%$ | | | |
| Resolution | counter-clockwise $\pm 3\%$ | | | |
| | angle $\pm 2^\circ$ (rotate 90°) | | | |
| Square driver (L) | torque 0.01N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| | angle 1° | | | |
| Power supply | 1/4" | 3/8" | 1/2" | 1/2" |
| Length | 2xAA batteries, for 110 hours working | | | |
| Weight | 390mm | 415mm | 530mm | 650mm |
| | 830g | 950g | 1400g | 1600g |



Set the desired torque first. After reaching the desired torque, set the angle and turn the wrench at this angle to apply extra torque

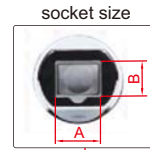
OPTIONAL ACCESSORY

| | |
|-------------------|-------------|
| Calibration cable | IST-W-CABLE |
|-------------------|-------------|

INTERCHANGEABLE HEAD DIGITAL TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off in 5 minutes automatically without any operations
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)

INSPECTION CERTIFICATE



IST-2W135A

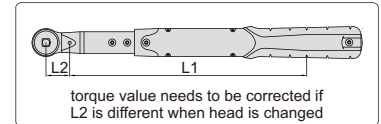
SPECIFICATION

| Code | IST-2W30A | IST-2W135A | IST-2W200A | IST-2W340A |
|-------------------|---------------------------------------|------------|------------|------------|
| Range | 6~30N.m | 27~135N.m | 40~200N.m | 68~340N.m |
| Accuracy | clockwise | ±2% | | |
| | counter-clockwise | ±3% | | |
| Resolution | 0.01N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| Socket size (A×B) | 12×9mm | 12×9mm | 18×14mm | 18×14mm |
| Arm length (L1) | 272.7mm | 287.7mm | 381.2mm | 501.2mm |
| Power supply | 2xAA batteries, for 110 hours working | | | |
| Weight | 1400g | 1570g | 2170g | 2320g |

Ratchet head (included)



torque correction



RATCHET HEAD (INCLUDED) SPECIFICATION

| Code of torque wrench | IST-2W30A | IST-2W135A | IST-2W200A | IST-2W340A |
|-----------------------|-----------|------------|------------|------------|
| Square driver (D) | 1/4" | 3/8" | 1/2" | 1/2" |
| Length (L2) | 29mm | 29mm | 40mm | 40mm |

STANDARD DELIVERY

| | |
|---------------|------|
| Torque wrench | 1 pc |
| Ratchet head | 1 pc |

OPTIONAL ACCESSORY

| | |
|----------------------|-------------|
| Calibration cable | IST-W-CABLE |
| Interchangeable head | see details |



RATCHET HEAD (optional)

| Code | Square driver (D) | Applicable wrenches |
|-----------|-------------------|--------------------------|
| IST-2W-R1 | 1/4" | IST-2W30A |
| IST-2W-R2 | 3/8" | IST-2W135A |
| IST-2W-R3 | 1/2" | IST-2W135A |
| IST-2W-R4 | 1/2" | IST-2W200A IST-2W340A |



BOX END HEAD (optional)

| Code | Open size | Applicable wrenches | |
|-------------|-----------|-------------------------|--------------------------|
| IST-2W-M7 | 7mm | IST-2W30A IST-2W135A | |
| IST-2W-M8 | 8mm | | |
| IST-2W-M10 | 10mm | | |
| IST-2W-M11 | 11mm | | |
| IST-2W-M12 | 12mm | | |
| IST-2W-M13 | 13mm | | |
| IST-2W-M14 | 14mm | | |
| IST-2W-M15 | 15mm | | |
| IST-2W-M16 | 16mm | | |
| IST-2W-M17 | 17mm | | |
| IST-2W-M18 | 18mm | | |
| IST-2W-M19 | 19mm | | |
| IST-2W-M21 | 21mm | | IST-2W200A IST-2W340A |
| IST-2W-M22 | 22mm | | |
| IST-2W-M13A | 13mm | | |
| IST-2W-M14A | 14mm | | |
| IST-2W-M15A | 15mm | | |
| IST-2W-M16A | 16mm | | |
| IST-2W-M17A | 17mm | | |
| IST-2W-M18A | 18mm | | |
| IST-2W-M19A | 19mm | | |
| IST-2W-M21A | 21mm | | |



OPEN END HEAD (optional)

| Code | Open size | Applicable wrenches | |
|-------------|-----------|-------------------------|--------------------------|
| IST-2W-K7 | 7mm | IST-2W30A IST-2W135A | |
| IST-2W-K8 | 8mm | | |
| IST-2W-K9 | 9mm | | |
| IST-2W-K10 | 10mm | | |
| IST-2W-K11 | 11mm | | |
| IST-2W-K12 | 12mm | | |
| IST-2W-K13 | 13mm | | |
| IST-2W-K14 | 14mm | | |
| IST-2W-K15 | 15mm | | |
| IST-2W-K16 | 16mm | | |
| IST-2W-K17 | 17mm | | |
| IST-2W-K18 | 18mm | | |
| IST-2W-K19 | 19mm | | |
| IST-2W-K13A | 13mm | | IST-2W200A IST-2W340A |
| IST-2W-K14A | 14mm | | |
| IST-2W-K15A | 15mm | | |
| IST-2W-K16A | 16mm | | |
| IST-2W-K17A | 17mm | | |
| IST-2W-K18A | 18mm | | |
| IST-2W-K19A | 19mm | | |
| IST-2W-K21A | 21mm | | |
| IST-2W-K22A | 22mm | | |
| IST-2W-K24A | 24mm | | |



ADJUSTABLE SPANNER HEAD (optional)

| Code | Open size | Applicable wrenches |
|-----------|-----------|---------------------|
| IST-2W-A1 | 5~27mm | IST-2W135A |
| IST-2W-A2 | 5~30mm | IST-2W200A |
| IST-2W-A3 | 10~41mm | IST-2W340A |



MEASURE THE TORQUE OF TIGHTENED BOLT

QUALITY INSPECTION TORQUE WRENCHES



- Measure the torque of tightened bolt with retightening method, read the torque value when the looseness is detected
- Two measuring modes:
 - M1: automatic detecting mode, for normal bolts retighten the bolt, the torque value is displayed on screen when the wrench automatically detects the looseness, both green and red LED light on and buzzer sounds
 - M2: manual detecting mode, for long bolts retighten the bolt, read the torque value when the looseness is detected by hand
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode (only for M2 measuring mode)
- Clockwise and count-clockwise operation
- Memory of 50 results
- Power off in 15 minutes automatically
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)



IST-4W135A

SPECIFICATION

| Code | IST-4W30A | IST-4W135A | IST-4W200A | IST-4W340A |
|-------------------|---------------------------------------|------------|------------|------------|
| Range | 6~30N.m | 27~135N.m | 40~200N.m | 68~340N.m |
| Accuracy | clockwise | ±2% | | |
| | counter-clockwise | ±3% | | |
| Resolution | 0.01N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| Square driver (L) | 1/4" | 3/8" | 1/2" | 1/2" |
| Power supply | 2xAA batteries, for 110 hours working | | | |
| Length | 390mm | 415mm | 530mm | 650mm |
| Weight | 760g | 940g | 1340g | 1540g |

OPTIONAL ACCESSORY

| | |
|-------------------|-------------|
| Calibration cable | IST-W-CABLE |
|-------------------|-------------|



ACCURACY ±3%

ATTENTION: CLOCKWISE OPERATION ONLY

TORQUE WRENCHES



- According to DIN ISO 6789, ASME B107.300-2010

Set torque:



step 1: unlock



step 2: set



step 3: lock



IST-2WM100

SPECIFICATION

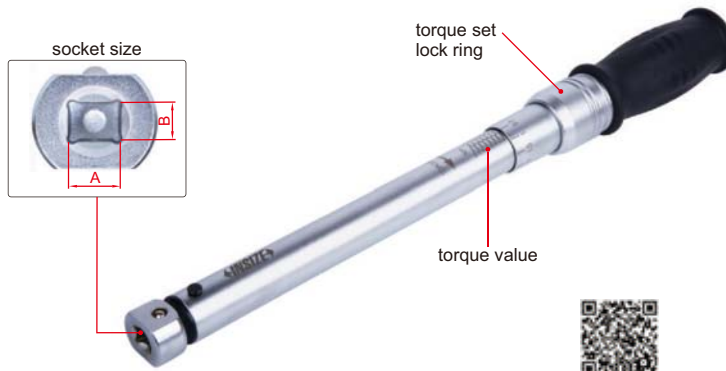
| Code | IST-2WM25 | IST-2WM60 | IST-2WM100 | IST-2WM200 | IST-2WM340 | IST-2WM600 | IST-2WM800 |
|-------------------|-----------|-----------|------------|------------|------------|------------|------------|
| Range (clockwise) | 5~25N.m | 10~60N.m | 20~100N.m | 40~200N.m | 60~340N.m | 100~600N.m | 150~800N.m |
| Accuracy | ±3% | ±3% | ±3% | ±3% | ±3% | ±3% | ±3% |
| Graduation | 0.2N.m | 0.5N.m | 0.5N.m | 1N.m | 2N.m | 5N.m | 5N.m |
| Square driver (D) | 1/4" | 3/8" | 3/8" | 1/2" | 1/2" | 3/4" | 3/4" |
| Length | 281mm | 337mm | 436mm | 512mm | 614mm | 1050mm | 1240mm |
| Weight | 590g | 760g | 1320g | 1580g | 1800g | 5030g | 6110g |

INTERCHANGEABLE HEAD TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY

ACCURACY $\pm 3\%$

INSPECTION CERTIFICATE



IST-6WM100

■ According to DIN ISO 6789, ASME B107.300-2010

Set torque:



step 1: unlock

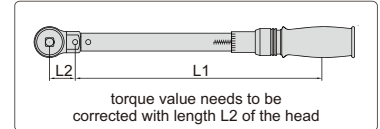


step 2: set



step 3: lock

torque correction



SPECIFICATION

| Code | IST-6WM60 | IST-6WM100 | IST-6WM200 | IST-6WM340 | IST-6WM600 |
|-------------------|-----------|------------|------------|------------|------------|
| Range (clockwise) | 10~60N.m | 20~100N.m | 40~200N.m | 60~340N.m | 100~600N.m |
| Accuracy | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ |
| Graduation | 0.5N.m | 0.5N.m | 1N.m | 2N.m | 5N.m |
| Socket size (A×B) | 12×9mm | 12×9mm | 18×14mm | 18×14mm | 18×14mm |
| Arm length (L1) | 261mm | 343mm | 420mm | 521mm | 891mm |
| Length | 306mm | 403mm | 484mm | 585mm | 988mm |
| Weight | 630g | 1286g | 1400g | 1602g | 5600g |

OPTIONAL ACCESSORY

| | |
|----------------------|-------------|
| Interchangeable head | see details |
|----------------------|-------------|



OPEN END HEAD (optional)

BOX END HEAD (optional)

| Code | Open size | Applicable wrenches | |
|--------------|-----------|-------------------------|--|
| IST-6WM-M7 | 7mm | IST-6WM60 IST-6WM100 | |
| IST-6WM-M8 | 8mm | | |
| IST-6WM-M10 | 10mm | | |
| IST-6WM-M11 | 11mm | | |
| IST-6WM-M12 | 12mm | | |
| IST-6WM-M13 | 13mm | | |
| IST-6WM-M14 | 14mm | | |
| IST-6WM-M15 | 15mm | | |
| IST-6WM-M16 | 16mm | | |
| IST-6WM-M17 | 17mm | | |
| IST-6WM-M18 | 18mm | | |
| IST-6WM-M19 | 19mm | | |
| IST-6WM-M21 | 21mm | | |
| IST-6WM-M22 | 22mm | | |
| IST-6WM-M13A | 13mm | | IST-6WM200 IST-6WM340 IST-6WM600 |
| IST-6WM-M14A | 14mm | | |
| IST-6WM-M15A | 15mm | | |
| IST-6WM-M16A | 16mm | | |
| IST-6WM-M17A | 17mm | | |
| IST-6WM-M18A | 18mm | | |
| IST-6WM-M19A | 19mm | | |
| IST-6WM-M21A | 21mm | | |

| Code | Open size | Applicable wrenches | |
|--------------|-----------|-------------------------|--|
| IST-6WM-K7 | 7mm | IST-6WM60 IST-6WM100 | |
| IST-6WM-K8 | 8mm | | |
| IST-6WM-K9 | 9mm | | |
| IST-6WM-K10 | 10mm | | |
| IST-6WM-K11 | 11mm | | |
| IST-6WM-K12 | 12mm | | |
| IST-6WM-K13 | 13mm | | |
| IST-6WM-K14 | 14mm | | |
| IST-6WM-K15 | 15mm | | |
| IST-6WM-K16 | 16mm | | |
| IST-6WM-K17 | 17mm | | |
| IST-6WM-K18 | 18mm | | |
| IST-6WM-K19 | 19mm | | |
| IST-6WM-K13A | 13mm | | IST-6WM200 IST-6WM340 IST-6WM600 |
| IST-6WM-K14A | 14mm | | |
| IST-6WM-K15A | 15mm | | |
| IST-6WM-K16A | 16mm | | |
| IST-6WM-K17A | 17mm | | |
| IST-6WM-K18A | 18mm | | |
| IST-6WM-K19A | 19mm | | |
| IST-6WM-K21A | 21mm | | |
| IST-6WM-K22A | 22mm | | |
| IST-6WM-K24A | 24mm | | |



Ratchet head (optional)

| Code | Square driver | Applicable wrenches |
|------------|---------------|--------------------------|
| IST-6WM-R1 | 3/8" | IST-6WM60 IST-6WM100 |
| IST-6WM-R2 | 1/2" | IST-6WM200 IST-6WM340 |
| IST-6WM-R3 | 3/4" | IST-6WM600 |

ACCURACY $\pm 3\%$

ATTENTION: CLOCKWISE OPERATION ONLY

INSPECTION CERTIFICATE



INTERCHANGEABLE HEAD TORQUE WRENCH SETS

Set torque:



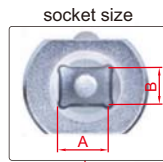
step 1: unlock



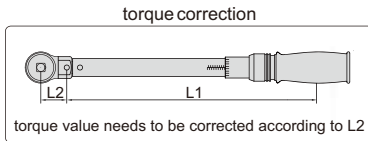
step 2: set



step 3: lock



socket size



torque correction

torque value needs to be corrected according to L2



torque value
torque set lock ring

IST-8WM60



ratchet head (included)



box end head (included, only for IST-8WM10, IST-8WM20, IST-8WM60)



open end head (included)

- According to DIN ISO 6789, ASME B107.300-2010

SPECIFICATION

| Code | IST-8WM10 | IST-8WM20 | IST-8WM60 | IST-8WM100 | IST-8WM200 | IST-8WM340 | IST-8WM400 |
|-------------------|-----------|-----------|-----------|------------|------------|------------|------------|
| Range (clockwise) | 2~10N.m | 4~20N.m | 10~60N.m | 20~100N.m | 40~200N.m | 60~340N.m | 80~400N.m |
| Accuracy | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ | $\pm 3\%$ |
| Graduation | 0.1N.m | 0.1N.m | 0.5N.m | 0.5N.m | 1N.m | 2N.m | 2N.m |
| Socket size (A×B) | 12×9mm | | | 18×14mm | | | |
| Arm length (L1) | 218mm | 261mm | 261mm | 366mm | 420mm | 521mm | 521mm |
| Length | 263mm | 306mm | 306mm | 430mm | 484mm | 585mm | 585mm |
| Weight | 1264g | 1372g | 1372g | 3712g | 3825g | 4047g | 4047g |

STANDARD DELIVERY

| Code | IST-8WM10 | IST-8WM20 | IST-8WM60 | IST-8WM100 | IST-8WM200 | IST-8WM340 | IST-8WM400 |
|---------------|--------------------------|------------|------------|--|------------|------------|------------|
| Torque wrench | 1pc | 1pc | 1pc | 1pc | 1pc | 1pc | 1pc |
| Ratchet head | 1pc (1/4") | 1pc (1/4") | 1pc (3/8") | 1pc (3/8") | 1pc (1/2") | 1pc (1/2") | 1pc (1/2") |
| Box end head | 3pcs (size 10, 13, 17mm) | | | — | | | |
| Open end head | 3pcs (size 10, 13, 17mm) | | | 9pcs (size 13, 14, 15, 17, 19, 22, 24, 27, 30mm) | | | |

ACCURACY $\pm 4\%$

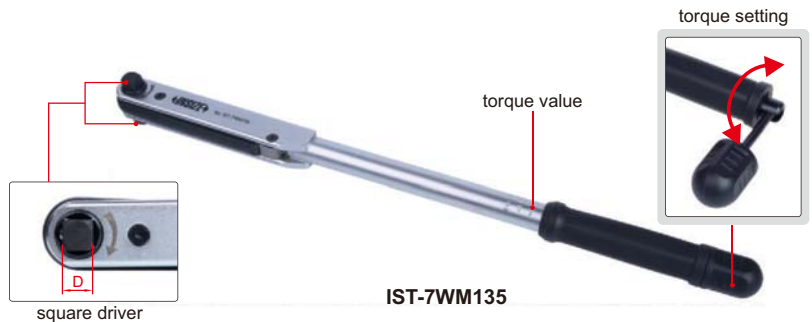
LOUD CLICK SOUND

INSPECTION CERTIFICATE

CLASSIC TORQUE WRENCHES



- Clockwise and counter-clockwise operation
- Unit: N.m, kgf.m, lbf.in, lbf.ft
- Loud click sound when target torque value is reached
- According to DIN ISO 6789, ASME B107.300-2010



square driver

IST-7WM135

SPECIFICATION

| Code | IST-7WM33 | IST-7WM68 | IST-7WM135 | IST-7WM225 | IST-7WM330 | IST-7WM560 | IST-7WM800 | IST-7WM1000 |
|-------------------|-----------|------------|-------------|-------------|-------------|--------------|--------------|---------------|
| Range | 5 ~ 33N.m | 12 ~ 68N.m | 25 ~ 135N.m | 50 ~ 225N.m | 70 ~ 330N.m | 140 ~ 560N.m | 200 ~ 800N.m | 200 ~ 1000N.m |
| Accuracy | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ |
| Graduation | 1N.m | 2N.m | 5N.m | 5N.m | 10N.m | 10N.m | 20N.m | 20N.m |
| Square driver (D) | 1/4" | 3/8" | 1/2" | 1/2" | 1/2" | 3/4" | 3/4" | 1" |
| Length | 425mm | 500mm | 556mm | 600mm | 805mm | 996mm | 1070mm | 1400mm |
| Weight | 720g | 1050g | 1600g | 2300g | 2600g | 7410g | 7580g | 12800g |

DIAL TORQUE WRENCHES

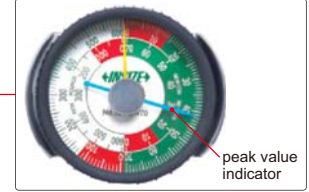
**INSPECTION
CERTIFICATE**

ACCURACY $\pm 4\%$

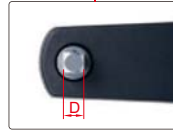


VIDEO

dial with metric and inch scales



peak value indicator



square driver



IST-DW70

SPECIFICATION

| Code | IST-DW3D5 | IST-DW9 | IST-DW18 | IST-DW35 | IST-DW70 | IST-DW140 | IST-DW240 | IST-DW350 |
|-------------------|-------------------------|------------------------|--------------------------|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Range | 0.7~3.5N.m 6~30in.lb | 1.8~9N.m 15~75in.lb | 3.6~18N.m 30~150in.lb | 7~35N.m 60~300in.lb | 14~70N.m 120~600in.lb | 28~140N.m 20~100ft.lb | 48~240N.m 35~175ft.lb | 70~350N.m 50~250ft.lb |
| Accuracy | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ | $\pm 4\%$ |
| Graduation | 0.05N.m 0.5in.lb | 0.1N.m 1in.lb | 0.2N.m 2in.lb | 0.5N.m 5in.lb | 1N.m 10in.lb | 2N.m 1ft.lb | 3N.m 2.5ft.lb | 2.5N.m 2.5ft.lb |
| Square driver (D) | 1/4" | 1/4" | 3/8" | 3/8" | 3/8" | 1/2" | 1/2" | 1/2" |
| Length | 254mm | 254mm | 254mm | 254mm | 378mm | 546mm | 546mm | 546mm |
| Weight | 480g | 480g | 480g | 480g | 820g | 1300g | 1300g | 1300g |

DIGITAL TORQUE ADAPTERS

**INSPECTION
CERTIFICATE**

- Clockwise and counter-clockwise operation
- Set the desired torque first. After reaching the desired torque, set the angle and turn the wrench at this angle to apply extra torque
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- Peak and track working mode
- Target torque or angle value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque or angle value is 80%~100% of target torque or angle
 - Both green and red LED light on and buzzer sounds when target torque or angle value is reached
- Power off in 2 minutes automatically
- Memory 50 measurement values for browsing
- With overload record (once the torque reaches 110% of the maximum range)



IST-5W135A



VIDEO

SPECIFICATION

| Code | | IST-5W30A | IST-5W135A | IST-5W200A | IST-5W340A |
|-------------------|-------------------|----------------------------|------------|------------|------------|
| Range | torque | 6~30N.m | 27~135N.m | 40~200N.m | 68~340N.m |
| | angle | 0~999° | | | |
| Accuracy | clockwise | $\pm 3\%$ | | | |
| | counter-clockwise | $\pm 4\%$ | | | |
| | angle | $\pm 2^\circ$ (rotate 90°) | | | |
| Resolution | torque | 0.01N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| | angle | 1° | | | |
| Square driver (L) | | 1/4" | 3/8" | 1/2" | 1/2" |
| Power supply | | 2xAAA batteries | | | |
| Length | | Ø85×60mm | Ø85×75mm | Ø85×80mm | Ø85×80mm |
| Weight | | 150g | 220g | 240g | 240g |



working with mechanical wrenches

OPTIONAL ACCESSORY

| | |
|-------------------|--------------|
| Calibration cable | IST-SD-CABLE |
|-------------------|--------------|

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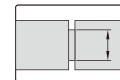
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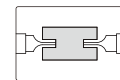
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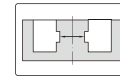
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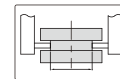
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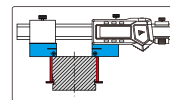
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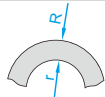
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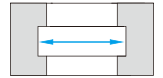


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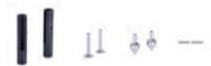
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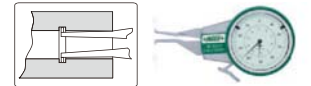
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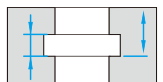


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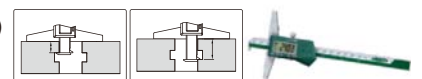
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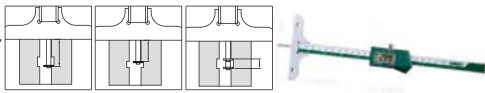
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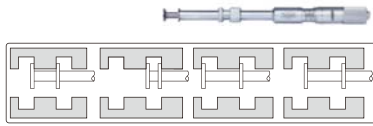
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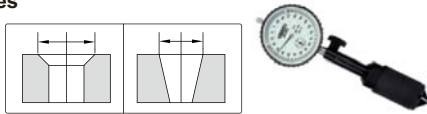
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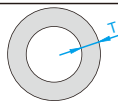
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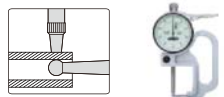
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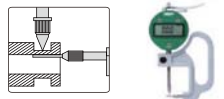
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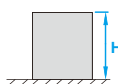
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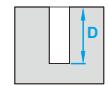
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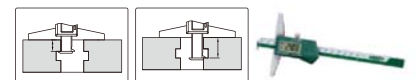
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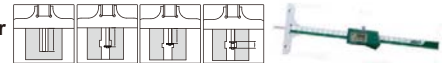
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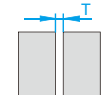
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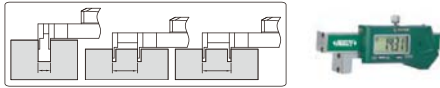
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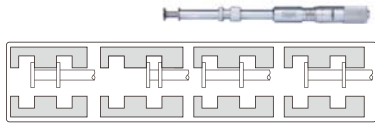
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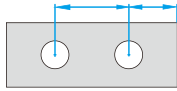


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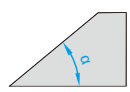


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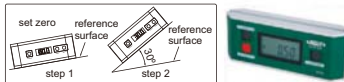
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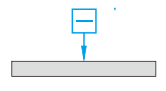


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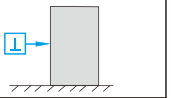


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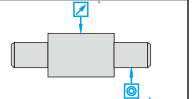


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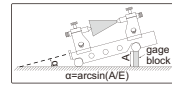
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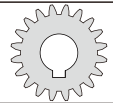


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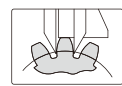


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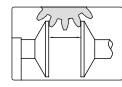
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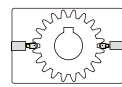
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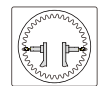
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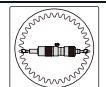
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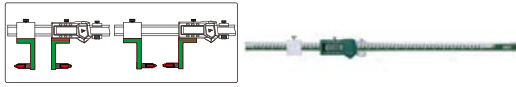
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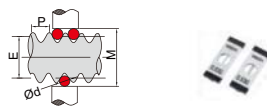
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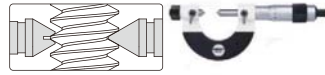
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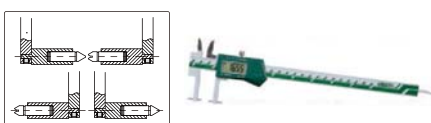
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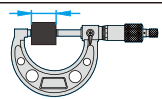
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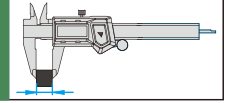
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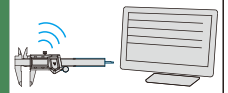
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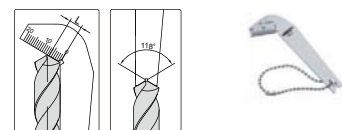
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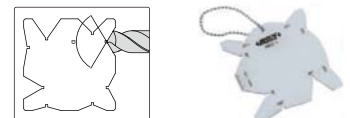
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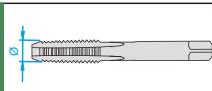
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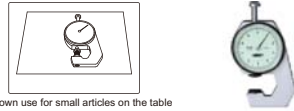


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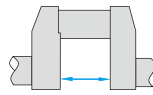


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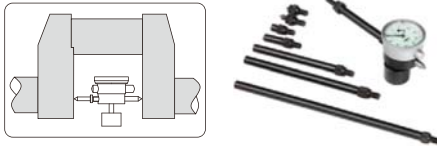


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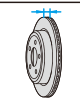
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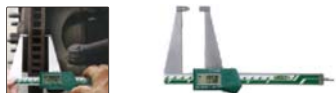


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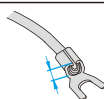


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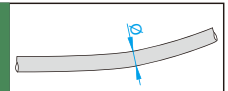


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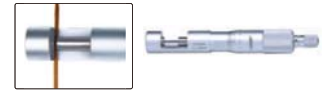


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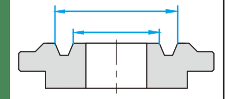


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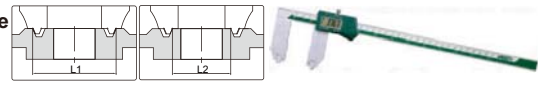


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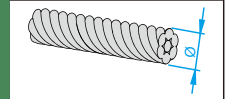


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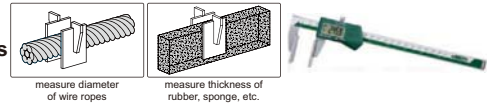


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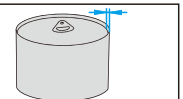


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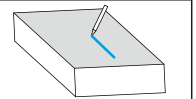


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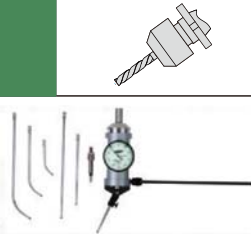


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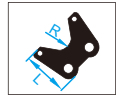


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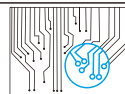
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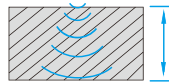
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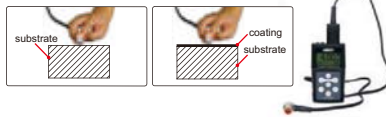
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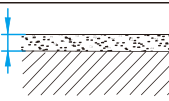
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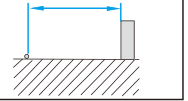
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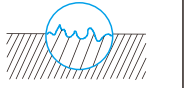
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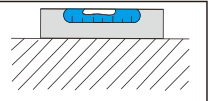
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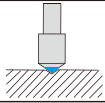
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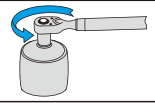
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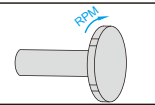
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