

2023
2024



MEASURING INSTRUMENTS

CATALOGUE NO. EU260

**BEST
SELLER**

←INSIZE→

All products in this catalogue are usually stocked and available from INSIZE Europe in Spain (subject to our final confirmation)

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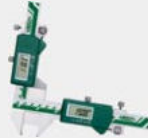
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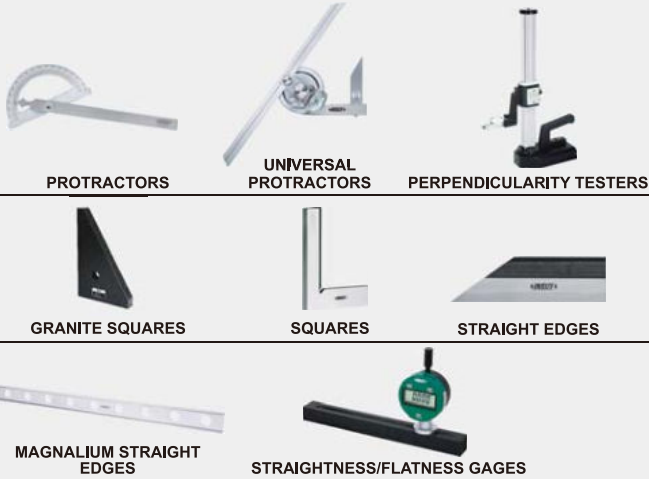
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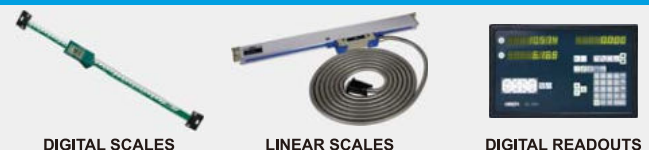
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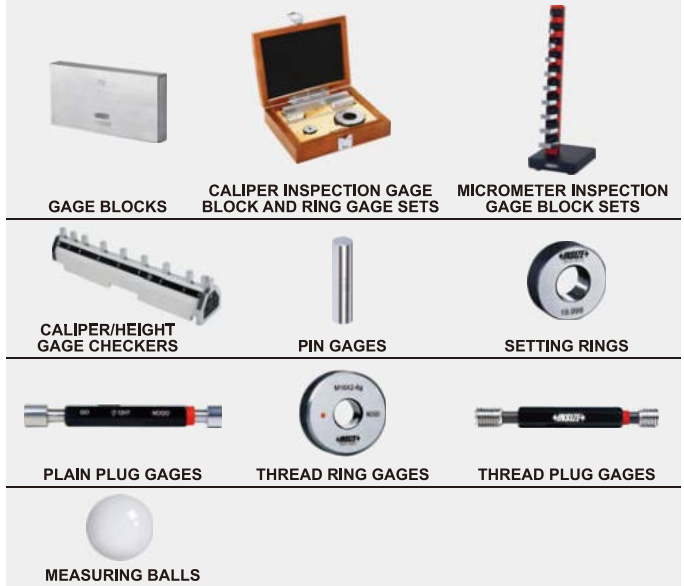
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DIAL CALIPERS



OUTSIDE MICROMETERS



DEPTH MICROMETERS



DIAL INDICATORS

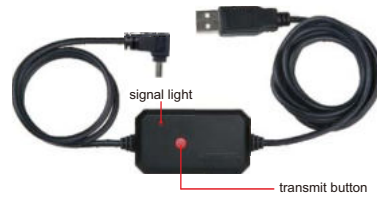


DIAL TEST INDICATORS



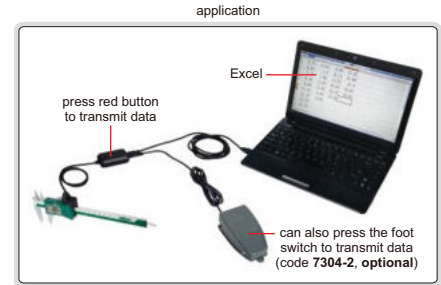
FEELER GAGES

DATA OUTPUT CABLES (KEYBOARD FORMAT)



7302-40M

- Recognized as HID keyboard device by computer, no need to install drivers and softwares
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter, such as 12.34 ✓)
- Suitable for any softwares which can receive keyboard signal
- Optional accessory: foot switch (code: 7304-2), hub (code: 7324-HUB4, 7324-HUB7) extension cables (code: 7325-ADD5, 7325-ADD10)

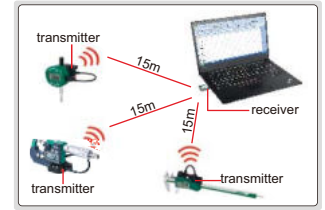
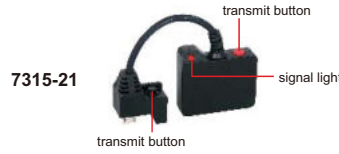


| Code | Description | Plug to product | Plug to computer | Applicable products |
|-----------|---|-----------------|------------------|--|
| 7302-21 | cable for digital calipers (length 3m) | | | <p>digital calipers and digital depth gages</p> |
| 7302-22 | cable for large digital calipers (length 2.5m) | | | <p>large digital calipers (range ≤1000mm) and digital height gages</p> |
| 7302-30 | cable for digital micrometers (length 2.5m) | | | <p>digital micrometers</p> |
| 7302-40M* | cable for digital indicators (length 2.5m) | | | <p>digital indicators</p> |
| 7302-50M | cable for digital gages (length 2.5m) | | | <p>digital thickness gages and digital internal/external caliper gages</p> |
| 7302-60 | cable for high precision digital indicators (length 2.5m) | | | <p>2140-6 and 2133 series high precision digital indicators</p> |

*Long press transmit button to zero the digital indicators

WIRELESS DATA TRANSMISSION SYSTEM

- Through wireless transmission, the measurement data can be transmitted to computers or mobile phones
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (Under the condition of no obstruction and no electromagnetic interference. The transmission distance of built-in wireless measuring tools can be found in their respective introduction.)



Transmitter

- Connecting to digital measuring tools such as calipers, micrometers and indicators
- Press the transmit button to send data
- CR2032 battery

| Code | Description | Plug to product | Remark |
|----------|---|-----------------|---|
| 7315-21 | transmitter for digital calipers | transmit button | digital calipers and digital depth gages |
| 7315-22 | transmitter for large digital calipers | transmit button | large digital calipers (range≤1000mm) and digital height gages |
| 7315-30 | transmitter for digital micrometers | transmit button | digital micrometers |
| 7315-50M | transmitter for digital indicators | transmit button | digital indicators, digital thickness gages and digital internal/external caliper gages |
| 7315-60 | transmitter for high precision digital indicators | transmit button | 2140-6 and 2133 series high precision digital indicators |

Receiver (keyboard signal)

- For computers and mobile phones with windows, android and ios systems
- Recognized as HID keyboard device, press transmit button of transmitter, which is recognized by computers or mobile phones as keyboard input data and press enter, such as 12.34 √.
- No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- Suitable for any softwares which can receive keyboard signal

| Code | Product | Description | Remark |
|--------|----------------|-------------------------|---|
| 7315-3 | USB port | single channel receiver | connected with 1 transmitter only |
| 7315-6 | USB port | multichannel receiver | connected with 6 transmitter, each channel has a transmitter status indicator |
| 7315-7 | type-C port | | |
| 7315-8 | micro USB port | | |
| 7315-9 | lightning port | | |

To be continued

Continued from previous page

Receiver (text format, virtual com port)

- Suitable for computers with windows system
- Text format virtual com port, converted to keyboard format with supplied software
- Supplied with EXCEL directional input software (please refer to the next page for details)
- Measurement data can be transmitted to excel, word, txt etc. and any software which receives keyboard signal

| Code | Product | Description | Remark |
|--------|---------|-----------------------|---|
| 7315-2 | | multichannel receiver | connected with maximum 16 transmitters, each of them has unique identification code |

EXCEL directional input software

- Included in **7315-2** receiver
- The measurement data of multiple measuring tools can be transmitted to the designated area of excel, which facilitates data management and improves efficiency

Excel directional input software (included in 7315-2), application example 1

Set the display area of caliper at B4-B9, the readings of caliper are displayed at B4, B5... B9.
Set the display area of micrometer at C4-C9, the readings of micrometer are displayed at C4, C5... C9.
Set the display area of height gage at D4-D9, the readings of height gage are displayed at D4, D5... D9.

| Project | Length | Width | Height |
|-------------------------|---------|------------|--------------|
| Dimension and Tolerance | 50±0.05 | 24±0.01 | 10±0.05-0.06 |
| Measuring tool | Caliper | Micrometer | Height gage |
| 1 | 50.02 | 24.004 | 9.98 |
| 2 | 50.01 | 24.010 | 10.01 |
| 3 | 49.99 | 23.990 | 10.02 |
| 4 | 50.00 | 23.996 | 9.99 |
| 5 | 50.04 | 24.000 | 10.01 |
| 6 | | | |

serial of workpieces the next data display area is indicated in green

Excel directional input software (included in 7315-2), application example 2

Set the display area of micrometer at B4-C9, data input is from the left to the right, the readings of micrometer are displayed at B4, C4, B5, C5... B9, C9.
Set the display area of caliper at D4-D9, the readings of caliper are displayed at D4, D5... D9.
Set the display area of depth gage at E4-E9, the readings of depth gage are displayed at E4, E5... E9.

| Project | External diameter | External diameter | Length | Depth |
|-------------------------|-------------------|-------------------|---------|------------|
| Dimension and Tolerance | Φ23±0.01-0.02 | Φ21±0.01-0.02 | 50±0.04 | 28±0.05 |
| Measuring tool | Micrometer | Micrometer | Caliper | Depth gage |
| 1 | 23.010 | 21.000 | 49.99 | 28.01 |
| 2 | 23.010 | 21.000 | 50.00 | 27.98 |
| 3 | 23.999 | 21.000 | 50.00 | 28.00 |
| 4 | 23.007 | 20.996 | 50.00 | 28.00 |
| 5 | 23.000 | 20.985 | 50.01 | 28.01 |
| 6 | 23.005 | | | |

serial of workpieces the next data display area is indicated in green

FOOT SWITCH

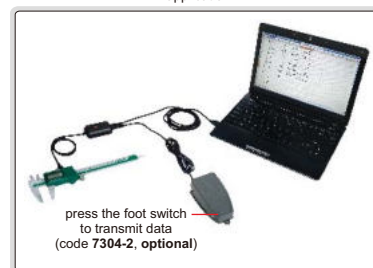
- For data transmission

| Code | Description | Applicable products |
|--------|--|--|
| 7304-2 | data transmission foot switch with cable (length 2m) | 7302 series data cables 7305 series data cables |



7304-2

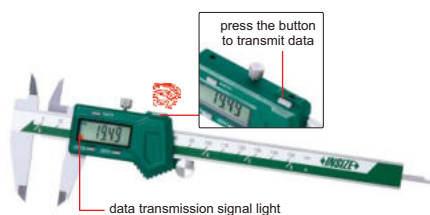
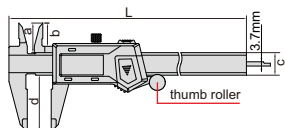
application



press the foot switch to transmit data (code 7304-2, optional)

WIRELESS DIGITAL CALIPERS

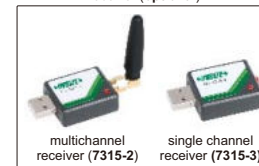
ATTENTION: THE WORKING LIFE OF A BATTERY IS ABOUT 3-5 MONTHS



1113-150

- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 10 meter (under the condition of no obstruction and no electromagnetic interference)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data transmission
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: receiver (code 7315-2/3/6/7/8/9)

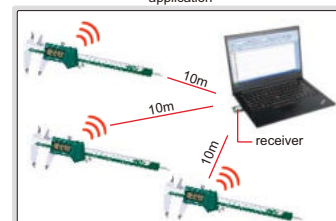
receiver (optional)



| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|------------|---------------|----------|--------------|-----|----|------|----|----|
| 1113-150* | 0-150mm/0-6" | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 |
| 1113-200* | 0-200mm/0-8" | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 |
| 1113-300* | 0-300mm/0-12" | ±0.03mm | with | 400 | 25 | 20.5 | 16 | 60 |
| 1113-150W* | 0-150mm/0-6" | ±0.03mm | without | 236 | 21 | 16 | 16 | 40 |
| 1113-200W* | 0-200mm/0-8" | ±0.03mm | without | 286 | 24 | 19 | 16 | 50 |
| 1113-300W* | 0-300mm/0-12" | ±0.03mm | without | 400 | 25 | 20.5 | 16 | 60 |

*Supplied with manufacturer inspection certificate

application



IP67 WATERPROOF DIGITAL CALIPERS



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

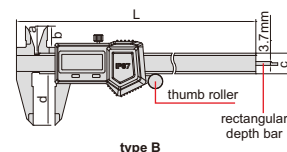
ATTENTION: NO DATA OUTPUT

IP67
WATERPROOF

- Accuracy: $\pm 0.03\text{mm}$
- 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



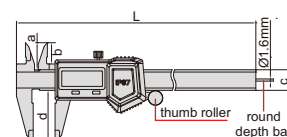
1118-150B



type B



1118-150R



type R

(mm)

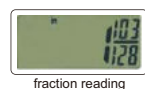
| Code | Range | Thumb roller | Type | L | a | b | c | d |
|-------------|---------------|--------------|------|-----|----|------|----|----|
| 1118-150B* | 0-150mm/0-6" | with | B | 236 | 21 | 16 | 16 | 40 |
| 1118-200B* | 0-200mm/0-8" | with | B | 286 | 24 | 19 | 16 | 50 |
| 1118-300B* | 0-300mm/0-12"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

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS (FRACTION READING)



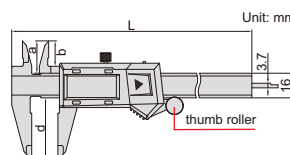
ATTENTION: NO DATA OUTPUT



fraction reading



1102-150



Unit: mm

- Accuracy: $\pm 0.03\text{mm}$
- Resolution: 0.01mm, 0.0005", 1/128"
- Buttons: unit (mm/in/fraction), ABS, on/off, zero
- Absolute and incremental measurement
- Battery CR2032, automatic power off
- Meet DIN862
- Made of stainless steel

| Code | Range | Thumb roller | L | a | b | d |
|------------|---------------|--------------|-----|----|------|----|
| 1102-150* | 0-150mm/0-6" | with | 234 | 20 | 15 | 40 |
| 1102-200* | 0-200mm/0-8" | with | 286 | 24 | 19 | 50 |
| 1102-300* | 0-300mm/0-12" | with | 390 | 26 | 21.5 | 60 |
| 1102-150W* | 0-150mm/0-6" | without | 234 | 20 | 15 | 40 |
| 1102-200W* | 0-200mm/0-8" | without | 286 | 24 | 19 | 50 |
| 1102-300W* | 0-300mm/0-12" | without | 390 | 26 | 21.5 | 60 |

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS (ABSOLUTE SYSTEM)

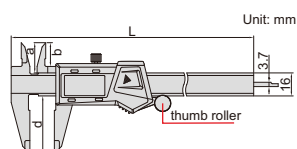


DATA OUTPUT



1103-150

- Absolute system, low power consumption, long battery life
- Accuracy: $\pm 0.03\text{mm}$
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, mm/inch, ORIGIN, ZERO/ABS
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: wireless transmitter, code 7315-1103, data output cable (keyboard format), code 7302-1103



Unit: mm

| Code | Range | Thumb roller | L | a | b | d |
|------------|---------------|--------------|-----|----|------|----|
| 1103-150* | 0-150mm/0-6" | with | 236 | 21 | 16.5 | 40 |
| 1103-200* | 0-200mm/0-8" | with | 286 | 24 | 19.5 | 50 |
| 1103-300* | 0-300mm/0-12" | with | 400 | 26 | 21.5 | 60 |
| 1103-150W* | 0-150mm/0-6" | without | 236 | 21 | 16.5 | 40 |
| 1103-200W* | 0-200mm/0-8" | without | 286 | 24 | 19.5 | 50 |
| 1103-300W* | 0-300mm/0-12" | without | 400 | 26 | 21.5 | 60 |

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS (STANDARD TYPE)

DATA OUTPUT

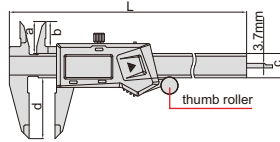
INSPECTION CERTIFICATE

ATTENTION: NOT WATERPROOF



1108-150

- 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 7315-21, 7302-21)



With thumb roller (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|-----------|---------------|----------|-----|----|------|----|----|
| 1108-150* | 0-150mm/0-6" | ±0.02mm | 236 | 21 | 16 | 16 | 40 |
| 1108-200* | 0-200mm/0-8" | ±0.03mm | 286 | 24 | 19 | 16 | 50 |
| 1108-300* | 0-300mm/0-12" | ±0.03mm | 400 | 25 | 20.5 | 16 | 60 |

Without thumb roller (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|------------|---------------|----------|-----|----|------|----|----|
| 1108-150W* | 0-150mm/0-6" | ±0.02mm | 236 | 21 | 16 | 16 | 40 |
| 1108-200W* | 0-200mm/0-8" | ±0.03mm | 286 | 24 | 19 | 16 | 50 |
| 1108-300W* | 0-300mm/0-12" | ±0.03mm | 400 | 25 | 20.5 | 16 | 60 |

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS

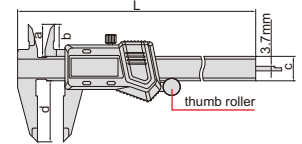
ATTENTION: NO DATA OUTPUT

INSPECTION CERTIFICATE



1114-150A

- 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



With thumb roller (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|------------|---------------|----------|-----|----|------|----|----|
| 1114-150A* | 0-150mm/0-6" | ±0.03mm | 236 | 21 | 16 | 16 | 40 |
| 1114-200A* | 0-200mm/0-8" | ±0.03mm | 286 | 24 | 19 | 16 | 50 |
| 1114-300A* | 0-300mm/0-12" | ±0.03mm | 400 | 25 | 20.5 | 17 | 60 |

Without thumb roller (mm)

| Code | Range | Accuracy | L | a | b | c | d |
|-------------|---------------|----------|-----|----|------|----|----|
| 1114-150AW* | 0-150mm/0-6" | ±0.03mm | 236 | 21 | 16 | 16 | 40 |
| 1114-200AW* | 0-200mm/0-8" | ±0.03mm | 286 | 24 | 19 | 16 | 50 |
| 1114-300AW* | 0-300mm/0-12" | ±0.03mm | 400 | 25 | 20.5 | 17 | 60 |

*Supplied with manufacturer inspection certificate

HEAVY DUTY 300mm DIGITAL CALIPERS

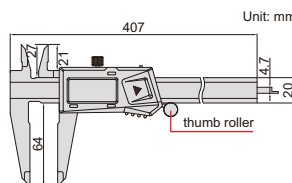
INSPECTION CERTIFICATE

DATA OUTPUT



1196-300

- 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 7315-22, 7302-22)



| Code | Range | Accuracy | Thumb roller |
|------------|---------------|----------|--------------|
| 1196-300* | 0-300mm/0-12" | ±0.03mm | with |
| 1196-300W* | 0-300mm/0-12" | ±0.03mm | without |

*Supplied with manufacturer inspection certificate

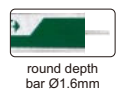
DIGITAL CALIPERS WITH ROUND DEPTH BAR

DATA OUTPUT

INSPECTION CERTIFICATE

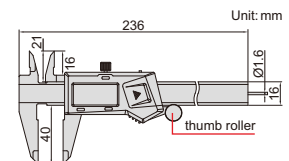


1119-150



round depth bar Ø1.6mm

- 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 7315-21, 7302-21)



| Code | Range | Accuracy | Thumb roller |
|------------|--------------|----------|--------------|
| 1119-150* | 0-150mm/0-6" | ±0.03mm | with |
| 1119-150W* | 0-150mm/0-6" | ±0.03mm | without |

*Supplied with manufacturer inspection certificate

METRIC DIGITAL CALIPERS

DATA OUTPUT

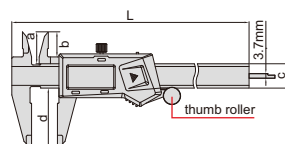
LOCK READING WITH "HOLD" BUTTON

INSPECTION CERTIFICATE



1109-150

- 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 7315-21, 7302-21)



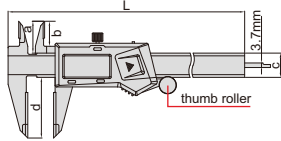
| Code | Range | Accuracy | Thumb roller | L | a | b | c | d |
|------------|---------|----------|--------------|-----|----|------|----|----|
| 1109-150* | 0-150mm | ±0.03mm | with | 236 | 21 | 16 | 16 | 40 |
| 1109-200* | 0-200mm | ±0.03mm | with | 286 | 24 | 19 | 16 | 50 |
| 1109-300* | 0-300mm | ±0.03mm | 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 |

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS WITH CARBIDE TIPPED JAWS

DATA
OUTPUT

INSPECTION
CERTIFICATE



1110-150A



1110-150B

- Accuracy: $\pm 0.03\text{mm}$
- Resolution: $0.01\text{mm}/0.0005''$
- 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 7315-21, 7302-21)

Carbide tipped upper and lower jaws

(mm)

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

Carbide tipped lower jaws

(mm)

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

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS WITH CERAMIC TIPPED JAWS

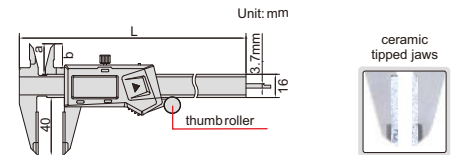
INSPECTION
CERTIFICATE

DATA
OUTPUT

- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic and non electric conductive
- Resolution: $0.01\text{mm}/0.0005''$
- 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 7315-21, 7302-21)



1193-150



| Code | Range | Accuracy | Thumb roller | L | a | b |
|------------|--------------|---------------------|--------------|-----|----|------|
| 1193-150* | 0-150mm/0-6" | $\pm 0.03\text{mm}$ | with | 235 | 21 | 16.5 |
| 1193-150W* | 0-150mm/0-6" | $\pm 0.03\text{mm}$ | without | 235 | 21 | 16.5 |

*Supplied with manufacturer inspection certificate

LEFT HAND DIGITAL CALIPERS

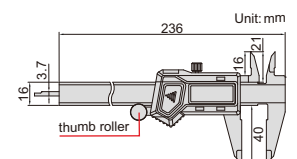
INSPECTION
CERTIFICATE

DATA
OUTPUT

- Designed for left handed users
- Resolution: $0.01\text{mm}/0.0005''$
- 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 7315-22, 7302-22)



1130-150



| Code | Range | Accuracy | Thumb roller |
|------------|--------------|---------------------|--------------|
| 1130-150* | 0-150mm/0-6" | $\pm 0.03\text{mm}$ | with |
| 1130-150W* | 0-150mm/0-6" | $\pm 0.03\text{mm}$ | without |

*Supplied with manufacturer inspection certificate

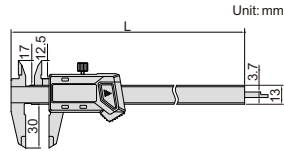
MINI DIGITAL CALIPERS

ATTENTION:
NO DATA OUTPUT



1111-100A

- 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



Unit: mm

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

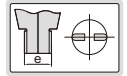
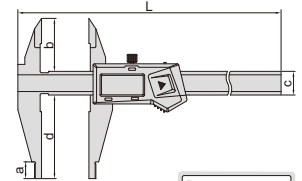
DIGITAL CALIPERS

DATA
OUTPUT



1171-300

- 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 7315-21, 7302-21)



| Code | Range | Accuracy | L | a | b | c | d | e |
|----------|---------------|----------|-----|----|----|----|----|----|
| 1171-200 | 0-200mm/0-8" | ±0.03mm | 320 | 12 | 38 | 17 | 60 | 10 |
| 1171-306 | 0-300mm/0-12" | ±0.04mm | 420 | 12 | 38 | 17 | 60 | 10 |
| 1171-300 | 0-300mm/0-12" | ±0.06mm | 420 | 12 | 38 | 17 | 90 | 10 |

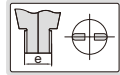
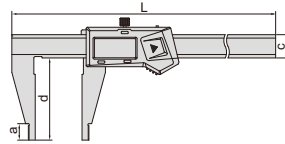
DIGITAL CALIPERS

DATA
OUTPUT



1170-300

- 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 7315-21, 7302-21)



| Code | Range | Accuracy | L | a | c | d | e |
|----------|---------------|----------|-----|----|----|----|----|
| 1170-200 | 0-200mm/0-8" | ±0.03mm | 314 | 12 | 17 | 60 | 10 |
| 1170-306 | 0-300mm/0-12" | ±0.04mm | 420 | 12 | 17 | 60 | 10 |
| 1170-300 | 0-300mm/0-12" | ±0.06mm | 420 | 12 | 17 | 90 | 10 |

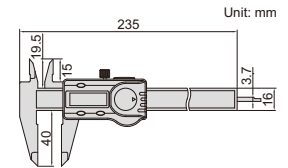
PLASTIC DIGITAL CALIPER

ATTENTION:
NO DATA OUTPUT



1139-150

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



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

DIAL CALIPERS

- Shockproof dial indicator
- Made of stainless steel

INSPECTION
CERTIFICATE

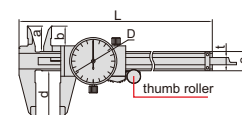
SHOCK
PROOF



1312-150A

| 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 |

| 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 |



*Supplied with manufacturer inspection certificate

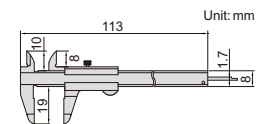
MINI VERNIER CALIPERS

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

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



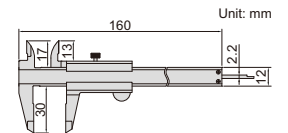
1204-70



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



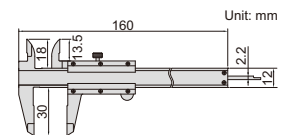
1203-1003



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



1201-1003



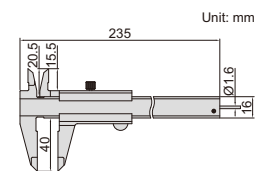
VERNIER CALIPER WITH ROUND DEPTH BAR

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

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



1202-150



VERNIER CALIPERS (ANTI MAGNETIC)

- Suitable for magnetic parts
- Made of pure copper

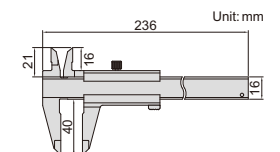
ATTENTION:
NOT HARDENED

PURE
COPPER

| Code | Range | Graduation | Accuracy |
|------------|---------|------------|----------|
| 1224-150A | 0-150mm | 0.02mm | ±0.05mm |
| 1224-1501A | 0-150mm | 0.05mm | ±0.05mm |



1224-150A



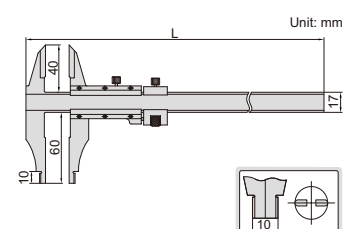
VERNIER CALIPERS

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

| Code | Range | Graduation | Accuracy | L |
|-----------|---------|------------|----------|-------|
| 1217-2503 | 0-250mm | 0.05mm | ±0.05mm | 360mm |
| 1217-3001 | 0-300mm | 0.02mm | ±0.03mm | 410mm |



1217-3001

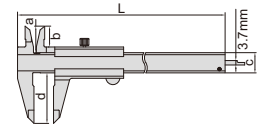


VERNIER CALIPERS

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



1205-1502S



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 |
| 1205-300S | 0-300mm/0-12" | ±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 |
| 1205-3002S | 0-300mm/0-12" | ±0.03mm | 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 (mm)

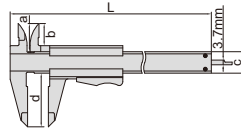
| Code | Range | Accuracy | L | a | b | c | d |
|------------|---------|----------|-----|------|------|----|----|
| 1205-1501S | 0-150mm | ±0.03mm | 235 | 20.5 | 15.5 | 16 | 40 |
| 1205-2001S | 0-200mm | ±0.03mm | 290 | 23.5 | 19 | 17 | 50 |
| 1205-3001S | 0-300mm | ±0.03mm | 414 | 27.5 | 22 | 20 | 64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

VERNIER CALIPERS WITH THUMB CLAMP



1223-150

- 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 |

Graduation 0.02mm/0.001" (mm)

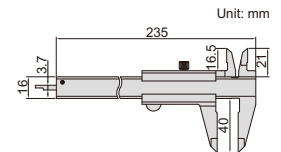
| Code | Range | Accuracy | L | a | b | c | d |
|-----------|--------------|----------|-----|------|------|----|----|
| 1223-1502 | 0-150mm/0-6" | ±0.03mm | 230 | 20.5 | 16.5 | 16 | 40 |
| 1223-2002 | 0-200mm/0-8" | ±0.03mm | 295 | 23.5 | 19 | 16 | 50 |

LEFT HAND VERNIER CALIPERS



1239-1502

- Designed for left handed users
- Made of stainless steel
- Satin chrome plated reading surface



| Code | Range | Graduation | Accuracy |
|-----------|--------------|---------------|----------|
| 1239-150 | 0-150mm/0-6" | 0.05mm/1/128" | ±0.05mm |
| 1239-1502 | 0-150mm/0-6" | 0.02mm/0.001" | ±0.03mm |

DEPTH BASE ATTACHMENTS

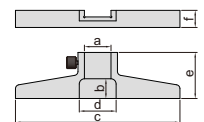
- To increase the stability of depth measurement
- Suitable for digital calipers and dial calipers
- Made of stainless steel



6140



6140-16B



| Code | a | b | c | d | e | f | Type | Application |
|-----------|------|------|-----|------|----|----|----------------------------------|--|
| 6140 | 16.5 | 9 | 75 | 18 | 30 | 6 | narrow base (f=6) | Suitable for calipers with beam width (w) 16mm |
| 6140-300A | 20 | 15 | 125 | 22 | 34 | 9 | narrow base (f=9) | Suitable for calipers with beam width (w) 20mm |
| 6140-16B | 16 | 12.5 | 75 | 24.5 | 30 | 11 | wide base (f=11), high stability | Suitable for calipers with beam width (w) 16mm |



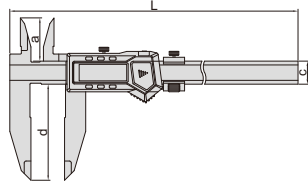
DIGITAL CALIPERS

DATA
OUTPUT



1135-601

- 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 7315-22, 7302-22)



(mm)

| Code | Range | Accuracy | a | 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 |

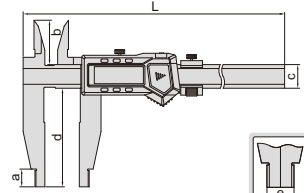
DIGITAL CALIPERS

DATA
OUTPUT



1136-501

- 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 7315-22, 7302-22)



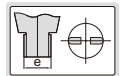
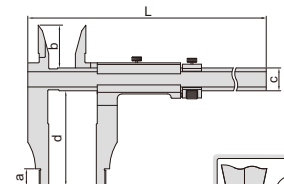
(mm)

| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------------|----------|----|----|----|-----|----|------|
| 1136-301 | 0-300mm/0-12" | ±0.05mm | 18 | 45 | 24 | 100 | 20 | 420 |
| 1136-501 | 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 |
| 1136-601 | 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 |

VERNIER CALIPERS (SOLID TYPE)



1236-511



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

Graduation 0.05mm/1/128"

(mm)

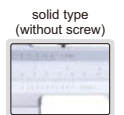
| Code | Range | Accuracy | a | b | c | d | e | L |
|-----------|----------------|----------|----|----|----|-----|----|------|
| 1236-524 | 0-500mm/0-20" | ±0.08mm | 18 | 45 | 24 | 150 | 20 | 670 |
| 1236-614 | 0-600mm/0-24" | ±0.08mm | 18 | 45 | 24 | 100 | 20 | 770 |
| 1236-1024 | 0-1000mm/0-40" | ±0.12mm | 24 | 60 | 31 | 150 | 20 | 1230 |

Graduation 0.02mm

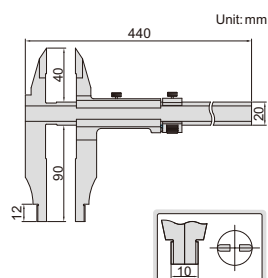
(mm)

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

VERNIER CALIPER (SOLID TYPE)



1207-394



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

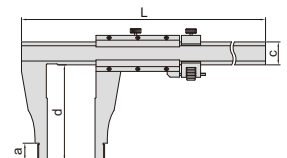
| Code | Range | Accuracy |
|----------|---------------|----------|
| 1207-394 | 0-300mm/0-12" | ±0.07mm |

VERNIER CALIPERS (SEPARATE TYPE)

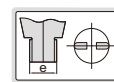
separate type
(with screws)



1214-500



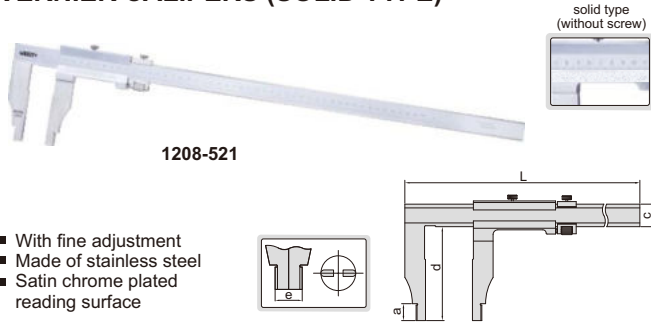
- Graduation 0.02mm/0.001"
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



(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 |

VERNIER CALIPERS (SOLID TYPE)



1208-521

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

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 |
| 1208-824 | 0-800mm/0-32" | ±0.09mm | 24 | 31 | 150 | 20 | 1030 |
| 1208-1024 | 0-1000mm/0-40" | ±0.12mm | 24 | 31 | 150 | 20 | 1230 |

Graduation 0.02mm (mm)

| Code | Range | Accuracy | a | c | d | e | L |
|-----------|----------|----------|----|----|-----|----|------|
| 1208-521 | 0-500mm | ±0.06mm | 18 | 24 | 150 | 20 | 670 |
| 1208-1021 | 0-1000mm | ±0.08mm | 24 | 31 | 150 | 20 | 1230 |

LONG JAW VERNIER CALIPERS (SEPARATE TYPE)



1215-1034

separate type (with screws)



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

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 |

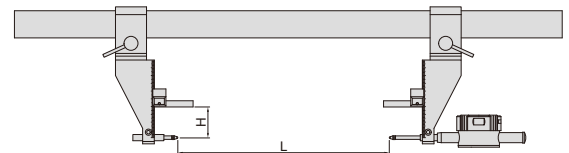
CARBON FIBER COMPARISON GAGES

CARBON FIBER RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, NO TEMPERATURE EXPAND, SUITABLE FOR THIN-WALL WORKPIECES AND LARGE-SIZE WORKPIECES



2931-D1000A

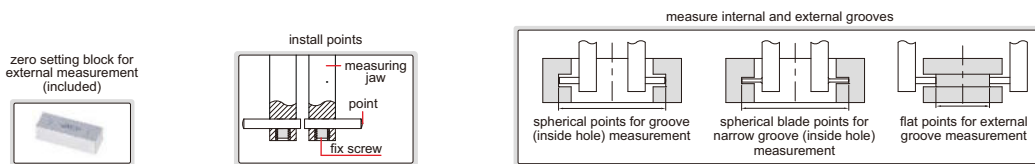
- Measure outer diameter, inside diameter, holes distance and cylindrical workpiece length
- Carbon fiber rods, light weight, not easy to deform, no temperature expand
- Optional accessory: cylinder gage blocks (code 4001)



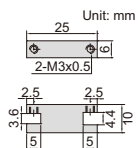
| application | | |
|-------------|--|--|
| | | |
| | | |
| | | |

| Code | Maximum measuring range (L) | Measuring depth (H) | Repeatability | Weight |
|-------------|-----------------------------|---------------------|---------------|--------|
| 2931-D1000A | 1000mm | 0-100mm | 5µm | 2.0kg |
| 2931-D1000B | 1000mm | 0-200mm | 10µm | 2.3kg |
| 2931-D1000C | 1000mm | 0-300mm | 25µm | 2.6kg |
| 2931-D1500A | 1500mm | 0-100mm | 8µm | 2.3kg |
| 2931-D1500B | 1500mm | 0-200mm | 15µm | 2.6kg |
| 2931-D1500C | 1500mm | 0-300mm | 30µm | 2.9kg |
| 2931-D2000A | 2000mm | 0-100mm | 10µm | 2.6kg |
| 2931-D2000B | 2000mm | 0-200mm | 20µm | 2.9kg |
| 2931-D2000C | 2000mm | 0-300mm | 35µm | 3.2kg |
| 2931-D2500A | 2500mm | 0-100mm | 12µm | 2.9kg |
| 2931-D2500B | 2500mm | 0-200mm | 25µm | 3.2kg |
| 2931-D2500C | 2500mm | 0-300mm | 50µm | 3.5kg |
| 2931-D3000A | 3000mm | 0-100mm | 14µm | 3.2kg |
| 2931-D3000B | 3000mm | 0-200mm | 30µm | 3.5kg |
| 2931-D3000C | 3000mm | 0-300mm | 60µm | 3.8kg |
| 2931-D4000A | 4000mm | 0-100mm | 16µm | 3.8kg |
| 2931-D4000B | 4000mm | 0-200mm | 35µm | 4.1kg |
| 2931-D4000C | 4000mm | 0-300mm | 65µm | 4.4kg |

Continued from previous page

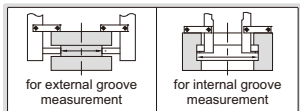


Depth stop (optional)

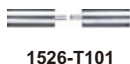


6143

Code
6143

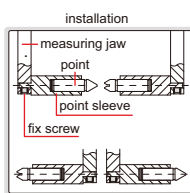
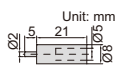


Point sleeve (optional)



1526-T101

Code
1526-T101



Ball points (optional)

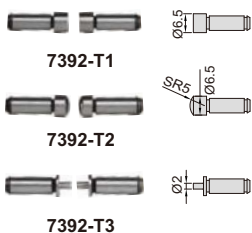


7391-T5

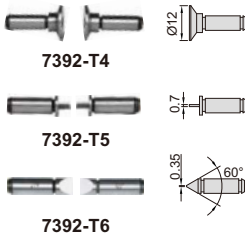
| Code | Ball dia. (D) |
|------------|---------------|
| 7391-T3 * | SØ2.0mm |
| 7391-T4 * | SØ2.5mm |
| 7391-T5 * | SØ3.0mm |
| 7391-T6 * | SØ3.5mm |
| 7391-T7 * | SØ4.0mm |
| 7391-T8 * | SØ4.5mm |
| 7391-T9 * | SØ5.0mm |
| 7391-T10 * | SØ6.0mm |

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

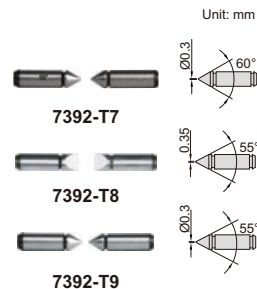
Multifunctional points (optional)



7392-T3



7392-T6



7392-T9

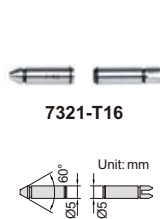
| Code | Type |
|-----------|-----------|
| 7392-T1 * | flat |
| 7392-T2 * | spherical |
| 7392-T3 * | spline |

| Code | Type |
|-----------|------------|
| 7392-T4 * | disk |
| 7392-T5 * | blade |
| 7392-T6 * | knife-edge |

| Code | Type |
|-----------|------------|
| 7392-T7 * | point |
| 7392-T8 * | knife-edge |
| 7392-T9 * | point |

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

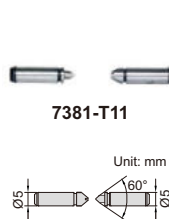
Screw thread points (optional)



7321-T16

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 |



7381-T11

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 |

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

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS CODE 1124-300A



DATA
OUTPUT

short spherical/flat points (included)



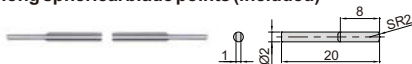
long spherical/flat points (included)



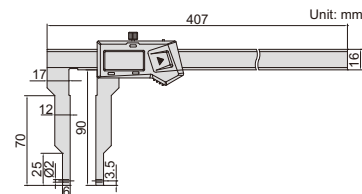
short spherical blade points (included)



long spherical blade points (included)



1124-300A



depth stop 6143
(optional)



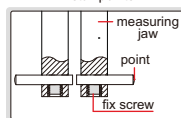
preset buttons



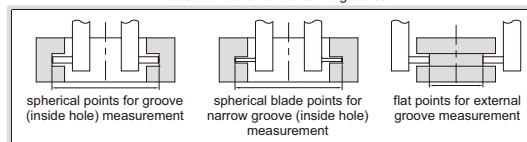
zero setting block for
external measurement
(included)



install points



measure internal and external grooves



- 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 7315-21, 7302-21)

| 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)



Ball points 7391* (optional)



Screw thread points 7381*, 7321* (optional)



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

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS



VARIOUS POINTS
ARE AVAILABLE

DATA
OUTPUT



1530-300

- 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, depth stop (code 6143), data output cable (code 7315-21, 7302-21)

preset buttons



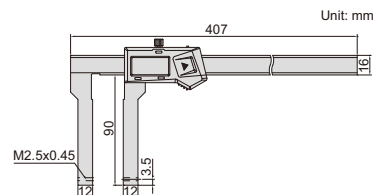
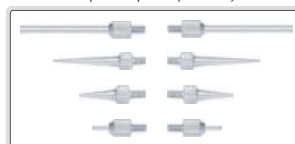
depth stop 6143
(optional)



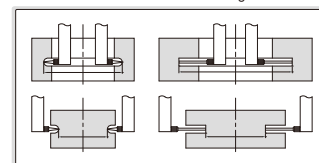
zero setting block for
external measurement
(included)



4 pairs of points (included)



measure internal and external grooves



| Code | Range* | Accuracy |
|----------|---------------|----------|
| 1530-300 | 0-300mm/0-12" | ±0.04mm |

*For different points, the measuring range changes accordingly

DIGITAL INSIDE GROOVE CALIPERS

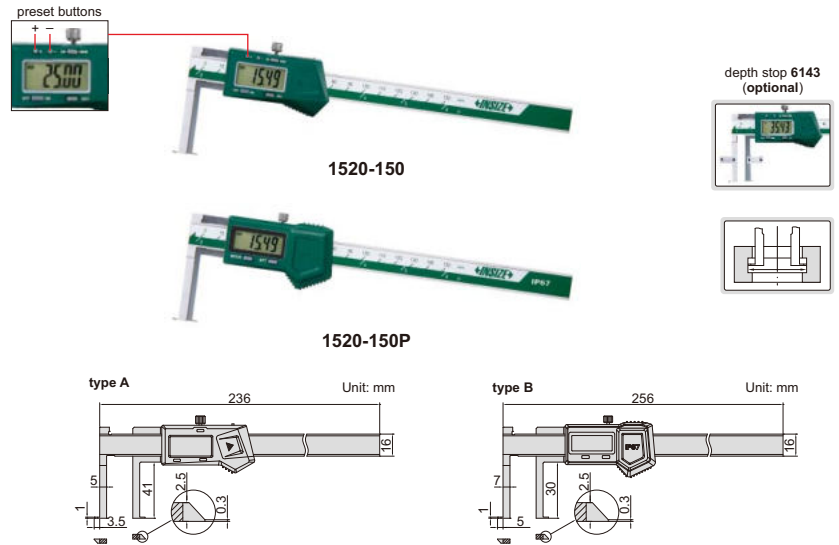
- Measure diameter of grooves inside small bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -), type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

No dust/waterproof, with data interface
(data output cable code 7315-21, 7302-21, optional)

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

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

| Code | Range | Type | Accuracy |
|-----------|------------------|------|----------|
| 1520-150P | 14-150mm/0.56-6" | B | ±0.04mm |



DIGITAL INSIDE GROOVE CALIPERS

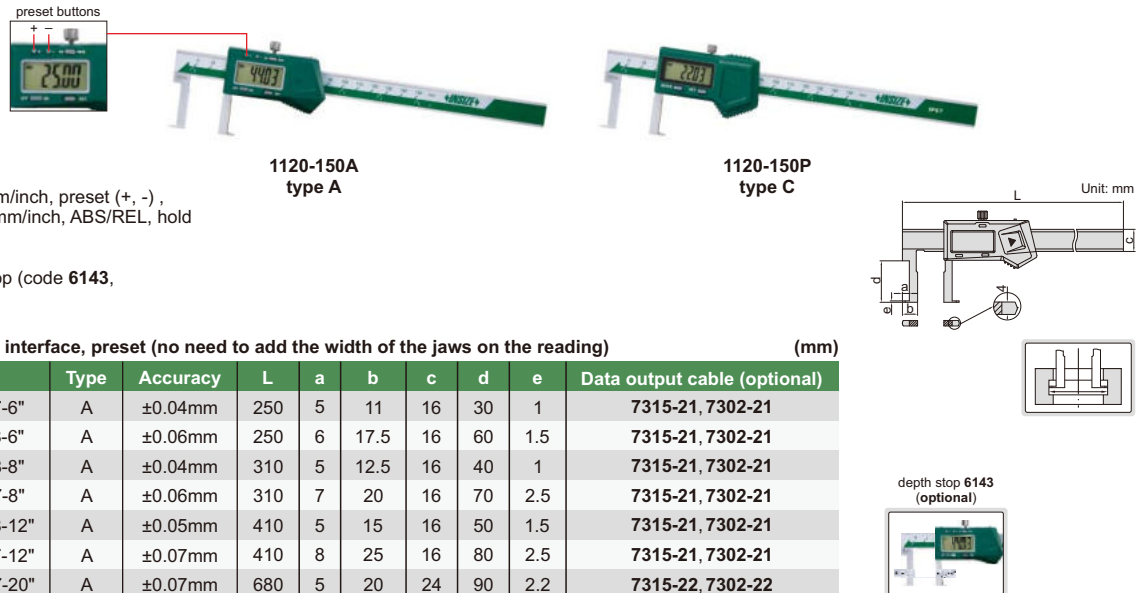
- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -), type C: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143, for calipers with c=16mm)

No dust/waterproof, with data interface, preset (no need to add the width of the jaws on the reading) (mm)

| Code | Range | Type | Accuracy | L | a | b | c | d | e | Data output cable (optional) |
|-----------|-------------------|------|----------|-----|---|------|----|----|-----|------------------------------|
| 1120-150A | 22-150mm/0.87-6" | A | ±0.04mm | 250 | 5 | 11 | 16 | 30 | 1 | 7315-21, 7302-21 |
| 1120-1501 | 35-150mm/1.38-6" | A | ±0.06mm | 250 | 6 | 17.5 | 16 | 60 | 1.5 | 7315-21, 7302-21 |
| 1120-200A | 25-200mm/0.98-8" | A | ±0.04mm | 310 | 5 | 12.5 | 16 | 40 | 1 | 7315-21, 7302-21 |
| 1120-2001 | 40-200mm/1.57-8" | A | ±0.06mm | 310 | 7 | 20 | 16 | 70 | 2.5 | 7315-21, 7302-21 |
| 1120-300A | 30-300mm/1.18-12" | A | ±0.05mm | 410 | 5 | 15 | 16 | 50 | 1.5 | 7315-21, 7302-21 |
| 1120-3001 | 50-300mm/1.97-12" | A | ±0.07mm | 410 | 8 | 25 | 16 | 80 | 2.5 | 7315-21, 7302-21 |
| 1120-500 | 40-500mm/1.57-20" | A | ±0.07mm | 680 | 5 | 20 | 24 | 90 | 2.2 | 7315-22, 7302-22 |

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time, no preset (no need to add the width of the jaws on the reading) (mm)

| Code | Range | Type | Accuracy | L | a | b | c | d | e |
|-----------|------------------|------|----------|-----|---|----|----|----|---|
| 1120-150P | 22-150mm/0.87-6" | C | ±0.04mm | 250 | 5 | 11 | 16 | 30 | 1 |

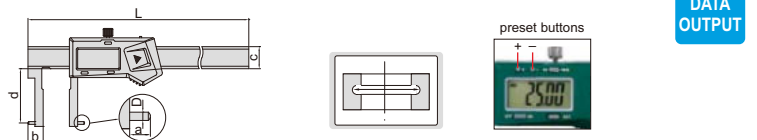


DIGITAL INSIDE POINT CALIPERS

- 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, for calipers with c=16mm)



1121-150A



With data interface, preset (no need to add the width of the jaws on the reading) (mm)

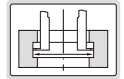
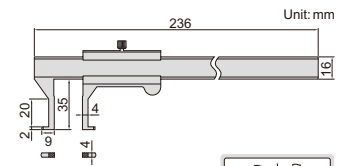
| Code | Range | Accuracy | L | a | b | c | d | D | Data output cable (optional) |
|------------|-------------------|----------|-----|---|------|----|----|----|------------------------------|
| 1121-150A | 24-150mm/0.94-6" | ±0.04mm | 250 | 5 | 12 | 16 | 28 | Ø2 | 7315-21, 7302-21 |
| 1121-1501 | 35-150mm/1.38-6" | ±0.05mm | 250 | 6 | 17.5 | 16 | 60 | Ø2 | 7315-21, 7302-21 |
| 1121-200A | 25-200mm/0.98-8" | ±0.04mm | 310 | 5 | 12.5 | 16 | 37 | Ø2 | 7315-21, 7302-21 |
| 1121-2001 | 40-200mm/1.57-8" | ±0.05mm | 310 | 7 | 20 | 16 | 70 | Ø3 | 7315-21, 7302-21 |
| 1121-300A | 30-300mm/1.18-12" | ±0.07mm | 410 | 5 | 15 | 16 | 50 | Ø2 | 7315-21, 7302-21 |
| 1121-3001A | 50-300mm/1.97-12" | ±0.07mm | 410 | 8 | 25 | 16 | 77 | Ø3 | 7315-21, 7302-21 |
| 1121-500A | 40-500mm/1.57-20" | ±0.07mm | 680 | 5 | 20 | 24 | 90 | Ø3 | 7315-22, 7302-22 |

INSIDE GROOVE VERNIER CALIPER

- Measure diameter of grooves inside bores
- Made of stainless steel
- Satin chrome plated reading surface

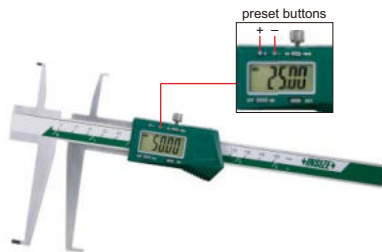


1262-150A

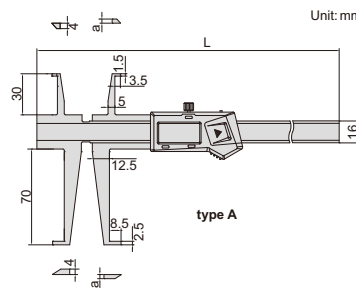


| Code | Range | Graduation | Accuracy |
|-----------|----------|------------|----------|
| 1262-150A | 18-150mm | 0.02mm | ±0.04mm |

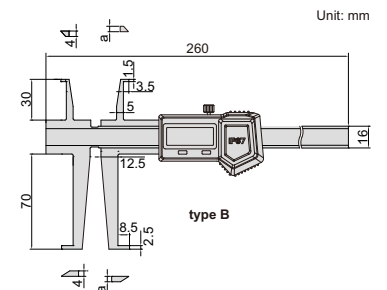
DIGITAL INSIDE GROOVE CALIPERS



1176-150



type A



type B

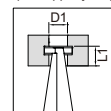


1176-150P



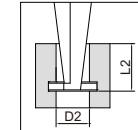
depth stop 6143 (optional)

sizes to be measured (use upper jaws)



| D1 | L1 |
|---------|-----|
| Ø9 | <8 |
| Ø10 | <15 |
| Ø11-200 | <30 |

sizes to be measured (use lower jaws)



| (mm) | |
|---------|-----|
| D2 | L2 |
| Ø17 | <16 |
| Ø18 | <28 |
| Ø19 | <40 |
| Ø20 | <50 |
| Ø21 | <58 |
| Ø22-200 | <70 |

No dust/waterproof, with data interface (data output cable code 7315-21, 7302-21, optional)

| Code | Range of upper jaw | Range of lower jaw | Type | Accuracy | L | a |
|----------|--------------------|--------------------|------|----------|-------|-------|
| 1176-150 | 9-150mm/0.35-6" | 17-150mm/0.70-6" | A | ±0.04mm | 260mm | 3mm |
| 1176-200 | 9-200mm/0.35-8" | 17-200mm/0.70-8" | A | ±0.05mm | 320mm | 3.5mm |

- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -), type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

| Code | Range of upper jaw | Range of lower jaw | Type | Accuracy | a |
|-----------|--------------------|--------------------|------|----------|-----|
| 1176-150P | 9-150mm/0.35-6" | 17-150mm/0.70-6" | B | ±0.04mm | 4mm |

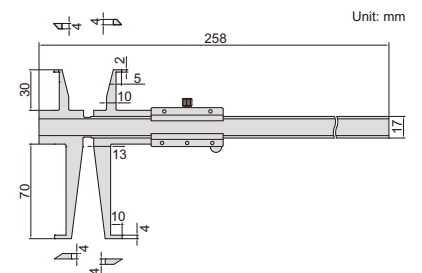
INSIDE GROOVE CALIPER



depth stop 6143 (optional)



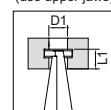
1199-150



- Measure diameter of grooves inside bores
- Graduation: 0.02mm
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

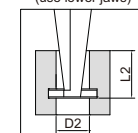
| Code | Range of upper jaw | Range of lower jaw | Accuracy |
|----------|--------------------|--------------------|----------|
| 1199-150 | 11-150mm | 18-150mm | ±0.03mm |

sizes to be measured (use upper jaws)



| (mm) | |
|---------|-----|
| D1 | L1 |
| Ø11 | <8 |
| Ø12 | <10 |
| Ø13 | <15 |
| Ø14 | <20 |
| Ø15-150 | <30 |

sizes to be measured (use lower jaws)



| (mm) | |
|---------|-----|
| D2 | L2 |
| Ø18 | <20 |
| Ø19 | <28 |
| Ø20 | <35 |
| Ø21 | <40 |
| Ø22 | <50 |
| Ø23-150 | <70 |

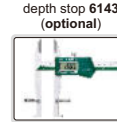
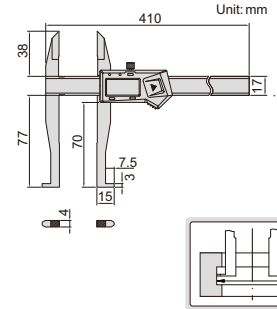
DIGITAL DEEP HOLE INSIDE GROOVE CALIPER

DATA OUTPUT

- Measure diameter of grooves inside deep holes
- 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 7315-21, 7302-21)



1129-300



| Code | Range of upper jaw | Range of lower jaw | Accuracy |
|----------|--------------------|--------------------|----------|
| 1129-300 | 0-300mm/0-12" | 30-300mm/1.2-12" | ±0.04mm |

DIGITAL INSIDE GROOVE CALIPERS

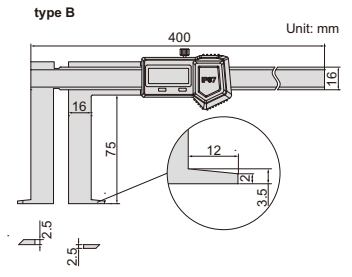
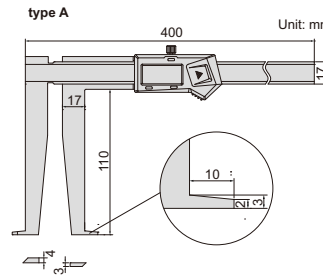


1178-300



1178-300P

- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -), type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)



No dust/waterproof, with data interface (data output cable code 7315-21, 7302-21, optional)

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

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

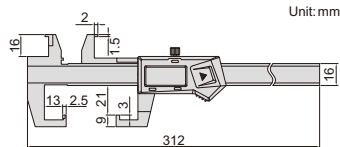
| Code | Range | Type | Accuracy |
|-----------|-------------------|------|----------|
| 1178-300P | 33-300mm/1.30-12" | B | ±0.05mm |

DIGITAL INSIDE GROOVE CALIPER

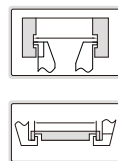
DATA OUTPUT



1128-200



- Measure distance of grooves
- 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 7315-21, 7302-21)



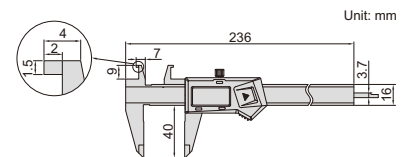
| Code | Range of upper jaw | Range of lower jaw | Accuracy |
|----------|--------------------|--------------------|----------|
| 1128-200 | 10-200mm/0.39-8" | 3-200mm/0.12-8" | ±0.03mm |

DIGITAL INSIDE GROOVE CALIPER

DATA OUTPUT



1191-150



- Upper jaws for measuring diameter of 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 7315-21, 7302-21)

| Code | Range of upper jaw | Range of lower jaw | Accuracy |
|----------|--------------------|--------------------|----------|
| 1191-150 | 8-150mm/0.3-6" | 0-150mm/0-6" | ±0.03mm |

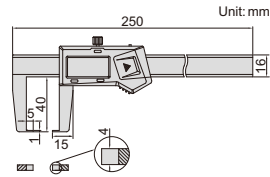
DIGITAL OUTSIDE NECK CALIPER

DATA
OUTPUT



1187-150A

- 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 7315-21, 7302-21)



depth stop 6143
(optional)



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

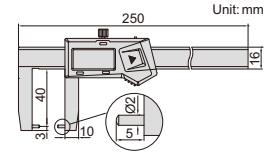
DIGITAL OUTSIDE POINT CALIPER

DATA
OUTPUT



1185-150A

- 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 7315-21, 7302-21)



depth stop 6143
(optional)



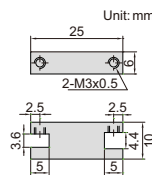
| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1185-150A | 0-150mm/0-6" | ±0.04mm |

DEPTH STOP FOR CALIPERS

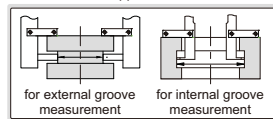


6143

- Supplied in pairs
- Made of stainless steel
- Suitable for caliper series 1124, 1526, 1530, 1520, 1176, 1178, 1120, 1121, 1187, 1129 and 1185



application



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



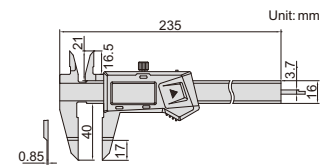
DIGITAL BLADE CALIPER

DATA
OUTPUT

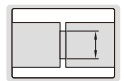


1188-150A

- 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 7315-21, 7302-21)



| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1188-150A | 0-150mm/0-6" | ±0.03mm |



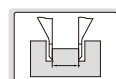
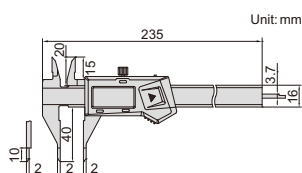
DIGITAL SMALL POINT CALIPER

DATA
OUTPUT



1169-150

- 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 7315-21, 7302-21)



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

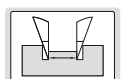
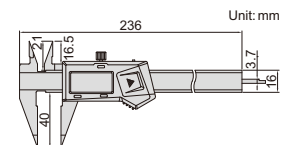
DIGITAL POINT CALIPER

DATA
OUTPUT



1183-150A

- 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 7315-21, 7302-21)



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

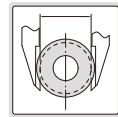
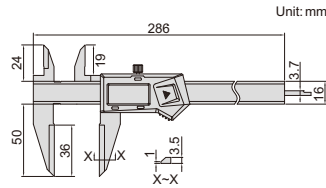
DIGITAL CALIPER WITH KNIFE-EDGE LOWER JAWS

DATA OUTPUT



1532-200

- Measure diameter of narrow 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 7315-21, 7302-21)



| Code | Range | Accuracy |
|----------|--------------|----------|
| 1532-200 | 0-200mm/0-8" | ±0.03mm |

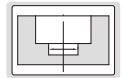
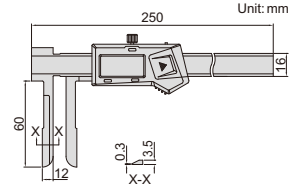
DIGITAL INSIDE KNIFE-EDGE CALIPER

DATA OUTPUT



1123-150A

- 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 7315-21, 7302-21)



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

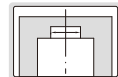
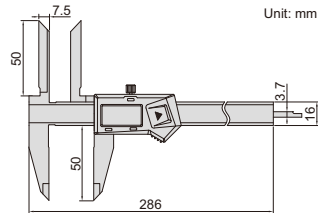
DIGITAL CALIPER WITH LONG UPPER JAWS

DATA OUTPUT



1138-200

- Long upper jaws for measuring diameter of deep 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 7315-21, 7302-21)



| Code | Range | Accuracy |
|----------|--------------|----------|
| 1138-200 | 0-200mm/0-8" | ±0.04mm |

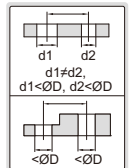
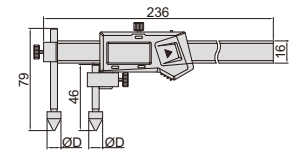
DIGITAL OFFSET CENTERLINE CALIPER

DATA OUTPUT



1192-150A

- 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 7315-21, 7302-21)



| Code | Range | Accuracy | ØD |
|-----------|-----------------|----------|------|
| 1192-150A | 10-150mm/0.4-6" | ±0.05mm | 10mm |

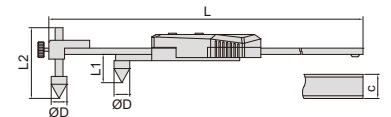
DIGITAL BACK-JAW CENTERLINE CALIPERS

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

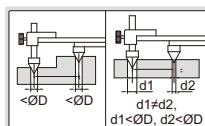


1177-200



(mm)

| Code | Range | Accuracy | ØD | c | L1 | L2 | L | Data output cable (optional) |
|-----------|-------------------|----------|----|----|----|----|------|------------------------------|
| 1177-200 | 10-200mm/0.4-8" | ±0.10mm | 10 | 16 | 18 | 45 | 310 | 7315-21, 7302-21 |
| 1177-300 | 10-300mm/0.4-12" | ±0.10mm | 10 | 16 | 18 | 45 | 410 | 7315-21, 7302-21 |
| 1177-500 | 20-500mm/0.8-20" | ±0.10mm | 20 | 24 | 26 | 70 | 692 | 7315-22, 7302-22 |
| 1177-1000 | 30-1000mm/1.2-40" | ±0.12mm | 30 | 31 | 39 | 70 | 1242 | 7315-22, 7302-22 |
| 1177-1500 | 30-1500mm/1.2-60" | ±0.15mm | 30 | 31 | 39 | 70 | 1745 | 7315-22, 7302-22 |



DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS

DATA OUTPUT

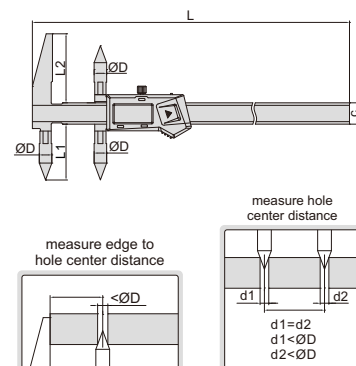
- Measure hole center distance or edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel



1525-300

(mm)

| Code | Range of upper jaw (edge to center) | Range of lower jaw (center to center) | Accuracy | ØD | L1 | L2 | c | L | Data output cable (optional) |
|-----------|-------------------------------------|---------------------------------------|----------|----|------|----|----|------|------------------------------|
| 1525-300 | 5-300mm/0.2-12" | 10-300mm/0.4-12" | ±0.08mm | 10 | 44.5 | 55 | 17 | 410 | 7315-21, 7302-21 |
| 1525-500 | 10-500mm/0.4-20" | 20-500mm/0.8-20" | ±0.09mm | 20 | 50 | 60 | 24 | 690 | 7315-22, 7302-22 |
| 1525-1000 | 15-1000mm/0.6-40" | 30-1000mm/1.2-40" | ±0.12mm | 30 | 70 | 81 | 31 | 1255 | 7315-22, 7302-22 |
| 1525-1500 | 15-1500mm/0.6-60" | 30-1500mm/1.2-60" | ±0.15mm | 30 | 70 | 81 | 31 | 1760 | 7315-22, 7302-22 |



DIGITAL BACK-JAW EDGE TO CENTER CALIPERS

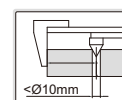
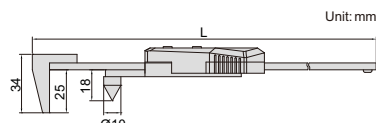
DATA OUTPUT

- 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 7315-21, 7302-21)



1524-200

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



DIGITAL HOOK CALIPER

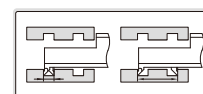
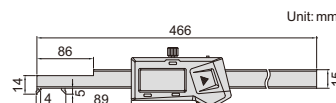
DATA OUTPUT

- Measure width and distance of grooves 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 7315-21, 7302-21)



1122-300

| Code | Range | Accuracy |
|----------|------------------|----------|
| 1122-300 | 4-300mm/0.16-12" | ±0.04mm |



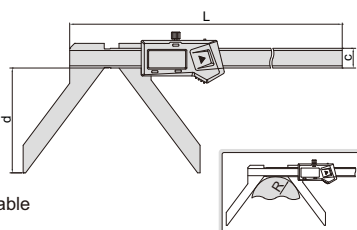
DIGITAL ARC RADIUS CALIPERS

DATA OUTPUT



1189-150B

- 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 7315-21, 7302-21)



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

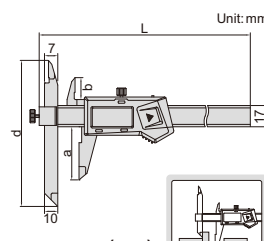
DIGITAL OFFSET CALIPERS

DATA OUTPUT



1186-150A

- 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 7315-21, 7302-21)



| Code | Range | Accuracy | L | a | b | d |
|-----------|---------------|----------|-----|----|------|-----|
| 1186-150A | 0-150mm/0-6" | ±0.04mm | 249 | 40 | 16.5 | 110 |
| 1186-300A | 0-300mm/0-12" | ±0.05mm | 399 | 60 | 20.5 | 130 |

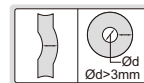
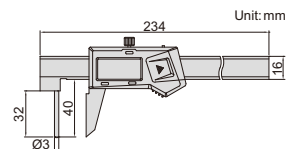
DIGITAL TUBE THICKNESS CALIPER

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 7315-21, 7302-21)



1161-150A



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

DIGITAL RTJ RING GROOVE CALIPERS

DATA OUTPUT

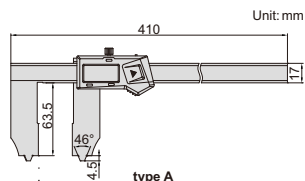
- Measure ring grooves of flange
- Resolution: 0.01mm/0.0005"
- Button function: on/off, set, zero, mm/inch, data preset
- Battery CR2032, data output
- Made of stainless steel



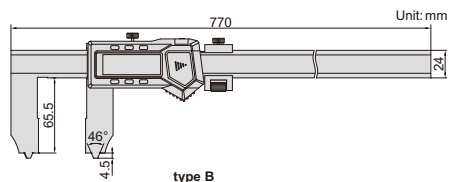
1179-300 type A



1179-600 type B

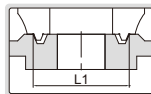


type A

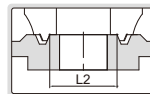


type B

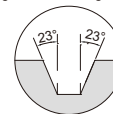
measure outside diameter of RTJ ring groove



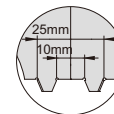
measure inside diameter of RTJ ring groove



applicable for RTJ ring grooves with angle 23°



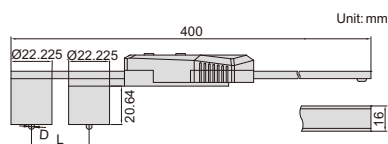
10mm and 25mm need to be added on the reading



| Code | Range (inside diameter of RTJ ring groove) | Range (outside diameter of RTJ ring groove) | Angle of RTJ ring groove | Accuracy | Type | Data output cable (optional) |
|----------|--|---|--------------------------|----------|------|------------------------------|
| 1179-300 | 10-300mm/0.4-12" | 25-300mm/1-12" | 23° | ±0.06mm | A | 7315-21, 7302-21 |
| 1179-600 | 10-600mm/0.4-24" | 25-600mm/1-24" | 23° | ±0.07mm | B | 7315-22, 7302-22 |

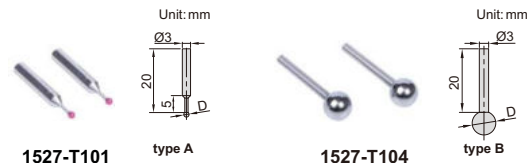
DIGITAL CALIPER WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT



1527-3001

Ball tips (optional, supplied in pair)



1527-T101

type A

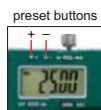
1527-T104

type B

- Resolution 0.01mm/.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: ball tips, data output cable (code 7315-21, 7302-21)

| Code | Range | Accuracy |
|-----------|------------------|----------|
| 1527-3001 | (22.22+D)~300mm* | ±0.03mm |

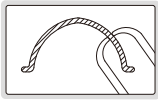
*"D" is the diameter of ball tips.



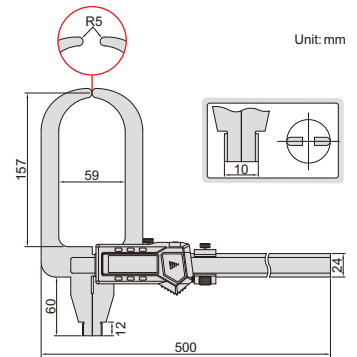
| Code | Diameter (D) | Accuracy of diameter | Type | Material |
|-----------|-------------------|----------------------|------|-----------------|
| 1527-T101 | 1/16" (Ø1.5875mm) | ±0.005mm | A | ruby |
| 1527-T102 | 1/8" (Ø3.175mm) | ±0.005mm | B | stainless steel |
| 1527-T103 | 3/16" (Ø4.7625mm) | ±0.005mm | B | stainless steel |
| 1527-T104 | 1/4" (Ø6.35mm) | ±0.005mm | B | stainless steel |
| 1527-T105 | 3/8" (Ø9.525mm) | ±0.005mm | B | stainless steel |
| 1527-T106 | 1/2" (Ø12.7mm) | ±0.005mm | B | stainless steel |

DIGITAL WALL THICKNESS CALIPER

DATA OUTPUT



1536-300



Unit: mm

- Measure wall thickness of helmets, domes and curved pots
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS, data 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 7315-22, 7302-22)

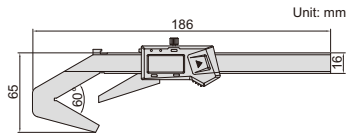
| Code | Range | Accuracy |
|----------|---------------|----------|
| 1536-300 | 0-300mm/0-12" | ±0.05mm |

DIGITAL V SHAPE CALIPER

ATTENTION: ACTUAL DIAMETER IS 2/3 OF THE READING



1539-3



Unit: mm

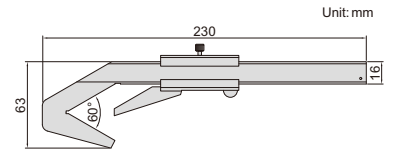
- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel

| Code | Range | Accuracy |
|--------|--------------------------|----------|
| 1539-3 | Ø4-Ø40mm/0.16"-1.58" DIA | ±0.03mm |

V SHAPE VERNIER CALIPER



1273-403



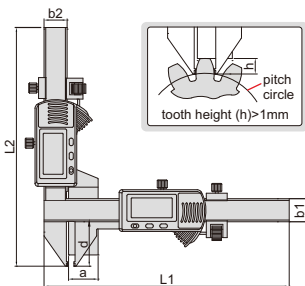
Unit: mm

- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface

| Code | Range | Graduation | Accuracy |
|----------|---------|------------|----------|
| 1273-403 | Ø4-40mm | 0.05mm | ±0.05mm |

DIGITAL GEAR TOOTH CALIPERS

ATTENTION: NO DATA OUTPUT



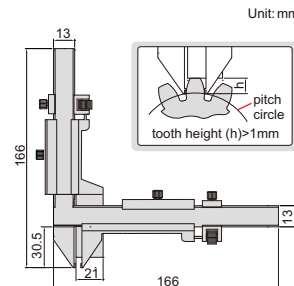
1181-M25A

- Resolution: 0.01mm/0.0005"
- Accuracy of height measurement: ±0.03mm
- Accuracy of thickness measurement: ±0.03mm
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > 1mm)
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

(mm)

| Code | Range | Total 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 |

GEAR TOOTH VERNIER CALIPER



Unit: mm



1281-M26A

- Graduation: 0.02mm
- Total accuracy: ±0.04mm
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > 1mm)
- Made of stainless steel
- Satin chrome plated reading surface

| Code | Range | Accuracy of height measurement | Accuracy of thickness measurement |
|-----------|---------|--------------------------------|-----------------------------------|
| 1281-M26A | M1-26mm | ±0.03mm | ±0.03mm |

DIGITAL DISK BRAKE CALIPER

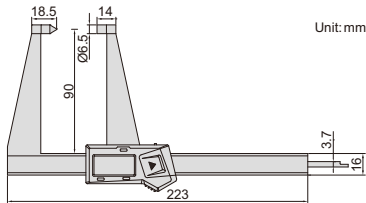
DATA OUTPUT



1162-125A



- 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 7315-21, 7302-21)



Unit: mm

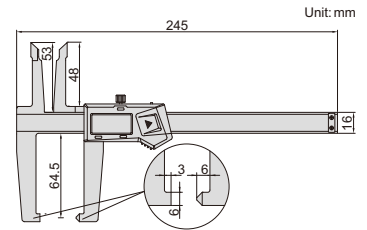
| Code | Range | Accuracy |
|-----------|--------------|----------|
| 1162-125A | 0-125mm/0-5" | ±0.05mm |

DIGITAL DISK BRAKE AND PAD CALIPER

DATA OUTPUT



1167-150A



Unit: mm

- 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 7315-21, 7302-21)

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

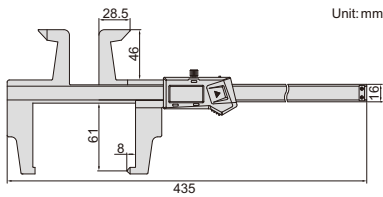


DIGITAL DRUM BRAKE CALIPER

DATA OUTPUT



1168-300A



Unit: mm

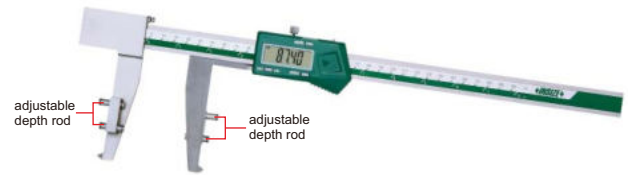
- Measure internal and external diameter of drum brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (code 7315-21, 7302-21)

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

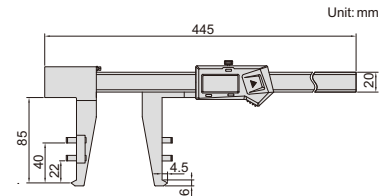


DIGITAL DRUM BRAKE CALIPER

DATA OUTPUT



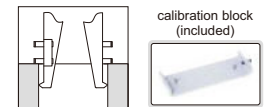
1538-300



Unit: mm

- Measure internal 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 7315-22, 7302-22)

| Code | Range | Accuracy |
|----------|------------------|----------|
| 1538-300 | 30-300mm/1.2-12" | ±0.05mm |



IP67 WATERPROOF DIGITAL DEPTH GAGES

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

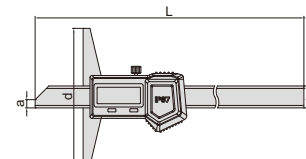
ATTENTION: NO DATA OUTPUT

IP67 WATERPROOF

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- 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 |

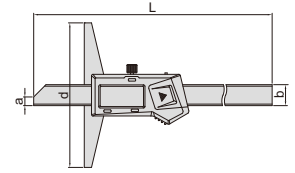
DIGITAL DEPTH GAGES (STANDARD TYPE)

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 (except 1141-500A)
- Battery CR2032, data output
- Made of stainless steel



1141-150A



(mm)

| Code | Range | Accuracy | L | a | b | d | Data output cable (optional) |
|-----------|---------------|----------|-----|---|------|-----|------------------------------|
| 1141-150A | 0-150mm/0-6" | ±0.03mm | 230 | 6 | 14.5 | 100 | 7315-21, 7302-21 |
| 1141-200A | 0-200mm/0-8" | ±0.03mm | 280 | 6 | 14.5 | 100 | 7315-21, 7302-21 |
| 1141-300A | 0-300mm/0-12" | ±0.03mm | 380 | 6 | 14.5 | 150 | 7315-21, 7302-21 |
| 1141-500A | 0-500mm/0-20" | ±0.05mm | 585 | 7 | 15 | 150 | 7315-22, 7302-22 |

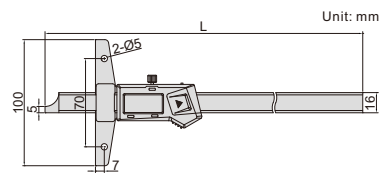
DIGITAL DEPTH GAGES WITH MOUNTING HOLES FOR EXTENSION BASE

DATA OUTPUT



1147-300

- 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 7315-21, 7302-21), extension base (code 6141)



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

extension base (optional)



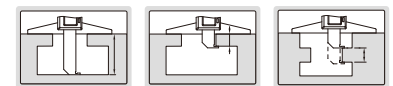
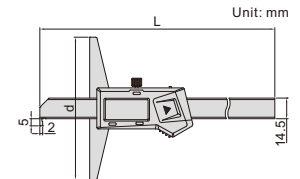
DIGITAL HOOK DEPTH GAGES

DATA OUTPUT



1142-150A

- 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 7315-21, 7302-21)



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

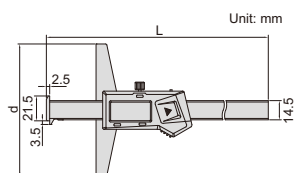
DIGITAL DOUBLE HOOK DEPTH GAGES

DATA OUTPUT



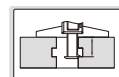
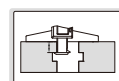
1144-150A

- 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 7315-21, 7302-21)



(mm)

| 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 |



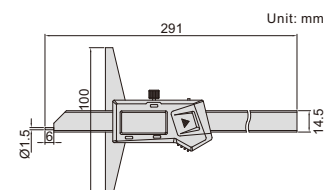
DIGITAL POINT DEPTH GAGE

DATA OUTPUT

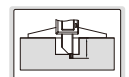


1143-200A

- 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 7315-21, 7302-21)



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



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



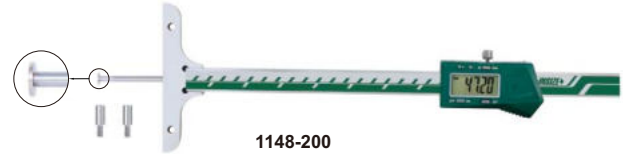
extension base for 1148-200 (optional)



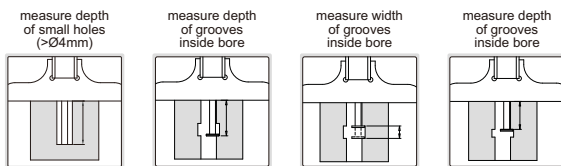
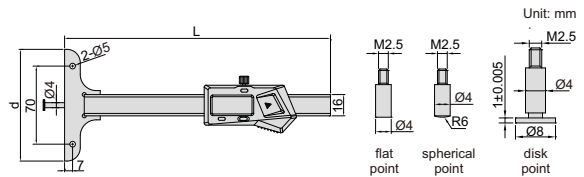
- Resolution: 0.01mm/0.0005"
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: data output cable (code 7315-21, 7302-21), extension base (code 6141, for 1148-200)



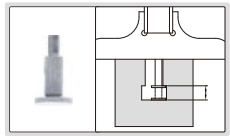
1148-100S



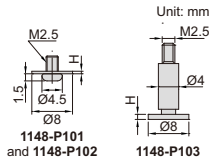
1148-200



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



1148-P101 (optional)



| 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 | |
| 1148-200 | 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 |

DIGITAL DOUBLE HOOK DEPTH GAGE

- 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
- Made of stainless steel
- LR44 battery, data output
- Supplied with gage block for zero setting
- Optional accessory: extension base, wireless transmitter (code 7315-1150), data output cable (code 7302-SPC7, keyboard format)

gage block for zero setting (included)



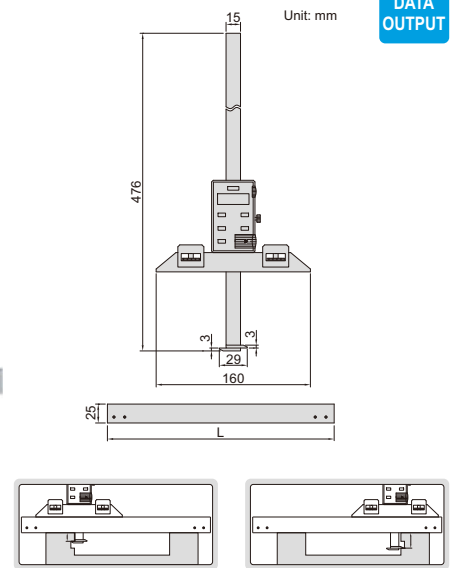
Extension base (optional)

| Code | L |
|-----------|-------|
| 1540-L300 | 300mm |
| 1540-L400 | 400mm |
| 1540-L500 | 500mm |
| 1540-L600 | 600mm |
| 1540-L800 | 800mm |

| Code | Range | Accuracy |
|----------|---------------|----------|
| 1540-300 | 0-300mm/0-12" | ±0.04mm |



1540-300



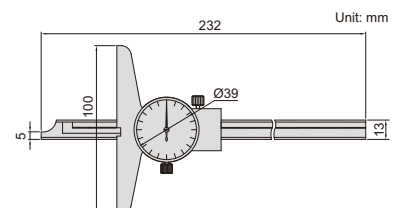
DIAL DEPTH GAGE

SHOCK PROOF

- Shockproof dial indicator
- Made of stainless steel



1340-150



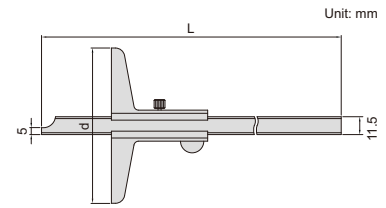
| Code | Range | Graduation | Accuracy |
|----------|---------|------------|----------|
| 1340-150 | 0-150mm | 0.02mm | ±0.03mm |

VERNIER DEPTH GAGES (STANDARD TYPE)

- Made of stainless steel
- Satin chrome plated reading surface



1240-2001



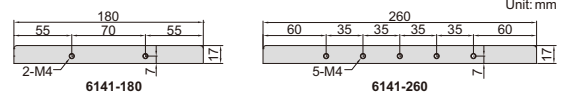
| Graduation 0.05mm | | (mm) | | |
|-------------------|---------|----------|-----|-----|
| Code | Range | Accuracy | L | d |
| 1240-150 | 0-150mm | ±0.05mm | 245 | 100 |
| 1240-200 | 0-200mm | ±0.05mm | 282 | 100 |
| 1240-300 | 0-300mm | ±0.08mm | 382 | 100 |
| 1240-500 | 0-500mm | ±0.09mm | 585 | 150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

| 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 |

EXTENSION BASES

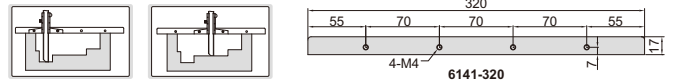


6141-260



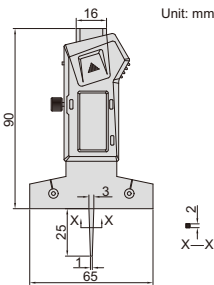
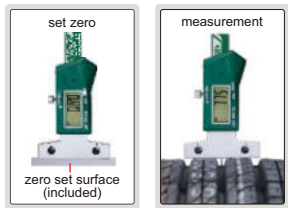
- Supplied with two screws
- Made of stainless steel
- Suitable for depth gages series 1147, 1148, 1247, 1248 and 1249

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



MINI DIGITAL DEPTH GAGE

DATA OUTPUT



1145-25A

- Measure depth of small groove and hole, also measure depth of tire tread
- 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 7315-21, 7302-21)

| Code | Range | Accuracy | Resolution |
|----------|-------------|----------|----------------|
| 1145-25A | 0-25mm/0-1" | ±0.03mm | 0.01mm/0.0005" |

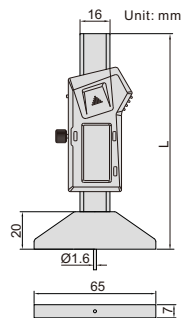
MINI DIGITAL DEPTH GAGES WITH ROUND BAR

DATA OUTPUT

- Measure depth of small groove and hole
- 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 7315-21, 7302-21)



1140-25

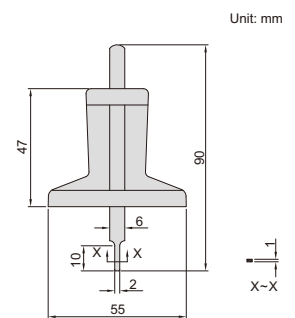


| Code | Range | Accuracy | L |
|---------|-------------|----------|-------|
| 1140-25 | 0-25mm/0-1" | ±0.02mm | 114mm |
| 1140-50 | 0-50mm/0-2" | ±0.02mm | 140mm |

VERNIER DEPTH GAGE (ECONOMIC TYPE)



1244-30



- Graduation: 0.1mm
- Made of stainless steel

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

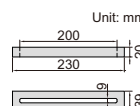
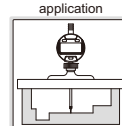
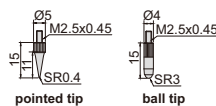
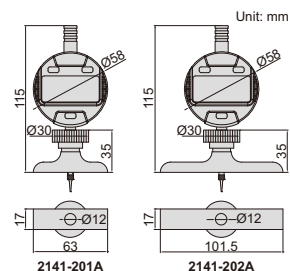
DIGITAL DEPTH GAGES

DATA
OUTPUT

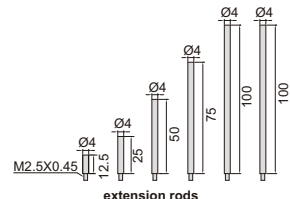
- Accuracy: $\pm 20\mu\text{m}$
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Extension rods: 12.5mm (1 pc), 25mm (1 pc), 50mm (1 pc), 75mm (1 pc), 100mm (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: data output cable (code **7315-50M**, **7302-40M**), granite extension holder (code **2141-10**)



2141-202A



2141-10 (optional),
can be customized
according to workpieces



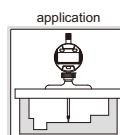
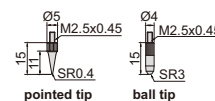
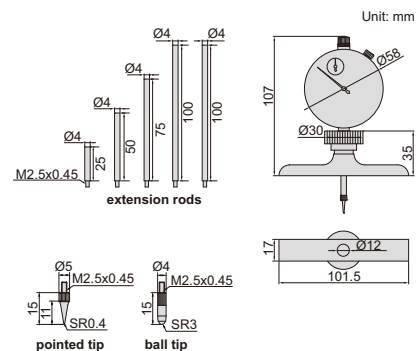
| Code | Range | Digital indicator stroke | Digital indicator resolution | Base |
|-----------|---------------|--------------------------|------------------------------|------------|
| 2141-201A | 0-300mm/0-12" | 12.7mm/0.5" | 0.01mm/0.0005" | 63x17mm |
| 2141-202A | 0-300mm/0-12" | 12.7mm/0.5" | 0.01mm/0.0005"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

DIAL DEPTH GAGE

- Accuracy: $\pm 0.03\text{mm}$
- Dial indicator stroke: 30mm
- Dial indicator graduation: 0.01mm
- Stainless steel base
- Extension rods: 25mm (1 pc), 50mm (1 pc), 75mm (1 pc), 100mm (2 pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: granite extension holder (code **2141-10**)



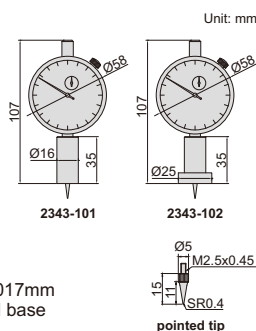
2342-202



2141-10 (optional),
can be customized
according to workpieces

| Code | Range | Base |
|----------|---------|------------|
| 2342-202 | 0-300mm | 101.5x17mm |

DIAL DEPTH GAGES



2343-101

2343-102

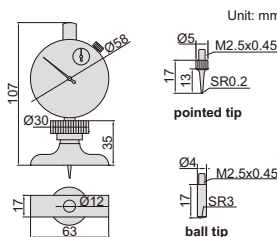
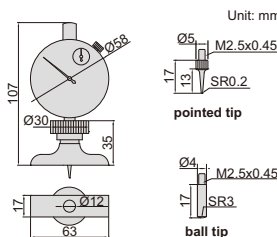


2343-102

- Accuracy: $\pm 0.017\text{mm}$
- Stainless steel base
- Pointed tip

| Code | Range | Dial indicator stroke | Dial indicator graduation | Base |
|----------|--------|-----------------------|---------------------------|---------------------------|
| 2343-101 | 0-10mm | 10mm | 0.01mm | $\varnothing 16\text{mm}$ |
| 2343-102 | 0-10mm | 10mm | 0.01mm | $\varnothing 25\text{mm}$ |

DIAL DEPTH GAGE



2341-101A

- Dial indicator graduation: 0.01mm
- Stainless steel base
- Supplied with pointed tip and ball tip

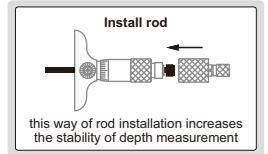
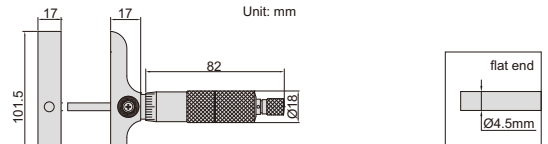
| Code | Range | Dial indicator stroke | Accuracy |
|-----------|--------|-----------------------|----------------------|
| 2341-101A | 0-10mm | 10mm | $\pm 0.017\text{mm}$ |

DEPTH MICROMETERS

- Graduation: 0.01mm
- Meet DIN863-2
- 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



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

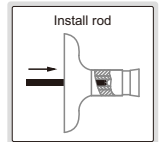
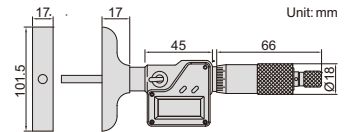
DIGITAL DEPTH MICROMETERS

DATA OUTPUT IP65 WATERPROOF

- 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, data transmit
- IP65 dust/waterproof
- Data output
- Automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory: data output cable (code 7315-30, 7302-30)



3540-50



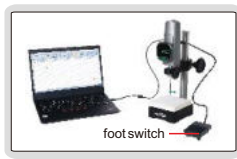
| Code | Range | Resolution | Rods |
|----------|---------------|------------------|--------|
| 3540-50 | 0-50mm/0-2" | 0.001mm/0.00005" | 2 pcs |
| 3540-150 | 0-150mm/0-6" | 0.001mm/0.00005" | 6 pcs |
| 3540-300 | 0-300mm/0-12" | 0.001mm/0.00005" | 12 pcs |

HIGH PRECISION DIGITAL HEIGHT GAGES

DATA OUTPUT

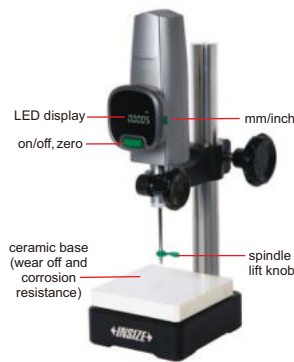
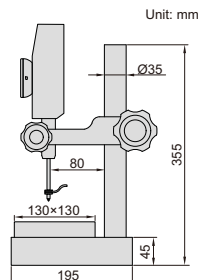


power supplied by charge pal

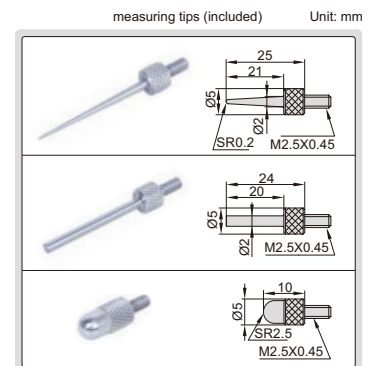


data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

- Measuring force: 0.8~1.2N
- Power supply: 5V/1A (adapter or charge pal)
- High stability, high precision, high response speed (5000mm/s)
- High brightness LED display
- Ceramic base flatness: $1\mu\text{m}$



1155-505



| Code | Range | Resolution | Accuracy (20°C) | Output |
|----------|--------|---|-------------------|--------|
| 1155-505 | 0~50mm | 0.5 μm /0.00002" (can switch to: 1 μm /0.00005") | 1.5 μm | USB |
| 1155-510 | 0~50mm | 0.1 μm /0.000005" (can switch to: 1 μm /0.00005") | 1 μm | USB |

STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
|-----------|------|

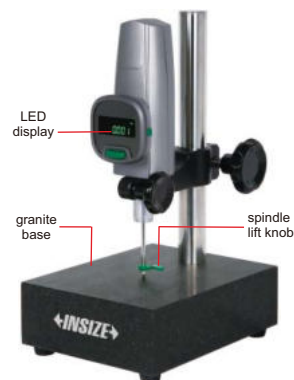
OPTIONAL ACCESSORY

| | |
|---|------------|
| Contact point | code 6282 |
| Charge pal | 1155-5-POB |
| Data output cable (including foot switch) | 1155-5-FOS |

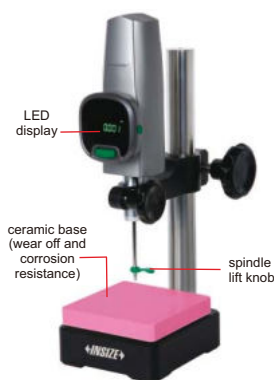
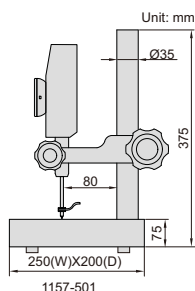
DIGITAL HEIGHT GAGES



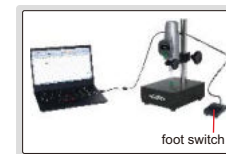
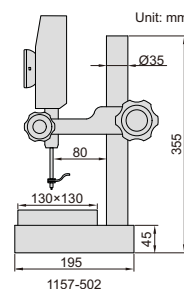
DATA OUTPUT



1157-501



1157-502



data transmitted to Excel without software

- Measuring force: 0.8~1.2N
- Power supply: 5V/1A (adapter or charge pal)
- Buttons: on/off, zero, mm/inch, mix/min/mix-min
- High response speed (5000mm/s)
- High brightness LED display

| Code | Range | Resolution | Accuracy (20°C) | Output | Base |
|----------|--------|--------------|-----------------|--------|-------------------------|
| 1157-501 | 0~50mm | 1µm/0.00005" | 3µm | USB | granite (flatness: 2µm) |
| 1157-502 | 0~50mm | 1µm/0.00005" | 3µm | USB | ceramic (flatness: 1µm) |

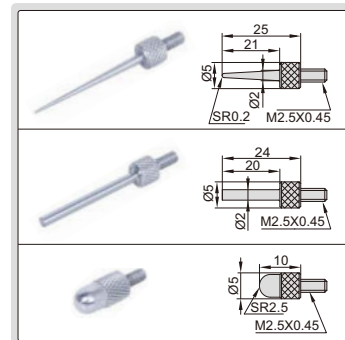
STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
|-----------|------|



power supplied by charge pal

measuring tips (included) Unit: mm



OPTIONAL ACCESSORY

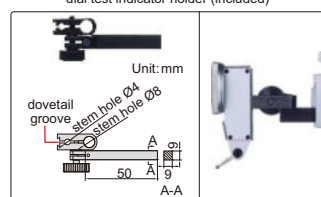
| | |
|---|------------|
| Contact point | code 6282 |
| Charge pal | 1155-5-POB |
| Data output cable (including foot switch) | 1155-5-FOS |

DIGITAL HEIGHT GAGES WITH DRIVING WHEEL

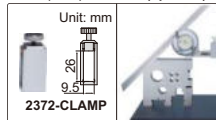


DATA OUTPUT

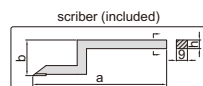
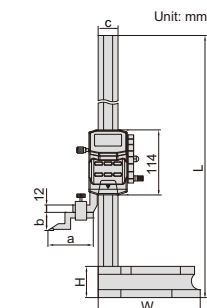
dial test indicator holder (included)



clamp for protractors (optional)



- 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
- With dial test indicator holder
- Optional accessory: data output cable (code 7315-22, 7302-22), clamp for protractors (code 2372-CLAMP)



1156-300

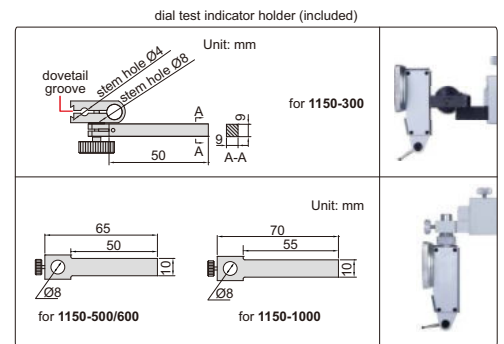
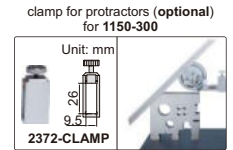
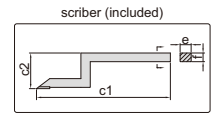
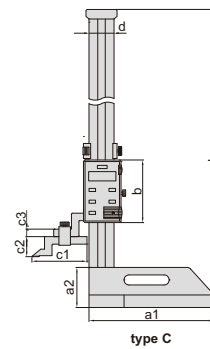
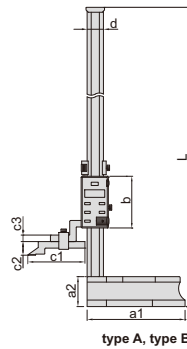
1156-1000

| Code | Range | Accuracy | L | W | H | a | b | c | h |
|------------|----------------|----------|------|-----|----|----|----|----|----|
| 1156-300* | 0-300mm/0-12" | ±0.03mm | 515 | 180 | 55 | 80 | 30 | 35 | 9 |
| 1156-600* | 0-600mm/0-24" | ±0.05mm | 815 | 180 | 55 | 80 | 30 | 35 | 9 |
| 1156-1000* | 0-1000mm/0-40" | ±0.07mm | 1220 | 265 | 70 | 92 | 48 | 40 | 12 |

*Supplied with manufacturer inspection certificate

DIGITAL HEIGHT GAGES

DATA OUTPUT

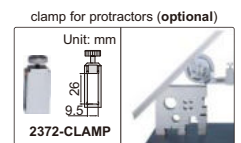
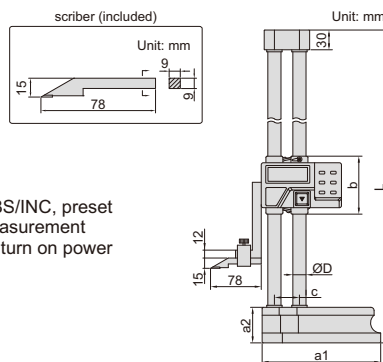


- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- LR44 battery, data output
- Supplied with dial test indicator holder
- Supplied with dust cover
- Optional accessory: wireless transmitter (code 7315-1150), data output cable (code 7302-SPC7, keyboard format), clamp for protractors (code 2372-CLAMP, for 1150-300)

| Code | Range | Type | Accuracy | L | a1 | a2 | b | c1 | c2 | c3 | d | e | f |
|-----------|----------------|------|----------|--------|-------|------|-------|-------|------|------|------|------|------|
| 1150-300 | 0-300mm/0-12" | A | ±0.04mm | 485mm | 138mm | 45mm | 95mm | 80mm | 30mm | 10mm | 28mm | 9mm | 9mm |
| 1150-500 | 0-500mm/0-20" | B | ±0.06mm | 720mm | 180mm | 55mm | 95mm | 103mm | 25mm | 12mm | 30mm | 10mm | 12mm |
| 1150-600 | 0-600mm/0-24" | B | ±0.06mm | 820mm | 180mm | 55mm | 95mm | 103mm | 25mm | 12mm | 30mm | 10mm | 12mm |
| 1150-1000 | 0-1000mm/0-40" | C | ±0.08mm | 1275mm | 250mm | 80mm | 125mm | 110mm | 39mm | 15mm | 50mm | 10mm | 15mm |

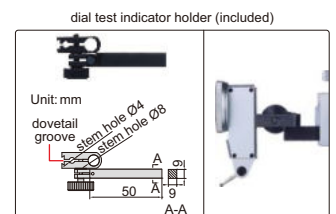
DIGITAL HEIGHT GAGES

DATA OUTPUT

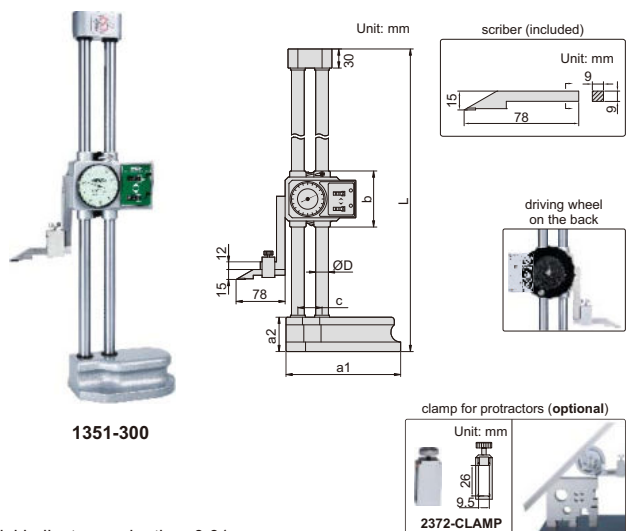


- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data hold, ABS/INC, preset
- ABS/INC is for absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032, data output
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (code 2372-CLAMP), wireless transmitter (code 7315-1151), data output cable (code 7302-1151, keyboard format)

| Code | Range | Accuracy | L | a1 | a2 | b | c | ØD |
|-----------|---------------|----------|-----|-----|----|----|----|----|
| 1151-300A | 0-300mm/0-12" | ±0.04mm | 475 | 135 | 43 | 84 | 33 | 15 |
| 1151-450A | 0-450mm/0-18" | ±0.05mm | 660 | 180 | 54 | 88 | 38 | 20 |
| 1151-600A | 0-600mm/0-24" | ±0.05mm | 810 | 180 | 54 | 88 | 38 | 20 |

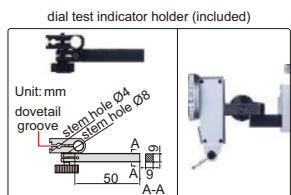


DIAL HEIGHT GAGES



1351-300

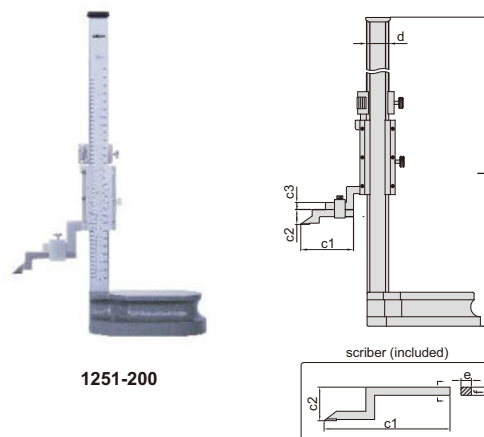
- Dial indicator graduation: 0.01mm
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scribe
- Made of stainless steel (except the base)
- With driving wheel
- With dial test indicator holder
- Supplied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



(mm)

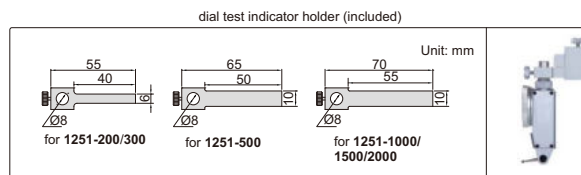
| Code | Range | Accuracy | L | a1 | a2 | b | c | ØD |
|----------|---------|----------|-----|-----|----|----|----|----|
| 1351-300 | 0-300mm | ±0.04mm | 475 | 135 | 43 | 84 | 33 | 15 |
| 1351-450 | 0-450mm | ±0.05mm | 660 | 180 | 54 | 88 | 38 | 20 |
| 1351-600 | 0-600mm | ±0.05mm | 810 | 180 | 54 |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

VERNIER HEIGHT GAGES (BASIC TYPE)



1251-200

- Graduation: 0.02mm/0.001"
- Carbide tipped scribe
- Made of stainless steel (except the base)
- Satin chrome plated scale
- With dial test indicator holder
- Supplied with dust cover



(mm)

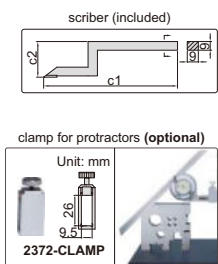
| Code | Range | Accuracy | L | c1 | c2 | c3 | d | e | f |
|-----------|----------------|----------|------|-----|----|----|----|----|----|
| 1251-200 | 0-200mm/0-8" | ±0.03mm | 370 | 76 | 25 | 10 | 23 | 6 | 8 |
| 1251-300 | 0-300mm/0-12" | ±0.04mm | 470 | 76 | 25 | 10 | 23 | 6 | 8 |
| 1251-500 | 0-500mm/0-20" | ±0.05mm | 720 | 105 | 25 | 12 | 30 | 10 | 12 |
| 1251-1000 | 0-1000mm/0-40" | ±0.07mm | 1275 | 110 | 39 | 15 | 50 | 10 | 15 |
| 1251-1500 | 0-1500mm/0-60" | ±0.11mm | 1790 | 110 | 39 | 15 | 50 | 10 | 15 |
| 1251-2000 | 0-2000mm/0-80" | ±0.14mm | 2290 | 110 | 39 | 15 | 50 | 10 | 15 |

VERNIER HEIGHT GAGES



1250-300

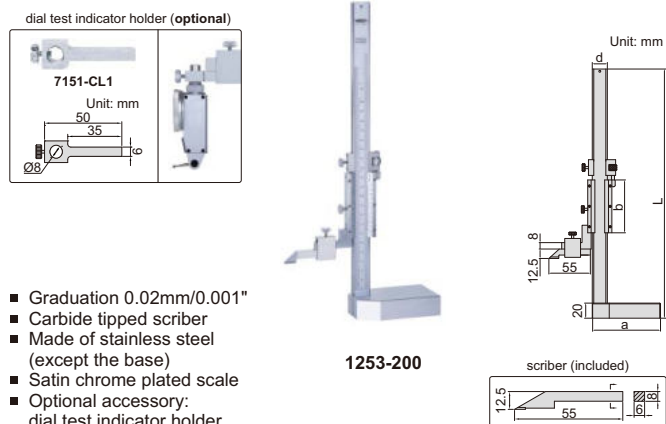
- Graduation: 0.02mm/0.001"
- Adjustable main scale to set zero
- Carbide tipped scribe
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code 6293-6), clamp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



(mm)

| 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 |
| 1250-600 | 0-600mm/0-24" | ±0.05mm | 870 | 180 | 54 | 85 | 80 | 41 | 35 |

VERNIER HEIGHT GAGES



1253-200

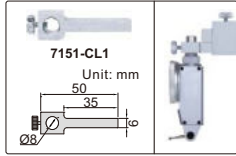
- Graduation 0.02mm/0.001"
- Carbide tipped scribe
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory: dial test indicator holder (code 7151-CL1)

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

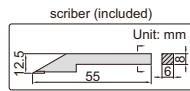
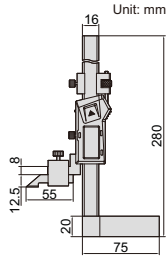
DIGITAL HEIGHT GAGE

DATA OUTPUT

dial test indicator holder (optional)



1154-150



- 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 7315-22, 7302-22), dial test indicator holder (code 7151-CL1)

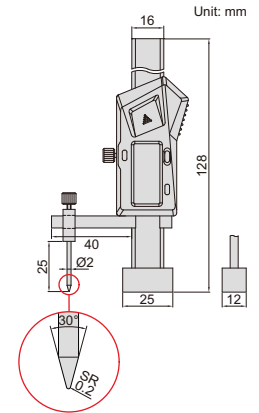
| Code | Range | Resolution | Accuracy |
|----------|--------------|----------------|----------|
| 1154-150 | 0-150mm/0-6" | 0.01mm/0.0005" | ±0.03mm |

MINI DIGITAL HEIGHT GAGE

DATA OUTPUT

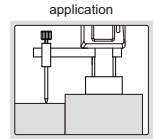


1146-20A



- Measure height difference of two surfaces
- 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 7315-21, 7302-21)

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



HIGH PRECISION DIGITAL MICROMETERS/SNAP GAGES

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

IP65 WATERPROOF

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

NON-ROTATING SPINDLE

DATA OUTPUT

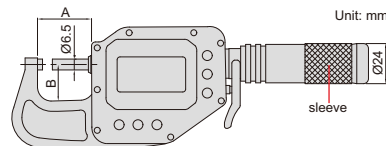
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001", 0.001mm/0.00005", 0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
- Customizable measuring force range 2-12N
- Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gage blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working

With data interface

Optional accessory:
wireless transmitter, code 7315-3350,
data output cable (keyboard format), code 7302-3350



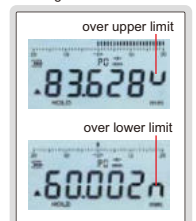
3350-25



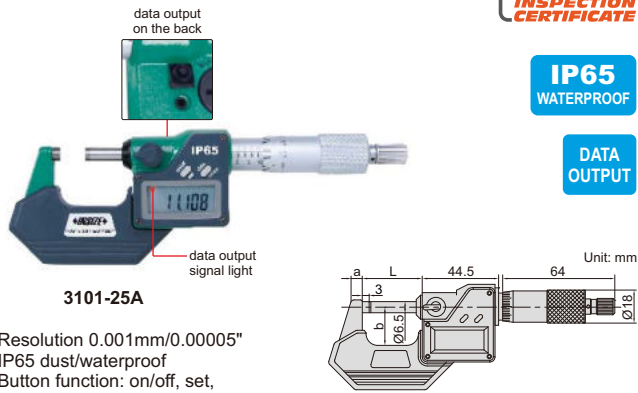
| Code | Range | Accuracy | Repeatability | Measuring faces | | A | B |
|-----------|------------------|----------|---------------|-----------------|-------------|-------|------|
| | | | | Flatness | Parallelism | | |
| 3350-25* | 0-25mm/0-1" | 1.4µm | 0.6µm | 0.5µm | 1µm | 38mm | 24mm |
| 3350-50* | 25-50mm/1-2" | 1.6µm | 1µm | 0.5µm | 1µm | 63mm | 28mm |
| 3350-75* | 50-75mm/2-3" | 1.8µm | 1µm | 0.5µm | 1µm | 88mm | 45mm |
| 3350-100* | 75-100mm/3-3.95" | 2µm | 1µm | 0.5µm | 1µm | 113mm | 57mm |

*Supplied with manufacturer inspection certificate

warning when over tolerance



WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT)



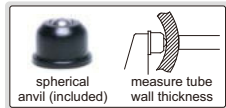
INSPECTION CERTIFICATE

IP65 WATERPROOF

DATA OUTPUT

3101-25A

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30, 7302-30)

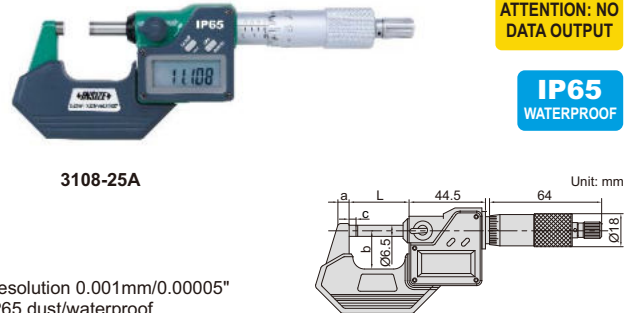


(mm)

| Code | Range | Accuracy | L | a | b |
|------------|----------------|----------|-------|----|------|
| 3101-25A* | 0-25mm/0-1" | ±2µm | 34.5 | 6 | 25 |
| 3101-50A* | 25-50mm/1-2" | ±2µm | 59.5 | 8 | 32 |
| 3101-75A* | 50-75mm/2-3" | ±3µm | 84.5 | 8 | 44.5 |
| 3101-100A* | 75-100mm/3-4" | ±3µm | 109.5 | 8 | 57 |
| 3101-125A | 100-125mm/4-5" | ±3µm | 135 | 10 | 70 |
| 3101-150A | 125-150mm/5-6" | ±3µm | 160.5 | 10 | 82 |

*Supplied with manufacturer inspection certificate

WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)



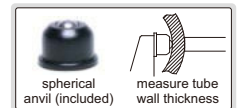
INSPECTION CERTIFICATE

ATTENTION: NO DATA OUTPUT

IP65 WATERPROOF

3108-25A

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



(mm)

| 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 |

*Supplied with manufacturer inspection certificate

DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITHOUT DATA OUTPUT)

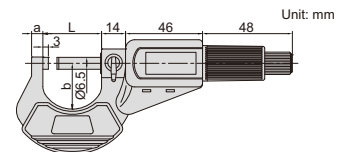
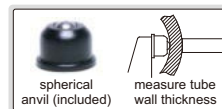
INSPECTION CERTIFICATE

ATTENTION: NO DATA OUTPUT



3109-25A

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



(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 |
| 3109-125A | 100-125mm/4-5" | ±3µm | 132 | 10 | 73 |
| 3109-150A | 125-150mm/5-6" | ±3µm | 157 | 10 | 85 |

*Supplied with manufacturer inspection certificate

DIGITAL VERTICAL MICROMETER

- Measure the thickness of plates for easy reading
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- Automatic power off
- Carbide spindle tip
- Ratchet stop
- Optional accessory: data output cable (code 7315-30, 7302-30)

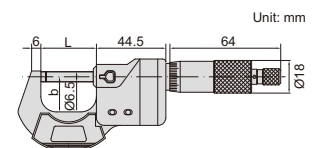


3565-25A

INSPECTION CERTIFICATE

DATA OUTPUT

IP65 WATERPROOF

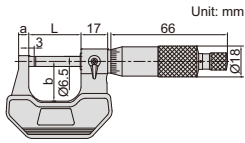


Unit: mm

| Code | Range | Accuracy | L | b |
|-----------|-------------|----------|--------|------|
| 3565-25A* | 0-25mm/0-1" | ±2µm | 34.5mm | 25mm |

*Supplied with manufacturer inspection certificate

OUTSIDE MICROMETERS



3202-25A

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

| Individual | | | (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 |

Set

| Code | Range | Micrometers included |
|-------------|---------|---|
| 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

OUTSIDE MICROMETERS



3203-50A



3203-25A



3203-1004A

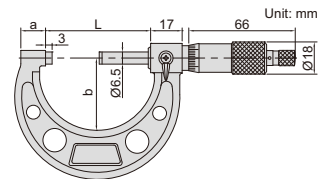


3203-3006A

Individual (mm)

| Code | Range | Accuracy | L | a | b |
|------------|-----------|----------|-----|------|-----|
| 3203-25A* | 0-25mm | ±2µm | 32 | 9 | 28 |
| 3203-50A* | 25-50mm | ±2µm | 57 | 14 | 38 |
| 3203-75A* | 50-75mm | ±2µm | 82 | 15 | 49 |
| 3203-100A* | 75-100mm | ±3µm | 107 | 15 | 60 |
| 3203-125A | 100-125mm | ±3µm | 133 | 16.5 | 73 |
| 3203-150A | 125-150mm | ±3µm | 158 | 16.5 | 85 |
| 3203-175A | 150-175mm | ±4µm | 183 | 19.4 | 104 |
| 3203-200A | 175-200mm | ±4µm | 209 | 19.4 | 117 |
| 3203-225A | 200-225mm | ±4µm | 234 | 19.4 | 130 |
| 3203-250A | 225-250mm | ±5µm | 260 | 19.4 | 142 |
| 3203-275A | 250-275mm | ±5µm | 285 | 19.4 | 155 |
| 3203-300A | 275-300mm | ±5µm | 310 | 19.4 | 168 |

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



Set

| Code | Range | Micrometers included | Packaging |
|-------------|-----------|--|-----------------|
| 3203-1004A* | 0-100mm | 3203-25A, 3203-50A, 3203-75A, 3203-100A | blow mould case |
| 3203-1506A | 0-150mm | 3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A | blow mould case |
| 3203-3006A | 150-300mm | 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A | aluminum box |

*Supplied with manufacturer inspection certificate

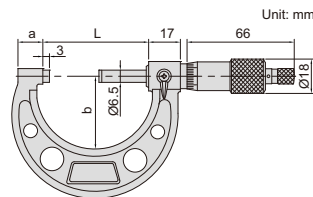
1µm GRADUATION OUTSIDE MICROMETERS



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



3210-25A



Individual (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 |

Set

| Code | Range | Micrometers included |
|-------------|---------|---|
| 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 |

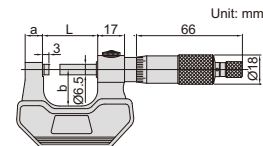
*Supplied with manufacturer inspection certificate

OUTSIDE MICROMETER FOR LEFT OR RIGHT HANDERS

- Graduation 0.01mm
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces
- Meet DIN863-1



3236-25B



(mm)

| Code | Range | Accuracy | L | a | b |
|----------|--------|----------|----|---|----|
| 3236-25B | 0-25mm | 4µm | 32 | 6 | 24 |

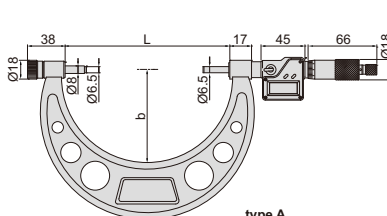
DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

IP65
WATERPROOF

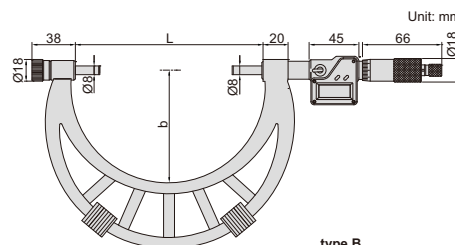
DATA
OUTPUT



3506-400A



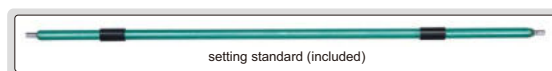
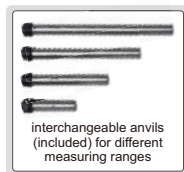
type A



type B

Unit: mm

- Resolution 0.001mm/0.0001"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-30, 7302-30)



(mm)

| Code | Range | Type | Accuracy | L | b | Setting standard (included) |
|-----------|------------------|------|----------|-----|-----|------------------------------|
| 3506-300A | 150-300mm/6-12" | A | ±8µm | 305 | 165 | 150, 175, 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 |

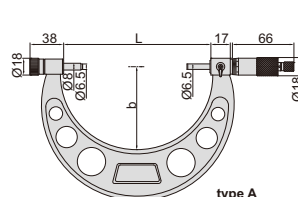
OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS



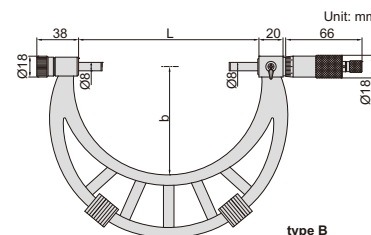
3206-400



3206-150A

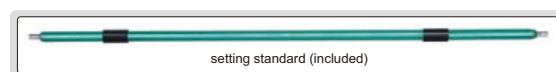


type A

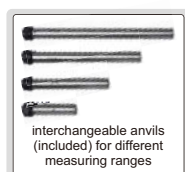


type B

Unit: mm



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

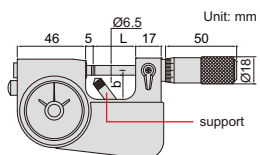


(mm)

| Code | Range | Type | Accuracy | L | b | Setting standard (included) |
|-----------|-----------|------|----------|-----|-----|------------------------------|
| 3206-150A | 0-150mm | A | 6µm | 158 | 82 | 25, 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 |

INDICATING MICROMETERS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



3332-25

- Meet DIN863-3
- Micrometer head graduation: 0.002mm
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4101-A series), for zero setting

(mm)

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

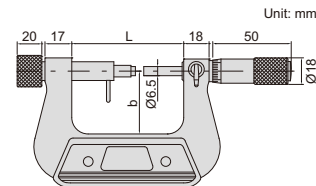
MICROMETER WITH DIAL INDICATOR

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



digital indicator is optional

3331-25A



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

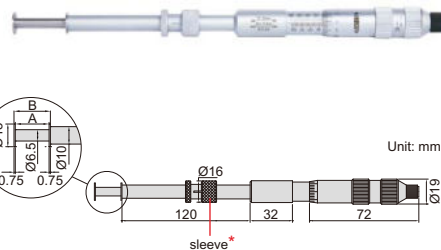
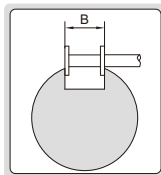
(mm)

| Code | Micrometer head range | Micrometer head accuracy | L | b |
|----------|-----------------------|--------------------------|----|----|
| 3331-25A | 0-25mm | 4µm | 67 | 38 |

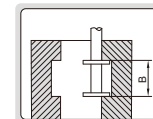
GROOVE MICROMETER

- Measure width of grooves inside bores, measure width of keyway
- Graduation 0.01mm
- Two graduations for inside and outside measurements
- Non-rotating spindle
- Two-directional ratchet stop

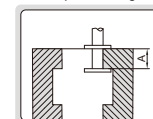
measure width of keyway



measure width of groove



measure position of groove

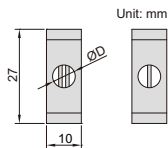


| Code | Range (outside A) | Range (inside B) | Accuracy |
|----------|-------------------|------------------|----------|
| 3287-25B | 0-25mm | 1.6-26.5mm | 10µm |

3-WIRES



7382-19



application



- Used with standard outside micrometers to measure pitch diameter of screw threads
- Diameter accuracy: ±0.5µm
- Cylindricity: 1µm
- Hardness: HRC60
- Supplied with manufacturer inspection certificate

For outside micrometers with spindle Ø6.50mm (ØD)

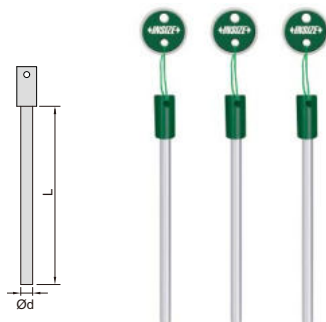
| Code | Pin gage diameter (Ø) | Applicable pitch |
|----------|---|----------------------|
| 7382-21 | 0.170mm | 0.2mm, 0.25mm, 0.3mm |
| 7382-22 | 0.195mm | 0.35mm |
| 7382-23 | 0.220mm | 0.4mm |
| 7382-24 | 0.250mm | 0.45mm |
| 7382-25 | 0.290mm | 0.5mm |
| 7382-26 | 0.335mm | 0.6mm |
| 7382-27 | 0.390mm | 0.7mm |
| 7382-28 | 0.455mm | 0.75mm, 0.8mm |
| 7382-29 | 0.530mm | 0.9mm |
| 7382-210 | 0.620mm | 1.0mm |
| 7382-211 | 0.725mm | 1.25mm |
| 7382-212 | 0.895mm | 1.5mm |
| 7382-213 | 1.100mm | 1.75mm, 2.0mm |
| 7382-214 | 1.350mm | 2.5mm |
| 7382-215 | 1.650mm | 3.0mm |
| 7382-216 | 2.050mm | 3.5mm |
| 7382-217 | 2.550mm | 4mm, 4.5mm |
| 7382-218 | 3.200mm | 5mm, 5.5mm, 6mm |
| 7382-2S | 18 pairs/set, including all above 3-wires | |

CARBIDE 3-WIRES

CUSTOMIZABLE
DIAMETER Ød

INSPECTION
CERTIFICATE

- When $\text{Ød} \leq 0.3\text{mm}$, length $L=25\text{mm}$;
- When $\text{Ød} > 0.3\text{mm}$, length $L=45\text{mm}$
- Made of carbide
- Hardness HRA90
- Diameter accuracy: $\pm 0.5\mu\text{m}$
- Roundness: $0.5\mu\text{m}$
- Cylindricity: $1\mu\text{m}$
- Supplied with manufacturer inspection certificate



7394-76A

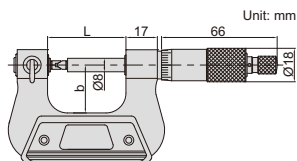
| Code | Diameter (Ød) | Applicable pitch |
|----------|---------------|----------------------|
| 7394-60A | 0.170mm | 0.2mm, 0.25mm, 0.3mm |
| 7394-61A | 0.195mm | 0.35mm |
| 7394-62A | 0.220mm | 0.4mm |
| 7394-63A | 0.250mm | 0.45mm |
| 7394-64A | 0.290mm | 0.5mm |
| 7394-65A | 0.335mm | 0.6mm |
| 7394-66A | 0.390mm | 0.7mm |
| 7394-67A | 0.455mm | 0.75mm, 0.8mm |
| 7394-68A | 0.530mm | 0.9mm |
| 7394-69A | 0.620mm | 1.0mm |
| 7394-70A | 0.725mm | 1.25mm |
| 7394-71A | 0.895mm | 1.5mm |
| 7394-72A | 1.100mm | 1.75mm, 2.0mm |
| 7394-73A | 1.350mm | 2.5mm |
| 7394-74A | 1.650mm | 3.0mm |
| 7394-75A | 2.050mm | 3.5mm |
| 7394-76A | 2.550mm | 4mm, 4.5mm |
| 7394-77A | 3.200mm | 5mm, 5.5mm, 6mm |

SCREW THREAD MICROMETERS

NON-ROTATING
SPINDLE



3281-25A
(measuring tips are optional)



Unit: mm

- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm)
- Optional accessory: 55° setting standards, measuring tips (code 7381)



accuracy of micrometers with tips (mm)

| Pitch | Range | | | | | |
|---------|--------|--------|--------|--------|---------|---------|
| | 0-25 | 25-50 | 50-75 | 75-100 | 100-125 | 125-150 |
| 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 |

(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 |

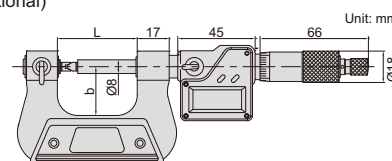
DIGITAL SCREW THREAD MICROMETERS

NON-ROTATING
SPINDLE

DATA
OUTPUT

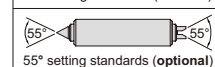
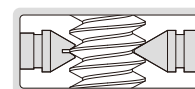


3581-25A
(measuring tips are optional)



Unit: mm

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm/0-1")
- Optional accessory: 55° setting standards, measuring tips (code 7381), data output cable (code 7315-30, 7302-30)



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

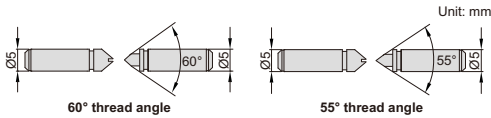
- Supplied in pairs
- Suitable for 3281, 3581 series micrometers

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 |

Whitworth thread (55° thread angle)

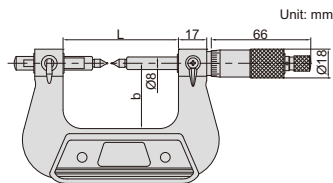
| Code | Pitch |
|----------|---|
| 7381-T2S | 10 pairs/set: 60-48TPI, 48-40TPI, 40-32TPI, 32-24TPI, 24-18TPI, 18-14TPI, 14-10TPI, 10-7TPI, 7-4.5TPI, 4.5-3.5TPI, including all above tips |



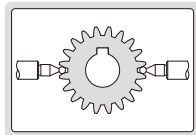
GEAR TOOTH MICROMETERS



3291-25



- 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 |

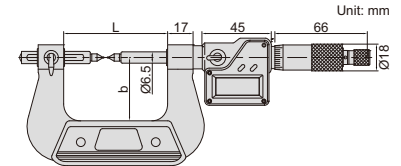
DIGITAL GEAR TOOTH MICROMETERS

IP65
WATERPROOF

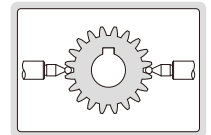
DATA
OUTPUT



3591-25A



- Measure over-pin diameter of gears
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: ball tips (code 7391), data output cable (code 7315-30, 7302-30)



| 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



7391-T5

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

| Code | Ball dia. (D) |
|---------|---------------|
| 7391-T2 | SØ1.5mm |
| 7391-T3 | SØ2.0mm |
| 7391-T4 | SØ2.5mm |
| 7391-T5 | SØ3.0mm |
| 7391-T6 | SØ3.5mm |

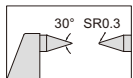
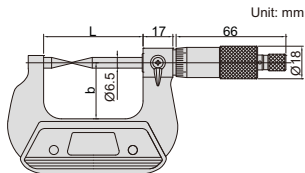
| Code | Ball dia. (D) |
|----------|---------------|
| 7391-T7 | SØ4.0mm |
| 7391-T8 | SØ4.5mm |
| 7391-T9 | SØ5.0mm |
| 7391-T10 | SØ6.0mm |

POINT MICROMETERS



3230-25A

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



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

DIGITAL POINT MICROMETERS

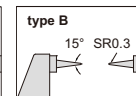
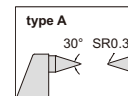
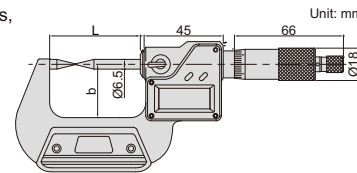
IP65
WATERPROOF

DATA
OUTPUT



3530-25A

- Measure the web thickness of drills, small grooves and keyways
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30, 7302-30)



| Code | Range | Type | Accuracy | L | b |
|-----------|--------------|------|----------|------|--------|
| 3530-25A | 0-25mm/0-1" | A | ±4µm | 57mm | 32mm |
| 3530-50A | 25-50mm/1-2" | A | ±4µm | 82mm | 44.5mm |
| 3530-25BA | 0-25mm/0-1" | B | ±4µm | 57mm | 32mm |
| 3530-50BA | 25-50mm/1-2" | B | ±4µm | 82mm | 44.5mm |

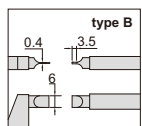
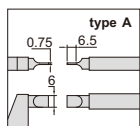
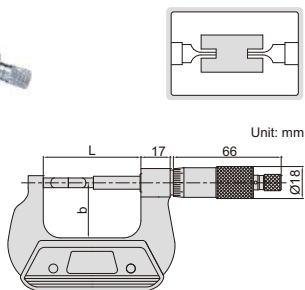
BLADE MICROMETERS

NON-ROTATING
SPINDLE



3232-25A

- 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)



| Code | Range | Type | Accuracy | L | b |
|-----------|----------|------|----------|---------|--------|
| 3232-25A | 0-25mm | A | 4µm | 57mm | 32mm |
| 3232-50A | 25-50mm | A | 4µm | 82mm | 44.5mm |
| 3232-75A | 50-75mm | A | 5µm | 107mm | 57mm |
| 3232-100A | 75-100mm | A | 5µm | 132.6mm | 69.5mm |
| 3232-25BA | 0-25mm | B | 4µm | 57mm | 32mm |

DIGITAL BLADE MICROMETERS

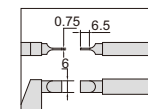
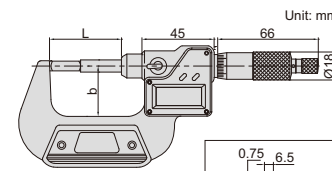
NON-ROTATING
SPINDLE

DATA
OUTPUT



3532-25A

- Measure the groove diameter of shafts and keyways
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30, 7302-30)



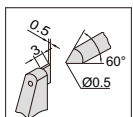
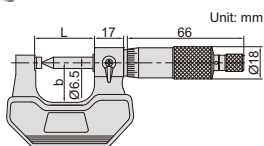
| Code | Range | Accuracy | L | b |
|----------|--------------|----------|----|------|
| 3532-25A | 0-25mm/0-1" | ±4µm | 57 | 32 |
| 3532-50A | 25-50mm/1-2" | ±4µm | 82 | 44.5 |

CRIMP HEIGHT MICROMETER



3266-25BA

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



| Code | Range | Accuracy | L | b |
|-----------|--------|----------|------|------|
| 3266-25BA | 0-25mm | 4µm | 34mm | 24mm |

DIGITAL CRIMP HEIGHT MICROMETER

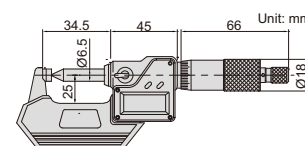
IP65
WATERPROOF

DATA
OUTPUT



3566-25BA

- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7315-30, 7302-30)



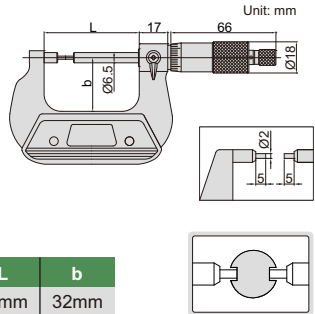
| Code | Range | Accuracy |
|-----------|-------------|----------|
| 3566-25BA | 0-25mm/0-1" | ±4µm |

SPLINE MICROMETER



3233-25A

- Meet DIN863-3
- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



| Code | Range | Accuracy | L | b |
|----------|--------|----------|------|------|
| 3233-25A | 0-25mm | 4µm | 57mm | 32mm |

DIGITAL SPLINE MICROMETER

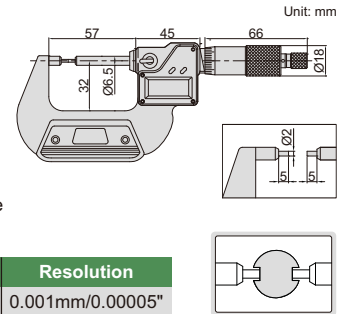
DATA OUTPUT

IP65 WATERPROOF



3533-25A

- Measure splined shafts, slots and keyways
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7315-30, 7302-30)



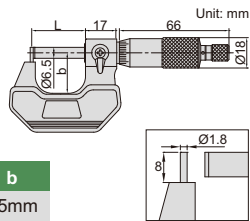
| Code | Range | Accuracy | Resolution |
|----------|-------------|----------|------------------|
| 3533-25A | 0-25mm/0-1" | ±4µm | 0.001mm/0.00005" |

CYLINDRICAL ANVIL TUBE MICROMETER



3261-25A

- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip



| Code | Range | Accuracy | L | b |
|----------|--------|----------|------|------|
| 3261-25A | 0-25mm | 6µm | 36mm | 25mm |

DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

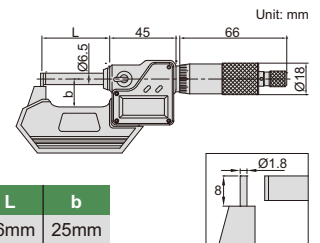
IP65 WATERPROOF

DATA OUTPUT



3561-25A

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide spindle tip
- Optional accessory: data output cable (code 7315-30, 7302-30)



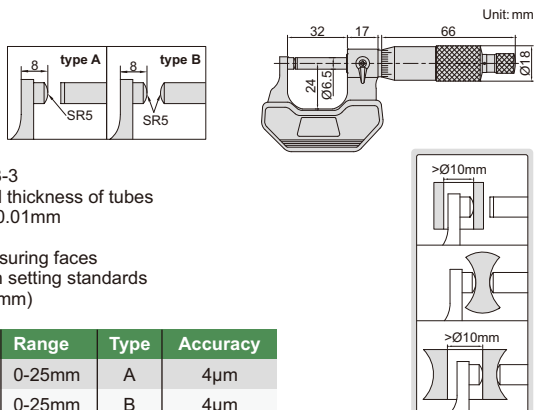
| Code | Range | Accuracy | L | b |
|----------|-------------|----------|------|------|
| 3561-25A | 0-25mm/0-1" | ±6µm | 36mm | 25mm |

SPHERICAL ANVIL TUBE MICROMETERS



3260-25A

- 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 |
|-----------|--------|------|----------|
| 3260-25A | 0-25mm | A | 4µm |
| 3260-25SA | 0-25mm | B | 4µm |

DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

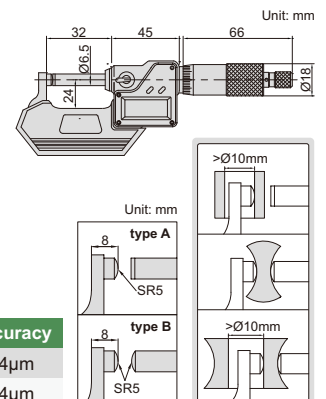
IP65 WATERPROOF

DATA OUTPUT



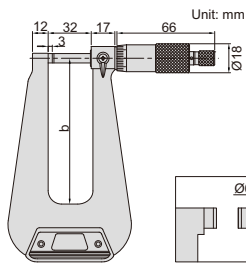
3560-25A

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30, 7302-30)



| Code | Range | Type | Accuracy |
|-----------|-------------|------|----------|
| 3560-25A | 0-25mm/0-1" | A | ±4µm |
| 3560-25SA | 0-25mm/0-1" | B | ±4µm |

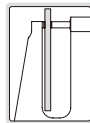
SHEET METAL MICROMETER



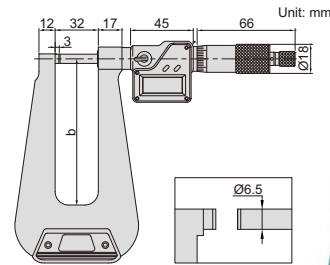
3239-253

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

| Code | Range | Accuracy | b |
|----------|--------|----------|-------|
| 3239-253 | 0-25mm | 7µm | 155mm |



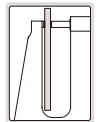
DIGITAL SHEET METAL MICROMETER



3539-253A

- Deep frame suitable for sheet metal, paper and plastic
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7315-30, 7302-30)

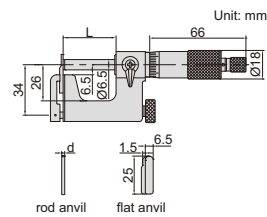
| Code | Range | Accuracy | b |
|-----------|-------------|----------|-------|
| 3539-253A | 0-25mm/0-1" | ±7µm | 155mm |



INTERCHANGEABLE ANVIL MICROMETERS

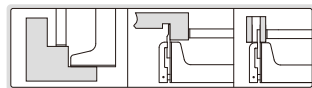


3262-25A



rod anvil flat anvil

- 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)

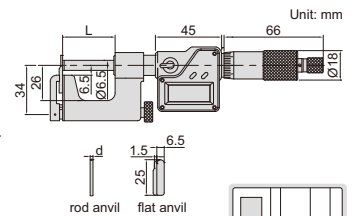


| Code | Range | Accuracy | L | d |
|----------|---------|----------|--------|------|
| 3262-25A | 0-25mm | 4µm | 28.5mm | Ø3mm |
| 3262-50A | 25-50mm | 4µm | 53.5mm | Ø5mm |

DIGITAL INTERCHANGEABLE ANVIL MICROMETERS



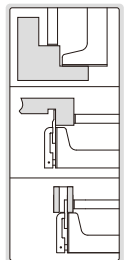
3562-25A



rod anvil flat anvil

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7315-30, 7302-30)

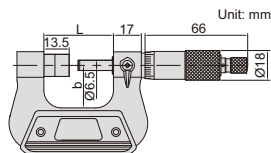
| Code | Range | Accuracy | L | d |
|----------|--------------|----------|--------|------|
| 3562-25A | 0-25mm/0-1" | ±4µm | 28.5mm | Ø3mm |
| 3562-50A | 25-50mm/1-2" | ±4µm | 53.5mm | Ø5mm |



LARGE ANVIL MICROMETER

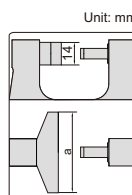
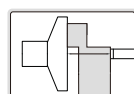


3234-25A



Unit: mm

- Graduation 0.01mm
- Ratchet stop

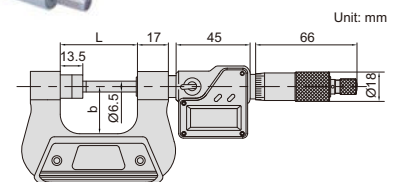


| Code | Range | Accuracy | L | a | b |
|----------|--------|----------|------|------|------|
| 3234-25A | 0-25mm | 4µm | 42mm | 50mm | 26mm |

DIGITAL LARGE ANVIL MICROMETER



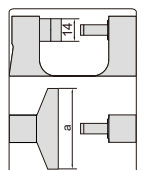
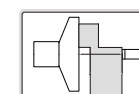
3534-25A



Unit: mm

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7315-30, 7302-30)

| Code | Range | Accuracy | L | a | b |
|----------|-------------|----------|----|----|----|
| 3534-25A | 0-25mm/0-1" | ±4µm | 42 | 50 | 26 |

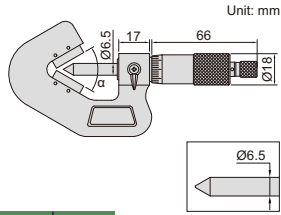


V-ANVIL MICROMETER



3290-153A

- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



| Code | Range | Flutes | Accuracy | α |
|-----------|--------|--------|----------|-----|
| 3290-153A | 1-15mm | 3 | 4µm | 60° |

DIGITAL V-ANVIL MICROMETER

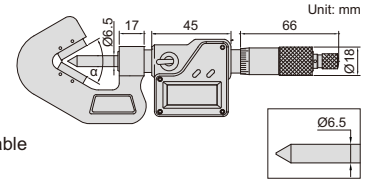
IP65
WATERPROOF

DATA
OUTPUT



3590-153A

- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-30, 7302-30)



| Code | Range | Flutes | Accuracy | α |
|-----------|------------------|--------|----------|-----|
| 3590-153A | 1-15mm/0.04-0.6" | 3 | ±4µm | 60° |

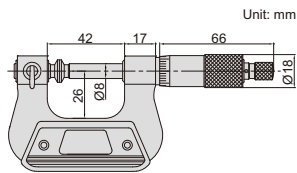
NON-ROTATING SPINDLE UNIVERSAL MICROMETER

NON-ROTATING
SPINDLE



3280-25A

| Code | Range | Accuracy |
|----------|--------|----------|
| 3280-25A | 0-25mm | 4µm |



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

Anvil/spindle tip (included) Unit: mm

| | | | |
|------------|--|------|--|
| Flat | | Ø6.5 | |
| Spherical | | R6.5 | |
| Spline | | Ø2 | |
| Disk | | Ø12 | |
| Blade | | 0.7 | |
| Knife-edge | | 0.35 | |
| Point | | Ø0.3 | |

55° anvil/spindle tip (optional) Unit: mm

| | | | |
|-----------------------------|--|------|--|
| Code 3280-SP1 Knife-edge | | 0.35 | |
| Code 3280-SP2 Point | | Ø0.3 | |

DIGITAL UNIVERSAL MICROMETER

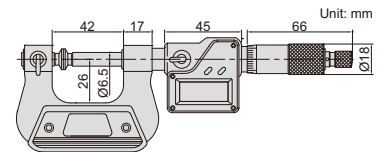
NON-ROTATING
SPINDLE

DATA
OUTPUT



3580-25A

| Code | Range |
|----------|-------------|
| 3580-25A | 0-25mm/0-1" |



- Accuracy: ±4µm
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Optional accessory: 55° anvil/spindle tip code 3280-SP1 and 3280-SP2, data output cable (code 7315-30, 7302-30)

Anvil/spindle tip (included) Unit: mm

| | | | |
|------------|--|------|--|
| Flat | | Ø6.5 | |
| Spherical | | R6.5 | |
| Spline | | Ø2 | |
| Disk | | Ø12 | |
| Blade | | 0.7 | |
| Knife-edge | | 0.35 | |
| Point | | Ø0.3 | |

55° anvil/spindle tip (optional) Unit: mm

| | | | |
|-----------------------------|--|------|--|
| Code 3280-SP1 Knife-edge | | 0.35 | |
| Code 3280-SP2 Point | | Ø0.3 | |

DISK MICROMETERS

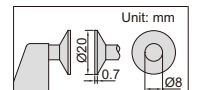
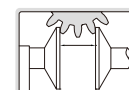
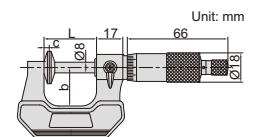
- Measure root tangent length of gear
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards

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

(mm)



3282-25



DIGITAL NON-ROTATING SPINDLE DISK MICROMETERS

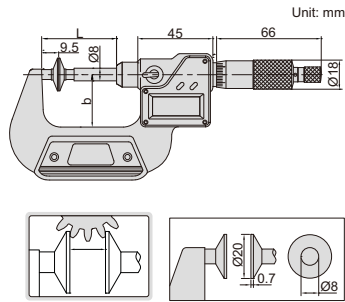
NON-ROTATING SPINDLE

DATA OUTPUT



3594-25A

- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-30, 7302-30)

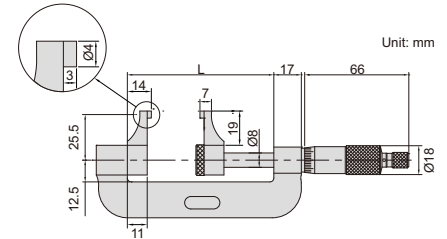
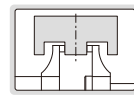


| Code | Range | Accuracy | Parallelism | L | b |
|-----------|---------------|----------|-------------|---------|--------|
| 3594-25A | 0-25mm/0-1" | ±4µm | 5µm | 43mm | 32mm |
| 3594-50A | 25-50mm/1-2" | ±4µm | 5µm | 68mm | 44.5mm |
| 3594-75A | 50-75mm/2-3" | ±5µm | 5µm | 93mm | 57mm |
| 3594-100A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

CALIPER TYPE MICROMETER



3238-25



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

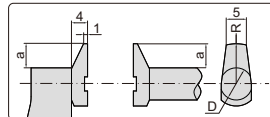
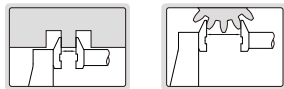
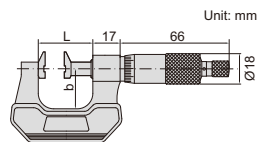
| Code | Range | Accuracy | L |
|---------|--------|----------|------|
| 3238-25 | 0-25mm | 10µm | 56mm |

JAW TYPE MICROMETER

NON-ROTATING SPINDLE



3283-25A



- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop

(mm)

| Code | Range | Accuracy | L | a | b | R | D |
|----------|--------|----------|----|---|----|----|---|
| 3283-25A | 0-25mm | 4µm | 34 | 6 | 24 | 10 | 8 |

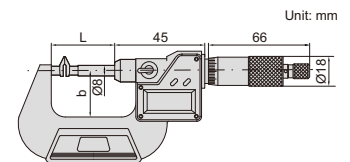
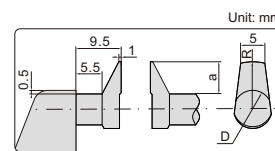
DIGITAL JAW TYPE MICROMETER

NON-ROTATING SPINDLE

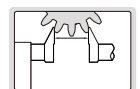
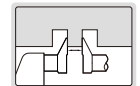
DATA OUTPUT



3583-25A



- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7315-30, 7302-30)



(mm)

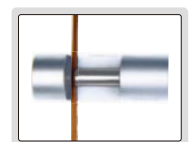
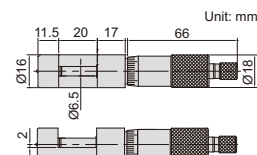
| Code | Range | Accuracy | L | a | b | R | D |
|----------|-------------|----------|----|-----|----|----|---|
| 3583-25A | 0-25mm/0-1" | ±4µm | 43 | 6.5 | 32 | 10 | 8 |

WIRE MICROMETER

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



3285-10

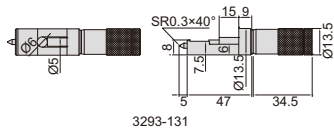


| Code | Range | Accuracy |
|---------|--------|----------|
| 3285-10 | 0-10mm | 4µm |

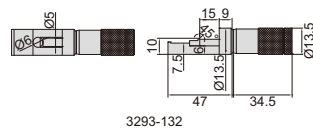
CAN SEAM MICROMETERS



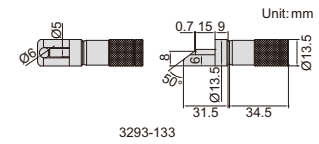
3293-131



3293-132

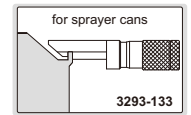
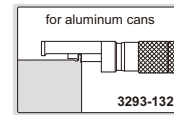
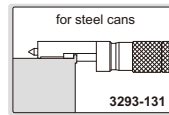


3293-133



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

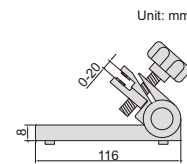
| Code | Range | Accuracy |
|----------|--------|----------|
| 3293-131 | 0-13mm | 4µm |
| 3293-132 | 0-13mm | 4µm |
| 3293-133 | 0-13mm | 4µm |



MICROMETER STAND



6300



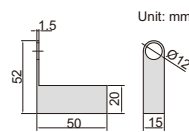
- Suitable for outside micrometers up to 100mm

| Code |
|------|
| 6300 |

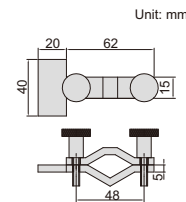
MICROMETER STAND



6301

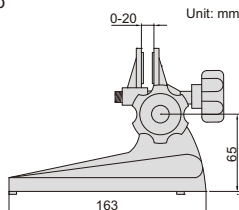


6301-1



6301-2

- Suitable for outside micrometers up to 100mm



- Suitable for inside micrometers

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

- Suitable for three points internal micrometers

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

MICROMETER SETTING STANDARDS



6310-100



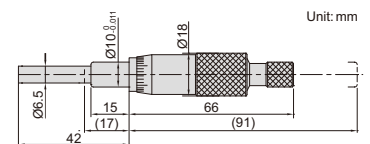
| Code | Length | Accuracy | D |
|----------|--------|----------|----|
| 6310-25 | 25 | ±1.5µm | Ø7 |
| 6310-50 | 50 | ±2µm | Ø7 |
| 6310-75 | 75 | ±2.5µm | Ø7 |
| 6310-100 | 100 | ±3µm | Ø8 |

MICROMETER HEAD



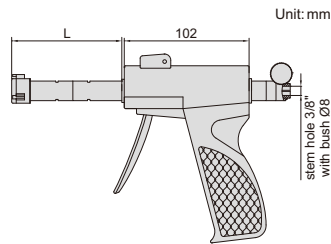
6381-25W

- Meet DIN863-2
- Ratchet stop

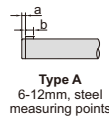


| Code | Range | Stem | Spindle tip | Accuracy | Graduation |
|----------|--------|-------|----------------|----------|------------|
| 6381-25W | 0-25mm | plain | flat (carbide) | 3µm | 0.01mm |

PISTOL GRIP THREE POINTS BORE GAGES



Unit: mm

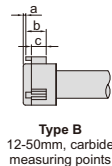


Type A
6-12mm, steel
measuring points



digital indicator
is optional

2124-8



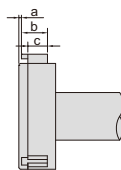
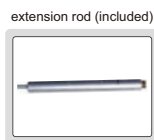
Type B
12-50mm, carbide
measuring points



digital indicator
is optional

2124-25

- Optional accessory:
digital indicators (code **2108-101F**,
resolution 0.001mm/0.00005")



Type C
50-100mm, carbide
measuring points



digital indicator
is optional

2124-100

Individual

(mm)

| Code | Range | Type | Accuracy (without digital indicator) | Setting ring (included) | Extension rod (included) | L | a | b | c |
|------------|----------|------|--------------------------------------|-------------------------|--------------------------|-----|-----|------|------|
| 2124-8 * | 6-8mm | A | 4µm | Ø6mm | 100mm | 50 | 1.5 | 2.5 | — |
| 2124-10 * | 8-10mm | A | 4µm | Ø8mm | 100mm | 50 | 1.5 | 2.5 | — |
| 2124-12 * | 10-12mm | A | 4µm | Ø10mm | 100mm | 50 | 1.5 | 2.5 | — |
| 2124-16 * | 12-16mm | B | 4µm | Ø16mm | 150mm | 65 | 0.5 | 6 | 4.5 |
| 2124-20 * | 16-20mm | B | 4µm | Ø16mm | 150mm | 65 | 0.5 | 6 | 4.5 |
| 2124-25 * | 20-25mm | B | 4µm | Ø25mm | 150mm | 91 | 0.5 | 8 | 6 |
| 2124-30 * | 25-30mm | B | 4µm | Ø25mm | 150mm | 91 | 0.5 | 8 | 6 |
| 2124-40 * | 30-40mm | B | 4µm | Ø40mm | 150mm | 97 | 0.5 | 14 | 12 |
| 2124-50 * | 40-50mm | B | 5µm | Ø40mm | 150mm | 97 | 0.5 | 14 | 12 |
| 2124-63 * | 50-63mm | C | 5µm | Ø62mm | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-75 * | 62-75mm | C | 5µm | Ø62mm | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-88 * | 75-88mm | C | 5µm | Ø87mm | 150mm | 112 | 0.5 | 17.5 | 14.5 |
| 2124-100 * | 87-100mm | C | 5µm | Ø87mm | 150mm | 112 | 0.5 | 17.5 | 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 |



2124-S504

*Supplied with manufacturer inspection certificate

DIGITAL THREE POINTS INTERNAL MICROMETERS

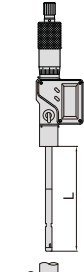
INSPECTION
CERTIFICATE

IP65
WATERPROOF

DATA
OUTPUT



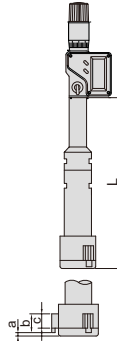
3127-12



Type A
6-12mm, steel
measuring points
three points



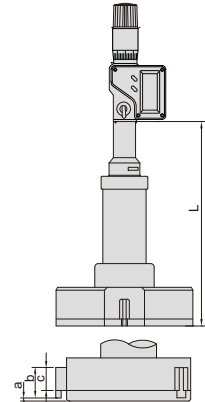
3127-40



Type B
12-50mm, carbide
measuring points
three points



3127-125



Type C
50-150mm, carbide
measuring points
three points

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Buttons: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory:
data output cable (code 7315-30, 7302-30),
setting ring (code 6312), micrometer stand
and clamp (code 6301 and 6301-2)

micrometer stand
with clamp (optional)



setting ring



6-100mm: included
100-150mm: optional

extension rod



included

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 | 57 | 1.5 | 2.5 | — |
| 3127-10 * | 8-10mm/0.31-0.39" | A | 4µm | Ø8mm (included) | 100mm | 57 | 1.5 | 2.5 | — |
| 3127-12 * | 10-12mm/0.39-0.47" | A | 4µm | Ø10mm (included) | 100mm | 57 | 1.5 | 2.5 | — |
| 3127-16 * | 12-16mm/0.47-0.63" | B | 4µm | Ø16mm (included) | 150mm | 99 | 0.5 | 6 | 4.5 |
| 3127-20 * | 16-20mm/0.63-0.79" | B | 4µm | Ø16mm (included) | 150mm | 99 | 0.5 | 6 | 4.5 |
| 3127-25 * | 20-25mm/0.79-0.98" | B | 4µm | Ø25mm (included) | 150mm | 105 | 0.5 | 8 | 6 |
| 3127-30 * | 25-30mm/0.98-1.18" | B | 4µm | Ø25mm (included) | 150mm | 105 | 0.5 | 8 | 6 |
| 3127-40 * | 30-40mm/1.18-1.57" | B | 4µm | Ø40mm (included) | 150mm | 110 | 0.5 | 14 | 12 |
| 3127-50 * | 40-50mm/1.57-1.97" | B | 5µm | Ø40mm (included) | 150mm | 110 | 0.5 | 14 | 12 |
| 3127-63 * | 50-63mm/1.97-2.48" | C | 5µm | Ø62mm (included) | 150mm | 127 | 0.5 | 17.5 | 14.5 |
| 3127-75 * | 62-75mm/2.44-2.95" | C | 5µm | Ø62mm (included) | 150mm | 127 | 0.5 | 17.5 | 14.5 |
| 3127-88 * | 75-88mm/2.95-3.46" | C | 5µm | Ø87mm (included) | 150mm | 127 | 0.5 | 17.5 | 14.5 |
| 3127-100 * | 87-100mm/3.43-3.94" | C | 5µm | Ø87mm (included) | 150mm | 127 | 0.5 | 17.5 | 14.5 |
| 3127-125 * | 100-125mm/3.94-4.92" | C | 5µm | optional | 150mm | 175 | 0.9 | 29 | 25 |
| 3127-150 * | 125-150mm/4.92-5.91" | C | 5µm | optional | 150mm | 175 | 0.9 | 29 | 25 |

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



3127-202

THREE POINTS INTERNAL MICROMETERS

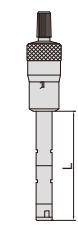


- Meet DIN863-4
- 6-12mm: graduation 0.001mm, 12-200mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)

micrometer stand with clamp (optional)



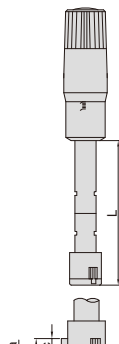
3227-8



Type A
6-12mm, steel measuring points three points



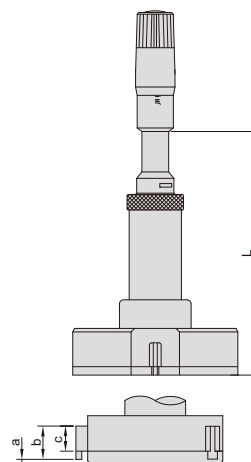
3227-16



Type B
12-50mm, carbide measuring points three points



3227-125



Type C
50-200mm, carbide measuring points three points

Individual

(mm)

| 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 | optional | 150mm | 140 | 0.9 | 29 | 25 |
| 3227-150 * | 125-150mm | C | 5µm | optional | 150mm | 140 | 0.9 | 29 | 25 |
| 3227-175 * | 150-175mm | C | 7µm | optional | 150mm | 140 | 0.9 | 29 | 25 |
| 3227-200 * | 175-200mm | C | 7µm | optional | 150mm | 140 | 0.9 | 29 | 25 |

setting ring



6-100mm: included
100-200mm: optional

extension rod



included

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

WIDE RANGE THREE POINTS INTERNAL MICROMETERS



- Meet DIN863-4
- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Setting rings are included

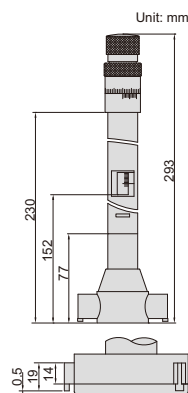
| Code | Range | Accuracy | Setting ring |
|------------|-----------|----------|-------------------|
| 3228-70 * | 50-70mm | 5µm | Ø50mm (included) |
| 3228-100 * | 70-100mm | 5µm | Ø70mm (included) |
| 3228-150 * | 100-150mm | 6µm | Ø100mm (included) |
| 3228-250 * | 150-250mm | 8µm | Ø150mm (included)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



setting ring



3228-70

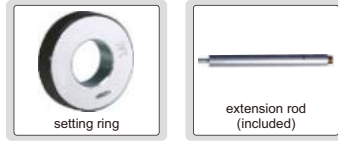


Unit: mm

* Supplied with manufacturer inspection certificate

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS

- Meet DIN863-4
- Resolution 0.001mm/0.00005" (resolution of 3128-300 is 0.001mm/0.0001")
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output, 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 7315-30, 7302-30)



INSPECTION CERTIFICATE

IP54 WATERPROOF

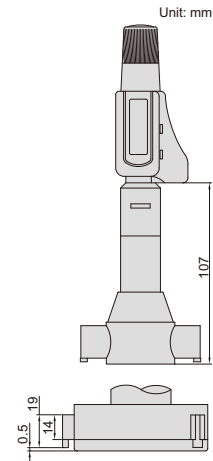
DATA OUTPUT

| 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



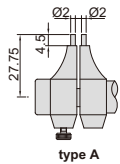
3128-70



INSIDE MICROMETERS (ECONOMIC TYPE)

ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

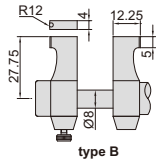
Unit: mm



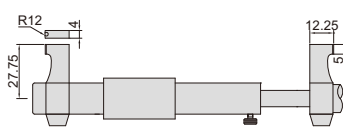
type A



3220-50



type B



type C

micrometer stand with clamp (optional)



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

| 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 |

DIGITAL INSIDE MICROMETERS (ECONOMIC TYPE)

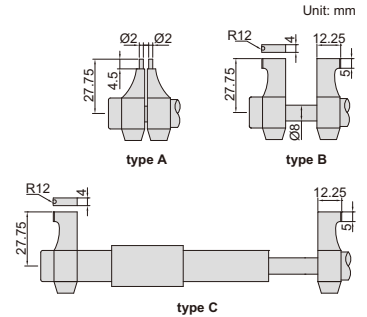
ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

DATA OUTPUT



3520-30

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7315-30, 7302-30), setting ring (code 6312)



| 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 |

DIGITAL TUBULAR INSIDE MICROMETERS

IP65 WATERPROOF

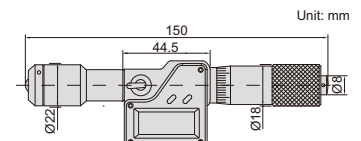
DATA OUTPUT

- Micrometer head: 150-175mm
- Graduation: 0.001mm/0.00005"
- Accuracy: $(3+n+L/50)\mu\text{m}$
n = number of rods
L = maximum measuring length (mm)
- Carbide measuring faces
- The diameter of extension rods is 22mm
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Supplied with setting standards
- Optional accessory: data output cable (code 7315-30, 7302-30)



3521-1000

| Code | Range | Travel of micrometer head | Extension rods |
|-----------|------------|---------------------------|---|
| 3521-175 | 150-175mm | 25mm | — |
| 3521-1000 | 150-1000mm | 25mm | 25mm, 50mm (2 pcs), 100mm, 200mm, 400mm |

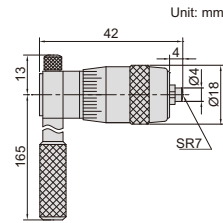


TUBULAR INSIDE MICROMETERS

- Graduation: 0.01mm
- Accuracy: $(6+L/50)\mu\text{m}$
L=maximum measuring length (mm)
- Optional accessory: setting ring (code 6312), gage block accessory (code 6881), cylinder gage block (code 4001), caliper/height gage checker (code 6884)



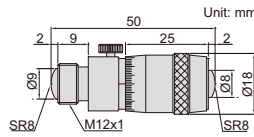
3221-50



| Code | Range | Travel of micrometer head | Extension rods |
|----------|----------|---------------------------|----------------|
| 3221-50 | 25-50mm | 7mm | 2 pcs |
| 3221-300 | 50-300mm | 13mm | 10 pcs |

TUBULAR INSIDE MICROMETERS

- Micrometer head: 50-63mm
- Travel of micrometer head: 13mm
- 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

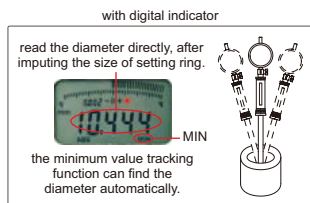
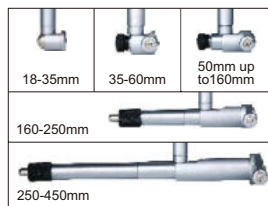


3222-150

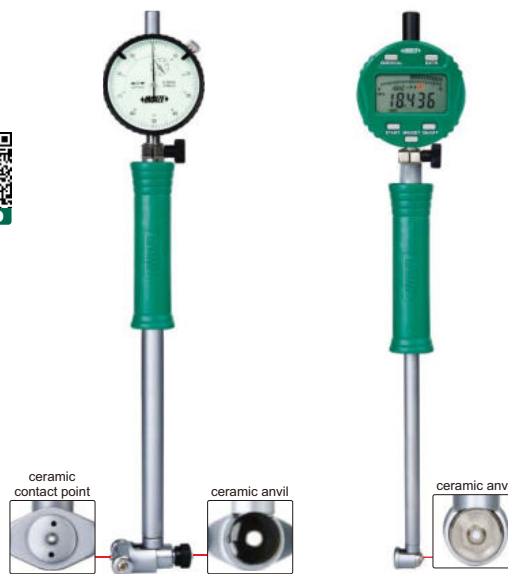
| Code | Range | Extension rods |
|-----------|-----------|---|
| 3222-150 | 50-150mm | 13mm, 25mm, 50mm |
| 3222-300 | 50-300mm | 13mm, 25mm, 50mm (2 pcs), 100mm |
| 3222-500 | 50-500mm | 13mm, 25mm, 50mm (2 pcs), 100mm, 200mm |
| 3222-600 | 50-600mm | 13mm, 25mm, 50mm, 100mm, 150mm, 200mm |
| 3222-1000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

BORE GAGES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

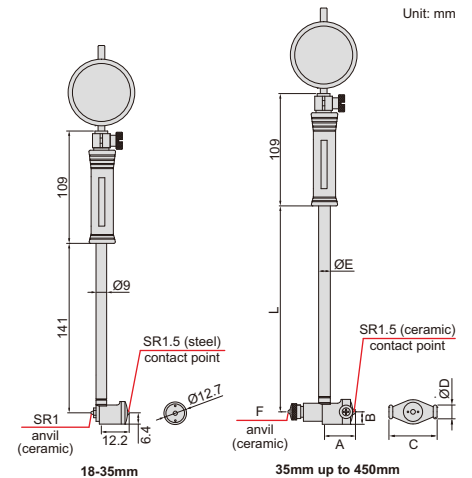


- Repeatability: 0.003mm
- Optional accessory: setting ring (code 6312), long handle (code 7351), bore gage setter



2322-160A

2122-35A



| 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 |

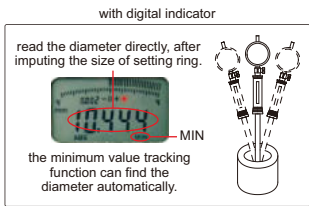
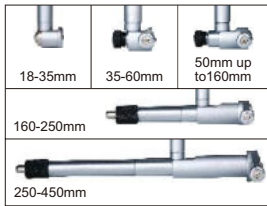
With dial indicator

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

With digital indicator (data output cable code 7315-50M, 7302-40M, optional)

| Code | Range | Indicator | Accuracy |
|-----------|-----------|---|----------|
| 2122-35A | 18-35mm | digital indicator, code 2108-10F, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005") | ±0.015mm |
| 2122-60A | 35-60mm | | ±0.018mm |
| 2122-160A | 50-160mm | | ±0.018mm |
| 2122-250A | 160-250mm | | ±0.018mm |
| 2122-450A | 250-450mm | | ±0.018mm |

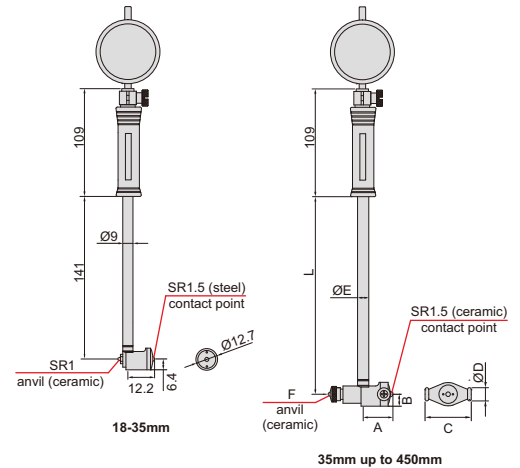
PRECISION BORE GAGES



2825-160



2126-35



| 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 |

- Optional accessory: setting ring (code 6312), long handle (code 7351), bore gage setter

With dial indicator

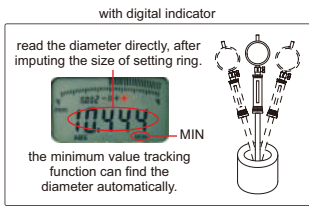
| Code | Range | Indicator | Accuracy | Repeatability |
|----------|-----------|---|----------|---------------|
| 2825-35 | 18-35mm | dial indicator, range 1mm, graduation 0.001mm (code 2313-1FA) | ±0.007mm | 0.0015mm |
| 2825-60 | 35-60mm | | ±0.007mm | 0.0015mm |
| 2825-100 | 50-100mm | | ±0.007mm | 0.0015mm |
| 2825-160 | 50-160mm | | ±0.007mm | 0.0015mm |
| 2825-161 | 100-160mm | | ±0.007mm | 0.0015mm |
| 2825-250 | 160-250mm | | ±0.007mm | 0.0015mm |
| 2825-450 | 250-450mm | | ±0.007mm | 0.0015mm |

With digital indicator (data output cable code 7315-50M, 7302-40M, optional)

| Code | Range | Indicator | Accuracy | Repeatability |
|----------|-----------|---|----------|---------------|
| 2126-35 | 18-35mm | digital indicator, code 2108-101F, range 12.7mm/0.5", resolution 0.001mm/0.00005" | ±0.007mm | 0.002mm |
| 2126-60 | 35-60mm | | ±0.007mm | 0.002mm |
| 2126-100 | 50-100mm | | ±0.007mm | 0.002mm |
| 2126-160 | 50-160mm | | ±0.007mm | 0.002mm |
| 2126-161 | 100-160mm | | ±0.007mm | 0.002mm |
| 2126-250 | 160-250mm | | ±0.007mm | 0.002mm |
| 2126-450 | 250-450mm | | ±0.007mm | 0.002mm |

BORE GAGES FOR SMALL HOLES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



2852-10

2152-18

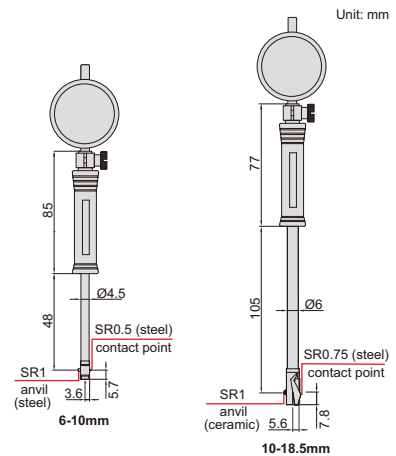
- Repeatability: 0.003mm
- Optional accessory: setting ring (code 6312), bore gage setter

With dial indicator

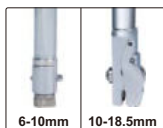
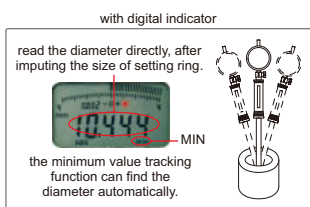
| Code | Range | Indicator | Accuracy |
|---------|-----------|---|----------|
| 2852-10 | 6-10mm | dial indicator, range 3mm, graduation 0.01mm (code 2311-3F) | ±0.012mm |
| 2852-18 | 10-18.5mm | | ±0.012mm |

With digital indicator (data output cable code 7315-50M, 7302-40M, optional)

| Code | Range | Indicator | Accuracy |
|---------|-----------|---|----------|
| 2152-10 | 6-10mm | digital indicator, code 2108-10F, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005") | ±0.012mm |
| 2152-18 | 10-18.5mm | | ±0.012mm |



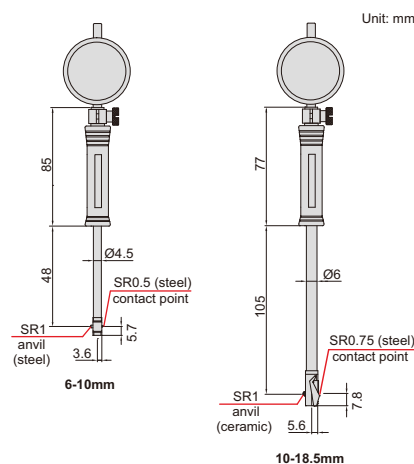
PRECISION BORE GAGES FOR SMALL HOLES



- Accuracy: $\pm 0.007\text{mm}$
- Optional accessory: setting ring (code 6312), bore gage setter

With dial indicator

| Code | Range | Indicator | Repeatability |
|---------|-----------|---|---------------|
| 2853-10 | 6-10mm | dial indicator, range 1mm, graduation 0.001mm (code 2313-1FA) | 0.0015mm |
| 2853-18 | 10-18.5mm | | 0.0015mm |



With digital indicator (data output cable code 7315-50M, 7302-40M, optional)

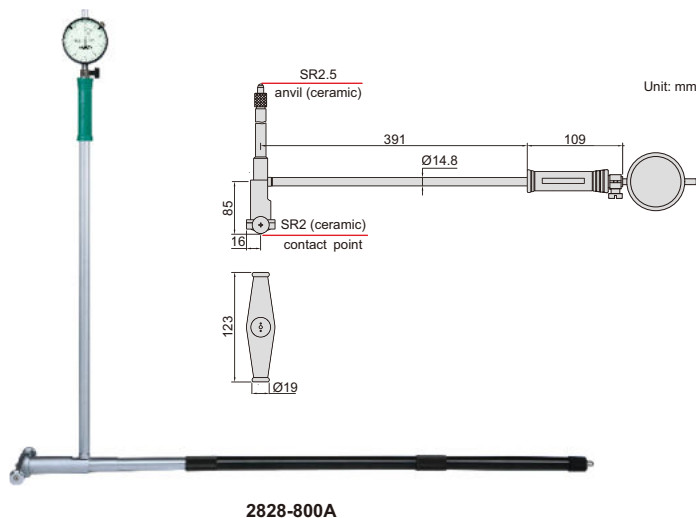
| Code | Range | Indicator | Repeatability |
|---------|-----------|---|---------------|
| 2153-10 | 6-10mm | digital indicator, code 2108-101F, range 12.7mm/0.5", resolution 0.001mm/0.00005" | 0.002mm |
| 2153-18 | 10-18.5mm | | 0.002mm |

BORE GAGE

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

(mm)

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



BORE GAGE SETS

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

packaging (code 2824-S3)



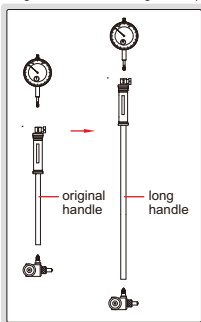
- Repeatability: 0.003mm
- Optional accessory: setting ring (code 6312) long handle (code 7351)

| Code | Range | Indicator | Bore gages included | Accuracy |
|-----------|----------|---|--|---|
| 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 $\pm 0.018\text{mm}$ 50-160mm $\pm 0.018\text{mm}$ |
| 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 $\pm 0.015\text{mm}$ 35-60mm $\pm 0.018\text{mm}$ 50-160mm $\pm 0.018\text{mm}$ |

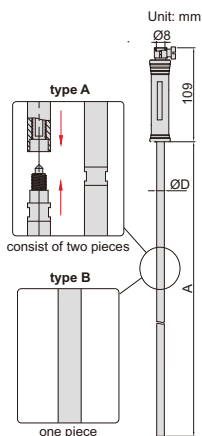


LONG HANDLES

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



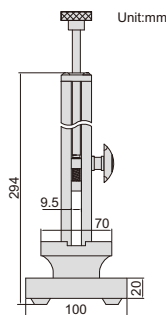
7351-EX11



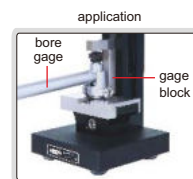
- To assist deep-hole measurement
- Can be used for bore gages 2322, 2122, 2824 and 2827

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

BORE GAGE SETTERS



7353-160



gage blocks for 7353-160



horizontal use



- Vertical and horizontal use
- To be used with gage blocks

Gage block set for 7353-160

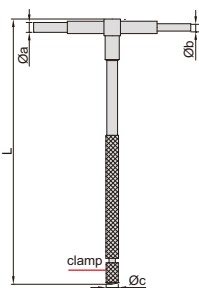
| Blocks per set | Size (mm) | Step (mm) | Quantity (pcs) | Remark |
|----------------|-----------|-----------|----------------|-------------------|
| 33 | 1.005 | | 1 | grade 2 (ISO3650) |
| | 1.01-1.09 | 0.01 | 9 | |
| | 1.1-1.9 | 0.1 | 9 | |
| | 1-9 | 1 | 9 | |
| | 10-30 | 10 | 3 | |
| | 50 | | 1 | |
| | 100 | | 1 | |

| Code | Range | Repeatability | Remark |
|-----------|---------|---------------|------------------------|
| 7353-160 | 0-160mm | 1.2µm | with gage block set |
| 7353-160W | 0-160mm | 1.2µm | without gage block set |

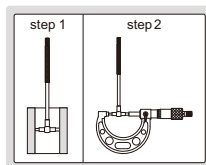
TELESCOPING GAGE SET



4206-1



- 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 |

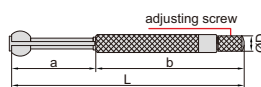
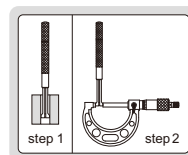
| Code | Total range | Gages included (mm) |
|--------|-------------|--|
| 4206-1 | 8-150mm | 8-12.7, 12.7-19, 19-32, 32-54, 54-90, 90-150 |

SMALL HOLE GAGE SET

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



4208-1



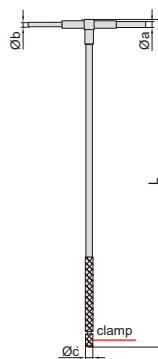
| Range | L | a | b | ØD |
|----------|----|----|----|----|
| 3-5mm | 76 | 24 | 52 | 5 |
| 5-7.5mm | 79 | 27 | 52 | 5 |
| 7.5-10mm | 88 | 30 | 58 | 6 |
| 10-13mm | 91 | 34 | 58 | 6 |

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

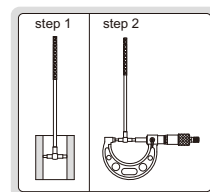
LONG HANDLE TELESCOPING GAGES

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

| Code | Range | L | Øa | Øb | Øc |
|--------|-----------|-----|-----|-----|-----|
| 4209-1 | 8-12.7mm | 300 | 3.9 | 2.9 | 6.2 |
| 4209-2 | 12.7-19mm | 300 | 5.3 | 3.8 | 6.2 |
| 4209-3 | 19-32mm | 300 | 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 |

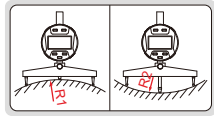


4209-6



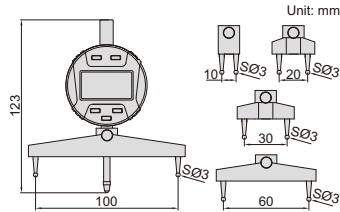
DIGITAL RADIUS GAGE (LOW ACCURACY)

ATTENTION: NO DATA OUTPUT



2183

- Resolution: 0.005mm/0.0002"
- 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 (time is adjustable)



| Code | Range of external radius (R1) | Range of internal radius (R2) | Accuracy (mm) |
|------|-------------------------------|-------------------------------|---------------|
| 2183 | 5-910mm/0.2-35.83" | 7-910mm/0.3-35.83" | ±0.01R* |

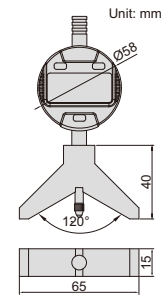
*R is the radius to be measured. For example, radius is 100mm, the accuracy is $\pm 0.01 \times 100 = \pm 1\text{mm}$

DIGITAL RADIUS GAGE

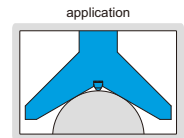
DATA OUTPUT



2188-55



- Measure radius of external arc, arc angle of measured surface should be larger than 60°
- Display radius value, no need to calculate
- Button function: on/off, zero, data preset, inch/mm
- Keep preset data in memory after restart
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Supplied with pin gage for zero setting
- Optional accessory: data output cable (code 7315-50M, 7302-40M)



| Code | Range (radius) | Resolution | Accuracy |
|---------|-------------------|----------------|----------|
| 2188-55 | 4-53mm/0.16-2.09" | 0.01mm/0.0005" | ±0.02mm |

DIGITAL RADIUS CALIPERS

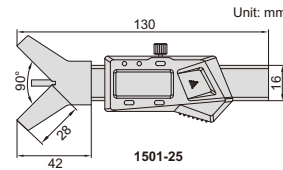
ATTENTION: THE ACTUAL RADIUS IS 2.414 TIMES OF THE READING

DATA OUTPUT

- Measure radius of external arc, arc angle of measured surface should be larger than 90°
- 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
- Supplied with pin gage for zero setting



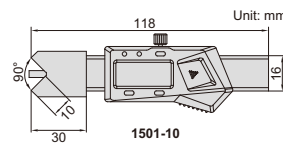
1501-25



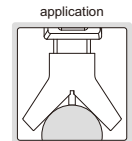
1501-25



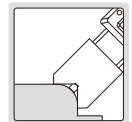
1501-10



1501-10



1501-10 can measure small workpieces or workpieces with steps



| Code | Range (radius) | Accuracy |
|---------|---------------------|----------|
| 1501-25 | 2-25mm/0.079-1" | ±0.05mm |
| 1501-10 | 2-10mm/0.079-0.394" | ±0.05mm |

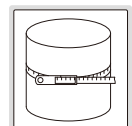
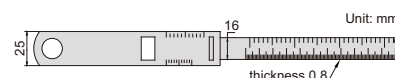
CIRCUMFERENCE TAPES

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



7114-950

| Code | Circumference range | Diameter range | Accuracy | |
|-----------|---------------------|----------------|---------------|----------|
| | | | Circumference | Diameter |
| 7114-950 | 150-950mm | Ø50-300mm | ±3mm | ±1mm |
| 7114-2200 | 940-2200mm | Ø300-700mm | ±3mm | ±1mm |
| 7114-3460 | 2190-3460mm | Ø700-1100mm | ±3mm | ±1mm |



HIGH PRECISION DIGITAL INDICATORS

DATA OUTPUT **Ø28MM STEM SUITABLE FOR REINFORCED CLAMPING** **ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF**

LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE **ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING**

- Linear ball bearings for ten million times use
- Ø28mm stem suitable for reinforced clamping
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001" / 0.001mm/0.00005" / 0.01mm/0.0005"
- Reading in digital and analog
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Ruby probe

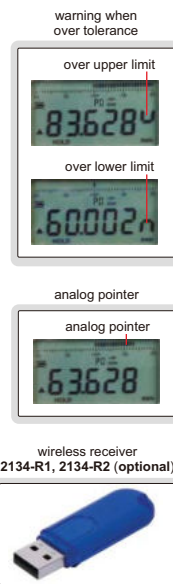
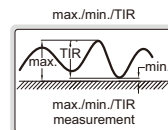
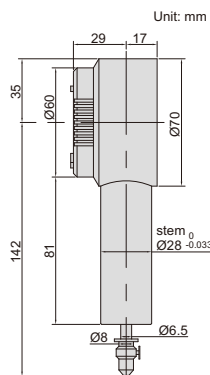
With data interface

Optional accessory:
 wireless transmitter, code **7315-60**,
 data output cable (keyboard format), code **7302-60**
 data output cable (serial port format), code **7305-G60**
 (cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)

| Code | Range | Accuracy | Hysteresis | Remark |
|--------|---------------|----------|------------|-----------|
| 2140-6 | 0-6mm/0-0.24" | 1.6µm | 0.8µm | flat back |



2140-6



Built-in wireless

Optional accessory:
 wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
 wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

| Code | Range | Accuracy | Hysteresis | Remark |
|----------|---------------|----------|------------|-----------|
| 2140-6WL | 0-6mm/0-0.24" | 1.6µm | 0.8µm | flat back |

HIGH PRECISION DIGITAL INDICATORS

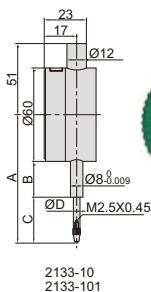


DATA OUTPUT **LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE**

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

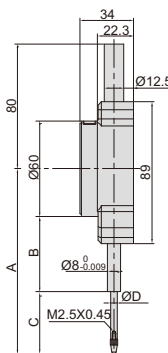
- Linear ball bearings for ten million times use
- Absolute encoder, the original data remains after power off
- Reading in digital and analog
- Data output
- With flat back
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Optional accessory: contact points wireless transmitter, code **7315-60**
 data output cable (keyboard format), code **7302-60**
 data output cable (serial port format), code **7305-G60**
 (cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)



2133-10
2133-101



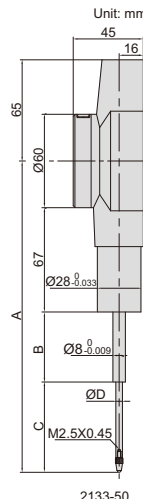
2133-10



2133-25
2133-251



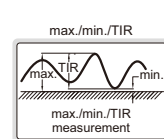
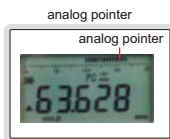
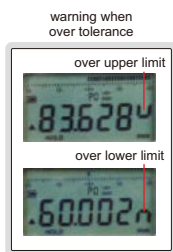
2133-25



2133-50



2133-50



Low precision

Carbide probe
 Adjustable resolution: 0.0005mm/0.00002" / 0.001mm/0.00005" / 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | A | B | C | ØD |
|----------|-------------|----------|------------|-------|------|------|-----|
| 2133-10* | 12.7mm/0.5" | 3µm | 1.5µm | 75.4 | 20.6 | 24.8 | 5 |
| 2133-25* | 25.4mm/1" | 3µm | 1.5µm | 109.5 | 38.5 | 41 | 5 |
| 2133-50* | 50.8mm/2" | 3µm | 1.5µm | 201 | 32 | 72 | 4.5 |

High precision

Ruby probe
 Adjustable resolution: 0.0002mm/0.00001" / 0.001mm/0.00005" / 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | A | B | C | ØD |
|-----------|-------------|----------|------------|-------|------|------|----|
| 2133-101* | 12.7mm/0.5" | 1.5µm | 1µm | 77.4 | 26 | 21.4 | 4 |
| 2133-251* | 25.4mm/1" | 1.8µm | 1µm | 116.1 | 42.5 | 44 | 4 |

*Supplied with manufacturer inspection certificate

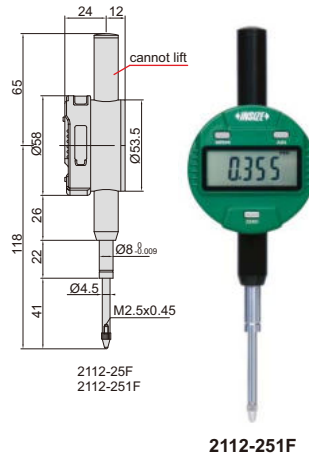
DIGITAL INDICATORS (STANDARD TYPE)

**INSPECTION
CERTIFICATE**

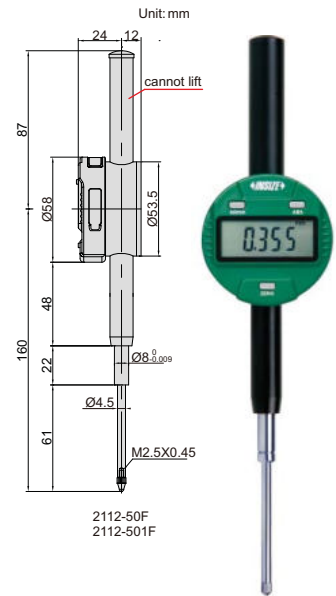
**DATA
OUTPUT**



2112-10F
2112-101F



2112-25F
2112-251F



2112-50F
2112-501F

- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable), data output
- Optional accessory: data output cable (code **7315-50M**, **7302-40M**, **7305-40M**), backs, contact points

spindle lift knob is included



Resolution 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | Maximum measuring force | Remark |
|------------------|-------------|----------|------------|-------------------------|-----------|
| 2112-10F* | 12.7mm/0.5" | 20µm | 10µm | 1.5N | flat back |
| 2112-25F* | 25.4mm/1" | 20µm | 10µm | 2.2N | flat back |
| 2112-50F* | 50.8mm/2" | 30µm | 10µm | 2.5N | flat back |
| 2112-10* | 12.7mm/0.5" | 20µm | 10µm | 1.5N | lug back |
| 2112-25* | 25.4mm/1" | 20µm | 10µm | 2.2N | lug back |
| 2112-50* | 50.8mm/2" | 30µm | 10µm | 2.5N | lug back |

*Supplied with manufacturer inspection certificate

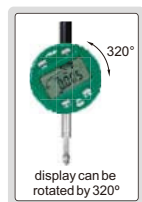
Resolution 0.001mm/0.00005"

| Code | Range | Accuracy | Hysteresis | Maximum measuring force | Remark |
|-------------------|-------------|----------|------------|-------------------------|-----------|
| 2112-101F* | 12.7mm/0.5" | 5µm | 2µm | 1.5N | flat back |
| 2112-251F* | 25.4mm/1" | 5µm | 3µm | 2.2N | flat back |
| 2112-501F* | 50.8mm/2" | 6µm | 3µm | 2.5N | flat back |

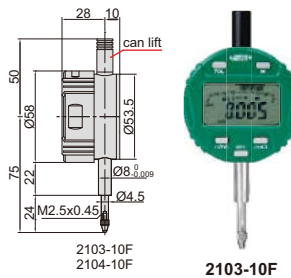
DIGITAL INDICATORS (ADVANCED TYPE)

**INSPECTION
CERTIFICATE**

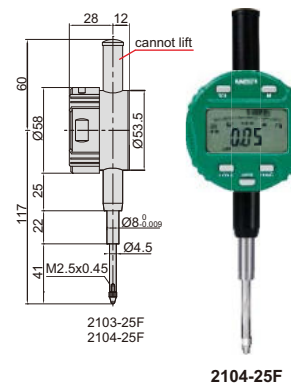
**DATA
OUTPUT**



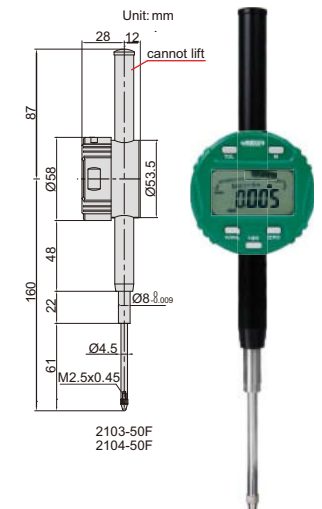
spindle lift knob is included



2103-10F
2104-10F

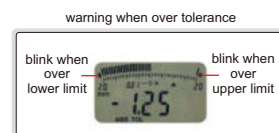
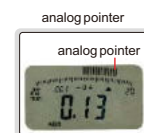
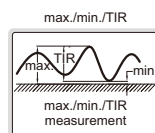


2104-25F



2103-50F
2104-50F

- 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
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code **7315-50M**, **7302-40M**, **7305-40M**), backs, contact points



Resolution 0.001mm/0.00005"

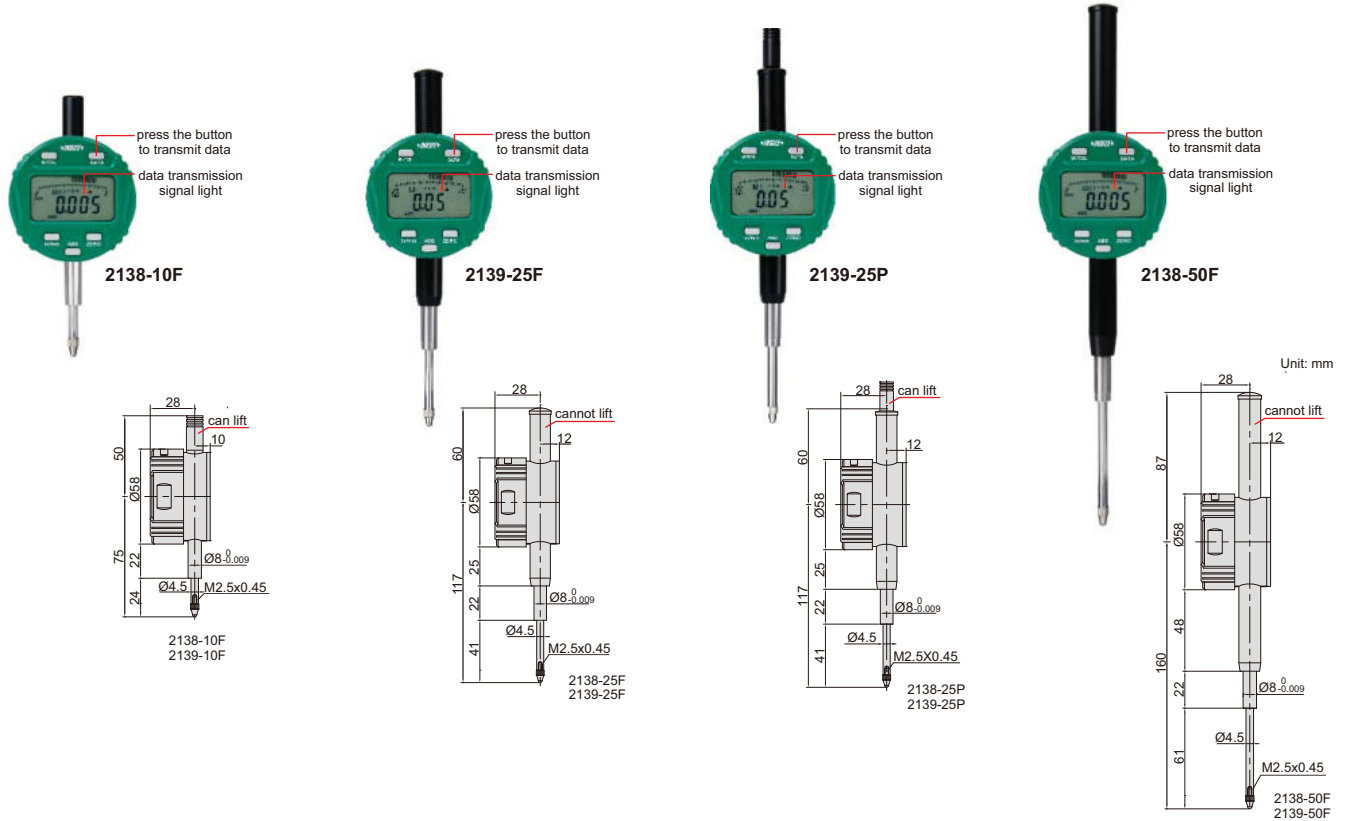
| Code | Range | Accuracy | Hysteresis | Maximum measuring force | Remark |
|------------------|-------------|----------|------------|-------------------------|-----------|
| 2103-10F* | 12.7mm/0.5" | 5µm | 2µm | 1.5N | flat back |
| 2103-25F* | 25.4mm/1" | 5µm | 3µm | 2.2N | flat back |
| 2103-50F* | 50.8mm/2" | 6µm | 3µm | 2.5N | flat back |

Resolution 0.01mm/0.0005"

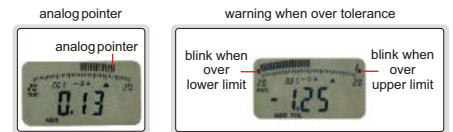
| Code | Range | Accuracy | Hysteresis | Maximum measuring force | Remark |
|------------------|-------------|----------|------------|-------------------------|-----------|
| 2104-10F* | 12.7mm/0.5" | 20µm | 10µm | 1.5N | flat back |
| 2104-25F* | 25.4mm/1" | 20µm | 10µm | 2.2N | flat back |
| 2104-50F* | 50.8mm/2" | 30µm | 10µm | 2.5N | flat back |

*Supplied with manufacturer inspection certificate

DIGITAL INDICATORS (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)



- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-40M, 7305-40M), backs, contact points



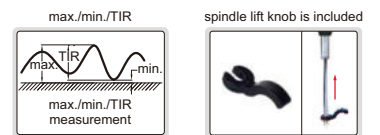
Resolution 0.001mm/0.0005"

| Code | Range | Accuracy | Hysteresis | Maximum measuring force | Remark |
|-----------|-------------|----------|------------|-------------------------|--------------------------|
| 2138-10F* | 12.7mm/0.5" | 5µm | 2µm | 1.5N | flat back |
| 2138-25F* | 25.4mm/1" | 5µm | 3µm | 2.2N | flat back |
| 2138-50F* | 50.8mm/2" | 6µm | 3µm | 2.5N | flat back |
| 2138-25P* | 25.4mm/1" | 5µm | 3µm | 2.2N | flat back, with lift cap |
| 2138-50P* | 50.8mm/2" | 6µm | 3µm | 2.5N | flat back, with lift cap |

Resolution 0.01mm/0.0005"

| Code | Range | Accuracy | Hysteresis | Maximum measuring force | Remark |
|-----------|-------------|----------|------------|-------------------------|--------------------------|
| 2139-10F* | 12.7mm/0.5" | 20µm | 10µm | 1.5N | flat back |
| 2139-25F* | 25.4mm/1" | 20µm | 10µm | 2.2N | flat back |
| 2139-50F* | 50.8mm/2" | 30µm | 10µm | 2.5N | flat back |
| 2139-25P* | 25.4mm/1" | 20µm | 10µm | 2.2N | flat back, with lift cap |
| 2139-50P* | 50.8mm/2" | 30µm | 10µm | 2.5N | flat back, with lift cap |

*Supplied with manufacturer inspection certificate

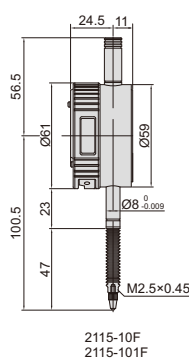


WATERPROOF DIGITAL INDICATORS

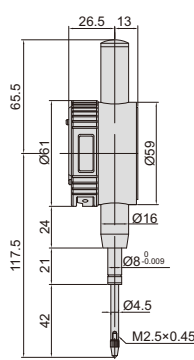
INSPECTION CERTIFICATE

WATERPROOF

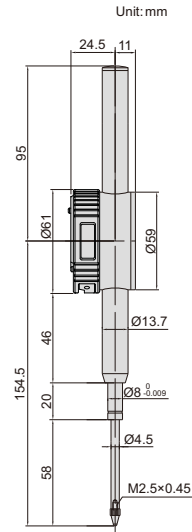
DATA OUTPUT



2115-10F

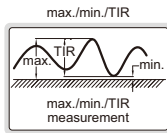


2115-25F



2115-50F

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



Resolution 0.001mm/0.00005"

| Code | Range | Dust/waterproof | Accuracy | Hysteresis | Remark |
|------------|-------------|-----------------|----------|------------|-----------|
| 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 |
|-----------|-------------|-----------------|----------|------------|-----------|
| 2115-10F* | 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

- Dust/waterproof
- Button function: on/off, zero, mm/inch, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-40M, 7305-40M), backs, contact points

warning when over tolerance



DIGITAL INDICATOR FOR BORE GAGES (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

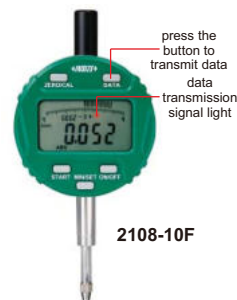
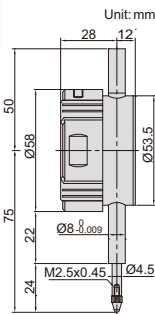
THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT

INSPECTION CERTIFICATE



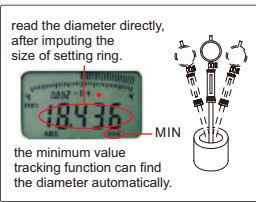
display can be rotated by 320°



2108-10F

press the button to transmit data
data transmission signal light

- 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: on/off, minimum value tracking, calibration, data preset, inch/metric conversion
- Data remains after power off, no need to recalibrate after power on
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output, with flat back
- Optional accessory: data output cable (code 7315-50M, 7302-40M, 7305-40M), backs, contact points, spindle lift knob



read the diameter directly, after inputting the size of setting ring.
the minimum value tracking function can find the diameter automatically.

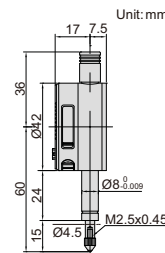
| Code | Range | Resolution | Accuracy | Hysteresis |
|-----------|-------------|--|----------|------------|
| 2108-10F* | 12.7mm/0.5" | 0.002mm/0.0001" (can switch to: 0.01mm/0.0005") | 20µm | 10µm |

*Supplied with manufacturer inspection certificate

COMPACT DIGITAL INDICATOR

INSPECTION CERTIFICATE

DATA OUTPUT



2114-5F

- 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
- Keep preset data in memory after restart
- CR1632 battery, automatic power off
- Data output, with flat back
- Optional accessory: data output cable (code 7315-50M, 7302-40M, 7305-40M), contact points

| Code | Range | Resolution | Accuracy | Hysteresis |
|----------|----------|----------------|----------|------------|
| 2114-5F* | 5mm/0.2" | 0.01mm/0.0005" | 20µm | 10µm |

*Supplied with manufacturer inspection certificate

BACK PLUNGER TYPE DIGITAL INDICATOR

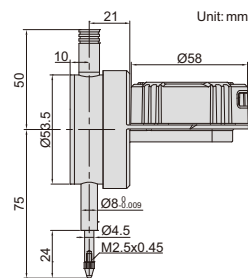
INSPECTION
CERTIFICATE

DATA
OUTPUT

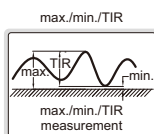
- Display can rotate 320°, and display direction is changeable
- Reading in digital and analog
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output, with flat back
- Optional accessory: data output cable (code 7315-50M, 7302-40M, 7305-40M), backs, contact points



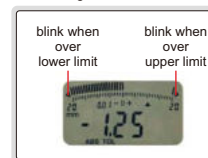
2118-10



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



warning when over tolerance



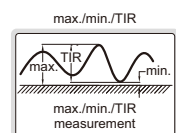
| Code | Range | Resolution | Accuracy | Hysteresis |
|----------|-------------|----------------|----------|------------|
| 2118-10* | 12.7mm/0.5" | 0.01mm/0.0005" | 20µm | 10µm |

*Supplied with manufacturer inspection certificate



LARGE STROKE DIGITAL INDICATORS

DATA
OUTPUT



- Button function: on/off, zero, mm/inch, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Maximum measuring force: 3.2N
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-40M, 7305-40M), backs, contact points

Resolution 0.01mm/0.0005"

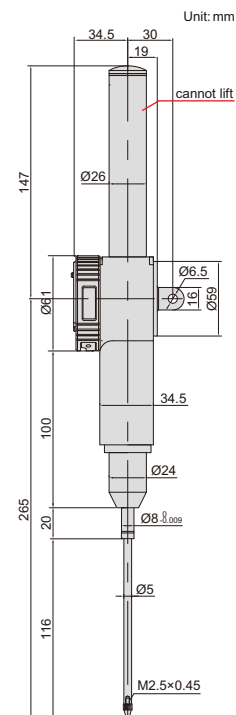
| Code | Range | Accuracy | Hysteresis | Remark |
|----------|----------|----------|------------|----------|
| 2117-100 | 100mm/4" | 30µm | 10µm | lug back |

Resolution 0.001mm/0.00005"

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

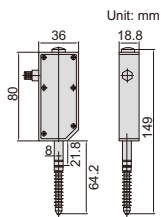


2117-100



LINEAR GAGES

LINEAR GAGE
IP65
WATERPROOF



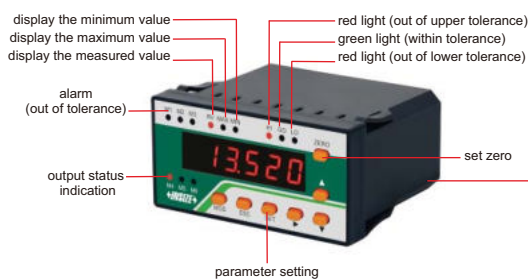
7107-11

SPECIFICATION

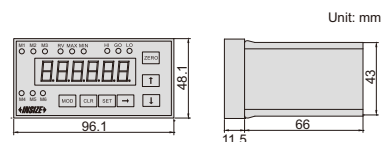
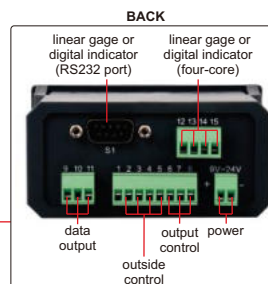
| Code | 7107-11 | 7107-12 |
|---------------------|---------------------------------|------------------|
| Measuring range | 12mm/0.47" | 12mm/0.47" |
| Resolution | 0.01mm/0.0004" | 0.001mm/0.00004" |
| Accuracy | 20µm | 5µm |
| Hysteresis | 10µm | 2µm |
| Measuring principle | capacitance type linear encoder | |
| 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 | |

- Capacitance type linear encoder
- Shock-proof, water proof, dust proof, suitable for high speed movement, long working life
- Optional: display unit **7106-1A**, multichannel interface box **7107-1** or **7107-2**

DISPLAY UNIT CODE 7106-1A



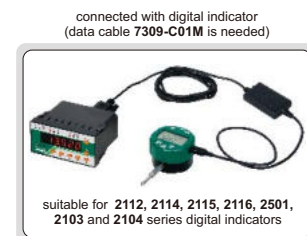
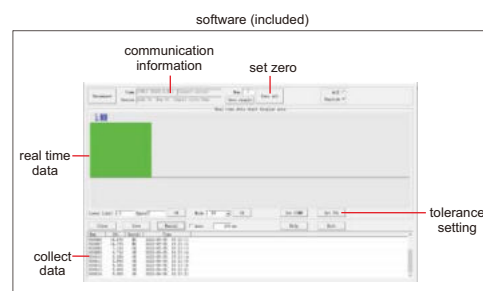
7106-1A



- Can be connected with **7107-11** or **7107-12** linear gage, can also be connected with digital indicator (data cable **7309-C01M** is needed)
- Set tolerance and make judgment (out of upper tolerance, within tolerance, out of lower tolerance), output the judgment to control outside devices, control from outside (set zero, hold reading and collect data)
- Software of display unit (included): in the software, it is possible to set tolerance and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report

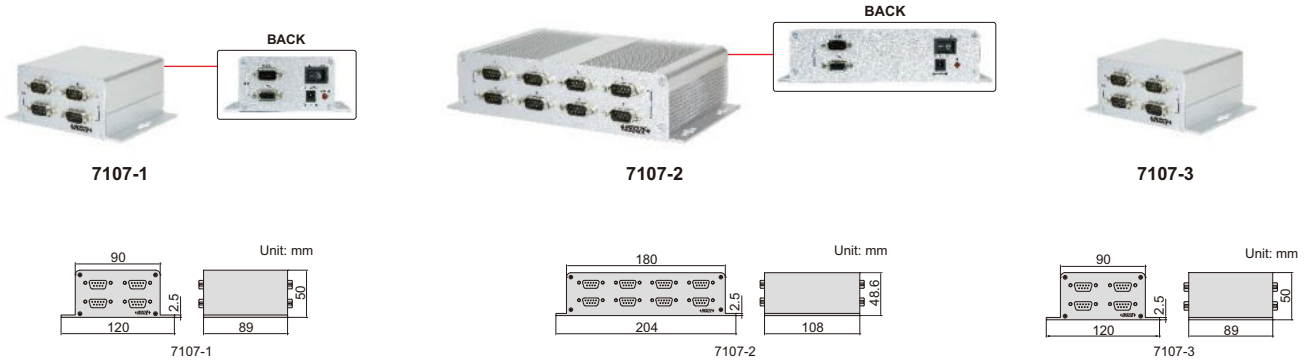
SPECIFICATION

| | |
|--|---|
| Code | 7106-1A |
| Display | 6 digits |
| Quantity of linear gage or digital indicator to be connected | 1 pc |
| Tolerance | set tolerance and make judgment with alarm and lights (out of upper tolerance, within tolerance, out of lower tolerance) |
| 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 and collect data) |
| Data output | connect to computer software and serial communication |
| Power supply | DC 9~24V |



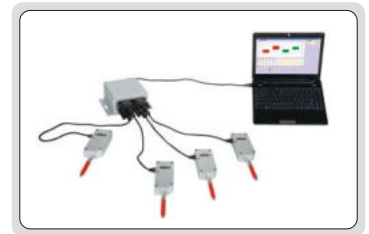


MULTICHANNEL INTERFACE BOXES



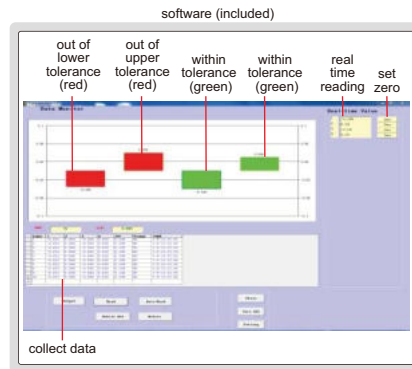
- Can be connected with **7107-11** or **7107-12** linear gages, can also be connected with digital indicators (data cable **7309-C01M** is needed)
- Connection box (code **7107-3**) is needed to connect interface boxes, when two or more interface boxes are used. Maximum 4 interface boxes can be connected.
- Software of interface boxes (included): in the software, it is possible to set tolerance of each channel and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report.

connected with **7107-11** or **7107-12** linear gages



INTERFACE BOX SPECIFICATION

| Code | 7107-1 | 7107-2 |
|--|-----------------|--------|
| Quantity of linear gages or digital indicators to be connected | 4 pcs | 8 pcs |
| Data output | RS232 and RS485 | |
| Power supply | DC 9~24V | |



connected with digital indicators (data cable **7309-C01M** is needed)



CONNECTION BOX (OPTIONAL) SPECIFICATION

| Code | 7107-3 |
|---|--|
| Quantity of interface boxes to be connected | 4 pcs (maximum 4 interface boxes can be connected) |
| Data output | RS232 and RS485 |
| Power supply | DC 9~24V |

DIGITAL LINEAR GAGES



IP43
WATERPROOF

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

- Scale type: optical grating
- Absolute encoder, the original data remains after power off
- Digital signal output, amplifier is not required
- Repeatability: 0.5µm
- Measuring force: 1.5N
- Dust/waterproof: IP43
- Baud rate: 9600 (can be customized)
- Cable length: 3m (can be customized)



| Code | Range | Resolution | Accuracy | Outgoing cable direction | Output signal | Output interface |
|----------|----------|------------|----------|--------------------------|------------------|------------------|
| 7130-10 | 0-12.7mm | 0.1µm | 1.6µm | horizontal | RS232, TTL level | |
| 7130-10L | 0-12.7mm | 0.1µm | 1.6µm | vertical | RS232, TTL level | |

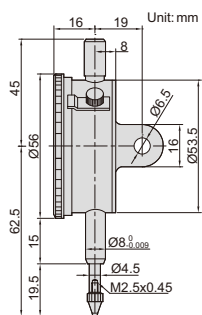
PRECISION DIAL INDICATORS

INSPECTION CERTIFICATE

JEWELLED BEARING



2313-1A



- Graduation: 0.001mm
- Dial reading: 0-100-0
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

| Code | Range | Accuracy | Hysteresis | Range/rev | Remark |
|-----------|-------|----------|------------|-----------|-----------|
| 2313-1FA* | 1mm | 5µm | 2µm | 0.2mm | flat back |
| 2313-2FA* | 2mm | 6µm | 2.5µm | 0.2mm | flat back |
| 2313-1A* | 1mm | 5µm | 2µm | 0.2mm | lug back |

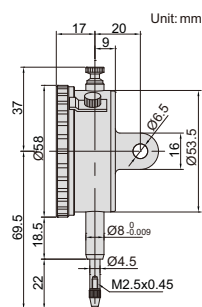
*Supplied with manufacturer inspection certificate

DIAL INDICATORS (BASIC TYPE)

INSPECTION CERTIFICATE



2301-10



- Graduation: 0.01mm
- Dial reading: 0-100
- Meet DIN878
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs, contact points



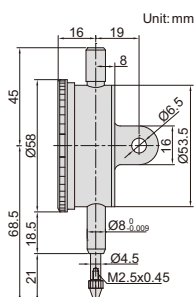
| Code | Range | Accuracy | Hysteresis | Range/rev | Remark |
|-----------|-------|----------|------------|-----------|-------------------------------|
| 2301-10F* | 10mm | 17µm | 3µm | 1mm | flat back |
| 2301-10* | 10mm | 17µm | 3µm | 1mm | lug back with spare flat back |

*Supplied with manufacturer inspection certificate

SHOCKPROOF DIAL INDICATORS

INSPECTION CERTIFICATE

- Graduation: 0.01mm
- Dial reading: 0-100
- Meet DIN878
- Shockproof
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points



2314-10A

JEWELLED BEARING

SHOCK PROOF

| Code | Range | Accuracy | Hysteresis | Range/rev | Remark |
|------------|-------|----------|------------|-----------|-----------|
| 2314-10FA* | 10mm | 17µm | 3µm | 1mm | flat back |
| 2314-10A* | 10mm | 17µm | 3µm | 1mm | lug back |

*Supplied with manufacturer inspection certificate

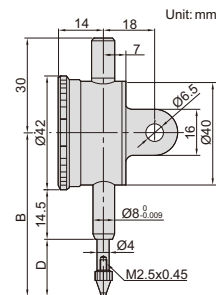
COMPACT DIAL INDICATORS

INSPECTION CERTIFICATE

JEWELLED BEARING



2311-5



- Range/rev: 0.5mm
- Dial reading: 0-50
- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

(mm)

| Code | Range | Graduation | Accuracy | Hysteresis | Remark | B | D |
|----------|-------|------------|----------|------------|-----------|----|------|
| 2311-3F* | 3mm | 0.01mm | 12µm | 3µm | flat back | 46 | 10.5 |
| 2311-5F* | 5mm | 0.01mm | 14µm | 3µm | flat back | 48 | 12.5 |
| 2311-3* | 3mm | 0.01mm | 12µm | 3µm | lug back | 46 | 10.5 |
| 2311-5* | 5mm | 0.01mm | 14µm | 3µm | lug back | 48 | 12.5 |

*Supplied with manufacturer inspection certificate

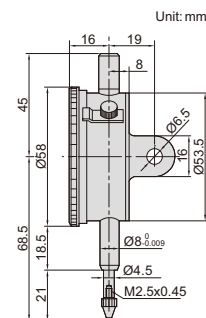
DIAL INDICATORS (STANDARD TYPE)

INSPECTION CERTIFICATE

JEWELLED BEARING



2308-10A



- Graduation: 0.01mm
- Dial reading: 0-100
- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

| Code | Range | Accuracy | Hysteresis | Range/rev | Remark |
|------------|-------|----------|------------|-----------|-----------|
| 2308-3FA* | 3mm | 12µm | 3µm | 1mm | flat back |
| 2308-5FA* | 5mm | 14µm | 3µm | 1mm | flat back |
| 2308-10FA* | 10mm | 17µm | 3µm | 1mm | flat back |
| 2308-3A* | 3mm | 12µm | 3µm | 1mm | lug back |
| 2308-5A* | 5mm | 14µm | 3µm | 1mm | lug back |
| 2308-10A* | 10mm | 17µm | 3µm | 1mm | lug back |

*Supplied with manufacturer inspection certificate

DOUBLE FACE DIAL INDICATOR

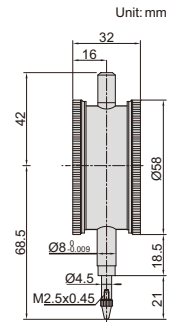


- Graduation: 0.01mm
- Meet DIN878
- Read from both sides
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: contact points



front back

2328-10



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

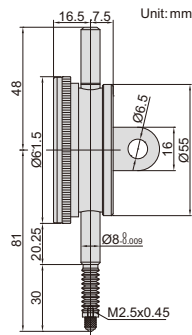
*Supplied with manufacturer inspection certificate

WATERPROOF DIAL INDICATORS



2324-10A

- Hysteresis: 3µm
- Dial reading: 0-100
- Meet DIN878
- IP54 dust/waterproof
- With limit pointers
- Optional accessory: back, contact points



| Code | Range | Graduation | Accuracy | Range/rev | Remark |
|------------|-------|------------|----------|-----------|-----------|
| 2324-10FA* | 10mm | 0.01mm | 17µm | 1mm | flat back |
| 2324-10A* | 10mm | 0.01mm | 17µm | 1mm | lug back |

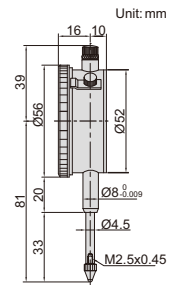
*Supplied with manufacturer inspection certificate

DIAL INDICATOR (BASIC TYPE, LONG STROKE)



2302-25F

- Graduation: 0.01mm
- Dial reading: 0-100
- Supplied with limit pointers and bezel clamp
- Packed in carton box
- Optional accessory: backs, contact points



| Code | Range | Accuracy | Hysteresis | Range/rev | Remark |
|-----------|-------|----------|------------|-----------|-----------|
| 2302-25F* | 25mm | 35µm | 7µm | 1mm | flat back |

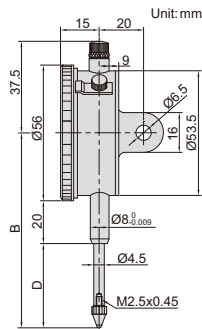
*Supplied with manufacturer inspection certificate

DIAL INDICATORS (LONG STROKE)



2310-30A

- Graduation: 0.01mm
- Dial reading: 0-100
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points



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

(mm)

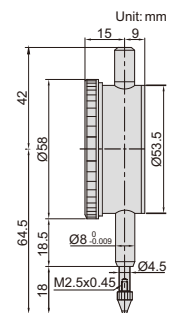
*Supplied with manufacturer inspection certificate

ONE REVOLUTION DIAL INDICATORS



2316-05F

- Dial indicator stroke: 5mm
- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- With flat back
- Supplied with limit pointers
- Optional accessory: backs, contact points



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

*Supplied with manufacturer inspection certificate

DIAL INDICATORS (LONG STROKE)

JEWELLED BEARING

SHOCK PROOF

INSPECTION CERTIFICATE

- Range/rev: 1mm
- Dial reading: 0-100
- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs, contact points



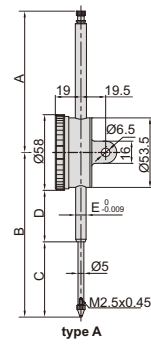
2309-50



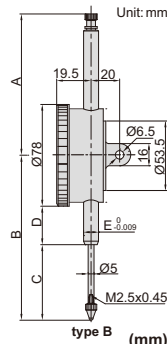
back of type B



stem clamp Ø10mm of 2309-100D



type A



type B (mm)

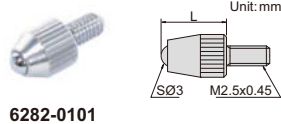
| Code | Range | Type | Graduation | Accuracy | Hysteresis | Remark |
|------------|-------|------|------------|----------|------------|-------------------------------|
| 2309-30F * | 30mm | A | 0.01mm | 35µm | 7µm | flat back |
| 2309-50 * | 50mm | A | 0.01mm | 40µm | 8µm | flat back with spare lug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

| Code | Type | A | B | C | D | E |
|-----------|------|-------|-------|------|------|-----|
| 2309-30F | 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 |
| 2309-100D | B | 167.6 | 207.8 | 108 | 60.8 | Ø10 |

Note: 1) 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) 2309-30F can not accept optional backs

* Supplied with manufacturer inspection certificate

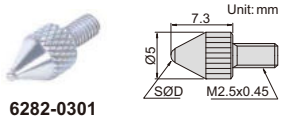
CONTACT POINTS



6282-0101

BALL POINT

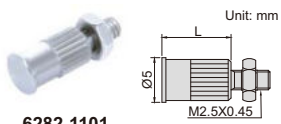
| Code | Material of measuring face | L (mm) |
|-----------|----------------------------|--------|
| 6282-0101 | carbide | 7.3 |
| 6282-0103 | ceramic | 7.3 |
| 6282-0104 | carbide | 8.3 |



6282-0301

BALL POINT

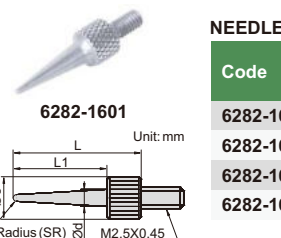
| Code | Material of measuring face | SØD |
|-----------|----------------------------|-------|
| 6282-0301 | steel | 1mm |
| 6282-0302 | carbide | 1.5mm |
| 6282-0303 | carbide | 1.8mm |
| 6282-0304 | carbide | 2.5mm |
| 6282-0305 | carbide | 4mm |



6282-1101

FLAT POINT

| Code | Material of measuring face | L |
|-----------|----------------------------|-----|
| 6282-1101 | steel | 8mm |



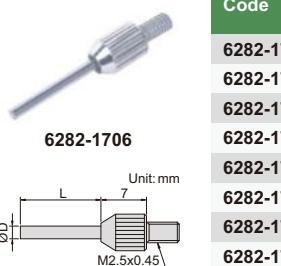
6282-1601

NEEDLE POINT (mm)

| 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 |

NEEDLE POINT

| Code | Material of measuring face | ØD | L |
|-----------|----------------------------|-------|------|
| 6282-1705 | carbide | 1mm | 8mm |
| 6282-1706 | carbide | 1mm | 10mm |
| 6282-1707 | carbide | 1mm | 20mm |
| 6282-1708 | carbide | 1mm | 40mm |
| 6282-1712 | carbide | 1.5mm | 20mm |
| 6282-1713 | carbide | 1.5mm | 40mm |
| 6282-1714 | carbide | 2mm | 8mm |
| 6282-1715 | carbide | 2mm | 18mm |
| 6282-1716 | carbide | 2mm | 28mm |
| 6282-1717 | carbide | 2mm | 40mm |



6282-1706



6282-0205

SHELL TYPE POINT

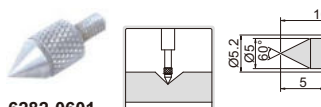
| Code | Material of measuring face | L |
|-----------|----------------------------|------|
| 6282-0205 | steel | 15mm |
| 6282-0210 | steel | 30mm |



6282-0401

SPHERICAL POINT

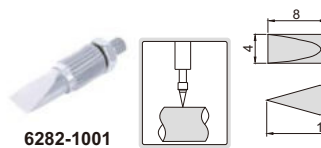
| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-0401 | steel |



6282-0601

CONICAL POINT

| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-0601 | steel |



6282-1001

KNIFE EDGE POINT

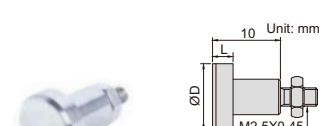
| Code | Material of measuring face |
|-----------|----------------------------|
| 6282-1001 | steel |



6282-1301

FLAT POINT

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



6282-1201

FLAT POINT (mm)

| Code | Material of measuring face | ØD | L |
|-----------|----------------------------|----|---|
| 6282-1201 | steel | 10 | 3 |
| 6282-1202 | steel | 15 | 4 |
| 6282-1203 | steel | 20 | 3 |
| 6282-1204 | steel | 25 | 4 |
| 6282-1205 | steel | 30 | 4 |

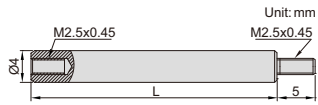


6282-1901

ROLLER POINT

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

EXTENSION RODS



6282-2011

| Code | Material | L | Code | Material | L |
|-----------|----------|------|-----------|----------|-------|
| 6282-2001 | steel | 10mm | 6282-2010 | steel | 55mm |
| 6282-2002 | steel | 15mm | 6282-2011 | steel | 60mm |
| 6282-2003 | steel | 20mm | 6282-2012 | steel | 65mm |
| 6282-2004 | steel | 25mm | 6282-2013 | steel | 70mm |
| 6282-2005 | steel | 30mm | 6282-2014 | steel | 75mm |
| 6282-2006 | steel | 35mm | 6282-2015 | steel | 80mm |
| 6282-2007 | steel | 40mm | 6282-2016 | steel | 90mm |
| 6282-2008 | steel | 45mm | 6282-2017 | steel | 100mm |
| 6282-2009 | steel | 50mm | | | |

SPINDLE LIFT KNOB



7332



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

| Code |
|------|
| 7332 |

MAGNETIC BACKS



front

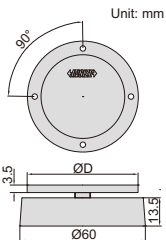


back

7331-M2



(mm)

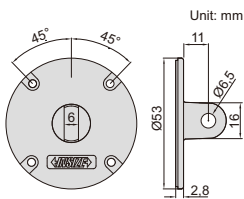


| Code | ØD | For digital/dial indicators |
|---------|------|---------------------------------|
| 7331-M1 | 51.5 | 2103 |
| | | 2104 |
| | | 2108 |
| | | 2109 |
| | | 2112 |
| | | 2115 |
| | | 2116 |
| | | 2117 |
| | | 2118 |
| | | 2138 |
| | | 2301 |
| | | 2302 |
| | | 2308 |
| | | 2309 (except 2309-30, 2309-30F) |
| | | 2313 |
| | | 2314 |
| 2316 | | |
| 2801 | | |
| 2318 | | |
| 7331-M2 | 54 | 2318 |

LUG BACKS



7330-L2



7330-L2 and 7330-L10

| Code | For digital/dial indicators |
|----------|---------------------------------|
| 7330-L1 | 2311 |
| 7330-L2 | 2308 |
| | 2309 (except 2309-30, 2309-30F) |
| | 2313 |
| | 2314 |
| | 2324 |
| | 2316 |
| 7330-L5 | 2103 |
| | 2104 |
| | 2108 |
| | 2109 |
| | 2112 |
| | 2113 |
| 2115 | |
| 7330-L10 | 2310 |

DIAL TEST INDICATORS

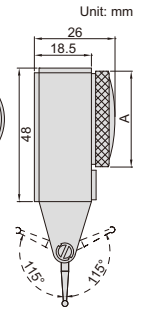
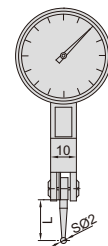
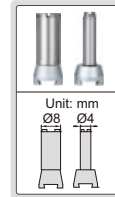


JEWELLED BEARING



2380-08

clamps (included)



- 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

Graduation: 0.01mm

| Code | Range | Accuracy | Hysteresis | Dial reading | A | L |
|----------|-------|----------|------------|--------------|-----|------|
| 2380-08* | 0.8mm | 13µm | 3µm | 0-40-0 | Ø30 | 13.5 |
| 2381-08* | 0.8mm | 13µm | 3µm | 0-40-0 | Ø37 | 13.5 |

Graduation: 0.002mm

| Code | Range | Accuracy | Hysteresis | Dial reading | A | L |
|----------|-------|----------|------------|--------------|-----|------|
| 2380-02* | 0.2mm | 6µm | 2µm | 0-100-0 | Ø30 | 12.5 |
| 2381-02* | 0.2mm | 6µm | 2µm | 0-100-0 | Ø37 | 12.5 |

Graduation: 0.001mm

| Code | Range | Accuracy | Hysteresis | Dial reading | A | L |
|-----------|-------|----------|------------|--------------|-----|------|
| 2381-021* | 0.2mm | 6µm | 2µm | 0-100-0 | Ø37 | 12.5 |

*Supplied with manufacturer inspection certificate

TILTED FACE TYPE DIAL TEST INDICATOR

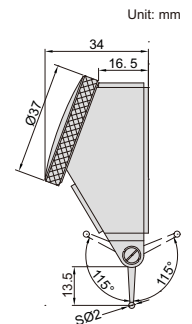
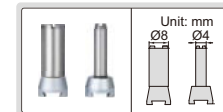


JEWELLED BEARING



2399-08

clamps (included)



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

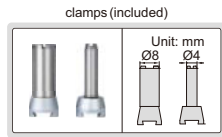
| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2399-08* | 0.8mm | 0.01mm | 13µm | 3µm | 0-40-0 |

*Supplied with manufacturer inspection certificate

VERTICAL TYPE DIAL TEST INDICATOR

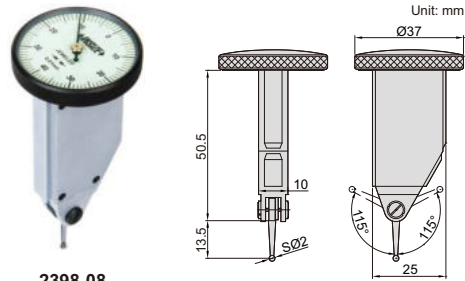


- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli



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

*Supplied with manufacturer inspection certificate



2398-08

JEWELLED BEARING

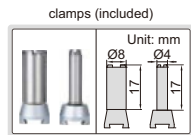
LONG STYLI DIAL TEST INDICATOR



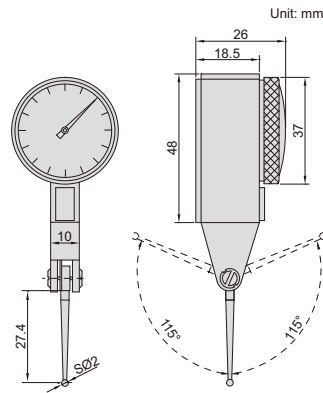
JEWELLED BEARING



2383-08A



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



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

*Supplied with manufacturer inspection certificate

LARGE RANGE DIAL TEST INDICATOR

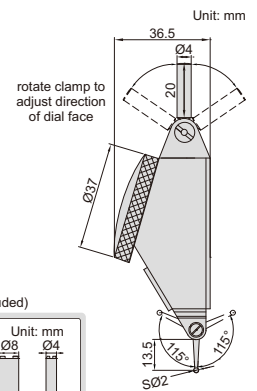
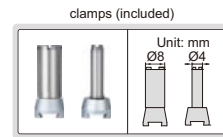


JEWELLED BEARING



2386-16A

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



| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|-----------|-------|------------|----------|------------|--------------|
| 2386-16A* | 1.6mm | 0.01mm | 25µm | 8µm | 0-40-0 |

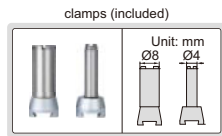
*Supplied with manufacturer inspection certificate

LARGE RANGE BACK PLUNGER TYPE DIAL TEST INDICATOR

JEWELLED BEARING



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

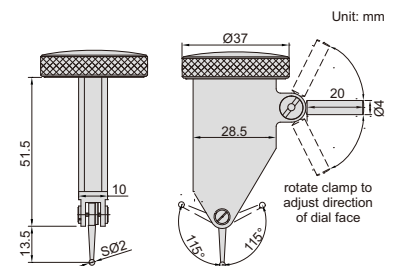


| Code | Range | Graduation | Accuracy | Hysteresis | Dial reading |
|----------|-------|------------|----------|------------|--------------|
| 2480-16* | 1.6mm | 0.01mm | 18µm | 3µm | 0-40-0 |

*Supplied with manufacturer inspection certificate



2480-16



CLAMPS FOR DIAL TEST INDICATORS

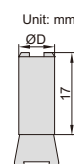
| Code | ØD |
|--------|------|
| 6298-1 | Ø4mm |
| 6298-2 | Ø8mm |



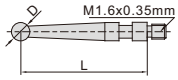
6298-1



6298-2



STYLI FOR DIAL TEST INDICATORS



6284-3

| (mm) | | | | |
|---------|-------------------------|---------------------------|------|-----|
| Code | For dial test indicator | Material of contact point | L | D |
| 6284-1 | 2380-08 | steel | 13.5 | SØ1 |
| 6284-3 | | 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 |

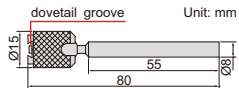
DIAL TEST INDICATOR UNIVERSAL HOLDER

- Set the indicators at the desired attitude to the workpiece



6297-1

Code
6297-1

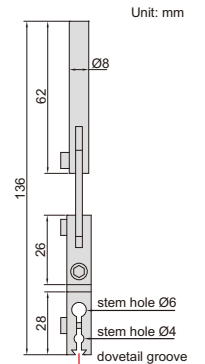


DIAL TEST INDICATOR HOLDER



6296-1

- Supplied with hex key

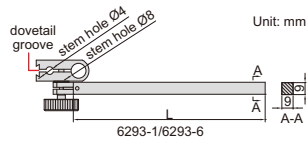


Code
6296-1

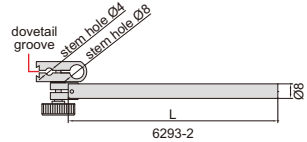
DIAL TEST INDICATOR HOLDERS



6293-1



6293-2



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

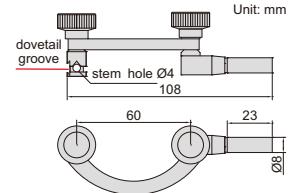


DIAL TEST INDICATOR HOLDER



6291-1

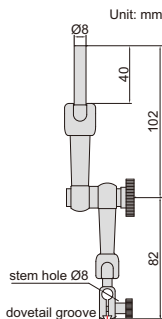
- Can be used with dial test indicators



Code
6291-1

DIAL TEST INDICATOR HOLDER

- Can be used with dial test indicators

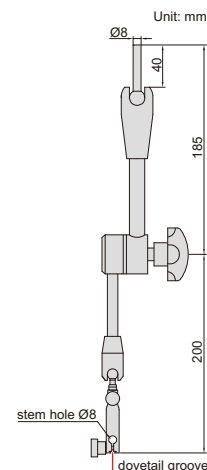


6295-1A

Code
6295-1A

DIAL INDICATOR HOLDER

- Can be used with dial test indicators or dial indicators



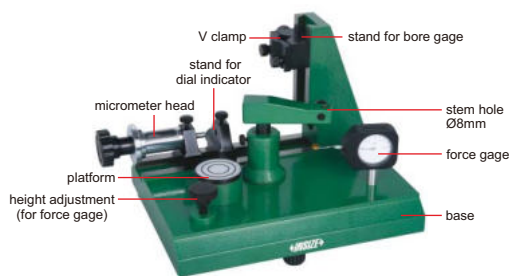
6294-1A

Code
6294-1A

DIAL INDICATOR TESTER CODE 2396-25A

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

ATTENTION: NOT SUITABLE FOR INDICATORS WITH GRADUATION 0.001MM



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 |



Half round gage block (optional)

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



test force of dial indicators



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



inspect accuracy of dial bore gages (range 6-450mm)



inspect accuracy of test 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)

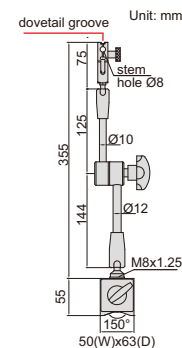
UNIVERSAL MAGNETIC STAND (ECONOMIC TYPE)

ATTENTION: LOW LOCKING FORCE

- Applicable holding stem: Ø8mm
- For digital/dial indicators and dial test indicators



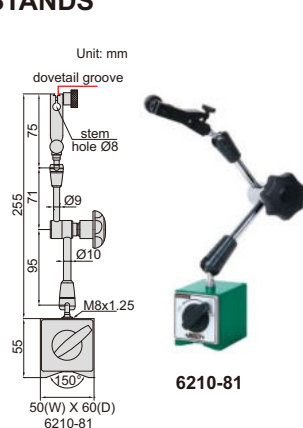
6208-80A



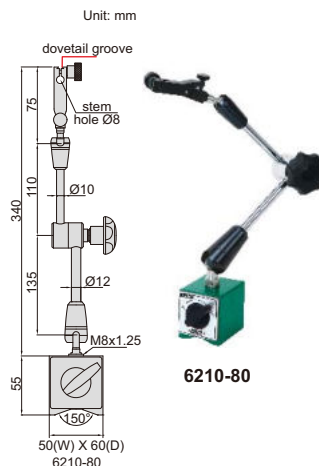
| Code | Magnetic force | Remark |
|----------|----------------|--|
| 6208-80A | 80kgf | with fine adjustment and dovetail groove |

UNIVERSAL MAGNETIC STANDS

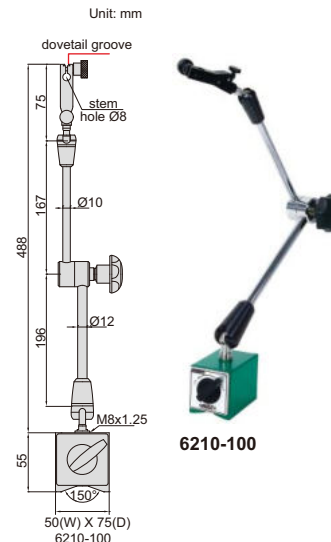
- For digital/dial indicators and dial test indicators
- With fine adjustment and dovetail groove



6210-81



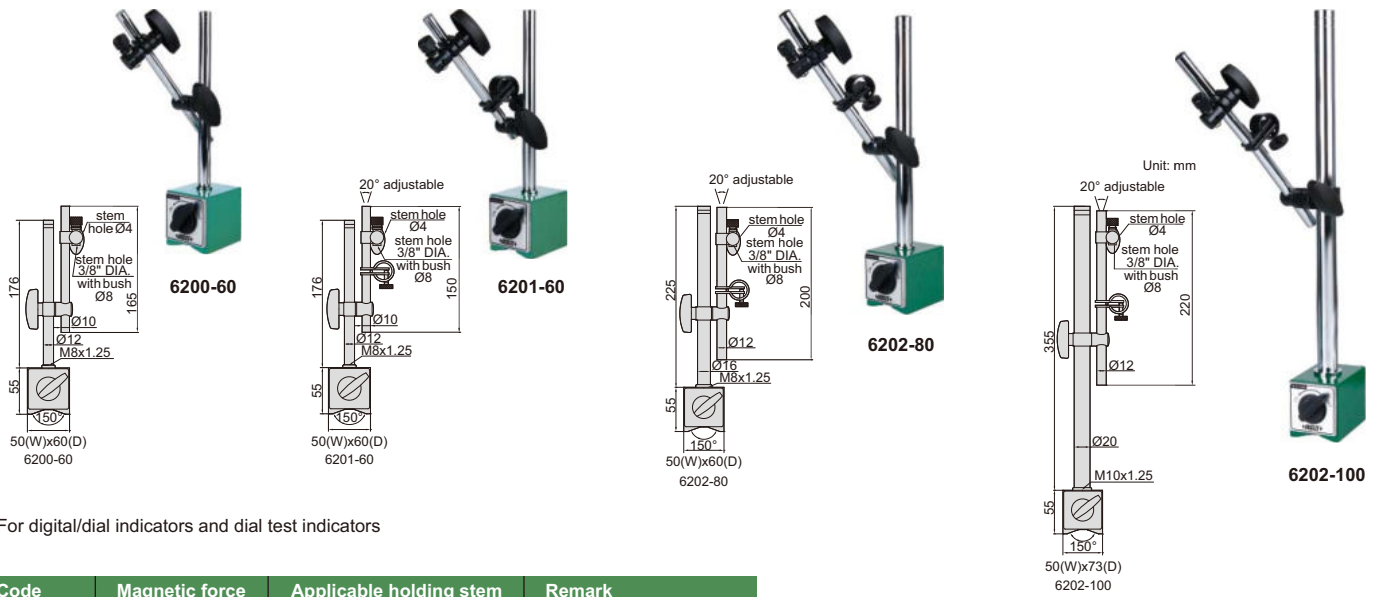
6210-80



6210-100

| Code | Magnetic force | Applicable holding stem |
|----------|----------------|-------------------------|
| 6210-81 | 80kgf | Ø8mm |
| 6210-80 | 80kgf | Ø8mm |
| 6210-100 | 100kgf | Ø8mm |

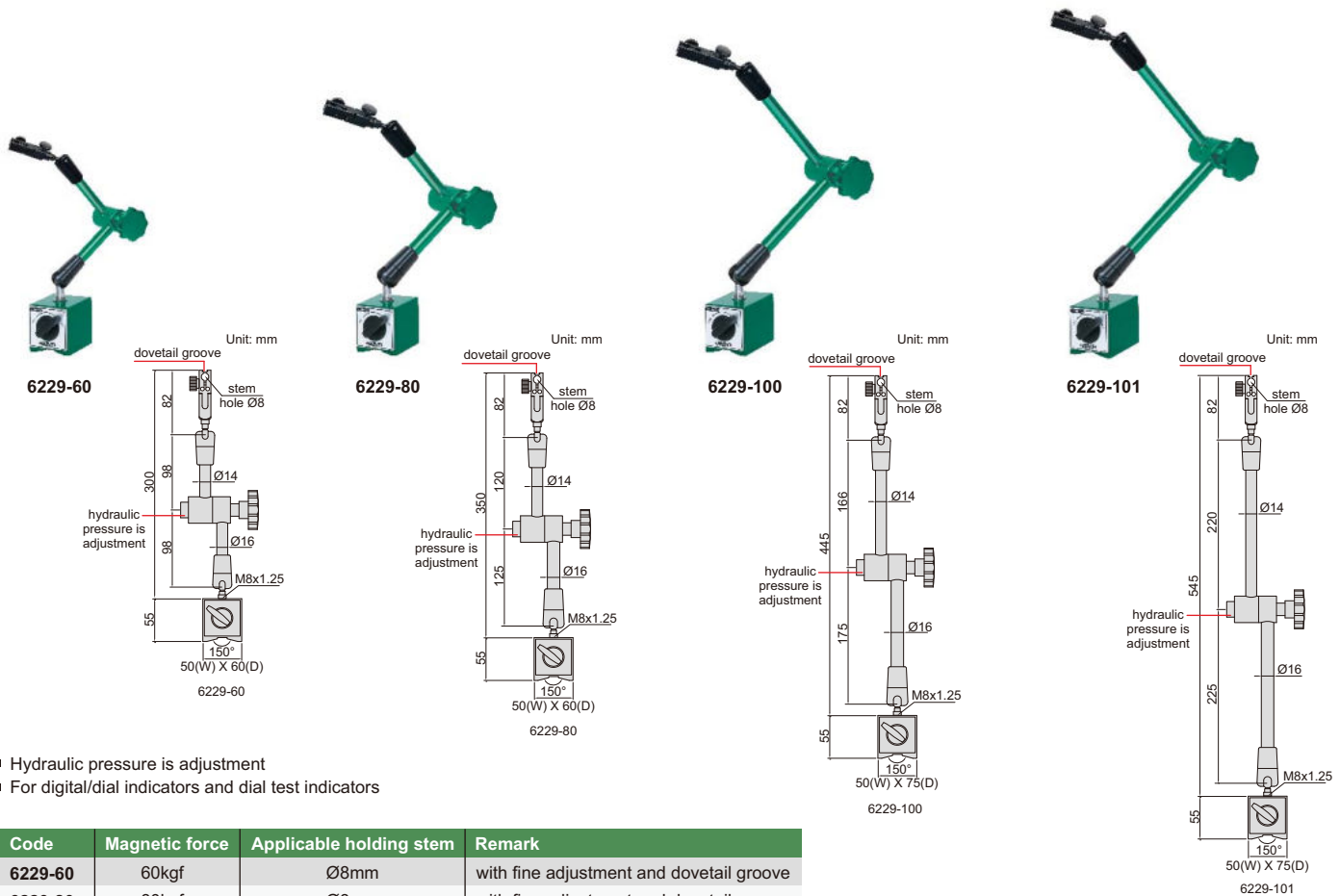
MAGNETIC STANDS



■ 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 |

HYDRAULIC UNIVERSAL MAGNETIC STANDS

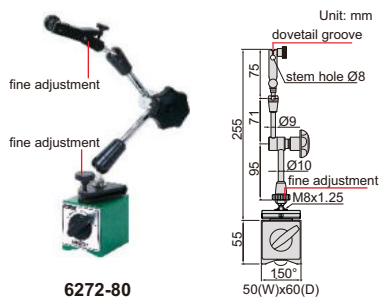


■ Hydraulic pressure is adjustment
 ■ For digital/dial indicators and dial test indicators

| Code | Magnetic force | Applicable holding stem | Remark |
|----------|----------------|-------------------------|--|
| 6229-60 | 60kgf | Ø8mm | with fine adjustment and dovetail groove |
| 6229-80 | 80kgf | Ø8mm | with fine adjustment and dovetail groove |
| 6229-100 | 100kgf | Ø8mm | with fine adjustment and dovetail groove |
| 6229-101 | 100kgf | Ø8mm | with fine adjustment and dovetail groove |

MAGNETIC STAND WITH DOUBLE FINE ADJUSTMENT

- Magnetic force: 80kgf
- With double fine adjustments on the head and on the base
- For digital/dial indicators and dial test indicators

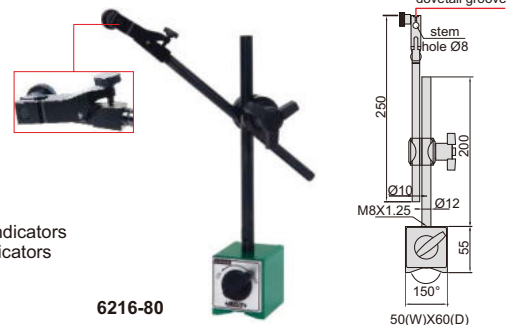


6272-80

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

MAGNETIC STAND

- For digital/dial indicators and dial test indicators

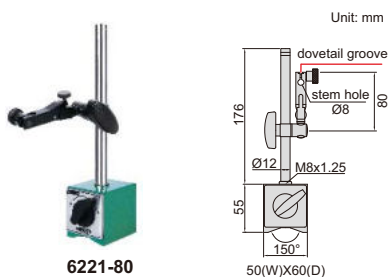


6216-80

| Code | Magnetic force | Applicable holding stem | Remark |
|---------|----------------|-------------------------|--|
| 6216-80 | 80kgf | Ø8mm | with fine adjustment and dovetail groove |

MAGNETIC STAND (FOR 0.001MM DIAL AND DIAL TEST INDICATORS)

- For 0.001mm and 0.01mm dial and dial test indicators



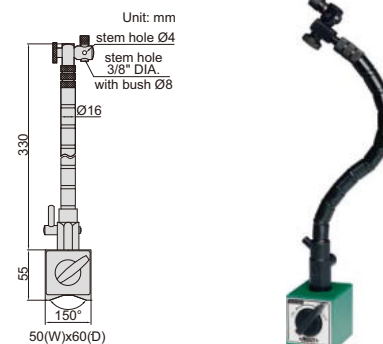
6221-80

| Code | Magnetic force | Applicable holding stem | Remark |
|---------|----------------|-------------------------|--|
| 6221-80 | 80kgf | Ø8mm | with fine adjustment and dovetail groove |

FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators



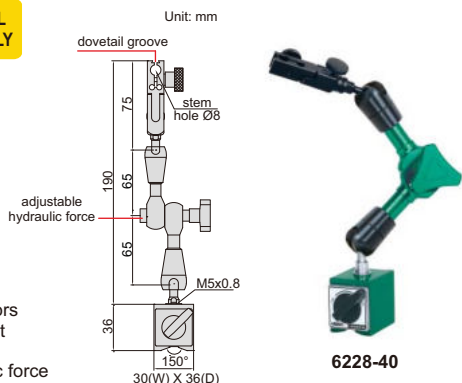
6207-80A

| Code | Magnetic force | Applicable holding stem |
|----------|----------------|-------------------------|
| 6207-80A | 80kgf | Ø8mm, Ø4mm, 3/8" DIA. |

HYDRAULIC MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With fine adjustment and dovetail groove
- Adjustable hydraulic force



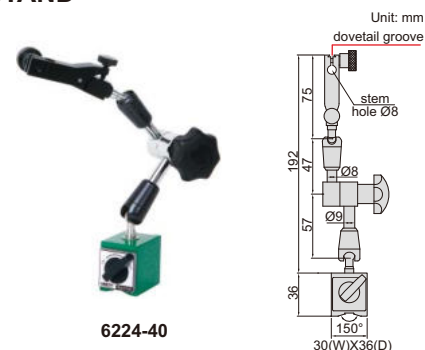
6228-40

| Code | Magnetic force | Applicable holding stem |
|---------|----------------|-------------------------|
| 6228-40 | 40kgf | Ø8mm |

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

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



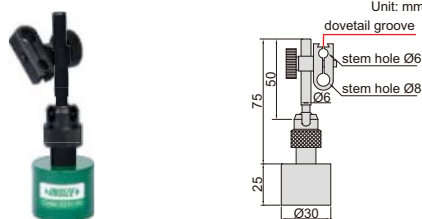
6224-40

| Code | Magnetic force | Applicable holding stem |
|---------|----------------|-------------------------|
| 6224-40 | 40kgf | Ø8mm |

MINI MAGNETIC STAND

- For dial test indicators
- With dovetail groove

6211-10



ATTENTION: FOR DIAL TEST INDICATORS ONLY

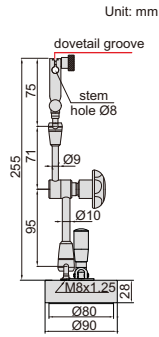
| Code | Magnetic force | Applicable holding stem |
|---------|----------------|-------------------------|
| 6211-10 | 10kgf | Ø6mm, Ø8mm |

VACUUM STAND

- Diameter of vacuum disc: Ø80mm
- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

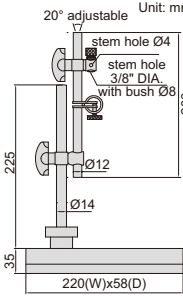


6217-B



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

UNIVERSAL STAND



6214-A

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

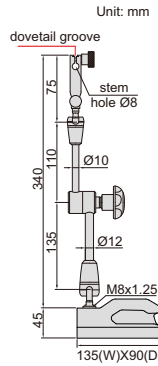
| Code | Applicable holding stem |
|--------|-------------------------|
| 6214-A | Ø8mm, Ø4mm, 3/8" DIA. |

UNIVERSAL DIAL INDICATOR STANDS (NON-MAGNETIC)

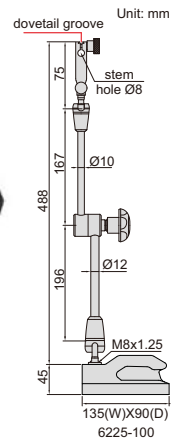
- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators



6225-80



6225-100

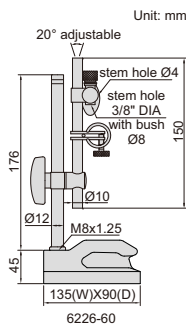


| Code | Applicable holding stem | Remark |
|----------|-------------------------|--|
| 6225-80 | Ø8mm | with fine adjustment and dovetail groove |
| 6225-100 | Ø8mm | with fine adjustment and dovetail groove |

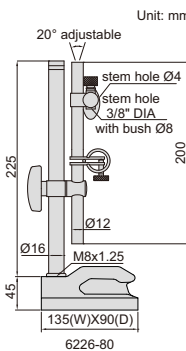
DIAL INDICATOR STANDS (NON-MAGNETIC)



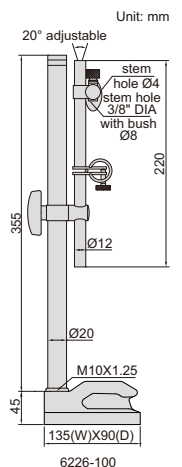
6226-60



6226-80



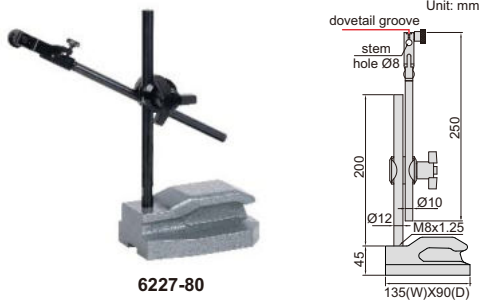
6226-100



| Code | Applicable holding stem | Remark |
|----------|-------------------------|----------------------|
| 6226-60 | Ø8mm, Ø4mm, 3/8" DIA | with fine adjustment |
| 6226-80 | Ø8mm, Ø4mm, 3/8" DIA | with fine adjustment |
| 6226-100 | Ø8mm, Ø4mm, 3/8" DIA | with fine adjustment |

- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

DIAL INDICATOR STAND (NON-MAGNETIC)

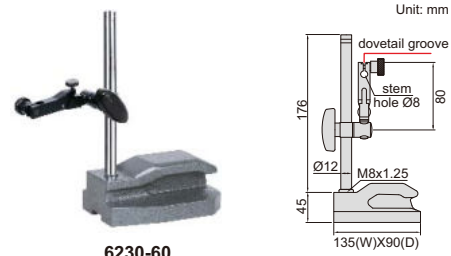


6227-80

- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

| Code | Applicable holding stem | Remark |
|---------|-------------------------|--|
| 6227-80 | Ø8mm | with fine adjustment and dovetail groove |

DIAL INDICATOR STAND (FOR 0.001MM DIAL AND DIAL TEST INDICATORS)

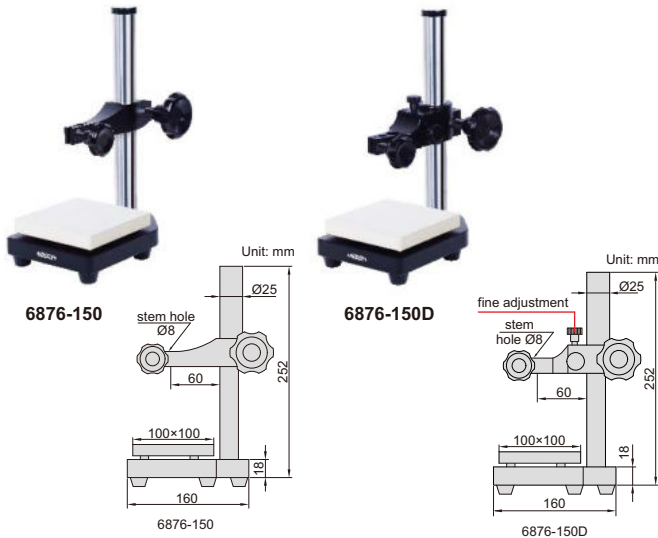


6230-60

- Non-magnetic and hardened base
- Suitable for granite surface plates or cast iron surface plates
- For 0.001mm and 0.01mm dial and dial test indicators

| Code | Applicable holding stem | Remark |
|---------|-------------------------|--|
| 6230-60 | Ø8mm | with fine adjustment and dovetail groove |

DIAL INDICATOR STANDS



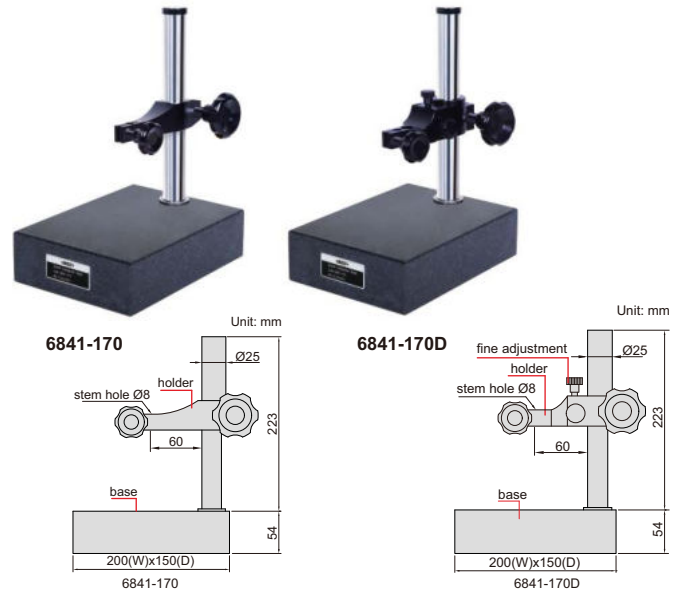
6876-150

6876-150D

- Vertical travel of holder: 150mm
- Applicable holding stem: Ø8mm
- Ceramic anvil
- Supplied with dust cover

| Code | Anvil | Remark |
|-----------|--------------------------------|---|
| 6876-150 | ceramic, plain, flatness 1.5µm | without fine adjustment |
| 6876-150D | ceramic, plain, flatness 1.5µm | with fine adjustment, fine adjustment range 3mm |

GRANITE DIAL INDICATOR STANDS (BASIC TYPE)



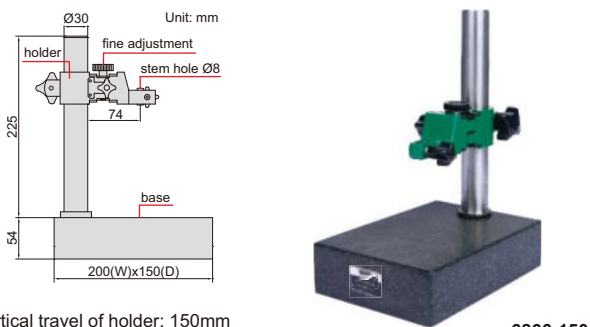
6841-170

6841-170D

- Vertical travel of holder: 170mm
- Applicable holding stem: Ø8mm
- Supplied with dust cover

| Code | Anvil | Remark |
|-----------|----------------|---|
| 6841-170 | flatness 1.5µm | without fine adjustment |
| 6841-170D | flatness 1.5µm | with fine adjustment, fine adjustment range 3mm |

GRANITE DIAL INDICATOR STAND

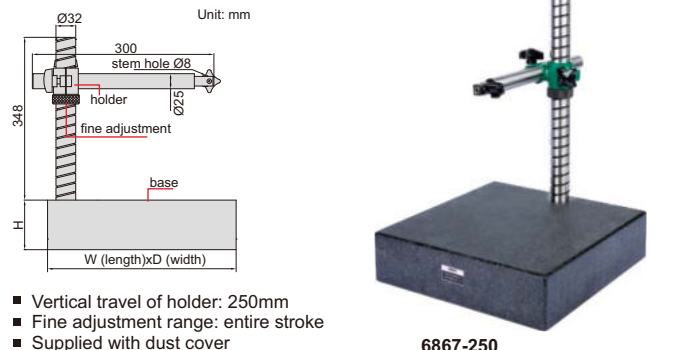


6866-150

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

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

GRANITE DIAL INDICATOR STANDS



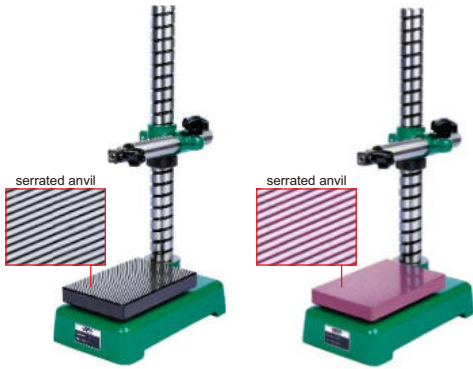
6867-250

(mm)

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

| Code | Applicable holding stem | W | D | H | Base |
|----------|-------------------------|-----|-----|-----|----------------|
| 6867-250 | Ø8mm | 300 | 300 | 75 | flatness 2.8µm |
| 6867-400 | Ø8mm | 400 | 300 | 100 | flatness 3µm |

DIAL INDICATOR STANDS

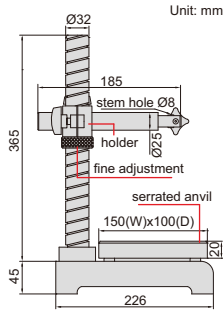


6864-250

6864-250T

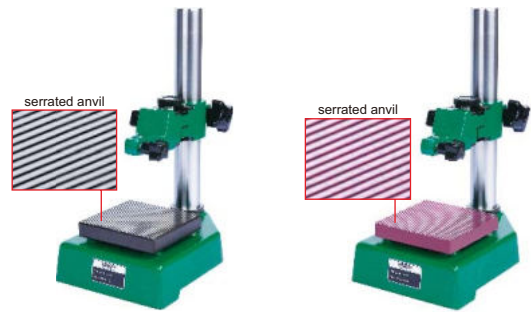
- Vertical travel of holder: 250mm
- Applicable holding stem: Ø8mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

| Code | Anvil |
|-----------|--|
| 6864-250 | steel (hardness HRC60±2), serrated, flatness 1.5µm |
| 6864-250T | ceramic, serrated, flatness 1.5µm |



Unit: mm

DIAL INDICATOR STANDS

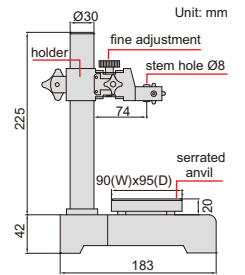


6863-150

6863-150T

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Applicable holding stem: Ø8mm
- Supplied with dust cover

| Code | Anvil |
|-----------|--|
| 6863-150 | steel (hardness HRC60±2), serrated, flatness 1.5µm |
| 6863-150T | ceramic, serrated, flatness 1.5µm |



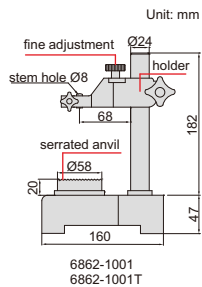
Unit: mm

DIAL INDICATOR STANDS



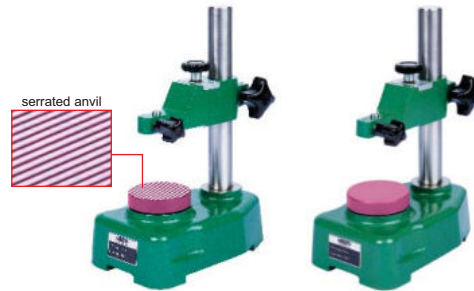
6862-1001

6862-1002



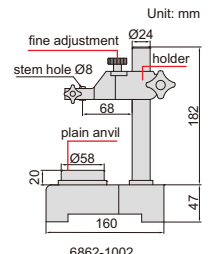
6862-1001
6862-1001T

Unit: mm



6862-1001T

6862-1002T



6862-1002
6862-1002T

Unit: mm

| Code | Anvil |
|------------|--|
| 6862-1001 | steel (hardness HRC60±2), serrated, flatness 1.5µm |
| 6862-1002 | steel (hardness HRC60±2), plain, flatness 1.5µm |
| 6862-1001T | ceramic, serrated, flatness 1.5µm |
| 6862-1002T | ceramic, plain, flatness 1.5µm |

- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Applicable holding stem: Ø8mm
- Supplied with dust cover

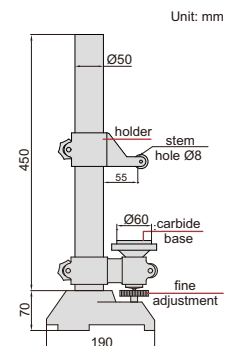
HEAVY DUTY DIAL INDICATOR STAND

- Vertical travel of holder: 300mm
- Fine adjustment range: 5mm
- Carbide base
- Supplied with dust cover
- Optional accessory:
holder with stem hole Ø28 (code 6869-D28)

| Code | Applicable holding stem | Base |
|----------|-------------------------|------------------------------|
| 6869-300 | Ø8mm | plain, flatness 1µm, carbide |



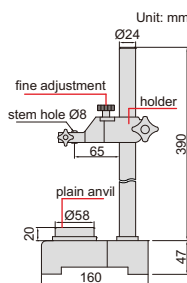
6869-300



Unit: mm

TRANSFER STANDS

- Vertical travel of holder: 335mm
- Fine adjustment range: 2mm
- Applicable holding stem: Ø8mm
- Supplied with dust cover



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)

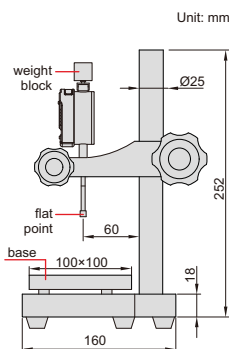
| Code | Anvil |
|-----------|---|
| 6865-300 | steel (hardness HRC60±2), plain, flatness 1.5µm |
| 6865-300T | ceramic, plain, flatness 1.5µm |

DIGITAL RUBBER THICKNESS GAGES

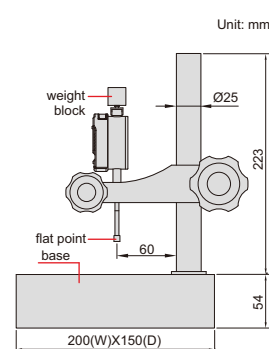
DATA OUTPUT



2878-6B



2878-71B



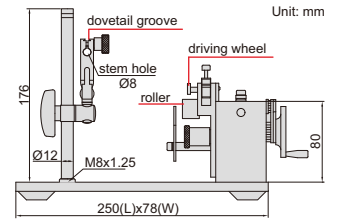
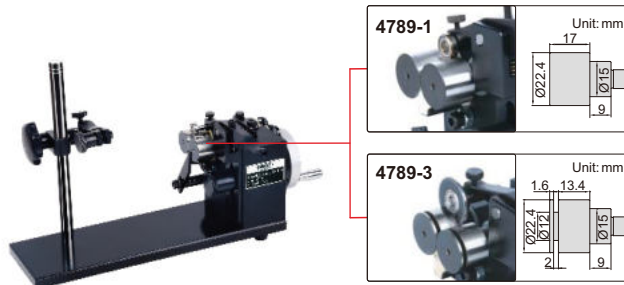
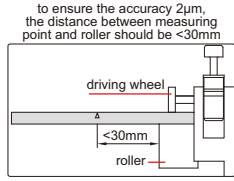
- Measure thickness of vulcanized rubber and plastic products
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Supplied with dust cover
- Optional accessory: data output cable (code 7315-50M, 7302-50M), flat points, weight blocks

| Code | Range | Resolution | Accuracy | Flat point diameter | Pressure | Base |
|----------|-------------|------------------|----------|---------------------|------------|--------------------------------|
| 2878-6A | 12.7mm/0.5" | 0.01mm/0.0005" | 20µm | 6mm | 22kPa±5kPa | ceramic, plain, flatness 1.5µm |
| 2878-6B | 12.7mm/0.5" | 0.001mm/0.00005" | 5µm | 6mm | 22kPa±5kPa | ceramic, plain, flatness 1.5µm |
| 2878-71A | 12.7mm/0.5" | 0.01mm/0.0005" | 20µm | 6mm | 22kPa±5kPa | granite, plain, flatness 2.5µm |
| 2878-71B | 12.7mm/0.5" | 0.001mm/0.00005" | 5µm | 6mm | 22kPa±5kPa | granite, plain, flatness 2.5µm |

Flat points and weight blocks (Optional)

| Flat point | Flat point code | Pressure | | | | |
|-------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | 10kPa±2kPa | 22kPa±5kPa | 20kPa±3kPa | 70kPa±5kPa | 1.6kPa±0.1kPa |
| | | Weight block code | Weight block code | Weight block code | Weight block code | Weight block code |
| Ø4mm | 2878-P4 | — | 2878-W4B | — | — | — |
| Ø5mm | 2878-P5 | 2878-W5A | 2878-W5B | 2878-W5C | 2878-W5D | — |
| Ø6mm | 2878-P6 | 2878-W6A | 2878-W6B | — | — | — |
| Ø8mm | 2878-P8 | 2878-W8A | 2878-W8B | — | — | — |
| Ø10mm | 2878-P10 | 2878-W10A | 2878-W10B | 2878-W10C | — | — |
| Ø25mm | 2878-P25 | — | — | — | — | 2878-W25E |
| 1x4mm (rectangle) | 2878-P14 | — | — | — | 2878-W14D | — |

CONCENTRICITY GAGES



- Optional accessory: dial test indicator

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

CONCENTRICITY GAGES

HIGH STABILITY,
LONG WORKING LIFE

dial test indicator is optional

dial test indicator is optional

dial test indicator is optional



4725-45



4725-60

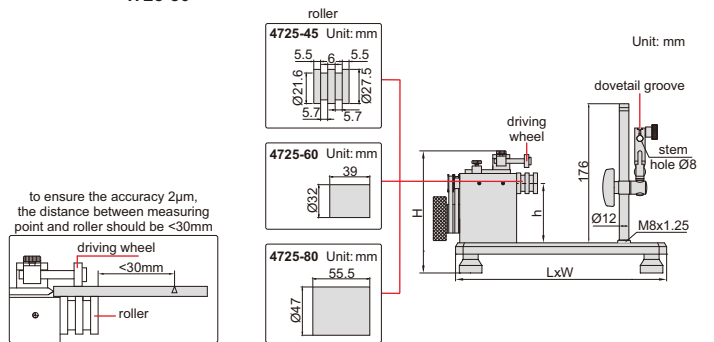


4725-80



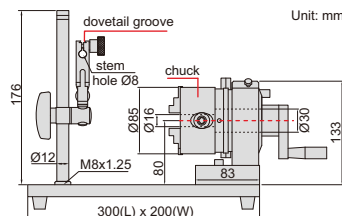
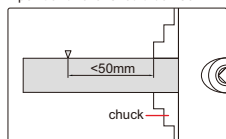
- With ball bearing, high stability, long working life
- Accuracy: 2µm
- Optional accessory: dial test indicator

| Code | Diameter range | Center height (h) | LxWxH | Weight |
|---------|----------------|-------------------|---------------|--------|
| 4725-45 | 3-45mm | 80mm | 280x130x170mm | 6kg |
| 4725-60 | 8-60mm | 90mm | 350x160x190mm | 15.6kg |
| 4725-80 | 8-80mm | 130mm | 400x200x250mm | 25kg |



CONCENTRICITY GAGE

to ensure the accuracy 3µm, the distance between measuring point and roller should be <50mm

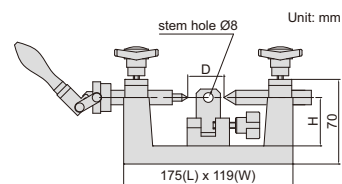


- Accuracy: 3µm
- Ø50mm setting ring and Ø55mm calibration cylinder are included
- Optional accessory: dial test indicator

| Code | Applicable inside diameter | Applicable outside diameter |
|--------|----------------------------|-----------------------------|
| 4786-1 | Ø24-64mm | Ø2-70mm |

MINI BENCH CENTER

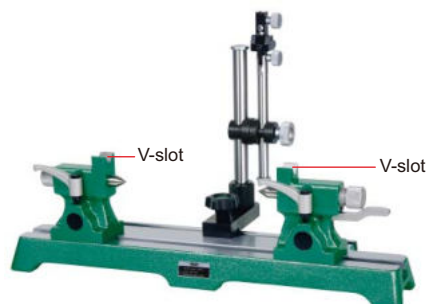
- Distance between two centers (D): 35-100mm
- Diameter of center (Ød): 6mm
- Taper of center: MT1



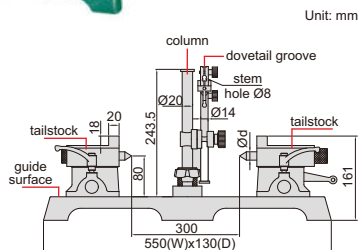
4721-75A

| Code | Runout accuracy | Center height (H) | Weight | Load |
|----------|-----------------|-------------------|--------|------|
| 4721-75A | 2µm | 40mm | 4.5kg | 4kg |

BENCH CENTER (BASIC TYPE)



4782-300

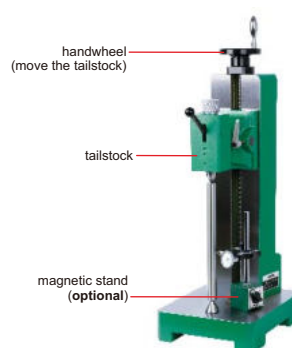


- Runout accuracy: 2µm
- Distance between two centers: 300mm
- Taper of center: MT1
- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4~Ø22mm

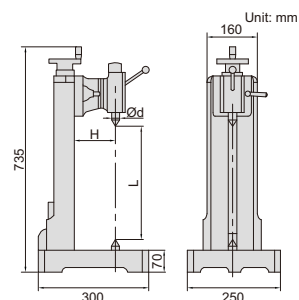
| Code | Parallelism* | Center height | Diameter of center (Ød) | Load |
|----------|--------------|---------------|-------------------------|------|
| 4782-300 | 0.01mm | 80mm | Ø16mm | 25kg |

*Parallelism of two centers to the guide surface

VERTICAL BENCH CENTER



4728-360



- Runout accuracy: 2µm
- Distance between two centers (L): 360mm
- Diameter of center (Ød): 24.1mm
- Taper of center: MT3
- Hardened cast-iron guide surface
- Use handwheel to move the tailstock
- Optional accessory: magnetic stands, dial test indicators

| Code | Parallelism* | Center height (H) | Weight | Load |
|----------|--------------|-------------------|--------|------|
| 4728-360 | 0.01mm | 130mm | 85kg | 80kg |

*Parallelism of two centers to the guide surface

SHANK RUNOUT TESTERS

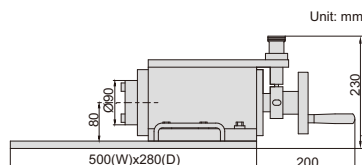
standard shank (included)



4771-30

- Measure the radial runout of shanks, collets and cutting tools
- Optional accessory: dial test indicators, magnetic stands

| Code | Taper | Accuracy |
|---------|-------|----------|
| 4771-30 | BT30 | 1µm |
| 4771-40 | BT40 | 1µm |
| 4771-50 | BT50 | 1µm |



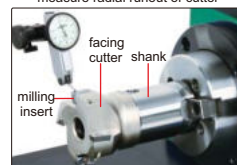
measure radial runout of shank



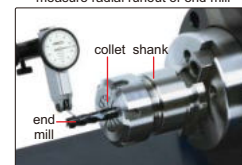
measure radial runout of collet



measure radial runout of cutter



measure radial runout of end mill

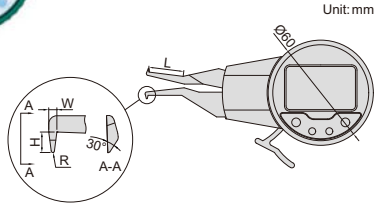
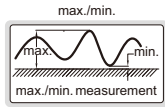


DIGITAL INTERNAL CALIPER GAGES

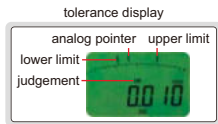
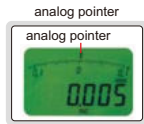
DATA OUTPUT



2121-15



Unit: mm



- Resolution: 0.005mm/0.0002"
- Reading in digit and analog
- Display can be rotated by 170°
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-30, 7302-30)

(mm)

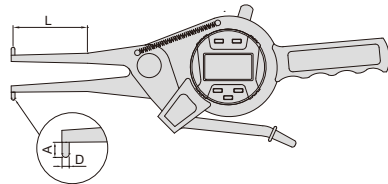
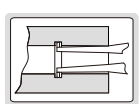
| Code | Range | Accuracy | Repeatability | L | H | W | R |
|---------|------------------|----------|---------------|----|-----|-----|------|
| 2121-15 | 5-15mm/0.2-0.6" | ±0.03mm | 0.01mm | 20 | 2 | 1.5 | R0.3 |
| 2121-25 | 5-25mm/0.2-1.0" | ±0.03mm | 0.01mm | 35 | 1.5 | 1.0 | R0.3 |
| 2121-31 | 10-30mm/0.4-1.2" | ±0.03mm | 0.01mm | 55 | 5.5 | 2.5 | R0.5 |
| 2121-41 | 20-40mm/0.8-1.6" | ±0.03mm | 0.01mm | 80 | 6.0 | 3.0 | R0.5 |

DIGITAL INTERNAL CALIPER GAGES

DATA OUTPUT



2151-35



- Accuracy: ±0.04mm
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, data output, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-50M)

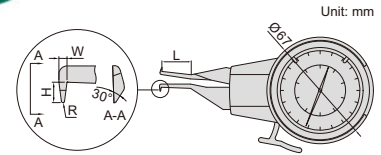
(mm)

| Code | Range | Resolution | L | A | D |
|----------|--------------------|----------------|-----|----|------|
| 2151-35 | 15-35mm/0.6-1.4" | 0.01mm/0.0005" | 50 | 3 | Ø3 |
| 2151-55 | 35-55mm/1.4-2.2" | 0.01mm/0.0005" | 80 | 6 | Ø3 |
| 2151-75 | 55-75mm/2.2-3" | 0.01mm/0.0005" | 90 | 8 | Ø3 |
| 2151-95 | 75-95mm/3-3.8" | 0.01mm/0.0005" | 100 | 8 | Ø3 |
| 2151-115 | 95-115mm/3.8-4.6" | 0.01mm/0.0005" | 120 | 10 | Ø3.2 |
| 2151-135 | 115-135mm/4.6-5.4" | 0.01mm/0.0005" | 120 | 10 | Ø3.2 |

INTERNAL DIAL CALIPER GAGES



2222-15

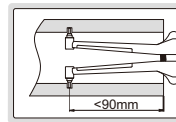


Unit: mm

(mm)

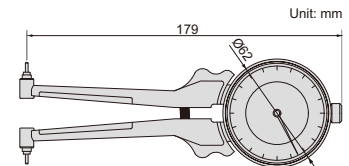
| Code | Range | Graduation | Accuracy | L | H | W | R |
|----------|---------|------------|----------|----|-----|-----|------|
| 2222-15 | 5-15mm | 0.01mm | ±0.02mm | 20 | 2 | 1.5 | R0.3 |
| 2222-25 | 5-25mm | 0.01mm | ±0.03mm | 35 | 1.5 | 1.0 | R0.3 |
| 2222-301 | 10-30mm | 0.01mm | ±0.03mm | 55 | 5.5 | 2.5 | R0.5 |
| 2222-401 | 20-40mm | 0.01mm | ±0.03mm | 80 | 6.0 | 3.0 | R0.5 |

INTERNAL DIAL CALIPER GAGE WITH INTERCHANGEABLE POINTS

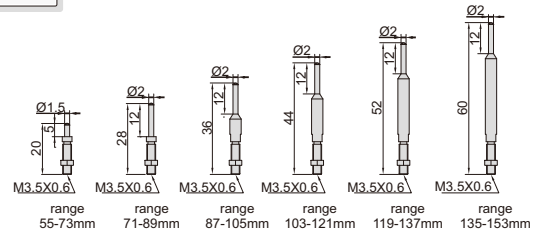


2223-153

6 pair of points (included)



Unit: mm



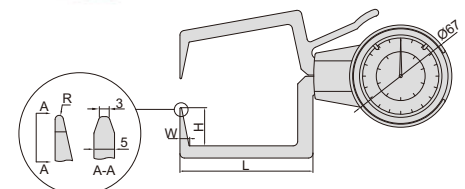
- Supplied with 6 pairs of points

| Code | Range | Dial indicator range | Graduation | Accuracy |
|----------|----------|----------------------|------------|----------|
| 2223-153 | 55-153mm | 2mm | 0.01mm | ±0.02mm |

EXTERNAL DIAL CALIPER GAGE



2333-201



Unit: mm

(mm)

| Code | Range | Graduation | Accuracy | L | H | W | R |
|----------|--------|------------|----------|----|----|-----|------|
| 2333-201 | 0-20mm | 0.01mm | ±0.03mm | 80 | 25 | 6.5 | R0.5 |

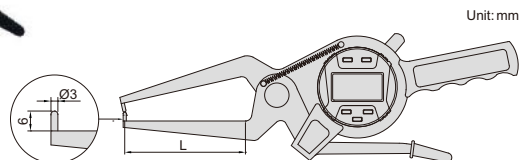
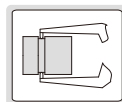
DIGITAL EXTERNAL CALIPER GAGE

- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-50M)



DATA OUTPUT

2132-20

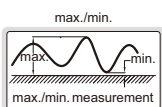


| Code | Range | Resolution | Accuracy | L (mm) |
|---------|---------------|----------------|----------|--------|
| 2132-20 | 0-20mm/0-0.8" | 0.01mm/0.0005" | ±0.04mm | 60 |

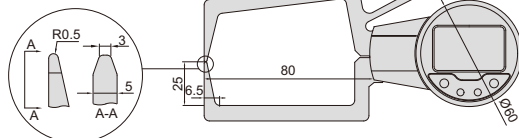
DIGITAL EXTERNAL CALIPER GAGE



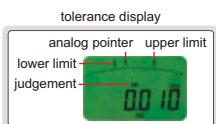
DATA OUTPUT



2131-21

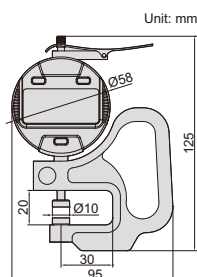


- Resolution: 0.005mm/0.0002"
- Repeatability: 0.01mm
- Reading in digit and analog
- Display can be rotated by 170°
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7315-30, 7302-30)



| Code | Range | Accuracy |
|---------|---------------|----------|
| 2131-21 | 0-20mm/0-0.8" | ±0.03mm |

DIGITAL THICKNESS GAGES



2871-101



DATA OUTPUT

- Ceramic spindle tip and anvil
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-50M)

| 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 |

HIGH PRECISION DIGITAL THICKNESS GAGES

ATTENTION: RECHARGEABLE BATTERY, FOR 12 HOURS CONTINUOUS WORKING

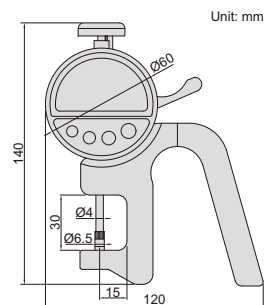
MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT



2879-10



- Absolute encoder, the original data remains after power off
- Button function: on/off, zero, tolerance, absolute/incremental measurement, max./min./TIR, data preset, mm/inch, data output, data hold
- Measuring force: 0.5-1N
- Reading in digital and analog
- Power: rechargeable battery, for 12 hours continuous working
- Data output
- Supplied with data output cable (keyboard format)

| Code | Range | Resolution | Accuracy | Repeatability |
|----------|---------------|-------------------|-----------|---------------|
| 2879-10 | 0-10mm/0-0.4" | 0.001mm/0.00005" | ±0.002mm | 0.001mm |
| 2879-101 | 0-10mm/0-0.4" | 0.0005mm/0.00002" | ±0.0015mm | 0.0005mm |

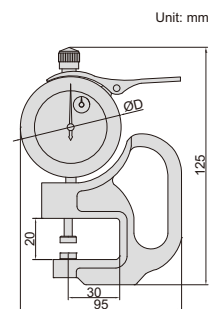
THICKNESS GAGES



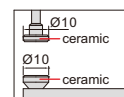
2364-10



2364-1



| Code | Range | Graduation | Accuracy | ØD |
|---------|--------|------------|----------|------|
| 2364-10 | 0-10mm | 0.01mm | ±0.02mm | 58mm |
| 2364-1 | 0-1mm | 0.001mm | ±0.005mm | 56mm |



DIGITAL THICKNESS GAGE



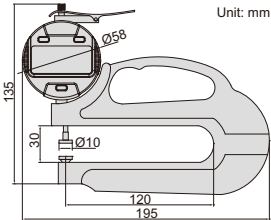
2872-10

DATA OUTPUT

measuring tips and anvils can be custom-made



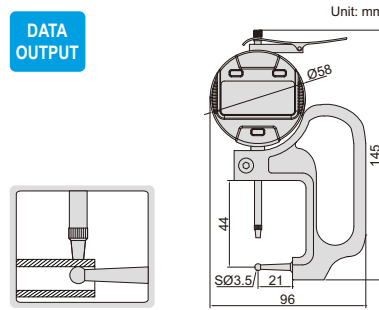
- Ceramic spindle tip and anvil
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-50M)



| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2872-10 | 0-10mm/0-0.4" | 0.01mm/0.0005" | ±0.02mm |

DIGITAL TUBE THICKNESS GAGE

DATA OUTPUT



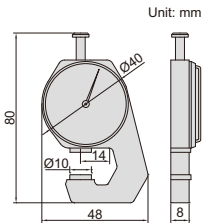
2876-10

- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: data output cable (code 7315-50M, 7302-50M)

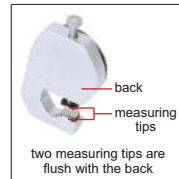
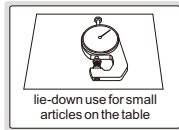
| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2876-10 | 0-10mm/0-0.4" | 0.01mm/0.0005" | ±0.02mm |

THICKNESS GAGE

SUITABLE FOR JEWELLERY

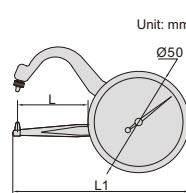


2361-10

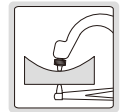


| Code | Range | Graduation | Accuracy |
|---------|--------|------------|----------|
| 2361-10 | 0-10mm | 0.1mm | ±0.05mm |

THICKNESS GAGE



2862-101



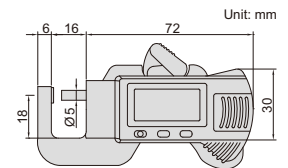
| Code | Range | Graduation | Accuracy | L | L1 |
|----------|--------|------------|----------|------|------|
| 2862-101 | 0-10mm | 0.05mm | ±0.1mm | 35mm | 85mm |

DIGITAL SNAP GAGE

ATTENTION: NO DATA OUTPUT



2166-12



| Code | Range | Resolution | Accuracy |
|---------|---------------|----------------|----------|
| 2166-12 | 0-12mm/0-0.5" | 0.01mm/0.0005" | ±0.03mm |

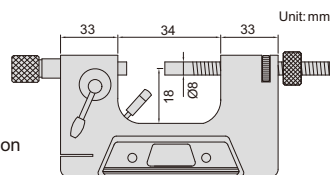
DIAL SNAP GAGE

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS



digital indicator is optional

2184-50W



- Quick measurement for mass production
- 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")

| Code | Range |
|----------|--------|
| 2184-25W | 0-25mm |

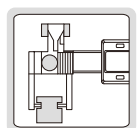
DIGITAL 3-PURPOSE SNAP GAGE

ATTENTION: NO DATA OUTPUT

SUITABLE FOR JEWELLERY

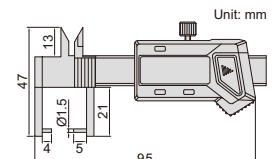


2164-25A



- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

| Code | Range | Accuracy |
|----------|-------------|----------|
| 2164-25A | 0-25mm/0-1" | ±0.03mm |



STEP AND GAP GAGE

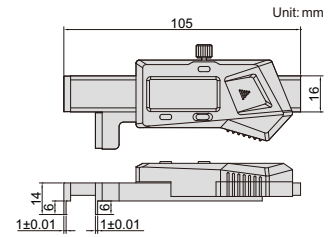
DATA OUTPUT

- Resolution: 0.01mm/0.0005"
- Measure step height and gap width
- 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
- Supplied with zero setting block
- Optional accessory: data output cable (code 7315-21, 7302-21)

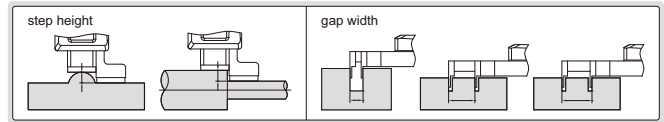
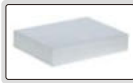
| Code | Range | Accuracy |
|---------|-----------------|----------|
| 2168-12 | 0-12.7mm/0-0.5" | ±0.03mm |



2168-12

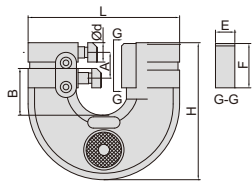


zero setting block (included)



ADJUSTABLE SNAP GAGES

FAST AND ACCURATE MEASUREMENT OF CYLINDERS



2187-19

- 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

(mm)

| 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 |

DIAL SNAP GAGES

QUICK AND ACCURATE MEASUREMENT OF CYLINDRICAL WORKPIECES

INSPECTION CERTIFICATE



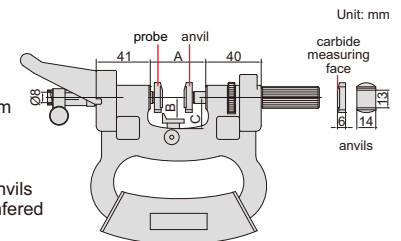
digital indicator is optional

2186-25



VIDEO

- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Flatness of anvil: 1.5µm
- Repeatability: 1µm
- 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)



Unit: mm

(mm)

| Code | Range | Parallelism of measuring faces | A | B | C |
|------------|----------|--------------------------------|-----|-------|----|
| 2186-25 * | 0-25mm | 4µm | 42 | 11-18 | 20 |
| 2186-50 * | 25-50mm | 4µm | 69 | 11-32 | 41 |
| 2186-75 * | 50-75mm | 5µm | 94 | 17-41 | 51 |
| 2186-100 * | 75-100mm | 6µm | 119 | 31-55 | 65 |

* Supplied with manufacturer inspection certificate

DIAL SNAP GAGES (ECONOMIC TYPE)

- Go/No-Go judgement for mass production
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- IP54 dust/waterproof
- Measuring force: 5-10N
- Carbide measuring faces
- Optional accessory: gage blocks grade 0 (4101-A series), for zero setting

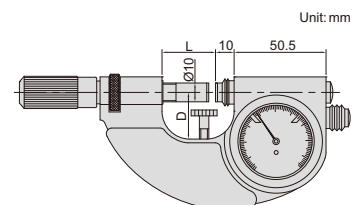
| Code | Range | L | D |
|----------|----------|---------|--------|
| 3334-25 | 0-25mm | 28.5mm | 25mm |
| 3334-50 | 25-50mm | 53.5mm | 35mm |
| 3334-75 | 50-75mm | 78.5mm | 47.5mm |
| 3334-100 | 75-100mm | 103.5mm | 60mm |



3334-25

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

IP54 WATERPROOF



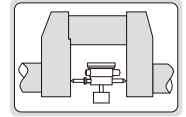
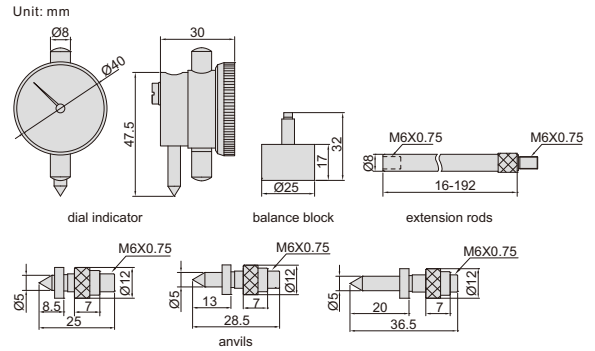
Unit: mm

CRANKSHAFT TESTERS



2841-500

- To test crankshaft deflection
- The balance block is mounted on the back of dial indicator to keep the dial indicator facing up

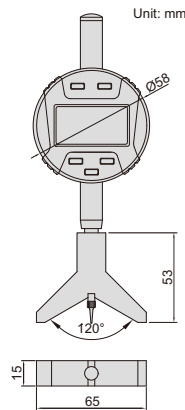


| Code | Range | Dial indicator range | Extension rods | Accuracy | Graduation |
|----------|----------|----------------------|--------------------------------------|----------|------------|
| 2841-300 | 60-300mm | 3mm | 16mm, 32mm, 64mm, 128mm | ±0.016mm | 0.01mm |
| 2841-500 | 60-500mm | 3mm | 16mm, 32mm, 64mm, 96mm, 128mm, 192mm | ±0.016mm | 0.01mm |

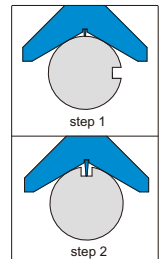
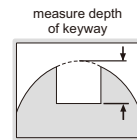
DIGITAL KEYWAY DEPTH GAGE

- Measure keyway depth of cylindrical workpieces with diameter Ø10-100mm
- Button function: on/off, zero, inch/metric conversion, absolute/incremental measurement, data preset, measuring direction change
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: data output cable (code 7315-50M, 7302-40M)

2182-25



DATA OUTPUT



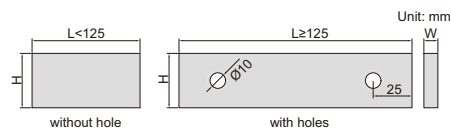
| Code | Range | Accuracy | Resolution |
|---------|---------------|----------|----------------|
| 2182-25 | 0-25.4mm/0-1" | ±0.02mm | 0.01mm/0.0005" |

STEEL GAGE BLOCK SETS



4100-87

- Made of alloy steel
- Meet ISO3650
- Gage blocks ≥ 125mm have clamping holes
- Supplied with manufacturer inspection certificate



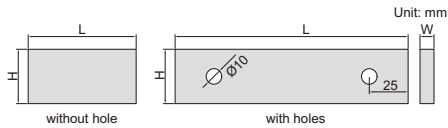
| Dimension: | | (mm) | |
|----------------|---|------|--|
| Size (L) | W | H | |
| 0.5 ≤ L ≤ 10mm | 9 | 30 | |
| L > 10mm | 9 | 35 | |

| Blocks per set | Gage blocks included in set | | | Code | | |
|----------------|-----------------------------|-----------|----------|-----------|-----------|----|
| | Size (mm) | Step (mm) | Quantity | Grade 1 | Grade 2 | |
| 122 | 1.0005 | 0.001 | 1 | 4100-1122 | 4100-2122 | |
| | 1.001-1.009 | | 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 |
| 112 | 1.0005 | 0.001 | 1 | 4100-1112 | 4100-2112 | |
| | 1.001-1.009 | | 9 | | | |
| | 1.01-1.49 | | 0.01 | | | 49 |
| | 0.5-24.5 | | 0.5 | | | 49 |
| | 25-100 | | 25 | | | 4 |
| 103 | 1.005 | 0.01 | 1 | 4100-1103 | 4100-2103 | |
| | 1.01-1.49 | | 49 | | | |
| | 0.5-24.5 | | 49 | | | |
| | 25-100 | | 25 | | | 4 |
| | | | | | | |

| Blocks per set | Gage blocks included in set | | | Code | | | |
|----------------|-----------------------------|-----------|----------|---------|----------|----------|----|
| | Size (mm) | Step (mm) | Quantity | Grade 0 | Grade 1 | Grade 2 | |
| 87 | 1.001-1.009 | 0.001 | 9 | 4100-87 | 4100-187 | 4100-287 | |
| | 1.01-1.49 | 0.01 | 49 | | | | |
| | 0.5-9.5 | 0.5 | 19 | | | | |
| | 10-100 | 10 | 10 | | | | |
| | | | | | | | |
| 47 | 1.005 | 0.01 | 1 | 4100-47 | 4100-147 | 4100-247 | |
| | 1.01-1.19 | | 0.1 | | | | 19 |
| | 1.2-1.9 | | 1 | | | | 8 |
| | 1-9 | | 1 | | | | 9 |
| | 10-100 | | 10 | | | | 10 |
| | | | | | | | |
| 32 | 1.005 | 0.01 | 1 | 4100-32 | 4100-132 | 4100-232 | |
| | 1.01-1.09 | | 0.01 | | | | 9 |
| | 1.1-1.9 | | 0.1 | | | | 9 |
| | 1-9 | | 1 | | | | 9 |
| | 10-30 | | 10 | | | | 3 |
| | 50 | | | | | | 1 |
| | | | | | | | |
| 8 | 125-175 | 25 | 3 | 4100-8 | 4100-18 | 4100-28 | |
| | 200-250 | 50 | 2 | | | | |
| | 300-500 | 100 | 3 | | | | |

INDIVIDUAL STEEL GAGE BLOCKS

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM 0.5 TO 1000MM,
SUCH AS 72.672MM



4101-A70

4101-A200

- Grade 0, 1 and 2 gage blocks are available
- Made of alloy steel
- Meet ISO3650
- Gage blocks with clamping holes: 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000mm
- Supplied with manufacturer inspection certificate

Dimension: (mm)

| Size (L) | W | H |
|----------------|---|----|
| 0.5 ≤ L ≤ 10mm | 9 | 30 |
| L > 10mm | 9 | 35 |

Grade 0 (mm)

| Code | Size |
|-----------|------|
| 4101-A1 | 1 |
| 4101-A10 | 10 |
| 4101-A100 | 100 |

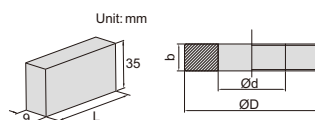
Grade 2 (mm)

| Code | Size |
|-----------|------|
| 4101-C1 | 1 |
| 4101-C10 | 10 |
| 4101-C100 | 100 |
| 4101-C200 | 200 |
| 4101-C250 | 250 |
| 4101-C300 | 300 |

| Grade 1 (mm) | | Grade 1 (mm) | | Grade 1 (mm) | | Grade 1 (mm) | | Grade 1 (mm) | |
|--------------|-------|--------------|------|--------------|------|--------------|------|--------------|-------|
| Code | Size | Code | Size | Code | Size | Code | Size | Code | Size |
| 4101-BD5 | 0.5 | 4101-B1D12 | 1.12 | 4101-B1D4 | 1.4 | 4101-B5 | 5 | 4101-B22 | 22 |
| 4101-B1 | 1 | 4101-B1D15 | 1.15 | 4101-B1D42 | 1.42 | 4101-B5D5 | 5.5 | 4101-B23 | 23 |
| 4101-B1D001 | 1.001 | 4101-B1D16 | 1.16 | 4101-B1D43 | 1.43 | 4101-B6 | 6 | 4101-B25 | 25 |
| 4101-B1D002 | 1.002 | 4101-B1D18 | 1.18 | 4101-B1D45 | 1.45 | 4101-B7 | 7 | 4101-B30 | 30 |
| 4101-B1D003 | 1.003 | 4101-B1D19 | 1.19 | 4101-B1D46 | 1.46 | 4101-B7D5 | 7.5 | 4101-B35 | 35 |
| 4101-B1D004 | 1.004 | 4101-B1D2 | 1.2 | 4101-B1D47 | 1.47 | 4101-B8 | 8 | 4101-B40 | 40 |
| 4101-B1D005 | 1.005 | 4101-B1D21 | 1.21 | 4101-B1D48 | 1.48 | 4101-B8D5 | 8.5 | 4101-B45 | 45 |
| 4101-B1D006 | 1.006 | 4101-B1D22 | 1.22 | 4101-B1D49 | 1.49 | 4101-B9 | 9 | 4101-B50 | 50 |
| 4101-B1D009 | 1.009 | 4101-B1D24 | 1.24 | 4101-B1D5 | 1.5 | 4101-B9D5 | 9.5 | 4101-B60 | 60 |
| 4101-B1D01 | 1.01 | 4101-B1D25 | 1.25 | 4101-B1D6 | 1.6 | 4101-B10 | 10 | 4101-B70 | 70 |
| 4101-B1D02 | 1.02 | 4101-B1D26 | 1.26 | 4101-B1D7 | 1.7 | 4101-B11 | 11 | 4101-B75 | 75 |
| 4101-B1D03 | 1.03 | 4101-B1D27 | 1.27 | 4101-B1D8 | 1.8 | 4101-B12 | 12 | 4101-B80 | 80 |
| 4101-B1D04 | 1.04 | 4101-B1D3 | 1.3 | 4101-B1D9 | 1.9 | 4101-B13 | 13 | 4101-B90 | 90 |
| 4101-B1D05 | 1.05 | 4101-B1D32 | 1.32 | 4101-B2 | 2 | 4101-B14 | 14 | 4101-B100 | 100 |
| 4101-B1D06 | 1.06 | 4101-B1D33 | 1.33 | 4101-B2D5 | 2.5 | 4101-B15 | 15 | 4101-B125 | 125 |
| 4101-B1D07 | 1.07 | 4101-B1D34 | 1.34 | 4101-B3 | 3 | 4101-B16 | 16 | 4101-B131D4 | 131.4 |
| 4101-B1D08 | 1.08 | 4101-B1D35 | 1.35 | 4101-B3D5 | 3.5 | 4101-B18 | 18 | 4101-B150 | 150 |
| 4101-B1D09 | 1.09 | 4101-B1D36 | 1.36 | 4101-B4 | 4 | 4101-B20 | 20 | | |
| 4101-B1D1 | 1.1 | 4101-B1D37 | 1.37 | 4101-B4D5 | 4.5 | 4101-B21 | 21 | | |

CALIPER INSPECTION GAGE BLOCK AND RING GAGE SET

- Gage blocks meet ISO3650
- Ring gages meet DIN2250-1:2008
- Supplied with manufacturer inspection certificate



4176-30

Ring gage sizes:

| diameter (Ød)* | b | ØD |
|----------------|------|------|
| Ø4mm | 5mm | 22mm |
| Ø25mm | 14mm | 53mm |

* The size of the ring gage when supplied may have deviation. For example, the size Ø25mm may be 24.996mm

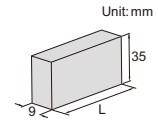
(mm)

| Code | Material | Gage blocks included in set (L) | Ring gages included in set (Ød) | Applicable calipers |
|---------|-------------|---------------------------------|---------------------------------|---------------------|
| 4176-30 | alloy steel | 30, 41.3, 131.4 | 4, 25 | 0-150 |

CALIPER INSPECTION GAGE BLOCK SET



- Meet ISO3650/grade 2
- Supplied with manufacturer inspection certificate



4108-3005

| Code | Material | Gage blocks included in set (L) | Applicable calipers |
|-----------|-------------|---------------------------------|---------------------|
| 4108-3005 | alloy steel | 30, 41.3, 131.4, 243.5, 281.2 | 0-150, 0-200, 0-300 |

MICROMETER INSPECTION GAGE BLOCK SET

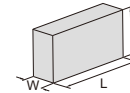


- Meet ISO3650/grade 0
- One piece of optical flat is included (size Ø30x12mm)
- Supplied with manufacturer inspection certificate

optical flat (included)



4160-10



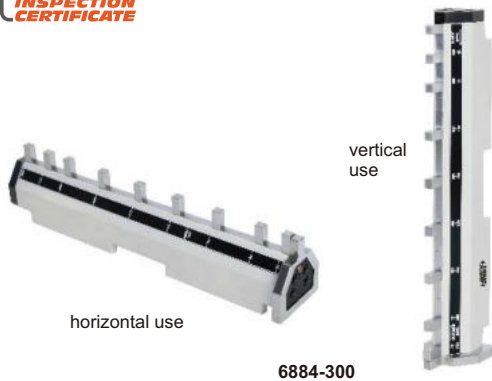
Dimension:

| Size (L) | W | H |
|----------------|-----|------|
| 0.5 ≤ L ≤ 10mm | 9mm | 30mm |
| L > 10mm | 9mm | 35mm |

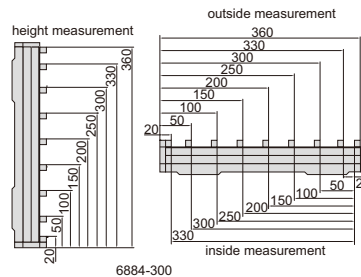
| Code | Material | Gage blocks included in set | Applicable micrometer |
|---------|-------------|---|-----------------------|
| 4160-10 | alloy steel | 2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm | 0-25mm |



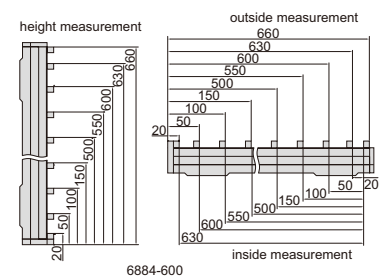
CALIPER/HEIGHT GAGE CHECKERS



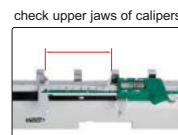
6884-300



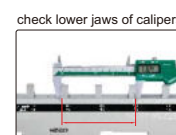
6884-300



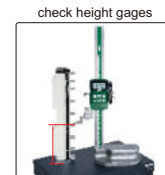
6884-600



check upper jaws of calipers



check lower jaws of calipers



check height gages

- To check calipers and height gages
- Constructed with steel gage blocks

| 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, 330 | 20, 50, 100, 150, 200, 250, 300, 330, 360 | 20, 50, 100, 150, 200, 250, 300, 330, 360 | ±3µm |
| 6884-600* | 0-600mm | 20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630 | 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 | ±5µm |

*Supplied with manufacturer inspection certificate

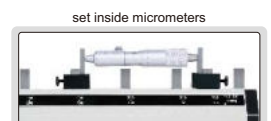
INSIDE MICROMETER ACCESSORY

- Supplied with a pair of 5mm carbide gage blocks

| Code |
|-----------|
| 6884-A10* |



6884-A10



set inside micrometers

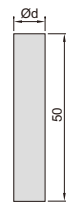
*Supplied with manufacturer inspection certificate

PIN GAGE SETS

| Code | Diameter Ød (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 |



Unit: mm



4166-10

| Code | Diameter Ød (mm) | Step | Pin gages per set |
|----------|--------------------------|--------|-------------------|
| 4166-411 | 1.0, 1.1, 1.2, … 5.0 | 0.01mm | 41 |
| 4166-511 | 5.0, 5.1, 5.2, … 10.0 | 0.01mm | 51 |
| 4166-512 | 10.0, 10.1, 10.2, … 15.0 | 0.01mm | 51 |
| 4166-513 | 15.0, 15.1, 15.2, … 20.0 | 0.01mm | 51 |

- Meet DIN2269, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: $\pm 1\mu\text{m}$

| Code | Diameter Ød (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 Ød (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 |

PIN GAGE HANDLES (OPERATED WITHOUT WRENCH)

- Operated without wrench
- Made of aluminum
- Pin gages can be installed



7342-M1



| Code | Applicable pin gage diameter |
|---------|------------------------------|
| 7342-M0 | 0.30-1.50mm/0.011-0.060" |
| 7342-M1 | 1.51-6.35mm/0.061-0.250" |
| 7342-M2 | 6.36-12.70mm/0.251-0.500" |
| 7342-M3 | 12.71-15.88mm/0.501-0.625" |

| Code | Applicable pin gage diameter |
|---------|------------------------------|
| 7342-M4 | 15.89-19.00mm/0.626-0.750" |
| 7342-M5 | 19.01-21.13mm/0.751-0.832" |
| 7342-M6 | 21.14-23.27mm/0.833-0.916" |
| 7342-M7 | 23.28-25.40mm/0.917-1.000" |

PIN GAGE HANDLES (OPERATED WITH WRENCH)



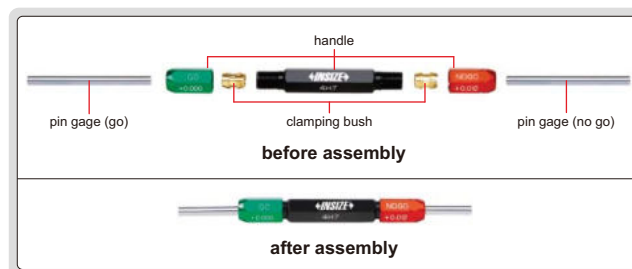
handle



brass clamping bush (0.2~7.14mm)



aluminum clamping bush (7.14~24.80mm)



- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~24.80mm) are made of aluminum

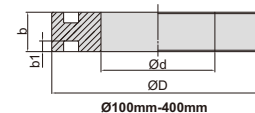
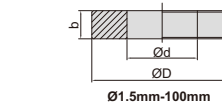
| Code | Applicable pin gage diameter | Including | |
|---------|------------------------------|-----------|---|
| | | Handle | Clamping bush (mm) |
| 7341-0S | 0.2-1.02mm | 1 pc | 6 pairs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02) |
| 7341-1S | 1.02-1.91mm | 1 pc | 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 | 1.91-3.33mm | 1 pc | 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 | 3.33-4.57mm | 1 pc | 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 | 4.57-5.79mm | 1 pc | 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 | 5.79-7.14mm | 1 pc | 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) |
| 7341-6S | 7.14-8.66mm | 1 pc | 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) |

| Code | Applicable pin gage diameter | Including | |
|----------|------------------------------|-----------|---|
| | | Handle | Clamping bush (mm) |
| 7341-7S | 8.66-10.31mm | 1 pc | 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 | 10.31-11.81mm | 1 pc | 4 pairs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81) |
| 7341-9S | 11.81-12.95mm | 1 pc | 3 pairs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95) |
| 7341-10S | 12.95-14.71mm | 1 pc | 4 pairs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71) |
| 7341-11S | 14.71-16.13mm | 1 pc | 4 pairs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13) |
| 7341-12S | 16.13-17.88mm | 1 pc | 4 pairs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88) |
| 7341-13S | 17.88-19.30mm | 1 pc | 4 pairs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30) |
| 7341-15S | 19.30-24.80mm | 1 pc | 8 pairs (the clamping range are 19.30-19.84, 19.84-20.62, 20.62-21.41, 21.41-22.23, 22.23-23.03, 23.03-23.80, 23.80-24.59, 24.59-24.80) |

SETTING RINGS

CAN SUPPLY CUSTOM SETTING RINGS FROM Ø1.500MM TO Ø400.000MM, FOR EXAMPLE, Ø17.085MM

- For zero setting of inside micrometers, three points internal micrometers and bore gages
- The size marked on the setting ring is checked at the direction of the marking line
- 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 Ø10.135mm
- Meet DIN2250-1:2008



(mm)

| Diameter d** | b | ØD | Deviation | Roundness and cylindricity |
|--------------|------|-------|-----------|----------------------------|
| Ø1.5-2.5 | 4mm | 22mm | ±10.0µm | 0.3µm |
| Ø2.5-3 | 5mm | 22mm | ±10.0µm | 0.3µm |
| Ø3-5 | 5mm | 22mm | ±10.0µm | 0.4µm |
| Ø5-10 | 8mm | 32mm | ±10.0µm | 0.4µm |
| Ø10-15 | 10mm | 38mm | ±10.0µm | 0.5µm |
| Ø15-18 | 12mm | 45mm | ±10.0µm | 0.5µm |
| Ø18-20 | 12mm | 45mm | ±10.0µm | 0.6µm |
| Ø20-25 | 14mm | 53mm | ±10.0µm | 0.6µm |
| Ø25-30 | 16mm | 63mm | ±10.0µm | 0.6µm |
| Ø30-32 | 16mm | 63mm | ±10.0µm | 0.7µm |
| Ø32-40 | 18mm | 71mm | ±10.0µm | 0.7µm |
| Ø40-50 | 20mm | 85mm | ±10.0µm | 0.7µm |
| Ø50-60 | 20mm | 100mm | ±10.0µm | 0.8µm |
| Ø60-70 | 24mm | 112mm | ±10.0µm | 0.8µm |
| Ø70-80 | 24mm | 125mm | ±10.0µm | 0.8µm |
| Ø80-90 | 24mm | 140mm | ±10.0µm | 1.0µm |
| Ø90-100 | 24mm | 160mm | ±10.0µm | 1.0µm |

** For example Ø3-5mm means Ø3mm < diameter d ≤ Ø5mm

(mm)

| Diameter d** | b | b1 | ØD | Deviation | Roundness and cylindricity |
|--------------|------|------|-------|-----------|----------------------------|
| Ø100-110 | 30mm | 8mm | 164mm | ±10.0µm | 1.0µm |
| Ø110-130 | 34mm | 10mm | 192mm | ±10.0µm | 1.0µm |
| Ø130-150 | 34mm | 10mm | 220mm | ±10.0µm | 1.2µm |
| Ø150-170 | 36mm | 10mm | 248mm | ±10.0µm | 1.5µm |
| Ø170-190 | 36mm | 10mm | 276mm | ±10.0µm | 1.5µm |
| Ø190-210 | 38mm | 10mm | 300mm | ±10.0µm | 1.5µm |
| Ø210-230 | 38mm | 10mm | 324mm | ±10.0µm | 2.5µm |
| Ø230-250 | 40mm | 12mm | 350mm | ±10.0µm | 2.5µm |
| Ø250-270 | 40mm | 12mm | 375mm | ±10.0µm | 3.0µm |
| Ø270-290 | 42mm | 12mm | 400mm | ±10.0µm | 3.0µm |
| Ø290-300 | 42mm | 12mm | 425mm | ±10.0µm | 3.0µm |
| Ø300-320 | 42mm | 12mm | 430mm | ±10.0µm | 4.0µm |
| Ø320-330 | 42mm | 12mm | 440mm | ±10.0µm | 4.0µm |
| Ø330-340 | 42mm | 12mm | 450mm | ±10.0µm | 4.0µm |
| Ø340-350 | 42mm | 12mm | 460mm | ±10.0µm | 4.0µm |
| Ø350-360 | 42mm | 12mm | 470mm | ±10.0µm | 4.0µm |
| Ø360-370 | 42mm | 12mm | 480mm | ±10.0µm | 4.0µm |
| Ø370-380 | 42mm | 12mm | 490mm | ±10.0µm | 4.0µm |
| Ø380-390 | 42mm | 12mm | 500mm | ±10.0µm | 4.0µm |
| Ø390-400 | 42mm | 12mm | 510mm | ±10.0µm | 4.0µm |

| Code | Size |
|------------|---------|
| 6312-1D5* | Ø1.5mm |
| 6312-2* | Ø2mm |
| 6312-2D5* | Ø2.5mm |
| 6312-3* | Ø3mm |
| 6312-3D5* | Ø3.5mm |
| 6312-4* | Ø4mm |
| 6312-4D5* | Ø4.5mm |
| 6312-5* | Ø5mm |
| 6312-5D5* | Ø5.5mm |
| 6312-6* | Ø6mm |
| 6312-6D5* | Ø6.5mm |
| 6312-7* | Ø7mm |
| 6312-7D5* | Ø7.5mm |
| 6312-8* | Ø8mm |
| 6312-8D5* | Ø8.5mm |
| 6312-9* | Ø9mm |
| 6312-9D5* | Ø9.5mm |
| 6312-10* | Ø10mm |
| 6312-10D5* | Ø10.5mm |
| 6312-11* | Ø11mm |
| 6312-11D5* | Ø11.5mm |
| 6312-12* | Ø12mm |
| 6312-12D5* | Ø12.5mm |
| 6312-13* | Ø13mm |
| 6312-13D5* | Ø13.5mm |
| 6312-14* | Ø14mm |
| 6312-14D5* | Ø14.5mm |

| Code | Size |
|------------|---------|
| 6312-15* | Ø15mm |
| 6312-15D5* | Ø15.5mm |
| 6312-16* | Ø16mm |
| 6312-16D5* | Ø16.5mm |
| 6312-17* | Ø17mm |
| 6312-17D5* | Ø17.5mm |
| 6312-18* | Ø18mm |
| 6312-18D5* | Ø18.5mm |
| 6312-19* | Ø19mm |
| 6312-19D5* | Ø19.5mm |
| 6312-20* | Ø20mm |
| 6312-20D5* | Ø20.5mm |
| 6312-21* | Ø21mm |
| 6312-21D5* | Ø21.5mm |
| 6312-22* | Ø22mm |
| 6312-22D5* | Ø22.5mm |
| 6312-23* | Ø23mm |
| 6312-23D5* | Ø23.5mm |
| 6312-24* | Ø24mm |
| 6312-24D5* | Ø24.5mm |
| 6312-25* | Ø25mm |
| 6312-25D5* | Ø25.5mm |
| 6312-26* | Ø26mm |
| 6312-26D5* | Ø26.5mm |
| 6312-27* | Ø27mm |
| 6312-27D5* | Ø27.5mm |
| 6312-28* | Ø28mm |

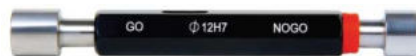
| Code | Size |
|------------|---------|
| 6312-28D5* | Ø28.5mm |
| 6312-29* | Ø29mm |
| 6312-29D5* | Ø29.5mm |
| 6312-30* | Ø30mm |
| 6312-31* | Ø31mm |
| 6312-32* | Ø32mm |
| 6312-33* | Ø33mm |
| 6312-34* | Ø34mm |
| 6312-35* | Ø35mm |
| 6312-36* | Ø36mm |
| 6312-37* | Ø37mm |
| 6312-38* | Ø38mm |
| 6312-39* | Ø39mm |
| 6312-40* | Ø40mm |
| 6312-41* | Ø41mm |
| 6312-42* | Ø42mm |
| 6312-43* | Ø43mm |
| 6312-44* | Ø44mm |
| 6312-45* | Ø45mm |
| 6312-46* | Ø46mm |
| 6312-47* | Ø47mm |
| 6312-48* | Ø48mm |
| 6312-49* | Ø49mm |
| 6312-50* | Ø50mm |
| 6312-55* | Ø55mm |
| 6312-60* | Ø60mm |
| 6312-62* | Ø62mm |

| Code | Size |
|-------------|----------|
| 6312-65* | Ø65mm |
| 6312-70* | Ø70mm |
| 6312-75* | Ø75mm |
| 6312-80* | Ø80mm |
| 6312-85* | Ø85mm |
| 6312-87* | Ø87mm |
| 6312-90* | Ø90mm |
| 6312-95* | Ø95mm |
| 6312-100* | Ø100mm |
| 6312-112D5* | Ø112.5mm |
| 6312-125* | Ø125mm |
| 6312-137D5* | Ø137.5mm |
| 6312-150* | Ø150mm |
| 6312-162D5* | Ø162.5mm |
| 6312-175* | Ø175mm |
| 6312-187D5* | Ø187.5mm |
| 6312-200* | Ø200mm |
| 6312-212D5* | Ø212.5mm |
| 6312-225* | Ø225mm |
| 6312-237D5* | Ø237.5mm |
| 6312-250* | Ø250mm |
| 6312-262D5* | Ø262.5mm |
| 6312-275* | Ø275mm |
| 6312-287D5* | Ø287.5mm |
| 6312-300* | Ø300mm |
| 6312-350* | Ø350mm |
| 6312-400* | Ø400mm |

*Supplied with manufacturer inspection certificate

PLAIN PLUG GAGES

- Supplied with Go and No-Go gages together
- Class H7
- Hardness HRC 60±2
- Standard DIN7150-2

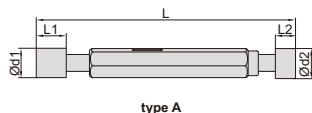


4124-12

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



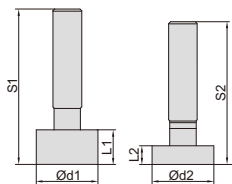
type A



type A



type B



type B

Size tolerance of H7

| Diameter Ød | Type | Size tolerance of Go gage (µm) | Size tolerance of No-Go gage (µm) | L1 | L2 | L | S1, S2 |
|-------------|------|--------------------------------|-----------------------------------|-----|-----|-----|----------|
| ≥2, ≤3 | A | +0.5 / +2.5 | +9 / +11 | 6.5 | 4.5 | 62 | – |
| >3, ≤6 | A | +0.75 / +3.25 | +10.75 / +13.25 | 8 | 6 | 74 | – |
| >6, ≤10 | A | +0.75 / +3.25 | +13.75 / +16.25 | 10 | 7 | 87 | – |
| >10, ≤14 | A | +1 / +4 | +16.5 / +19.5 | 12 | 8 | 99 | – |
| >14, ≤18 | A | +1 / +4 | +16.5 / +19.5 | 14 | 10 | 114 | – |
| >18, ≤24 | A | +1 / +5 | +19 / +23 | 16 | 12 | 132 | – |
| >24, ≤30 | A | +1 / +5 | +19 / +23 | 18 | 14 | 136 | – |
| >30, ≤40 | A | +1.5 / +5.5 | +23 / +27 | 20 | 15 | 155 | – |
| >40, ≤50 | A | +1.5 / +5.5 | +23 / +27 | 25 | 18 | 169 | – |
| >50, ≤65 | B | +1.5 / +6.5 | +27.5 / +32.5 | 30 | 18 | – | 164, 152 |
| >65, ≤80 | B | +1.5 / +6.5 | +27.5 / +32.5 | 35 | 25 | – | 169, 159 |
| >80, ≤100 | B | +2 / +8 | +32 / +38 | 35 | 25 | – | 169, 159 |

| Code | Diameter | Type | Code | Diameter | Type | Code | Diameter | Type | Code | Diameter | Type | Code | Diameter | Type |
|---------|----------|------|---------|----------|------|---------|----------|------|---------|----------|------|----------|----------|------|
| 4124-2 | 2mm | A | 4124-13 | 13mm | A | 4124-24 | 24mm | A | 4124-38 | 38mm | A | 4124-52 | 52mm | B |
| 4124-3 | 3mm | A | 4124-14 | 14mm | A | 4124-25 | 25mm | A | 4124-39 | 39mm | A | 4124-55 | 55mm | B |
| 4124-4 | 4mm | A | 4124-15 | 15mm | A | 4124-26 | 26mm | A | 4124-40 | 40mm | A | 4124-60 | 60mm | B |
| 4124-5 | 5mm | A | 4124-16 | 16mm | A | 4124-28 | 28mm | A | 4124-41 | 41mm | A | 4124-65 | 65mm | B |
| 4124-6 | 6mm | A | 4124-17 | 17mm | A | 4124-29 | 29mm | A | 4124-42 | 42mm | A | 4124-70 | 70mm | B |
| 4124-7 | 7mm | A | 4124-18 | 18mm | A | 4124-30 | 30mm | A | 4124-44 | 44mm | A | 4124-75 | 75mm | B |
| 4124-8 | 8mm | A | 4124-19 | 19mm | A | 4124-31 | 31mm | A | 4124-45 | 45mm | A | 4124-80 | 80mm | B |
| 4124-9 | 9mm | A | 4124-20 | 20mm | A | 4124-32 | 32mm | A | 4124-46 | 46mm | A | 4124-85 | 85mm | B |
| 4124-10 | 10mm | A | 4124-21 | 21mm | A | 4124-34 | 34mm | A | 4124-47 | 47mm | A | 4124-100 | 100mm | B |
| 4124-11 | 11mm | A | 4124-22 | 22mm | A | 4124-35 | 35mm | A | 4124-49 | 49mm | A | | | |
| 4124-12 | 12mm | A | 4124-23 | 23mm | A | 4124-36 | 36mm | A | 4124-50 | 50mm | A | | | |

METRIC THREAD PLUG GAGES

- Supplied with Go and No-Go gages together
- Standard ISO1502
- Supplied with manufacturer inspection certificate



4130-10



| Size (mm) | | Code | | |
|------------------|-------|----------|-----------|-----------|
| Nominal diameter | Pitch | Class 6H | Class 6G | Class 4H |
| M0.8 | 0.2 | 4130-D8 | 4130-D8G | – |
| M0.9 | 0.225 | 4130-D9 | – | – |
| M1 | 0.25 | 4130-1 | – | – |
| M1.2 | 0.25 | 4130-1D2 | – | 4130-1D2H |
| M1.4 | 0.3 | 4130-1D4 | – | 4130-1D4H |
| M1.6 | 0.35 | 4130-1D6 | 4130-1D6G | 4130-1D6H |
| M1.8 | 0.35 | 4130-1D8 | – | – |
| M2 | 0.4 | 4130-2 | 4130-2G | 4130-2H |
| M2.2 | 0.45 | 4130-2D2 | – | – |
| M2.3 | 0.4 | 4130-2D3 | – | – |
| M2.5 | 0.45 | 4130-2D5 | 4130-2D5G | 4130-2D5H |
| M2.6 | 0.45 | 4130-2D6 | – | – |
| M3 | 0.5 | 4130-3 | 4130-3G | 4130-3H |
| M3.5 | 0.6 | 4130-3D5 | 4130-3D5G | – |
| M4 | 0.7 | 4130-4 | 4130-4G | 4130-4H |
| M4.5 | 0.75 | 4130-4D5 | – | – |
| M5 | 0.8 | 4130-5 | 4130-5G | – |
| M6 | 1 | 4130-6 | 4130-6G | 4130-6H |
| M7 | 1 | 4130-7 | – | – |
| M8 | 1.25 | 4130-8 | – | – |

| Size (mm) | | Code | | |
|------------------|-------|----------|----------|----------|
| Nominal diameter | Pitch | Class 6H | Class 6G | Class 4H |
| M9 | 1.25 | 4130-9 | 4130-9G | – |
| M10 | 1.5 | 4130-10 | 4130-10G | – |
| M11 | 1.5 | 4130-11 | – | – |
| M12 | 1.75 | 4130-12 | 4130-12G | – |
| M14 | 2 | 4130-14 | 4130-14G | – |
| M16 | 2 | 4130-16 | 4130-16G | – |
| M18 | 2.5 | 4130-18 | 4130-18G | 4130-18H |
| M20 | 2.5 | 4130-20 | 4130-20G | – |
| M22 | 2.5 | 4130-22 | – | – |
| M24 | 3 | 4130-24 | – | – |
| M27 | 3 | 4130-27 | – | – |
| M30 | 3.5 | 4130-30 | 4130-30G | – |
| M33 | 3.5 | 4130-33 | – | – |
| M36 | 4 | 4130-36 | – | 4130-36H |
| M39 | 4 | 4130-39 | – | – |
| M45 | 4.5 | 4130-45 | – | – |
| M48 | 5 | 4130-48 | – | – |
| M56 | 5.5 | 4130-56 | – | – |
| M60 | 5.5 | 4130-60 | – | – |

Set (class 6H)

| 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) |

METRIC FINE THREAD PLUG GAGES

- Supplied with Go and No-Go gages together
- Standard ISO1502
- Supplied with manufacturer inspection certificate



4139-20G

Code example:
"1A" stands for "4139-1A"

| Size (mm) | | Code (4139) | | | Size (mm) | | Code (4139) | | | Size (mm) | | Code (4139) | |
|------------------|-------|-------------|----------|----------|------------------|-------|-------------|----------|----------|------------------|-------|-------------|----------|
| Nominal diameter | Pitch | Class 6H | Class 6G | Class 4H | Nominal diameter | Pitch | Class 6H | Class 6G | Class 4H | Nominal diameter | Pitch | Class 6H | Class 6G |
| M1 | 0.2 | -1A | - | - | M19 | 1 | -19P | - | - | M38 | 0.75 | -38L | - |
| M1.6 | 0.2 | -1D6A | -1D6AG | - | | 0.5 | -20G | - | - | | 1.5 | -38R | - |
| M1.8 | 0.2 | -1D8A | - | - | M20 | 1 | -20P | -20PG | - | | 2 | -38T | - |
| M2 | 0.2 | -2A | -2AG | - | | 1.5 | -20R | -20RG | - | M39 | 1 | -39P | - |
| | 0.25 | -2B | -2BG | - | | 2 | -20T | - | - | | 1.5 | -39R | - |
| M2.5 | 0.2 | -2D5A | - | - | M21 | 1 | -21P | - | - | | 2 | -39T | - |
| | 0.25 | -2D5B | - | - | | 1.5 | -21R | - | - | | 3 | -39V | - |
| M3 | 0.25 | -3B | - | - | | 0.5 | -22G | - | - | M40 | 1 | -40P | - |
| | 0.35 | -3D | - | - | M22 | 1 | -22P | -22PG | - | | 2 | -40T | - |
| M3.5 | 0.35 | -3D5D | - | - | | 1.5 | -22R | -22RG | - | | 1 | -42P | - |
| | 0.5 | -3D5G | - | - | | 2 | -22T | - | - | M42 | 1.5 | -42R | -42RG |
| M4 | 0.5 | -4G | -4GG | -4GH | | 0.5 | -24G | - | - | | 3 | -42V | -42VG |
| M4.5 | 0.5 | -4D5G | - | - | M24 | 1 | -24P | -24PG | - | | 1 | -45P | - |
| M5 | 0.25 | -5B | - | - | | 1.25 | -24Q | - | - | M45 | 1.5 | -45R | -45RG |
| | 0.5 | -5G | -5GG | - | | 1.5 | -24R | -24RG | - | | 2 | -45T | - |
| M6 | 0.25 | -6B | -6BG | - | | 2 | -24T | -24TG | - | | 3 | -45V | - |
| | 0.5 | -6G | - | - | | 0.5 | -25G | - | - | | 1 | -48P | - |
| M7 | 0.5 | -7G | - | - | M25 | 1 | -25P | - | - | | 1.5 | -48R | - |
| M8 | 0.5 | -8G | - | - | | 1.5 | -25R | - | - | M48 | 2 | -48T | - |
| | 1 | -8P | -8PG | - | | 2 | -25T | - | - | | 3 | -48V | - |
| M9 | 0.5 | -9G | -9GG | - | M26 | 1 | -26P | - | - | | 1 | -52P | - |
| | 0.75 | -9L | - | - | | 1.5 | -26R | - | - | M52 | 1.5 | -52R | - |
| | 1 | -9P | - | - | | 0.5 | -27G | - | - | | 3 | -52V | - |
| M10 | 0.5 | -10G | - | - | | 1 | -27P | -27PG | - | | 4 | -52X | - |
| | 1 | -10P | -10PG | - | M27 | 1.5 | -27R | - | -27RH | M55 | 1.5 | -55R | - |
| | 1.25 | -10Q | -10QG | - | | 2 | -27T | - | -27TH | | 2 | -55T | - |
| M11 | 0.5 | -11G | - | - | | 1 | -28P | - | - | M56 | 1.5 | -56R | - |
| | 1 | -11P | - | - | M28 | 1.5 | -28R | -28RG | - | | 3 | -56V | - |
| M12 | 0.5 | -12G | -12GG | -12GH | | 2 | -28T | - | - | | 1 | -60P | - |
| | 1 | -12P | -12PG | - | | 0.75 | -30L | - | - | M58 | 2 | -60T | - |
| | 1.25 | -12Q | -12QG | - | | 1 | -30P | - | -30PH | | 3 | -60V | - |
| | 1.5 | -12R | -12RG | - | M30 | 1.5 | -30R | - | -30RH | | | | |
| M13 | 1.5 | -13R | - | - | | 2 | -30T | -30TG | - | | | | |
| | 0.5 | -14G | - | - | | 3 | -30V | - | - | | | | |
| M14 | 1 | -14P | - | - | M31 | 1.5 | -32R | - | - | | | | |
| | 1.25 | -14Q | - | - | | 2 | -32T | - | - | | | | |
| | 1.5 | -14R | -14RG | - | | 0.75 | -33L | - | - | | | | |
| M15 | 0.5 | -15G | - | - | | 1 | -33P | - | - | | | | |
| | 1 | -15P | -15PG | -15PH | M32 | 1.5 | -33R | - | - | | | | |
| | 1.5 | -15R | -15RG | - | | 2 | -33T | - | - | | | | |
| M16 | 0.5 | -16G | - | - | | 3 | -33V | - | - | | | | |
| | 1 | -16P | - | - | M33 | 1.5 | -34R | - | - | | | | |
| | 1.25 | -16Q | - | - | | 2 | -34T | - | - | | | | |
| | 1.5 | -16R | - | - | | 1 | -36P | - | - | | | | |
| M17 | 0.5 | -17G | - | - | | 1.5 | -36R | - | - | | | | |
| | 1 | -17P | - | - | M36 | 2 | -36T | - | -36TH | | | | |
| | 1.5 | -17R | - | - | | 3 | -36V | - | - | | | | |
| M18 | 1 | -18P | - | - | M37 | 0.75 | -37L | - | - | | | | |
| | 1.5 | -18R | -18RG | - | | | | | | | | | |
| | 2 | -18T | - | - | | | | | | | | | |

METRIC THREAD RING GAGES



4120-16



4120-16N

- Standard ISO1502
- Supplied with manufacturer inspection certificate

Code example:
"-2" stands for "4120-2"

| Size (mm) | | Code (4120) | | | | | |
|------------------|-------|-------------|-------|----------|-------|----------|-------|
| | | Class 6g | | Class 6e | | Class 6h | |
| Nominal diameter | Pitch | GO | NOGO | GO | NOGO | GO | NOGO |
| M2 | 0.4 | -2 | - | - | - | -2H | -2HN |
| M2.2 | 0.45 | -2D2 | -2D2N | - | - | - | - |
| M2.5 | 0.45 | -2D5 | - | - | - | -2D5H | - |
| M2.6 | 0.45 | -2D6 | - | - | - | - | - |
| M3 | 0.5 | -3 | -3N | - | - | -3H | -3HN |
| M3.5 | 0.6 | -3D5 | -3D5N | - | - | - | - |
| M4 | 0.7 | -4 | - | -4E | -4EN | -4H | -4HN |
| M5 | 0.8 | -5 | -5N | -5E | - | -5H | -5HN |
| M6 | 1 | -6 | -6N | -6E | -6EN | -6H | -6HN |
| M7 | 1 | -7 | -7N | - | - | - | - |
| M8 | 1.25 | -8 | -8N | -8E | -8EN | -8H | - |
| M9 | 1.25 | -9 | -9N | -9E | - | - | - |
| M10 | 1.5 | -10 | -10N | -10E | -10EN | -10H | -10HN |
| M11 | 1.5 | -11 | -11N | - | - | - | - |
| M12 | 1.75 | -12 | -12N | -12E | -12EN | -12H | - |
| M14 | 2 | -14 | -14N | - | - | -14H | - |
| M16 | 2 | -16 | -16N | -16E | -16EN | -16H | - |
| M18 | 2.5 | -18 | -18N | - | - | - | - |
| M20 | 2.5 | -20 | -20N | -20E | -20EN | -20H | -20HN |
| M22 | 2.5 | -22 | -22N | - | - | - | - |
| M24 | 3 | -24 | -24N | - | - | - | - |
| M27 | 3 | -27 | - | - | - | -27H | - |
| M30 | 3.5 | -30 | -30N | - | - | -30H | - |
| M33 | 3.5 | -33 | -33N | - | - | - | - |
| M36 | 4 | -36 | -36N | - | - | -36H | -36HN |
| M39 | 4 | -39 | -39N | - | - | - | - |
| M42 | 4.5 | -42 | -42N | - | - | - | - |
| M45 | 4.5 | -45 | -45N | - | - | - | - |
| M48 | 5 | -48 | -48N | - | - | - | - |
| M56 | 5.5 | -56 | -56N | - | - | - | - |

Go ring gage set (class 6g)

| 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 (class 6g)

| 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) |

METRIC FINE THREAD RING GAGES



4129-9P



4129-9PN

Code example:
"-2D5D" stands for "4129-2D5D"

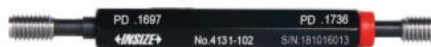
- Standard ISO1502
- Supplied with manufacturer inspection certificate

| Size (mm) | | Code (4129) | | | | | |
|------------------|-------|-------------|--------|----------|--------|----------|--------|
| Nominal diameter | Pitch | Class 6g | | Class 6e | | Class 6h | |
| | | GO | NOGO | GO | NOGO | GO | NOGO |
| M3 | 0.35 | -3D | -3DN | - | - | -3DH | -3DHN |
| M3.5 | 0.35 | -3D5D | -3D5DN | - | - | - | - |
| M4 | 0.5 | -4G | -4GN | - | - | -4GH | 4GHN |
| M4.5 | 0.5 | -4D5G | -4D5GN | -4D5GE | - | - | - |
| M5 | 0.5 | -5G | - | - | - | -5GH | - |
| M6 | 0.5 | -6G | -6GN | - | - | - | - |
| | 0.75 | -6L | -6LN | - | - | -6LH | -6LHN |
| M7 | 0.5 | -7G | -7GN | - | - | - | - |
| | 0.75 | -7L | -7LN | -7LE | -7LEN | - | - |
| M8 | 0.5 | -8G | -8GN | - | - | - | - |
| | 0.75 | -8L | -8LN | - | - | - | - |
| | 1 | -8P | -8PN | -8PE | -8PEN | -8PH | -8PHN |
| M9 | 0.5 | -9G | -9GN | - | - | - | - |
| | 0.75 | -9L | -9LN | - | - | - | - |
| 1 | -9P | -9PN | - | - | -9PH | - | |
| M19 | 1.5 | -19R | -19RN | - | - | - | - |
| M20 | 0.5 | -20G | -20GN | - | - | - | - |
| | 0.75 | -20L | -20LN | - | - | - | - |
| | 1 | -20P | -20PN | -20PE | -20PEN | -20PH | - |
| | 1.25 | -20Q | - | - | - | -20QH | -20QHN |
| | 1.5 | -20R | -20RN | -20RE | -20REN | - | - |
| M21 | 2 | -20T | -20TN | - | - | - | - |
| | 1 | -21P | -21PN | - | - | - | - |
| M22 | 0.75 | -22L | -22LN | - | - | - | - |
| | 1 | -22P | -22PN | -22PE | -22PEN | - | - |
| | 1.5 | -22R | -22RN | -22RE | -22REN | -22RH | -22RHN |
| 2 | -22T | -22TN | - | - | -22TH | - | |
| M23 | 1 | -23P | -23PN | - | - | - | - |
| M24 | 0.75 | -24L | -24LN | - | - | - | - |
| | 1 | -24P | -24PN | - | - | -24PH | -24PHN |
| | 1.25 | -24Q | -24QN | - | - | - | - |
| M25 | 1.5 | -24R | -24RN | - | - | - | - |
| | 2 | -24T | - | - | - | -24TH | - |
| | 1 | -25P | -25PN | - | - | - | - |
| M26 | 1.5 | -25R | -25RN | - | - | -25RH | - |
| | 2 | -25T | -25TN | - | - | - | - |
| | 1 | -26P | -26PN | - | - | - | - |
| M27 | 1.5 | -26R | -26RN | -26RE | - | - | - |
| | 2 | -26T | -26TN | - | - | - | - |
| M28 | 0.75 | -27L | -27LN | - | - | - | - |
| | 1 | -27P | -27PN | - | - | -27PH | - |
| | 1.5 | -27R | -27RN | - | - | -27RH | -27RHN |
| 2 | -27T | -27TN | - | - | -27TH | - | |
| M29 | 1 | -28P | -28PN | - | - | - | - |
| | 1.5 | -28R | -28RN | - | -28REN | - | - |
| | 2 | -28T | - | - | - | -28TH | -28THN |

| Size (mm) | | Code (4129) | | | | |
|------------------|-------|-------------|----------|----------|-------|--------|
| Nominal diameter | Pitch | Class 6g | Class 6e | Class 6h | | |
| | | GO | NOGO | GO | NOGO | |
| M30 | 0.75 | -30L | -30LN | - | - | - |
| | 1 | -30P | -30PN | - | -30PH | -30PHN |
| | 1.5 | -30R | -30RN | - | -30RH | -30RHN |
| | 2 | -30T | -30TN | - | -30TH | -30THN |
| 3 | -30V | -30VN | - | - | - | |
| M32 | 1 | -32P | -32PN | - | - | - |
| | 1.5 | -32R | -32RN | - | - | - |
| 2 | -32T | -32TN | - | - | - | |
| M33 | 0.75 | -33L | -33LN | - | - | - |
| | 1.5 | -33R | -33RN | - | - | - |
| | 2 | -33T | -33TN | - | - | - |
| 3 | -33V | -33VN | - | - | - | |
| M34 | 1 | -34P | - | - | - | - |
| 1.5 | -34R | - | - | - | - | |
| M35 | 1.5 | -35R | -35RN | - | -35RH | - |
| M36 | 1 | -36P | - | - | - | - |
| | 1.5 | -36R | -36RN | - | -36RH | -36RHN |
| | 2 | -36T | -36TN | - | -36TH | - |
| 3 | -36V | -36VN | - | - | - | |
| M38 | 1.5 | -38R | -38RN | - | - | - |
| M39 | 1 | -39P | -39PN | - | - | - |
| | 1.5 | -39R | -39RN | - | - | - |
| | 2 | -39T | -39TN | - | - | - |
| 3 | -39V | -39VN | - | - | - | |
| M40 | 1.5 | -40R | -40RN | -40RE | -40RH | -40RHN |
| M42 | 1.5 | -42R | -42RN | - | -42RH | -42RHN |
| | 2 | -42T | -42TN | - | -42TH | -42THN |
| | 3 | -42V | -42VN | - | - | - |
| M45 | 1.5 | -45R | -45RN | - | - | - |
| | 2 | -45T | -45TN | - | - | - |
| | 3 | -45V | -45VN | -45VE | - | - |
| M48 | 1.5 | -48R | -48RN | - | - | - |
| | 2 | -48T | -48TN | - | -48TH | -48THN |
| | 3 | -48V | -48VN | - | -48VH | -48VHN |
| M50 | 1.5 | -50R | - | - | - | - |
| M52 | 1.5 | -52R | -52RN | - | -52RH | -52RHN |
| | 2 | -52T | -52TN | - | -52TH | - |
| | 3 | -52V | -52VN | - | -52VH | -52VHN |
| M55 | 4 | -52X | -52XN | - | - | - |
| | 2 | -55T | -55TN | - | - | - |
| M56 | 1.5 | -56R | -56RN | - | - | - |
| | 2 | -56T | - | - | - | - |
| | 3 | -56V | - | - | -56VH | -56VHN |
| 4 | -56X | - | - | - | - | |
| M58 | 1.5 | -58R | -58RN | - | -58RH | -58RHN |
| | 2 | -58T | - | - | - | - |
| M60 | 1.5 | -60R | -60RN | - | - | - |
| | 2 | -60T | -60TN | - | - | - |
| | 3 | -60V | - | - | - | - |
| | 4 | -60X | -60XN | - | - | - |

AMERICAN STANDARD THREAD PLUG GAGES

- Supplied with Go and No-Go gages together
- Standard ANSI/ASME B1.2
- Supplied with manufacturer inspection certificate



4131-102

| Size | Code | |
|--------------|----------|-----------|
| | Class 2B | Class 3B |
| No. 0-80UNF | 4131-02 | – |
| No. 1-64UNC | 4131-11 | – |
| No. 1-72UNF | 4131-12 | – |
| No. 2-56UNC | 4131-21 | – |
| No. 3-56UNF | 4131-32 | – |
| No. 4-40UNC | 4131-41 | 4131-41B |
| No. 4-48UNF | 4131-42 | 4131-42B |
| No. 5-40UNC | 4131-51 | 4131-51B |
| No. 6-32UNC | 4131-61 | 4131-61B |
| No. 6-40UNF | 4131-62 | – |
| No. 8-32UNC | 4131-81 | 4131-81B |
| No. 8-36UNF | 4131-82 | – |
| No. 10-24UNC | 4131-101 | – |
| No. 10-32UNF | 4131-102 | 4131-102B |
| No. 12-24UNC | 4131-121 | – |
| No. 12-28UNF | 4131-122 | – |
| 1/4-20UNC | 4131-1B1 | 4131-1B1B |
| 1/4-28UNF | 4131-1B2 | 4131-1B2B |
| 1/4-32UNEF | 4131-1B3 | – |

| Size | Code | |
|--------------|-------------|-----------|
| | Class 2B | Class 3B |
| 5/16-18UNC | 4131-5D1 | 4131-5D1B |
| 5/16-24UNF | 4131-5D2 | 4131-5D2B |
| 5/16-32UNEF | 4131-5D3 | 4131-5D3B |
| 3/8-16UNC | 4131-3C1 | 4131-3C1B |
| 3/8-24UNF | 4131-3C2 | 4131-3C2B |
| 3/8-32UNEF | 4131-3C3 | – |
| 7/16-14UNC | 4131-7D1 | 4131-7D1B |
| 7/16-20UNF | 4131-7D2 | 4131-7D2B |
| 1/2-13UNC | 4131-1A1 | 4131-1A1B |
| 1/2-20UNF | 4131-1A2 | – |
| 1/2-28UNEF | 4131-1A3 | – |
| 9/16-12UNC | 4131-9D1 | 4131-9D1B |
| 9/16-18UNF | 4131-9D2 | 4131-9D2B |
| 9/16-24UNEF | 4131-9D3 | – |
| 5/8-11UNC | 4131-5C1 | 4131-5C1B |
| 5/8-18UNF | 4131-5C2 | 4131-5C2B |
| 5/8-24UNEF | 4131-5C3 | – |
| 11/16-16UN | 4131-11D516 | – |
| 11/16-24UNEF | 4131-11D3 | – |

| Size | Code | |
|--------------|-------------|------------|
| | Class 2B | Class 3B |
| 3/4-10UNC | 4131-3B1 | 4131-3B1B |
| 3/4-16UNF | 4131-3B2 | 4131-3B2B |
| 3/4-20UNEF | 4131-3B3 | 4131-3B3B |
| 13/16-16UN | 4131-13D516 | – |
| 13/16-20UNEF | 4131-13D3 | – |
| 7/8-9UNC | 4131-7C1 | 4131-7C1B |
| 7/8-14UNF | 4131-7C2 | – |
| 1-8UNC | 4131-2A1 | – |
| 1-12UNF | 4131-2A2 | – |
| 1-14UNS | 4131-2A514 | – |
| 1-32UN | 4131-2A532 | – |
| 1 1/16-12UN | 4131-1E512 | – |
| 1 1/8-7UNC | 4131-1F1 | 4131-1F1B |
| 1 1/8-8UN | 4131-1F58 | 4131-1F58B |
| 1 1/8-12UNF | 4131-1F2 | – |
| 1 3/16-12UN | 4131-3E512 | – |
| 1 1/4-7UNC | 4131-1G1 | – |
| 1 1/4-8UN | 4131-1G58 | 4131-1G58B |
| 1 1/4-12UNF | 4131-1G2 | – |

AMERICAN STANDARD THREAD RING GAGES

- Standard ANSI/ASME B1.2
- Class 2A
- Supplied with manufacturer inspection certificate



4121-1B1

4121-1B1N

| Size | Code | |
|--------------|----------|-----------|
| | GO | NOGO |
| No. 4-40UNC | 4121-41 | 4121-41N |
| No. 5-40UNC | 4121-51 | 4121-51N |
| No. 6-32UNC | 4121-61 | 4121-61N |
| No. 8-32UNC | 4121-81 | 4121-81N |
| No. 10-32UNF | 4121-102 | 4121-102N |
| No. 12-24UNC | 4121-121 | 4121-121N |
| No. 12-28UNF | 4121-122 | 4121-122N |
| 1/4-20UNC | 4121-1B1 | 4121-1B1N |
| 1/4-28UNF | 4121-1B2 | 4121-1B2N |
| 5/16-18UNC | 4121-5D1 | 4121-5D1N |
| 5/16-24UNF | 4121-5D2 | 4121-5D2N |
| 5/16-32UNEF | 4121-5D3 | 4121-5D3N |
| 3/8-16UNC | 4121-3C1 | 4121-3C1N |
| 3/8-24UNF | 4121-3C2 | 4121-3C2N |
| 3/8-32UNEF | 4121-3C3 | 4121-3C3N |

| Size | Code | |
|-------------|-------------|--------------|
| | GO | NOGO |
| 7/16-14UNC | 4121-7D1 | 4121-7D1N |
| 7/16-20UNF | 4121-7D2 | 4121-7D2N |
| 7/16-28UNEF | 4121-7D3 | 4121-7D3N |
| 1/2-13UNC | 4121-1A1 | 4121-1A1N |
| 1/2-20UNF | 4121-1A2 | 4121-1A2N |
| 1/2-28UNEF | 4121-1A3 | 4121-1A3N |
| 9/16-12UNC | 4121-9D1 | 4121-9D1N |
| 9/16-18UNF | 4121-9D2 | 4121-9D2N |
| 5/8-11UNC | 4121-5C1 | 4121-5C1N |
| 5/8-18UNF | 4121-5C2 | 4121-5C2N |
| 11/16-16UN | 4121-11D516 | 4121-11D516N |
| 3/4-10UNC | 4121-3B1 | 4121-3B1N |
| 3/4-16UNF | 4121-3B2 | 4121-3B2N |
| 3/4-20UNEF | 4121-3B3 | 4121-3B3N |
| 13/16-16UN | 4121-13D516 | 4121-13D516N |

| Size | Code | |
|-------------|------------|-------------|
| | GO | NOGO |
| 7/8-9UNC | 4121-7C1 | 4121-7C1N |
| 7/8-14UNF | 4121-7C2 | 4121-7C2N |
| 7/8-16UN | 4121-7C516 | 4121-7C516N |
| 1-8UNC | 4121-2A1 | 4121-2A1N |
| 1-12UNF | 4121-2A2 | 4121-2A2N |
| 1-14UNS | 4121-2A514 | 4121-2A514N |
| 1-32UN | 4121-2A532 | 4121-2A532N |
| 1 1/8-7UNC | 4121-1F1 | 4121-1F1N |
| 1 1/8-12UNF | 4121-1F2 | 4121-1F2N |
| 1 1/4-7UNC | 4121-1G1 | 4121-1G1N |
| 1 1/4-8UN | 4121-1G58 | 4121-1G58N |
| 1 1/4-12UNF | 4121-1G2 | 4121-1G2N |
| 15/16-12UN | 4121-5E512 | 4121-5E512N |

CERAMIC MEASURING BALLS



4190-40D000

- Zirconia material, high strength and hardness, extremely wear resistance and corrosion resistance, good insulation, antistatic and magnetic resistance
- Mirror surface without holes
- Supplied with manufacturer inspection certificate

Individual

| Code | Diameter | Accuracy | Roundness |
|------------|------------------|----------|-----------|
| 4190-1D000 | 1.000mm | ±2µm | 0.5µm |
| 4190-1D200 | 1.200mm | ±2µm | 0.5µm |
| 4190-1D300 | 1.300mm | ±2µm | 0.5µm |
| 4190-1D340 | 1.340mm | ±2µm | 0.5µm |
| 4190-1D500 | 1.500mm | ±2µm | 0.5µm |
| 4190-1D588 | 1.588mm (1/16") | ±2µm | 0.5µm |
| 4190-1D750 | 1.750mm | ±2µm | 0.5µm |
| 4190-2D000 | 2.000mm | ±2µm | 0.5µm |
| 4190-2D381 | 2.381mm (3/32") | ±2µm | 0.5µm |
| 4190-2D500 | 2.500mm | ±2µm | 0.5µm |
| 4190-2D778 | 2.778mm (7/64") | ±2µm | 0.5µm |
| 4190-3D000 | 3.000mm | ±2µm | 0.5µm |
| 4190-3D175 | 3.175mm (1/8") | ±2µm | 0.5µm |
| 4190-3D500 | 3.500mm | ±2µm | 0.5µm |
| 4190-3D969 | 3.969mm (5/32") | ±2µm | 0.5µm |
| 4190-4D000 | 4.000mm | ±2µm | 0.5µm |
| 4190-4D500 | 4.500mm | ±2µm | 0.5µm |
| 4190-4D763 | 4.763mm (3/16") | ±2µm | 0.5µm |
| 4190-5D000 | 5.000mm | ±2µm | 0.5µm |
| 4190-5D556 | 5.556mm (7/32") | ±2µm | 0.5µm |
| 4190-5D953 | 5.953mm (15/64") | ±2µm | 0.5µm |
| 4190-6D000 | 6.000mm | ±2µm | 0.5µm |
| 4190-6D350 | 6.350mm (1/4") | ±2µm | 0.5µm |
| 4190-6D500 | 6.500mm | ±2µm | 0.5µm |
| 4190-6D747 | 6.747mm (17/64") | ±2µm | 0.5µm |
| 4190-7D000 | 7.000mm | ±2µm | 0.5µm |
| 4190-7D144 | 7.144mm (9/32") | ±2µm | 0.5µm |
| 4190-7D500 | 7.500mm | ±2µm | 0.5µm |
| 4190-7D938 | 7.938mm (5/16") | ±2µm | 0.5µm |
| 4190-8D000 | 8.000mm | ±2µm | 0.5µm |
| 4190-8D731 | 8.731mm (11/32") | ±2µm | 0.5µm |

Individual

| Code | Diameter | Accuracy | Roundness |
|-------------|-------------------|----------|-----------|
| 4190-9D525 | 9.525mm (3/8") | ±2µm | 0.5µm |
| 4190-10D000 | 10.000mm | ±2µm | 0.5µm |
| 4190-10D318 | 10.318mm (13/32") | ±2µm | 0.5µm |
| 4190-11D000 | 11.000mm | ±2µm | 0.5µm |
| 4190-11D113 | 11.113mm (7/16") | ±2µm | 0.5µm |
| 4190-11D509 | 11.509mm (29/64") | ±2µm | 0.5µm |
| 4190-11D906 | 11.906mm (15/32") | ±2µm | 0.5µm |
| 4190-12D000 | 12.000mm | ±2µm | 0.5µm |
| 4190-12D303 | 12.303mm (31/64") | ±2µm | 0.5µm |
| 4190-12D700 | 12.700mm (1/2") | ±2µm | 0.5µm |
| 4190-13D000 | 13.000mm | ±2µm | 0.6µm |
| 4190-13D494 | 13.494mm (17/32") | ±2µm | 0.6µm |
| 4190-14D000 | 14.000mm | ±2µm | 0.6µm |
| 4190-14D288 | 14.288mm (9/16") | ±2µm | 0.6µm |
| 4190-15D000 | 15.000mm | ±2µm | 0.6µm |
| 4190-15D081 | 15.081mm (19/32") | ±2.5µm | 0.6µm |
| 4190-15D875 | 15.875mm (5/8") | ±2.5µm | 0.6µm |
| 4190-16D000 | 16.000mm | ±2.5µm | 0.6µm |
| 4190-16D669 | 16.669mm (21/32") | ±2.5µm | 0.6µm |
| 4190-17D462 | 17.462mm (11/16") | ±2.5µm | 0.6µm |
| 4190-18D000 | 18.000mm | ±2.5µm | 0.6µm |
| 4190-18D256 | 18.256mm (23/32") | ±2.5µm | 0.6µm |
| 4190-19D050 | 19.050mm (3/4") | ±2.5µm | 0.6µm |
| 4190-19D844 | 19.844mm (25/32") | ±2.5µm | 0.6µm |
| 4190-20D000 | 20.000mm | ±2.5µm | 0.6µm |
| 4190-22D000 | 22.000mm | ±2.5µm | 1µm |
| 4190-22D225 | 22.225mm (7/8") | ±2.5µm | 1µm |
| 4190-23D812 | 23.812mm (15/16") | ±2.5µm | 1µm |
| 4190-25D000 | 25.000mm | ±2.5µm | 1µm |
| 4190-40D000 | 40.000mm | ±2.5µm | 1.5µm |

Set (25 pairs)

| Code | Ceramic balls included (one pair per size) |
|----------|--|
| 4190-S25 | 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 6.5, 7, 7.5, 8, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 25mm |

WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

ABSOLUTE LEVEL

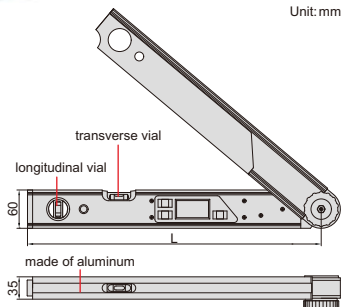
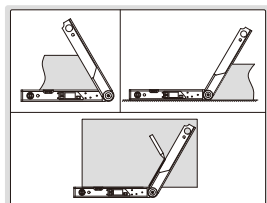
AUTOMATIC BACKLIGHT

IP54 WATERPROOF

2174-225



Unit: mm



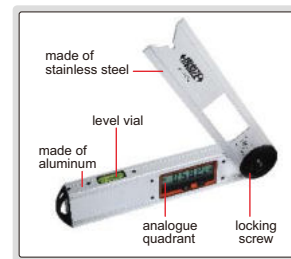
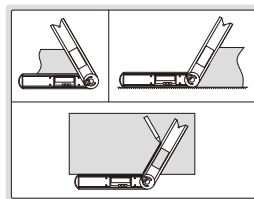
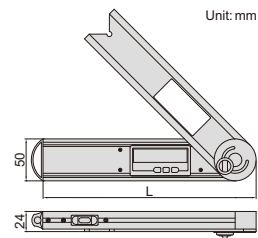
- Suitable for setting horizontal and vertical mitre angles of cutting machine
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off in one minute after no data changing, automatic power off in 5 minutes

| Code | Size (L) | Range | Resolution | Accuracy |
|----------|----------|--------|------------|----------|
| 2174-225 | 460mm | 0-225° | 0.05° | ±0.10° |

DIGITAL PROTRACTOR



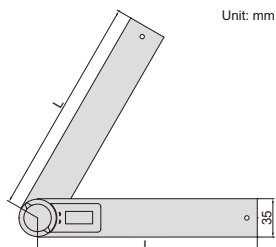
2171-250



- 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

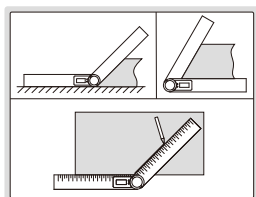


Unit: mm



2176-200

- Resolution: 0.1°
- 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

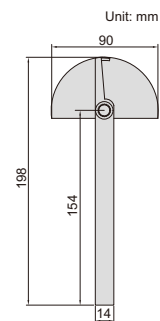


| Code | Size (L) | Range | Accuracy |
|----------|----------|--------|----------|
| 2176-200 | 200mm | 0-360° | ±0.3° |
| 2176-300 | 300mm | 0-360° | ±0.3° |

PROTRACTOR (ECONOMIC TYPE)



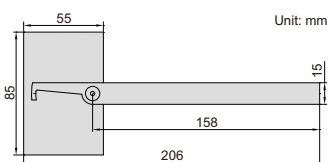
4780-85A



- Made of stainless steel
- With clamping screw

| Code | Size | Range | Graduation | Accuracy |
|----------|----------|--------|------------|----------|
| 4780-85A | 90x154mm | 0-180° | 1° | ±0.5° |

PROTRACTOR



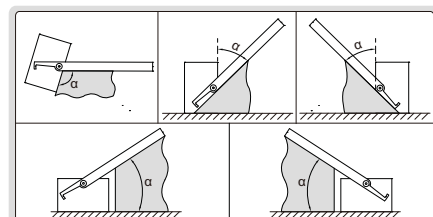
Unit: mm



4781-85A

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw

| Code | Size | Range | Graduation | Accuracy |
|----------|----------|--------|------------|----------|
| 4781-85A | 85x158mm | 0-180° | 1° | ±0.3° |

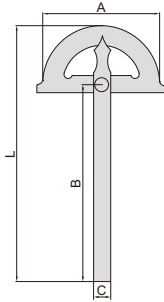


PROTRACTORS



4799-180

- Made of stainless steel (4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw



| Code | Size (AxB) | Range | Accuracy | Graduation | L | C |
|-----------|------------|--------|----------|------------|-------|------|
| 4799-180 | 80x120mm | 0-180° | ±0.3° | 1° | 168mm | 11mm |
| 4799-1120 | 120x150mm | 0-180° | ±0.3° | 1° | 220mm | 14mm |
| 4799-1150 | 150x200mm | 0-180° | ±0.3° | 1° | 285mm | 16mm |
| 4799-1200 | 200x300mm | 0-180° | ±0.3° | 1° | 413mm | 20mm |
| 4799-1300 | 300x500mm | 0-180° | ±0.3° | 1° | 675mm | 30mm |

DIGITAL PROTRACTORS

ATTENTION:
NO DATA OUTPUT

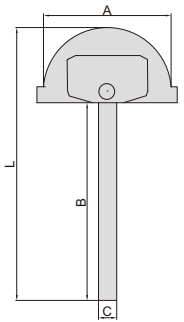


4779-120

the reading can turn over



- Range: 0-180°
- Buttons: on/off, zero, hold/turn
- Made of stainless steel
- With clamping screw



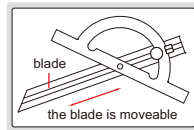
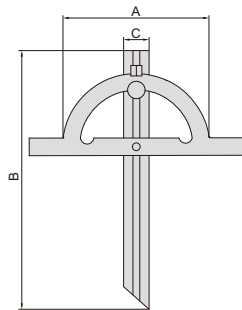
| Code | Size (AxB) | Resolution | Accuracy | L | C |
|----------|------------|------------|----------|-------|------|
| 4779-120 | 120x150mm | 0.05° | ±0.3° | 220mm | 22mm |
| 4779-150 | 150x200mm | 0.05° | ±0.3° | 285mm | 22mm |
| 4779-200 | 200x300mm | 0.05° | ±0.3° | 409mm | 22mm |

PROTRACTORS



4797-100

- 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° | 18mm |
| 4797-150 | 150x300mm | 10-170° | ±0.3° | 22mm |
| 4797-200 | 200x400mm | 10-170° | ±0.3° | 24mm |
| 4797-250 | 250x500mm | 10-170° | ±0.3° | 28mm |
| 4797-300 | 300x600mm | 10-170° | ±0.3° | 32mm |

DIGITAL PROTRACTORS

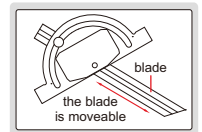
ATTENTION:
NO DATA OUTPUT



4778-100

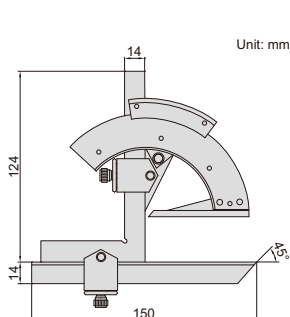
- Range: 0-180°
- Buttons: on/off, zero, hold/turn
- Made of stainless steel
- With clamping screw
- The blade is moveable

the reading can turn over



| Code | Size (AxB) | Resolution | Accuracy | C |
|----------|------------|------------|----------|------|
| 4778-100 | 100x150mm | 0.05° | ±0.3° | 22mm |
| 4778-150 | 150x300mm | 0.05° | ±0.3° | 22mm |
| 4778-200 | 200x400mm | 0.05° | ±0.3° | 24mm |

PROTRACTOR



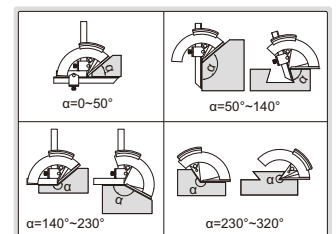
Unit: mm



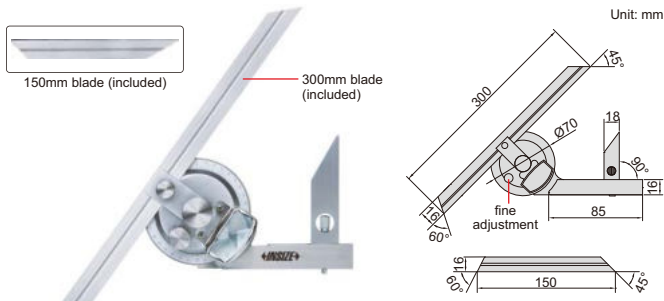
2374-320

- Made of stainless steel
- Satin chrome plated scale

| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2374-320 | 0-320° | 2' | ±2' |

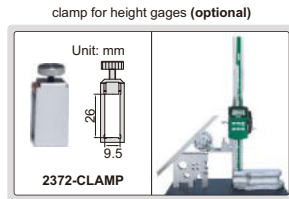


UNIVERSAL PROTRACTOR



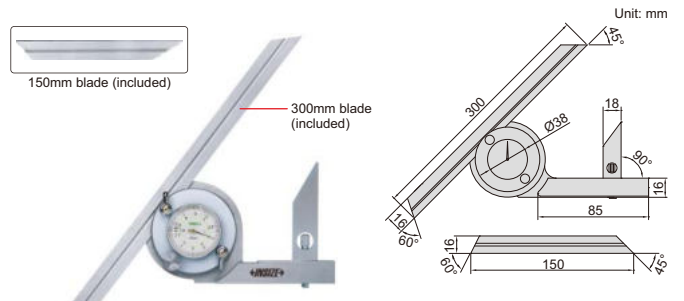
2372-360

- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156, 1150-300, 1351, 1151 and 1250**



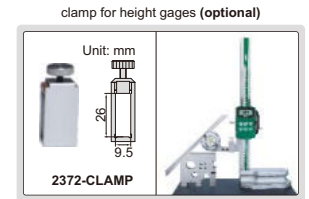
| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2372-360 | 0-360° | 5' | ±5' |

DIAL PROTRACTOR



2373-360

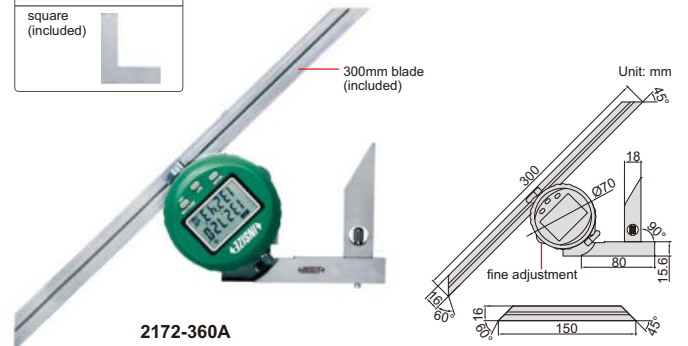
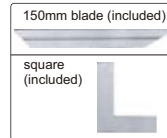
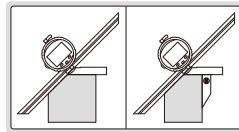
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156, 1150-300, 1351, 1151 and 1250**



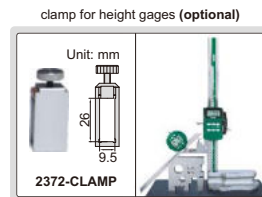
| Code | Range | Graduation | Accuracy |
|----------|--------|------------|----------|
| 2373-360 | 0-360° | 5' | ±5' |

DIGITAL PROTRACTOR

- 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 **7315-50, 7302-SPC3B**), clamp (code **2372-CLAMP**), suitable for height gages **1156, 1150-300, 1351, 1151 and 1250**



2172-360A



| Code | Range | Resolution | Accuracy |
|-----------|--------|------------|----------|
| 2172-360A | 0-360° | 10"/0.005° | ±5' |

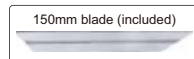


DATA OUTPUT

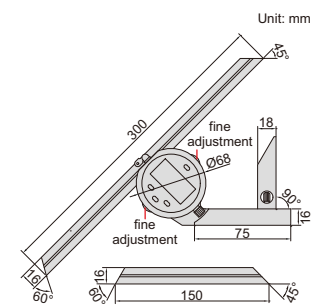
DIGITAL PROTRACTOR (BASIC TYPE)

ABSOLUTE ZERO DATA OUTPUT

- Absolute zero, zero setting is not needed when batteries are replaced
- Button function: choose 0~90°, 0~180° or 0~360° display, change resolution, display flips over, data hold, zero, on/off supplementary angle measurement
- Battery CR2032, automatic power off
- Data output
- Made of stainless steel
- Optional square for zero setting
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156, 1150-300, 1351, 1250 and 1151**, data output cable (code **7315-2771, 7302-50M**)



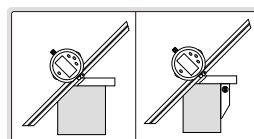
2771-360



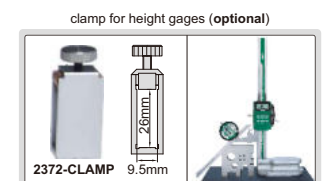
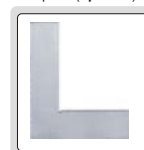
| Code | Range | Resolution | Accuracy |
|----------|--------|------------|----------|
| 2771-360 | 0-360° | 1"/0.01° | ±5' |

Square (for zero setting, optional)

Code
2771-S90



square (optional)



PERPENDICULARITY TESTERS



- Optional accessory: dial test indicators (graduation: 1µm or 2µm)

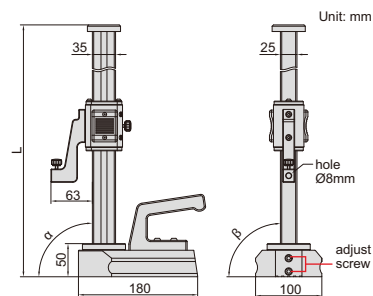


| Code | Range (H) | Perpendicularity (α) | Side perpendicularity (β) | L |
|----------|-----------|----------------------|---------------------------|-------|
| 4770-300 | 0-300mm | 3µm | 10µm | 460mm |
| 4770-600 | 0-600mm | 5µm | 20µm | 760mm |



dial test indicator is optional

4770-300



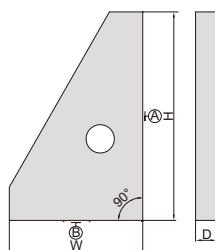
Unit: mm

GRANITE SQUARES

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST



4141-250

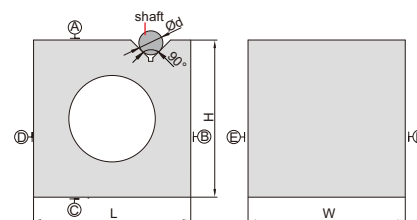


| Code | Size (HxW) | Flatness of A | Flatness of B | Squareness of A to B | D |
|----------|------------|---------------|---------------|----------------------|------|
| 4141-250 | 250x160mm | 1µm | 1µm | 2µm | 25mm |
| 4141-400 | 400x250mm | 1.5µm | 1µm | 3µm | 40mm |
| 4141-630 | 630x400mm | 2µm | 1.5µm | 4µm | 63mm |

GRANITE SQUARE WITH V GROOVE



4142-200



- 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

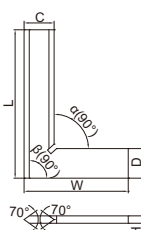
| Code | Size (LxWxH) | Range of shaft (Ød) |
|----------|---------------|---------------------|
| 4142-200 | 200x200x200mm | 9-70mm |

90° BEVELED EDGE SQUARES

- Satin chrome plating
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel



4790-0100



| 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 |
| 4790-0300 | 300x200mm | 4.6µm | 5.0µm | 40 | 40 | 8 |

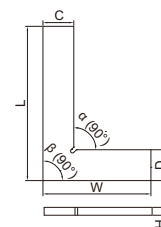
| Code | Size (LxW) | Squareness | | C | D | H |
|-----------|------------|------------|-------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4790-500 | 50x40mm | 6µm | 6µm | 13 | 13 | 4 |
| 4790-750 | 75x50mm | 6µm | 7µm | 15 | 15 | 4 |
| 4790-1000 | 100x70mm | 7µm | 7µm | 20 | 20 | 5 |
| 4790-1500 | 150x100mm | 7µm | 8µm | 30 | 30 | 6 |
| 4790-2000 | 200x130mm | 8µm | 9µm | 34 | 34 | 7 |
| 4790-3000 | 300x200mm | 10µm | 11µm | 40 | 40 | 8 |

90° FLAT EDGE SQUARES

- Made of hardened stainless steel



4791-100

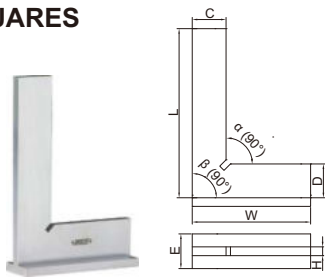


| Code | Size (LxW) | Squareness | | C | D | H |
|----------|------------|------------|-------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4791-50 | 50x40mm | 6µm | 6µm | 15 | 15 | 4 |
| 4791-75 | 75x50mm | 6µm | 7µm | 15 | 15 | 4 |
| 4791-100 | 100x70mm | 7µm | 7µm | 20 | 20 | 5 |
| 4791-150 | 150x100mm | 7µm | 8µm | 30 | 30 | 6 |
| 4791-200 | 200x130mm | 8µm | 9µm | 30 | 30 | 7 |
| 4791-250 | 250x165mm | 9µm | 10µm | 35 | 35 | 7 |
| 4791-300 | 300x200mm | 10µm | 11µm | 40 | 40 | 8 |

| Code | Size (LxW) | Squareness | | C | D | H |
|-----------|------------|------------|-------------|----|----|---|
| | | Inside (α) | Outside (β) | | | |
| 4791-501 | 50x40mm | 12µm | 13µm | 15 | 15 | 4 |
| 4791-751 | 75x50mm | 13µm | 14µm | 15 | 15 | 4 |
| 4791-1001 | 100x70mm | 14µm | 15µm | 20 | 20 | 5 |
| 4791-1501 | 150x100mm | 16µm | 18µm | 30 | 30 | 6 |
| 4791-2001 | 200x130mm | 19µm | 20µm | 30 | 30 | 6 |

90° FLAT EDGE SQUARES WITH WIDE BASE

4793-100

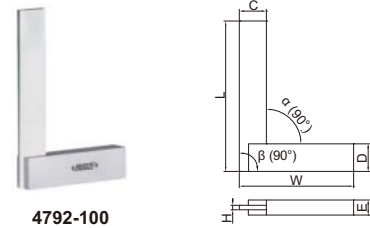


- DIN875 grade 0
- Made of hardened stainless steel

| Code | Size (LxW) | Squareness | | C | D | H | E |
|----------|------------|---------------------|---------------------|----|----|---|----|
| | | 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 |

(mm)

90° FLAT EDGE SQUARES WITH WIDE BASE



- DIN875 grade 0
- Made of hardened stainless steel

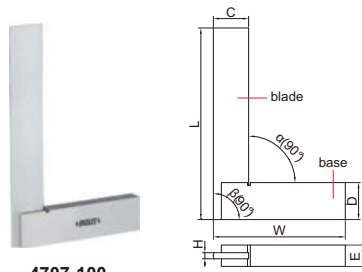
4792-100

| Code | Size (LxW) | Squareness | | C | D | H | E |
|----------|------------|---------------------|---------------------|----|----|---|----|
| | | 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 |

(mm)

MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND



4707-100

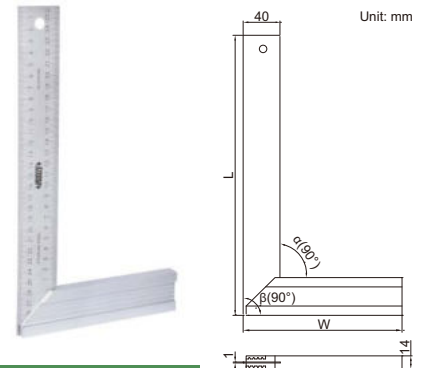
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

| Code | Size (LxW) | Squareness | | C | D | H | E |
|-----------|------------|---------------------|---------------------|----|----|---|----|
| | | Inside (α) | Outside (β) | | | | |
| 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 |

(mm)

TRY SQUARE

2275-300

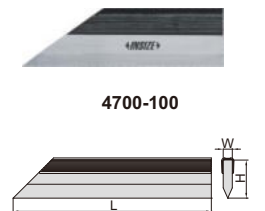


- Graduation: 1mm
- Stainless steel blade, aluminum base

| Code | Size (LxW) | Squareness | |
|----------|------------|---------------------|---------------------|
| | | Inside (α) | Outside (β) |
| 2275-300 | 300x170mm | 0.5mm | 0.5mm |

STRAIGHT EDGES

- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating

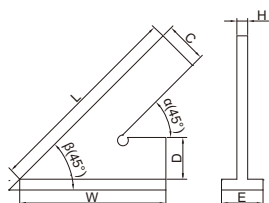


4700-100

| Code | Size (L) | Straightness | W | |
|----------|----------|--------------|---|----|
| | | | W | H |
| 4700-100 | 100mm | 2.4 μ m | 5 | 25 |
| 4700-150 | 150mm | 2.6 μ m | 6 | 30 |
| 4700-200 | 200mm | 2.8 μ m | 6 | 30 |
| 4700-300 | 300mm | 3.2 μ m | 8 | 40 |

(mm)

45° SQUARES WITH WIDE BASE



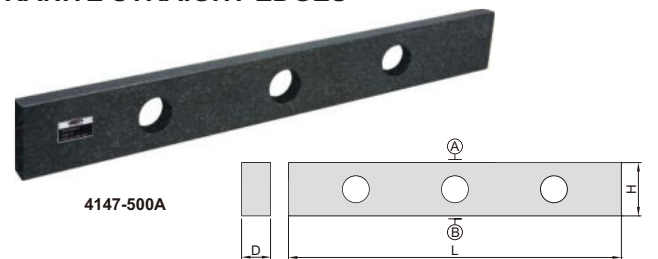
4747-150

- Made of hardened stainless steel

| Code | Size (LxW) | Accuracy | | C | D | H | E |
|----------|------------|---------------------|---------------------|----|----|---|----|
| | | Inside (α) | Outside (β) | | | | |
| 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 |

(mm)

GRANITE STRAIGHT EDGES



4147-500A

| 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 | 50mm | 80mm |
| 4147-1000A | 1000mm | 3.0 μ m | 4.5 μ m | 60mm | 120mm |

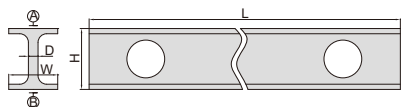
MAGNALIUM STRAIGHT EDGES

LIGHT WEIGHT



4180-1500

- Made of magnesium, light weight, non-deform, no rusty



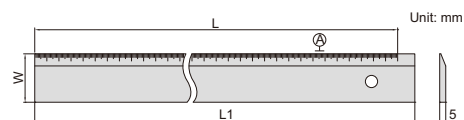
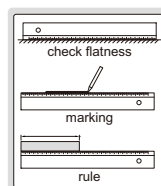
(mm)

| Code | Length (L) | Flatness of A and B | Parallelism between A and B | H | W | D | Weight |
|-----------|------------|---------------------|-----------------------------|-----|----|---|--------|
| 4180-500 | 500mm | 3µm | 4µm | 60 | 30 | 5 | 1kg |
| 4180-1000 | 1000mm | 5µm | 8µm | 60 | 30 | 5 | 1.5kg |
| 4180-1500 | 1500mm | 15µm | 22µm | 100 | 40 | 7 | 4.5kg |
| 4180-2000 | 2000mm | 18µm | 27µm | 100 | 40 | 7 | 6kg |
| 4180-3000 | 3000mm | 48µm | 72µm | 150 | 80 | 8 | 21kg |

STRAIGHT EDGES



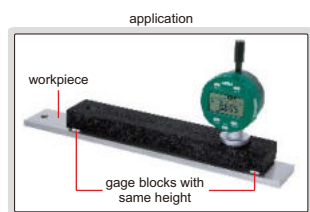
7111-300A



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated

| Code | Range (L) | Straightness of A | L1 | W |
|-----------|-----------|-------------------|-------|------|
| 7111-300A | 300mm | 0.02mm | 310mm | 40mm |
| 7111-500A | 500mm | 0.03mm | 510mm | 40mm |

STRAIGHTNESS/FLATNESS GAGE



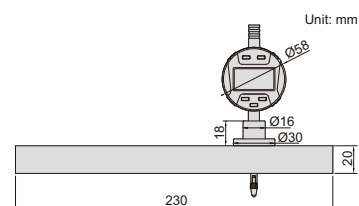
2144-200

- Optional accessory: data output cable (code 7315-50M, 7302-40M)



DATA OUTPUT

GRANITE HOLDER CAN BE CUSTOMIZED ACCORDING TO WORKPIECES



| Code | Range | Digital indicator resolution | Straightness measurement accuracy | Parallelism of top and bottom surfaces of granite holder | Flatness of top and bottom surfaces of granite holder |
|----------|-------|------------------------------|-----------------------------------|--|---|
| 2144-200 | 200mm | 0.001mm/0.00005" | 3µm | 2µm | 1.5µm |

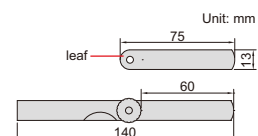
FEELER GAGE

- Range: 0.04-1.00mm
- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: $\pm(3+T/80)$ µm, 'T' is the thickness of leaves in µm

| Code | Thickness of leaves included (mm) | Quantity of leaves |
|---------|--|--------------------|
| 4601-25 | 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 |



4601-25

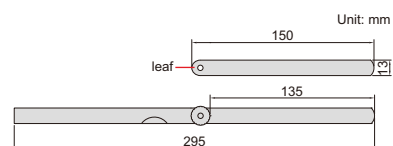


LONG FEELER GAGE

- Range: 0.05-1.00mm
- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: $\pm(3+T/80)$ µm, 'T' is the thickness of leaves in µm



4605-20



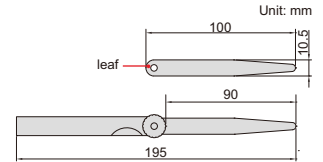
| Code | Thickness of leaves included (mm) | Quantity of leaves |
|---------|--|--------------------|
| 4605-20 | 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00 | 20 |

FEELER GAGES

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: $\pm(3+T/80) \mu\text{m}$,
"T" is the thickness of leaves in μm



4602-20



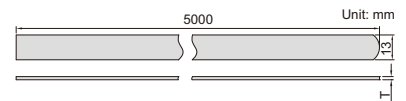
| Code | Range | Thickness of leaves included (mm) | Quantity of leaves |
|----------|-------------|--|--------------------|
| 4602-13A | 0.03-0.50mm | 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50 | 13 |
| 4602-13 | 0.05-1.00mm | 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 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 |
| 4602-32 | 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 |

FEELER GAGE TAPES

- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm

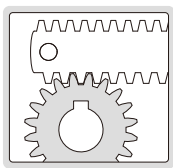


4621-30

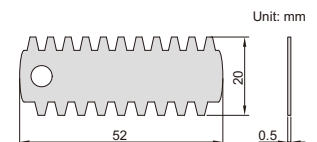


| Code | Thickness (T) | Accuracy | Code | Thickness (T) | Accuracy | Code | Thickness (T) | Accuracy |
|---------|---------------|--------------------|---------|---------------|---------------------|---------|---------------|---------------------|
| 4621-02 | 0.02mm | $\pm 4\mu\text{m}$ | 4621-12 | 0.12mm | $\pm 5\mu\text{m}$ | 4621-50 | 0.50mm | $\pm 14\mu\text{m}$ |
| 4621-03 | 0.03mm | $\pm 4\mu\text{m}$ | 4621-15 | 0.15mm | $\pm 6\mu\text{m}$ | 4621-55 | 0.55mm | $\pm 14\mu\text{m}$ |
| 4621-04 | 0.04mm | $\pm 4\mu\text{m}$ | 4621-18 | 0.18mm | $\pm 7\mu\text{m}$ | 4621-60 | 0.60mm | $\pm 14\mu\text{m}$ |
| 4621-05 | 0.05mm | $\pm 4\mu\text{m}$ | 4621-20 | 0.20mm | $\pm 8\mu\text{m}$ | 4621-65 | 0.65mm | $\pm 14\mu\text{m}$ |
| 4621-06 | 0.06mm | $\pm 4\mu\text{m}$ | 4621-25 | 0.25mm | $\pm 9\mu\text{m}$ | 4621-70 | 0.70mm | $\pm 17\mu\text{m}$ |
| 4621-07 | 0.07mm | $\pm 5\mu\text{m}$ | 4621-30 | 0.30mm | $\pm 9\mu\text{m}$ | 4621-75 | 0.75mm | $\pm 17\mu\text{m}$ |
| 4621-08 | 0.08mm | $\pm 5\mu\text{m}$ | 4621-35 | 0.35mm | $\pm 11\mu\text{m}$ | 4621-80 | 0.80mm | $\pm 19\mu\text{m}$ |
| 4621-09 | 0.09mm | $\pm 5\mu\text{m}$ | 4621-40 | 0.40mm | $\pm 12\mu\text{m}$ | 4621-90 | 0.90mm | $\pm 22\mu\text{m}$ |
| 4621-10 | 0.10mm | $\pm 5\mu\text{m}$ | 4621-45 | 0.45mm | $\pm 12\mu\text{m}$ | | | |

GEAR TOOTH PITCH GAGES



4860-245



- Accuracy: $\pm 0.05\text{mm}$
- Check the module pitch of gear tooth
- Made of hardened stainless steel

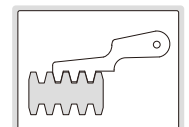
| Code | Range | Pressure angle | Quantity of leaves |
|----------|------------|----------------|--------------------|
| 4860-145 | 0.35-4.5mm | 14.5° | 15 |
| 4860-245 | 0.35-4.5mm | 20° | 15 |
| 4860-112 | 5-12mm | 14.5° | 8 |
| 4860-212 | 5-12mm | 20° | 8 |

PITCH GAGE



4824-12

- Accuracy: $\pm 0.07\text{mm}$
- Check the pitch of screw thread
- Made of medium carbon steel



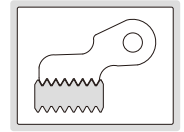
| Code | Range | Thread type | Pitch of leaves included | Quantity of leaves |
|---------|--------|-------------|--|--------------------|
| 4824-12 | 2-20mm | Tr30° | 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm | 12 |

PITCH GAGES

- Identify the pitch of screw thread
- Made of medium carbon steel



4820-124



Metric 60° screw

| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|----------|---|--------------------|
| 4820-124 | 0.25-7mm | 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, 7mm | 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 |

Metric 60° and Whitworth 55° screw

| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|----------|--|--------------------|
| 4820-452 | 0.25-6mm | 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 | |

Metric 60° and Unified 60° screw

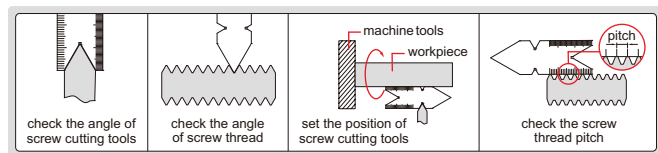
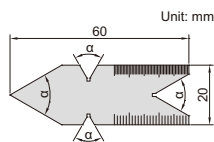
| Code | Range | Pitch of leaves included | Quantity of leaves |
|----------|---------|---|--------------------|
| 4820-552 | 0.4-7mm | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm | 52 |
| | 4-42TPI | 4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI | |

CENTER GAGES



4810-601

- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: ± 30 min.
- Made of stainless steel



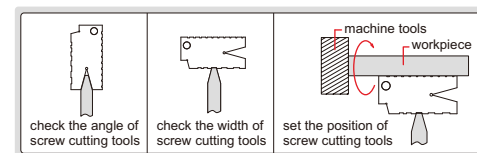
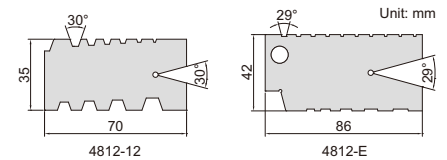
| Code | Thread type | Angle (α) | Graduation |
|----------|---------------|--------------------|---|
| 4810-601 | METRIC 60° | 60° | 0.5mm and 1mm |
| 4810-55 | WHITWORTH 55° | 55° | 14ths and 20ths on front side, 24ths and 32ths on back side |

THREAD GAGES



4812-E

- To check and set screw cutting tools
- Made of medium carbon steel



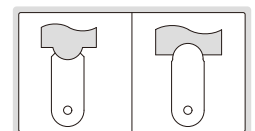
| Code | Range | Thread type | Pitch |
|---------|---------|-------------|--|
| 4812-12 | 2-12mm | Tr 30° | 2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm |
| 4812-E | 1-10TPI | ACME 29° | 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI |

RADIUS GAGES

- Made of carbon steel

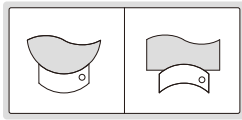


4801-17



| Code | Range | Radius of leaves included (mm) | Quantity of leaves (internal+external) |
|---------|-----------|---|--|
| 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 |
| 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 |
| 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 |

RADIUS GAGE

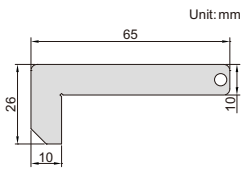


4802-31

- Made of stainless steel

| Code | Range | Radius of leaves included (mm) | Quantity of leaves |
|---------|---------|--|--------------------|
| 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 | 31 pcs |

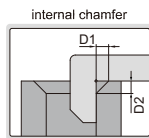
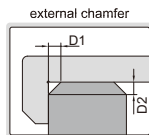
CHAMFER GAGE



Unit: mm



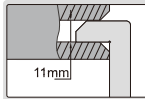
4844-1



- Accuracy: ± 0.25 mm
- To measure internal and external chamfers
- Made of stainless steel

| Code | Graduation |
|--------|------------|
| 4844-1 | 0.5mm |

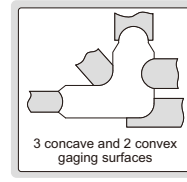
for internal chamfer measurement, diameter should be larger than 11mm



RADIUS GAGE SET



use of handle



3 concave and 2 convex gaging surfaces

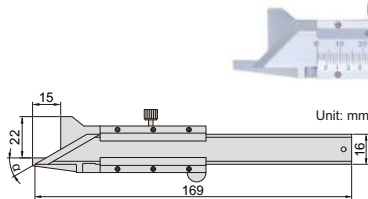


4804-26

- Each piece has 3 concave and 2 convex gaging surfaces
- Supplied with handle
- Made of medium carbon steel

| Code | Range | Radius of leaves included (mm) | Quantity of leaves |
|---------|----------|---|--------------------|
| 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 |

CHAMFER GAGES



Unit: mm

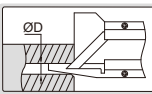
1267-6



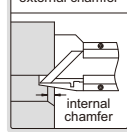
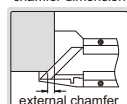
- Measure 30°/45°/60° chamfer dimension
- Accuracy: ± 0.06 mm
- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

| Code | Range | Chamfer (α) | $\varnothing D$ |
|---------|--------|----------------------|-----------------|
| 1267-6 | 0-10mm | 45° | 7mm |
| 1267-63 | 0-10mm | 30° | 8mm |
| 1267-66 | 0-10mm | 60° | 7mm |

for internal chamfer measurement, diameter should be larger than $\varnothing D$



measure chamfer dimension

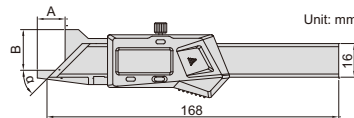


DIGITAL CHAMFER GAGES

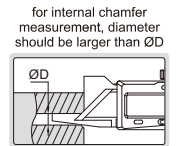
DATA OUTPUT



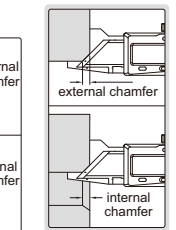
1180-6



Unit: mm



measure chamfer dimension



- Measure 30°/45°/60° chamfer dimension
- 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 7315-21, 7302-21)

| Code | Range | Accuracy | Chamfer (α) | A | B | $\varnothing D$ |
|---------|----------------|---------------|----------------------|------|------|-----------------|
| 1180-6 | 0-10mm/0-0.39" | ± 0.06 mm | 45° | 15mm | 22mm | 7mm |
| 1180-63 | 0-10mm/0-0.39" | ± 0.06 mm | 30° | 15mm | 22mm | 8mm |
| 1180-66 | 0-10mm/0-0.39" | ± 0.06 mm | 60° | 14mm | 21mm | 7mm |

DIGITAL CHAMFER GAGES

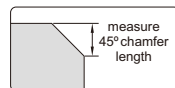


DATA OUTPUT

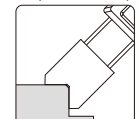
ATTENTION: THE ACTUAL LENGTH IS 1.414 TIMES OF THE READING

ATTENTION: CHAMFER OF HOLES CANNOT BE MEASURED

- Measure 45° chamfer length
- 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
- Supplied with pin gage for zero setting



1537-8 can measure small workpieces or workpieces with steps



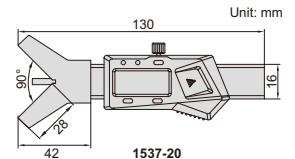
pin gage (included)



| Code | Range | Accuracy |
|---------|-----------------|---------------|
| 1537-20 | 0-20mm/0-0.787" | ± 0.05 mm |
| 1537-8 | 0-8mm/0-0.315" | ± 0.05 mm |



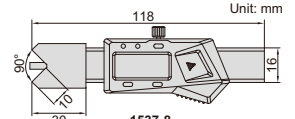
1537-20



1537-20



1537-8



1537-8

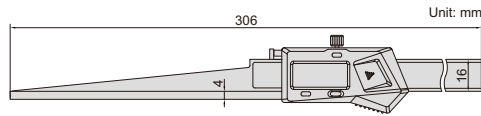
DIGITAL TAPER SLOT GAGE

ATTENTION: ACTUAL SLOT WIDTH IS 1/10 OF THE READING

DATA OUTPUT

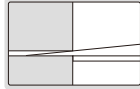


1160-10



- Measuring opening, slot width
- Resolution: 0.01mm/0.0005"
- Accuracy: ±0.03mm
- 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 7315-21, 7302-21)

measure slot width

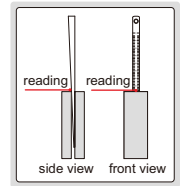


| Code | Range |
|---------|---------------------|
| 1160-10 | 0.2-10mm/0.01-0.39" |

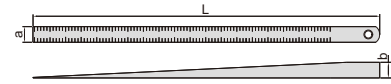
TAPER SLOT GAGES



4630-1



- For quick measurement of slot width
- Satin chrome plated reading surface
- Made of stainless steel



(mm)

| 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 |

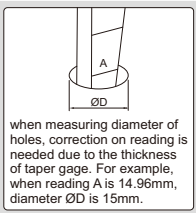
TAPER GAGES



4833-2

- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for 4833-1, 4833-2)
- Made of stainless steel

measure diameter of hole

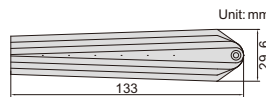


| Code | Range | Graduation | Accuracy | L | W |
|--------|----------|------------|----------|-------|--------|
| 4833-1 | 0.8-15mm | 0.1mm | ±0.05mm | 146mm | 17mm |
| 4833-2 | 15-30mm | 0.1mm | ±0.05mm | 159mm | 30.4mm |
| 4833-3 | 30-45mm | 0.1mm | ±0.05mm | 166mm | 45.4mm |
| 4833-4 | 45-60mm | 0.1mm | ±0.05mm | 170mm | 60.5mm |

TAPER GAGE SET



4837-1



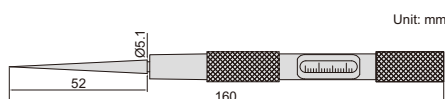
- Include 4pcs (1-8mm, 8-15mm, 15-22mm, 22-29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

| Code | Range | Graduation | Accuracy |
|--------|--------|------------|----------|
| 4837-1 | 1-29mm | 0.05mm | ±0.05mm |

SMALL TAPER BORE GAGE



4855-5



- Quick measurement of small bore diameter
- Hardened working face
- Supplied with protection cap

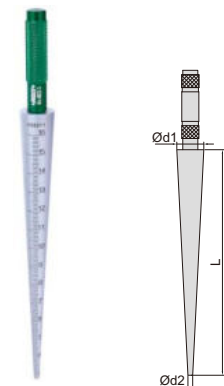
supplied with protection cap



| Code | Range | Graduation | Accuracy |
|--------|---------|------------|----------|
| 4855-5 | 0.1-5mm | 0.01mm | ±0.03mm |

TAPER BORE GAGES

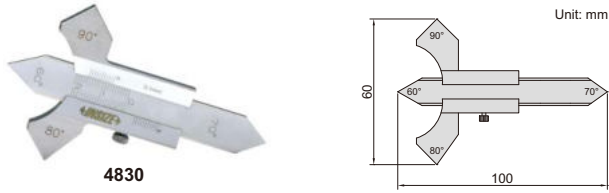
- Graduation: 0.1mm
- Accuracy: ±0.05mm
- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxidized handle



4852-3

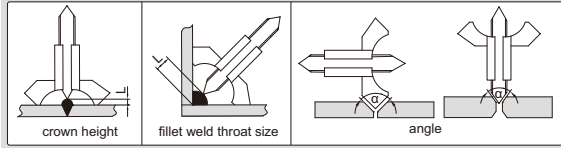
| Code | Range | L | Ød1 | Ød2 |
|---------|---------|------|-----|------|
| 4852-1 | 1-6.5mm | 62.5 | 7 | 0.8 |
| 4852-3 | 3-16mm | 143 | 17 | 2.8 |
| 4852-15 | 15-30mm | 165 | 31 | 14.7 |
| 4852-30 | 30-45mm | 165 | 46 | 29.6 |

WELDING GAGE



4830

- Made of stainless steel
- Satin chrome plated reading surface

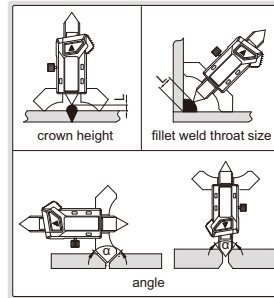


| Code | Measurement | Range | Graduation | Accuracy |
|------|-------------------------|--------------------|------------|----------|
| 4830 | crown height | 0-8mm | 0.1mm | ±0.1mm |
| | fillet weld throat size | 0-20mm | 0.1mm | ±0.3mm |
| | angle | 60°, 70°, 80°, 90° | — | ±1° |

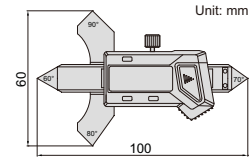
DIGITAL WELDING GAGE

ATTENTION:
NO DATA OUTPUT

- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

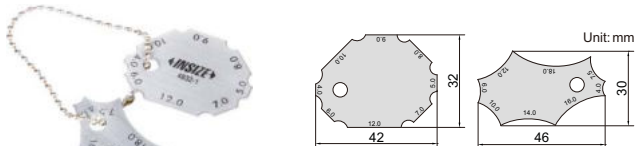


4831-20A



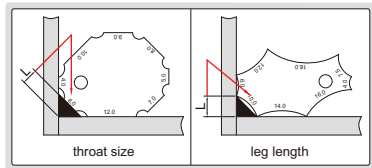
| Code | Measurement | Range | Resolution | Accuracy |
|----------|-------------------------|--------------------|----------------|----------|
| 4831-20A | crown height | 0-7mm | 0.01mm/0.0005" | ±0.03mm |
| | fillet weld throat size | 0-20mm | 0.01mm/0.0005" | ±0.1mm |
| | angle | 60°, 70°, 80°, 90° | — | ±1° |

FILLET WELDING GAGE



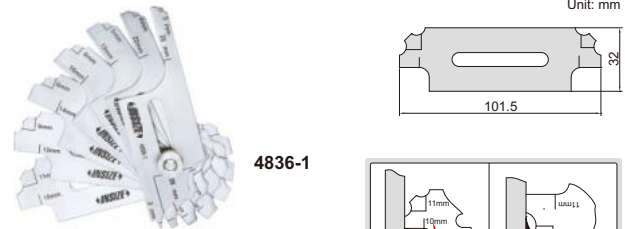
4832-1

- Made of stainless steel
- Sizes marked on both faces



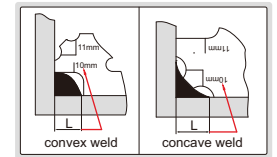
| Code | Throat size (mm) | Leg length (mm) | Accuracy |
|--------|--------------------------|-------------------------------|----------|
| 4832-1 | 4, 5, 6, 7, 8, 9, 10, 12 | 4, 6, 7.5, 10, 12, 14, 16, 18 | ±0.5mm |

FILLET WELDING GAGE



4836-1

- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel



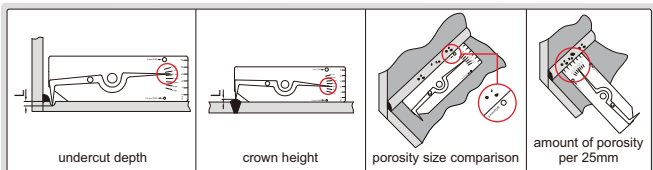
| Code | Size (mm) | Accuracy |
|--------|--|----------|
| 4836-1 | 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25 | ±0.5mm |

WELDING GAGE



4834-1

- Pointer can be locked for later reference
- Made of stainless steel

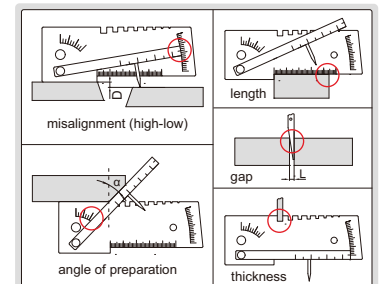
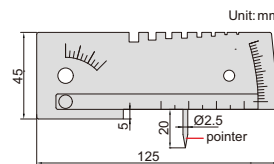


| Code | Measurement | Range | Graduation | Accuracy |
|--------|-----------------------------|------------|------------|----------|
| 4834-1 | undercut depth | 0-6mm | 0.5mm | ±0.5mm |
| | crown height | 0-6mm | 0.5mm | ±0.5mm |
| | porosity size comparison | 1.5mm, 3mm | — | ±0.2mm |
| | amount of porosity per 25mm | 25mm | 1mm | — |

WELDING GAGE



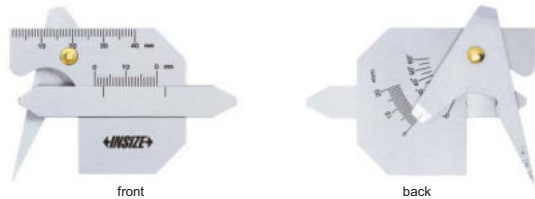
4848-1



- Made of stainless steel

| 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

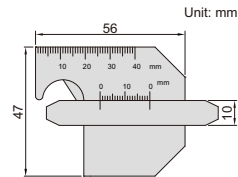


front

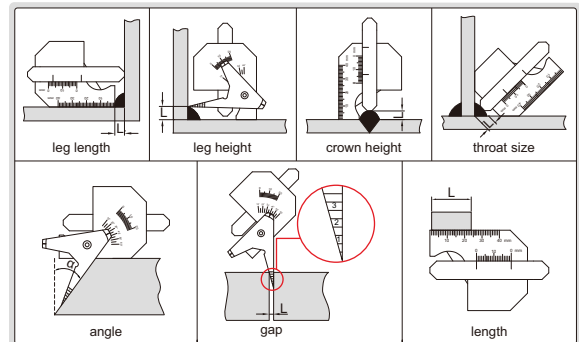
back

6832-1

- Made of stainless steel
- Satin chrome plated surface



| Code | Measurement | Range | Graduation | Accuracy |
|--------|--------------|---------|------------|----------|
| 6832-1 | leg length | 0-20mm | 1mm | ±0.3mm |
| | leg height | 0-20mm | 1mm | ±0.3mm |
| | crown height | 0-20mm | 1mm | ±0.3mm |
| | throat size | 0-10mm | 1mm | ±0.3mm |
| | angle | 0°-60° | 5° | ±1° |
| | gap | 1-3.5mm | 0.5mm | ±0.2mm |
| | length | 0-40mm | 1mm | ±0.3mm |



WELDING GAGE

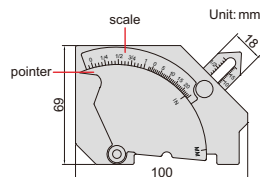


front

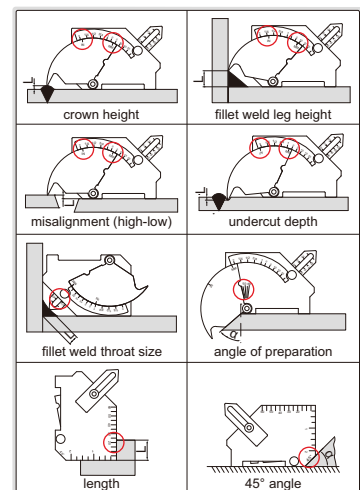
back

4835-1

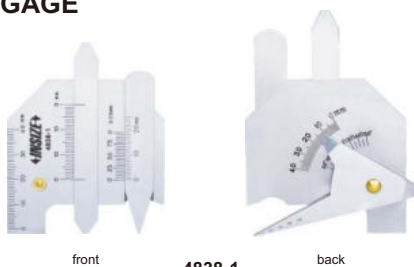
- Adjustable scale to compensate pointer wear
- Made of stainless steel



| 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° |



WELDING GAGE

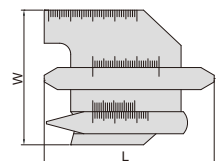


front

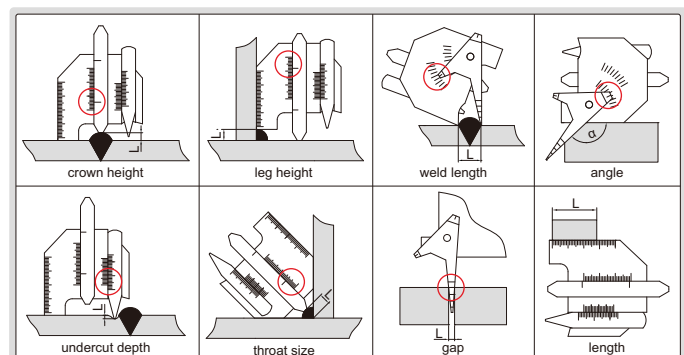
back

4838-1

- Made of stainless steel

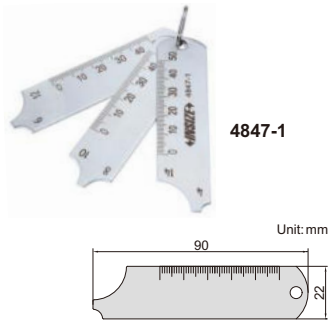
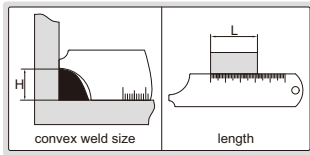


| Code | Measurement | Range | Graduation | Accuracy | LxW |
|--------|----------------|----------|------------|----------|---------|
| 4838-1 | crown height | 0-10mm | 1mm | ±0.5mm | 62x77mm |
| | leg height | 0-14mm | 1mm | ±0.5mm | |
| | undercut depth | 0-5mm | 0.05mm | ±0.05mm | |
| | throat size | 0-13mm | 1mm | ±0.5mm | |
| | weld length | 0-40mm | 1mm | ±1mm | |
| | angle | 90°-150° | 5° | ±1° | |
| | gap | 0.5-5mm | 1mm | ±0.5mm | |
| | length | 0-40mm | 1mm | ±0.5mm | |



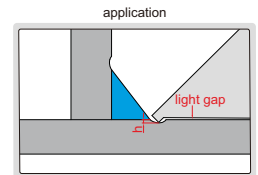
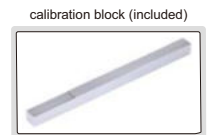
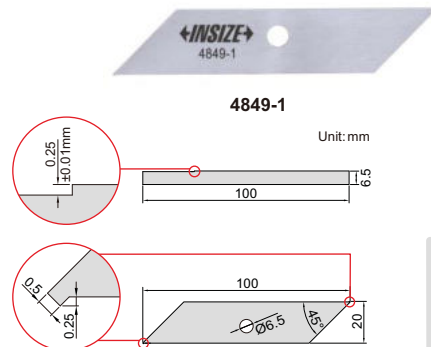
FILLET WELDING GAGE

- Measure convex weld sizes
- 3 blades are included
- Made of stainless steel



| 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 UNDERCUT GAGE



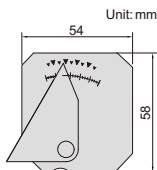
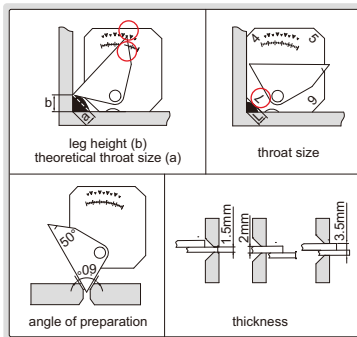
- Measure undercut
- Calibration block is included
- Made of stainless steel

when there is a light gap, $h < 0.25\text{mm}$
when there is no light gap, $h \geq 0.25\text{mm}$

WELDING GAGE



- Made of stainless steel



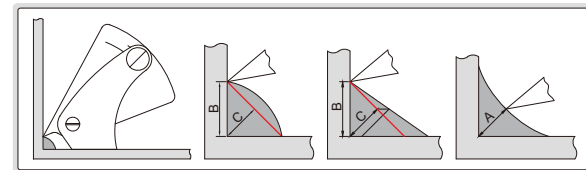
| Code | Measurement | Range | Graduation | Accuracy |
|--------|-----------------------------|---------------|------------|----------|
| 4850-1 | leg height (b) | 0-18mm | 1mm | ±0.5mm |
| | theoretical throat size (a) | 2-12mm | 1mm | ±0.5mm |
| | throat size | 4, 5, 6, 7mm | — | ±0.5mm |
| | angle of preparation | 50°, 60° | — | ±1° |
| | thickness | 1.5, 2, 3.5mm | — | ±0.2mm |

WELDING GAGE



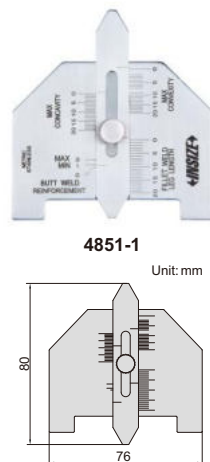
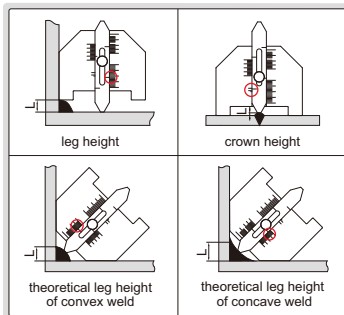
- Made of stainless steel

| Code | Graduation | Accuracy |
|--------|------------|----------|
| 4840-1 | 0.2mm | ±0.3mm |



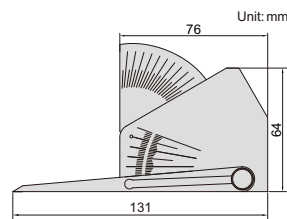
WELDING GAGE

- Accuracy: ±0.5mm
- Made of stainless steel

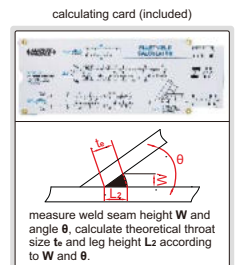
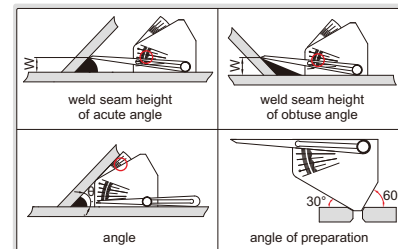


| Code | Measurement | Range | Graduation |
|--------|--|--------|------------|
| 4851-1 | leg height | 0-20mm | 1mm |
| | crown height | 0-3mm | — |
| | theoretical leg height of convex weld | 0-20mm | 1mm |
| | theoretical leg height of concave weld | 0-20mm | 1mm |

FILLET WELDING GAGE



- Calculating card is included
- Made of stainless steel



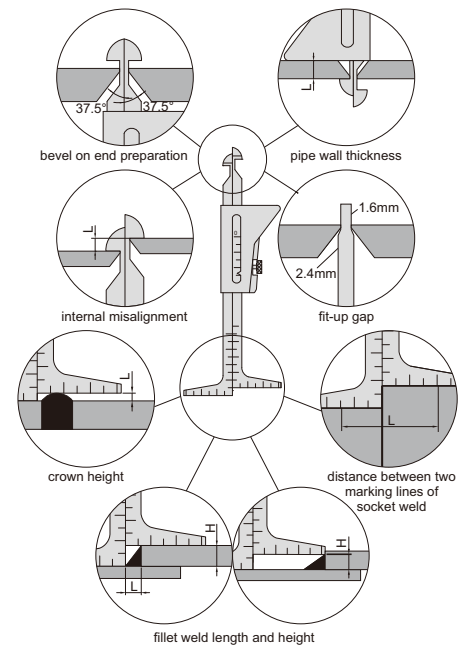
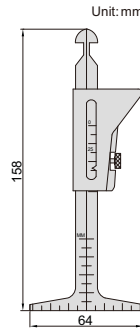
| Code | Measurement | Range | Graduation | Accuracy |
|--------|----------------------|-------------|------------|----------|
| 4846-1 | weld seam height W | 0-50mm/0-2" | 2mm/.050" | ±1mm |
| | angle θ | 30°~90° | 2.5° | ±1° |
| | 60° angle | — | — | ±0.5° |

PIPE WELDING GAGE

- Made of stainless steel

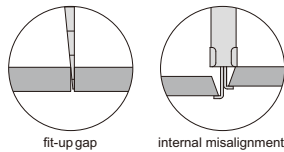


4839-1

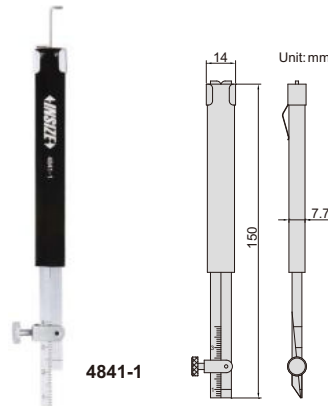


| Code | Measurement | Range | Graduation | Accuracy |
|--------|---|-------------------|-------------|----------|
| 4839-1 | bevel on end preparation | 37.5° | — | ±1° |
| | pipe wall thickness | 0-45mm (0~1-3/4") | 1mm (1/16") | ±0.5mm |
| | internal misalignment | 0-35mm (0~1-3/8") | 1mm (1/32") | ±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 |

PIPE WELDING GAGE



- Made of stainless steel



4841-1

| Code | Measurement | Range | Graduation | Accuracy |
|--------|-----------------------|---------|------------|----------|
| 4841-1 | internal misalignment | 0-30mm | 1mm | ±0.5mm |
| | fit-up gap | 0.7-4mm | 0.1mm | ±0.1mm |

6-PIECE WELDING GAGE SET

- Includes:
 - 1) Welding gage (code 4834-1)
 - 2) Fillet welding gage, size 3-25mm, 7 blades (code 4836-1)
 - 3) Pipe welding gage (code 4841-1)
 - 4) Telescoping inspection mirror, size of mirror Ø32mm, length 178-505mm (code 7160-1)
 - 5) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code 7119-150)
 - 6) LED flashlight (code ISGF-0501)



5064

Code
5064

7-PIECE WELDING GAGE SET

- Includes:
 - 1) Welding gage (code 4834-1)
 - 2) Welding gage (code 4851-1)
 - 3) Fillet welding gage, size 3-25mm, 7 blades (code 4836-1)
 - 4) Outside micrometer, range 0-25mm, graduation 0.01mm (code 3203-25A)
 - 5) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.005" (code 1108-150)
 - 6) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code 7119-150)
 - 7) Magnifier with illumination, magnification 4X (code 7513-4)



5072

Code
5072

7-PIECE WELDING GAGE SET

- Includes:
 - 1) Welding gage (code 4834-1)
 - 2) Welding gage (code 4851-1)
 - 3) Pipe welding gage (code 4839-1)
 - 4) Outside micrometer, range 0-25mm, graduation 0.01mm (code 3203-25A)
 - 5) Telescoping inspection mirror, size of mirror Ø32mm, length 178-505mm (code 7160-1)
 - 6) Magnifier with illumination, magnification 4X (code 7513-4)
 - 7) Steel rule, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code 7110-150)



5071

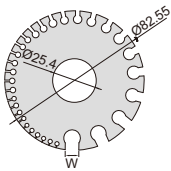
Code
5071

AMERICAN STANDARD WIRE GAGE



4808

Unit: mm

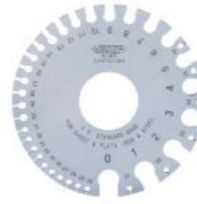


| No. | W | No. | W |
|-----|-----------------|-----|-----------------|
| 0 | 8.250mm/0.3249" | 18 | 1.020mm/0.0403" |
| 1 | 7.350mm/0.2893" | 19 | 0.912mm/0.0359" |
| 2 | 6.540mm/0.2576" | 20 | 0.813mm/0.0320" |
| 3 | 5.830mm/0.2294" | 21 | 0.724mm/0.0285" |
| 4 | 5.190mm/0.2043" | 22 | 0.643mm/0.0253" |
| 5 | 4.620mm/0.1819" | 23 | 0.574mm/0.0226" |
| 6 | 4.110mm/0.1620" | 24 | 0.511mm/0.0201" |
| 7 | 3.670mm/0.1443" | 25 | 0.440mm/0.0179" |
| 8 | 3.260mm/0.1285" | 26 | 0.404mm/0.0159" |
| 9 | 2.910mm/0.1144" | 27 | 0.361mm/0.0142" |
| 10 | 2.590mm/0.1019" | 28 | 0.320mm/0.0126" |
| 11 | 2.300mm/0.0907" | 29 | 0.287mm/0.0113" |
| 12 | 2.050mm/0.0808" | 30 | 0.254mm/0.0100" |
| 13 | 1.820mm/0.0720" | 31 | 0.226mm/0.0089" |
| 14 | 1.630mm/0.0641" | 32 | 0.203mm/0.0080" |
| 15 | 1.450mm/0.0571" | 33 | 0.180mm/0.0071" |
| 16 | 1.290mm/0.0508" | 34 | 0.160mm/0.0063" |
| 17 | 1.150mm/0.0453" | 35 | 0.142mm/0.0056" |
| | | 36 | 0.127mm/0.0050" |

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

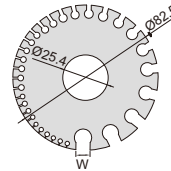
| Code | Range |
|-------------|-------------------------------------|
| 4808 | 0-36 (8.250-0.127mm/0.3249-0.0050") |

U.S. STANDARD SHEET METAL GAGE



4809

Unit: mm

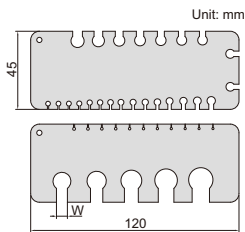


| No. | W | No. | W |
|-----|-----------------|-----|-----------------|
| 0 | 7.938mm/0.3125" | 18 | 1.270mm/0.0500" |
| 1 | 7.144mm/0.2813" | 19 | 1.111mm/0.0438" |
| 2 | 6.747mm/0.2656" | 20 | 0.953mm/0.0375" |
| 3 | 6.350mm/0.2500" | 21 | 0.873mm/0.0344" |
| 4 | 5.953mm/0.2344" | 22 | 0.794mm/0.0313" |
| 5 | 5.556mm/0.2188" | 23 | 0.714mm/0.0281" |
| 6 | 5.159mm/0.2031" | 24 | 0.635mm/0.0250" |
| 7 | 4.763mm/0.1875" | 25 | 0.556mm/0.0219" |
| 8 | 4.366mm/0.1719" | 26 | 0.476mm/0.0188" |
| 9 | 3.969mm/0.1563" | 27 | 0.437mm/0.0172" |
| 10 | 3.572mm/0.1406" | 28 | 0.397mm/0.0156" |
| 11 | 3.175mm/0.1250" | 29 | 0.357mm/0.0141" |
| 12 | 2.778mm/0.1094" | 30 | 0.318mm/0.0125" |
| 13 | 2.381mm/0.0938" | 31 | 0.278mm/0.0109" |
| 14 | 1.984mm/0.0781" | 32 | 0.258mm/0.0102" |
| 15 | 1.786mm/0.0703" | 33 | 0.238mm/0.0094" |
| 16 | 1.588mm/0.0625" | 34 | 0.218mm/0.0086" |
| 17 | 1.429mm/0.0563" | 35 | 0.198mm/0.0078" |
| | | 36 | 0.179mm/0.0070" |

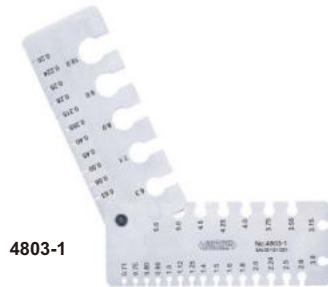
- For gaging sheet metal, plate iron and steel
- Hardened to HRC50-57

| Code | Range |
|-------------|-------------------------------------|
| 4809 | 0-36 (7.938-0.179mm/0.3125-0.0070") |

WIRE GAGE



Unit: mm



4803-1

| wire diameter (W) | wire diameter (W) | wire diameter (W) |
|-------------------|-------------------|-------------------|
| 0.200mm | 0.900mm | 3.55mm |
| 0.224mm | 1.000mm | 3.75mm |
| 0.250mm | 1.120mm | 4.00mm |
| 0.280mm | 1.250mm | 4.25mm |
| 0.315mm | 1.400mm | 4.50mm |
| 0.355mm | 1.500mm | 5.00mm |
| 0.400mm | 1.60mm | 5.60mm |
| 0.450mm | 1.80mm | 6.30mm |
| 0.500mm | 2.00mm | 7.10mm |
| 0.560mm | 2.24mm | 8.00mm |
| 0.630mm | 2.50mm | 9.00mm |
| 0.710mm | 2.80mm | 10.00mm |
| 0.750mm | 3.00mm | |
| 0.800mm | 3.15mm | |

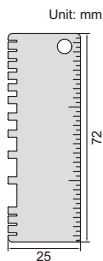
- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC51-53
- Including 2 pcs wire gages

| Code | Range |
|---------------|----------|
| 4803-1 | 0.2-10mm |

THICKNESS GAGE

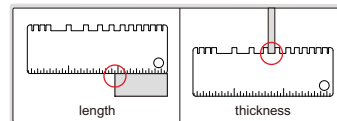


4853-1



Unit: mm

- Made of stainless steel



| Code | Measurement | Range | Graduation | Accuracy |
|---------------|-------------|--|------------|----------|
| 4853-1 | length | 0-2 3/4" | 1/16" | 1/32" |
| | thickness | 24GA. (0.0239"), 22GA. (0.0299"), 20GA. (0.0359") | — | ±0.002" |
| | | 18GA. (0.0478"), 16GA. (0.0598"), 14GA. (0.0747"), 1/8" (0.125"), 10GA. (0.1345"), 3/16" (0.1875"), 1/4" (0.250"), 5/16" (0.3125") | | ±0.004" |
| | | 0.024", 0.030", 0.035" | | ±0.002" |

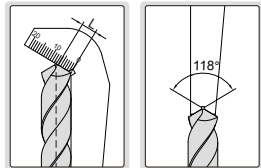
DRILL POINT GAGE



4843-1

- 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 |



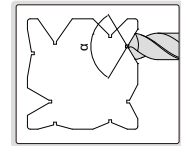
DRILL ANGLE GAGE



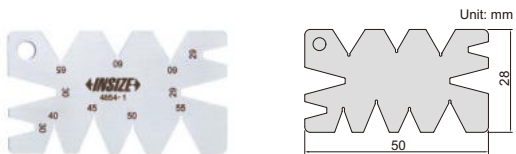
4842-1

- Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- Made of stainless steel

| Code | Accuracy |
|--------|----------|
| 4842-1 | ±0.5° |



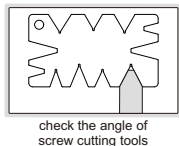
ANGLE GAGE



4854-1

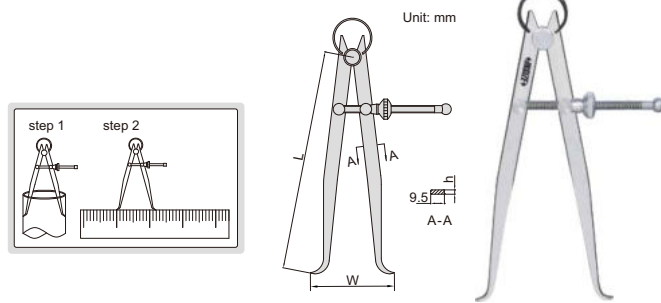
- Made of stainless steel

| Code | Range | Accuracy |
|--------|-----------------------------------|----------|
| 4854-1 | 29°, 30°, 40°, 45°, 50°, 55°, 60° | ±10' |



check the angle of screw cutting tools

INSIDE SPRING CALIPERS



7261-150

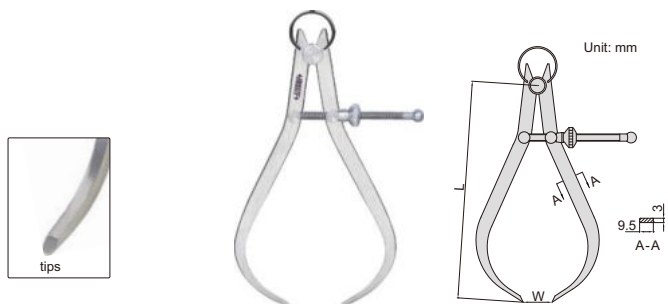
- Made of carbon steel

| Code | Size (L) | Range (W) | h |
|----------|----------|-----------|-----|
| 7261-150 | 150mm | 17-150mm | 2mm |
| 7261-200 | 200mm | 17-200mm | 3mm |
| 7261-300 | 300mm | 18-300mm | 3mm |



tips

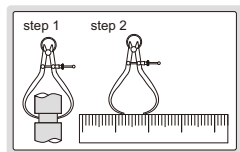
OUTSIDE SPRING CALIPERS



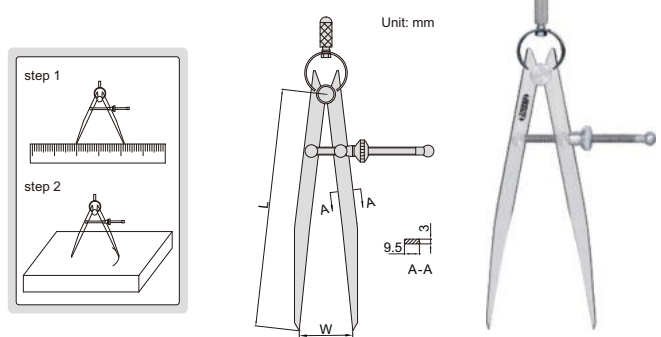
7262-150

- Made of carbon steel

| 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 |



SPRING DIVIDERS



7260-150

- Made of carbon steel
- Hardened points

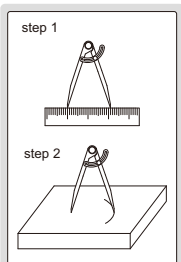
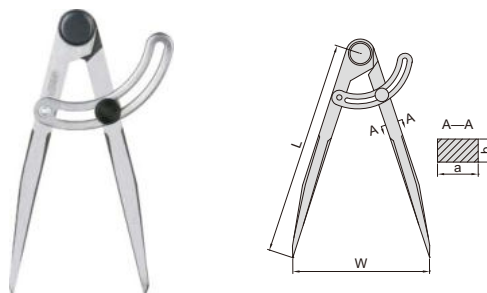
| Code | Size (L) | Range (W) |
|----------|----------|-----------|
| 7260-150 | 150mm | 0-150mm |
| 7260-200 | 200mm | 0-210mm |
| 7260-250 | 245mm | 0-260mm |
| 7260-300 | 300mm | 0-320mm |

DIVIDERS

- Made of carbon steel
- Hardened points

| 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 |

7247-150

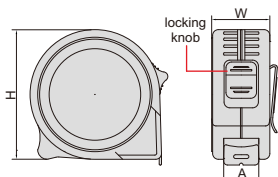
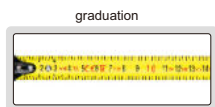


MEASURING TAPES

EG II



7140-5



- Non-glare nylon surface for wear resistance

| Code | Range | Graduation | Width of tape A | W | H |
|--------|-------|------------|-----------------|------|------|
| 7140-3 | 0-3m | 1mm | 16mm | 28mm | 62mm |
| 7140-5 | 0-5m | 1mm | 19mm | 30mm | 68mm |
| 7140-8 | 0-8m | 1mm | 25mm | 38mm | 78mm |

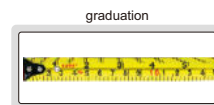
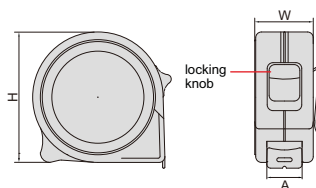
MEASURING TAPE (BASIC TYPE)

EG II



7142-5

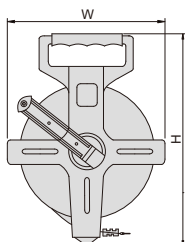
- Non-glare nylon coating tape, wear resistance



| Code | Range | Graduation | Width of tape A | W | H |
|--------|-------------|------------|-----------------|------|------|
| 7142-5 | 0-5m/0-16ft | 1mm, 1/16" | 19mm | 31mm | 64mm |

LONG MEASURING TAPE

EG II

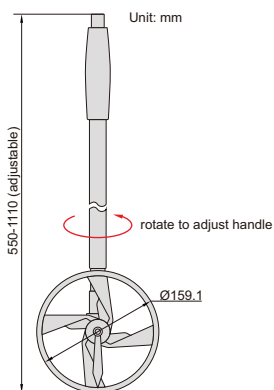


7143-50

- High tensile strength fibreglass tape
- Nylon coating tape, wear resistance

| Code | Range | Graduation | Width of tape | W | H |
|---------|---------------|------------|---------------|-------|-------|
| 7143-50 | 0-50m/0-165ft | 1mm, 1/8" | 13mm | 220mm | 320mm |

MEASURING WHEEL (BASIC TYPE)



7144-1

- ABS plastic frame, wear-resistant PU tire
- Three-section adjustable handle

| Code | Range | Resolution |
|--------|-------------|------------|
| 7144-1 | 0.1-9999.9m | 0.1m |

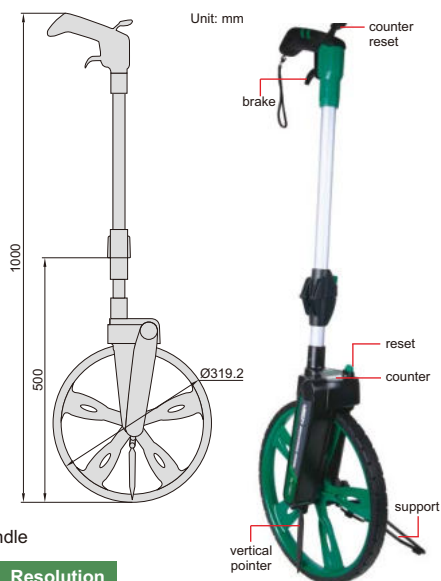
MEASURING WHEEL



after folding



backpack (included)



7145-1

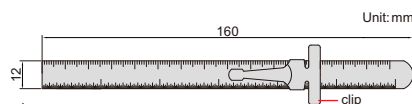
- ABS plastic frame, wear-resistant PU tire
- Two-section foldable handle

| Code | Range | Resolution |
|--------|-------------|------------|
| 7145-1 | 0.1-9999.9m | 0.1m |

POCKET RULE WITH SLIDING CLIP



7119-150



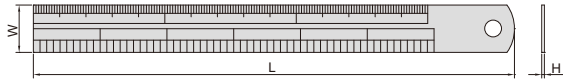
- With sliding clip, clip also can be used as depth gage base
- Inch/metric conversion table on the back
- Made of stainless steel

| Code | Range | Graduation | Accuracy |
|----------|----------|------------|----------|
| 7119-150 | 150mm/6" | 1mm, 1/64" | ±0.15mm |

STEEL RULES



7110-300



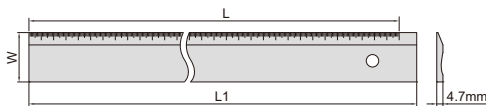
- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Rigid rules
- Made of stainless steel
- Non-glare surface

| Code | Range | Accuracy | L | W | H | Remark |
|-----------|------------|----------|------|----|-----|------------------------------|
| 7110-150 | 150mm/6" | ±0.18mm | 170 | 18 | 1.0 | graduation on front and back |
| 7110-200 | 200mm/8" | ±0.18mm | 220 | 18 | 1.0 | graduation on front and back |
| 7110-300 | 300mm/12" | ±0.27mm | 330 | 25 | 1.0 | graduation on front and back |
| 7110-3001 | 300mm/12" | ±0.27mm | 325 | 30 | 1.0 | graduation on front and back |
| 7110-500 | 500mm/20" | ±0.27mm | 530 | 30 | 1.2 | graduation on front and back |
| 7110-600 | 600mm/24" | ±0.45mm | 630 | 30 | 1.2 | graduation on front and back |
| 7110-1000 | 1000mm/40" | ±0.45mm | 1040 | 32 | 1.5 | graduation on front and back |
| 7110-1500 | 1500mm/60" | ±0.63mm | 1550 | 38 | 1.8 | graduation on front |
| 7110-2000 | 2000mm/80" | ±0.80mm | 2065 | 40 | 2.0 | graduation on front |

ALUMINUM RULES



7123-300



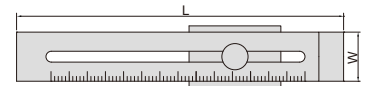
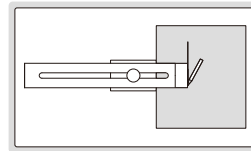
- Made of aluminum, oxidized surface

| Code | Range (L) | Accuracy | Graduation | L1 | W |
|-----------|-----------|----------|------------|--------|------|
| 7123-300 | 300mm | ±0.5mm | 1mm | 321mm | 50mm |
| 7123-600 | 600mm | ±0.9mm | 1mm | 624mm | 50mm |
| 7123-1000 | 1000mm | ±0.9mm | 1mm | 1024mm | 50mm |

MARKING GAGES



7120-200A



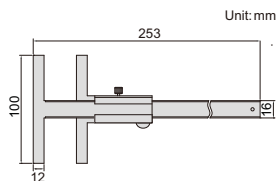
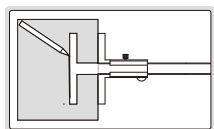
- Made of carbon steel
- Satin chrome plated

| Code | Range | Graduation | Accuracy | L | W |
|-----------|---------|------------|----------|-------|------|
| 7120-200A | 0-200mm | 0.1mm | ±0.1mm | 250mm | 40mm |
| 7120-250A | 0-250mm | 0.1mm | ±0.1mm | 300mm | 40mm |
| 7120-300A | 0-300mm | 0.1mm | ±0.1mm | 350mm | 40mm |

T-SHAPE MARKING GAGE



1275-150B



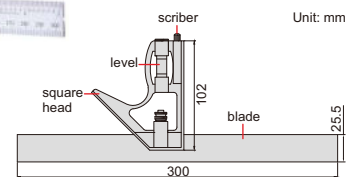
- Made of stainless steel
- Satin chrome plated reading surface

| Code | Range | Graduation | Accuracy |
|-----------|---------|------------|----------|
| 1275-150B | 0-150mm | 0.02mm | ±0.04mm |

COMBINATION SQUARE (ECONOMIC TYPE)

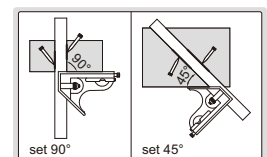


2276-300



- 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/12",
graduation: 1mm and 1/32" on front
face, 1mm and 1/16" on back face

| Code |
|----------|
| 2276-300 |



COMBINATION SQUARE SETS

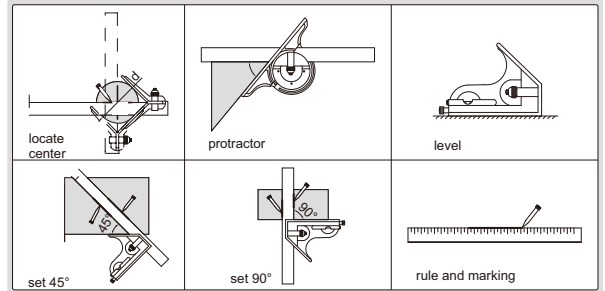
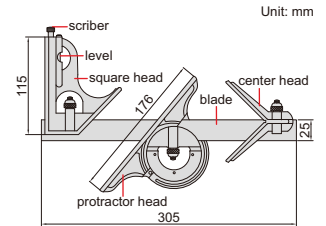
- Center head (made of cast iron): to locate center of cylinder with diameter (Ød): 30-100mm accuracy: ±0.15mm
- Protractor head (made of cast iron): to set the blade at desired angle to an edge of a workpiece, and can be used to measure angles range: 0-180°, accuracy: ±20min.
- Square head (made of 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)



2278-2



2278-180

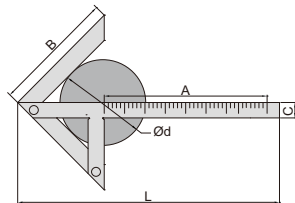


| Code | Remark |
|----------|-------------|
| 2278-2 | 2-piece set |
| 2278-180 | 4-piece set |

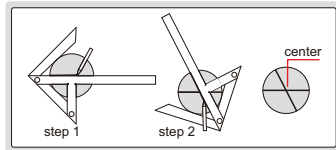
CENTER MARKING GAGES



7205-100



- Accuracy: ±0.15mm
- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated



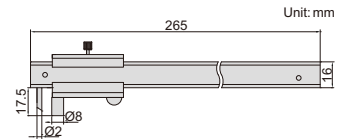
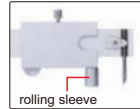
| Code | Size (AxB) | Diameter of shafts (Ød) | C | L |
|----------|------------|-------------------------|------|-------|
| 7205-100 | 100x70mm | 4-90mm | 12mm | 153mm |
| 7205-150 | 150x130mm | 4-190mm | 15mm | 245mm |
| 7205-200 | 200x150mm | 6-220mm | 15mm | 310mm |

SCRIBER CALIPER



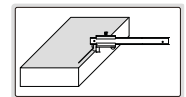
7202-200A

the position of scriber tip can be adjusted



- Graduation: 0.1mm, 1/128"
- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip (code SP-SCRIBER-7202)

| Code | Range | Accuracy |
|-----------|--------------|----------|
| 7202-200A | 0-200mm/0-8" | ±0.1mm |



DIGITAL SCRIBING CALIPER

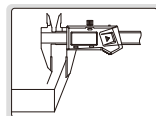
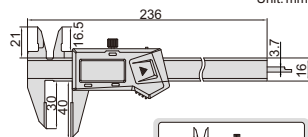
DATA OUTPUT



1166-150A

carbide measuring faces

- The carbide-tipped jaws facilitate scribing on workpieces
- 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 7315-21, 7302-21)

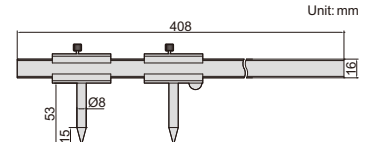


| Code | Range | Accuracy | Resolution |
|-----------|--------------|----------|----------------|
| 1166-150A | 0-150mm/0-6" | ±0.03mm | 0.01mm/0.0005" |

SCRIBING CALIPER

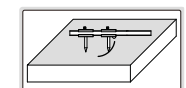


7203-300A



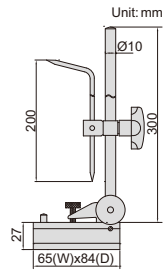
- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips

| Code | Range | Accuracy | Graduation |
|-----------|----------|----------|------------|
| 7203-300A | 51-300mm | ±0.1mm | 0.1mm |

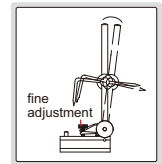
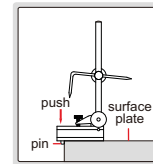


HEIGHT SCRIBER

- Grooved bottom for cylinder
- Two pins to be set against the edge of surface plate



6990-300A



Code

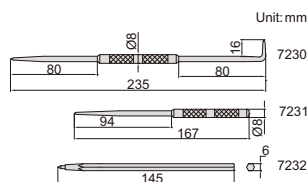
6990-300A

SCRIBERS



- 7230 and 7231 are nickel plated, 7232 is zinc-plated

| Code | Tip |
|------|---------------|
| 7230 | hardened tips |
| 7231 | hardened tip |
| 7232 | carbide tip |



PRECISION SCREWDRIVER SET CODE ISGF-0901



ISGF-0901

packaging



- Includes:
4 pcs "-": 1.4mm, 2.0mm, 2.4mm, 3.0mm
2 pcs "+": 0#, 1#
- Rotating cap
- Material: CRV, hardness: HRC52~56

2-PIECE MEASURING TOOL SET

- Includes:
1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" without thumb roller (code 1108-150W)
2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code 3109-25A)



5022-W

Code

5022-W

2-PIECE MEASURING TOOL SET

- Includes:
1) Dial test indicator, range 0.8mm, graduation 0.01mm (code 2380-08)
2) Magnetic stand



5023

Code

5023

2-PIECE MEASURING TOOL SET

- Includes:
1) Dial indicator, range 10mm, graduation 0.01mm (code 2308-10A)
2) Magnetic stand (code 6201-60)



5024

Code

5024

4-PIECE MEASURING TOOL SETS

- Includes:
1) Vernier caliper, range 0-150mm/0-6" graduation 0.05mm/1/128" (code 1205-150S) for 5041, graduation 0.02mm/0.001" (code 1205-1502S) for 5041-2
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)



5041

Code

5041

Remark

| | |
|--------|---|
| 5041 | vernier caliper, graduation 0.05mm/1/128" (code 1205-150S) |
| 5041-2 | vernier caliper, graduation 0.02mm/0.001" (code 1205-1502S) |

4-PIECE MEASURING TOOL SET



5042-W

Code

5042-W

- Includes:
1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" without thumb roller (code 1108-150W)
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)

6-PIECE MEASURING TOOL SETS

Includes:

- 1) Vernier caliper, range 0-150mm/0-6" graduation 0.05mm/1/128" (code **1205-150S**) for **5063**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5063-2**
- 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**)



5063

| 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) |

5-PIECE MEASURING TOOL SET

Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" without thumb roller (code **1108-150W**)
- 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)
- 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**)



5052-W

| Code |
|--------|
| 5052-W |

9-PIECE MEASURING TOOL SET

Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" without thumb roller (code **1108-150W**)
- 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, 20 pcs (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**)



5091-W

| Code |
|--------|
| 5091-W |

13-PIECE MEASURING TOOL SETS

Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005"
- 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, 24 pcs, 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 for depth base attachment



5013-W

| Code | Remark |
|--------|---|
| 5013-W | digital caliper, without thumb roller code 1108-150W |
| 5013 | digital caliper, with thumb roller code 1108-150 |

GRANITE SURFACE PLATES

- Made of Indian granite, high hardness, 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**)



6900-132

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING
TO CUSTOMER'S REQUEST



Grade 00

| Code | Size (LxWxH) | Flatness | Weight (Kg) | Max. 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 |
| 6900-1107 * | 1000x750x150mm | 4.5µm | 337 | 300 |
| 6900-1101 * | 1000x1000x150mm | 4.8µm | 450 | 400 |
| 6900-1128 * | 1200x800x160mm | 4.9µm | 461 | 500 |
| 6900-1161 * | 1600x1000x180mm | 5.8µm | 864 | 600 |

Grade 0

| Code | Size (LxWxH) | Flatness | Weight (Kg) | Max. 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 |
| 6900-0107 * | 1000x750x150mm | 9.0µm | 337 | 600 |
| 6900-0101 * | 1000x1000x150mm | 9.7µm | 450 | 800 |
| 6900-0128 * | 1200x800x160mm | 9.8µm | 461 | 1000 |
| 6900-0161 * | 1600x1000x180mm | 11.5µm | 864 | 1200 |

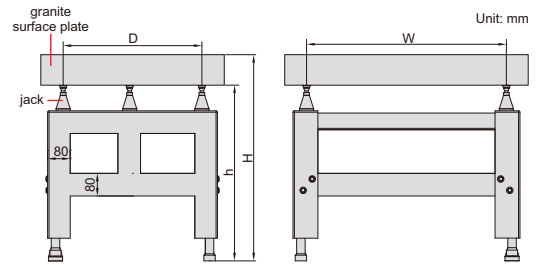
*Supplied with manufacturer inspection certificate

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



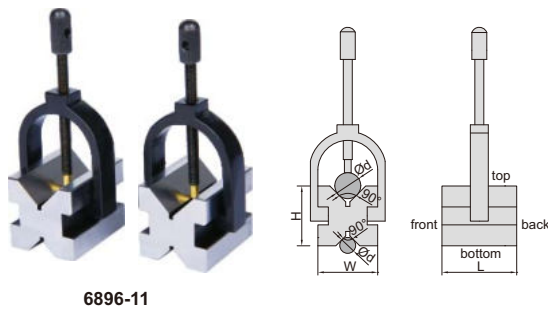
Low stands

| 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 |
| 6902-107A | 1000x750x150mm (code 6900-0107 and 6900-1107) | 560 | 420 | 755-780 | 605-630 |
| 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 |

High stands

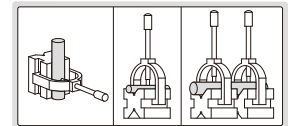
| Code | For granite surface plate | W | D | H (with granite surface plate) | h (without granite surface plate) |
|-----------|--|-----|-----|--------------------------------|-----------------------------------|
| 6902-64H | 630x400x80mm (code 6900-064 and 6900-164) | 352 | 224 | 1000-1025 | 920-945 |
| 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 |
| 6902-107H | 1000x750x150mm (code 6900-0107 and 6900-1107) | 560 | 420 | 1000-1025 | 850-875 |
| 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 |

V-BLOCK SETS



6896-11

- 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)



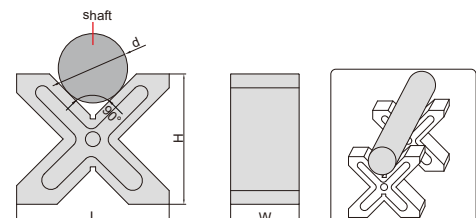
| Code | Size (LxWxH) | Range of shafts (Ød) | Parallelism of both V grooves to top and bottom sides | Squareness of both V grooves to front and back sides | Height difference of a matched pair |
|---------|--------------|----------------------|---|--|-------------------------------------|
| 6896-10 | 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 |

V-BLOCK SETS

- For positioning cylindrical workpieces
- Two V-blocks per set
- Each V-block has four 90° V-grooves
- Cast iron, hardness HB170-240



6805-2



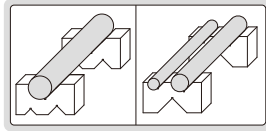
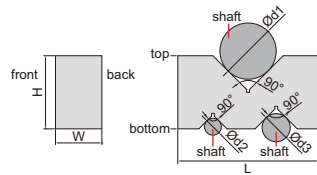
| Code | Size (LxHxW) | Range of shafts (Ød) | Parallelism of four V grooves to all sides | Height difference of a matched pair |
|--------|--------------|----------------------|--|-------------------------------------|
| 6805-1 | 150x130x75mm | 8-120mm | 15µm | 20µm |
| 6805-2 | 200x170x90mm | 12-180mm | 15µm | 20µm |

V-BLOCK SETS



6887-3

- Two V-blocks per set
- Made of hardened tool steel



| Code | Size (LxWxH) | Range of shafts (Ød1) | Range of shafts (Ød2) | Range of shafts (Ød3) |
|--------|--------------|-----------------------|-----------------------|-----------------------|
| 6887-1 | 50x19x24mm | 3-32mm | 3-16mm | 3-22mm |
| 6887-2 | 75x24x35mm | 3-50mm | 3-20mm | 3-32mm |
| 6887-3 | 100x33x52mm | 3-68mm | 3-26mm | 3-40mm |
| 6887-4 | 125x44x69mm | 3-87mm | 3-34mm | 3-50mm |

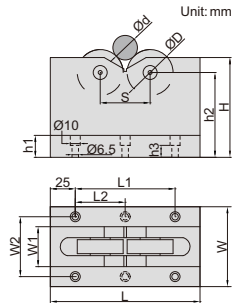
| Code | Parallelism of three V grooves to top and bottom sides | Height difference of a matched pair |
|--------|--|-------------------------------------|
| 6887-1 | 5µm | 5µm |
| 6887-2 | 5µm | 5µm |
| 6887-3 | 5µm | 5µm |
| 6887-4 | 5µm | 5µm |

ROLLER BEARING V-BLOCK SETS



6888-1

- Runout accuracy: 5µm
- Parallelism of bearings to bottom: 12µm
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces



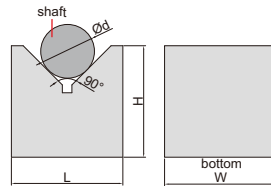
| Code | W1 | W2 | h1 | h2 | h3 | L1 | L2 | S |
|--------|----|----|----|-----|----|-----|----|-----|
| 6888-1 | 22 | 44 | 20 | 85 | 12 | 100 | - | 60 |
| 6888-2 | 40 | 60 | 22 | 85 | 12 | 100 | - | 50 |
| 6888-3 | 60 | 80 | 30 | 124 | 20 | 180 | 90 | 120 |

| Code | Size (LxWxH) | Code of bearings | Diameter of bearings (ØD) | Range of shafts (Ød) | Load capacity |
|--------|---------------|------------------|---------------------------|----------------------|---------------|
| 6888-1 | 150x60x100mm | 16004 ZZ | 42mm | 25-70mm | 500kg |
| 6888-2 | 150x80x100mm | 6303 ZZ | 47mm | 5-55mm | 1000kg |
| 6888-3 | 230x100x150mm | 6306 ZZ | 72mm | 70-200mm | 1000kg |

GRANITE V-BLOCK SET



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 |

MAGNETIC V-BLOCKS (PROFESSIONAL TYPE)

HARDENED SURFACES

HIGH PRECISION

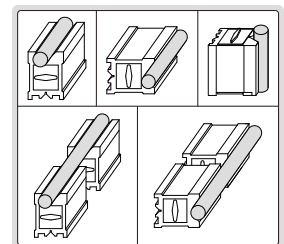
STRONG MAGNETIC FORCE



6889-11

6889-1

- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square workpieces
- 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

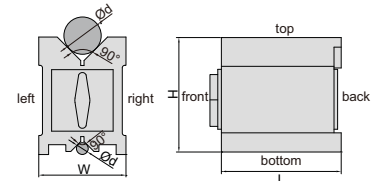


Individual

| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Parallelism of V grooves to top, bottom, left, right sides | Squareness of V grooves to back side |
|---------|---------------|----------------------|----------------|--|--------------------------------------|
| 6889-11 | 75x56x75mm | 5-40mm | 85kgf | 5µm | 5µm |
| 6889-22 | 100x70x95mm | 5-65mm | 150kgf | 5µm | 5µm |
| 6889-33 | 150x75x100mm | 5-70mm | 190kgf | 6µm | 6µm |
| 6889-55 | 160x125x130mm | 5-140mm | 220kgf | 12µm | 12µm |
| 6889-44 | 200x125x150mm | 10-140mm | 400kgf | 12µm | 12µm |

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 | 85kgf | 5µm | 5µm | 5µm |
| 6889-2 | 100x70x95mm | 5-65mm | 150kgf | 5µm | 5µm | 5µm |
| 6889-3 | 150x75x100mm | 5-70mm | 190kgf | 6µm | 6µm | 6µm |
| 6889-5 | 160x125x130mm | 5-140mm | 220kgf | 12µm | 12µm | 12µm |
| 6889-4 | 200x125x150mm | 10-140mm | 400kgf | 12µm | 12µm | 12µm |



MAGNETIC V-BLOCK (ECONOMIC TYPE)

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

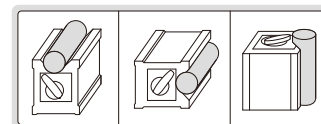
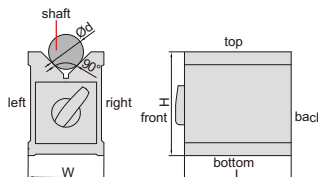
- Parallelism of V groove to top, bottom, left and right sides: 10µm
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced



6890-702

ATTENTION: NOT HARDENED

| Code | Size (LxWxH) | Range of shafts (Ød) | Magnetic force | Squareness of V groove to back side |
|----------|--------------|----------------------|----------------|-------------------------------------|
| 6890-702 | 70x60x73mm | 6-44mm | 56kgf | 10µm |



MAGNETIC V-BLOCKS (ECONOMIC TYPE)

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

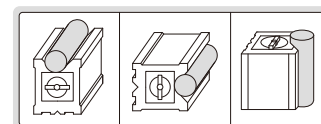
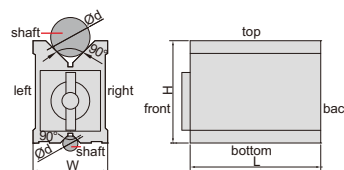
- Hold cylindrical workpieces for inspection and machining
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface, otherwise the magnetic force will be reduced



6801-1202

ATTENTION: NOT HARDENED

| 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 |



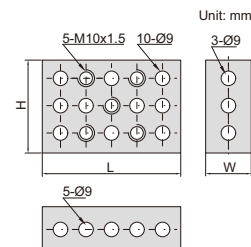
PARALLEL SET

- Pairs of matched blocks for positioning and set-up
- Screws and wrench are included
- Hardness HRC 55-62

screws and wrench are included



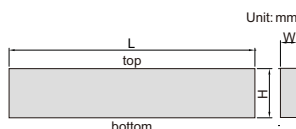
6531-25



| Code | Size (LxHxW) | Size accuracy | Squareness | Parallelism | Height difference of a matched pair |
|---------|--------------|---------------|------------|-------------|-------------------------------------|
| 6531-25 | 75x50x25mm | 10µm | 7µm/25mm | 10µm | 10µm |

PARALLEL SETS

- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Hardened to HRC55-60
- Made of alloy tool steel

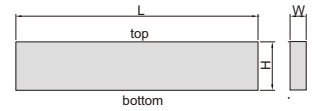


6533-144

| Code | Parallels per set | Length (L) | Thickness (W) | Height (H) |
|----------|-------------------|------------|---------------|--|
| 6533-6 | 6 pairs | 200mm | 9.5mm | 35, 40, 45, 50, 55, 58mm |
| 6533-8 | 8 pairs | 160mm | 8mm | 12, 17, 22, 25, 28, 32, 36, 38mm |
| 6533-81 | 8 pairs | 200mm | 8mm | 17, 22, 26, 28, 32, 36, 38, 42mm |
| 6533-9 | 9 pairs | 160mm | 4mm | 10, 14, 18, 22, 26, 30, 34, 38, 42mm |
| 6533-10 | 10 pairs | 150mm | 3mm | 13, 16, 19, 22, 25, 28, 31, 35, 38, 41mm |
| 6533-144 | 14 pairs | 150mm | 10mm | 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50mm |

PARALLEL SETS

- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Made of alloy tool steel
- Hardened to HRC55-60

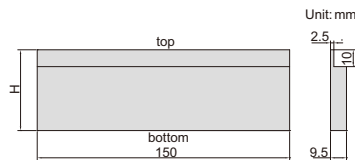
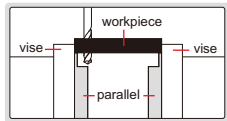


6511-20

| Code | Parallels per set | Length (L) | Height (H)×Thickness (W) |
|----------|-------------------|------------|--|
| 6511-20 | 20 pairs | 100mm | 5×2*, 10×2, 15×2, 20×2, 6×3*, 11×3, 16×3, 21×3, 7×4*, 12×4, 17×4, 22×4, 8×5*, 13×5, 18×5, 23×5, 9×6*, 14×6, 19×6, 24×6mm |
| 6511-24 | 24 pairs | 125mm | 11×8, 16×8, 21×8, 26×8, 31×8, 36×8, 13×10, 18×10, 23×10, 28×10, 33×10, 38×10, 15×12, 20×12, 25×12, 30×12, 35×12, 40×12, 17×14, 22×14, 27×14, 32×14, 37×14, 42×14mm |
| 6511-241 | 24 pairs | 150mm | 11×8, 16×8, 21×8, 26×8, 31×8, 36×8, 13×10, 18×10, 23×10, 28×10, 33×10, 38×10, 15×12, 20×12, 25×12, 30×12, 35×12, 40×12, 17×14, 22×14, 27×14, 32×14, 37×14, 42×14mm |

*Parallelism between top and bottom and height difference of a matched pair of 5×2mm, 6×3mm, 7×4mm, 8×5mm and 9×6mm in 6511-20 is 7µm

PARALLEL SET



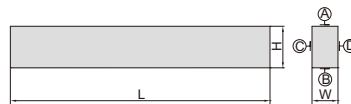
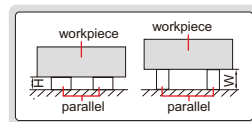
6534-6

- Height difference of a matched pair: 5µm
- Hardened to HRC55-60
- Made of alloy tool steel

| Code | Parallels per set | Parallelism between top and bottom | Height (H) |
|--------|-------------------|------------------------------------|--------------------------|
| 6534-6 | 6 pairs | 5µm | 25, 30, 35, 40, 45, 48mm |

GRANITE PARALLEL SET

- Made of granite, hard and no rusty, no dimensional change over time or temperature change
- Two parallels per set

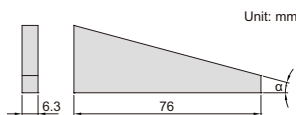


4143-250

| 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

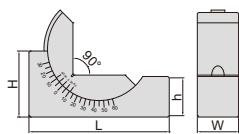
- Accuracy: ±20 seconds
- For angle set-up in tooling, production and inspection
- Hardness HRC52



4006-12

| Code | Angle plates included | Angle α |
|---------|-----------------------|---|
| 4006-10 | 10 pcs | 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30° |
| 4006-12 | 12 pcs | 1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30° |

ADJUSTABLE ANGLE BLOCK

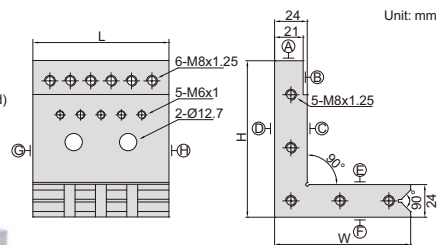
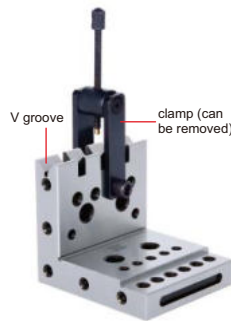


6535-30

- Graduation of angle: 10 minutes
- Made of hardened tool steel
- With locking screw

| Code | Size (LxWxH) | h | Adjustable angle | Accuracy of angle |
|---------|--------------|------|------------------|-------------------|
| 6535-30 | 102x30x49mm | 30mm | 30°~0°~60° | 10 minutes |

RIGHT ANGLE PLATE



Unit: mm

6547-1

- 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: 10µm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 10µm

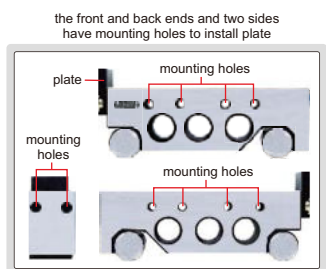
| Code | Size (LxWxH) |
|--------|---------------|
| 6547-1 | 100x100x115mm |

SINE BARS

CAN BE CUSTOMIZED HIGH PRECISION

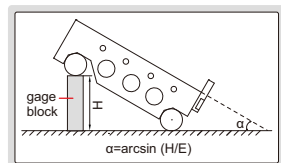


4155-100

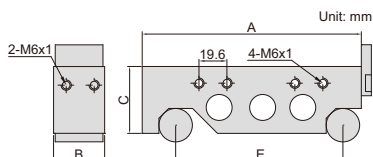


the front and back ends and two sides have mounting holes to install plate

- Made of alloy tool steel



$$\alpha = \arcsin(H/E)$$



Unit: mm

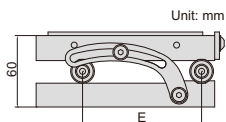
(mm)

| Code | Roller distance (E) | Table size (AxB) | C | Accuracy of α at 30° |
|----------|---------------------|------------------|----|-----------------------------|
| 4155-100 | 100mm | 130x30mm | 40 | ±5 seconds |
| 4155-200 | 200mm | 230x30mm | 40 | ±5 seconds |
| 4155-300 | 300mm | 345x40mm | 50 | ±8 seconds |

SINE TABLE

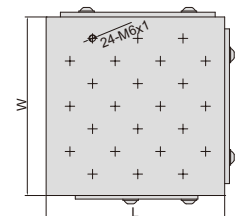


6527-100



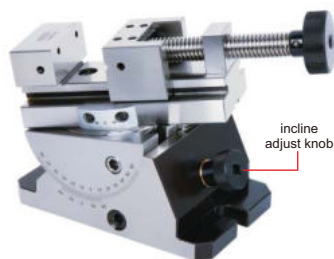
Unit: mm

- Accuracy of angle: ±15 seconds
- Made of alloy tool steel
- Hardness HRC58-60

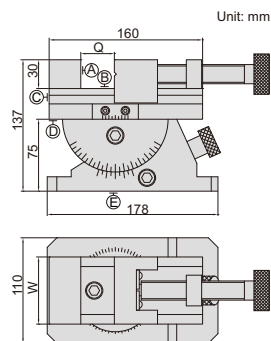


| Code | Roller distance (E) | Table size (LxW) | Adjustable angle |
|----------|---------------------|------------------|------------------|
| 6527-100 | 100mm | 150x150mm | 0-60° |

PRECISION UNIVERSAL VISE



6521-80



Unit: mm

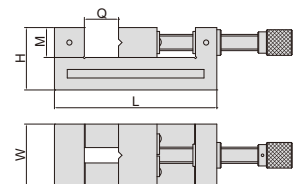
- Horizontal rotary: range 360°, graduation 0.05°
- Vertical incline: range 45°, graduation 0.05°
- With incline adjust knob
- Parallelism and squareness between A, B, C and D: 5µm/100mm, parallelism between D and E at 0°: 10µm/100mm
- Made of tool steel
- Hardness HRC56-58

| Code | Jaw opening (Q) | Jaw width (W) |
|---------|-----------------|---------------|
| 6521-80 | 0-80mm | 70mm |

PRECISION VISES



6520-73A

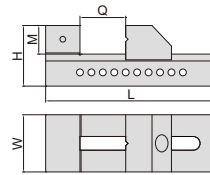


- Parallelism: 8µm/100mm
- Squareness: 10µm/100mm
- Made of alloy steel
- Hardness HRC56-58

| Code | Jaw opening (Q) | Jaw width (W) | L | H | M |
|-----------|-----------------|---------------|-------|------|------|
| 6520-73A | 0-73mm | 63mm | 176mm | 63mm | 30mm |
| 6520-76A | 0-76mm | 73mm | 190mm | 73mm | 35mm |
| 6520-120A | 0-120mm | 98mm | 255mm | 82mm | 40mm |

PRECISION VISES

- Parallelism: 3µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC56-58



6526-80

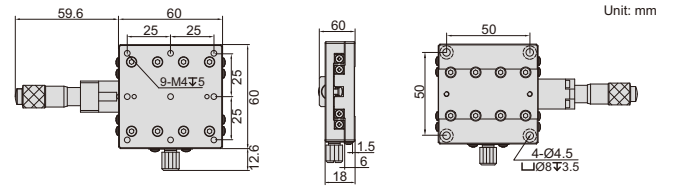
| Code | Jaw opening (Q) | Jaw width (W) | Overall length (L) | (mm) | |
|----------|-----------------|---------------|--------------------|------|----|
| | | | | H | M |
| 6526-80 | 0-80mm | 50mm | 150mm | 53 | 25 |
| 6526-100 | 0-100mm | 73mm | 190mm | 70 | 35 |

X-AXIS STAGE

- Cross roller guides, achieve high precision and smooth movement
- Stages made of aluminum alloy



6582-602



SPECIFICATION (micrometer in the middle)

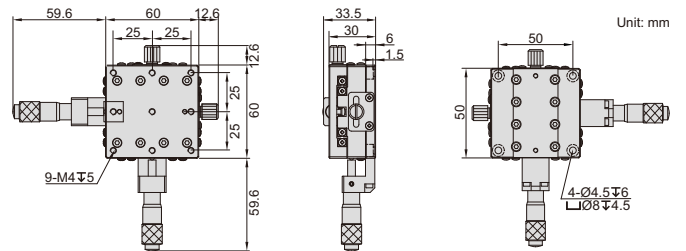
| Code | X-axis displacement | Parallelism of top to bottom surface | Micrometer graduation | Micrometer accuracy | Maximum load | Micrometer location | Stage size | Weight |
|----------|---------------------|--------------------------------------|-----------------------|---------------------|--------------|---------------------|------------|--------|
| 6582-602 | ±6.5mm | 0.03mm | 0.01mm | 0.01mm | 49N (5kgf) | middle | 60x60mm | 0.24kg |

XY-AXIS STAGE

- Cross roller guides, achieve high precision and smooth movement
- Stages made of aluminum alloy



6584-602



SPECIFICATION (micrometer in the middle)

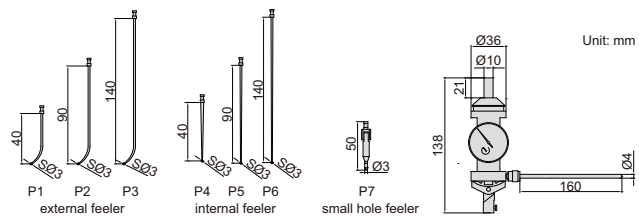
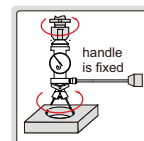
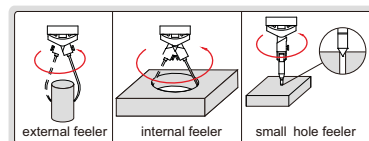
| Code | XY-axis displacement | Parallelism of top to bottom surface | Micrometer graduation | Micrometer accuracy | Maximum load | Micrometer location | Stage size | Weight |
|----------|----------------------|--------------------------------------|-----------------------|---------------------|--------------|---------------------|------------|--------|
| 6584-602 | ±6.5mm | 0.06mm | 0.01mm | 0.01mm | 49N (5kgf) | middle | 60x60mm | 0.48kg |

CENTERING INDICATOR



2385-3

- Provides quick and accurate centering in boring and milling set-up
- Maximum speed is recommended not to exceed 800RPM

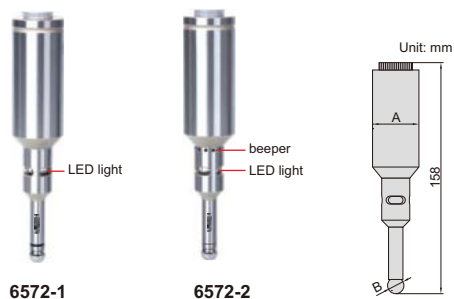


VIDEO

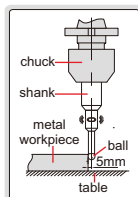
| Feeler | Measuring diameter | Accuracy |
|--------|--------------------|----------|
| P1 | Ø0-60mm | 0.015mm |
| P2 | Ø0-160mm | 0.02mm |
| P3 | Ø0-250mm | 0.03mm |
| P4 | Ø3.2-80mm | 0.015mm |
| P5 | Ø3.2-180mm | 0.02mm |
| P6 | Ø3.2-280mm | 0.03mm |
| P7 | Ø0-2.8mm | 0.015mm |

Code
2385-3

LARGE SHANK ELECTRONIC EDGE FINDERS

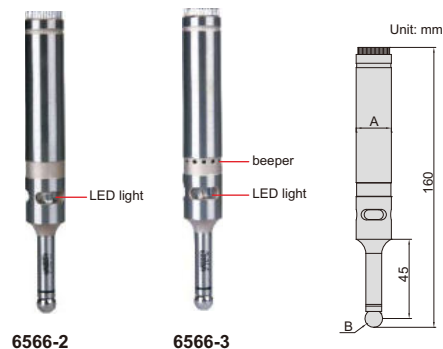


- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6572-2**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball

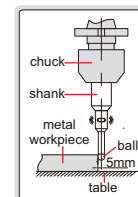


| Code | Shank (A) | Contact ball (B) | Accuracy | Beeper | Battery |
|--------|-----------|------------------|----------|---------|---------------|
| 6572-1 | Ø32mm | SØ10mm | 5µm | without | 23A, 12Vx1 pc |
| 6572-2 | Ø32mm | SØ10mm | 5µm | with | 23A, 12Vx1 pc |

ELECTRONIC EDGE FINDERS

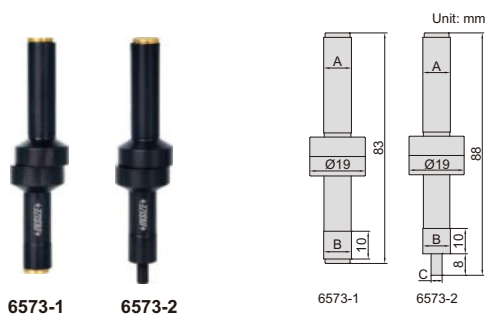


- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6566-3**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball

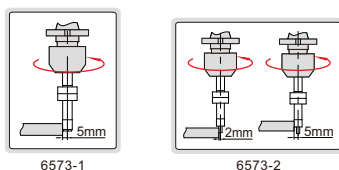


| Code | Shank (A) | Contact ball (B) | Accuracy | Beeper | Battery |
|--------|-----------|------------------|----------|---------|---------------|
| 6566-2 | Ø20mm | SØ10mm | 5µm | without | 23A, 12Vx1 pc |
| 6566-3 | Ø20mm | SØ10mm | 5µm | with | 23A, 12Vx1 pc |

NON-MAGNETIC EDGE FINDERS

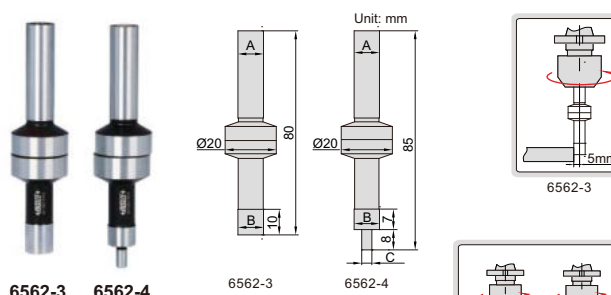


- TiAIN coating, non-magnetic, hardness HV2500, extremely wear resistance
- Suitable for machine speed 400~600rpm

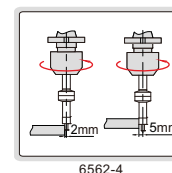


| Code | Shank (A) | Contact point (B) | Contact point (C) | Accuracy |
|--------|-----------|-------------------|-------------------|----------|
| 6573-1 | Ø10mm | Ø10mm | — | 5µm |
| 6573-2 | Ø10mm | Ø10mm | Ø4mm | 5µm |

EDGE FINDERS

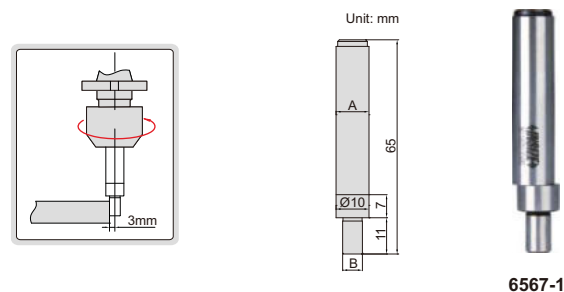


- Hardened shank and contact point
- Suitable for machine speed 400-600rpm



| Code | Shank(A) | Contact point (B) | Contact point (C) | Accuracy |
|--------|----------|-------------------|-------------------|----------|
| 6562-3 | Ø10mm | Ø10mm | — | 5µm |
| 6562-4 | Ø10mm | Ø10mm | Ø4mm | 5µm |

EDGE FINDER



- Hardened shank and contact point
- Suitable for machine speed 400-600rpm

| Code | Shank (A) | Contact point (B) | Accuracy |
|--------|-----------|-------------------|----------|
| 6567-1 | Ø10mm | Ø6mm | 8µm |

CERAMIC EDGE FINDER



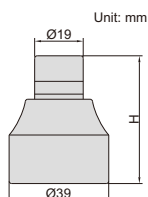
- Ceramic contact point, non magnetic
- Suitable for machine speed 400-600rpm

| Code | Shank (A) | Contact point (B) | Accuracy |
|--------|-----------|-------------------|----------|
| 6568-1 | Ø10mm | Ø10mm | 8µm |

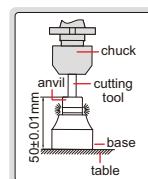
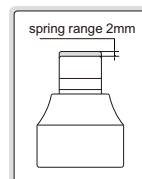
ELECTRONIC ZERO SETTER

INSIZE PLUS
MADE IN EUROPE

- 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

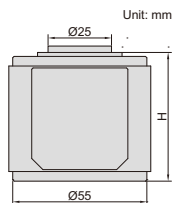


LOW TEST FORCE

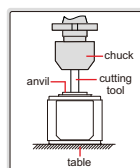
| Code | Height (H) | Accuracy | Test force |
|---------|------------|----------|--------------|
| 6553-50 | 50mm | ±10µm | 7N (at 49mm) |

DIGITAL ZERO SETTER

- Resolution: 0.001mm/0.00005"
- IP65 dust/waterproof
- Buttons: on/off, mm/inch, zero
- CR2032 battery
- Automatic power off
- Magnetic base
- Automatic backlight at zero



6557-50

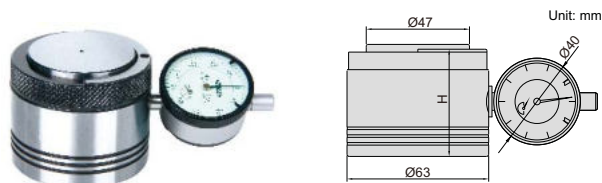


IP65
WATERPROOF

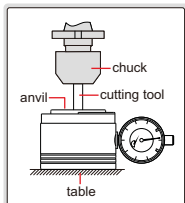
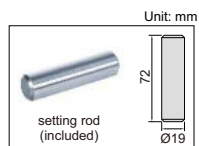
| Code | Height (H) | Anvil stroke | Accuracy * | Test force | Repeatability |
|---------|------------|--------------|---------------|---------------|---------------|
| 6557-50 | 50mm | 2.5mm | ±10µm/0.0004" | 10N (at 50mm) | 2µm |

* The accuracy is ensured within Ø10mm of the center

ZERO SETTER



6556-50

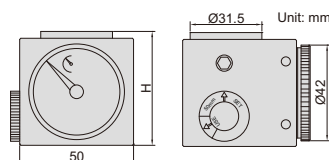


| Code | Height (H) | Accuracy | Test force |
|---------|------------|----------|---------------|
| 6556-50 | 50mm | ±10µm | 10N (at 50mm) |

ZERO SETTER

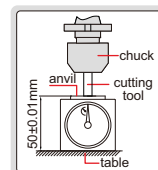


2397-502A



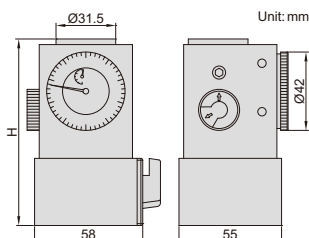
- Magnetic base

| Code | Height (H) | Accuracy | Test force |
|-----------|------------|----------|--------------|
| 2397-502A | 50mm | ±10µm | 9N (at 50mm) |

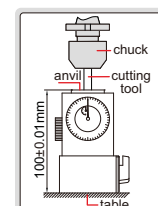


ZERO SETTER

- Magnetic base with on-off switch
- Test force: 9N (at 100mm)



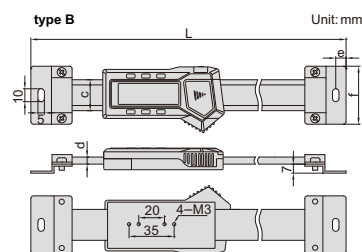
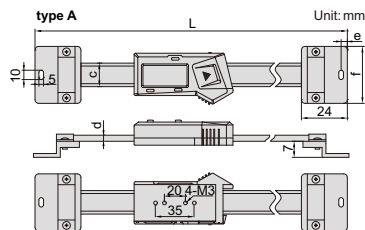
2394-100A



| Code | Height (H) | Accuracy |
|-----------|------------|----------|
| 2394-100A | 100mm | ±10µm |

DIGITAL HORIZONTAL SCALES

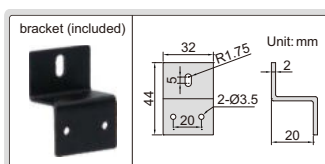
DATA
OUTPUT



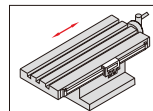
7101-300A



7101-400A



example of application



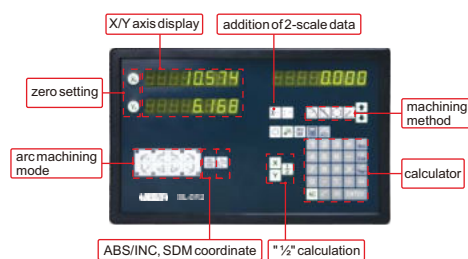
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, zero, mm/inch, type B: on/off, zero, mm/inch, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back

| Code | Range | Type | Accuracy | L | c | d | e | f | Data output cable (optional) |
|------------|--------|------|----------|------|----|------|----|----|------------------------------|
| 7101-100A | 100mm | A | ±0.02mm | 215 | 16 | 4 | 6 | 36 | 7315-21, 7302-21, 7305-21 |
| 7101-150A | 150mm | A | ±0.03mm | 265 | 16 | 4 | 6 | 36 | 7315-21, 7302-21, 7305-21 |
| 7101-200A | 200mm | A | ±0.03mm | 315 | 16 | 4 | 6 | 36 | 7315-21, 7302-21, 7305-21 |
| 7101-300A | 300mm | A | ±0.04mm | 445 | 16 | 4 | 6 | 36 | 7315-21, 7302-21, 7305-21 |
| 7101-400A | 400mm | B | ±0.05mm | 590 | 24 | 5.5 | 8 | 45 | 7315-22, 7302-22, 7305-22 |
| 7101-500A | 500mm | B | ±0.05mm | 690 | 24 | 5.5 | 8 | 45 | 7315-22, 7302-22, 7305-22 |
| 7101-600A | 600mm | B | ±0.08mm | 790 | 24 | 5.5 | 8 | 45 | 7315-22, 7302-22, 7305-22 |
| 7101-800A | 800mm | B | ±0.10mm | 990 | 24 | 5.5 | 8 | 45 | 7315-22, 7302-22, 7305-22 |
| 7101-1000A | 1000mm | B | ±0.10mm | 1240 | 31 | 10.5 | 10 | 60 | 7315-22, 7302-22, 7305-22 |

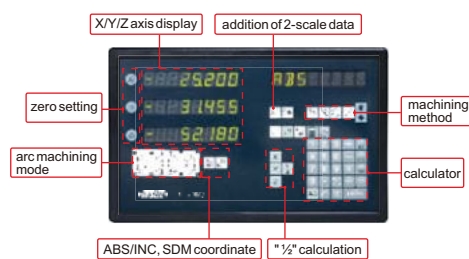
DIGITAL READOUTS



VIDEO



ISL-DR2



ISL-DR3

software CD (included)



mounting bracket (included)

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 | 295x185x45mm | |
| Weight | 1.45kg | |

STANDARD DELIVERY

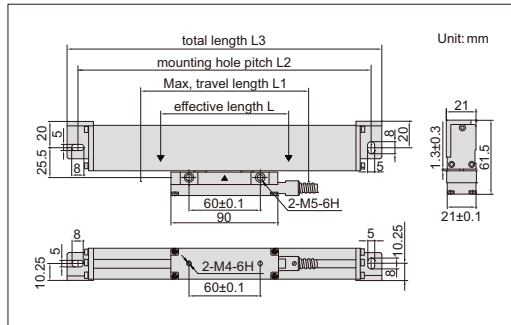
| | |
|------------------------|------|
| Main unit | 1 pc |
| Mounting bracket | 1 pc |
| Ground cable | 1 pc |
| RS232C cable | 1 pc |
| Software CD for RS232C | 1 pc |

LINEAR SCALES (TTL SIGNAL)

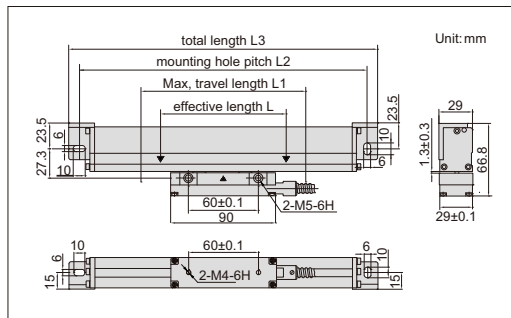


ISL-A5-300

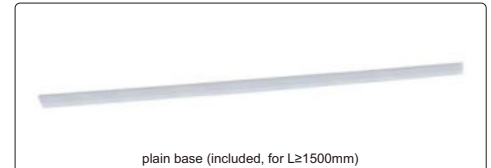
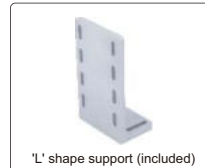
Series ISL-A1 and ISL-A5



Series ISL-B5

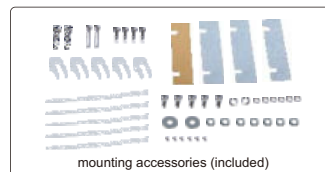


| Effective length (L) | Code | | |
|----------------------|---------------|---------------|---------------|
| | Thin type | | Thick type |
| | Series ISL-A1 | Series ISL-A5 | Series ISL-B5 |
| 50mm | ISL-A1-50 | ISL-A5-50 | ISL-B5-50 |
| 100mm | ISL-A1-100 | ISL-A5-100 | ISL-B5-100 |
| 150mm | ISL-A1-150 | 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 |



STANDARD DELIVERY

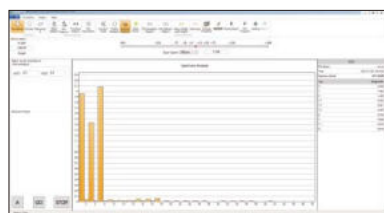
| | |
|----------------------|---------------------|
| Main Unit | 1 pc |
| 'L' shape support | 1 pc |
| Anti-dust cover | 1 pc |
| Plain base | 1 pc (for L≥1500mm) |
| Mounting accessories | 1 package |



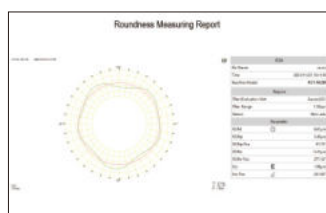
SPECIFICATION

| 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: 1600-2000mm) | | | | | |
| Output signal | TTL | | | | | |
| Socket | 9PD | | | | | |
| Power supply | 5±0.5V | | | | | |

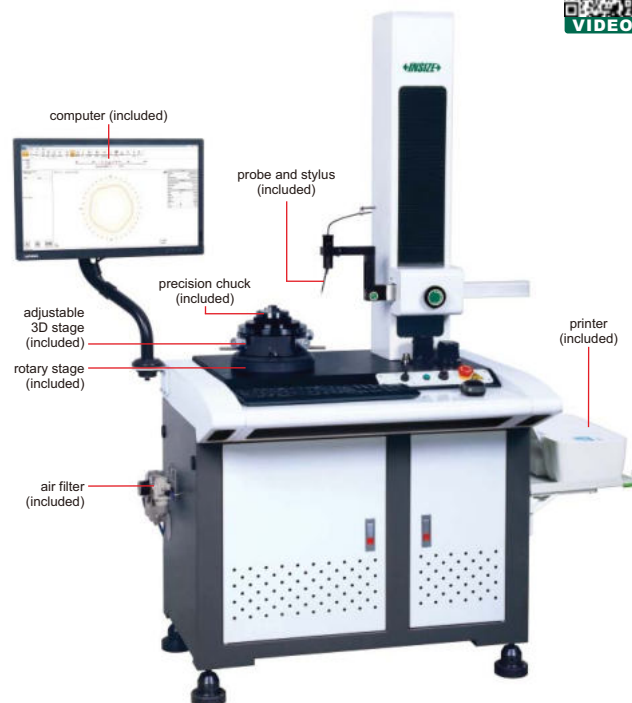
ROUNDNESS MEASURING MACHINE CODE RCT-RA260



spectrum analysis



measurement



SPECIFICATION

| | | |
|---------------------|---|--|
| Probe | measuring range | ±300µm |
| | resolution | 0.001µm |
| | linear accuracy | 0.25% |
| Ruby stylus | size | Ø2x10mm |
| | direction | two directions |
| | adjustable angle | ±45° |
| X axis | travel | 165mm |
| | excess range | 25mm |
| | drive mode | by hand |
| Z axis | drive mode | motor |
| | travel | 320mm |
| | movement speed | 0.5~10mm/s |
| Rotary stage | rotation accuracy | (0.025+6H/10000)µm for H≤20mm, H is the measuring height in mm |
| | rotation speed | 6rpm |
| | max. measuring diameter | 260mm |
| | max. workpiece diameter (rotation diameter) | 400mm |
| Rotary axis | radial rotation accuracy | ±0.0125µm |
| | axial runout accuracy | ±0.05µm |
| Adjustable 3D stage | diameter | 180mm |
| | adjustment range of center | ±3mm |
| | adjustment range of level | ±2° |
| Granite stage | weight capacity | 20kg |
| | external grip diameter | Ø1~Ø81mm |
| | internal grip diameter | Ø31~Ø70mm |
| Precision chuck | pressure range | 0~0.8MPa |
| | oil mist removal accuracy | 0.01µm |
| Air filter | oil mist removal accuracy | 0.01µm |
| | export oil mist concentration | 0.5mg/m³ |
| Dimension (LxWxH) | | 1300×795×1715mm |
| Power supply | | 220±10%V, 50Hz |
| Power | | 500W |
| Weight | | 320kg |

- Air-floating spindle
- Can measure roundness, coaxiality, concentricity, flatness, radial runout, axial runout, parallelism and perpendicularity.
- Spectrum analysis, automatic gap/burr removal, waveform analysis
- 4 roundness evaluation methods: smallest area method, least square method, smallest circumscribed circle method, largest inscribed circle method
- Measuring filter: 1-15µm, 1-50µm, 1-150µm, 1-250µm, 1-500µm, 15-100µm, 15-500µm, 2-15µm
- Filter form: Gauss (ISO standard)
- Software is included, for measurement, analysis, data output, etc.

STANDARD DELIVERY

| | |
|--------------------------|-----------|
| Main unit | 1 pc |
| Probe (with ruby stylus) | 1 pc each |
| Standard block | 1 pc |
| Precision chuck | 1 pc |
| Adjustable 3D stage | 1 pc |
| Rotary stage | 1 pc |
| Computer | 1 pc |
| Software | 1 set |
| Printer | 1 pc |
| Air filter | 1 set |
| Installation tools | 1 set |

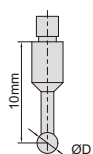


standard block (included)

OPTIONAL ACCESSORY

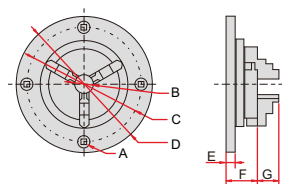
| | |
|------------------|------------------|
| Probes | refer to details |
| Precision chucks | refer to details |
| Dryer | ISC-DRY |

SPECIFICATION OF PROBES



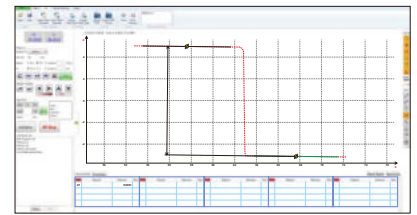
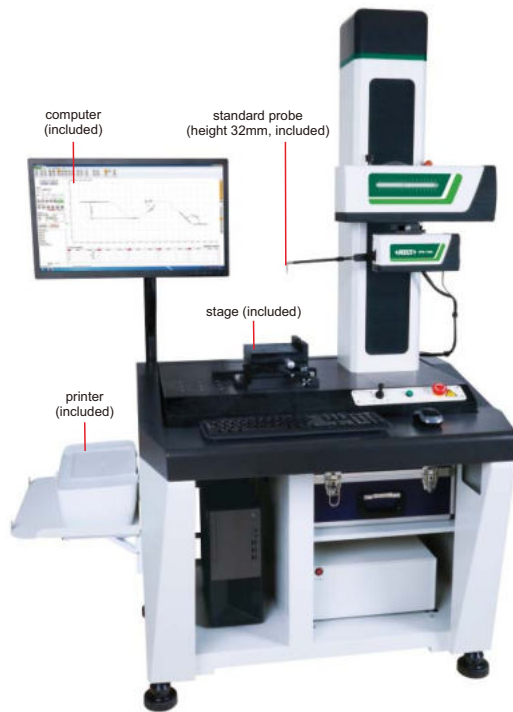
| Code | Diameter (ØD) | Remark |
|--------------|---------------|----------|
| RCT-RA260-T1 | 2mm | included |
| RCT-RA260-T2 | 0.5mm | optional |
| RCT-RA260-T3 | 1mm | optional |
| RCT-RA260-T4 | 4mm | optional |
| RCT-RA260-T5 | 8mm | optional |

SPECIFICATION OF PRECISION CHUCKS

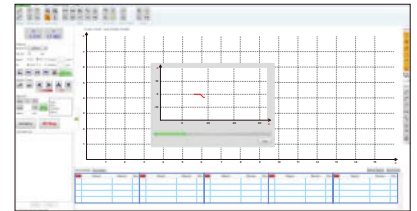


| Code | A | B | C | D | E | F | G | Clamping range (mm) | | Remark |
|--------------|--------|----|-----|-----|------|----|----|---------------------|--------------------|----------|
| | | | | | | | | external grip dia. | internal grip dia. | |
| RCT-RA260-C1 | M5x0.8 | 16 | 100 | 118 | 8 | 28 | 13 | Ø0.8~63 | Ø23~58 | optional |
| RCT-RA260-C2 | M6x1.0 | 20 | 116 | 143 | 10.5 | 37 | 15 | Ø1~81 | Ø31~70 | included |
| RCT-RA260-C3 | M6x1.0 | 26 | 140 | 168 | 10 | 39 | 19 | Ø1~100 | Ø36~90 | optional |

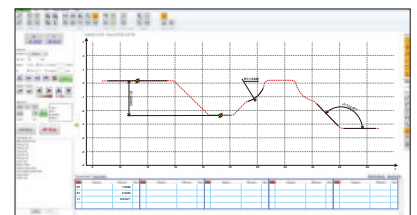
SURFACE PROFILE MEASURING MACHINE CODE SPM-1000



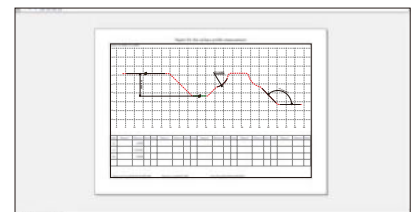
calibration



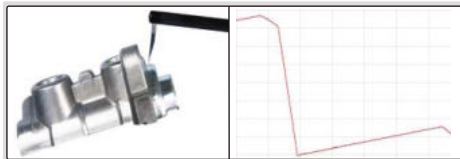
contour scanning



dimension measurement



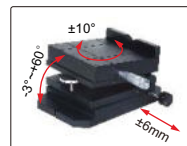
data output



- Software is included, for surface profile measurement and data output
- Probe compensation
- Output as format txt, csv, etc.
- Large range design, the leverage ratio is 1:2.2, maintain the original accuracy of the sensor
- The overall structure of the Z-axis sensor does not have any elastic components, ensuring the measuring force is constant regardless the position of probe

SPECIFICATION

| | |
|----------------------------|--|
| X axis measuring range | 140mm |
| X axis resolution | 0.2μm |
| X axis straightness | 0.8μm/100mm |
| X axis traverse speed | 0.1~10mm/s |
| Z axis measuring range | ±20mm |
| Z axis resolution | 0.05μm |
| Z axis traverse speed | 0.5~10mm/s |
| Linear accuracy | ±(1.5+ 0.2H)μm, H is measuring height in mm |
| Angular measuring accuracy | ±2' |
| Arc measuring accuracy | ±(2+R/8)μm, R is 2~10mm standard ball |
| Radius of probe tip | 25μm |
| Traverse direction | backward |
| Measuring force | 6.86~9.8mN |
| Measuring unit | mm/inch |
| Traceable angle | 72° (upward), 87° (downward) |
| Drive mode | motor |
| Travel of Z axis | 430mm |
| Dimension (L×W×H) | 1200×700×1780mm |
| Power supply | 220±5%V, 50Hz |
| Weight | 320kg |



stage (included)



vise (included)



standard balls (included)

STANDARD DELIVERY

| | |
|------------------------|--------------|
| Main unit | 1 pc |
| Standard probe and arm | 1 pc of each |
| Standard block | 2 pcs |
| Standard ball | 2 pcs |
| Standard shaft | 1 pc |
| Stage | 1 pc |
| Vise | 1 pc |
| Measuring arm | 1 pc |
| Computer | 1 pc |
| Measurement software | 1 pc |
| Printer | 1 pc |
| Installation tools | 1 set |



standard blocks (included)



standard shaft (included)

OPTIONAL ACCESSORY

| | |
|---------------|------------------|
| Probe and arm | refer to details |
|---------------|------------------|

ROUGHNESS TESTER CODE ISR-C002

CAN BE OPERATED BY
MOBILE PHONES OR COMPUTERS

BLUETOOTH

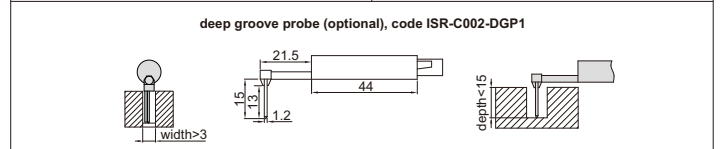
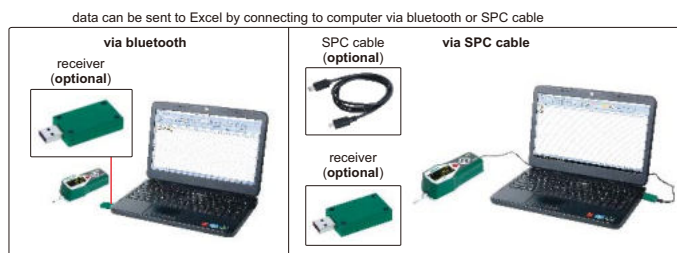
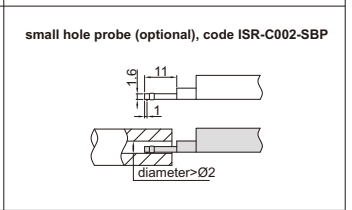
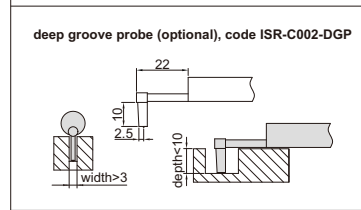
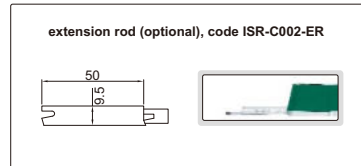
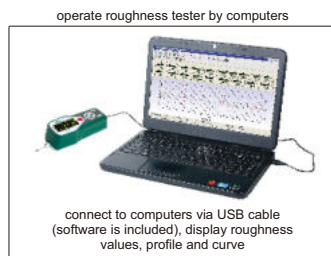
DATA
OUTPUT

- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 21 roughness parameters
- Display roughness value, profile and curve
- Memory of maximum 100 results
- Automatic power off



VIDEO

software CD (included)



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 | 320μm (-160μm~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-off | 1 to 5 | |
| Moving speed | 0.5mm/s, 1mm/s | |
| Memory | 100 measurement results | |
| Output | bluetooth and USB | |
| Power | built-in rechargeable battery | |
| Dimension (L×W×H) | 141×55×40mm | |
| Weight | 400g | |

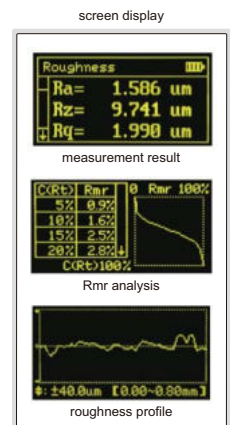
STANDARD DELIVERY

| | |
|-------------------------------|--------------|
| Main unit | 1 pc |
| Standard probe | 1 pc |
| Calibration block and support | 1 pc of each |
| Adjustable stand | 1 pc |
| Probe cover | 1 pc |
| Software and USB cable | 1 pc |
| AC/DC adapter | 1 pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|-------------------|
| Extension rod | ISR-C002-ER |
| Transverse rod | ISR-C002-TR |
| Tiny hole probe | ISR-C002-SBP |
| Deep groove probe | ISR-C002-DGP |
| Deep groove probe | ISR-C002-DGP1* |
| Light duty test stand | ISR-C002-STAND1 |
| Heavy duty test stand | ISR-C002-STAND |
| Bluetooth printer | ISR-C002-PRINTER |
| Receiver | ISR-C300-RECEIVER |
| SPC cable | ISR-C300-SPC |

*Need to be delivered with roughness tester ISR-C002



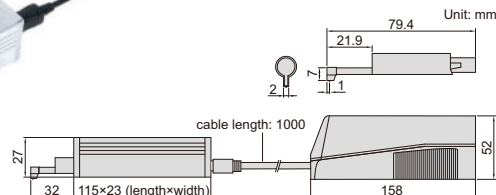
ROUGHNESS TESTER (SEPARABLE TYPE) CODE ISR-C300

CAN BE OPERATED BY
COMPUTER OR MOBILE PHONE

TOUCH SCREEN

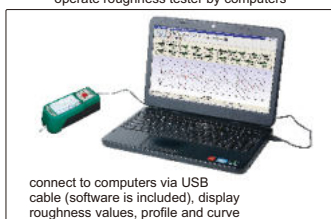
BLUETOOTH

DATA
OUTPUT



- Roughness tester can be operated by mobile phone (only android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off

operate roughness tester by computers



operate roughness tester by mobile phones

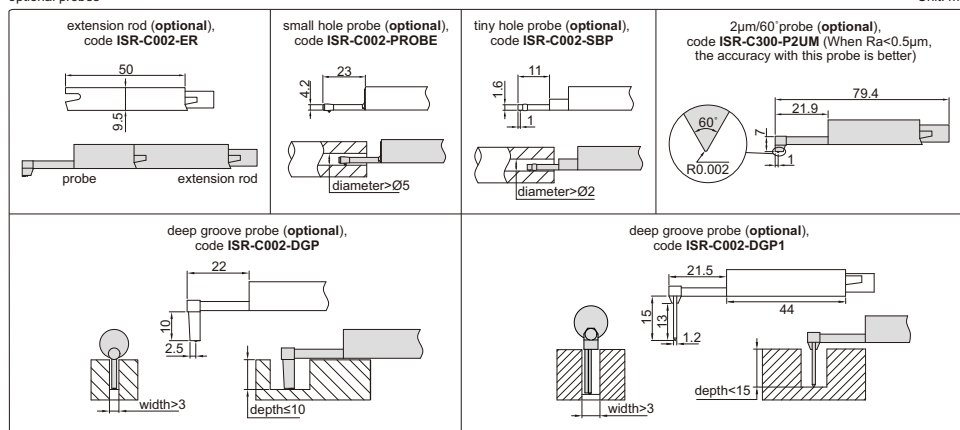


data can be sent to Excel by connecting to computer via bluetooth or SPC cable

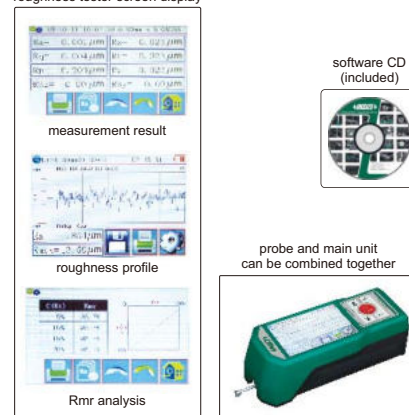


optional probes

Unit: mm



roughness tester screen display



SPECIFICATION

| | | |
|---------------------------|---------------------|--|
| Parameters | | Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax |
| Range | X axis | 17.5mm |
| | Z axis | 320µm (-160µm~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 | | 1~5 |
| Moving speed | | 0.135mm/s, 0.5mm/s, 1mm/s |
| Memory | | 100 measurement results |
| Output | | bluetooth and USB |
| Power | | built-in rechargeable battery |
| Dimension (L×W×H) | | 158×64×52mm |
| Weight | | 400g |

magnetic stand adapter (included)

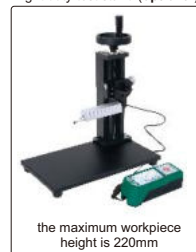


height gage adapter (optional)



NOTE: Please check whether the adapter can fit your height gages. When using INSIZE height gages, please use the dial test indicator holder of height gages

light duty test stand (optional)



heavy duty test stand (optional)



To be continued

Continued from previous page

bluetooth printer (optional)



adjustable stand (included)



STANDARD DELIVERY

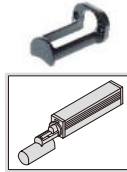
| | |
|-----------------------------------|-------------|
| Main unit | 1pc |
| Standard probe | 1pc |
| Calibration block and support | 1pc of each |
| Connecting cable (long and short) | 1pc of each |
| Magnetic stand adapter | 1pc |
| Adjustable stand | 1pc |
| Touch pen | 1pc |
| Software and USB cable | 1pc |
| AC/DC adapter | 1pc |

OPTIONAL ACCESSORY

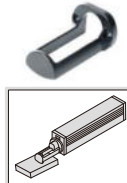
| | |
|---------------------------------|-------------------|
| Extension rod | ISR-C002-ER |
| Small hole probe | ISR-C002-PROBE |
| Tiny hole probe | ISR-C002-SBP |
| Deep groove probe | ISR-C002-DGP |
| Deep groove probe | ISR-C002-DGP1* |
| 2µm/60° probe | ISR-C300-P2UM |
| Bluetooth printer | ISR-C002-PRINTER |
| Height gage adapter | ISR-C300-LB1 |
| Receiver | ISR-C300-RECEIVER |
| SPC cable | ISR-C300-SPC |
| Support for flat surface | ISR-C300-COVER1 |
| Support for cylindrical surface | ISR-C300-COVER2 |
| Light duty test stand | ISR-C002-STAND1 |
| Heavy duty test stand | ISR-C002-STAND |

probe support (optional)

support for cylindrical surface



support for flat surface



*Need to be delivered with roughness tester **ISR-C300**

**ROUGHNESS TESTER (BASIC TYPE)
CODE ISR-C003**

ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES



SPECIFICATION

| | | |
|-------------------|---|---------------|
| Parameters | Ra, Rz, Rq, Rt | |
| Range | Ra, Rq: 0.05~15µm Rz, Rt: 0.1~50µm | |
| Accuracy | ±10% | |
| Resolution (Ra) | 0.01µm | |
| Probe | type | piezoelectric |
| | stylus radius/angle | 10µm/90° |
| | stylus material | diamond |
| Measuring force | 5mN | |
| Measuring unit | µm/µin | |
| 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 | |
| Moving speed | 0.75mm/s | |
| Power | built-in rechargeable battery | |
| Dimension (L×W×H) | 106×70×24mm | |
| Weight | 200g | |



calibration block (included)



- Unit: µm, µin
- Automatic power off

STANDARD DELIVERY

| | |
|-------------------|------|
| Main unit | 1 pc |
| Calibration block | 1 pc |
| AC/DC adapter | 1 pc |

fixture for small shafts (optional)



application

OPTIONAL ACCESSORY

| | |
|--------------------------|------------------|
| Fixture for small shafts | ISR-C003-FIXTURE |
|--------------------------|------------------|

**SURFACE ROUGHNESS SPECIMEN SET
CODE ISR-CS130-W**



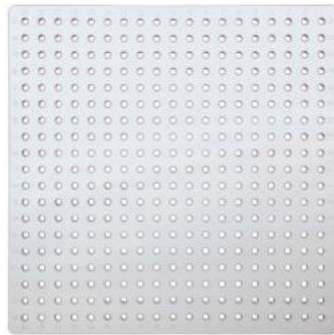
- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

| Machining method | Roughness (Ra) | Roughness (Rz) | Quantity |
|--------------------|---------------------------------|--------------------------|----------|
| Flat lapping | 0.05, 0.1, 0.2µm | 0.55, 1, 1.6µm | 3 pcs |
| | 2, 4, 8µin | | |
| Reaming | 0.4, 0.8, 1.6µm | 3, 6, 10µm | 3 pcs |
| | 16, 32, 63µin | | |
| Plain grinding | 0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm | 0.55, 1, 1.6, 3, 6, 10µm | 6 pcs |
| | 2, 4, 8, 16, 32, 63µin | | |
| Horizontal milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm | 2.5, 4, 8, 16, 32, 50µm | 6 pcs |
| | 16, 32, 63, 125, 250, 500µin | | |
| Vertical milling | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm | 2.5, 4, 8, 16, 32, 50µm | 6 pcs |
| | 16, 32, 63, 125, 250, 500µin | | |
| Turning | 0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm | 2.5, 4, 8, 16, 32, 50µm | 6 pcs |
| | 16, 32, 63, 125, 250, 500µin | | |

JIG SET FOR CMM CODE ISY-600



acrylic tray (included)



ISY-600

application example



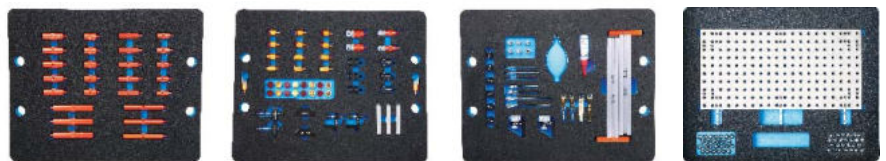
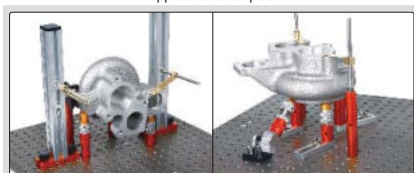
| Product | Code | Size (mm) | Quantity |
|--------------------------------|----------------|-----------|----------|
| stand | ISY-600-80001 | Ø12×50 | 6 |
| | ISY-600-80002 | Ø12×30 | 6 |
| | ISY-600-80007 | Ø12×20 | 6 |
| stand | ISY-600-80003 | Ø16×50 | 6 |
| | ISY-600-80004 | Ø16×30 | 6 |
| | ISY-600-80008 | Ø16×20 | 6 |
| stand | ISY-600-80005 | Ø20×50 | 6 |
| | ISY-600-80006 | Ø20×30 | 6 |
| | ISY-600-80009 | Ø20×20 | 6 |
| spring stand | ISY-600-800010 | — | 2 |
| universal support with damping | ISY-600-800012 | — | 2 |
| stand with fine adjustment | ISY-600-800013 | Ø20×55-78 | 2 |

| Product | Code | Size (mm) | Quantity |
|---------------------------------------|----------------|------------|----------|
| magnetic stand (magnetic top surface) | ISY-600-800014 | Ø20×20 | 4 |
| stand for slice parts | ISY-600-800015 | Ø20×20 | 2 |
| adaptor | ISY-600-800016 | Ø20×15 | 6 |
| clamping screw for base plate | ISY-600-800017 | — | 2 |
| V shaped support | ISY-600-800018 | Ø20×25 | 2 |
| clamping screw | ISY-600-800019 | — | 6 |
| sliding support plate | ISY-600-800020 | 68×20×10 | 6 |
| clip | ISY-600-800021 | 12×70 | 5 |
| chuck support | ISY-600-800022 | — | 2 |
| clip stand | ISY-600-800023 | Ø6×80 | 2 |
| | ISY-600-800024 | Ø6×40 | 3 |
| aluminum support head | ISY-600-800025 | — | 3 |
| nylon support head | ISY-600-800026 | — | 3 |
| wrench | ISY-600-800027 | Ø8×48 | 2 |
| base plate | ISY-600-800028 | 400×400×15 | 1 |

JIG SET FOR CMM CODE ISY-100



application examples



ISY-100






To be continued

Continued from previous page

| Product | Code | Size (mm) | Quantity | Application |
|---|----------------|--|----------|--|
|  | ISY-100-1001 | Ø16×30 | 5 |  |
| | ISY-100-1002 | Ø16×50 | 5 | |
| | ISY-100-1003 | Ø16×100 | 3 | |
|  | ISY-100-1004 | Ø20×30 | 5 | |
| | ISY-100-1005 | Ø20×50 | 5 | |
| | ISY-100-1006 | Ø20×100 | 3 | |
| stand with fine adjustment | ISY-100-2001 | Ø16×45~60 | 2 | height adjustment: 45~60mm |
| stand with fine adjustment | ISY-100-2003 | Ø20×45~60 | 2 | |
| horizontal spring stand | ISY-100-4001 | — | 2 | |
| horizontal screw stand | ISY-100-5001 | — | 2 | |
| magnetic stand (magnetic top surface) | ISY-100-7001 | Ø20×25 | 3 | |
| stand for slice parts | ISY-100-8001 | Ø20×25 | 2 | ISY-100-8001 and ISY-100-8002 use cooperatively  |
| clamping stand for slice parts | ISY-100-8002 | | 1 | |
| clip | ISY-100-1201 | — | 2 | |
| clip | ISY-100-1301 | — | 2 | |
| clip stand | ISY-100-1401 | Ø6×60 | 2 |  |
| | ISY-100-1402 | Ø6×100 | 2 | |
| vertical square column | ISY-100-3003 | 30×30×250 | 2 | |
| sliding support plate | ISY-100-1801 | 78×20×10 | 3 | |
| clamping screw | ISY-100-2301 | Ø8×20 | 6 | |
| screw | ISY-100-2302 | Ø8×20 | 6 | |
| base plate | ISY-600-400200 | 400×400×12 hole size: M8×1.25 hole center distance: 20 | 2 pieces | — |

| Product | Code | Size (mm) | Quantity | Application |
|------------------|---------------|-----------|----------|---|
| wrench | ISY-100-3701 | Ø3.8×70 | 1 | — |
| wrench | ISY-100-3801 | M2.5 | 1 | — |
| | ISY-100-3802 | M5 | 1 | — |
| | ISY-100-3803 | M6 | 1 | — |
| 45° stand | ISY-100-9001 | — | 2 |  |
| V shaped support | ISY-100-1901 | — | 2 |  |
| V shaped support | ISY-100-1902 | — | 2 |  |
| marker | ISY-6100-1501 | — | 52* |  |
| dust cleaner | ISY-100-3501 | — | 1 | — |
| lubricating oil | ISY-100-3601 | — | 1 | — |

* Letter A~Z, number 0~25

| Product | Code | Quantity | Material | Application |
|---|---------------|----------|----------|---|
|  | ISY-100-27016 | 2 | aluminum |  |
| | ISY-100-27018 | 2 | nylon | |
|  | ISY-100-27026 | 2 | aluminum | |
| | ISY-100-27028 | 2 | nylon | |
|  | ISY-100-27036 | 2 | aluminum | |
| | ISY-100-27038 | 2 | nylon | |
|  | ISY-100-27046 | 2 | aluminum | |
| | ISY-100-27048 | 2 | nylon | |
|  | ISY-100-27056 | 2 | aluminum | |
| | ISY-100-27058 | 2 | nylon | |
|  | ISY-100-27066 | 2 | aluminum | |
| | ISY-100-27068 | 2 | nylon | |
|  | ISY-100-27076 | 2 | aluminum | |
| | ISY-100-27078 | 2 | nylon | |

JIGS FOR CMM (ANVIL Ø6mm)

CAN BE CUSTOMIZED



ISY-400



ISY-400-1



ISY-400-2



ISY-400-3



ISY-400-4



ISY-400-5



ISY-400-6

| Code | Product | Remark |
|---------|---------|---|
| ISY-400 | jig set | including 3 pcs ISY-400-1, 9 pcs ISY-400-2, 9 pcs ISY-400-3, 1 pc ISY-400-4, 3 pcs ISY-400-5, 3 pcs ISY-400-6 |

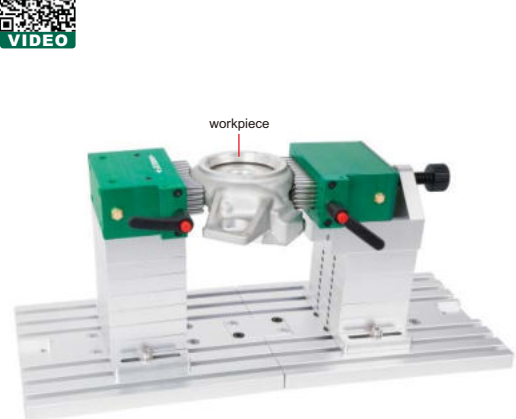
(mm)

| Code | Product | Size | Anvil area | Anvil stroke |
|-----------|--------------|-----------|------------|--------------|
| ISY-400-1 | spring anvil | 135×60×90 | 36×100 | 24 |

| Code | Product | Size (mm) |
|-----------|------------------|------------|
| ISY-400-2 | block | 120×60×20 |
| ISY-400-3 | block | 120×60×30 |
| ISY-400-4 | base plate | 500×500×12 |
| ISY-400-5 | connecting plate | 130×120×12 |
| ISY-400-6 | clamp handle | — |

JIGS FOR CMM (ANVIL Ø6mm)

CAN BE CUSTOMIZED



ISY-500



ISY-500-1



ISY-500-2



ISY-500-3



ISY-500-4



ISY-500-5



ISY-500-6



ISY-500-7

| Code | Product | Remark |
|---------|---------|--|
| ISY-500 | jig set | including 1pc ISY-500-1, 1 pc ISY-500-2, 2 pcs ISY-500-3, 10 pcs ISY-500-4, 2 pcs ISY-500-5, 1 pc ISY-500-6, 2 pcs ISY-500-7 |

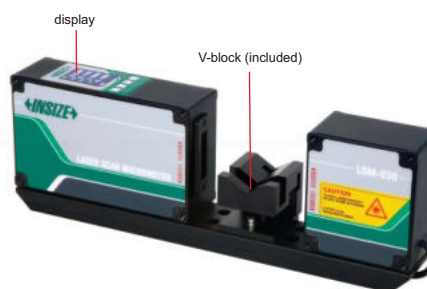
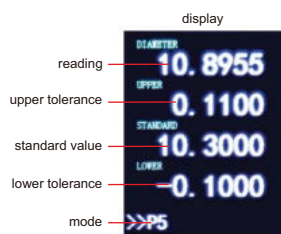
(mm)

| Code | Product | Size | Anvil area | Anvil stroke |
|-----------|--|-------------|------------|--------------|
| ISY-500-1 | spring anvil | 135×60×90 | 36×100 | 24 |
| ISY-500-2 | adjustable spring anvil (range 0-40mm) | 134×120×130 | 36×100 | 24 |

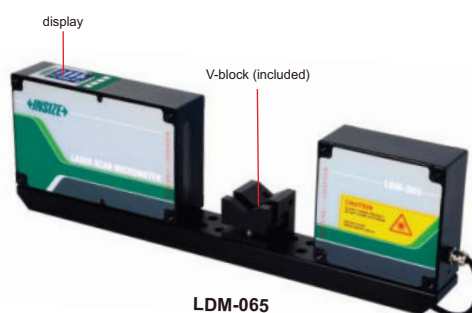
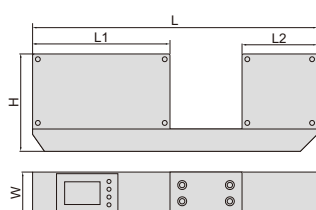
| Code | Product | Size (mm) |
|-----------|--------------------------------|------------|
| ISY-500-3 | base plate | 300×240×20 |
| ISY-500-4 | block | 120×90×20 |
| ISY-500-5 | connecting plate | 170×90×15 |
| ISY-500-6 | connecting block of base plate | 80×50×10 |
| ISY-500-7 | clamp handle | — |



LASER SCAN MICROMETERS



LDM-030



LDM-065

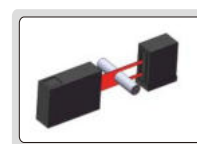
- Measure external diameter, ellipticity, run-out, maximum diameter of tools, etc.
- Can be used for transparent or non transparent workpieces
- Tolerance measurement
- Online or offline measurement
- Connected with computer and PLC



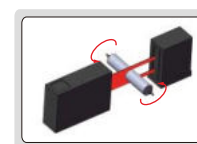
calibration gage (optional)

SPECIFICATION

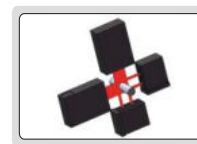
| Code | LDM-030 | LDM-065 |
|-----------------------|--|--------------|
| Measuring range | 0.1~30mm | 0.5~65mm |
| Resolution | 0.01/0.1/1/10/100µm selectable | |
| 25°C accuracy | ±(0.5+10%D)µm, D is measuring diameter in mm | |
| Repeatability | ±(0.3+5%D)µm, D is measuring diameter in mm | |
| Laser wave length | 650nm | |
| Measuring speed | 800~3200times/s (adjustable) | |
| Operation temperature | 0~50°C | |
| Operation humidity | 35~85RH without condensation | |
| Output | dual channel RS485 | |
| Alarm output | 24V, 1A | |
| Power supply | DC24V, 2A | |
| Dimension (L×W×H) | 351×52×120mm | 469×52×156mm |
| Weight | 5kg | 8kg |



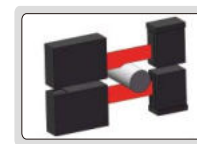
measure external diameter



measure ellipticity and run-out



two-axis measurement



large size measurement

STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1 pc |
| V-block | 1 pc |
| AC/DC adapter | 1 pc |
| RS485 cable | 1 pc |

OPTIONAL ACCESSORY

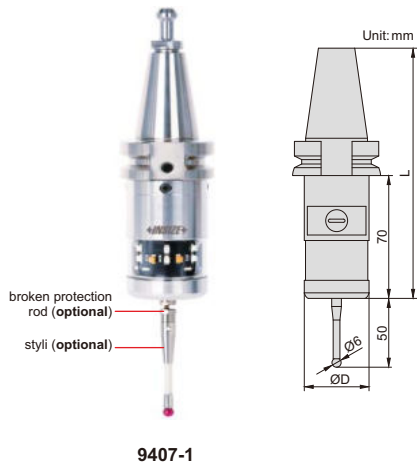
| | |
|------------------|-------------|
| Calibration gage | custom made |
|------------------|-------------|

Dimension (mm)

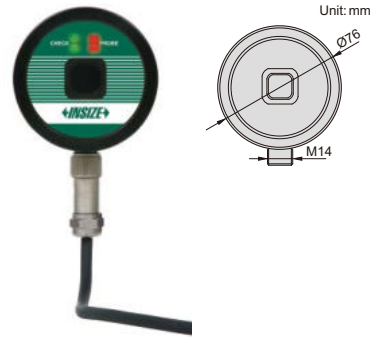
| Code | LDM-030 | LDM-065 |
|------|---------|---------|
| L | 351 | 469 |
| W | 52 | 52 |
| H | 120 | 146 |
| L1 | 170 | 203 |
| L2 | 95 | 131 |

OPTICAL TRANSMISSION PROBES FOR CNC MACHINE TOOLS

IP68
WATERPROOF

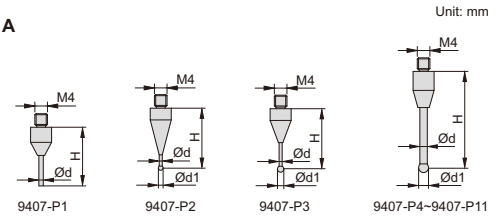


9407-1



9407-1A

- On-machine measurement
- Multi-channel transmission between probes and receivers, for anti-interference
- Transmit three kinds of signals: trigger, contact and low battery voltage
- With spindle protection function
- Optical transmission range: 1m, 3m, 5m
- Automatic power off in 3 seconds, move styli to power on



OPTICAL PROBE SPECIFICATION

| Code | 9407-1* | 9407-2* |
|--|---|---------|
| Probe length (L) | 140mm | 180mm |
| Probe diameter (ØD) | 40mm | 46.5mm |
| Trigger accuracy of styli in any one direction | 1µm | |
| Protection stroke triggered by styli in all directions | X and Y axis stroke: ±12.5°, Z axis stroke: 5mm | |
| Trigger force of styli in all directions | X and Y axis: 0.9N, Z axis: 6N | |
| Applicable spindle | BT30 | BT50 |
| Dust/waterproof | IP68 | |
| Power supply | 2×LS14250 lithium battery | |

*9407-1 can be customized to spindle below BT40, 9407-2 can be customized to spindle over BT50; HSK, SK and ISO series spindles also can be customized.

STYLI (OPTIONAL)

| Code | H | Ød | Ød1 | Material of measuring face |
|----------|------|-----|-----|----------------------------|
| 9407-P1 | 20 | 1 | — | carbide |
| 9407-P2 | 19.5 | 0.7 | 1 | ruby |
| 9407-P3 | 19 | 1.4 | 2 | ruby |
| 9407-P4 | 20 | 0.7 | 1 | ruby |
| 9407-P5 | 20 | 1.5 | 2 | ruby |
| 9407-P6 | 20 | 2 | 3 | ruby |
| 9407-P7 | 20 | 2 | 4 | ruby |
| 9407-P8 | 50 | 3 | 4 | ruby |
| 9407-P9 | 50 | 3.8 | 5 | ruby |
| 9407-P10 | 50 | 4.5 | 6 | ruby |
| 9407-P11 | 75 | 3.8 | 5 | ruby |

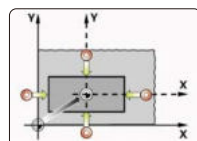
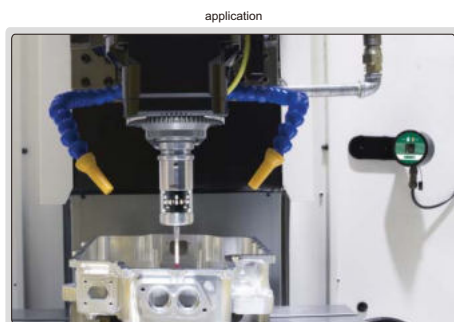
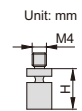
RECEIVER SPECIFICATION

| | |
|---------------------|---|
| Code | 9407-1A |
| Protection function | low battery voltage or probe transmitting signal all the time** |
| Applicable probe | code 9407-1, 9407-2 |
| Cable length | 5m |
| Dust/waterproof | IP68 |

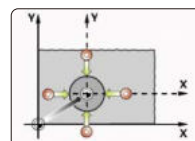
** When the battery voltage is low or the probe transmits signal all the time, the receiver will send a signal to the machine tool to stop working

BROKEN PROTECTION ROD (OPTIONAL)

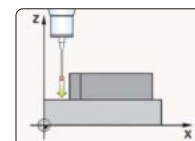
| Code | H |
|---------|------|
| 9407-R1 | 12mm |
| 9407-R2 | 22mm |



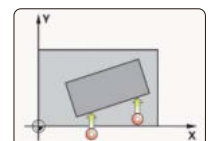
find center of rectangular boss



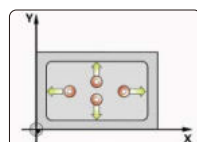
find center of the round boss



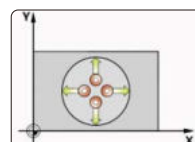
measure position of point on any axis



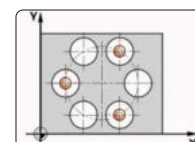
measure inclination of line



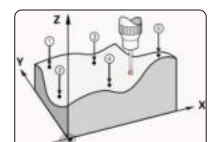
measure rectangular cavity



measure round cavity



measure center of holes



measure freeform surfaces

TOOL PRESETTER (BASIC TYPE) CODE TLP-300H



rotate tools



standard rod (included)



BT50/BT40 converter (optional)



BT50/BT30 converter (optional)

- Absolute linear scales, zero setting is not needed after power on and off

SPECIFICATION

| | |
|--------------------------------|-------------------|
| Maximum tool diameter (X axis) | Ø300mm |
| Height measuring range | 60~300mm |
| Repeatability | 0.005mm |
| Measuring accuracy | 0.02mm |
| Linear scale resolution | 0.005mm |
| Dial indicator graduation | 0.01mm |
| Spindle holder | BT50 |
| Power supply | 110/220V, 50/60HZ |
| Dimension (L×W×H) | 600x365x690mm |
| Weight | 68kg |

STANDARD DELIVERY

| | |
|---------------------|-------|
| Main unit | 1 pc |
| BT50 spindle holder | 1 pc |
| Standard rod | 1 pc |
| Dial indicator | 2 pcs |
| Wrench | 1 set |
| Anti-dust cover | 1 pc |

OPTIONAL ACCESSORY

| | |
|---------------------|-------------|
| BT50/BT30 converter | TLP-300H-C1 |
| BT50/BT40 converter | TLP-300H-C2 |

PROFILE PROJECTOR CODE ISP-Z3015



OPTIONAL ACCESSORY



lens



holder with clamp



swivel center support



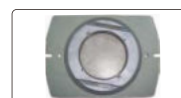
V-block with clamp



blue filter



demo sample



rotary table
(glass plate diameter 100mm)



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)

To be continued

Continued from previous page

SPECIFICATION

| | | | | | |
|------------------------|------------------------|---|----------------|----------------|-----------------|
| 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 | | | |
| | 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 | | | |
| Power supply | | 110/220V, 50/60Hz | | | |
| Dimension (L×W×H) | | 550×770×1100mm | | | |
| Weight | | 135kg | | | |

STANDARD DELIVERY

| | |
|---|-------|
| Main unit | 1 pc |
| 10X lens with half-reflection mirror and oblique illuminator mirror | 1 pc |
| Overlay chart clip | 4 pcs |
| Foot-switch | 1 pc |
| Anti-dust cover | 1 pc |
| USB cable | 1 pc |

OPTIONAL ACCESSORY

| | |
|---|--------------------|
| 20X lens with half-reflection mirror and oblique illuminator mirror | ISP-Z3015-LENS20X |
| 50X lens with half-reflection mirror | ISP-Z3015-LENS50X |
| 100X lens with half-reflection mirror | ISP-Z3015-LENS100X |
| Rotary table | ISP-Z3015-TABLE |
| Overlay chart | ISP-Z3015-CHART |
| Holder with clamp | ISP-Z3015-HOLDER |
| Swivel center support | ISP-Z3015-SUPPORT |
| V-block with clamp | ISP-Z3015-VBLOCK |
| 50mm reading scale | ISP-Z3015-SCALE50 |
| 300mm calibration scale | ISP-Z3015-RULE |
| Blue filter | ISP-Z3015-FILTER |
| Demo sample | ISP-Z3015-DEMO |

QUICK MEASUREMENT SYSTEM (WITHOUT STITCHING)



- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically



QMS-A110

SPECIFICATION

| | | |
|---------------------------|---|---|
| Code | QMS-A110 | |
| Optical lens | low-distortion lens, single-field telecentric Ø100mm | |
| View field range | 100×80mm | |
| Measurement range (X×Y) | 98×78mm | |
| Measurement accuracy * | ±3µm | |
| Repeatability | ±1µm | |
| Max.weight of workpiece | 5kg | |
| Measurement time | <2s | |
| Measurement data | 2D measurement | |
| Power supply | 220V, 50Hz, 600W | |
| Illumination system | back light | telecentric illuminator, green light |
| | ring light | 4-zone circular white high light circular (directional) low-angle green light (electric) |
| | coaxial light (optional) | vertical illuminator, white light |
| Environmental requirement | temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz | |
| Dimension (L×W×H) | 580×235×790mm | |
| Weight | 40kg | |

* The optimum temperature is 20°C±1°C
Within 80×64mm, on focal position and environment temperature at 20°C±1°C

STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Computer | 1 pc |
| Software | 1 pc |

OPTIONAL ACCESSORY

| | |
|--|------------|
| Coaxial light illumination | QMS-23-A3 |
| Data transmission function of software | QMS-23-D1 |
| CAD import function of software | QMS-23-C1 |
| Foot-switch | QMS-43-FS1 |

Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient.
- Measuring result can be stored automatically. OK items and NG items can be counted automatically.

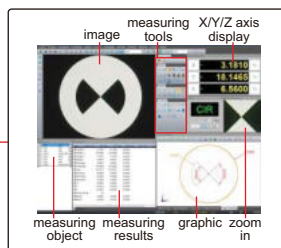


VISION MEASURING SYSTEMS

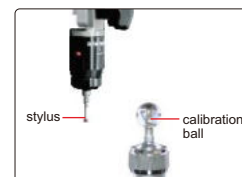


ISD-V250A

computer is included



lens with coaxial light (optional, must be installed in factory)



probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm

SPECIFICATION

| Code | ISD-V150A | ISD-V250A | ISD-V300A |
|---------------------------|--|---------------|---------------|
| Measuring range (X×Y×Z) | 150×100×150mm | 250×150×150mm | 300×200×150mm |
| Stage size | 354×228mm | 450×280mm | 500×330mm |
| Glass stage size | 210×160mm | 306×196mm | 350×250mm |
| Resolution of X/Y/Z axis | 0.5µm | | |
| Accuracy of X/Y axis | ≤(3.5+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, 0.3M pixel | | |
| Illumination | surface and contour with adjustable LED | | |
| Max. height of workpiece | 150mm | | |
| Max. weight of workpiece | 20kg | | |
| Operation system | Windows 7/8/10 | | |
| 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 |

STANDARD DELIVERY

| | |
|-------------------------|------|
| Main unit | 1 pc |
| Computer | 1 pc |
| Calibration glass chart | 1 pc |
| Clay | 1 pc |
| Foot switch | 1 pc |
| Anti-dust cover | 1 pc |

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 |
| Vision measuring system with coaxial light lens (with computer) | Code ISD-V150ACL, ISD-V250ACL, ISD-V300ACL |
| Office software | Code 7313-OFFICE |

SOFTWARE

- Operation system: Windows 7/8/10
- Language: English
- Single measuring tools:

- measure coordinate of point
- measure center coordinate and axis length of ellipse
- measure length of open curve
- measure distance of two elements

- measure center coordinate, diameter and area of circle
- measure length, width and area of rectangle
- measure length and area of closed curve

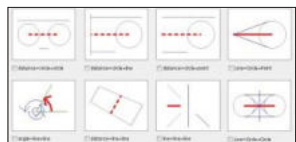
- measure distance between two points
- measure length, width and diameter of key slot
- measure angle of two lines

- measure length and diameter of arc
- measure width and diameter of ring
- measure focus distance of urface

To be continued

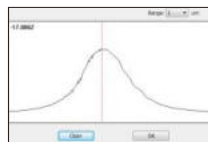
Continued from previous page

■ **Combined measuring tools:**

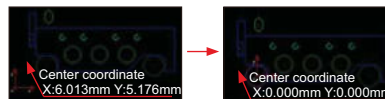


measure distance and angle of two elements

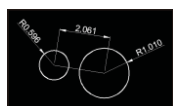
■ **Focus indicator:**



■ **Coordinate transfer:**



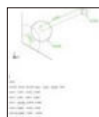
■ **Data export to CAD, EXCEL and WORD**



CAD



EXCEL



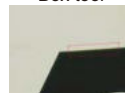
WORD

■ **Edge-detection:**

Point tool



Box tool



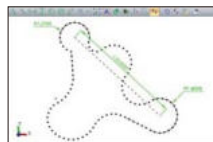
Circle tool



■ **Profile detection:**



■ **Contour scanning:**



■ **CAD measuring:**



Input CAD drawing and set reference, move the stage to make the target box in the center of crosshair, then the software will do automatic measurement

CNC VISION MEASURING SYSTEMS



programmable segmented ring light (included)

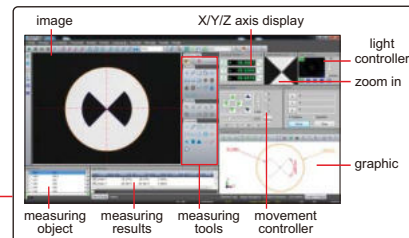


ISD-V220CNCA



controller

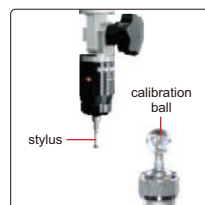
computer is included



- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement
- Measuring software is included

STANDARD DELIVERY

| | |
|-------------------------|------|
| Main unit | 1 pc |
| Software | 1 pc |
| Computer | 1 pc |
| 24" display | 1 pc |
| Len with coaxial light | 1 pc |
| Controller | 1 pc |
| Calibration glass chart | 1 pc |
| Laser positioner | 1 pc |
| Clay | 1 pc |
| Anti-dust cover | 1 pc |



stylus calibration ball

probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm



laser probe (optional) measuring accuracy is 5µm

To be continued

Continued from previous page

SPECIFICATION

| Code (manual zoom lens) | ISD-V220CNCA | ISD-V270CNCA | ISD-V370CNCA |
|------------------------------|---|--|---|
| Measuring range (X*Y*Z) | 220×120×150mm | 270×170×150mm | 370×270×150mm |
| Stage size | 450×280mm | 500×330mm | 606×466mm |
| Glass stage size | 306×196mm | 350×250mm | 450×350mm |
| 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) | | ≤(3.5+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 | 33.0X~208.6X (on 24" monitor) | | |
| Camera | Giga-bit network camera | | |
| Illumination | surface | coaxial light, programmable segmented ring light | |
| | contour | adjustable LED light | |
| View field (diagonal length) | 1.5~10.8mm | | |
| Max. height of workpiece | 150mm | | |
| Max. weight of workpiece | 30kg | | |
| Operation system | Windows 7/8/10 | | |
| Drive method | automatic | | |
| Power supply | 220V, 50/60Hz | | |
| Dimension (L*W*H) | 760×600×900mm | 760×600×900mm | 970×670×940mm |
| Weight | 146kg | 168kg | 266kg |

OPTIONAL ACCESSORY

| | |
|--------------------------|---|
| 0.5X auxiliary objective | Code: ISD-V-OB05X Working distance: 175mm Magnification: 16.5~104.3X (with manual zoom lens, on 24" monitor) |
| 2X auxiliary objective | Code: ISD-V-OB2X Working distance: 36mm Magnification: 66~417.2X (with manual zoom lens, on 24" monitor) |
| Probe | Code: ISD-V-PROBE Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball |
| Laser probe | Code: ISD-V-LASER |
| Office software | Code: 7313-OFFICE |
| Desk | Code: ISD-V-DESK |

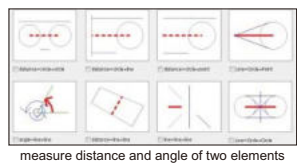


SOFTWARE

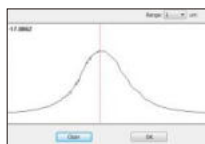
- **Operation system:** Windows 7/8/10
- **Language:** English
- **Single measuring tools:**

| | | | |
|--|--|--|------------------------------------|
| measure coordinate of point | measure center coordinate, diameter and area of circle | measure distance between two points | measure length and diameter of arc |
| measure center coordinate and axis length of ellipse | measure length, width and area of rectangle | measure length, width and diameter of key slot | measure width and diameter of ring |
| measure length of open curve | measure length and area of closed curve | measure angle of two lines | measure focus distance of surface |
| measure distance of two elements | | | |

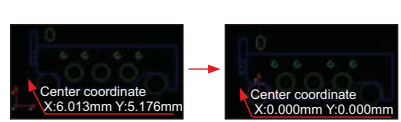
■ **Combined measuring tools:**



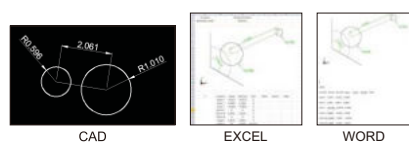
■ **Focus indicator:**



■ **Coordinate transfer:**



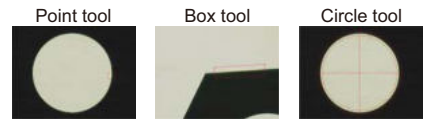
■ **Data export to CAD, EXCEL and WORD**



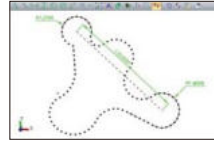
■ **Profile detection:**



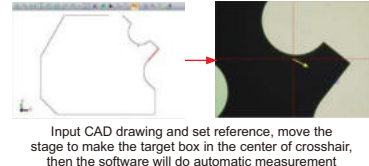
■ **Edge-detection:**



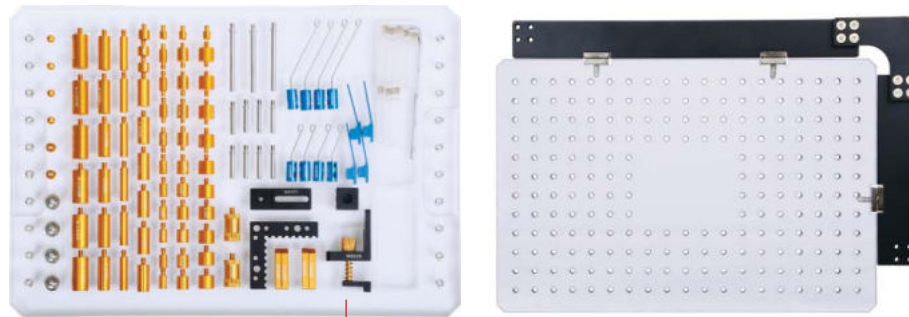
■ **Contour scanning:**



■ **CAD measuring:**



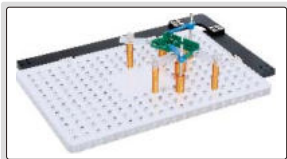
JIG SET FOR VISION MEASURING SYSTEMS CODE ISY-700


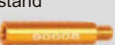


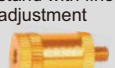


acrylic tray (included)

ISY-700

application example

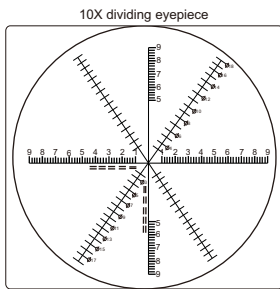


| Product | Code | Size (mm) | Quantity |
|--|---------------|-----------|----------|
|  clip | ISY-700-90001 | 7×34 | 4 |
|  clip | ISY-700-90002 | Ø1.5×24 | 4 |
| | ISY-700-90003 | Ø1.5×50 | 4 |
|  clip stand | ISY-700-90004 | Ø4×20 | 8 |
| | ISY-700-90005 | Ø4×46 | 3 |
|  spherical support head | ISY-700-90006 | — | 4 |
|  stand | ISY-700-90007 | Ø6×10 | 6 |
| | ISY-700-90008 | Ø6×25 | 6 |
| | ISY-700-90019 | Ø6×6 | 3 |
|  stand | ISY-700-90009 | Ø9×7 | 3 |
| | ISY-700-90010 | Ø9×10 | 6 |
| | ISY-700-90011 | Ø9×20 | 6 |
| | ISY-700-90012 | Ø9×25 | 6 |
|  stand | ISY-700-90013 | Ø12×10 | 6 |
| | ISY-700-90014 | Ø12×25 | 6 |
|  stand for slice parts | ISY-700-90015 | Ø6×10 | 4 |
| | ISY-700-90016 | Ø9×10 | 4 |
| | ISY-700-90017 | Ø12×10 | 4 |
|  stand with fine adjustment | ISY-700-90018 | Ø12×20~25 | 2 |

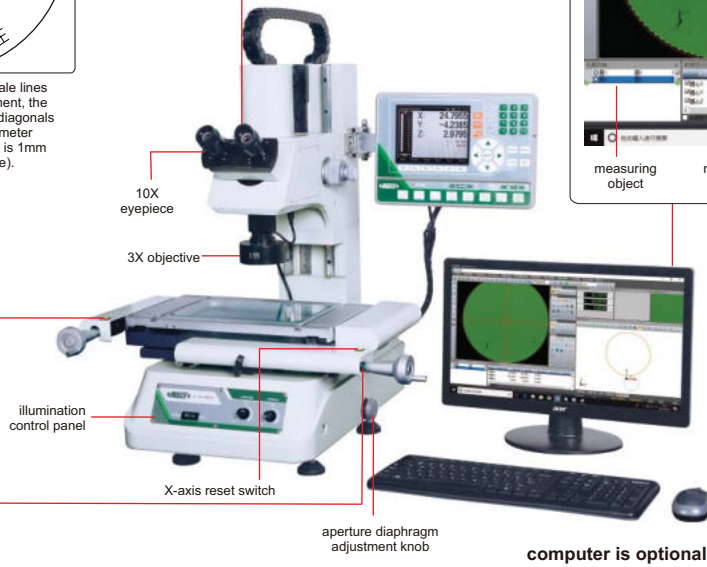
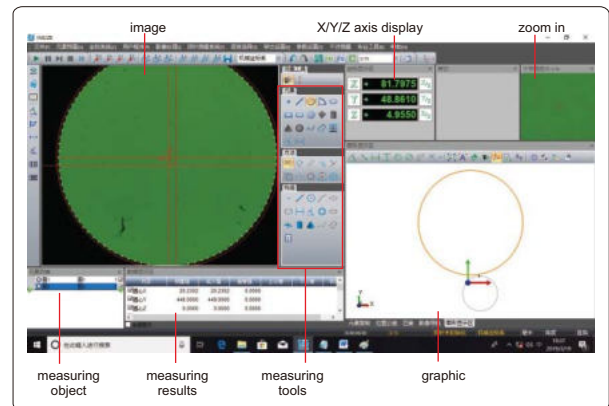
| Product | Code | Size (mm) | Quantity |
|--|---------------|------------|----------|
|  adapter for square support | ISY-700-90020 | — | 2 |
|  clamping screw | ISY-700-90021 | — | 4 |
|  L-shaped positioning plate | ISY-700-90022 | 50×50×6 | 1 |
|  sliding support plate | ISY-700-90023 | 30×12×5 | 4 |
|  square support | ISY-700-90024 | 20×16×16 | 1 |
|  base for square support | ISY-700-90025 | 45×16×6 | 1 |
|  spring stand | ISY-700-90026 | — | 1 |
|  acrylic sliding support plate | ISY-700-90028 | 45×12×5 | 8 |
|  wrench | ISY-700-90029 | M3 | 1 |
|  acrylic base plate | ISY-700-90030 | 300×200×12 | 1 |



TOOLMAKER MICROSCOPE



The horizontal and vertical scale lines are used for length measurement, the graduation is 0.2mm. The two diagonals scale lines are used for diameter measurement, the graduation is 1mm (when using 1X objective).



computer is optional

SPECIFICATION

| | |
|--------------------------|--|
| Code | ISD-VMM215 (binocular) |
| X/Y axis travel | 200×100mm |
| Z axis travel | 150mm |
| Metal stage size | 404×228mm |
| Glass stage size | 260×160mm |
| 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 | 2µm |
| Camera | 1/3" color CCD, 0.3M pixel |
| Optical magnification | 30X (with 3X objective) |
| Image magnification | 114X (on 19" monitor) |
| Illumination | surface and contour with adjustable LED |
| Max. weight of workpiece | 25kg |
| Power supply | 100V~240V, 50/60Hz |
| Operation system | Windows 7/8/10 |
| Drive method | manual |
| Dimension (L×W×H) | 540×667×850mm |
| Weight | 110kg |

DATA PROCESSING UNIT

| | |
|----------|--|
| Output | RS232 |
| Function | simple measuring tools |
| | measure coordinate of points |
| | measure lines |
| | measure center coordinate, radius of circle with three points |
| | measure distances between two objects |
| | measure angles |
| | set origin of coordinate |
| | skew and calibrate the workpiece |
| | measure rectangle (including length, width, perimeter and center coordinate) |
| | measure thread (including thread diameter, screw pitch, screw angle) |
| | measure slot (including center coordinate, length, width) |

STANDARD DELIVERY

| | |
|-------------------------|------|
| Main unit | 1 pc |
| Video card with dongle | 1 pc |
| Software disc | 1 pc |
| Calibration glass chart | 1 pc |
| Demo sample | 1 pc |
| Foot switch | 1 pc |
| 3X objective | 1 pc |

OPTIONAL ACCESSORY

| | |
|---------------------------------------|-------------------------------|
| 1X objective | ISD-VMM-LENS1X |
| 5X objective | ISD-VMM-LENS5X |
| 10X objective | ISD-VMM-LENS10X |
| Toolmaker microscopes (with computer) | Code: ISD-VMM215A (binocular) |

To be continued

Continued from previous page

SOFTWARE

- **Operation system:** Windows 7/8/10
- **Language:** English
- **Single measuring tools:**

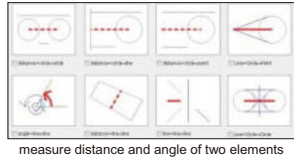
- measure coordinate of point
- measure center coordinate and axis length of ellipse
- measure length of open curve
- measure distance of two elements

- measure center coordinate, diameter and area of circle
- measure length, width and area of rectangle
- measure length and area of closed curve

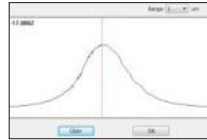
- measure distance between two points
- measure length, width and diameter of key slot
- measure angle of two lines

- measure length and diameter of arc
- measure width and diameter of ring
- measure focus distance of urface

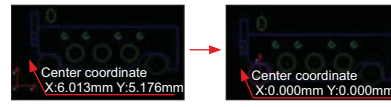
■ **Combined measuring tools:**



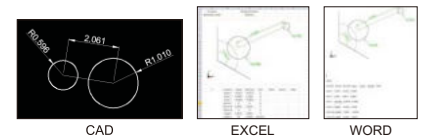
■ **Focus indicator:**



■ **Coordinate transfer:**



■ **Data export to CAD, EXCEL and WORD**



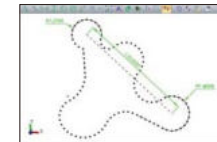
■ **Profile detection:**



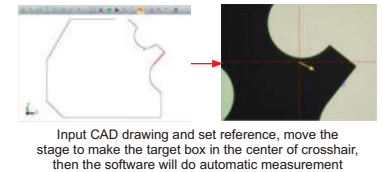
■ **Edge-detection:**



■ **Contour scanning:**



■ **CAD measuring:**

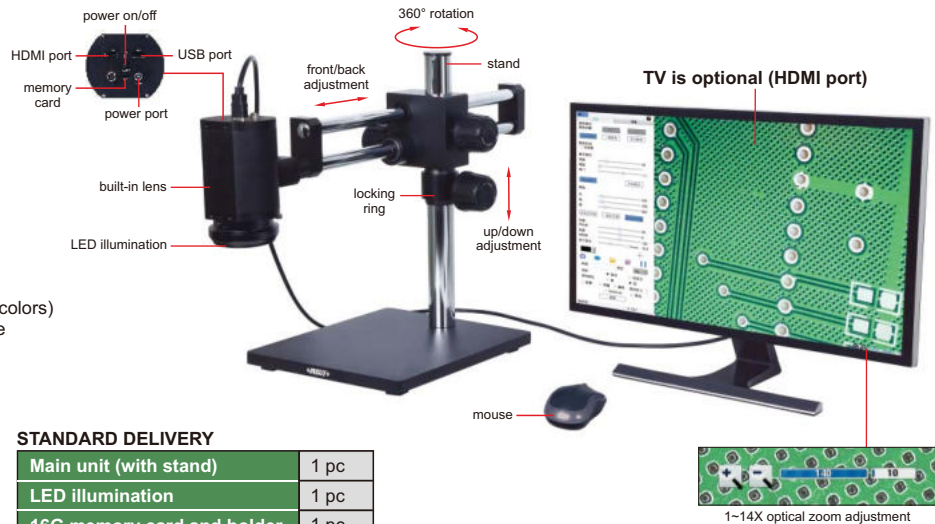


**AUTO FOCUS DIGITAL MICROSCOPE (LARGE VIEW FIELD)
CODE 5302-AF105**

- MEASUREMENT
- AUTO FOCUS
- TAKE PICTURES AND VIDEOS



- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to memory card
- Connected to TV by HDMI port
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse



SPECIFICATION

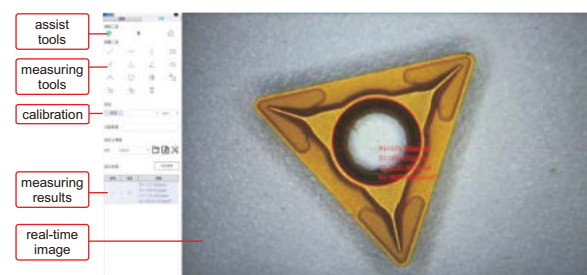
| | |
|---------------------|------------------------|
| Magnification | 1.8X~27.5X (on 28" TV) |
| Sensor | 1/2.8" CMOS |
| Pixel | 2M |
| Resolution | 1920×1080 |
| Frame rate | 60fps |
| Auto focus distance | 100mm~∞ |
| Output | HDMI |
| Power supply | power adapter |
| Dimension (L×W×H) | 500×280×410mm |
| Weight | 17kg |

STANDARD DELIVERY

| | |
|----------------------------|-------|
| Main unit (with stand) | 1 pc |
| LED illumination | 1 pc |
| 16G memory card and holder | 1 pc |
| Mouse | 1 pc |
| HDMI cable (for TV) | 1 pc |
| Power adapter | 2 pcs |

| Focus distance | Adjustable magnification (on 28" TV) | View field | Measuring accuracy |
|----------------|--------------------------------------|-----------------|--------------------|
| 100mm | 4.5~27.5X | 24×14~161×90mm | 0.02mm |
| 150mm | 3~21X | 30×17~240×128mm | 0.02mm |
| 200mm | 2.3~17.5X | 38×20~305×176mm | 0.02mm |
| 250mm | 2~15X | 42×24~320×210mm | 0.02mm |
| 270mm | 1.8~14.4X | 43×25~378×240mm | 0.02mm |

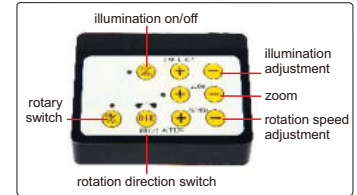
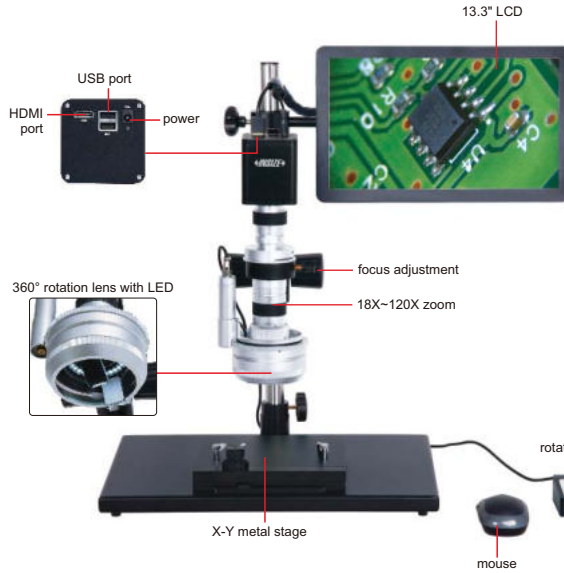
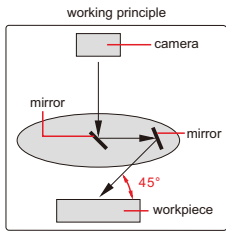
MEASURING SOFTWARE (INCLUDED)



3D MOTORIZED ROTATION MICROSCOPE (WITH DISPLAY) CODE 5301-D400

SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLE

TAKE PICTURES AND VIDEOS



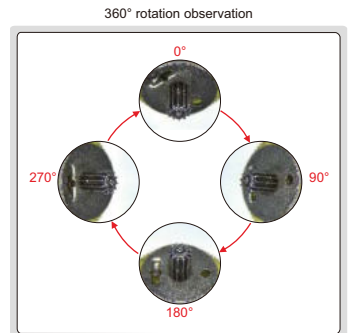
- 1080P high-definition 3D image
- Take pictures and videos, save to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio and gain are adjustable

SPECIFICATION

| | |
|-------------------|-------------------|
| Magnification | 18X~120X |
| View field | 2.4×1.5mm~16×9mm |
| Focus distance | 20mm |
| View angle | 45° |
| Sensor | 1/2.8" CMOS |
| Pixel | 2M |
| Resolution | 1920×1080 |
| Frame rate | 60fps |
| Output | HDMI |
| Rotation speed | 2~5RPM |
| Power supply | 110/220V, 50/60Hz |
| Dimension (L×W×H) | 570×300×430mm |
| Weight | 10kg |

STANDARD DELIVERY

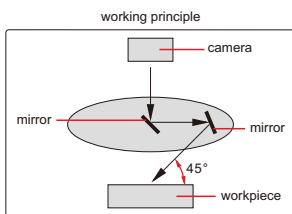
| | |
|---------------------|-------|
| Main unit | 1 pc |
| Rotation controller | 1 pc |
| X-Y metal stage | 1 pc |
| 16G USB flash disk | 1 pc |
| White/black plate | 1 pc |
| Mouse | 1 pc |
| Power adapter | 2 pcs |



3D MANUAL ROTATION MICROSCOPE (WITH DISPLAY) CODE 5313-S407

SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLES

TAKE PICTURES AND VIDEOS

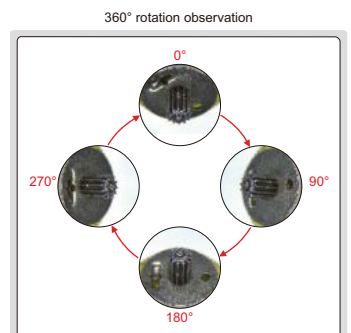


SPECIFICATION

| | |
|-------------------|------------------|
| Magnification | 18X~120X |
| View field | 2.4×1.5mm~16×9mm |
| Focus distance | 20mm |
| View angle | 45° |
| Sensor | 1/2.8" CMOS |
| Pixel | 2M |
| Resolution | 1920×1080 |
| Frame rate | 60fps |
| Output | HDMI |
| Power supply | 220V, 50/60Hz |
| Dimension (L×W×H) | 570×300×430mm |
| Weight | 10kg |

STANDARD DELIVERY

| | |
|--------------------|-------|
| Main unit | 1 pc |
| X-Y metal stage | 1 pc |
| 16G USB flash disk | 1 pc |
| White/black plate | 1 pc |
| Mouse | 1 pc |
| Power adapter | 2 pcs |

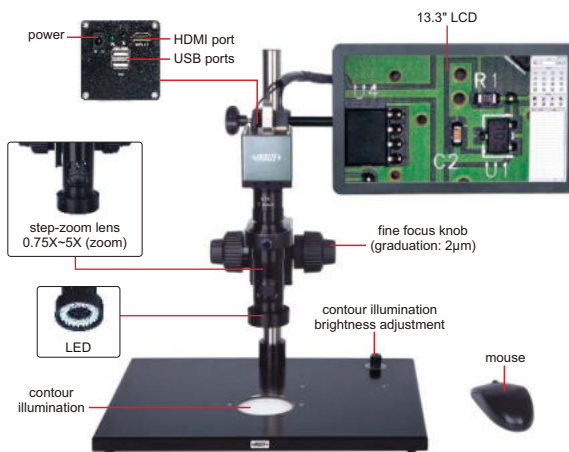


DIGITAL MEASURING MICROSCOPE (WITH DISPLAY)

MEASUREMENT

BUILT-IN SOFTWARE
WITHOUT COMPUTER

TAKE PICTURES



- 1080P high-definition image
- Built-in software without computer, operation by mouse
- Take pictures, saved to USB flash disk
- Measurement results can be output to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

ISM-DL301 (with contour illumination)

SPECIFICATION

| | |
|-------------------|--|
| Code | ISM-DL301 (with contour illumination) |
| Magnification | 15X~100X |
| Sensor | 1/2" CMOS |
| Pixel | 2M |
| Resolution | 1920×1080 |
| Frame rate | 60fps |
| Output | HDMI |
| Power supply | power adapter |
| Dimension (L×W×H) | 570×300×430mm |
| Weight | 6.5kg |



STANDARD DELIVERY

| | |
|------------------------|-------|
| Main unit | 1 pc |
| 0.5X camera adapter | 1 pc |
| 1X auxiliary objective | 1 pc |
| Calibration plate | 1 pc |
| 16G USB flash disk | 1 pc |
| White/black plate | 1 pc |
| Mouse | 1 pc |
| HDMI cable | 1 pc |
| Power adapter | 3 pcs |

MAGNIFICATION AND MEASURING ACCURACY

| Objective magnification | Image magnification | Measuring accuracy |
|-------------------------|---------------------|--------------------|
| 0.75X | 15X | ±8µm |
| 1X | 20X | ±7µm |
| 1.5X | 30X | ±6µm |
| 2X | 40X | ±6µm |
| 2.5X | 50X | ±6µm |
| 3X | 60X | ±5µm |
| 3.5X | 70X | ±5µm |
| 4X | 80X | ±4µm |
| 4.5X | 90X | ±4µm |
| 5X | 100X | ±4µm |

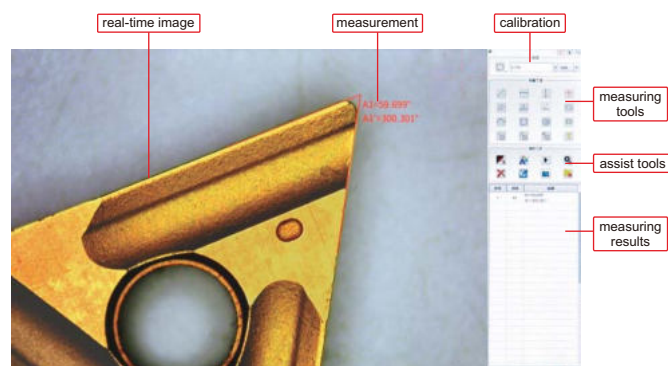
OPTIONAL ACCESSORY

| | |
|-----------------------------------|---------------|
| 1X camera adapter | ISM-DL-CA1X |
| 2X auxiliary objective | ISM-DL-OB2X |
| X-Y glass stage (travel: 74×60mm) | ISM-DL-STAGE |
| X-Y metal stage | ISM-DL-STAGE1 |
| LED light | see details |
| Auxiliary objective | see details |

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

| Auxiliary Objective | Specification | Camera adapter | |
|---------------------|----------------|-------------------|-------------------|
| | | 0.5X (included) | 1X (optional) |
| 1X (included) | Magnification | 15~100X | 30~200X |
| | Focus distance | 70±2mm | 70±2mm |
| | View field | 16×11~2.5×1.6mm | 7.8×5.3~1.2×0.8mm |
| 2X (optional) | Magnification | 30~200X | 60~400X |
| | Focus distance | 29±2mm | 29±2mm |
| | View field | 7.8×5.3~1.2×0.8mm | 3.8×2.7~0.6×0.4mm |

SOFTWARE (INCLUDED)



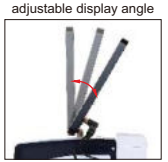
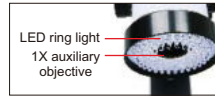
DIGITAL MEASURING MICROSCOPE CODE 5307-ID100A



ELECTRONIC MAGNIFICATION
FEEDBACK LENS

BUILT-IN SOFTWARE
WITHOUT COMPUTER

- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed
- Two methods of LED brightness adjustment, knob adjustment and software adjustment
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measuring results can be sent to Excel



SPECIFICATION

| | |
|----------------------|---------------------|
| Sensor | 1/2" CMOS |
| Pixel | 2M |
| Resolution | 1920×1080 |
| Magnification | 12~77X |
| Focus distance | 100mm |
| View field | 2.7×1.9~17.5×11.9mm |
| Max workpiece height | 60mm |
| Frame rate | 60fps |
| Output | USB/HDMI |
| Power supply | power adapter |
| Dimension (L×W×H) | 610×610×660mm |
| Weight | 4.5kg |

STANDARD DELIVERY

| | |
|--------------------|------|
| Main unit | 1 pc |
| Calibration plate | 1 pc |
| Power adapter | 1 pc |
| Mouse | 1 pc |
| 16G USB flash disk | 1 pc |

OPTIONAL ACCESSORY

| | |
|---------------------------|--------------------|
| 0.5X auxiliary objective | 5307-ID100A-OB05X |
| 0.75X auxiliary objective | 5307-ID100A-OB075X |
| 2X auxiliary objective | 5307-ID100A-OB2X |

MAGNIFICATION AND MEASURING ACCURACY

| Objective magnification | Magnification | Measuring accuracy |
|-------------------------|---------------|--------------------|
| 0.7X | 12X | ±9µm |
| 1X | 17X | ±9µm |
| 1.5X | 26X | ±8µm |
| 2X | 35X | ±7µm |
| 2.5X | 43X | ±7µm |
| 3X | 51X | ±7µm |
| 3.5X | 60X | ±6µm |
| 4X | 68X | ±6µm |
| 4.5X | 77X | ±5µm |

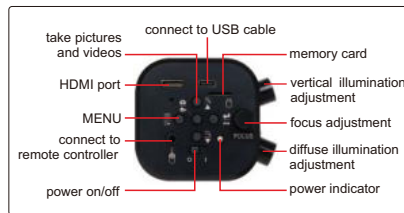
DIGITAL MICROSCOPE



MEASUREMENT

TAKE PICTURES
AND VIDEOS

- Independent control of vertical illumination and diffuse illumination
- Back focus adjustment extends working distance
- Take pictures and videos, save to memory card



5309-DM50



SPECIFICATION

| | |
|------------------|--|
| Code | 5309-DM50 |
| Arm type | straight |
| Sensor | 1/2.8" CMOS |
| Pixel | 2M |
| Resolution | 1920×1080 |
| Exposure | real-time auto, single auto, manual adjustment |
| White balance | real-time auto, single auto, manual RGB adjustment |
| Record format | pictures: JPG videos: MOV |
| Record media | memory card |
| Working distance | 45~169mm |
| Magnification | 9~41X |
| View field | 7.6×4~38.5×21.7mm |
| Power supply | DC12V 3A |

STANDARD DELIVERY

| | |
|---|------|
| Main unit | 1 pc |
| Memory card and holder | 1 pc |
| Plastic calibration rule (graduation 1mm) | 1 pc |
| White/black plate | 1 pc |
| Remote controller | 1 pc |
| USB cable | 1 pc |
| Measuring software | 1 pc |
| Power adapter | 1 pc |

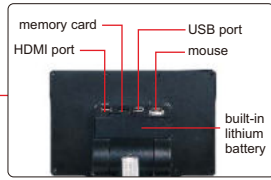
USE COMPUTERS, OPTIONAL

| Image magnification | View field | Measuring accuracy |
|---------------------|-------------|--------------------|
| 9.0X | 38.5×21.7mm | ±0.02mm |
| 13.0X | 26.6×15.0mm | ±0.02mm |
| 17.0X | 20.5×11.7mm | ±0.02mm |
| 22.0X | 16.0×9.0mm | ±0.02mm |
| 28.5X | 11.9×6.3mm | ±0.02mm |
| 34.0X | 9.8×5.5mm | ±0.01mm |
| 41.0X | 7.6×4.1mm | ±0.01mm |

MINI DIGITAL MICROSCOPE (ECONOMIC TYPE) CODE 5311-M710

TAKE PICTURES
AND VIDEOS

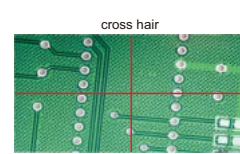
BUILT-IN
LITHIUM BATTERY



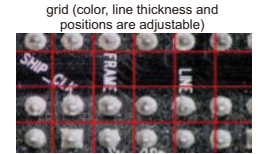
8G memory card and holder (included)



infrared ray remote controller (included)



cross hair



grid (color, line thickness and positions are adjustable)

SPECIFICATION

| | |
|--------------------|---|
| Display resolution | 1024×600 |
| Sensor | 1/3" CMOS |
| Sensor resolution | 1280×960 |
| Single pixel size | 2µm×2µm |
| Frame rate | 60fps/30fps |
| Magnification | 1X~16X |
| White balance | auto/manual (10 levels RGB)/calibration |
| Exposure control | AE lock/exposure compensation (10 levels) |
| Image control | contrast/saturation/sharpness |
| Record media | memory card |
| Output | HDMI |
| Power supply | built-in lithium battery/power adapter |
| Dimension(L×W×H) | 174×200×350mm |
| Weight | 1.5kg |

STANDARD DELIVERY

| | |
|---------------------------|------|
| Main unit | 1 pc |
| USB cable | 1 pc |
| HDMI cable | 1 pc |
| IR remote controller | 1 pc |
| 8G memory card and holder | 1 pc |
| Plastic calibration rule | 1 pc |
| Power adapter | 1 pc |

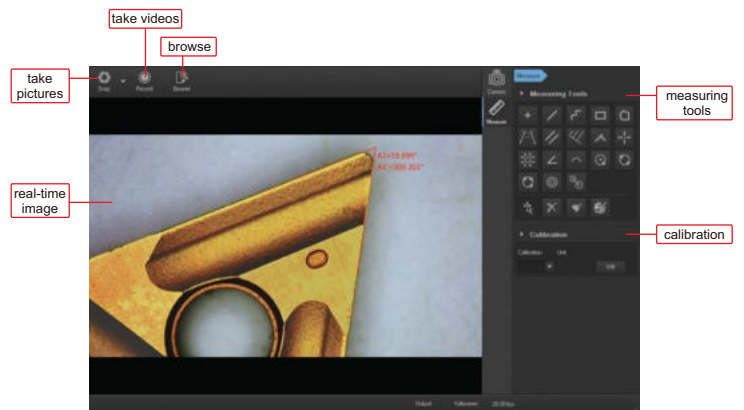
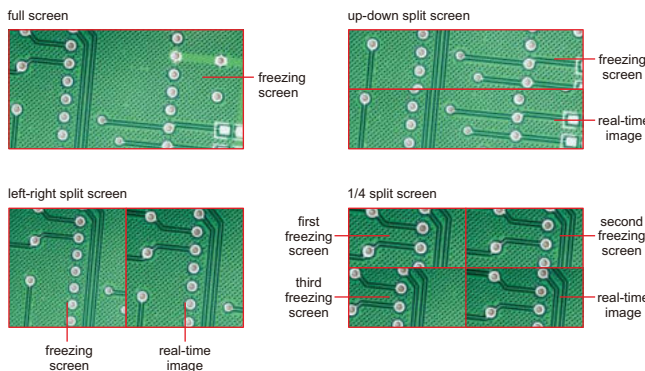
SOFTWARE FOR COMPUTER (included)

- Language: Chinese (Simplified), English
- Operation system: Windows 7/8/8.1/10 (64bit)
- Port: USB2.0 or above
- Measuring accuracy: 0.02mm

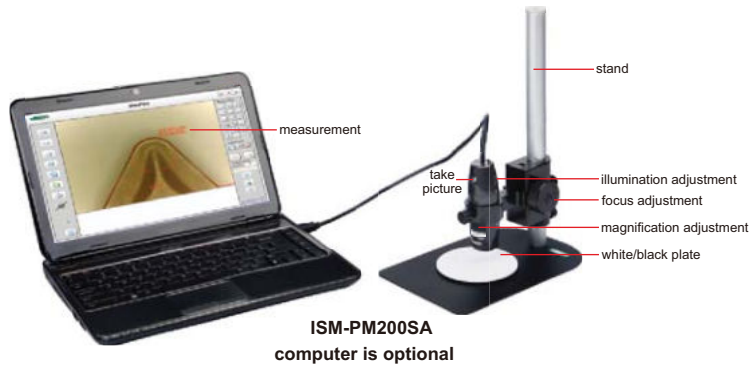
- point counting
- center distance of 2 circles
- straight line length
- radius of a circle
- continuous line length
- cross line
- area of a rectangle
- double cross line
- area of a polygon
- angle
- distance between 2 lines
- arc
- point-line distance
- distance between parallel lines
- distance between line and first parallel line
- center distance of concentric circle
- radius of a 2-point circle
- radius of a 3-point circle



Screen freezing:



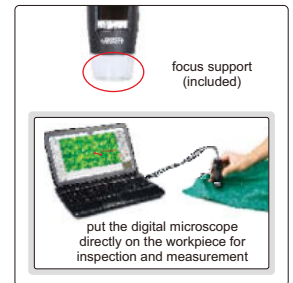
DIGITAL MEASURING MICROSCOPE



- Can take pictures and videos
- Supplied with software
- Calibration rules (graduation 0.1 and 1mm) are included
- With focus support

SPECIFICATION

| | |
|----------------------|--|
| Code | ISM-PM200SA |
| Magnification | 10X-200X |
| Stand | standard |
| 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

| Magnification | Focus distance | View field (mm) | Accuracy |
|---------------|----------------|-----------------|----------|
| 50X | 21mm | 8.1×6.4 | 30μm |
| 100X | 13mm | 3.9×3.1 | 15μm |
| 150X | 16mm | 2.6×2.1 | 10μm |
| 200X | 19mm | 1.8×1.5 | 8μm |

OPTIONAL ACCESSORY

| | |
|----------------------|---------------|
| Green filter | ISM-PM-GREEN |
| Yellow filter | ISM-PM-YELLOW |
| Blue filter | ISM-PM-BLUE |

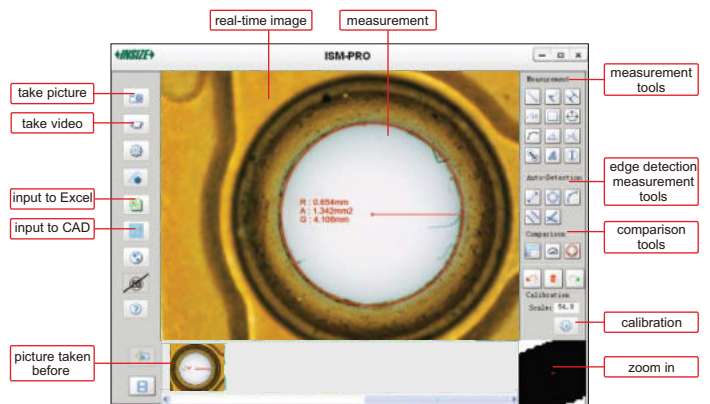
SOFTWARE

- **Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese
- **Operation system:** Windows 7/8/XP/Vista
- **Measurement tools:**

- measure length of line or distance between two points
- measure distance between point and line
- measure distance between two parallel lines
- measure length of continuous line
- measure area of rectangle
- measure radius, girth and area of circle
- measure radius, length and angle of arc
- measure distance between two circles
- measure angle with three points
- measure angle with two lines
- add text
- add number with circle

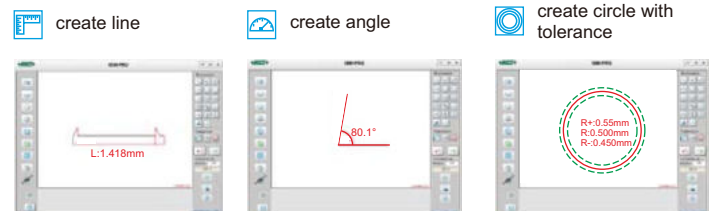
■ Edge detection measurement tools:

- detect line automatically, and calculate length
- detect arc automatically, and calculate radius, angle and arc length
- detect two lines automatically, and calculate angle
- detect circle automatically, and calculate radius, girth and area
- detect two parallel lines automatically, and calculate distance



■ Comparison tools:

Create line, angle or circle with desired size, to compare with workpieces.



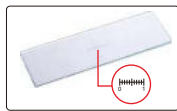
■ Data export to CAD or Excel:



WiFi DIGITAL MEASURING MICROSCOPE CODE ISM-WF200



plastic calibration rule
(graduation 1mm, included)



glass calibration rule
(graduation 0.1mm, included)



software CD
(included)

- 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: 1280x1024) |
| Illumination | built-in adjustable LED |
| Power supply | built-in rechargeable battery |

STANDARD DELIVERY

| | |
|---|------|
| Microscope | 1 pc |
| Focus support ring for 80X/150X | 1 pc |
| Focus support ring for 60X/200X | 1 pc |
| Glass calibration rule (graduation 0.1mm) | 1 pc |
| Plastic calibration rule (graduation 1mm) | 1 pc |
| Software and USB cable | 1 pc |
| AC/DC adapter | 1 pc |

OPTIONAL ACCESSORY

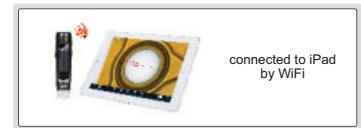
| | |
|---------------|---------------|
| Stand | ISM-PM-STAND |
| Green filter | ISM-PM-GREEN |
| Yellow filter | ISM-PM-YELLOW |
| Blue filter | ISM-PM-BLUE |



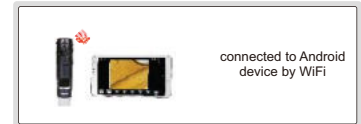
stand (code
ISM-PM-STAND, optional)



filter (optional)



connected to iPad
by WiFi



connected to Android
device by WiFi



connected to computer by WiFi

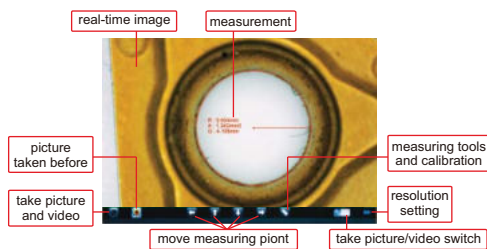


connected to computer by USB cable

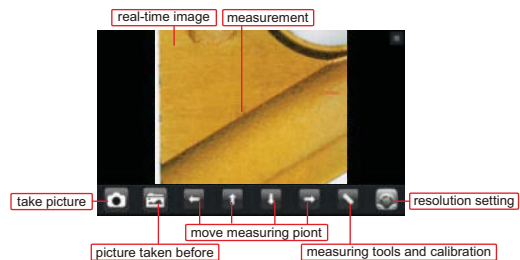
MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

| 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 |

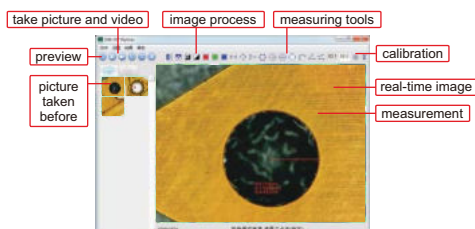
1 Software ISM-PAD (for iPad by WiFi)



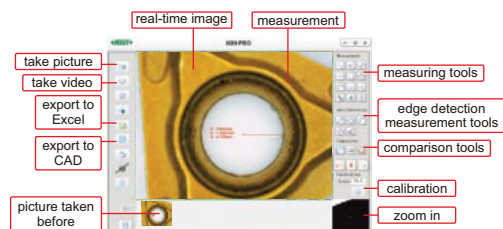
2 Software ISM-APK (for Android devices by WiFi)



3 Software ISM-WF Partner (for computer by WiFi)



4 Software ISM-PRO (for computer by USB cable)



INDUSTRIAL MICROSCOPES



- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objective 50X is spring type

STANDARD DELIVERY

| | |
|-----------------|------|
| Main unit | 1 pc |
| Anti-dust cover | 1 pc |

SPECIFICATION

| Code | 5101-M500 (bright field objectives) | | | | 5101-M500BD (bright & dark field objectives) | | | |
|--------------------------------------|---|--------|--------|--------|--|--------|--------|--------|
| Illumination | 6V/30W halogen lamp, brightness is adjustable | | | | 12V/50W halogen lamp, brightness is adjustable | | | |
| Objective (infinite plan achromatic) | bright field objectives | | | | bright & dark field objectives | | | |
| | 5X | 10X | 20X | 50X | 5X | 10X | 20X | 50X |
| Working distance | 26.1mm | 20.2mm | 8.80mm | 3.68mm | 9.70mm | 9.30mm | 7.23mm | 2.50mm |
| Numerical aperture | 0.12 | 0.25 | 0.40 | 0.70 | 0.12 | 0.25 | 0.40 | 0.70 |
| Magnification | 50X~500X | | | | | | | |
| Eyepiece (wide field) | 10X (view field: Ø22mm) | | | | | | | |
| | double layer | | | | | | | |
| Stage | size: 160×140mm | | | | | | | |
| | travel: 35x30mm | | | | | | | |
| Pupil distance | 53~75mm | | | | | | | |
| Diopter adjustment | ±5 diopter (one eyepiece) | | | | | | | |
| Power supply | 220V, 50/60Hz | | | | | | | |
| Dimension (L×W×H) | 415×345×380mm | | | | | | | |
| Weight | 14kg | | | | | | | |



5101-M500

OPTIONAL ACCESSORY

| | | |
|---|--------|--------------------------------|
| Bright field objective (for 5101-M500) | PL40X | 5101-M-OB40X |
| | PL60X | 5101-M-OB60X |
| | PL80X | 5101-M-OB80X |
| | PL100X | 5101-M-OB100X |
| Camera adapter * | | 5101-M-ADAPTER |
| Bright & dark field objective (for 5101-M500BD) | PL40X | 5101-M-BD40X |
| | PL60X | 5101-M-BD60X |
| | PL80X | 5101-M-BD80X |
| | PL100X | 5101-M-BD100X |
| 10X dividing eyepiece (0.1mm/div.) | | 5101-M-EPD10X |
| Digital camera | | ISM-CM20, ISM-CM63, ISM-ZS70-S |

*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPES



- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objectives 50X, 100X are spring type

STANDARD DELIVERY

| | |
|------------------------|--------------|
| Main unit | 1 pc |
| Polarizer and analyzer | 1 pc of each |
| Anti-dust cover | 1 pc |

SPECIFICATION

| Code | 5103-M1000 (bright field objectives) | | | | 5103-M1000BD (bright & dark field objectives) | | | |
|--------------------------------------|---|--------|--------|--------|--|--------|--------|--------|
| Illumination | 6V/30W halogen lamp, brightness is adjustable | | | | 12V/50W halogen lamp, brightness is adjustable | | | |
| Objective (infinite plan achromatic) | bright field objectives | | | | bright & dark field objectives | | | |
| | 10X | 20X | 50X | 100X | 5X | 10X | 20X | 50X |
| Working distance | 20.2mm | 8.80mm | 3.68mm | 0.40mm | 9.70mm | 9.30mm | 7.23mm | 2.50mm |
| Numerical aperture | 0.25 | 0.40 | 0.70 | 0.85 | 0.12 | 0.25 | 0.40 | 0.70 |
| Magnification | 100X~1000X | | | | 50X~500X | | | |
| Eyepiece (wide field) | 10X (view field: Ø22mm) | | | | | | | |
| | double layer | | | | | | | |
| Stage | size: 242×200mm | | | | | | | |
| | travel: 30x30mm | | | | | | | |
| Pupil distance | 53~75mm | | | | | | | |
| Diopter adjustment | ±5 diopter (one eyepiece) | | | | | | | |
| Power supply | 220V, 50/60Hz | | | | | | | |
| Dimension (L×W×H) | 614×250×394mm | | | | | | | |
| Weight | 13kg | | | | | | | |



5103-M1000

OPTIONAL ACCESSORY

| | | |
|--|--------|----------------|
| Bright field objective (for 5103-M1000) | PL5X | 5101-M-OB5X |
| | PL40X | 5101-M-OB40X |
| | PL60X | 5101-M-OB60X |
| | PL80X | 5101-M-OB80X |
| Bright & dark field objective (for 5103-M1000BD) | PL40X | 5101-M-BD40X |
| | PL60X | 5101-M-BD60X |
| | PL80X | 5101-M-BD80X |
| | PL100X | 5101-M-BD100X |
| 10X dividing eyepiece (0.1mm/div.) | | 5103-M-EPD10X |
| Camera adapter * | | 5101-M-ADAPTER |
| Digital camera | | ISM-CM63 |

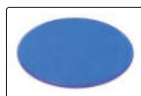
*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPES



VIDEO

- Infinite optical system, observation in reflected or transmitted illumination, polarizing observation and dark field observation
- Kohler illumination system provides uniform illumination field
- Objectives 40X, 60X are spring type



blue filter (included)



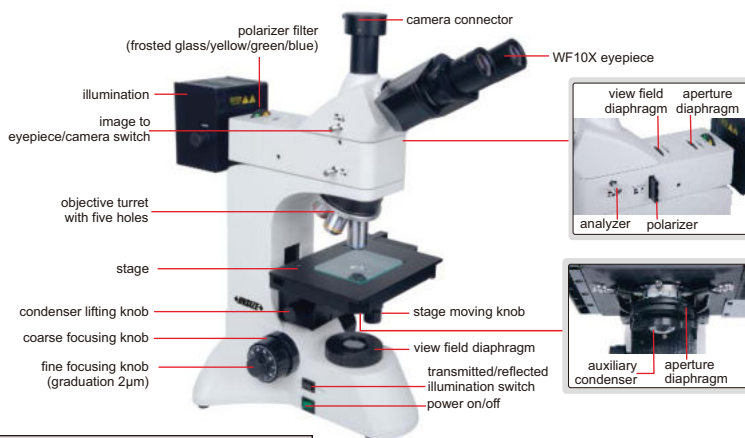
frosted glass filter (included)

STANDARD DELIVERY

| | |
|-----------------------------|--------------|
| Main unit | 1 pc |
| Anti-dust cover | 1 pc |
| Filter (blue/frosted glass) | 1 pc of each |

SPECIFICATION

| Code | 5102-M600 (bright field objectives) | 5102-M600BD (bright & dark field objectives) |
|--------------------------------------|--|---|
| Illumination | 6V/30W (transmitted), 6V/30W (reflected) | 12V/30W (transmitted), 12V/50W (reflected) |
| Objective (infinite plan achromatic) | bright field objectives | bright & dark field objectives |
| | 5X 10X 40X 60X | 5X 10X 20X 40X |
| Working distance | 26.1mm 20.2mm 3.98mm 3.18mm | 9.70mm 9.30mm 7.20mm 3.00mm |
| Numerical aperture | 0.12 0.25 0.60 0.70 | 0.12 0.25 0.40 0.70 |
| Magnification | 50X~600X | 50X~400X |
| Eyepiece (wide field) | 10X (view field: Ø22mm) | |
| Stage | double layer size: 210×140mm travel: 75x50mm | |
| Pupil distance | 53~75mm | |
| Diopter adjustment | ±5 diopter (one eyepiece) | |
| Power supply | 220V, 50/60Hz | |
| Dimension (L×W×H) | 456×260×498mm | |
| Weight | 11kg | |



5102-M600

OPTIONAL ACCESSORY

| | | |
|---|--------|--------------------------------|
| Bright field objective (for 5102-M600) | PL20X | 5101-M-OB20X |
| | PL50X | 5101-M-OB50X |
| | PL80X | 5101-M-OB80X |
| | PL100X | 5101-M-OB100X |
| Camera adapter* | | 5101-M-ADAPTER |
| Bright & dark field objective (for 5102-M600BD) | PL50X | 5101-M-BD50X |
| | PL60X | 5101-M-BD60X |
| | PL80X | 5101-M-BD80X |
| | PL100X | 5101-M-BD100X |
| 10X dividing eyepiece (0.1mm/div.) | | 5101-M-EPD10X |
| Digital camera | | ISM-CM20, ISM-CM63, ISM-ZS70-S |

*Digital camera must be used with camera adapter

ZOOM STEREO MICROSCOPE (PROFESSIONAL TYPE) CODE 5107-S70T



VIDEO

- Greenough optical system, clear observation, real color
- High working distance is convenient for operation
- Excellent flat image and large depth of field, make observation comfortable
- 6.7:1 large zoom ratio, allow quick observation adjustment

SPECIFICATION

| | |
|-------------------------------|--|
| Optical tube | trinocular |
| Eyepiece (wide field) | 10X (view field: Ø22mm) |
| Objective | 0.67X~4.5X (zoom) |
| Observation tube | 45° trinocular tube inclination angle, built-in 0.5X adapter |
| Zoom ratio | 6.7:1 |
| Pupil distance | 50~75mm |
| Diopter adjustment | -8~+5 diopter (both eyepieces) |
| Working distance of objective | 110mm |
| Max. workpiece height | 106mm |
| Illumination | adjustable LED light |
| Power supply | 110/220V |
| Dimension (L×W×H) | 330×300×368mm |
| Weight | 3.5kg |



white/black plate (included)



frosted glass filter (included)

STANDARD DELIVERY

| | |
|--------------------------|-------|
| Main unit | 1 pc |
| 10X eyepiece | 2 pcs |
| Ø100mm glass plate | 1 pc |
| Ø100mm white/black plate | 1 pc |
| Anti-dust cover | 1 pc |

OPTIONAL ACCESSORY

| | | |
|---------------------|---------------------------|--------------------------------|
| Auxiliary objective | 0.5X | 5107-S70T-OB05X |
| | 1.5X | 5107-S70T-OB15X |
| | 2X | 5107-S70T-OB20X |
| Eyepiece | 15X (view field: Ø16mm) | 5107-S70T-EP15X |
| | 20X (view field: Ø12.5mm) | 5107-S70T-EP20X |
| LED ring light | | ISM-ZS-RL |
| Digital camera | | ISM-CM20, ISM-CM63, ISM-ZS70-S |



LED ring light (optional)

PARALLEL LIGHT STEREO MICROSCOPE CODE ISM-ZS200

PARALLEL LIGHT PATH: REDUCE FATIGUE
ACCESSORIES CAN BE ADDED INTO LIGHT PATH



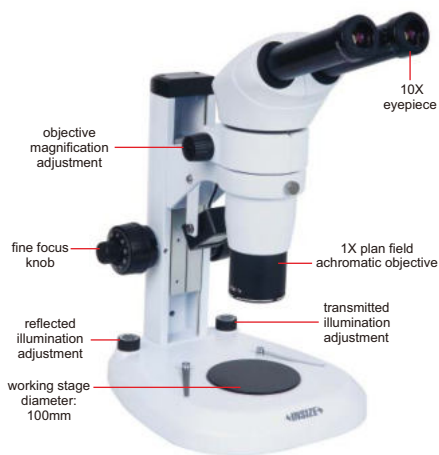
- Infinity parallel optical system and 20° inclined optical tube reduce fatigue
- Coaxial illumination is optional for deep holes which cannot be observed by ring light
- Aperture diaphragm is optional for large depth for field and high quality image

SPECIFICATION

| | |
|-------------------------------|--|
| Optical tube | binocular (20° inclined) |
| Eyeiece (wide field) | 10X (view field: Ø22mm) |
| Objective | 0.8X~8X (zoom) |
| Zoom ratio | 1:10 |
| Pupil distance | 55~75mm |
| Diopter adjustment | ±5 diopter (both eyepieces) |
| Working distance of objective | 78mm |
| Max. workpiece height | 72mm |
| Illumination | adjustable reflected and transmitted LED light |
| Power supply | 110/220V, 50/60HZ |
| Dimension (L×W×H) | 240×280×440mm |
| Weight | 4.3kg |

STANDARD DELIVERY

| | |
|--------------------------|-------|
| Main unit | 1 pc |
| WF 10X eyepiece | 2 pcs |
| Ø100mm glass plate | 1 pc |
| Ø100mm white/black plate | 1 pc |
| Anti-dust cover | 1 pc |



OPTIONAL ACCESSORY

| | | |
|-----------------------|--|--------------------|
| Objective | 0.5X achromatic objective (focus distance: 186mm) | ISM-ZS200-OB05X* |
| | 2X plan achromatic objective (focus distance: 32.5mm) | ISM-ZS200-OB2X |
| | 0.5X plan apochromatic objective (focus distance: 126mm) | ISM-ZS200-APO05X* |
| Eyepiece | WF15X (view field: Ø16mm) | ISM-ZS200-EP15X |
| | WF20X (view field: Ø12mm) | ISM-ZS200-EP20X |
| | WF30X (view field: Ø20mm) | ISM-ZS200-EP30X |
| Sleeve for objective | | ISM-ZS30-ADAPTER |
| Iris diaphragm | | ISM-ZS200-IRD |
| Optical path splitter | | ISM-ZS200-OBS |
| Coaxial illumination | | ISM-ZS200-COAXIAL |
| Digital camera** | | ISM-CM20, ISM-CM63 |

* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

** Digital camera must be used with optical path splitter

ZOOM STEREO MICROSCOPES (ADVANCED TYPE)

LARGE ZOOM
RATIO

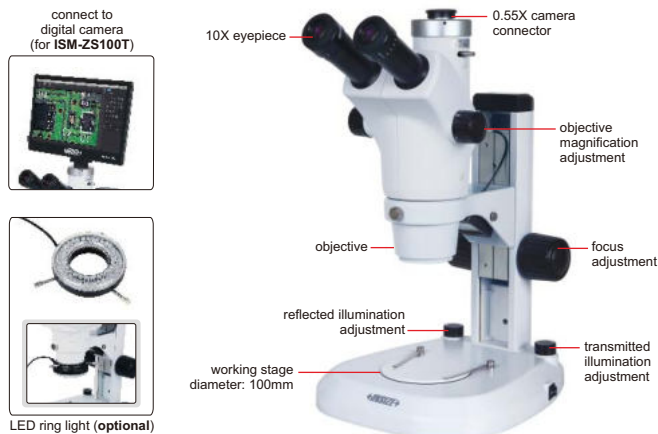


SPECIFICATION

| Code | ISM-ZS100 | ISM-ZS100T |
|-------------------------------|--|------------|
| Optical tube | binocular | trinocular |
| Eyeiece (wide field) | 10X (view field: Ø23mm) | |
| Objective | 0.6X~5X (zoom) | |
| Zoom ratio | 1:8.3 | |
| Pupil distance | 55~75mm | |
| Diopter adjustment | ±5 diopter (two eyepieces) | |
| Working distance of objective | 115mm | |
| Max. workpiece height | 75mm | |
| Illumination | adjustable reflected and transmitted LED light | |
| Power supply | 110/220V, 50/60HZ | |
| Dimension (L×W×H) | 260×310×490mm | |
| Weight | 4.9kg | |

STANDARD DELIVERY

| | |
|---|-------|
| Main unit | 1 pc |
| Digital camera adapter 0.55X for ISM-ZS100T | 1 pc |
| WF10X eyepiece | 2 pcs |
| Ø100mm glass plate | 1 pc |
| Ø100mm white/black plate | 1 pc |
| Anti-dust cover | 1 pc |



ISM-ZS100T

OPTIONAL ACCESSORY

| | | |
|--|------------------------------|--------------------------------|
| Auxiliary objective | 0.5X (focus distance: 220mm) | ISM-ZS100-OB05X* |
| | 0.7X (focus distance: 125mm) | ISM-ZS100-OB07X |
| | 2X (focus distance: 45mm) | ISM-ZS100-OB2X |
| Eyepiece | WF15X (view field: Ø16mm) | ISM-ZS100-EP15X |
| | WF20X (view field: Ø12mm) | ISM-ZS100-EP20X |
| | WF30X (view field: Ø8mm) | ISM-ZS100-EP30X |
| Sleeve for auxiliary objective | | ISM-ZS30-ADAPTER |
| LED ring light | | ISM-ZSRL |
| Digital camera adapter 1X for ISM-ZS100T | | ISM-ZS100-DA |
| Digital camera for ISM-ZS100T | | ISM-CM20, ISM-CM63, ISM-ZS70-S |

* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

ZOOM STEREO MICROSCOPES (STANDARD TYPE)



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 | 75mm | |
| Illumination | adjustable reflected and transmitted LED light | |
| Power supply | 110/220V, 50/60Hz | |
| Dimension (L×W×H) | 290x260x480mm | |
| Weight | 4.9kg | |

STANDARD DELIVERY

| | |
|--------------------------|-------|
| Main unit | 1 pc |
| WF10X eyepiece | 2 pcs |
| Ø100mm glass plate | 1 pc |
| Ø100mm white/black plate | 1 pc |
| Anti-dust cover | 1 pc |



LED ring light (optional)



ISM-ZS50

OPTIONAL ACCESSORY

| | | |
|-------------------------------------|---|--------------------------------|
| Auxiliary objective | 0.5X | ISM-ZS50-OB05X* |
| | 2X | ISM-ZS50-OB2X |
| Eyepiece | 10X dividing eyepiece (graduation 0.1mm/div.) | ISM-ZS50-EPD10X |
| | WF15X (view field: Ø16mm) | ISM-ZS50-EP15X |
| | WF20X (view field: Ø12mm) | ISM-ZS50-EP20X |
| LED ring light | | ISM-ZS-RL |
| Sleeve for auxiliary objective | | ISM-ZS30-ADAPTER |
| Digital camera for ISM-ZS50T | | ISM-CM20, ISM-CM63, ISM-ZS70-S |
| Camera adapter 0.5X for ISM-ZS50T** | | ISM-MAS-ADAPTER |

* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

** Digital camera must be used with camera adapter 0.5X

ZOOM STEREO MICROSCOPES (WITH UNIVERSAL STAND)

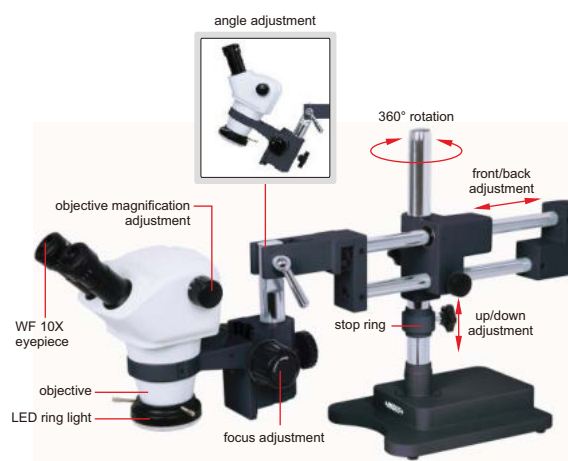


SPECIFICATION

| Code | 5106-M50 | 5106-M50T |
|-------------------------------|-------------------------------------|------------|
| 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 | |
| Diopter adjustment | ±5 diopter (two eyepieces) | |
| Working distance of objective | 115mm | |
| Max. workpiece height | 300mm | |
| Illumination | adjustable reflected LED ring light | |
| Power supply | power adapter | |
| Dimension (L×W×H) | 790×230×430mm | |
| Weight | 20kg | |

STANDARD DELIVERY

| | |
|------------------------|-------|
| Main unit (with stand) | 1 pc |
| WF 10X eyepiece | 2 pcs |
| LED ring light | 1 pc |
| Anti-dust cover | 1 pc |



5106-M50

OPTIONAL ACCESSORY

| | | |
|-------------------------------------|------------------------------------|--------------------|
| Auxiliary objective | 0.5X | ISM-ZS50-OB05X* |
| | 2X | ISM-ZS50-OB2X |
| Eyepiece | 10X dividing eyepiece (0.1mm/div.) | ISM-ZS50-EPD10X |
| | WF15X (view field: Ø16mm) | ISM-ZS50-EP15X |
| | WF20X (view field: Ø12mm) | ISM-ZS50-EP20X |
| Sleeve for auxiliary objective | | ISM-ZS30-ADAPTER |
| Digital camera for 5106-M50T | | ISM-CM20, ISM-CM63 |
| Camera adapter 0.5X for 5106-M50T** | | ISM-MAS-ADAPTER |

* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

** Digital camera must be used with camera adapter 0.5X

ZOOM STEREO MICROSCOPE (BASIC TYPE) 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 | 60mm |
| 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 | 1 pc |
| WF 10X eyepiece | 2 pcs |
| Ø95mm glass plate | 1 pc |
| Ø95mm white/black plate | 1 pc |
| Anti-dust cover | 1 pc |



LED ring light (optional)

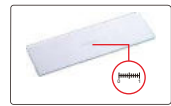
OPTIONAL ACCESSORY

| | | |
|--------------------------------|---|------------------|
| 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 (graduation 0.1mm/div.) | ISM-ZS30-EPD10X |
| | WF15X (view field: Ø16mm) | ISM-ZS50-EP15X |
| | WF20X (view field: Ø12mm) | ISM-ZS50-EP20X |
| LED ring light | | ISM-ZS-RL |
| Sleeve for auxiliary objective | | ISM-ZS30-ADAPTER |
| Digital camera | | ISM-CM63 |
| Camera adapter 0.75X ** | | ISM-AD-0D75 |

* 0.5X, 0.63X and 0.75X auxiliary objectives must be used with ISM-ZS30-ADAPTER
** Digital camera must be used with camera adapter 0.75X

DIGITAL CAMERA FOR MICROSCOPES (WITH PAD) CODE ISM-ZS70-S

- Windows 10 operation system
- Built-in software, can take pictures and videos, can measure
Language: Chinese, English, French, Japanese, German, Polish, Arabic
- Automatic exposure, white balance, brightness, contrast ratio, saturation are adjustable
- Image process feature: zoom in/out, flip, mirror, stitching and so on
- Output to Excel or CSV file



glass calibration rule (included, graduation 0.1mm)

SPECIFICATION

| | |
|-------------------|---|
| Sensor | 1/2.3" CMOS |
| Pixel | 16M |
| Resolution | 800×600, 1600×1200, 1920×1080, 2048×1536, 2304×1728, 2592×1944, 4608×3456 |
| Frame rate | 30fps (1920×1080) |
| Output | HDMI, USB 3.0 |
| Power supply | power adapter |
| Dimension (L×W×H) | 280.3×177.4×12.5mm |
| Weight | 0.9kg |

STANDARD DELIVERY

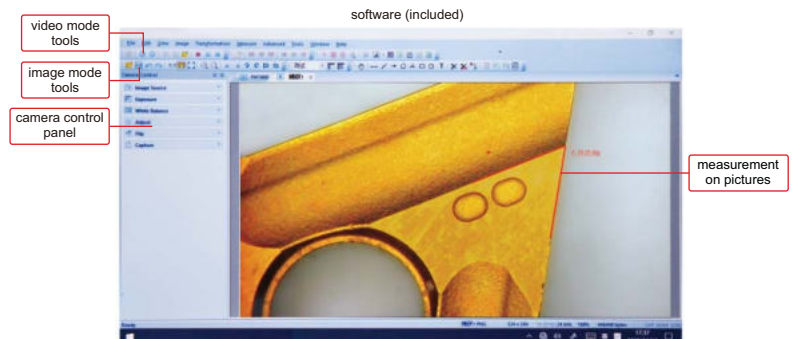
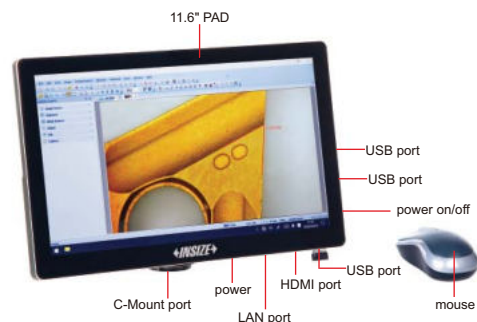
| | |
|---|------|
| Main unit | 1 pc |
| Mouse | 1 pc |
| Glass calibration rule (graduation 0.1mm) | 1 pc |
| AC/DC adapter | 1 pc |

Measurement tools

- | | | | | |
|---------------|---------------------|----------------|-----------------|-----------------|
| measure line | measure meanderline | arrow mark | measure polygon | calibration |
| measure angle | measure rectangle | measure circle | text mark | show/hide scale |

MEASUREMENT, TAKE PICTURES AND VIDEOS

ATTENTION: CAMERA CONNECTOR AND ADAPTER ARE NEEDED ACCORDING TO MICROSCOPES



DIGITAL CAMERA FOR MICROSCOPES CODE ISM-CM63

**ATTENTION: ADAPTERS ARE NEEDED
ACCORDING TO MICROSCOPES**



adapter 0.75X (optional)



application



- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transmission
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment

software (included)

selectable resolution

histogram (quantify the distribution of color and brightness)

black balance (reduce color difference)

flat field correction (reduce brightness difference)

dark field correction (reduce thermal noise)

The software can control image completely, including measurement, image stitch, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot(3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

Measurement tools:

- measure length of line or distance between two points
- measure rectangle
- measure angle
- measure radius, girth and area of circle
- measure axis lengths, girth and area of ellipse
- calibration
- measure distance between two parallel lines
- measure width and diameter of ring
- measure diameter, length, perimeter angle of arc
- measure area of polygon
- measure center distance between two circles
- measure length of open curve

counting

select counting tool

automatic counting

SPECIFICATION

| | |
|-------------------|--------------------------------------|
| Sensor (back-up) | 1/1.8" CMOS |
| Resolution | 3072×2048 |
| Pixel | 6.3M |
| Single pixel size | 2.4×2.4µm |
| Spectral range | 380-650nm (with infrared cut filter) |
| Frame rate | 30fps |
| Sampling average | 1×1 |
| Exposure time | 0.1ms~15s |
| Power supply | USB port |
| Weight | 400g |

STANDAER DELIVERY

| | |
|-----------------------------|------|
| Camera (USB cable included) | 1 pc |
| Software | 1 pc |

COMPUTER REQUIREMENT

| | |
|------------------|-----------------------------|
| Operation system | Windows/7/8/10 |
| CPU | Intel Core 2 2.8Hz or above |
| Memery | 2GB or above |
| USB port | USB3.0 (Recommad) or USB2.0 |
| Display | 17" or above |

OPTIONAL ACCESSORY

| | |
|---------------|-------------|
| Adapter 0.75X | ISM-AD-0D75 |
|---------------|-------------|

Extend focus depth

focus on the top + focus on the bottom = clear image of both top and bottom

automatic image stitching (expand field of view)

left side + right side = after stitching

Binary

separate target and background

3D plot

Visualize the distribution of image brightness and color

PORTABLE MEASURING MICROSCOPE

SPECIFICATION

| | |
|-------------------------------|--------------------------------|
| Code | ISM-PM100 |
| Total magnification | 100X |
| Eyepiece | 10X with graduation |
| Objective (achromatic) | 10X (numerical aperture: 0.25) |
| Working distance | 7mm |
| Graduation | 0.01mm |
| Viewing field | Ø1.8mm |
| Focus range | 30mm |
| Illumination | LED light |
| Diameter of base | Ø63mm |
| Height | 210mm |
| Weight | 650g |

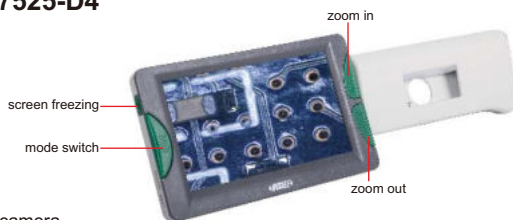
STANDARD DELIVERY

| | |
|----------------------|-------|
| Main unit | 1 pc |
| Pen light | 1 pc |
| Battery (AAA) | 2 pcs |



ISM-PM100

DIGITAL MAGNIFIER CODE 7525-D4



- 720P60 camera
- Auto focus
- With screen freezing function
- 26 color modes can be switched to meet the needs of different people
- Port to TV
- Automatic shutdown after 3 minutes

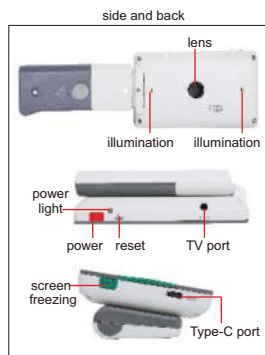
STANDARD DELIVERY

| | |
|---------------------------|------|
| Main unit | 1 pc |
| Video output cable | 1 pc |
| USB charging cable | 1 pc |
| Power adapter | 1 pc |

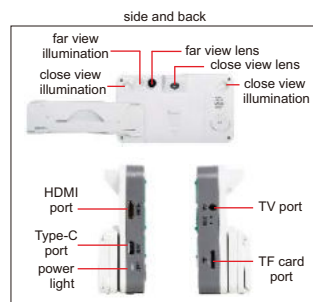
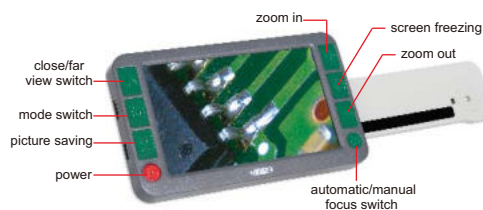


SPECIFICATION

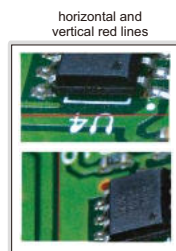
| | |
|------------------------------|--|
| Screen size | 4.3 inch |
| Screen resolution | 480x272 |
| Magnification | 2X-32X |
| Pixel | 8M |
| Focus | manual/automatic |
| Color mode (26 modes) | color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow |
| Output | TV |
| Charging port | Type-C |
| Lithium battery | 1600mAH (for 4 hours working) |
| Dimension (LxWxH) | 123x39x76mm (when the handle is folded) |
| Weight | 210g |



DIGITAL MAGNIFIER CODE 7526-D5



after the handle is folded, the magnifier can be directly placed on the object for observation



- 720P60 (close view) and 1080P30 (far view) cameras
- Double autofocus
- 26 color modes can be switched to meet the needs of different people
- Adopt folding bracket
- Detachable handle design, suitable for left-handed or right-handed use
- TV and HDMI ports to TV and display
- Automatic shutdown after 3 minutes

STANDARD DELIVERY

| | |
|---------------------------|------|
| Main unit | 1 pc |
| HDMI cable | 1 pc |
| Video output cable | 1 pc |
| USB charging cable | 1 pc |
| Power adapter | 1 pc |

SPECIFICATION

| | |
|------------------------------|--|
| Screen size | 5 inch |
| Screen resolution | 800x480 |
| Magnification | 2X-32X |
| Close view pixel | 8M |
| Far view pixel | 8M |
| Focus | manual/automatic |
| Color mode (26 modes) | color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow |
| Line | horizontal and vertical red lines |
| Function | screen freezing, image moving, photo playback, and high definition storage |
| Output | TV and HDMI |
| storage | supports up to 32G TF card |
| Charging port | Type-C |
| Lithium battery | 2500mAH (for 4 hours working) |
| Dimension (LxWxH) | 145x30x85mm (when the handle is folded) |
| Weight | 275g |

TABLE MAGNIFIER WITH ILLUMINATION CODE 7517-3D



- Four steps brightness adjustment
- LED illumination, working life 20000h
- Resin lens

SPECIFICATION

| | |
|----------------------|-------------------------------|
| Magnification | 1.75X |
| Diopter | 3D |
| Lens diameter | Ø125mm |
| Illumination | power: 3W, illuminance: 260lm |
| Power supply | power adapter 12V, 1A |

TABLE MAGNIFIER WITH ILLUMINATION CODE 7516-5D



- LED illumination, working life 20000h

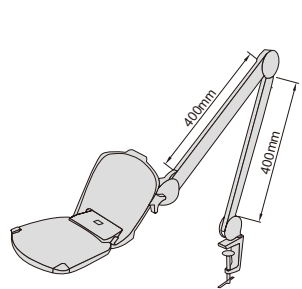
SPECIFICATION

| | |
|----------------------|-------------------------------|
| Magnification | 2.25X |
| Diopter | 5D |
| Lens diameter | Ø122mm |
| Illumination | power: 7W, illuminance: 420lm |
| Power supply | 100~240V, 50~60Hz |



TABLE MAGNIFIERS WITH ILLUMINATION

- LED illumination, working life 20000h
- Resin lens



7520-320D



7521-3D

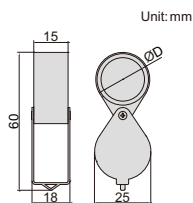
SPECIFICATION

| Code | 7520-320D | 7521-3D |
|----------------------|--------------------------------|---------|
| Magnification | two magnifications 1.75X/6X | 1.75X |
| Diopter | 3D/20D | 3D |
| Lens diameter | 160×127mm | Ø126mm |
| Illumination | power: 6W, illumination: 550lm | |
| Power supply | power adapter 12V, 1A | |

FOLDING MAGNIFIER



7511-8



- Glass lens

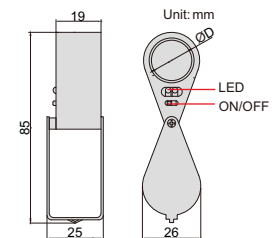


| Code | Magnification | Lens diameter (ØD) |
|--------|---------------|--------------------|
| 7511-8 | 10X | Ø21mm |

FOLDING MAGNIFIER WITH ILLUMINATION



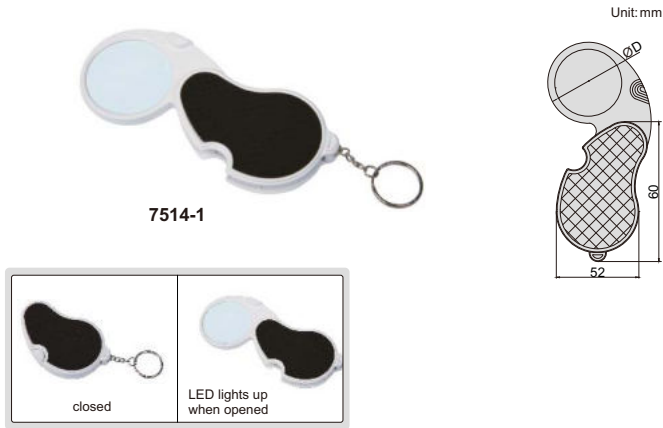
7515-10



- Resin lens
- Powered by 3xLR927 batteries (included)

| Code | Magnification | Lens diameter (ØD) |
|---------|---------------|--------------------|
| 7515-10 | 10X | Ø21mm |

FOLDING MAGNIFIER WITH ILLUMINATION



- Resin lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when opened

| Code | Magnification | Lens diameter (ØD) |
|--------|---------------|--------------------|
| 7514-1 | 2.5X | Ø45mm |



MAGNIFIER WITH ILLUMINATION



- Glass lens
- Powered by 3xAG7 batteries
- 3 pcs LED and 3 pcs UV
- Base with scale, graduation: 0.5mm, 1/16"

| Code | Magnification | Lens diameter (ØD) | L | H | W |
|---------|---------------|--------------------|------|------|------|
| 7524-10 | 10X | Ø30mm | 60mm | 50mm | 56mm |

MAGNIFIERS WITH ILLUMINATION



- Glass lens
- Powered by 3xAAA batteries (included)

| Code | Magnification | Lens diameter (ØD) | L | h |
|--------|---------------|--------------------|-------|------|
| 7513-2 | 2X | Ø75mm | 170mm | 90mm |
| 7513-4 | 4X | Ø50mm | 145mm | 90mm |



MAGNIFIER WITH TWO LENSES

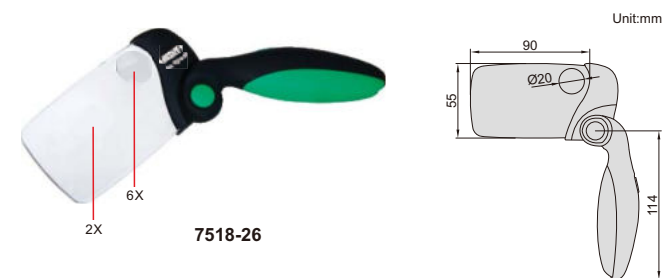


- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)

| Code | Lens number | Magnification | Lens diameter (ØD) |
|----------|-------------|---------------|--------------------|
| 7522-610 | 2 pcs | 6X | 50mm |
| | | 10X | 37mm |



MAGNIFIER WITH ILLUMINATION



- Two magnifications
- LED illumination
- Powered by 2 pcs AAA batteries (included)
- Resin lens

| Code | Magnification | Lens size |
|---------|---------------|-----------|
| 7518-26 | 2X/6X | 90x55mm |

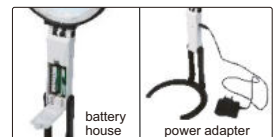


THREE WAYS MAGNIFIER WITH ILLUMINATION



- Resin lens
- Powered by 2xAA batteries (included) or power adapter (110~240V, 50~60Hz)

| Code | Magnification | Lens diameter (ØD/Ød) |
|--------|---------------|-----------------------|
| 7512-1 | 2X/4X | Ø120mm/Ø28mm |



MAGNIFICATION GLASSES



- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)



7523-3D5

head band (included)



| Code | Lens number | Magnification |
|----------|-------------|---------------|
| 7523-3D5 | 5 pcs | 1X |
| | | 1.5X |
| | | 2X |
| | | 2.5X |
| | | 3.5X |

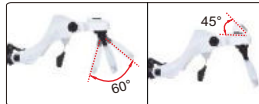
adjustable holder angle



moveable lens for focus



adjustable lens and LED angle



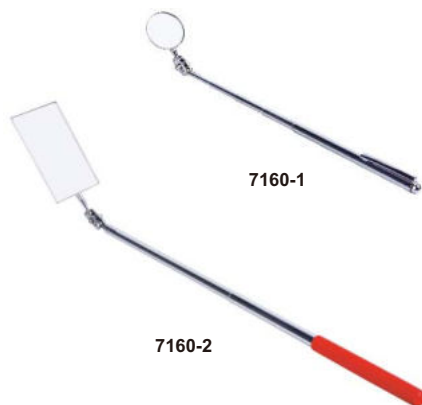
2 pcs LED



interchangeable lenses



TELESCOPING INSPECTION MIRRORS

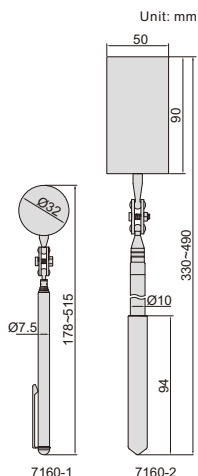


7160-1

7160-2

- Inspect hidden areas
- Rotation of the mirror: 360°
- Length of the handle is adjustable, the handle is made of stainless steel

| Code | Size of mirror | Length |
|--------|----------------|-----------|
| 7160-1 | Ø32mm | 178~515mm |
| 7160-2 | 50x90mm | 330~490mm |

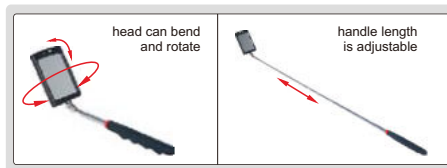


TELESCOPING INSPECTION MIRROR (WITH ILLUMINATION)

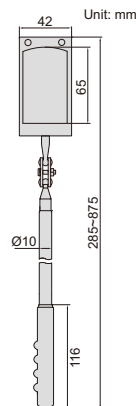


7162-1

- Inspect hidden areas
- Head can bend and rotate
- Telescoping handle, made of stainless steel
- With two CR2032 batteries



| Code | Size of mirror | Length |
|--------|----------------|-----------|
| 7162-1 | 65x42mm | 285~875mm |



TELESCOPING MAGNETIC PICK-UP AND FLASHLIGHT



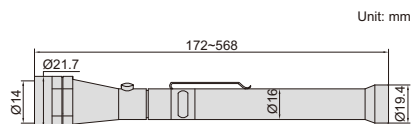
magnetic head



magnetic end to attach on steel surfaces



7163-1



- For illumination and pick up metal parts in hidden areas
- Head can bend
- Telescoping handle, made of stainless steel
- Magnetic head and end
- With four LR44 batteries

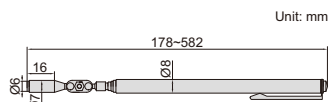


| Code | Magnetic end | Magnetic head | Flashlight range | Battery life | Length (mm) |
|--------|--------------|---------------|------------------|--------------|-------------|
| 7163-1 | 4kgf | 2kgf | 3m | 8h | 172~568 |

TELESCOPING MAGNETIC PICK-UP



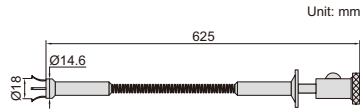
7161-1



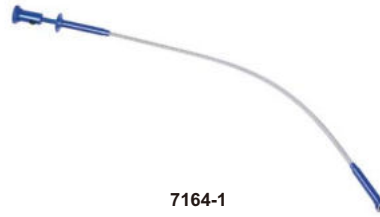
- Pick up metal parts from hidden areas
- Rotation of the magnetic head: 360°
- Length of the handle is adjustable, the handle is made of stainless steel

| Code | Size of magnetic tip | Magnetic force | Length |
|--------|----------------------|----------------|-----------|
| 7161-1 | Ø6mm | 0.45kgf | 178~582mm |

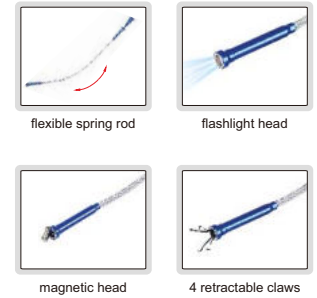
FLEXIBLE PICK-UP AND FLASHLIGHT



- For illumination and pick up steel parts in hidden areas
- Flexible spring rod, made of stainless steel
- Three LR44 batteries



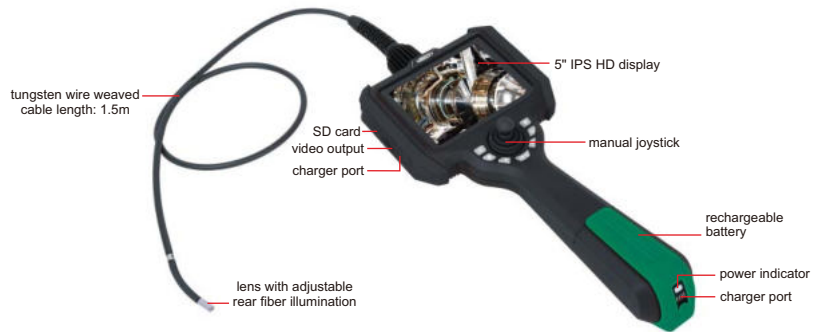
7164-1



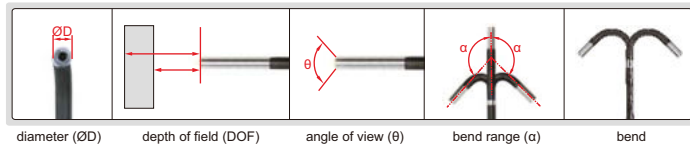
| Code | Magnetic force | Flashlight range | Battery life |
|--------|----------------|------------------|--------------|
| 7164-1 | 0.9kgf | 1m | 24h |

VIDEOSCOPIES

REAR FIBER ILLUMINATION



ISV-K6015



changeable lens cable

SPECIFICATION

| Code | ISV-K3915 | ISV-K6015 | |
|--------------|--|--|-----------------|
| Lens | diameter (ØD) | 3.9mm | 6.0mm |
| | pixel | 0.92M | |
| | resolution | 1280×720 | |
| | depth of field | 8-150mm | 12-200mm |
| | bending direction | four directions | four directions |
| | bending range (α) | ±160° | |
| | angle of view (θ) | 120° | |
| | illumination | rear fiber | |
| | lens | sapphire glass lens | |
| | dust/waterproof | IP67 | |
| Cable | bend control | manual joystick | |
| | length | 1.5m | 1.5m |
| Main unit | type | tungsten wire weaved cable | |
| | display | 5" high definition LCD | |
| | function | take pictures, take videos | |
| | file format | picture: JPG, video: MP4 | |
| | image process | image zoom (1X, 2X, 3X, 4X) | |
| | image control | freeze, flip over, playback and analog ruler | |
| | memory | memory card | |
| | output | USB, HDMI | |
| power supply | rechargeable lithium battery (working time ≥ 4hours), AC/DC adapter (for continuous working) | | |
| Weight | 1000g | | |

STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1 pc |
| 32G SD card | 1 pc |
| Card reader | 1 pc |
| USB cable | 1 pc |
| Tripod | 1 pc |
| AC/DC adapter | 1 pc |

OPERATION ENVIRONMENT

| | |
|-----------------------|------------------------------|
| Main unit | -10~50°C, no preheat |
| Operation temperature | -20~70°C |
| Storage temperature | -20~60°C |
| Relative humidity | maximum 90%, no condensation |

OPTIONAL ACCESSORY

| | |
|-------------------|---|
| WiFi output | ISV-K-WIFI (must be installed in factory, only for Android OS) |
| Temperature alarm | ISV-K-HTALARM (must be installed in factory) |
| Clamp | ISV-K-CLAMP1, ISV-K-CLAMP2, ISV-K-CLAMP3, ISV-K-CLAMP4 (must be installed in factory) |

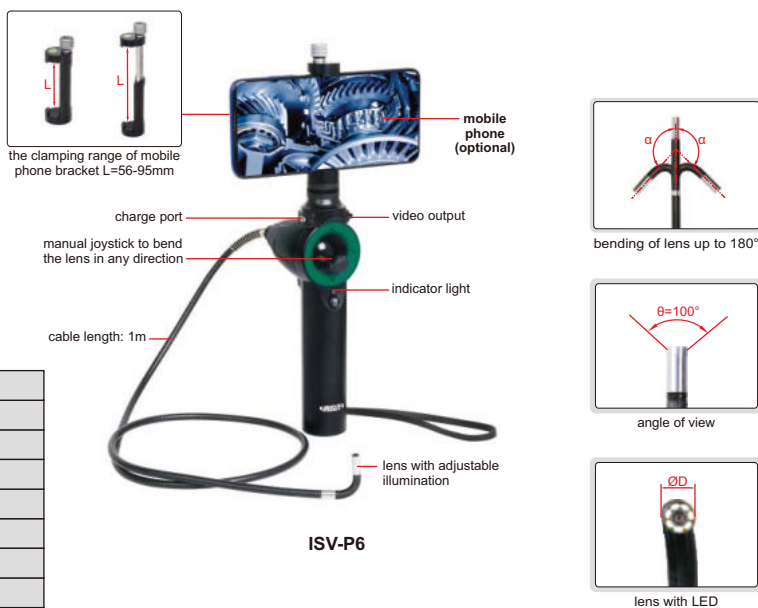
MOBILE PHONE VIDEOSCOPE



■ For Android and IOS mobile phones

SPECIFICATION

| | |
|-----------------------|--|
| Code | ISV-P6 |
| Diameter of lens (ØD) | 6±0.2mm |
| Length of cable | 1m |
| Resolution | 960×720, 1280×720 (switchable) |
| Depth of field | 20mm~∞ |
| Angle of view (θ) | 100° |
| Bending range (α) | 0~180° |
| Illumination | LED with 3 levels control |
| Cable type | wear resistant |
| Interface | USB, type-C |
| Mobile phone system | Android, IOS |
| Power supply | rechargeable battery (for 2 hours working) |
| Dimension (L×W×H) | 195×57×105mm |
| Weight | 450g |



ISV-P6

STANDARD DELIVERY

| | |
|------------------------|------|
| Main unit (with cable) | 1 pc |
| Type-C cable | 1 pc |
| Micro USB cable | 1 pc |
| Iphone cable | 1 pc |
| Charging cable | 1 pc |



VIDEOSCOPE (BASIC TYPE)

TUNGSTEN WIRE WEAVED CABLE
BREAK AND WEAR RESISTANCE

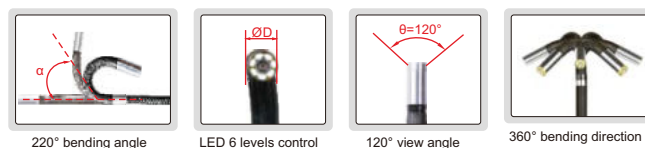


SPECIFICATION

| | | |
|--------------|--|----------------------------------|
| Code | ISV-S106 | |
| Lens | diameter (ØD) | 6mm |
| | pixel | 1M |
| | resolution | 1280×720 |
| | depth of field | 20~150mm |
| | bending direction | 360° |
| | bending range (α) | 0°~220° |
| | angle of view (θ) | 120° |
| | illumination | 7 pcs LED, with 6 levels control |
| | illuminance | 25000Lux |
| | lens | sapphire glass lens |
| | dust/waterproof | IP67 |
| | bend control | manual joystick |
| | temperature alarm | temperature sensor (optional) |
| Cable | length | 1.5m |
| | type | tungsten wire weaved cable |
| Main unit | display | 3.5" IPS full-view display |
| | display resolution | 640×480 |
| | function | take pictures, take videos |
| | file format | picture: JPG, video: MP4 |
| | image process | image zoom (1X, 2X, 3X, 4X, 5X) |
| | memory | memory card (maximum: 64G) |
| | output | USB, HDMI, WIFI (optional) |
| | dust/waterproof | IP65 |
| power supply | rechargeable lithium battery (working time ≥ 3 hours; optional: additional battery, working time ≥ 9 hours) AC/DC adapter (for continuous working) | |
| Weight | 1000g | |



ISV-S106



STANDARD DELIVERY

| | |
|-------------------------------|------|
| Main unit (with cable & lens) | 1 pc |
| 16G SD card | 1 pc |
| Card reader | 1 pc |
| USB cable | 1 pc |
| Battery | 1 pc |
| AC/DC adapter | 1 pc |

OPTIONAL ACCESSORY

| | |
|--------------------|---|
| Additional battery | ISV-S106-BATTERY (must be installed in factory) |
| WIFI output | ISV-S106-WIFI |
| Temperature alarm | ISV-S106-HT-ALARM |

VIDEOSCOPE (BASIC TYPE) CODE ISV-E40



MEMORY CABLE CAN BE
FIXED AT ANY SHAPE

IP67
WATERPROOF

lens with 8 pcs LED
adjustable illumination



hook (included)



magnet pick up (included)



45° mirror (included)



memory cable

SPECIFICATION

| | | |
|-----------|-----------------|--|
| Lens | diameter (ØD) | 8mm |
| | pixel | 0.92M |
| | resolution | 1280x720 |
| | depth of field | 30~80mm |
| | angle of view | 77° |
| | illumination | 3 levels |
| | dust/waterproof | IP67 |
| Cable | length | 1180mm |
| | type | memory (can be set at any shape) |
| Main unit | display | 5" IPS LCD |
| | function | take picture, take video |
| | file format | picture: JPG, video: MOV |
| | image process | image zoom (1.5X, 2X, 3X, 4X) |
| | memory | memory card (optional) |
| | output | type-C |
| | power supply | rechargeable lithium battery (for 5 hours working) |
| dimension | 217×155×131mm | |
| Weight | | 506g |

STANDARD DELIVERY

| | |
|----------------|------|
| Main unit | 1 pc |
| 45° mirror | 1 pc |
| Hook | 1 pc |
| Magnet pick up | 1 pc |

OPTIONAL ACCESSORY

| | |
|-----------------|----------------|
| 32G memory card | ISV-E40-CARD |
| Card reader | ISV-E40-READER |

OPERATION ENVIRONMENT

| | |
|-----------------------|----------|
| Operation temperature | -10~50°C |
| Storage temperature | -20~60°C |
| Operation humidity | 15%~85% |

VIDEOSCOPE (ECONOMIC TYPE) CODE ISV-E30

IP67
WATERPROOF

MEMORY CABLE CAN BE
FIXED AT ANY SHAPE



SPECIFICATION

| | | |
|-----------|-----------------|----------------------------------|
| Lens | diameter | 5.2mm |
| | pixel | 0.4M |
| | depth of field | 30~80mm |
| | angle of view | 72° |
| | illumination | 8 levels |
| | dust/waterproof | IP67 |
| Cable | length | 1m |
| | type | memory (can be set at any shape) |
| Main unit | display | 4.3" LCD |
| | function | take picture, take video |
| | file format | picture: JPG, video: AVI |
| | image zoom | 2X |
| | memory card | memory card (optional) |
| | output | micro USB |
| | power supply | AA battery |
| dimension | 154×32.5×87.5mm | |
| Weight | | 280g |

lens
(adjustable illumination)



memory cable
length: 1m



cable can be wrapped around the main unit



hook (included)



magnet pick up (included)

STANDARD DELIVERY

| | |
|----------------|-------|
| Main unit | 1 pc |
| Hook | 1 pc |
| Magnet pick up | 1 pc |
| AA battery | 4 pcs |

OPTIONAL ACCESSORY

| | |
|-----------------|----------------|
| 32G memory card | ISV-E40-CARD |
| Card reader | ISV-E40-READER |

OPERATION ENVIRONMENT

| | |
|-----------------------|----------|
| Operation temperature | -10~50°C |
| Storage temperature | -20~60°C |
| Operation humidity | 15%~85% |

COATING THICKNESS GAGE (HIGH PRECISION) CODE ISO-8000FN

SUITABLE FOR THIN
COATING BELOW 10µm

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES



calibration foils
(included)



zero calibration plate
(included)



eddy current probe
(optional)



magnetic induction
probe (included)

- Can measure thickness of thin coating below 10µm
- High repeatability
- Magnetic induction probe measures the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe measures the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- Maximum, minimum, average and variance values can be calculated automatically

SPECIFICATION

| Probe | magnetic induction probe (included) | eddy current probe (optional)* |
|--|--|---|
| Measuring range | 0~500µm | 0~1500µm |
| Resolution | 0.1µm (range<100µm) 1µm (100µm≤range≤500µm) | 0.1µm (range<100µm) 1µm (100µm≤range<1000µm) 0.01mm (1.00mm≤range≤1.50mm) |
| Accuracy | ±(0.5+2%L)µm L is measuring thickness in µm | |
| Repeatability | ≤(0.2+0.8%L)µm L is measuring thickness in µm | |
| Measuring mode | single and continuous | |
| Measure interval | single mode | 1.5s |
| | continuous mode | 0.4s |
| Calibration mode | zero calibration and multi-points calibration (1~5 points) | |
| Minimum substrate thickness | 0.1mm | 0.05mm |
| Minimum measuring area | Ø7mm | |
| Minimum radius of curvature workpieces | convex surface | 1.5mm |
| | concave surface | 10mm |
| Unit | µm/mil | |
| Power supply | 4×1.5V AAA batteries | |
| Dimension | 148×76×26mm | |
| Weight | 148g | |



stand (optional)

*For precision measurement of thin coating below 10µm, please use the stand for eddy current probe

STANDARD DELIVERY

| | |
|--|-------|
| Main unit | 1 pc |
| Magnetic induction probe | 1 pc |
| Zero calibration plate | 1 pc |
| Calibration foils (5.6µm, 11.6µm, 24.6µm, 50.0µm, 100µm, 252µm, 390µm) | 1 set |
| 1.5V AAA battery | 4 pcs |

OPTIONAL ACCESSORY

| | |
|--|-------------------|
| Eddy current probe (with zero calibration plate) | ISO-8000FN-N1500* |
| Stand | ISO-8000FN-STAND |

COATING THICKNESS GAGE (BASIC TYPE) CODE ISO-1200FN

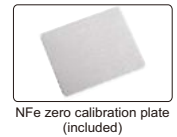


FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES

- Probe is suitable for both magnetic and non-magnetic metal substrates
- Can measure the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Can 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 (not for chrome and zinc plating)
- 3 measuring modes: Fe, NFe, Fe/NFe
- Store 9 measuring records
- Small and portable, easy for operation

SPECIFICATION

| | | |
|--|---|--------|
| Measuring range | 0~2000µm | |
| Resolution | 0.1µm (range<100µm) 1µm (100µm≤range<1000µm) 0.01mm (1mm≤range≤2mm) | |
| Accuracy | ±(2µm+3%L) L is measuring thickness in µm | |
| Measure interval | 0.5s | |
| Calibration mode | zero calibration | |
| Measuring mode | Fe, NFe, Fe/NFe | |
| Minimum substrate thickness | Fe | 0.2mm |
| | NFe | 0.05mm |
| Minimum measuring area | Ø25mm | |
| Minimum radius of curvature workpieces | convex surface | 5mm |
| | concave surface | 25mm |
| Unit | µm/mil | |
| Power supply | 2×1.5V AA batteries | |
| Main unit dimension | 101×62×28mm | |
| Probe dimension | 71×26×22mm | |
| Weight | 114g | |



STANDARD DELIVERY

| | |
|----------------------------|-------|
| Main unit | 1 pc |
| Fe zero calibration plate | 1 pc |
| NFe zero calibration plate | 1 pc |
| Standard foil (100µm) | 1 pc |
| 1.5V AA battery | 2 pcs |

COATING THICKNESS GAGE (BASIC TYPE) CODE ISO-1000FN

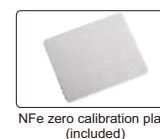


FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES

- Probe is suitable for both magnetic and non-magnetic metal substrates
- Can measure the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Can 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 (not for chrome and zinc plating)
- 3 measuring modes: Fe, NFe, Fe/NFe
- Store 9 measuring records
- Small and portable, easy for operation

SPECIFICATION

| | | |
|--|---|--------|
| Measuring range | 0~2000µm | |
| Resolution | 0.1µm (range<100µm) 1µm (100µm≤range<1000µm) 0.01mm (1mm≤range≤2mm) | |
| Accuracy | ±(2µm+3%L) L is measuring thickness in µm | |
| Measure interval | 0.5s | |
| Calibration mode | zero calibration | |
| Measuring mode | Fe, NFe, Fe/NFe | |
| Minimum substrate thickness | Fe | 0.2mm |
| | NFe | 0.05mm |
| Minimum measuring area | Ø25mm | |
| Minimum radius of curvature workpieces | convex surface | 5mm |
| | concave surface | 25mm |
| Unit | µm/mil | |
| Power supply | 2×1.5V AA batteries | |
| Dimension | 101×62×28mm | |
| Weight | 79g | |



STANDARD DELIVERY

| | |
|----------------------------|-------|
| Main unit | 1 pc |
| Fe zero calibration plate | 1 pc |
| NFe zero calibration plate | 1 pc |
| Standard foil (100µm) | 1 pc |
| 1.5V AA battery | 2 pcs |

COATING THICKNESS GAGE CODE 9501-1200

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES

DATA
OUTPUT



software CD
(included)



VIDEO

- Magnetic induction probe (FE) measures the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate.
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe (NFE) measures the thickness of non-conductive coating on non-magnetic metal substrate.
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- Tolerance measurement
- Automatic power off



eddy current probe
NFE (optional) with
zero calibration block



magnetic induction
probe FE90 for bores
and grooves (optional)



magnetic induction
probe FE10 for large
range (optional)



zero calibration block
for FE (included)



calibration foils
(included)



data transmission
cable (optional)

SPECIFICATION

| Probe type | FE (included) magnetic induction probe | NFE (optional) eddy current probe | FE90 (optional) magnetic induction probe for bores and grooves | FE10 (optional) magnetic induction probe for large range |
|---|--|---|--|--|
| Measuring range | 0~1250µm | 0~1250µm | 0~1250µm | 500~10000µm |
| Accuracy | $\pm(3\%L+1)\mu\text{m}$ (range $\leq 1250\mu\text{m}$) $\pm(3\%L+10)\mu\text{m}$ (range $> 1250\mu\text{m}$) L is measuring thickness in µm | | | |
| Resolution | 0.1µm (range $< 100\mu\text{m}$) 1µm (range $\geq 100\mu\text{m}$) | | | |
| Measuring mode | continuous and single | | | |
| Minimum substrate thickness | 0.5mm | 0.3mm | 0.5mm | 2mm |
| Minimum measuring area | Ø7mm | Ø5mm | Ø7mm | Ø40mm |
| Minimum curvature radius of convex workpiece | 1.5mm | 3mm | - | 10mm |
| Memory | 500 | | | |
| Output | USB | | | |
| Power supply | 2×1.5V AA batteries | | | |
| Dimension | 128×68×32mm | | | |
| Weight | 340g | | | |

STANDARD DELIVERY

| | |
|---|-------|
| Main unit | 1 pc |
| Magnetic induction probe (FE) | 1 pc |
| Zero calibration block for FE probe | 1 pc |
| Calibration foils (50µm, 100µm, 250µm, 500µm, 1000µm) | 1 set |
| 1.5V AA battery | 2 pcs |
| Software and USB cable | 1 pc |

OPTIONAL ACCESSORY

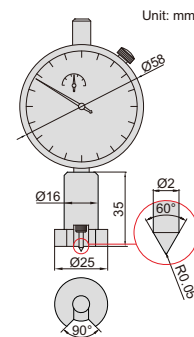
| | |
|---|----------------|
| Data transmission cable | 9501-1200-SPC |
| Eddy current probe (NFE) with zero calibration block | 9501-1200-NFE |
| Magnetic induction probe (FE90) for bores and grooves | 9501-1200-FE90 |
| Magnetic induction probe (FE10) for large range | 9501-1200-FE10 |

SURFACE PROFILE GAGE

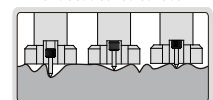
- Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Stainless steel base



2344-1



measure peak-to-valley height
of blast cleaned surface

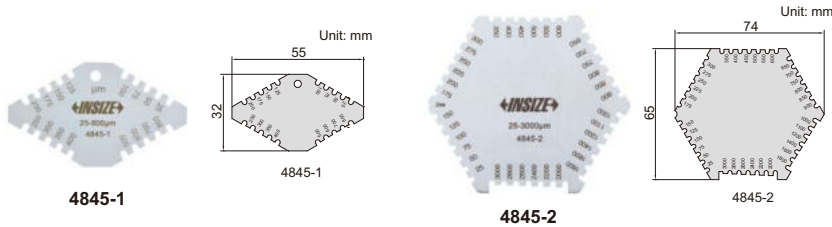


| Code | Range | Dial indicator stroke | Dial indicator graduation | Accuracy |
|--------|-------|--------------------------|------------------------------|----------|
| 2344-1 | 0-1mm | 1mm | 0.001mm | ±0.005mm |



VIDEO

WET FILM GAGES



■ 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 |

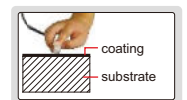
ULTRASONIC THICKNESS GAGE CODE ISU-720D

DATA
OUTPUT

WITH A AND
B SCAN

PENETRATE NON-METALLIC COATING AND
MEASURE THE THICKNESS OF METAL SUBSTRATES

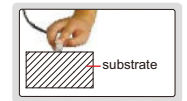
- Two measuring modes, Echo-Echo (E-E) and Transmit-Echo (T-E):
 - E-E is applicable for non-metallic coating (such as paint, plastic resin, etc.) on metal substrates, can penetrate coating and measure the thickness of substrates
 - T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, ice, etc.
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off



Echo-Echo mode (E-E)



couplant (included)



Transmit-Echo mode (T-E)



SPECIFICATION (ON STEEL)

| | |
|------------------------|--|
| Measuring range | T-E mode: substrate thickness 1.5~200mm E-E mode: substrate thickness 3~25mm |
| Measuring unit | mm/inch |
| Resolution | 0.1/0.01mm |
| Accuracy | ±0.04mm (H<9.9mm) ±(0.04+0.1%H) mm (H: 10~99.9mm) ±(0.3%H) mm (H>100mm) H is the thickness to be measured in mm |
| Frequency | 5.0MHZ |
| Display | 320×240, color screen display |
| Velocity | 1000~9999m/s |
| Measuring frequency | 2 times/second and 10 times/second |
| Applicable temperature | -20~50°C |
| Output | USB |
| Power supply | 2×1.5V AA batteries |
| Dimension | 133×75×29mm |
| Weight | 260g (including batteries) |

STANDARD DELIVERY

| | |
|------------------------------|----------|
| Main unit | 1 pc |
| Bicrystal transducer ISU-T07 | 1 pc |
| Battery (AA) | 2 pcs |
| Couplant | 1 bottle |
| USB cable | 1 pc |

OPTIONAL ACCESSORY

| | |
|------------------------|--|
| Transducer | ISU-T04, ISU-T06, ISU-T08, ISU-T12, ISU-T13, ISU-T25 |
| Couplant (for ISU-T13) | ISU-HT5-COULPLANT |



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



transducer ISU-T08 (optional)



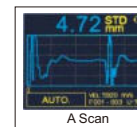
transducer ISU-T12 (optional)



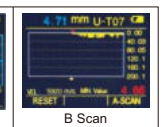
transducer ISU-T13 (optional)



transducer ISU-T25 (optional)



A Scan



B Scan

SPECIFICATION OF TRANSDUCERS (ON STEEL)

| Code | Mode | Frequency | Diameter (Ød) | Measuring range | Minimum size of pipes for measurement (diameter × wall thickness) | Applicable temperature | Application |
|--------------------|------------|-----------|---------------|---|---|------------------------|-------------------------------------|
| ISU-T07 (included) | T-E E-E | 5.0MHz | 13.2mm | T-E mode: 1.5~200mm E-E mode: 3~25mm | T-E mode: Ø25×3mm | <60°C | general use |
| ISU-T04 (optional) | T-E | 10.0MHz | 6mm | 0.7~20mm | Ø15×1mm | <60°C | for small tubes |
| ISU-T06 (optional) | T-E | 7.5MHz | 9mm | 0.7~50mm | Ø15×1.2mm | <60°C | for thin workpieces |
| ISU-T08 (optional) | T-E | 5.0MHz | 11mm | 0.8~300mm | Ø25×1.2mm | <60°C | general use |
| ISU-T12 (optional) | T-E | 2.0MHz | 17mm | 2~400mm | Ø40×3mm | <60°C | for casting iron |
| ISU-T13 (optional) | T-E | 5.0MHz | 15mm | 3~100mm | Ø25×2mm | <350°C | for high temperature |
| ISU-T25 (optional) | T-E | 1.0MHz | 26mm | 3~200mm | - | <60°C | for fiberglass and organic material |

ULTRASONIC THICKNESS GAGE CODE ISU-250C



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice
- Tolerance measurement
- Average calculation of maximum 9 readings
- Data can be input to Excel and Word as keyboard signal

SPECIFICATION (ON STEEL)

| | |
|---------------|---|
| 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 |

SPECIFICATION OF TRANSDUCERS (ON STEEL)

| Code | Frequency | Diameter (Ød) | Measuring range | Minimum size of pipes for measurement (diameter × wall thickness) | Applicable temperature | Application |
|--------------------|-----------|---------------|-----------------|---|------------------------|----------------------|
| ISU-T08 (included) | 5.0MHz | 11mm | 0.8~300mm | Ø25×1.2mm | <60°C | general use |
| ISU-T04 (optional) | 10.0MHz | 6mm | 0.7~20mm | Ø15×1mm | <60°C | for small tubes |
| ISU-T06 (optional) | 7.5MHz | 9mm | 0.7~50mm | Ø15×1.2mm | <60°C | for thin workpieces |
| ISU-T12 (optional) | 2.0MHz | 17mm | 2~400mm | Ø40×3mm | <60°C | for casting iron |
| ISU-T13 (optional) | 5.0MHz | 15mm | 3~100mm | Ø25×2mm | <350°C | for high temperature |



couplant (included)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



transducer ISU-T12 (optional)



transducer ISU-T13 (optional)

STANDARD DELIVERY

| | |
|---|----------|
| Main unit | 1 pc |
| Transducer ISU-T08 | 1 pc |
| Battery (AAA) | 2 pcs |
| Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12) | 1 bottle |
| USB cable | 1 pc |

OPTIONAL ACCESSORY

| | |
|------------------------|------------------------------------|
| Transducer | ISU-T04, ISU-T06, ISU-T12, ISU-T13 |
| Couplant (for ISU-T13) | ISU-HT5-COUPPLANT |

ULTRASONIC THICKNESS GAGE (BASIC TYPE) CODE ISU-100D

ATTENTION: NOT SUITABLE FOR CASTINGS AND ALUMINUM WORKPIECES



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: steel, stainless steel, glass, copper, brass, polystyrene, titanium, etc.



STANDARD DELIVERY

| | |
|---------------|----------|
| Main unit | 1 pc |
| Transducer | 1 pc |
| Couplant | 1 bottle |
| Battery (AAA) | 2 pcs |

SPECIFICATION (ON STEEL)

| | | |
|---------------------------------------|---|--------|
| 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 pipes 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 | |

LASER DISTANCE METERS

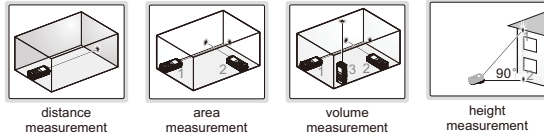


VIDEO



9561-50B

- Large display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Continuous measuring mode to track maximum and minimum value
- Memory of 30 measurement values
- Automatic power off: laser 30s, main unit 180s



SPECIFICATION

| Code | 9561-50B | 9561-70B |
|-------------------|--|----------|
| Measuring range | 0.2~50m | 0.2~70m |
| Resolution | 0.001m, 0.001ft, 1/32" | |
| Accuracy | $\pm(2+D/11)$ mm D: measured distance, unit: m | |
| Laser type | 630~670nm, class II, <1mW | |
| Power supply | 2×AAA batteries | |
| Dimension (L×W×H) | 115×50×28mm | |
| Weight | 95g | |

STANDARD DELIVERY

| | |
|---------------|-------|
| Main unit | 1 pc |
| Battery (AAA) | 2 pcs |

INFRARED THERMOMETER (BASIC TYPE) CODE 0210-G260



- MAX/MIN temperature display
- °C/°F conversion function
- Auto data hold and auto power off

STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Battery | 1 pc |

SPECIFICATION

| | |
|-----------------------------|--|
| Measuring range | -30°C~260°C/-22°F~500°F |
| Accuracy | $\pm 4^\circ\text{C}/\pm 7^\circ\text{F}$ ($\leq 0^\circ\text{C}$) $\pm 2\%$ or $\pm 2^\circ\text{C}/\pm 4^\circ\text{F}$ ($> 0^\circ\text{C}$) |
| Resolution | 0.1°C/0.1°F |
| Distance to spot size (D:S) | 8:1 |
| Emissivity | 0.95 (fixed) |
| Diode laser | output<1mW, wavelength 630~670nm class 2 (II) laser product |
| Spectral response | 6~14µm |
| Response time | less than 1s |
| Power supply | 9V battery |
| Dimension | 82×42×160mm |
| Weight | 180g |

INFRARED THERMAL IMAGING CAMERA CODE 9130-H360



IP54
WATERPROOF

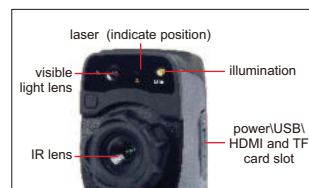
DATA
OUTPUT



- 4 inch high-brightness touchscreen
- Four image presentations: IR, visible, PIP and MIF
- WiFi real-time sharing, one-click connection to mobile devices
- USB interface for data transmission and charging
- Built-in illumination
- Video can be recorded and stored

STANDARD DELIVERY

| | |
|--------------------------|------|
| Main unit | 1 pc |
| Power supply adapter | 1 pc |
| USB cable | 1 pc |
| HDMI cable | 1 pc |
| Capacitive screen gloves | 1 pc |
| TF card (16GB) | 1 pc |



SPECIFICATION

| | |
|-----------------------|---|
| IR resolution | 192×144 |
| NETD | ≤ 50 mk |
| Focus length | 7mm/F1.1 |
| Angle of view | 37.8°×28.8° |
| Spatial resolution | 3.45mrad |
| Focus adjustment | focus-free |
| Detector type | unrefrigerated vanadium oxide/8~14µm |
| Pixel size | 25µm |
| Visible camera | resolution 500W, focus-free |
| Display | 4" highlight LCD touch screen, 480×800 |
| Image mode | IR image, visible image, MIF, PIP |
| Digital zoom | 1.1~4 |
| Color palette | 8 modes |
| Temperature range | -20°C~350°C |
| Accuracy | $\pm 2^\circ\text{C}$ or $\pm 2\%$ (of maximize range) |
| Emissivity | 0.01-1.00 (adjustable) |
| Storage | in camera and TF card (up to 32GB) |
| Image format | JPG with temp info |
| Output | USB, HDMI |
| Power | rechargeable Li-ion battery (7.4V), working time ≥ 4 h |
| Operation temperature | -10°C~50°C |
| Vibration | 10HZ~150HZ~10HZ 0.15mm (IEC 60068-2-6) |
| Impact | 30g 11ms (IEC 60068-2-27) |
| Weight | 735g |
| Dimension | 274×97×78mm |

INFRARED THERMAL IMAGING CAMERA (BASIC TYPE) CODE 9132-T400

NON-CONTACT
TEMPERATURE MEASUREMENT



DATA
OUTPUT

IP54
WATERPROOF



front view



- IR/visible/laser indicator
- Trigger button for photo taking
- 2-meter drop test, IP54 protection

STANDARD DELIVERY

| | |
|----------------------|------|
| Main unit | 1 pc |
| Power supply adapter | 1 pc |
| TYPE-C cable | 1 pc |
| 16G TF card | 1 pc |

SPECIFICATION

| | | |
|------------------------------|------------------------------|---|
| IR image | IR resolution | 120×90@17μm |
| | detector type | VOx/7.5~14μm |
| | frame rate | 25Hz/9Hz |
| | thermal sensitivity/NETD | 60mk |
| | focal length | 2.28mm/F1.13 |
| | field of view (FOV) | 50°×38° |
| | spatial resolution (IFOV) | 7.6mrad |
| Visible camera | focus | focus-free |
| | visible camera resolution | 320×240, focus-free |
| Image display | flashlight | yes |
| | display | 2.4 inch IPS technology TFT display |
| | display resolution | 320×240 |
| | image model | IR/visible/picture-in-picture |
| Temperature measurement | color palettes | 6: white hot, iron red, hot iron, arctic, rainbow 1, rainbow 2 |
| | temperature range | -20~150°C, 100~400°C (auto switching) |
| | accuracy | ±2°C or ±2%, whichever is greater (target temp ≥0°C, ambient temp is 15~30°C) |
| | measurement spot | center spot |
| | measurement area | 3 (incl. max & min temp) |
| | auto max & min spot tracking | yes |
| Image storage | alarm | full screen max & min spot alarm |
| | storage media | TF card (16G) |
| | IR image format | full radiometric (JPG) (120 x 90) |
| Connections & communications | visible image | yes, 320x240 |
| | USB | type-C, TF card slot |
| | tripod interface | yes |
| | mobile APP | yes |
| Power system | PC IR analysis software | yes |
| | battery type | rechargeable li ion battery |
| | battery operation time | >5 hours |
| Environmental parameters | charging time | internal charge, ≤2.5 hours |
| | operation temperature | -10~50°C |
| | storage temperature | -40~70°C |
| | protection | IP54, 2-meter drop test |
| | certification | CE/ROHS/FCC |
| | dimension (LxWxH) | 194×61.5×76mm |
| | weight | 350g |

DIGITAL THERMOHYGROMETER CODE 9362-TH27

- Measure humidity, ambient temperature and dew-point temperature
- Max/Min/Average mode
- Alarm function

SPECIFICATION

| | |
|------------------------|--|
| Sensor | NTC thermistor/humidity capacitance/digital sensor |
| Temperature range | -20°C~70°C/-4°F~158°F |
| Temperature accuracy | ±0.5°C/±0.9°F |
| Temperature resolution | 0.1°C/0.2°F (minimum adjustable unit is 0.2°F in setting mode) |
| Humidity range | 0~100%RH |
| Humidity accuracy | ±5%RH |
| Humidity resolution | 0.1%RH |
| Sampling interval | 5s |
| Battery | 1.5V AAA |
| Dimensions | 95×107×18mm |
| Weight | 105g |



STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1 pc |
| Battery (AAA) | 1 pc |

DATA LOGGER FOR TEMPERATURE AND HUMIDITY (BUILT-IN SENSOR) CODE 0311-3070



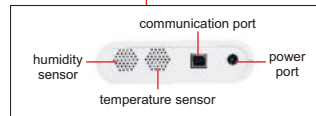
**IP54
WATERPROOF**

**DATA
OUTPUT**

- Signal acquisition, display, storage, analysis function
- Low power consumption
- Built-in high-precision temperature and humidity sensor
- Software is included

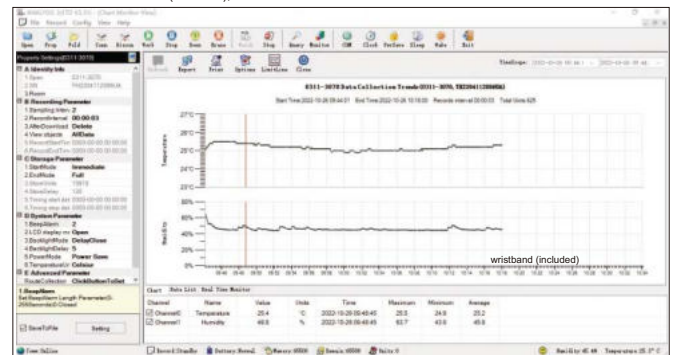
SPECIFICATION

| | |
|------------------------|--|
| Temperature range | -30°C~70°C/-22°F~158°F |
| Temperature accuracy | ±0.3°C (at 23°C±2°C), other range ±0.5°C ±0.6°F (at 73.4°F±3.6°F), other range ±0.9°F |
| Temperature resolution | 0.1°C/0.2°F |
| Humidity range | 0%RH~100%RH |
| Humidity accuracy | ±3%RH (at 10%RH~85%RH), other range ±5%RH |
| Humidity resolution | 0.1%RH |
| Memory capacity | 10918 |
| Alarm | function: alarm when over high or low limit method: display+buzz+backlight |
| Sampling interval | 2s, 5s, 10s, 30s, 60s, 255s (adjustable) |
| Logging interval | 2 seconds~24 hours (adjustable) |
| Start with delay | 1~120 seconds (adjustable) |
| Start mode | start immediately/delay start/timing start |
| End mode | full/FIFO/preset/timing end |
| Timing start/end | random start/end with format YYMMDD HHMMSS |
| Interface | USB |
| Time battery | CR2032 |
| Power supply | 3.2V lithium battery or 5~24V DC |
| Dimensions | 123×117×33mm |
| Weight | 260g |



stand (included)

software (included), record and download data to PC software via USB cable



STANDARD DELIVERY

| | |
|------------------------|------|
| Main unit | 1 pc |
| Software and USB cable | 1 pc |
| Time battery | 1 pc |
| Lithium battery | 1 pc |
| Screwdriver | 1 pc |

OPTIONAL ACCESSORY

| | |
|---------------|-------------------|
| Power adapter | 0311-3070-ADAPTER |
|---------------|-------------------|

THERMOHYGROMETER CODE 0310-H26

- Measure humidity, ambient temperature, dew point temperature and wet bulb temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off

SPECIFICATION

| Function | Measuring range | Resolution | Accuracy |
|-----------------------|------------------------|-------------|---------------|
| Ambient temperature | 0°C~50°C 32°F~122°F | 0.1°C/0.1°F | ±1.0°C/±1.8°F |
| Wet bulb temperature | 0°C~50°C 32°F~122°F | | |
| Dew point temperature | 0°C~50°C 32°F~122°F | | |
| Humidity | 0%RH~80%RH | 0.1%RH | ±5.0%RH |
| Auto power off | 30 minutes | | |
| Data port | Bluetooth 4.0 | | |
| Power supply | 9V battery | | |
| Dimension | 204×54×36mm | | |
| Weight | 172g | | |



STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Battery | 1 pc |

App measurement



App record

ANEMOMETER CODE 0110-1125

- Measure air velocity and temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off



App measurement



App record

| No. | Data Value (°C) | Data Value (m/s) |
|-----|-----------------|------------------|
| 1 | 23.10 | 0.22 |
| 2 | 23.10 | 0.09 |
| 3 | 23.00 | 0.00 |
| 4 | 23.10 | 4.19 |
| 5 | 23.10 | 1.80 |
| 6 | 23.00 | 1.68 |
| 7 | 23.00 | 0.72 |
| 8 | 23.00 | 0.44 |
| 9 | ... | ... |

SPECIFICATION

| | Unit | Measuring range | Resolution | Accuracy |
|-----------------------|--|-----------------|------------|-----------|
| Air velocity | m/s | 1.1~25.0 | 0.01 | ±(3%+0.3) |
| | km/h | 4~90 | 0.1 | ±(3%+1) |
| | ft/min | 220~4920 | 1 | ±(3%+40) |
| | MPH | 2.5~56.0 | 0.1 | ±(3%+0.4) |
| | knots | 2.2~48.0 | 0.1 | |
| Air temperature | °C | 0~50 | 0.1 | ±2 |
| | °F | 32~122 | 0.1 | ±4 |
| Sensors | air velocity sensor, NTC-type precision thermistor | | | |
| Sampling time | 0.5s | | | |
| Operation altitude | max 2000m | | | |
| Operation environment | 0~50°C, 0~80%RH | | | |
| Storage environment | -10~60°C, 0~80%RH | | | |
| Auto power off | 10 minutes | | | |
| Data port | Bluetooth 4.0 | | | |
| Power supply | 9V | | | |
| Dimension | 213×54×36mm | | | |
| Weight | 172g | | | |

STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Battery | 1 pc |

LIGHT METER (BASIC TYPE) CODE 0130-L110

- Suitable for measuring illuminance in various occasions
- Data hold function
- Fast switching of measuring range, easy to operate



SPECIFICATION

| Measuring range | Lux | 1~1999 | 10~19990 | 100~100000 |
|-------------------------|--|--------|----------|------------|
| Resolution | Lux | 1 | 10 | 100 |
| Accuracy | ± (4%+10d), range<10000Lux ± (5%+10d), range≥10000Lux (d is resolution, calibrated with standard incandescent lamp at color temperature 2856K) | | | |
| Repeatability | ±2% | | | |
| Sampling time | 0.5s | | | |
| Operation environment | 0~40°C, 0~70%RH | | | |
| Storage environment | -10~50°C, 0~80%RH | | | |
| Battery | 9V | | | |
| Photodetector dimension | 105×58×28mm | | | |
| Main unit dimension | 130×72×30mm | | | |
| Weight | 170g | | | |

STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Battery | 1 pc |

LIGHT METER CODE 0131-A120

- Photosensor can rotate 90° clockwise and rotate 180° counterclockwise
- Build-in calibration filters ensure the accuracy when working in different colors
- Data hold function
- Lux/FC unit switch
- Low battery warning

SPECIFICATION

| | | | | | |
|-----------------------|--|------------|-----------|----------|------------|
| Measuring range | Lux | 0.1~199.9 | 1~1999 | 10~19990 | 100~199900 |
| Resolution | Lux | 0.1 | 1 | 10 | 100 |
| Measuring range | FC | 0.01~19.99 | 0.1~199.9 | 1~1999 | 10~19990 |
| Resolution | FC | 0.01 | 0.1 | 1 | 10 |
| Accuracy | ±(4%+10d), range<20000Lux/2000FC ±(5%+10d), range≥20000Lux/2000FC (d is resolution, calibrated with standard incandescent lamp at color temperature 2856K) | | | | |
| Repeatability | ±2% | | | | |
| Sampling time | 0.5s | | | | |
| Operation environment | 0~40°C, 0~70%RH | | | | |
| Storage environment | -10~50°C, 0~80%RH | | | | |
| Battery | 9V | | | | |
| Dimension | 185×68×38mm | | | | |
| Weight | 130g | | | | |



STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Battery | 1 pc |

INDUCTIVE MOISTURE METER CODE 0120-IM24

- Suitable for wood, gypsum and cement
- MAX/MIN/HOLD mode
- Alarm function
- Low battery indication
- Auto power off

SPECIFICATION

| | |
|-----------------|-------------|
| Measuring range | 0~100% |
| Resolution | 1% |
| Accuracy | ±4% |
| Detection depth | 20~40mm |
| Sampling time | 0.5s |
| Battery | 9V |
| Dimension | 185×55×38mm |
| Weight | 193g |



STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| Battery | 1 pc |

SOUND LEVEL METER CODE 0010-A35

- Auto range selection
- Over range indication
- Display backlight
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

SPECIFICATION

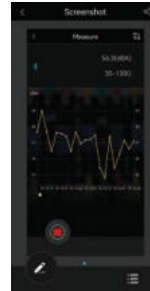
| | |
|------------------------------------|--|
| Frequency | 31.5Hz~8KHz |
| Measuring Range | 35dB~130dB |
| Accuracy | IEC 61672-1:2013 Class 2 |
| Resolution | 0.1dB |
| Frequency weighting | A and C |
| Display update | 2 times/sec |
| Microphone | 1/2 inch electret condenser microphone |
| Power supply | 9V battery |
| Operation temperature and humidity | 0°C~40°C/32°F~104°F, 10%RH~90%RH |
| Dimensions | 185×54×36mm |
| Weight | 184g |



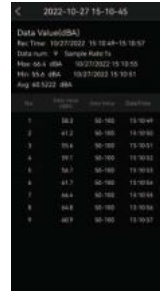
STANDARD DELIVERY

| | |
|------------|------|
| Main unit | 1 pc |
| Battery | 1 pc |
| Windscreen | 1 pc |

App measurement



App record



DIGITAL SOUND LEVEL METER (ADVANCED TYPE) CODE 9353-413

SPECIFICATION

| | |
|---------------------|---|
| Measuring range | 40dB~130dB (ref.20μPa) |
| Frequency | 20Hz~12.5kHz |
| Resolution | 0.1dB |
| Accuracy | IEC 61672-1:2013 Class 2 |
| Frequency weighting | A weighting |
| Response time | fast (125ms), slow (1s) |
| Microphone | pre polarization condenser microphone |
| Reference direction | axial direction of condenser microphone |
| Power supply | 4×1.5V AAA batteries |
| Dimension | 210×68×27mm |
| Weight | 240g |



- Automatic range conversion
- Over range indicator
- Maximum mode
- Data hold
- AC signal output: 0.707Vrms, impedance approx.100Ω
- DC signal output: 20mV/dB, impedance approx.1kΩ

STANDARD DELIVERY

| | |
|---------------|-------|
| Main unit | 1 pc |
| Battery (AAA) | 4 pcs |
| Screwdriver | 1 pc |

CONTACT TACHOMETER CODE 9224-213



STANDARD DELIVERY

| | |
|---------------------------|-------|
| Main unit | 1 pc |
| Wheel with 0.1m perimeter | 1 pc |
| Clamping sleeve | 1 pc |
| Cone head | 1 pc |
| Small cone head | 1 pc |
| Cone cavity head | 1 pc |
| Battery (AA) | 3 pcs |



- Can measure rotary speed, line speed and line length
- Automatically save the maximum value, minimum value and the last value, 96 data can be stored during continuous measurement
- With backlight display

SPECIFICATION

| | | |
|-----------------------|--------------|---|
| Measuring range | rotary speed | 0.5~19999RPM |
| | line speed | 0.05~500m/min |
| | line length | 0.05~99999m |
| Resolution | rotary speed | 0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM) |
| | line speed | 0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min) |
| | line length | 0.02m |
| Accuracy | rotary speed | ±(0.4%n+1d)RPM (n<300RPM) ±(0.05%n+1d)RPM (n≥300RPM) n is rotary speed, d is resolution |
| | line speed | ±(1%+1d)m/min d is resolution |
| | line length | ±(1%+1d)m d is resolution |
| Sampling time | | 0.8s (above 60RPM) |
| Operation temperature | | 0~40°C |
| Power supply | | 3×AA batteries |
| Dimension | | 171×71×35mm |
| Weight | | 162g |

NON-CONTACT TACHOMETER CODE 9223-120



- Accurately measure the rotary speed without contact
- Automatically save the maximum value, minimum value and the last value, 500 data can be stored during continuous measurement

SPECIFICATION

| | |
|-----------------------|---|
| Measuring range | 2.5~99999RPM |
| Resolution | 0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM) |
| Accuracy | $\pm(0.05\%n+1d)$ RPM n is rotary speed, d is resolution |
| Laser power | Class 3R, 3mW~4mW |
| Sampling time | 0.6 second (above 100RPM) |
| Measuring distance | 50~500mm |
| Operation temperature | 0~40°C |
| Power supply | 3×AA batteries |
| Dimension | 180×71×29.9mm |
| Weight | 145g |



reflection sticker
(included)

STANDARD DELIVERY

| | |
|--------------------|-------|
| Main unit | 1 pc |
| Reflection sticker | 3 pcs |
| Battery (AA) | 3 pcs |



CONTACT/NON-CONTACT TACHOMETER CODE 9225-405



- 2 measuring method, contact and non-contact
- Can measure rotary speed and line speed
- Automatically save the maximum value, minimum value and the last value, 500 data can be stored during continuous measurement
- Automatic power off



cone cavity head (included)



small cone head (included)



wheel with 0.1m perimeter (included)



cone head (included)



clamping sleeve (included)



reflection sticker (included)

SPECIFICATION

| Measuring method | | Non-contact | Contact |
|-----------------------|--------------|---|---|
| Measuring range | rotary speed | 2.5~99999RPM | 0.5~19999RPM |
| | line speed | — | 0.05~500m/min |
| Resolution | rotary speed | 0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM) | 0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM) |
| | line speed | — | 0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min) |
| Accuracy | rotary speed | $\pm(0.05\%n+1d)$ RPM n is rotary speed, d is resolution | $\pm(0.4\%n+1d)$ RPM (n<300RPM) $\pm(0.05\%n+1d)$ RPM (n≥300RPM) n is rotary speed, d is resolution |
| | line speed | — | $\pm(1\%+1d)$ m/min d is resolution |
| Laser power | | Class 3R, 3mW~4mW | — |
| Sampling time | | 0.6s (above 100RPM) | — |
| Measuring distance | | 50~500mm | — |
| Operation temperature | | 0~40°C | — |
| Power supply | | 3×AA batteries | — |
| Dimension | | 206×71×36mm | — |
| Weight | | 170g | — |

STANDARD DELIVERY

| | |
|---------------------------|-------|
| Main unit | 1 pc |
| Reflection sticker | 3 pcs |
| Wheel with 0.1m perimeter | 1 pc |
| Clamping sleeve | 1 pc |
| Cone head | 1 pc |
| Small cone head | 1 pc |
| Cone cavity head | 1 pc |
| Battery (AA) | 3 pcs |



SPECTROPHOTOMETER CODE 5701-D40

THREE KINDS
OF APERTURE

MATCHING COLOR
CARD QUICKLY

GRATING
SPECTROPHOTOMETRIC

DATA
OUTPUT

connect to computer



computer is optional



measurement

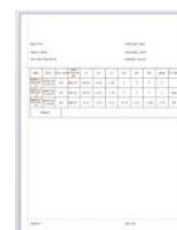


- Conforms with CIE No.15, ISO7724-1, ASTM E1164 and DIN5033 Teil7 standards
- 3.5"IPS full color screen
- Use long life and low power consumption combined LED light source, include UV and exclude UV measurement
- Camera locating function, switchable 11mm/6mm/1×3mm aperture
- Large capacity storage space, over 20,000 measurement data
- Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data
- Measure sample spectra, accurate Lab data, can be used in color matching and accurate color transmission

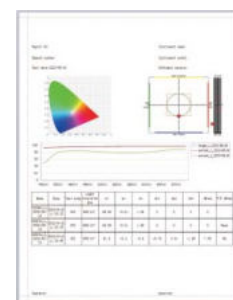
white calibration cavity (included)



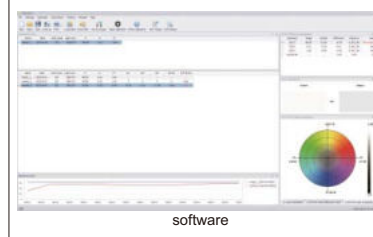
software (included), test can be controlled from the software, display test data, report



text report



graphic report



software

SPECIFICATION

| | | |
|-------------------------------|---|---|
| Optical geometry | D/8 (diffused illumination/8° direction reception) SCI+SCE (specular component included+specular component excluded) | |
| Integrating sphere size | Ø40mm | |
| Light source | LED (full band balanced LED) +UV | |
| Spectrophotometric mode | grating | |
| Sensor | dual optical path high precise CMOS array sensor | |
| Wavelength range | 400~700nm | |
| Wavelength interval | 10nm | |
| Reflectance measurement range | 0~200% | |
| Reflectance resolution | 0.01% | |
| Display resolution | 0.01 | |
| Illumination area/Aperture | MAV:Ø11mm; SAV:Ø6mm; MINI:1×3mm | |
| Color space | CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB | |
| Color difference formula | ΔE^*ab , ΔE^*cmc , ΔE^*94 , ΔE^*00 | |
| Other colorimetric index | Whiteness (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, Hunter, Taube Berger Stensby), Yellowness (ASTM D1925, ASTM 313-00, ASTM E313-73), Blackness (My, dM), Color fastness, Tint (ASTM E313-73) Color density CMYK (A, T, E, M), Milm, Munsell, Opacity, Color strength | |
| Observer angle | 2°/10° | |
| Illuminant | A, B, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, U35, DLF, NBF, T183, T184, Id50, Id65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2 | |
| Measuring time | about 1.5s | |
| Repeatability | spectral reflectance | within 0.08% of standard deviation |
| | colorimetric values | $\Delta E^*ab \leq 0.025$ (after whiteboard correction, measuring the whiteboard 30 times at 5s interval) |
| Inter-instrument error | $\Delta E^*ab \leq 0.25$ (BCRA series II, average value of 12 color plates) | |
| Output | USB, Bluetooth | |
| Light source lifetime | 10 years, more than 1 million times measurements | |
| Battery | 3.7V/3000mAh, rechargeable 8,000 times continuous tests | |
| Dimension | 95×129×231mm | |
| Weight | 750g | |

STANDARD DELIVERY

| | |
|--------------------------|-------|
| Main unit | 1 pc |
| White calibration cavity | 1 pc |
| Measuring aperture | 3 pcs |
| USB cable | 1 pc |
| USB disk | 1 pc |
| AC/DC adapter | 1 pc |

COLORIMETER (BASIC TYPE) CODE 5700-LS35



- Conforms with CIE 15, CIE S 005, ISO 7724-1 and ISO 13655 standards
- 3.5-inch IPS display and capacity touch panel
- Contains multiple color cards and can match the closest color code quickly
- QC testing function, can set color difference threshold
- Able to store 1000 colors and 1000 color comparison
- 3.7V/4000mAh battery, 10000 continuous measurements

SPECIFICATION

| | |
|---------------------------|---|
| Illumination geometry | D/8, specular component include (SCI) |
| Illumination light source | full spectrum LED light source |
| Measurement conditions | light source D65, field of view 10° |
| Measuring time | about 1s |
| Color space | CIE Lab, Luv, LCh, Yxy, CMYK, RGB, Hex |
| Color difference formula | ΔE^*ab , ΔE^*uv , ΔE^*94 , ΔE^*cmc (2:1), ΔE^*cmc (1:1), ΔE^*00 |
| Repeatability | standard deviation ΔE^*ab is within 0.03 (measurement condition: the average value of 30 measurements on the whiteboard at an interval of 3s after calibration) |
| Charging interface | USB (Type-C) |
| Dimension | 86×63×158mm |
| Weight | 245g |



STANDARD DELIVERY

| | |
|--------------------------|------|
| Main unit | 1 pc |
| White calibration cavity | 1 pc |
| USB cable | 1 pc |
| AC/DC adapter | 1 pc |
| Cleaning cloth | 1 pc |
| Locating plate | 1 pc |



white calibration cavity (included)

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 |
| Output | bluetooth |
| Power supply | 1×1.5V AA battery |
| Dimension | 123×38×65mm |
| Weight | 300g |



base with calibration block (included)



connect mobile phone via bluetooth (only Android system)



operate and output data by mobile phone

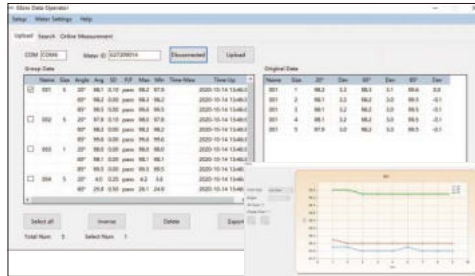
STANDARD DELIVERY

| | |
|-----------------------------|------|
| Main unit | 1 pc |
| Base with calibration block | 1 pc |
| Spare calibration block | 1 pc |

20°/60°/85° GLOSS METER CODE ISQ-DG8

- 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

software (included), test can be controlled from the software, display test data, output to Excel



base with calibration block (included)



CAN BE OPERATED BY
COMPUTERS OR MOBILE PHONES

DATA
OUTPUT

BLUETOOTH

connect to mobile phone via bluetooth
(only Android system)



operate and output data by mobile phone

software CD
(included)



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 |
| Output | USB and bluetooth | | |
| Power supply | 1×1.5V AA battery | | |
| Dimension | 155×48×75mm | | |
| Weight | 400g | | |

connect to computer via bluetooth or USB cable



STANDARD DELIVERY

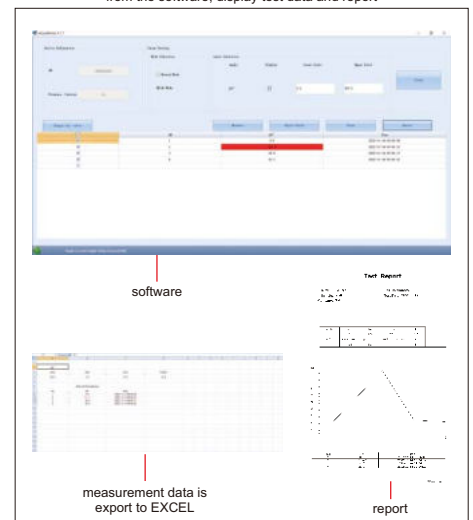
| | |
|------------------------------------|------|
| Main unit | 1 pc |
| Base with calibration block | 1 pc |
| Software and USB cable | 1 pc |
| Bluetooth receiver | 1 pc |

60° GLOSS METER (BASIC TYPE) CODE 5702-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, ISO 7668, ASTM D523, ASTM D2457, DIN 67530
- Automatic judgement after setting high and low limits
- Automatic power off



software (included), test can be controlled from the software, display test data and report



software

Test Report

measurement data is export to EXCEL

report



base with calibration block (included)

STANDARD DELIVERY

| | |
|------------------------------------|------|
| Main unit | 1 pc |
| Base with calibration block | 1 pc |
| U disk | 1 pc |
| AC/DC adapter | 1 pc |
| USB data cable | 1 pc |
| Cleaning cloth | 1 pc |

SPECIFICATION

| | |
|------------------------|----------------------|
| Incidence angle | 60° |
| Measuring range | 0~200GU |
| Resolution | 0.1GU |
| Accuracy | ±1.5GU (range<120GU) |
| | ±1.5% (range≥120GU) |
| Repeatability | 0.2GU (range<120GU) |
| | 0.2% (range≥120GU) |
| Zero error | 0.1GU |
| Measuring area | 20×10mm |
| Power supply | rechargeable battery |
| Data port | USB |
| Dimension | 135×45×75mm |
| Weight | 237g |

VIBRATION PEN CODE 9720-199



- Measure vibration of motors, fans, pumps, compressors and machine tools to prevent mechanical failure
- Small size, light weight, low energy consumption, easy operation, easy to carry
- One key control
- Automatic power off

STANDARD DELIVERY

| | |
|--------------|-------|
| Main unit | 1 pc |
| LR44 battery | 2 pcs |

SPECIFICATION

| | |
|-----------------------|---|
| Code | 9720-199 |
| Measured parameter | speed |
| Measuring range | 0.1~199.9mm/s |
| Frequency | 10Hz~1KHz |
| Accuracy | ±(5%±2)mm/s |
| Operation temperature | 0°C~40°C |
| Operation humidity | <85% |
| Power supply | 2×LR44 batteries (for 10 hours working) |
| Dimension | 150x22x18mm |
| Weight | 55g |

VIBRATION PEN (THREE PARAMETERS) CODE 0020-A199



- Acceleration, velocity and displacement can be tested
- Automatic power off

STANDARD DELIVERY

| | |
|--------------|-------|
| Main unit | 1 pc |
| LR44 battery | 2 pcs |

SPECIFICATION

| Parameter | acceleration | velocity | displacement |
|------------------------------|--|-----------------------------------|------------------------------------|
| Measuring range | 0.01~199.9m/s ² (peak value) | 0.01~199.9mm/s (virtual value) | 0.001~1.999mm (peak-peak value) |
| Frequency | 10Hz~1kHz | 10Hz~1kHz | 10Hz~500Hz |
| Frequency response | ±5% (≥20Hz) -20%~+10% (<20Hz) | | |
| Linearity | ±(5%+2unit) | | |
| Indeterminacy of sensitivity | ≤3% | | |
| Operation temperature | 0°C~40°C/32°F~104°F | | |
| Operation humidity | <85% | | |
| Power supply | 2×LR44 battery (for 10 hours working) | | |
| Dimension | 150x22x18mm | | |
| Weight | 55g | | |

DIGITAL REFRACTOMETER CODE ISQ-DRM31

SUITABLE FOR WATER
BASED COOLANT



- Quickly measure the concentration of coolant
- Two measurement modes: single measurement and automatic average multiple measurement
- Two units: brix and refractive index
- 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 (2.1×6%)=12.6%
- Automatic power off



SPECIFICATION

| | |
|-----------------|-------------------------|
| Measuring range | 0~50% (1.3330~1.4200RI) |
| Accuracy | ±0.2% (±0.0003RI) |
| Resolution | 0.1% (0.0001RI) |
| Power supply | 1×AAA battery |
| Dimension | 121×58×25mm |
| Weight | 90g |

STANDARD DELIVERY

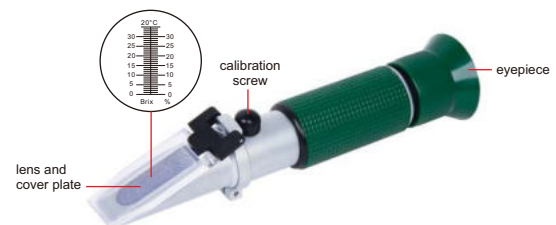
| | |
|---------------|------|
| Main unit | 1 pc |
| Dropper | 1 pc |
| Battery (AAA) | 1 pc |

dropper (included)



PORTABLE REFRACTOMETER CODE ISQ-RM30

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 (2.1×6%)=12.6%

SPECIFICATION

| | |
|-----------------|-------------|
| Measuring range | 0~32% |
| Graduation | 0.2% |
| Dimension | 27×40×160mm |
| Weight | 175g |

DIGITAL STOPWATCH CODE DSW-A010

- Split time, total time and continuous time can be displayed
- 10 groups of results can be read out from memory after resetting
- Scroll back and forth to read out the memory digits
- The fastest, slowest and average time can be displayed
- Able to record the split times (00-199)



SPECIFICATION

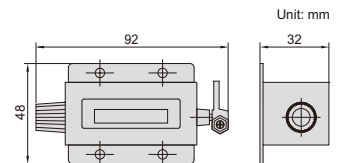
| | | |
|------------------|-------------------------------------|---|
| Measuring range | 0~9 hour, 59 minutes, 59.99 seconds | |
| Resolution | 0.01s | |
| Accuracy | ±0.5s | |
| Function | memory | 10 groups |
| | timer | up to 10 hours |
| | time | 12-hour or 24-hour time display, alarm can be set |
| Power supply | LR44 battery | |
| Screen dimension | 33.6×13.6mm | |
| Dimension | 76×63×16mm (metal case) | |

STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| String | 1 pc |

STROKE COUNTER CODE 7600-6

- Accumulate and record the number of mechanical movements
- Rotate back to zero



SPECIFICATION

| Code | Number of digits | Range |
|--------|------------------|----------|
| 7600-6 | 6 | 0-999999 |

DIGITAL VOLTAGE TESTER CODE 9721-250

- Direct AC test (contact): 12-250V two way display: voltage displays on LCD screen and neon lamp lights up (when voltage>80V)
- Induction AC test (non-contact): 12-250V to detect power source or recognize the phase line, ground line and break point
- Direct DC test (contact): 6-36V instant sense and display
- Work without battery
- Tester tip: CRV material



SPECIFICATION

| | |
|----------------|------------------------|
| Range | AC: 12-250V; DC: 6-36V |
| Neon lamp life | 30000 times |
| Dimension | 133×21×19mm |
| Weight | 22g |



VOLTAGE TESTER CODE 9722-250

- Tester tip: CRV material



SPECIFICATION

| | |
|----------------|--------------|
| Range | AC: 100-250V |
| Neon lamp life | 30000 times |
| Dimension | 145×Ø15mm |
| Weight | 21g |

AC PHASE AND VOLTAGE DETECTOR CODE 9723-400



9723-400

- Non-contact detection of phase sequence, high and low voltage, wire distinction
- Low battery indication
- Auto power off
- Flashlight

SPECIFICATION

| | |
|--------------------------------|---|
| Phase sequence detection | screen display clockwise or counterclockwise |
| High and low voltage detection | beep: slow~fast backlight: green~red analog bar: low~high |
| Wire distinction | green backlight indicates neutral wire red backlight indicates live wire |
| Power supply | 2×1.5V AAA batteries |
| Dimension | 157×27×23mm |
| Weight | 32g |

PEN-TYPE DIGITAL MULTIMETER CODE 9241-ML200



- Auto/manual ranging
- Maximum mode
- Data hold
- Low battery display
- Auto power off
- Safety rating: CAT III 600V



probe (included)



SPECIFICATION

| Function | Range | Resolution | Accuracy |
|-------------------|--|------------------------|-----------|
| DC Voltage | 200mV/2V/20V/200V/600V | 0.1mV/1mV/10mV/0.1V/1V | ±(0.7%+2) |
| | 200mV/2V/20V/200V | 0.1mV/1mV/10mV/0.1V | ±(0.8%+3) |
| AC Voltage | 600V | 1V | ±(1.0%+3) |
| | | | |
| DC Current | 20mA/200mA | 10µA/0.1mA | ±(1.5%+3) |
| AC Current | 20mA/200mA | 10µA/0.1mA | ±(2.0%+3) |
| Resistance | 200Ω | 0.1Ω | ±(1.0%+3) |
| | 2kΩ/20kΩ/200kΩ/2MΩ | 1Ω/10Ω/0.1kΩ/1kΩ | ±(1.0%+1) |
| | 20MΩ | 10kΩ | ±(1.0%+5) |
| Logic level test | <1.5V (green LED on) 1.5~3.5V (green & red LED off) >3.5V (red LED on) | | |
| Diode | open circuit voltage 1.5V | | |
| Continuity buzzer | <50Ω | | |
| Power supply | 2×1.5V AAA batteries | | |



clips (included)

STANDARD DELIVERY

| | |
|--------------|-------|
| Main unit | 1 pc |
| Probe | 1 pc |
| Clip | 2 pcs |
| 1.5V battery | 2 pcs |

SMART DIGITAL MULTIMETER CODE 9247-190



- Automatically identify test mode for AC voltage/DC voltage/resistance/continuity
- Non-connection AC voltage detection, and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Display backlight
- True RMS
- Data hold
- Low battery display
- Automatic power off
- Safety rating: CAT III 600V



probes (included)



STANDARD DELIVERY

| | |
|------------------|-------|
| Main unit | 1 pc |
| Probe | 2 pcs |
| Battery (CR2032) | 2 pcs |

SPECIFICATION

| Function | Range | Resolution | Accuracy |
|------------------------|--|--|-----------|
| DC Voltage | 60mV/600mV/6V/60V/600V | 0.01mV/0.1mV/0.001V/0.01V/0.1V | ±(0.5%+3) |
| AC Voltage | 60mV/600mV/6V/60V/600V | 0.01mV/0.1mV/0.001V/0.01V/0.1V | ±(1.0%+3) |
| DC Current | 6000µA/60mA/600mA | 1µA/0.01mA/0.1mA | ±(1.2%+5) |
| AC Current | 6000µA/60mA/600mA | 1µA/0.01mA/0.1mA | ±(1.5%+5) |
| Resistance | 600Ω/6kΩ/60kΩ/600kΩ | 0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ | ±(1.0%+5) |
| | 6MΩ/60MΩ | 0.001MΩ/0.01MΩ | ±(1.5%+3) |
| Capacitance | 6nF/60nF/600nF/6µF/60µF/600µF | 0.001nF/0.01nF/0.1nF/0.001µF/0.01µF/0.1µF | ±(4.0%+5) |
| | 6mF/60mF | 0.001mF/0.01mF | ±(5.0%+5) |
| Frequency | 10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz | 0.001Hz/0.01Hz/0.1Hz/0.001kHz/0.01kHz/0.1kHz | ±(1.0%+5) |
| | 10MHz | 0.001MHz | ±(3.0%+5) |
| Duty | 1~99% | 0.1% | ±(3.0%+5) |
| Diode measurement | open circuit voltage 2.0V | | |
| Continuity measurement | <50Ω | | |
| Power | 2×3V CR2032 batteries | | |
| Dimension (LxWxH) | 133×68×18mm | | |
| Weight | 178g | | |



DIGITAL MULTIMETER (WITH JACK INDICATOR LIGHT) CODE 9246-180

- Jack indicator light: jacks flash green to indicate the corresponding jacks for probes
- Non-connection AC voltage detection and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Double color backlight (orange backlight prompts high voltage or current: the orange backlight automatically lights up when voltage is higher than 80V or the current is higher than 1A)
- Large range capacitance meter 100mF
- True RMS
- Battery test function
- Max/Min mode
- Data hold
- Low battery display
- Automatic power off
- Safety rating: CAT III 1000V, CAT IV 600V



probes (included)

STANDARD DELIVERY

| | |
|--------------|-------|
| Main unit | 1 pc |
| Probe | 2 pcs |
| Battery (AA) | 2 pcs |

SPECIFICATION

| Function | Range | Resolution | Accuracy |
|------------------------|---|--|-----------|
| DC Voltage | 600mV/6V/60V/600V/1000V | 0.1mV/0.001V/0.01V/0.1V/1V | ±(0.5%+3) |
| AC Voltage | 6V/60V/600V/750V | 0.001V/0.01V/0.1V/1V | ±(0.8%+5) |
| DC Current | 60µA/60mA/600mA/10A | 0.01µA/0.01mA/0.1mA/0.01A | ±(1.2%+3) |
| AC Current | 60mA/600mA/10A | 0.01mA/0.1mA/0.01A | ±(1.5%+3) |
| Resistance | 600Ω/6kΩ/60kΩ/600kΩ | 0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ | ±(1.0%+3) |
| | 6MΩ/60MΩ | 0.001MΩ/0.01MΩ | ±(1.5%+3) |
| Capacitance | 10nF/100nF/1000nF/10µF/100µF/1000µF | 0.001nF/0.01nF/0.1nF/0.001µF/0.01µF/0.1µF | ±(4.0%+5) |
| | 10mF/100mF | 0.001mF/0.01mF | ±(5.0%+5) |
| Frequency | 10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz | 0.001Hz/0.01Hz/0.1Hz/0.001kHz/0.01kHz/0.1kHz | ±(1.0%+3) |
| | 10MHz | 0.001MHz | ±(3.0%+3) |
| Duty | 1~99% | 0.1% | ±(3.0%+3) |
| Diode measurement | forward DC current 2.5mA, reverse DC voltage 3.0V | | |
| Continuity measurement | <30Ω | | |
| Power | 2x1.5V AA batteries | | |
| Dimension (LxWxH) | 188x88x50mm | | |
| Weight | 424g | | |

DIGITAL MULTIMETER CODE 9242-ML100



SPECIFICATION

| Function | Range | Resolution | Accuracy |
|-------------------|-----------------------------|---------------------|------------|
| DC Voltage | 200mV/2V/20V/200V | 0.1mV/1mV/10mV/0.1V | ±(0.5%+3) |
| | 600V | 1V | ±(0.8%+5) |
| AC Voltage | 200V/600V | 0.1V/1V | ±(1.2%+10) |
| DC Current | 200µA/2mA | 0.1µA/1µA | ±(1.0%+3) |
| | 20mA | 10µA | ±(1.0%+5) |
| | 200mA | 0.1mA | ±(1.5%+5) |
| | 10A | 10mA | ±(3.0%+10) |
| Resistance | 200Ω | 0.1Ω | ±(0.8%+5) |
| | 2kΩ/20kΩ/200kΩ | 1Ω/10Ω/0.1kΩ | ±(0.8%+2) |
| | 2MΩ | 1kΩ | ±(1.0%+5) |
| Diode | open circuit voltage 3.0V | | |
| Continuity buzzer | <70±30Ω | | |
| Transistor hFE | measuring range 0~1000 | | |
| Power supply | 1x9V 6F22/NEDA 1604 battery | | |

- Data hold
- Display backlight
- Low battery display
- Safety rating: CAT II 600V



probes (included)



STANDARD DELIVERY

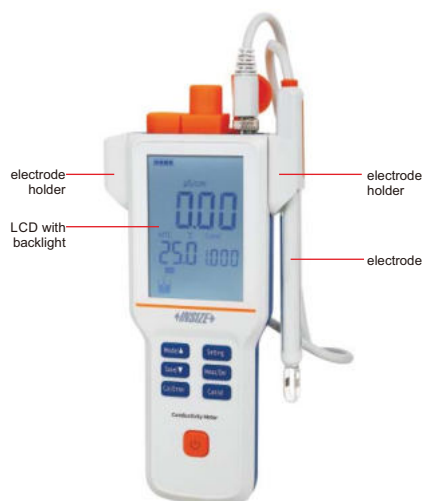
| | |
|------------|-------|
| Main unit | 1 pc |
| Probe | 2 pcs |
| 9V battery | 1 pc |

PORTABLE CONDUCTIVITY/TDS METER CODE 0411-0200



**IP65
WATERPROOF**

- Reading mode: auto-read and continuous-read
- Automatic/manual temperature compensation
- Auto-hold feature senses and locks the measurement endpoint
- Cell constant is settable
- 1 point calibration with standard recognition
- Data capacity up to 200 sets for each parameter
- IP65 dust/waterproof
- Auto power off



SPECIFICATION

| | | |
|--------------|---|--------------------------------|
| Conductivity | range | 0.00µS/cm~200mS/cm |
| | resolution | 0.01µS/cm minimum |
| | accuracy | ±1.0%FS |
| | reference temperature | 25°C/77°F |
| | calibration point | 1 |
| | standard recognition | 84µS/cm, 1413µS/cm, 12.88mS/cm |
| TDS | range | 0.00mg/L~300g/L |
| | resolution | 0.01mg/L minimum |
| | accuracy | ±1.0%FS |
| Temperature | range | -5~110°C/23~230°F |
| | resolution | 0.1°C/0.2°F |
| | accuracy | ±0.2°C/±0.4°F |
| Input | electrode with 5-pin aviation connector | |
| Power supply | rechargeable battery | |
| Dimension | 80×225×35mm | |
| Weight | 400g | |

STANDARD DELIVERY

| | |
|----------------------------------|----------|
| Main unit | 1 pc |
| Electrode | 1 pc |
| Electrode holder | 2 pcs |
| Wristband | 1 pc |
| Silicone rubber case | 1 pc |
| AC/DC adapter and charging cable | 1 pc |
| Standard solution | 1 bottle |

PORTABLE pH METER CODE 0431-0018



**IP65
WATERPROOF**

- Reading mode: auto-read and continuous-read
- Automatic/manual temperature compensation
- Auto-hold feature senses and locks the measurement endpoint
- 1 or 2 points calibration with standard recognition
- Data capacity up to 200 sets for each parameter
- IP65 dust/waterproof
- Auto power off



standard solution (included)



SPECIFICATION

| | | |
|--------------|---|------------------------------------|
| pH | range | -2.00~18.00pH |
| | resolution | 0.01pH |
| | accuracy | ±0.01pH |
| | calibration point | 1 or 2 |
| | standard recognition | NIST pH buffers: 4.01, 7.00, 10.01 |
| Voltage | range | -1999~1999mV |
| | resolution | 1mV |
| | accuracy | ±0.1%FS |
| Temperature | range | -5~110°C/23~230°F |
| | resolution | 0.1°C/0.2°F |
| | accuracy | ±0.2°C/±0.4°F |
| Inputs | pH electrode: BNC (Q9) temp. probe: 4-pin aviation connector | |
| Power supply | rechargeable battery | |
| Dimension | 80×225×35mm | |
| Weight | 400g | |

STANDARD DELIVERY

| | |
|----------------------------------|-----------|
| Main unit | 1 pc |
| Electrode | 1 pc |
| Electrode holder | 2 pcs |
| Wristband | 1 pc |
| Silicone rubber case | 1 pc |
| AC/DC adapter and charging cable | 1 pc |
| Standard solution | 3 bottles |
| KCL powder | 1 bottle |

BOURDON TUBE PRESSURE GAGES (LIQUID FILLED)

CAN BE CUSTOMIZED

- Stainless steel case and bezel, copper alloy internals
- Shock-proof and pulse-proof
- Suitable for pneumatic system, hydraulic system and compressed air system

SPECIFICATION

| | |
|---------------------|----------|
| Accuracy class | 1.6 |
| Ambient temperature | -20~60°C |
| Medium temperature | ≤60°C |

| | | | |
|--------------------------|--------------|--------------|--------------|
| Dial size | Ø63mm | | |
| Process connection | 1/4BSP | 1/4ZG | 1/4NPT |
| Connector location | Bottom | Bottom | Bottom |
| Range (0~10bar/0~150psi) | 5201-63B2Y10 | 5201-63Z2Y10 | 5201-63N2Y10 |



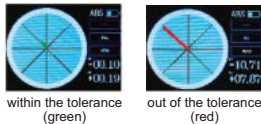
5201-63B2Y10

DIGITAL LEVEL CODE ISE-2DT

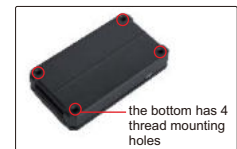
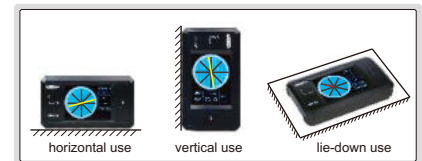
DATA OUTPUT



- Color LCD, touch panel
- X-Y axis measurement
- Set the tolerance and the display is shown in different colors



- To show the incline with line or bubble



SPECIFICATION

| | |
|-----------------|---|
| Measuring range | ±30° |
| Resolution | 0.1°, 0.01°, 0.1mm/m |
| Accuracy | ±0.03° (range 0~3°) ±0.05° (range >3°) |
| Power supply | rechargeable battery |
| Dimension | 115×66×25mm |
| Weight | 224g |

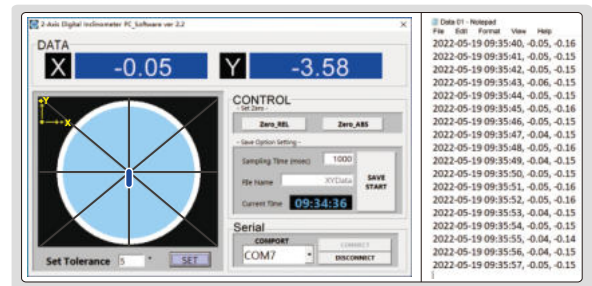
STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
| USB cable | 1 pc |

OPTIONAL ACCESSORY

| | |
|----------|------------------|
| Software | ISE-2DT-SOFTWARE |
|----------|------------------|

PC software (optional), send data to txt



DIGITAL LEVEL AND SLOPE METER

WORKING TEMPERATURE
-5°C~50°C

IP67
WATERPROOF

ABSOLUTE
LEVEL

BACKLIGHT

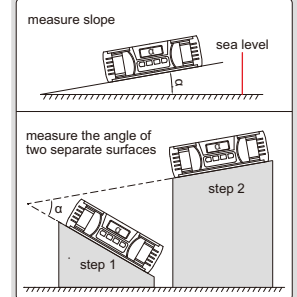
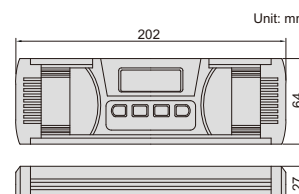
BUZZER ALARM
AT 0° AND 90°



2175-360

- IP67 dust/waterproof
- Used as level and slope meter
- 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

| Code | Range | Resolution | Accuracy |
|----------|-------------------|-----------------------|------------------------------------|
| 2175-360 | 0-360° (90°×4) | 0.05° (=0.873mm/m) | at 0°: ±0.05°; at others: ±0.1° |



DIGITAL LEVEL AND SLOPE METER

WORKING TEMPERATURE
-5°C ~ 50°C

IP54
WATERPROOF

ABSOLUTE
LEVEL

BACKLIGHT

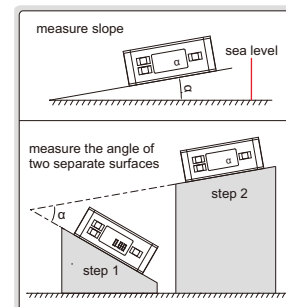
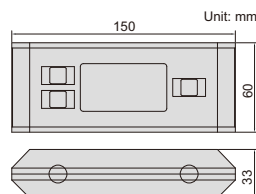
BUZZER ALARM
AT 0° AND 90°



2179-360

- IP54 dust/waterproof
- Used as level and slope meter
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), conversion, backlight
- Two AAA batteries, automatic power off

| Code | Range | Resolution | Accuracy |
|----------|-------------------|-----------------------|---|
| 2179-360 | 0-360° (90°x4) | 0.05° (=0.873mm/m) | at 0° and 90°: ±0.1°; at others: ±0.2° |



DIGITAL LEVEL AND SLOPE METER

ABSOLUTE
LEVEL

WORKING TEMPERATURE
-5°C~50°C

BACKLIGHT

DISPLAY FLIPS OVER WHEN
THE BOTTOM FACES UP

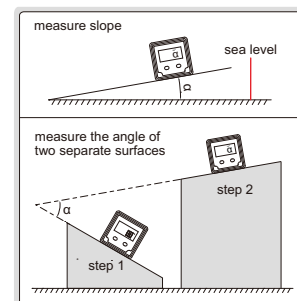
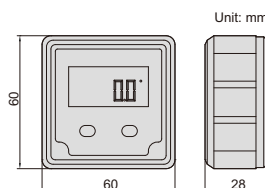
MAGNETIC
BOTTOM



2170-1

- Used as level and slope meter
- 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 seconds 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

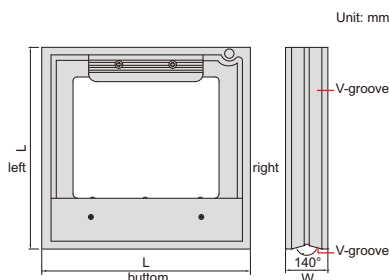
| Code | Range | Resolution | Accuracy |
|--------|-------|------------------------|---|
| 2170-1 | 4x90° | 0.1° (= 1.745 mm/m) | at 0° and 90°: ±0.1°; at others: ±0.2° |



FRAME LEVELS



- V-groove on bottom and left for shafts (shafts dia. 15~68mm)
- With transverse vial



4902-200

| Code | | Size (LxL) | W |
|--------------------------------|---------------------------------|------------|------|
| Sensitivity 0.02mm/m (=0.001°) | Sensitivity 0.05mm/m (=0.0029°) | | |
| 4902-150 | 4902-C150 | 150x150mm | 40mm |
| 4902-200 | 4902-C200 | 200x200mm | 40mm |
| 4902-300 | 4902-C300 | 300x300mm | 45mm |

BLOCK LEVELS

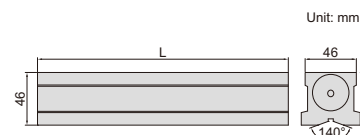


- V-groove on bottom for shafts (shafts dia. 15~68mm)
- With transverse vial



4903-200A

| Code | | Length (L) |
|--------------------------------|---------------------------------|------------|
| Sensitivity 0.02mm/m (=0.001°) | Sensitivity 0.05mm/m (=0.0029°) | (mm) |
| 4903-150A | 4903-C150 | 150 |
| 4903-200A | 4903-C200 | 200 |
| 4903-300A | 4903-C300 | 300 |

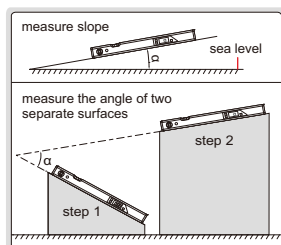


DIGITAL LEVELS AND SLOPE METERS

WORKING TEMPERATURE
0°C ~ 50°C

BACKLIGHT

ABSOLUTE LEVEL

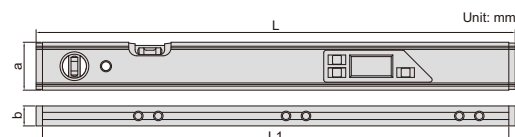


4910-400



4910-600

- With transverse and longitudinal vials
- Used as level and slope meter
- 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 (not for 4910-400), unit (mm/m, %, in/ft), conversion (not for 4910-400), backlight
- The display flips over when the bottom faces up
- Two AAA batteries, automatic power off



| Code | Range | Resolution | Accuracy | Remark | L | L1 | a | b |
|----------|----------------|---|---|------------------------------------|-------|-------|------|------|
| 4910-400 | 0~360° (90°×4) | angle: 0.1°; slope: 1mm/m | ±0.2° | both angle and slope are displayed | 416mm | 400mm | 50mm | 21mm |
| 4910-600 | 0~360° (90°×4) | at 0° and 90°: 0.05° (=0.8725mm/m); at others: 0.1° (=1.745mm/m) | at 0° and 90°: ±0.1°; at others: ±0.2° | at 0° and 90° buzzer alarms | 600mm | 585mm | 60mm | 25mm |

ALUMINUM ALLOY LEVELS

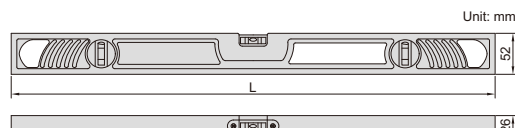
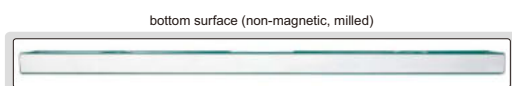
LIFETIME WARRANTY VIALS

- Accuracy: 0.5mm/m
- Top and bottom working surfaces
- Shock-proof and UV-proof vials
- Die casting aluminum alloy frame
- Zero position of horizontal vial can be set
- One graduation of horizontal vial is 2% slope
- Working temperature: -15°C~55°C



4911-600

| Code | Length (L) |
|----------|------------|
| 4911-600 | 600mm |
| 4911-800 | 800mm |



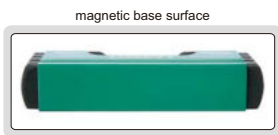
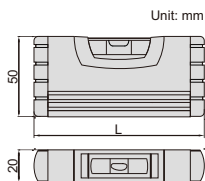
HANDY LEVEL



4912-100

LIFETIME WARRANTY VIALS

MAGNETIC BASE



- Shockproof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

| Code | Size (L) | Accuracy |
|----------|----------|----------|
| 4912-100 | 100mm | 0.5mm/m |

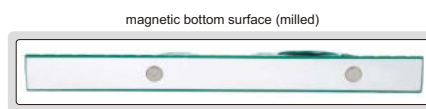
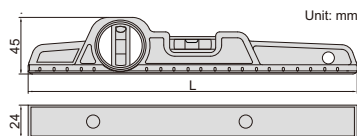
CAST ALUMINUM LEVEL

LIFETIME WARRANTY VIALS

MAGNETIC BASE



4913-250



- Shockproof horizontal and vertical vials
- Magnetic base
- Working temperature: -15°C~55°C
- Cast aluminum body

| Code | Size (L) | Accuracy |
|----------|----------|----------|
| 4913-250 | 250mm | 0.5mm/m |

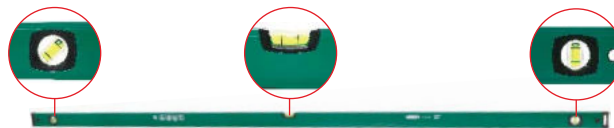
ALUMINUM LEVELS

LIFETIME WARRANTY VIALS

MAGNETIC BASE

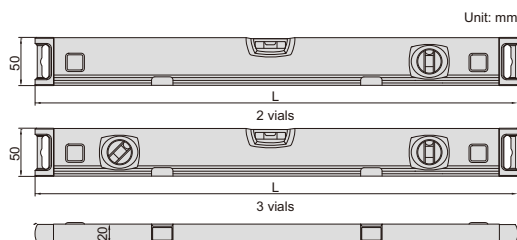
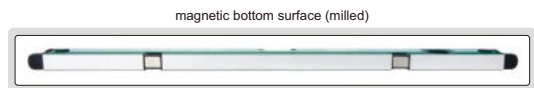


4914-600



4914-2000

- Accuracy: 0.5mm/m
- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



| Code | Size (L) | Number of vials |
|-----------|----------|-----------------|
| 4914-300 | 300mm | 2 |
| 4914-600 | 600mm | 2 |
| 4914-800 | 800mm | 2 |
| 4914-1000 | 1000mm | 2 |
| 4914-1200 | 1200mm | 2 |
| 4914-2000 | 2000mm | 3 |

ALUMINUM ALLOY LEVELS (WITH ROTARY VIAL)

LIFETIME WARRANTY VIALS

- Shockproof and UV-proof vials
- Horizontal, vertical and rotary vials
- Rotary vial, range: 0°~360°, graduation: 5°
- Plumb window
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

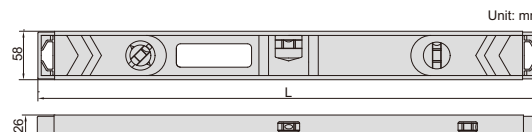
window to see vertical vial



4920-600



| Code | Length (L) | Accuracy |
|-----------|------------|----------|
| 4920-400 | 400mm | 0.5mm/m |
| 4920-600 | 600mm | 0.5mm/m |
| 4920-800 | 800mm | 0.5mm/m |
| 4920-900 | 900mm | 0.5mm/m |
| 4920-1000 | 1000mm | 0.5mm/m |
| 4920-1200 | 1200mm | 0.5mm/m |



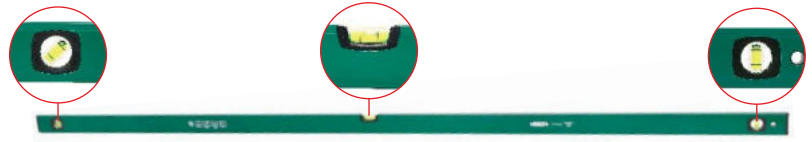
ALUMINUM ALLOY LEVELS (BASIC TYPE)

LIFETIME WARRANTY VIALS

MAGNETIC BASE

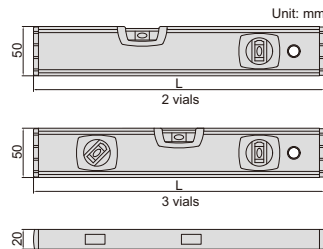


4918-300

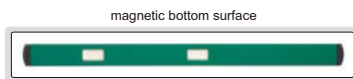


4918-2000

- Accuracy: 1mm/m
- Shock-proof and UV-proof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



| Code | Size (L) | Number of vials |
|-----------|----------|-----------------|
| 4918-300 | 300mm | 2 |
| 4918-600 | 600mm | 2 |
| 4918-800 | 800mm | 2 |
| 4918-1000 | 1000mm | 2 |
| 4918-1200 | 1200mm | 2 |
| 4918-2000 | 2000mm | 3 |



CROSS-LINE LASER LEVEL CODE 4917-30

IP54 WATERPROOF

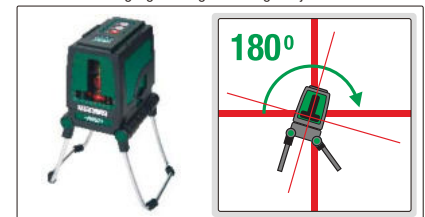
AUDIBLE AND VISUAL WARNING WHEN OUT OF ±3°



- Red horizontal and vertical cross laser lines
- Self-leveling within ±3°, self-leveling time within 4s, "out of ±3°" audible and visual warning
- Folding legs for angle and height adjustment
- Outdoor use with the detector (code 4917-DETECTOR)



folding legs for angle and height adjustment



application examples



SPECIFICATION

| | |
|-----------------------|--|
| Laser line width | 2±0.5mm (within 5m) |
| Laser type | 630~660nm, class II, <1mW |
| Beam angle | 120±0.5° |
| Self-leveling range | ±3° |
| Working distance | indoor: 30m, outdoor: 50m with detector (optional) |
| Accuracy | 0.2mm/m |
| Operation temperature | -10~40°C |
| Power supply | 3×AA batteries, for 3 hours operation |
| Dimension | 100×82×104mm |
| Weight | 620g |

STANDARD DELIVERY

| | |
|-----------------------------|-------|
| Main unit | 1 pc |
| 1/4" to 5/8" tripod adaptor | 1 pc |
| Battery (AA) | 3 pcs |



outdoor detector (optional)



stand (included with outdoor detector)

OPTIONAL ACCESSORY

| | |
|------------------|---------------|
| Outdoor detector | 4917-DETECTOR |
|------------------|---------------|

OUTDOOR DETECTOR (OPTIONAL)

| | |
|---------------------|---|
| Detecting distance | horizontal 1~50m, vertical 1~30m |
| Detecting accuracy* | high accuracy ±1.5mm, low accuracy ±2.5mm |
| Power supply | 9V battery |
| Dimension | 168×58×30mm |
| Weight | 140g (battery included) |

*Use high accuracy detection mode within 15m, use low accuracy detection mode over 15m

MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

DATA OUTPUT

INSPECTION CERTIFICATE



ISH-RSR400

- Automatic testing, the preliminary and main test force are loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpieces
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale
- According to ISO 6508



SPECIFICATION

| | | |
|------------------------|--|---|
| Code | ISH-RSR400 | |
| Type | Rockwell | |
| Hardness scale | with standard indenters | HRA, HRB, HRC, HRD, HRF, HRG |
| | with optional indenters | HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV |
| Preliminary test force | 98N/10kgf for Rockwell | |
| Test force | 588N (60kg), 980N (100kg), 1471N (150kg) | |
| 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. testing width | 200mm (from the center of indenter to the wall of main body) | |
| Power supply | 220V, 50/60Hz | |
| Dimension | 510×260×780mm | |
| Weight | 70kg | |

STANDARD DELIVERY

| | |
|---------------------------------|------|
| Main unit | 1 pc |
| Ø63mm flat anvil | 1 pc |
| Ø150mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Diamond indenter | 1 pc |
| Ø1.5875mm carbide ball indenter | 1 pc |
| Hardness test block HRB88-95 | 1 pc |
| Hardness test block HRC60-65 | 1 pc |
| Hardness test block HRC20-30 | 1 pc |
| USB flash disk (8G) | 1 pc |
| Level | 1 pc |
| Touch pen | 1 pc |
| Anti-dust cover | 1 pc |

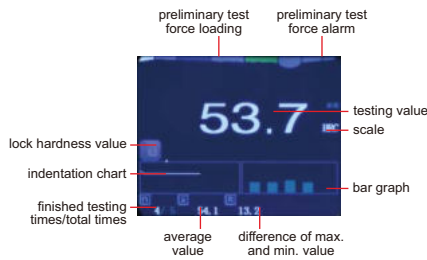
OPTIONAL ACCESSORY

| | |
|--------------------------------|----------------|
| Hardness test block HRB88-100 | HDT-B-HRB |
| Hardness test block HRC60-70 | HDT-B-HRC3 |
| Hardness test block HRC20-30 | HDT-B-HRC1 |
| Hardness test block 78-88HR15N | HDT-B-HR15N2 |
| Hardness test block 55-73HR30N | HDT-B-HR30N2 |
| Hardness test block 73-82HR30T | HDT-B-HR30T |
| Small V-type anvil | ISH-SMALLANVIL |
| Desk | HDT-DESK |

MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200

INSPECTION
CERTIFICATE

DATA
OUTPUT



software CD
(included)

- Tolerance testing
- Set testing times (2~10) to have average value and the difference of max. and min. value
- Convert to other Rockwell scales, HV or HB
- Memory of 500 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
- According to ISO 6508

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 | 500 |
| Max. workpiece height | 170mm |
| Max. testing width | 165mm (from the center of indenter to the wall of main body) |
| Power supply of the display unit | built-in rechargeable battery |
| Power supply | 220V, 50/60Hz |
| Dimension | 520×160×700mm |
| Weight | 60kg |



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



wireless printer (optional)



small V-type anvil (optional)
for cylinders with diameter
Ø2-4mm



V-type anvil (included)
for cylinders with
diameter Ø4-60mm



desk (optional)

STANDARD DELIVERY

| | |
|---------------------------------|------|
| Main unit | 1 pc |
| Ø60mm flat anvil | 1 pc |
| Ø150mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Diamond indenter | 1 pc |
| Ø1.5875mm carbide ball indenter | 1 pc |
| Hardness test block HRB88-95 | 1 pc |
| Hardness test block HRC60-65 | 1 pc |
| Hardness test block HRC20-30 | 1 pc |
| Anti-dust cover | 1 pc |
| Software and USB cable | 1 pc |
| AC/DC adapter | 1 pc |

OPTIONAL ACCESSORY

| | |
|--------------------------------|------------------|
| Wireless printer | ISH-DS-PRINTER |
| Ø3.175mm carbide ball indenter | ISH-EHK-INDENTER |
| Hardness test block HRB88-100 | HDT-B-HRB |
| Hardness test block HRC60-70 | HDT-B-HRC3 |
| Hardness test block HRC20-30 | HDT-B-HRC1 |
| Small V-type anvil | ISH-SMALLANVIL |
| Desk | HDT-DESK |

MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150

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. testing width | 165mm (from the center of indenter to the wall of main body) |
| Dimension | 520×160×700mm |
| Weight | 60kg |

STANDARD DELIVERY

| | |
|---------------------------------|------|
| Main unit | 1 pc |
| Ø60mm flat anvil | 1 pc |
| Ø150mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Diamond indenter | 1 pc |
| Ø1.5875mm carbide ball indenter | 1 pc |
| Hardness test block HRB88~95 | 1 pc |
| Hardness test block HRC60~65 | 1 pc |
| Hardness test block HRC20~30 | 1 pc |
| Anti-dust cover | 1 pc |



desk (optional)



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

■ According to ISO 6508

OPTIONAL ACCESSORY

| | |
|-------------------------------|----------------|
| Hardness test block HRB88~100 | HDT-B-HRB |
| Hardness test block HRC60~70 | HDT-B-HRC3 |
| Hardness test block HRC20~30 | HDT-B-HRC1 |
| Small V-type anvil | ISH-SMALLANVIL |
| Desk | HDT-DESK |

MOTORIZED ROCKWELL HARDNESS TESTER (BASIC TYPE) CODE HDT-RA151

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 | 1~60 second |
| Min. reading | 0.5HR |
| Max. workpiece height | 170mm |
| Max. testing width | 165mm (from the center of indenter to the wall of main body) |
| Power supply | 220V, 50/60Hz |
| Dimension | 520×225×640mm |
| Weight | 65kg |

STANDARD DELIVERY

| | |
|-------------------------------|------|
| Main unit | 1 pc |
| Ø58mm flat anvil | 1 pc |
| Ø150mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Diamond indenter | 1 pc |
| Ø1.5875mm steel ball indenter | 1 pc |
| Level | 1 pc |
| Hardness test block HRA80~88 | 1 pc |
| Hardness test block HRB85~95 | 1 pc |
| Hardness test block HRC20~30 | 1 pc |
| Hardness test block HRC35~55 | 1 pc |
| Hardness test block HRC60~70 | 1 pc |
| Anti-dust cover | 1 pc |



level (included)



Ø150mm flat anvil (included)



Ø58mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



small V-type anvil (optional) for cylinders with diameter Ø2~4mm

■ According to ISO 6508

OPTIONAL ACCESSORY

| | |
|-------------------------------|----------------|
| Hardness test block HRA80~84 | HDT-B-HRA |
| Hardness test block HRB88~100 | HDT-B-HRB |
| Hardness test block HRC20~30 | HDT-B-HRC1 |
| Hardness test block HRC35~55 | HDT-B-HRC2 |
| Hardness test block HRC60~70 | HDT-B-HRC3 |
| Small V-type anvil | ISH-SMALLANVIL |
| Desk | HDT-DESK |



desk (optional)

MANUAL ROCKWELL HARDNESS TESTER (BASIC TYPE) CODE HDT-RW160

**INSPECTION
CERTIFICATE**



desk (optional)



level (included)



Ø58mm flat anvil (included)



small V-type anvil (optional) for cylinders with diameter Ø2-4mm



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4-60mm

■ According to ISO 6508

OPTIONAL ACCESSORY

| | |
|-------------------------------|----------------|
| Hardness test block HRA80~84 | HDT-B-HRA |
| Hardness test block HRB88~100 | HDT-B-HRB |
| Hardness test block HRC20~30 | HDT-B-HRC1 |
| Hardness test block HRC35~55 | HDT-B-HRC2 |
| Hardness test block HRC60~70 | HDT-B-HRC3 |
| Small V-type anvil | ISH-SMALLANVIL |
| Desk | HDT-DESK |

SPECIFICATION

| | |
|------------------------|--|
| Hardness scale | HRA, HRB, HRC, HRD, HRF, HRG |
| Preliminary test force | 98N (10kg) |
| Test force | 588N (60kg), 980N (100kg), 1471N (150kg) |
| Display | analogue |
| Stage elevation | manual |
| Load control | manual |
| Min. reading | 0.5HR |
| Max. workpiece height | 170mm |
| Max. testing width | 135mm (from the center of indenter to the wall of main body) |
| Dimension | 466×238×630mm |
| Weight | 70kg |

STANDARD DELIVERY

| | |
|-------------------------------|-------|
| Main unit | 1 pc |
| Ø58mm flat anvil | 1 pc |
| Ø150mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Diamond indenter | 1 pc |
| Ø1.5875mm steel ball indenter | 1 pc |
| Ø1.5875mm steel ball | 5 pcs |
| Level | 1 pc |
| Hardness test block HRA80~88 | 1 pc |
| Hardness test block HRB85~95 | 1 pc |
| Hardness test block HRC20~30 | 1 pc |
| Hardness test block HRC35~55 | 1 pc |
| Hardness test block HRC60~70 | 1 pc |
| Anti-dust cover | 1 pc |

DIGITAL VICKERS HARDNESS TESTER CODE HDT-VD50A

**FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)**

**INSPECTION
CERTIFICATE**



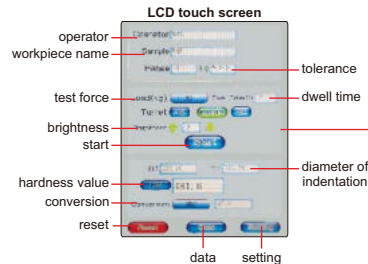
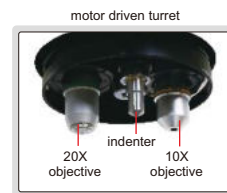
- LCD touch screen, easy operation
- Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights
- According to ISO 6507

SPECIFICATION

| | |
|-------------------------------|--|
| Test force | 0.5, 1, 2, 2.5, 3, 5, 10, 15, 20, 30, 40, 50kgf |
| Range | 8~2900HV |
| Load control | automatic (load/dwell/unload) |
| Load dwell time | 1~99 second |
| Eyepiece | 10X |
| Objective | 10X, 20X |
| Total magnification | 100X, 200X |
| Length measurement resolution | 0.01µm |
| Data output | USB flash disk |
| Max. workpiece height | 180mm |
| Max. testing width | 160mm (from the center of indenter to the wall of main body) |
| Power supply | 220V, 50/60Hz |
| Dimension | 580x190x700mm |
| Weight | 55kg |

OPTIONAL ACCESSORY

| | |
|---------------------------------|-------------|
| Hardness test block 400~500HV10 | HDT-B-HV10D |
| Hardness test block 400~500HV30 | HDT-B-HV30D |
| Measuring system | HDT-VS530 |



STANDARD DELIVERY

| | |
|---------------------------------|--------------|
| Main unit | 1 pc |
| 10X, 20X objective | 1 pc of each |
| Vickers indenter | 1 pc |
| Ø58mm flat anvil | 1 pc |
| Ø150mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Hardness test block 400~500HV10 | 1 pc |
| Hardness test block 400~500HV30 | 1 pc |
| USB flash disk | 1 pc |
| Level | 1 pc |
| Touch pen | 1 pc |
| Anti-dust cover | 1 pc |



level (included)



Ø150mm flat anvil (included)



Ø58mm flat anvil (included)



V-type anvil (included)

DIGITAL MICRO-VICKERS HARDNESS TESTERS



- Measure hardness of thin or small workpieces
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Motor driven turret to switch between indenter and objective lens automatically
- Calibrated according to standard hardness blocks or length scales
- Test result can be sent to Word or Excel
- According to ISO 6507

HDT-MV290

SPECIFICATION

| Code | HDT-MV290 | HDT-MV290S |
|-------------------------------|--|-----------------------------|
| | Test force | Manual switch of test force |
| Vickers scales | 0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf) | |
| Range | HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, Hv1 | |
| Length measurement resolution | 8HV~2900HV | |
| Objective/indenter switch | 0.01µm | |
| Stage lifting | motor driven turret | |
| Load control | manual | |
| Load dwell time | automatic (load/dwell/unload) | |
| Objective | 1~99 second | |
| Eyepiece | 10X, 40X | |
| Total magnification | 10X | |
| Max. workpiece height | 100X (for measurement or observation), 400X (for measurement) | |
| Max. testing width | 100mm | |
| X-Y stage | 130mm (from the center of indenter to the wall of main body) | |
| Data output | dimensions: 100×100mm, travel range: 25×25mm | |
| Power supply | built-in printer, Rs232 | |
| Dimension | 220V, 50/60Hz | |
| Weight | 540×260×650mm | |
| | 50kg | |

STANDARD DELIVERY

| | |
|----------------------------------|--------------|
| Main unit | 1 pc |
| 10X, 40X objective | 1 pc of each |
| Micro Vickers indenter | 1 pc |
| Hardness test block 400~500HV0.2 | 1 pc |
| Hardness test block 700~750HV1 | 1 pc |
| Level | 1 pc |
| Touch pen | 1 pc |
| Slice holder | 1 pc |
| Vice | 1 pc |
| Cylinder holder | 1 pc |
| Anti-dust cover | 1 pc |

OPTIONAL ACCESSORY

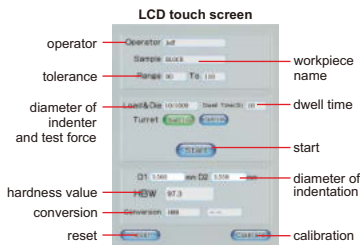
| | |
|----------------------------------|-------------|
| Hardness test block 400~500HV0.2 | HDT-B-HV02C |
| Hardness test block 700~750HV1 | HDT-B-HV1F |
| Measuring system | HDT-VS530 |

MOTORIZED DIGITAL BRINELL HARDNESS TESTER

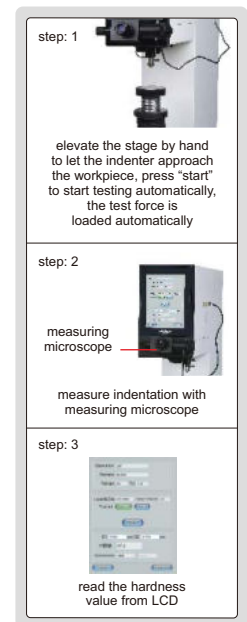
**AUTOMATIC TESTING,
AUTOMATIC TEST FORCE LOADING**

**FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)**

**INSPECTION
CERTIFICATE**



ISHB-D300



- Automatic testing, automatic test force loading
- LCD touch screen, easy operation
- Measure indentation by measuring microscope then read the hardness value from LCD
- Tolerance testing
- Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HB, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights
- According to ISO 6506



Ø80mm flat anvil (included)



Ø200mm flat anvil (included)



V-type anvil (included)



touch pen (included)



desk (optional)

SPECIFICATION

| | | |
|-----------------------|--|---------|
| Code | ISHB-D300 | |
| Turret rotation | 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. workpiece height | 200mm | |
| Max. testing width | 155mm (from the center of indenter to the wall of main body) | |
| Stage elevation | manual | |
| Load control | automatic (load/dwell/unload) | |
| Load dwell time | 5~60 second | |
| Measuring microscope | magnification | 20X |
| | resolution | 0.625µm |
| Power supply | 220V, 50/60Hz | |
| Dimension | 550x210x750mm | |
| Weight | 110kg | |

STANDARD DELIVERY

| | |
|---|------|
| Main unit | 1 pc |
| Ø80mm flat anvil | 1 pc |
| Ø200mm flat anvil | 1 pc |
| V-type anvil | 1 pc |
| Ø2.5mm carbide ball indenter | 1 pc |
| Ø5mm carbide ball indenter | 1 pc |
| Ø10mm carbide ball indenter | 1 pc |
| Hardness test block 150~250HBW2.5/187.5 | 1 pc |
| Hardness test block 75~125HBW10/1000 | 1 pc |
| Hardness test block 175~250HBW10/3000 | 1 pc |
| USB flash disk (8G) | 1 pc |
| Touch pen | 1 pc |
| Anti-dust cover | 1 pc |

OPTIONAL ACCESSORY

| | |
|---|--------------|
| Hardness test block 200~300HBW2.5/187.5 | HDT-B-HB25A2 |
| Hardness test block 90~200HBW10/1000 | HDT-B-HB10C1 |
| Hardness test block 200~300HBW10/3000 | HDT-B-HB10A2 |
| Brinell indentation measuring system | ISHB-MSA |
| Desk | HDT-DESK |

DIGITAL BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE HDT-BRV130



FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)



- According to ISO 6506, ISO 6507, ISO 6508
- Force loading by electric motor (without weights)

SPECIFICATION

| | |
|-----------------------------|--|
| Brinell test load | 49N (5kgf), 98N (10kgf), 153N (15.625kgf), 294N (30kgf), 306N (31.25kgf), 613N (62.5kgf), 980N (100kgf), 1226N (125kgf), 1839N (187.5kgf) |
| Brinell scales | HBW1/5, HBW2.5/62.5, HBW1/10, HBW2.5/15.625, HBW1/30, HBW2.5/31.25, HBW2.5/62.5, HBW10/100, HBW5/125, HBW2.5/187.5 |
| Brinell resolution | 0.1HBW |
| Rockwell test load | 98N (10kgf) preload 588 (60kgf), 980 (100kgf), 1471N (150kgf) total load |
| Rockwell scales | HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV |
| Rockwell resolution | 0.1HR |
| Vickers test load | 49N (5kgf), 98N (10kgf), 196N (20kgf), 294N (30kgf), 392N (40kgf), 490N (50kgf), 588N (60kgf), 784N (80kgf), 980N (100kgf), 1176N (120kgf) |
| Vickers scales | HV5, HV10, HV20, HV30, HV40, HV50, HV60, HV80, HV100, HV120 |
| Vickers resolution | 0.1HV |
| Objective | 2.5X/5X |
| Magnification of microscope | Brinell: 37.5X, Vickers: 75X |
| Hardness test range | Brinell: 8~650HBW, Rockwell: 20~100HR, Vickers: 8~2900HV |
| Max. workpiece height | Rockwell: 220mm, Brinell and Vickers: 150mm |
| Max. testing width | 200mm (from the center of indenter to the wall of main body) |
| Data output | USB flash disk |
| Power supply | 220V, 50/60Hz |
| Dimension | 560×350×800mm |
| Weight | 70kg |

LCD touch screen



STANDARD DELIVERY

| | |
|--|------|
| Main unit | 1 pc |
| Vickers diamond indenter | 1 pc |
| Rockwell diamond indenter | 1 pc |
| Ø1.5875mm Rockwell indenter | 1 pc |
| Ø2.5mm Brinell indenter | 1 pc |
| Ø5mm Brinell indenter | 1 pc |
| Ø60mm flat anvil for Rockwell | 1 pc |
| Ø150mm flat anvil for Rockwell | 1 pc |
| V-type anvil for Rockwell | 1 pc |
| Ø60mm flat anvil for Vickers and Brinell | 1 pc |
| Hardness test block HRB88-95 | 1 pc |
| Hardness test block HRC60-65 | 1 pc |
| Hardness test block HRC20-30 | 1 pc |
| Hardness test block 400-500HV30 | 1 pc |
| Hardness test block 180-300HBW2.5/187.5 | 1 pc |
| Level | 1 pc |
| USB flash disk | 1 pc |
| Touch pen | 1 pc |
| Anti-dust cover | 1 pc |



Ø60mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



V-type anvil for Rockwell (included), for cylinders with diameter Ø4-60mm



small V-type anvil for Rockwell (optional), for cylinders with diameter Ø2-4mm



Ø150mm flat anvil for Rockwell (included)

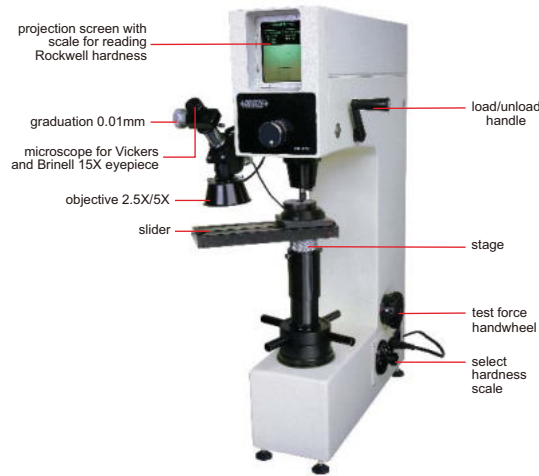


desk (optional)

OPTIONAL ACCESSORY

| | |
|---|----------------|
| Hardness test block HRB88~100 | HDT-B-HRB |
| Hardness test block HRC60~70 | HDT-B-HRC3 |
| Hardness test block HRC20~30 | HDT-B-HRC1 |
| Hardness test block 400-500HV30 | HDT-B-HV30D |
| Hardness test block 200-300HBW2.5/187.5 | HDT-B-HB25A2 |
| Small V-type anvil for Rockwell | ISH-SMALLANVIL |
| Desk | HDT-DESK |

BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE ISH-BRV



■ According to ISO 6506, ISO 6507, ISO 6508



Ø60mm flat anvil for Rockwell (included)



Ø150mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



V-type anvil for Rockwell (included), for cylinders with diameter Ø4-60mm



V-type anvil for Vickers and Brinell (included)



small V-type anvil for Rockwell (optional), for cylinders with diameter Ø2-4mm



desk (optional)

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 |
| Max. workpiece height | 180mm |
| Max. testing width | 200mm (from the center of indenter to the wall of main body) |
| Power supply | 220V, 50/60Hz |
| Dimension | 546×300×767mm |
| Weight | 90kg |

STANDARD DELIVERY

| | |
|--|------|
| Main unit | 1 pc |
| Ø1.5875mm carbide ball indenter | 1 pc |
| Diamond Rockwell indenter | 1 pc |
| Ø5mm Brinell indenter | 1 pc |
| Ø2.5mm Brinell indenter | 1 pc |
| Vickers indenter | 1 pc |
| Ø60mm flat anvil for Rockwell | 1 pc |
| Ø150mm flat anvil for Rockwell | 1 pc |
| V-type anvil for Rockwell | 1 pc |
| Ø60mm flat anvil for Vickers and Brinell | 1 pc |
| V-type anvil for Vickers and Brinell | 1 pc |
| Hardness test block HRB88-95 | 1 pc |
| Hardness test block HRC60-65 | 1 pc |
| Hardness test block HRC20-30 | 1 pc |
| Hardness test block 400-500HV30 | 1 pc |
| Hardness test block 180-300HBW2.5/187.5 | 1 pc |
| Anti-dust cover | 1 pc |

OPTIONAL ACCESSORY

| | |
|--|----------------|
| Hardness test block HRB88-100 | HDT-B-HRB |
| Hardness test block HRC60-70 | HDT-B-HRC3 |
| Hardness test block HRC20-30 | HDT-B-HRC1 |
| Hardness test block 400-500HV30 | HDT-B-HV30D |
| Hardness test block 200-3000HBW2.5/187.5 | HDT-B-HB25A2 |
| Small V-type anvil for Rockwell | ISH-SMALLANVIL |
| Desk | HDT-DESK |

VICKERS HARDNESS MEASURING SYSTEM CODE HDT-VS530

measure the indentation sizes automatically or manually, and hardness tester can be controlled by software

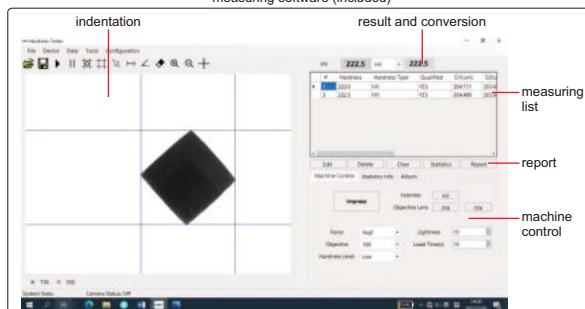


C-mount



software CD (included)

measuring software (included)



indentation

result and conversion

measuring list

report

machine control

- Suitable for digital Vickers hardness tester HDT-VD series and HDT-MV series
- Connected to computer USB port
- Measure the indentation sizes automatically or manually
- Multiple measurements to have average value, max. value, min. value and variance
- Convert to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Hardness tester can be controlled by software
- Measurement result can be sent to Word, Excel or CSV

SPECIFICATION

| | |
|---------------------------------|--|
| Sensor | 1/2.5" CMOS |
| Pixel | 5M (resolution 2592×1944) |
| Hardness measurement resolution | 0.1HV |
| Length measurement resolution | 0.001µm |
| Test force | 1, 2, 2.5, 3, 5, 10, 15, 20, 30, 40, 50kgf |
| Dimension | 30×30×40mm |
| Weight | 50g |

STANDARD DELIVERY

| | |
|------------------------|-------|
| Main unit | 1 pc |
| Software and USB cable | 1 pc |
| Rs232 cable | 1 pc |
| USB dongle | 1 pc |
| Camera adapter | 1 set |

camera adapter (included)



PORTABLE LEEB HARDNESS TESTER CODE ISH-PHB



- 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

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) |
| | minimum thickness: 5mm | 0.1kg(coupled on plate) |
| | | minimum radius of curved surface: 30mm |
| | maximum roughness (Ra): 1.6µm | |
| Power supply | 3×AAA batteries | |
| Dimension | 150×84×28mm | |
| Weight | 200g | |



hardness test block D (included)



small support ring (included)



wireless printer (optional)

STANDARD DELIVERY

| | |
|-----------------------|------|
| Main unit | 1 pc |
| Impact device D | 1 pc |
| Hardness test block D | 1 pc |
| Small support ring | 1 pc |
| Cleaning brush | 1 pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|------------------|
| Wireless printer | ISH-DS-PRINTER |
| Couplant | ISH-COULPLANT |
| Support rings | refer to details |
| Hardness test block D | HDT-B-HLD3 |



PORTABLE LEEB HARDNESS TESTERS (BASIC TYPE)



- Can change probes
- Dual-coil probe for high accuracy
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Dual value display, shows both Leeb and converted hardness
- Large LCD display with backlight
- Can choose large font display and statistics display
- Automatically calculate maximum, minimum and average value
- Save 300 data
- Operation temperature: -10°C~45°C
- According to ASTM A956, DIN 50156, GB/T 17394



HDT-LP200



small support ring (included)



hardness test block D (included)



wireless printer (included in HDT-LP200B)

SPECIFICATION

| Code | HDT-LP200 | HDT-LP200B |
|-----------------|---|------------|
| Printer | not included | included |
| Output | – | bluetooth |
| Resolution | 1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HRA/0.1HS/1SGM | |
| Accuracy | ±6HLD (when HLD=800) | |
| Measuring range | HL 100-960/HRC 0.9-79.2/HRB 1-140/HB 1-1878/HV 1-1698/HS 0.5-1370/HRA 1-88.5/SGM (rm) 1-6599N/mm ² | |
| Power supply | 2xAA battery | |
| Dimension | 127×67×30mm | |
| Weight | 240g | |

STANDARD DELIVERY

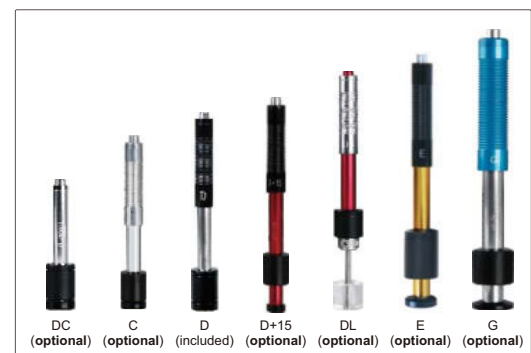
| | |
|----------------------------------|------|
| Main unit | 1 pc |
| Hardness test block D | 1 pc |
| Small support ring | 1 pc |
| Cleaning brush | 1 pc |
| Impact device D | 1 pc |
| Printer (included in HDT-LP200B) | 1 pc |

OPTIONAL ACCESSORY

| | |
|-------------------------|------------------|
| Impact device DC | HDT-LP200-DC |
| Impact device C | HDT-LP200-C |
| Impact device D+15 | HDT-LP200-D15 |
| Impact device DL | HDT-LP200-DL |
| Impact device E* | HDT-LP200-E |
| Impact device G | HDT-LP200-G |
| Hardness test block D** | HDT-B-HLD3 |
| Hardness test block G** | HDT-B-HLG2 |
| Support rings | refer to details |

*Impact device E (HDT-LP200-E) must be purchased together with the main unit.

**Hardness test block G (HDT-B-HLG2) is for impact device G (HDT-LP200-G).
Hardness test block D (HDT-B-HLD3) is for all others impact devices.



APPLICABLE WORKPIECE

| Impact device | DC | C | D | D+15 | DL | E | G |
|-------------------------------------|---------------------------|--|-------------|-------------|---------------------------|--------------------|------------------------------|
| Application | inner wall of small space | small or thin workpiece, coating layer | general use | deep groove | narrow slot or small hole | very hard material | casting or forging workpiece |
| Maximum roughness of workpiece (Ra) | 2µm | 0.4µm | 2µm | 2µm | 2µm | 2µm | 7µm |
| Minimum weight of workpiece | direct measurement | 5kg | 1.5kg | 5kg | 5kg | 5kg | 15kg |
| | on solid support | 2kg | 0.5kg | 2kg | 2kg | 2kg | 5kg |
| | coupled on plate | 0.05kg | 0.02kg | 0.05kg | 0.1kg | 0.05kg | 0.5kg |
| Minimum thickness of workpiece | 3mm | 1mm | 3mm | 3mm | 3mm | 3mm | 10mm |

PORTABLE LEEB HARDNESS TESTER (HIGH ACCURACY) CODE HDT-L410

DATA
OUTPUT

HIGH
ACCURACY

DL PROBE IS
OPTIONAL

INSPECTION
CERTIFICATE

- Metal housing
- HD TFT 320×320 display
- Impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Four display modes
- Automatic direction correction
- Tolerance testing
- Automatic power off, automatic calculation of statistics
- Dual value display, shows both Leeb and other conversion values
- 31 files can be saved, each containing 100 measurement data
- Connected to PC software via USB or Bluetooth 2.0
- Connected with printer via Bluetooth
- Operation temperature: -20°C~70°C
- According to ASTM A956, DIN 50156, GB/T 17394



software CD
(included)

DL probe can be installed (optional)



small support ring
(included)

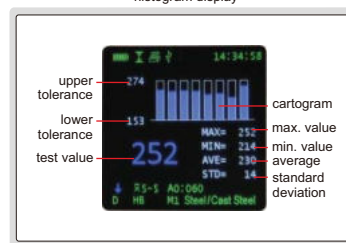


hardness test block D
(included)

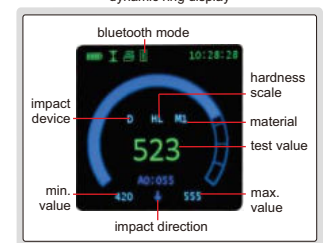


wireless printer
(optional)

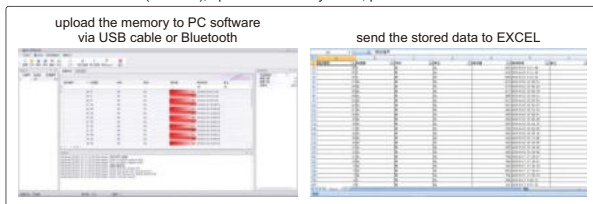
histogram display



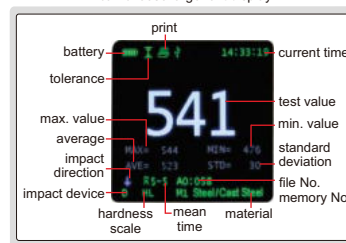
dynamic ring display



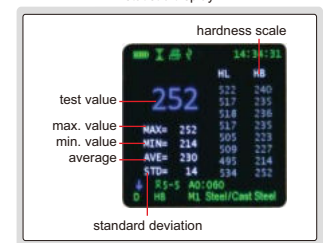
software (included), upload the memory to PC, print and send to EXCEL



can choose large font display



statistic display



SPECIFICATION

| | | |
|--|---|---------------------------|
| Resolution | 1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM | |
| Accuracy | ±4HLD (when HLD=800) | |
| Output | USB and bluetooth | |
| Applicable workpiece | minimum weight | 5kg (direct measurement) |
| | | 2kg (on solid support) |
| | | 0.05kg (coupled on plate) |
| | minimum thickness: 5mm | |
| minimum radius of curved surface: 30mm | | |
| maximum roughness (Ra): 2µm | | |
| Power supply | built-in 3.7V rechargeable battery | |
| Dimension | 148×44×22mm | |
| Weight | 115g | |

STANDARD DELIVERY

| | |
|-----------------------------|------|
| Main unit | 1 pc |
| Hardness test block D | 1 pc |
| Small support ring | 1 pc |
| Cleaning brush | 1 pc |
| AC/DC adapter | 1 pc |
| Software disc and USB cable | 1 pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|------------------|
| Printer | HDT-L410-PRINTER |
| Support rings | ISH-PH-SP9 |
| Hardness test block D | HDT-B-HLD3 |
| DL probe | HDT-L410-DL |

PORTABLE LEEB HARDNESS TESTER (BASIC TYPE) CODE HDT-L411



software CD
(included)



small support ring
(included)



hardness test
block D (included)

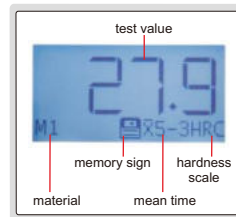


- Impact device D
- Universal testing angle, no need to set impact direction
- Dual-coil probe, high accuracy
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Dual value display, shows both Leeb and converted hardness
- High contrast digital LCD display
- Can choose large font display
- Automatically calculate maximum, minimum, average value
- Connected to PC via USB
- Save 999 data
- Operation temperature: -20°C~45°C
- According to ASTM A956, DIN 50156, GB/T 17394

SPECIFICATION

| | | |
|--|--|---------------------------|
| Resolution | 1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM | |
| Accuracy | ±6HLD (when HLD=800) | |
| Output | USB | |
| Measuring range | HL100-960, HRC1-74.7, HRB1.2-140, HB28-1027, HV45-1230, HS4-112, HRA7-88.5, SGM (rm) 118-3315N/mm ² | |
| Applicable workpiece | minimum weight | 5kg (direct measurement) |
| | | 2kg (on solid support) |
| | | 0.05kg (coupled on plate) |
| | minimum thickness: 5mm | |
| minimum radius of curved surface: 30mm | | |
| maximum roughness (Ra): 2µm | | |
| Power supply | 1xAAA battery | |
| Dimension | 148×45×21mm | |
| Weight | 105g | |

can choose large font display

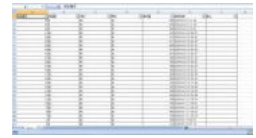


software (included), upload the memory to PC, print and send to EXCEL

upload the memory to PC software via USB cable



send the stored data to EXCEL



STANDARD DELIVERY

| | |
|-----------------------------|------|
| Main unit | 1 pc |
| Hardness test block D | 1 pc |
| Cleaning brush | 1 pc |
| AAA battery | 1 pc |
| Small support ring | 1 pc |
| Software disc and USB cable | 1 pc |

OPTIONAL ACCESSORY

| | |
|-----------------------|------------|
| Support rings | ISH-PH-SP9 |
| Hardness test block D | HDT-B-HLD3 |

ALUMINUM HARDNESS TESTER



- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-84 (2000)

SPECIFICATION

| | |
|--|--------------------------------|
| Code | ISHW-L20 |
| Application | for aluminum alloy general use |
| Thickness requirement of flat workpiece | 0.6~6mm |
| Internal diameter requirement of tube workpiece | >Ø10mm |
| Wall thickness requirement of tube workpiece | 0.6~6mm |
| Hardness range | 0~20HW |
| Min. reading | 1HW |
| Accuracy | ±0.5HW (at 5~17HW) |
| Dimension | 205x30x85mm |
| Weight | 500g |



ISHW-L20

STANDARD DELIVERY

| | |
|---------------------|------|
| Main unit | 1 pc |
| Spare indenter | 1 pc |
| Hardness test block | 1 pc |
| Wrench | 1 pc |

BARCOL HARDNESS TESTER CODE ISHB-B300



- To measure the hardness of 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 | 1 pc |
| Spare indenter | 2 pcs |
| Hardness test block | 2 pcs |
| Wrench | 1 pc |

DIGITAL SHORE DUROMETERS



- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Tolerance testing
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (code ISH-DS-STANDA)
- Automatic power off



DATA
OUTPUT



software CD
(included)



calibration block
(included)



printer (optional)

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 | 153x50x29mm | |
| Weight | 170g | |

STANDARD DELIVERY

| | |
|------------------------|------|
| Main unit | 1 pc |
| Calibration block | 1 pc |
| Software and USB cable | 1 pc |
| AC/DC adapter | 1 pc |

OPTIONAL ACCESSORY

| | |
|------------|----------------|
| Printer | ISH-DS-PRINTER |
| Test stand | ISH-DS-STAND |

*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-STANDA

- 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
- Special structure for stable loading
- Weight block A is for ISH-DSA, weight block D is for ISH-DSD

SPECIFICATION

| | |
|-----------------------|--------------------------------------|
| Stage diameter | Ø115mm |
| Max. workpiece height | 45mm |
| Max. testing width | 63mm (from test point to the column) |
| Dimension | Ø195×370mm |
| Weight | 5.61kg |



weight block D (optional)
for ISH-DSD



STANDARD DELIVERY

| | |
|------------------------------|------|
| Test stand | 1 pc |
| Weight block A (for ISH-DSA) | 1 pc |

OPTIONAL ACCESSORY

| | |
|------------------------------|-----------|
| Weight block D (for ISH-DSD) | ISH-DS-W4 |
|------------------------------|-----------|

SHORE DUROMETERS

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand **ISH-STAC** and **ISH-STD**



calibration block (optional)

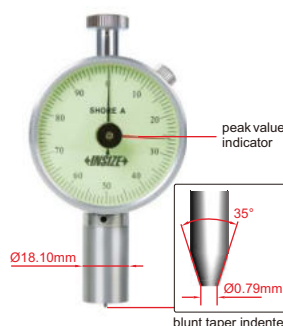


VIDEO

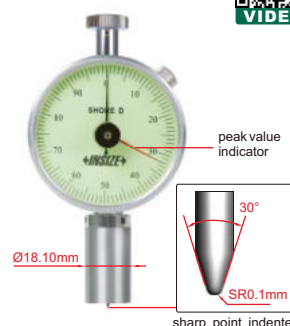
SPECIFICATION

| Code | ISH-SAM | ISH-SDM |
|---------------------|--------------------------------------|--|
| Scale | Shore A | Shore D |
| Application | natural rubber, soft elastomer, etc. | hard elastomer, plastic, hard rubber, etc. |
| Measuring range * | 10~90HA | 20~90HD |
| Graduation | 1HA | 1HD |
| Indenter protrusion | 2.5mm | |
| Dimension | 115x60x25mm | |
| Net weight | 160g | |

* Use **ISH-SDM** when measuring result is higher than 90HA
Use **ISH-SAM** when measuring result is lower than 20HD



ISH-SAM



ISH-SDM

OPTIONAL ACCESSORY

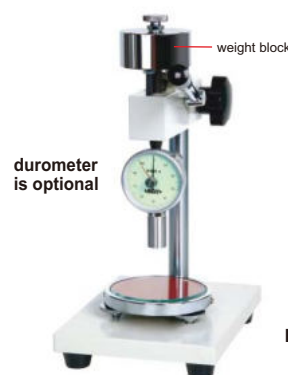
Calibration block **ISH-DS-BLOCK**

TEST STAND FOR SHORE DUROMETER

- 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 |
| Applicable durometer | ISH-SAM |
| Stage diameter | Ø100mm |
| Max. workpiece height | 75mm |
| Max. testing width | 65mm (from test point to the column) |
| Weight block | 1kg |



durometer is optional

ISH-STAC



VIDEO

DIGITAL FORCE GAGES

DATA OUTPUT

INSPECTION CERTIFICATE



VIDEO

- Push and pull test
- Units: lbf, ozf, N, gf, kgf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm

software CD (included)



printer (optional)



ISF-1DF100

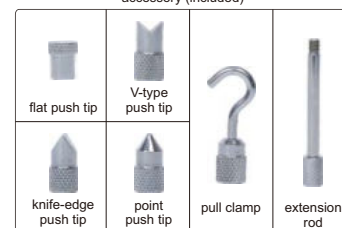
SPECIFICATION

| 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.), tolerance testing | | | | |
| Power supply | built-in rechargeable battery | | | | |
| Dimension | 150x73x33mm | | | | |
| Weight | 450g | | | | |

STANDARD DELIVERY

| | |
|------------------------|--|
| Main unit | 1 pc |
| AC/DC adapter | 1 pc |
| Software and USB cable | 1 pc |
| Push/pull accessory | 6 pcs (flat push tip, V-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod) |

accessory (included)



OPTIONAL ACCESSORY

| | |
|------------|-----------------------|
| Printer | ISF-DF-PRINTER |
| Test stand | ISF-MT1K |

DIGITAL FORCE GAGES (HIGH ACCURACY)

**INSPECTION
CERTIFICATE**

**DATA
OUTPUT**



ISF-DF100A

- Push and pull test
- Peak (max.) and tracking mode
- Units: mN, N, gf, kgf, ozf, lbf
- Tolerance testing
- 1000 memories
- Automatic power off
- Metal case, touch buttons
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm
- Keyboard signal, can be transmitted to Excel

printer (optional)



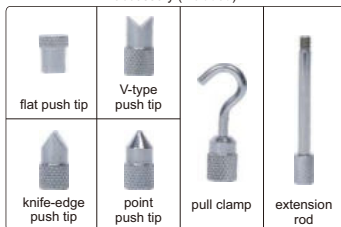
software CD (included)



SPECIFICATION

| Code | ISF-DF50A | ISF-DF100A | ISF-DF200A | ISF-DF500A | ISF-DF1KA |
|-------------------|-------------------------------|------------|------------|------------|-----------|
| Type | internal sensor | | | | |
| Load capacity (N) | 50 | 100 | 200 | 500 | 1000 |
| Resolution (N) | 0.005 | 0.01 | 0.05 | 0.05 | 0.1 |
| Accuracy | ±0.2% (of load capacity) | | | | |
| Power supply | built-in rechargeable battery | | | | |

accessory (included)



STANDARD DELIVERY

| | |
|------------------------|--|
| Main unit | 1 pc |
| AC/DC adapter | 1 pc |
| Software and USB cable | 1 pc |
| Push/pull accessory | 6 pcs (flat push tip, V-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod) |

OPTIONAL ACCESSORY

| | |
|------------|----------------|
| Printer | ISF-DF-PRINTER |
| Test stand | ISF-MT1K |

TEST STAND FOR DIGITAL FORCE GAGE CODE ISF-MT1K

- For digital force gages (code ISF-1DF□□ and ISF-DF□□)
- To be used in vertical and horizontal orientation

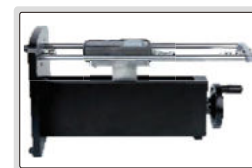
SPECIFICATION

| | |
|---------------|---|
| Load capacity | 1000N |
| Travel | 200mm (3mm vertical movement per revolution of handwheel) |
| Dimension | 196x250x446mm |
| Weight | 13kg |

OPTIONAL ACCESSORY

| | |
|--|----------------|
| Digital scale (range: 200mm, resolution: 0.01mm/0.0005") | ISF-MT1K-SCALE |
|--|----------------|

force gage is optional



horizontal orientation test



digital scale (optional)



FORCE GAGES



- Push and pull test
- Peak (max.) or tracking mode

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) | | | | | | | | |

STANDARD DELIVERY

| | |
|---------------|---|
| Main unit | 1 pc |
| Push tip | 4 pcs (flat, V type, knife-edge, point) |
| Pull clamp | 1 pc |
| Extension rod | 1 pc |

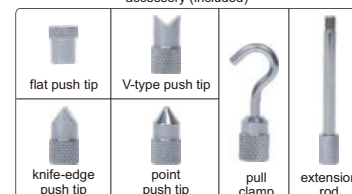
OPTIONAL ACCESSORY

| | |
|------------|-----------|
| Test stand | ISF-MT500 |
|------------|-----------|



ISF-F500

accessory (included)



TEST STAND FOR FORCE GAGE CODE ISF-MT500

- For force gages (code ISF-F□□□)
- To be used in vertical and horizontal orientation



horizontal orientation test

SPECIFICATION

| | |
|---------------|---|
| Load capacity | 500N |
| Travel | 150mm (3mm vertical movement per revolution of handwheel) |
| Dimension | 160×240×460mm |
| Weight | 12kg |



force gage is optional



VIDEO

MANUAL HORIZONTAL TEST STAND FOR FORCE GAGES

ATTENTION: ONLY
FOR PULL TEST



VIDEO

force gage is optional



- For pull test with force gages

SPECIFICATION

| | |
|---------------|---|
| Code | ISF-H20D |
| Apply to | digital force gages (code ISF-1DF□□□ and ISF-DF□□□) |
| Load capacity | 500N |
| Travel | 60mm |
| Dimension | 450×185×170mm |
| Weight | 9kg |

MANUAL STRIPPING FORCE TEST STAND



VIDEO

force gage is optional



stripping angle 45°

- For stripping force test with force gages

SPECIFICATION

| | |
|-------------------|---|
| Code | ISF-P30D |
| Apply to | digital force gages (code ISF-1DF□□□ and ISF-DF□□□) |
| Load capacity | 500N |
| Horizontal travel | 170mm |
| Dimension | 420×215×480mm |
| Weight | 22kg |

MOTORIZED VERTICAL TEST STAND CODE ISF-RV61

- For digital force gages (code ISF-1DF□□□ and ISF-DF□□□)
- Push and pull test
- Automatic and manual test
- Programmable automatic operation (automatic cycle)
- Four operation modes: displacement cycle (D cycle), force cycle (F cycle), demo (teaching & playback) mode and positioning mode
- Alarm indications: stroke overrange alarm, force overrange alarm, motor block alarm

SPECIFICATION

| | |
|--|---------------------|
| Load capacity | 650N (250lbf, 65kg) |
| Max. travel | 220mm |
| Resolution of displacement | 0.01mm |
| Accuracy of displacement | ±0.3mm |
| Range of adjustable speed | 30~720mm/min |
| Resolution of speed | 1mm/min |
| Accuracy of speed | ±2% |
| Data output | USB, RS232 |
| Work temperature and relative humidity | 10~40°C, 10%~80%RH |
| Power supply | 100~230V |
| Dimension | 340×180×630mm |
| Weight | 15.5kg |

digital force gage is optional



VIDEO

STANDARD DELIVERY

| | |
|-----------------------------|------|
| Test stand | 1 pc |
| AC/DC adapter | 1 pc |
| MD8 cable (for force gages) | 1 pc |
| Software and USB cable | 1 pc |

MOTORIZED HORIZONTAL TEST STAND CODE ISF-RH62



- For digital force gages (code **ISF-1DF** and **ISF-DF**)
- Push and pull test
- Automatic and manual test
- Programmable automatic operation (automatic cycle)
- Four operation modes: displacement cycle (D cycle), force cycle (F cycle), demo (teaching & playback) mode and positioning mode
- Alarm indications: stroke overrange alarm, force overrange alarm, motor block alarm

digital force gage
is optional



SPECIFICATION

| | |
|--|---------------------|
| Load capacity | 650N (250lbf, 65kg) |
| Max. travel | 220mm |
| Resolution of displacement | 0.01mm |
| Accuracy of displacement | ±0.3mm |
| Range of adjustable speed | 30~720mm/min |
| Resolution of speed | 1mm/min |
| Accuracy of speed | ±2% |
| Data output | USB, RS232 |
| Work temperature and relative humidity | 10~40°C, 10%~80%RH |
| Power supply | 100~230V |
| Dimension | 671×120×278mm |
| Weight | 13kg |

STANDARD DELIVERY

| | |
|-----------------------------|------|
| Test stand | 1 pc |
| AC/DC adapter | 1 pc |
| MD8 cable (for force gages) | 1 pc |
| Software and USB cable | 1 pc |

DIGITAL SPRING TESTERS

DATA
OUTPUT



- Peak hold and automatic release function
- Set upper and lower limits, red and green indicator and buzzer alarm
- Automatic conversion of three units: N, kgf, lbf
- Built in printer
- Automatic power off



ISF-S500

SPECIFICATION

| Code | ISF-S50 | ISF-S100 | ISF-S200 | ISF-S300 | ISF-S500 |
|-------------------------------|------------------------|----------|----------|----------|----------|
| Maximum load | 50N | 100N | 200N | 300N | 500N |
| Resolution | 0.01N | 0.02N | 0.05N | 0.1N | 0.1N |
| Range of digital scale | 95mm | | | | |
| Resolution of digital scale | 0.01mm | | | | |
| Disk diameter | Ø49mm | | | | |
| Maximum free length of spring | 95mm | | | | |
| Measuring range of force | 5%~100% (maximum load) | | | | |
| Accuracy of force | ±1% (maximum load) | | | | |
| Data output | RS232 | | | | |
| Power supply | 220V, 50/60Hz | | | | |
| Dimension | 300×235×620mm | | | | |
| Weight | 17.3kg | 19.1kg | 19.1kg | 19.1kg | 20.8kg |

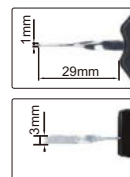
STANDARD DELIVERY

| | |
|-----------|------|
| Main unit | 1 pc |
|-----------|------|

DIAL TENSION GAGES



- Clockwise and counter-clockwise use
- For electronic and precision mechanical industry, such as test the contact pressure of relay, adjust the tension or compression of spring



ISF-TG3

SPECIFICATION (Unit: N)

| Code | ISF-TGD1 | ISF-TGD3 | ISF-TGD5 | ISF-TG1 | ISF-TG1D5 | ISF-TG3 | ISF-TG5 |
|-------------------|------------------|----------|----------|---------|-----------|---------|---------|
| Range (N) | 0.01~0.1 | 0.03~0.3 | 0.05~0.5 | 0.1~1 | 0.15~1.5 | 0.3~3 | 0.5~5 |
| 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 |
|-------------------|------------------|----------|----------|-----------|-----------|-----------|-----------|
| Range (gf) | 1~10 | 3~30 | 5~50 | 10~100 | 15~150 | 30~300 | 50~500 |
| 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 | | | | | | |

DIGITAL TORQUE TESTERS

ATTENTION: NOT SUITABLE FOR ELECTRIC WRENCHES, IMPACT WRENCHES OR PNEUMATIC WRENCHES

- Test torque wrenches, torque screwdrivers and other torque tools
- Clockwise operation
- Peak, track and first peak working modes
- Tolerance testing
- LED indicator for target torque alarm:
 - Green LED light on when the value is within tolerance;
 - Red LED light on when the value is above the high tolerance
- Power off automatically in 2 minutes without any operations



IST-04TT350
type A



IST-04TT815
type B

SPECIFICATION

| Code | IST-04TT5 | IST-04TT28 | IST-04TT68 | IST-04TT350 | IST-04TT815 | IST-04TT1000 |
|--------------------------|--------------------------|------------|------------|-------------|-------------|--------------|
| Type | A | | | | B | |
| Range | 0.5~5N.m | 2.8~28N.m | 6.8~68N.m | 35~350N.m | 81.5~815N.m | 100~1000N.m |
| Accuracy | ±1% (clockwise) | | | | | |
| Resolution | 0.001N.m | 0.01N.m | 0.01N.m | 0.1N.m | 0.1N.m | 1N.m |
| Unit | N.m, in.lb, ft.lb, kg.cm | | | | | N.m, ft.lb |
| Square socket/hex driver | 1/4" | 3/8" | 3/8" | 1/2" | 27mm | 27mm |
| Power supply | DC | | | | | |
| Weight | 0.75kg | 0.75kg | 1.1kg | 1.1kg | 5.1kg | 5.1kg |



STANDARD DELIVERY

| | |
|---------------|------|
| Main unit | 1 pc |
| AC/DC adapter | 1 pc |

TORQUE SCREWDRIVERS

ATTENTION: CLOCKWISE OPERATION ONLY



T-bar wrench
(for IST-MG250,
IST-MG360, IST-MG600)



IST-MG100

SPECIFICATION

| Code | IST-MG100 | IST-MG250 | IST-MG360 | IST-MG600 |
|-------------------|-----------------|------------|------------|------------|
| Range (clockwise) | 20~100cN.m | 50~250cN.m | 60~360cN.m | 1.0~6.0N.m |
| Graduation | 2cN.m | 5cN.m | 5cN.m | 0.1N.m |
| Head | 1/4" hex socket | | | |
| Accuracy | ±6% | | | |
| Length | 172mm | | | |
| Weight | 0.26kg | | | |

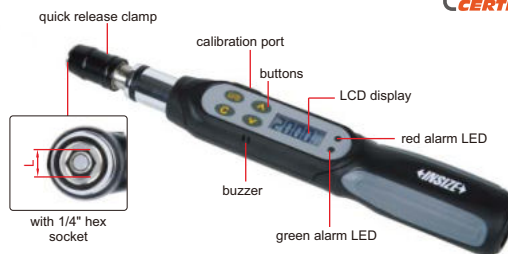
STANDARD DELIVERY

| | |
|--|------|
| Torque screwdriver | 1 pc |
| T-bar wrench (for IST-MG250, IST-MG360, IST-MG600) | 1 pc |

DIGITAL TORQUE SCREWDRIVERS



- Clockwise and counter-clockwise operation
- Unit: cN.m, in.lb, kg.cm
- Peak and track working modes
- 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



SPECIFICATION

| Code | IST-SD50 | IST-SD200 |
|------------------------|-------------------|------------|
| Range | 10~50cN.m | 40~200cN.m |
| Accuracy | clockwise | ±3% |
| | counter-clockwise | ±4% |
| Resolution | 0.1cN.m | 0.1cN.m |
| Size of hex socket (L) | 1/4" | 1/4" |
| Power supply | 1xAAA battery | |
| Length | 193mm | 203mm |
| Weight | 190g | 200g |

STANDARD DELIVERY

| | |
|---------------------------|------|
| Torque screwdriver | 1 pc |
| Phillips screwdriver bits | 1 pc |
| Hex screwdriver bits | 1 pc |

OPTIONAL ACCESSORY

| | |
|-------------------|--------------|
| Calibration cable | IST-SD-CABLE |
|-------------------|--------------|

IST-SD200



DIGITAL TORQUE WRENCHES

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working modes
- 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)



OPTIONAL ACCURACY:
CLOCKWISE: ±1%
COUNTER-CLOCKWISE: ±2%
ONLY FOR RANGE FOR 6~850N.m



SPECIFICATION

| Code | Range | Accuracy | Resolution | Square driver (L) | Power supply | Length | Weight |
|------------|-------------|--|------------|-------------------|----------------|--------|--------|
| IST-W30A | 6~30N.m | clockwise: ±2% counter-clockwise: ±3% | 0.01N.m | 1/4" | 2×AA 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: ±2.5% counter-clockwise: ±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" | | 1800mm | 14kg |
| | | | | | | 1800mm | 14kg |

OPTIONAL ACCESSORY

| | |
|-------------------|-------------|
| Calibration cable | IST-W-CABLE |
|-------------------|-------------|

TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY

- According to DIN ISO 6789, ASME B107.300
- All-metal construction, sturdy and durable



IST-9WM335

SPECIFICATION

| Code | IST-9WM30 | IST-9WM60 | IST-9WM100 | IST-9WM200 | IST-9WM335 | IST-9WM500 | IST-9WM800 | IST-9WM1000 |
|-------------------|------------------------------|-----------|------------|------------|------------|------------|------------|-------------|
| Range (clockwise) | 6~30N.m | 10~60N.m | 20~100N.m | 40~200N.m | 65~335N.m | 100~500N.m | 160~800N.m | 200~1000N.m |
| Accuracy | ±6% (<10N.m) ±4% (≥10N.m) | ±4% | ±4% | ±4% | ±4% | ±4% | ±4% | ±4% |
| Graduation | 0.2N.m | 0.25N.m | 0.5N.m | 1N.m | 1N.m | 2.5N.m | 4N.m | 5N.m |
| Square driver (D) | 3/8" | 3/8" | 1/2" | 1/2" | 1/2" | 3/4" | 3/4" | 3/4" |
| Length | 318mm | 388mm | 443mm | 468mm | 528mm | 855mm | 1055mm | 1055mm |
| Weight | 820g | 960g | 1040g | 1160g | 1300g | 5000g | 5900g | 5900g |

INTERCHANGEABLE HEAD TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY



IST-11WM200



- According to DIN ISO 6789, ASME B107.300
- All-metal construction, sturdy and durable

SPECIFICATION

| Code | Range (clockwise) | Accuracy | Graduation | Socket size (A×B) | Length | Weight |
|-------------|-------------------|------------------------------|------------|-------------------|--------|--------|
| IST-11WM12 | 2.5~12N.m | ±6% (<10N.m) ±4% (≥10N.m) | 0.05N.m | 12×9mm | 284mm | 580g |
| IST-11WM30 | 6.0~30N.m | ±6% (<10N.m) ±4% (≥10N.m) | 0.1N.m | 12×9mm | 303mm | 720g |
| IST-11WM60 | 10~60N.m | ±4% | 0.5N.m | 12×9mm | 372mm | 860g |
| IST-11WM125 | 25~125N.m | ±4% | 0.5N.m | 12×9mm | 427mm | 940g |
| IST-11WM200 | 40~200N.m | ±4% | 1N.m | 18×14mm | 460mm | 1060g |
| IST-11WM335 | 65~335N.m | ±4% | 1N.m | 18×14mm | 520mm | 1200g |

RATCHET HEAD (optional)

| Code | Square driver | Applicable wrenches |
|--------------|---------------|---|
| IST-11WM-R1 | 1/4" | IST-11WM12 IST-11WM30 |
| IST-11WM-R2 | 3/8" | IST-11WM12 IST-11WM30 IST-11WM60 IST-11WM125 |
| IST-11WM-R3 | 1/2" | IST-11WM200 IST-11WM335 |
| IST-11WM-R4* | 3/4" | IST-11WM200 IST-11WM335 |



OPEN END HEAD (optional)

| Code | Open size | Applicable wrenches |
|----------------|-----------|---|
| IST-11WM-K8 | 8mm | IST-11WM12 IST-11WM30 IST-11WM60 IST-11WM125 |
| IST-11WM-K10 | 10mm | |
| IST-11WM-K13 | 13mm | |
| IST-11WM-K14 | 14mm | |
| IST-11WM-K15 | 15mm | |
| IST-11WM-K17 | 17mm | |
| IST-11WM-K19* | 19mm | |
| IST-11WM-K13A | 13mm | IST-11WM200 IST-11WM335 |
| IST-11WM-K14A | 14mm | |
| IST-11WM-K15A | 15mm | |
| IST-11WM-K17A | 17mm | |
| IST-11WM-K19A | 19mm | |
| IST-11WM-K22A | 22mm | |
| IST-11WM-K24A | 24mm | |
| IST-11WM-K27A* | 27mm | |
| IST-11WM-K30A* | 30mm | |
| IST-11WM-K32A* | 32mm | |

BOX END HEAD (optional)

| Code | Open size | Applicable wrenches |
|---------------|-----------|---|
| IST-11WM-M8 | 8mm | IST-11WM12 IST-11WM30 IST-11WM60 IST-11WM125 |
| IST-11WM-M10 | 10mm | |
| IST-11WM-M13 | 13mm | |
| IST-11WM-M14 | 14mm | |
| IST-11WM-M15 | 15mm | |
| IST-11WM-M17 | 17mm | |
| IST-11WM-M19 | 19mm | |
| IST-11WM-M13A | 13mm | IST-11WM200 IST-11WM335 |
| IST-11WM-M14A | 14mm | |
| IST-11WM-M15A | 15mm | |
| IST-11WM-M17A | 17mm | |
| IST-11WM-M19A | 19mm | |
| IST-11WM-M22A | 22mm | |
| IST-11WM-M24A | 24mm | |
| IST-11WM-M27A | 27mm | |
| IST-11WM-M30A | 30mm | |
| IST-11WM-M32A | 32mm | |

*Torque value needs to be corrected with those heads

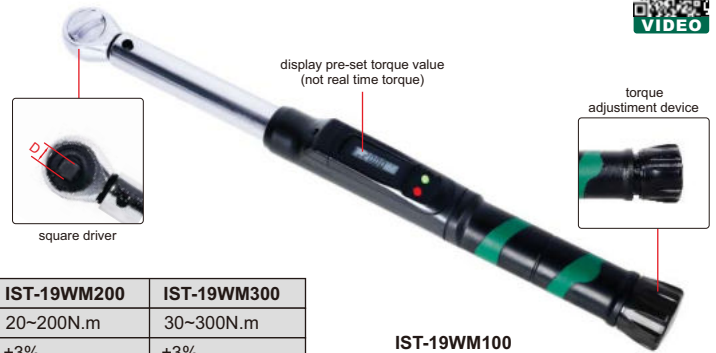
MECHANICAL TORQUE WRENCHES (DIGITAL SETTING)



ATTENTION: CLOCKWISE
OPERATION ONLY

ATTENTION: DISPLAY PRE-SET TORQUE
VALUE (NOT REAL TIME TORQUE)

- Unit: N.m, in.lb, ft.lb, kg.cm
- Mechanical "click" torque wrench, the pre-set torque value is shown on the display



IST-19WM100

SPECIFICATION

| Code | IST-19WM60 | IST-19WM100 | IST-19WM140 | IST-19WM200 | IST-19WM300 |
|-------------------|------------|-------------|-------------|-------------|-------------|
| Range (clockwise) | 6~60N.m | 10~100N.m | 14~140N.m | 20~200N.m | 30~300N.m |
| Accuracy | ±3% | ±3% | ±3% | ±3% | ±3% |
| Graduation | 0.1N.m | 0.1N.m | 0.1N.m | 0.1N.m | 0.1N.m |
| Square driver (D) | 3/8" | 3/8" | 1/2" | 1/2" | 1/2" |
| Length | 382mm | 450mm | 481mm | 520mm | 585mm |
| Weight | 1.3kg | 1.4kg | 1.45kg | 1.6kg | 1.8kg |

PRESET TORQUE WRENCHES

ATTENTION: CLOCKWISE
OPERATION ONLY

- Torque is preset, to prevent adjustment by mistake during use
- The torque is set at the factory before delivery. Customers can also set the torque with torque adjustment tool (IST-PW-TOOL, optional) and digital torque testers (IST-TT□□□, optional)
- Clockwise operation only



IST-PW60

SPECIFICATION

| Code | IST-PW12 | IST-PW20 | IST-PW30 | IST-PW60 | IST-PW125 | IST-PW200 |
|--------------------|-----------|----------|----------|----------|-----------|-----------|
| Adjustable range * | 2.5~12N.m | 4~20N.m | 6~30N.m | 10~60N.m | 25~125N.m | 40~200N.m |
| Accuracy | ±3% | ±3% | ±3% | ±3% | ±3% | ±3% |
| Square driver (D) | 1/4" | 1/4" | 3/8" | 3/8" | 3/8" | 1/2" |
| Length | 184mm | 184mm | 214mm | 255mm | 366mm | 457mm |
| Weight | 450g | 450g | 500g | 560g | 790g | 1200g |

| Code | IST-PW340 | IST-PW500 | IST-PW650 | IST-PW800 | IST-PW1000A | IST-PW1000B |
|--------------------|-----------|------------|------------|------------|-------------|-------------|
| Adjustable range * | 65~340N.m | 100~500N.m | 150~650N.m | 160~800N.m | 200~1000N.m | 200~1000N.m |
| Accuracy | ±3% | ±3% | ±4% | ±4% | ±4% | ±4% |
| Square driver (D) | 1/2" | 3/4" | 3/4" | 3/4" | 3/4" | 1" |
| Length | 691mm | 910mm | 910mm | 1037mm | 1265mm | 1265mm |
| Weight | 1960g | 2800g | 2800g | 5000g | 6000g | 6000g |



torque adjustment tool
(optional)

OPTIONAL ACCESSORY

Torque adjustment tool IST-PW-TOOL

*Adjust to a fixed torque value according to customer requirements before delivery

DIAL TORQUE WRENCHES



- Clockwise and counter-clockwise operation
- According to DIN ISO 6789, ASME B107.300

SPECIFICATION

| Code | IST-DW18 | IST-DW35 | IST-DW70 | IST-DW140 |
|-------------------|--------------------------|------------------------|--------------------------|--------------------------|
| Range | 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 |
| Accuracy | ±3% | ±3% | ±3% | ±3% |
| Graduation | 0.2N.m 2in.lb | 0.5N.m 5in.lb | 1N.m 10in.lb | 2N.m 1ft.lb |
| Square driver (D) | 3/8" | 3/8" | 3/8" | 1/2" |
| Length | 254mm | 254mm | 378mm | 546mm |
| Weight | 480g | 480g | 820g | 1300g |



IST-DW70

ELECTRONIC BALANCES (0.1mg)

DATA
OUTPUT

- Electromagnetic sensor
- Unit: g, ct, oz, lb
- Weighing, counting, taring
- Data output



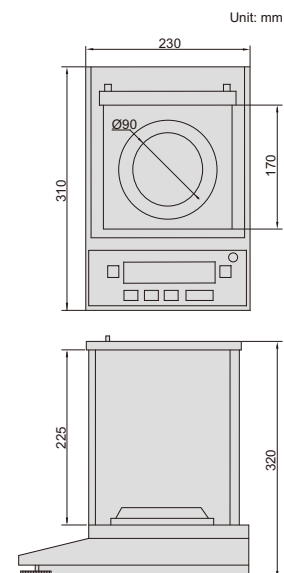
calibration weight
(included)

SPECIFICATION

| Code | 8304-120 | 8304-220 |
|---------------------------|------------------------------------|---|
| Maximum weighing | 120g | 220g |
| Minimum weighing | 10mg | 10mg |
| Resolution (d) | 0.1mg | 0.1mg |
| Verification interval (e) | 1mg | 1mg |
| Accuracy (m is load) | m≤50g: ±0.5mg; 50g<m≤120g: ±1mg | m≤50g: ±0.5mg; 50g<m≤200g: ±1mg; m>200g: ±1.5mg |
| Weighing pan size (Ød) | Ø90mm | |
| Operation temperature | 10~30°C | |
| Operation humidity | 20~85% RH | |
| Power supply | power adapter (12V/2A) | |
| Dimension (L×W×H) | 230×310×320mm | |



8304-120



OPTIONAL ACCESSORY

| | |
|-------------|--------------|
| RS232 cable | 8304-CABLE |
| Printer | 8304-PRINTER |

ELECTRONIC BALANCES (1mg)

DATA
OUTPUT

- Aluminum alloy shell, wind shield, three side glass sliding doors
- Electromagnetic balance sensor
- Unit: g, ct, ozt, oz, gn, dwt, mg
- Weighing, counting, taring
- Data output
- With a hook at the bottom



calibration weight
(included)



8303-520

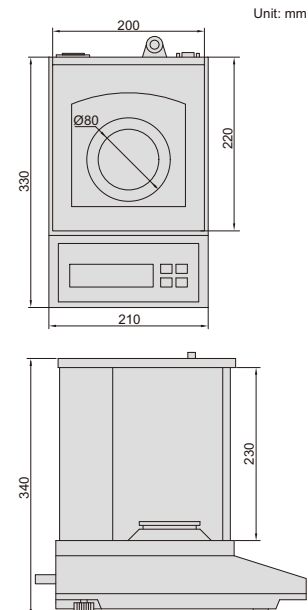
SPECIFICATION

| Code | 8303-220 | 8303-320 | 8303-520 | 8303-620 | 8303-1020 |
|---------------------------|---|----------|------------|----------|-----------|
| Maximum weighing | 220g | 320g | 520g | 620g | 1020g |
| Minimum weighing | 20mg | 20mg | 100mg | 100mg | 100mg |
| Resolution (d) | 1mg | 1mg | 1mg | 1mg | 1mg |
| Verification interval (e) | 10mg | 10mg | 10mg | 10mg | 10mg |
| Accuracy | load capacity≤500g: ±5mg; load capacity>500g: ±10mg | | | | |
| Weighing pan size (Ød) | Ø80mm | | | Ø120mm | |
| Operation temperature | 15~30°C | | 18~23°C | | |
| Operation humidity | 40%~80% RH | | 50%~70% RH | | |
| Power supply | 220V, 50/60Hz | | | | |
| Dimension (L×W×H) | 330×210×340mm | | | | |

OPTIONAL ACCESSORY

| | |
|-------------|--------------|
| RS232 cable | 8301-CABLE* |
| Printer | 8303-PRINTER |

*Used to connect with computers



ELECTRONIC BALANCES

- Automatic zero when power on
- Unit: g (gram), ct (carat), ozt (troy ounce)
- Weighing, counting, taring
- Overload alarm
- Data output



calibration weight
(included in 8301-300,
8301-600 and 8301-1200)



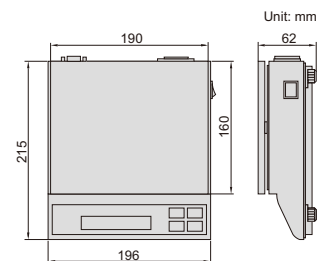
windshield
(included in 8301-300,
8301-600 and 8301-1200)



8301-3000

SPECIFICATION

| Code | 8301-300 | 8301-600 | 8301-1200 | 8301-3000 | 8301-6000 |
|---------------------------|--|----------|--|-----------|-----------|
| Maximum weighing | 300g | 600g | 1200g | 3000g | 6000g |
| Minimum weighing | 0.2g | 0.2g | 0.2g | 2g | 2g |
| Resolution (d) | 0.01g | 0.01g | 0.01g | 0.1g | 0.1g |
| Verification interval (e) | 0.1g | 0.1g | 0.1g | 1g | 1g |
| Accuracy (m is load) | m≤50g: ±0.05g; 50g<m≤200g: ±0.1g; m>200g: ±0.15g | | m≤500g: ±0.5g; 500g<m≤2000g: ±1g; m>2000g: ±1.5g | | |
| Weighing pan size | Ø135mm | | 190×160mm | | |
| Operation temperature | 0~40°C | | | | |
| Operation humidity | ≤80% RH | | | | |
| Power supply | 220V, 50/60Hz | | | | |
| Dimension (L×W×H) | 215×196×62mm | | | | |



OPTIONAL ACCESSORY

RS232 cable 8301-CABLE

WEIGHING SCALES (ECONOMIC TYPE)

SPECIFICATION

| Code | 8003-3 | 8003-6 | 8003-10 |
|---------------------|--------------------------------|--------|---------|
| Maximum weighing | 3kg | 6kg | 10kg |
| Minimum weighing | 0.4g | 2.0g | 20g |
| Resolution (d) | 0.1g | 0.5g | 1g |
| Accuracy | ±0.5g | ±2.5g | ±5g |
| Weighing pan size | 157×157mm | | |
| Working temperature | 5~35°C | | |
| Power supply | 2×AAA batteries, power adapter | | |
| Dimension (L×W) | 160×225mm | | |



8003-3

- Unit: g, oz, ct, tl

WEIGHING SCALES (OIML CERTIFICATE)

- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off
- OIML certificate (No. 0200-NAWI-04601)

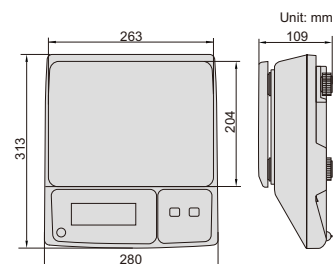


SPECIFICATION

| Code | 8002-6M | 8002-15M | 8002-30M |
|---------------------------|---|-------------------------------|----------------------------------|
| Maximum capacity | 3/6kg | 6/15kg | 15/30kg |
| Minimum capacity | 20g | 40g | 100g |
| Resolution (d) | 1/2g | 2/5g | 5/10g |
| Verification interval (e) | 2g | 5g | 10g |
| Accuracy (m is load) | m≤3kg: ±1g 3kg<m≤6kg: ±2g | m≤6kg: ±2g 6kg<m≤15kg: ±5g | m≤15kg: ±5g 15kg<m≤30kg: ±10g |
| Operation temperature | -10~40°C | | |
| Power | rechargeable battery (6V/3.2Ah), power adapter (12V/500mA) | | |
| Dimensions of pan | 263×204mm | | |



8002-30M



COUNTING SCALES

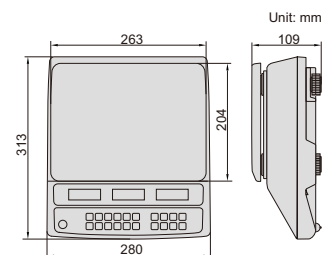
- LCD display, with backlight
- Zero-setting, subtracting tare value, counting, accumulation, checking alarm
- Overload alarm
- Units: kg, g, lb, tj, hj, lb-oz

SPECIFICATION

| Code | 8101-6 | 8101-15 | 8101-30 |
|-----------------------|--|--|--|
| Maximum weighing | 6kg | 15kg | 30kg |
| Minimum weighing | 4g | 10g | 20g |
| Resolution (d) | 0.2g | 0.5g | 1g |
| Accuracy (m is load) | m≤1kg: ±1g 1kg<m≤4kg: ±2g m>4kg: ±3g | m≤2.5kg: ±2.5g 2.5kg<m≤10kg: ±5g m>10kg: ±7.5g | m≤5kg: ±5g 5kg<m≤20kg: ±10g m>20kg: ±15g |
| Operation temperature | -10~40°C | | |
| Power | rechargeable battery (6V/3.2Ah), power adapter (12V/500mA) | | |
| Dimensions of pan | 263×204mm | | |



8101-30



WEIGHING SCALES (HIGH PRECISION)

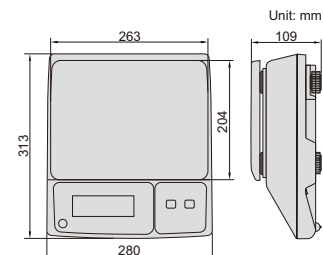
- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off

SPECIFICATION

| Code | 8001-6 | 8001-15 | 8001-30 |
|-----------------------|--|--|--|
| Maximum weighing | 6kg | 15kg | 30kg |
| Minimum weighing | 4g | 10g | 20g |
| Resolution (d) | 0.2g | 0.5g | 1g |
| Accuracy (m is load) | m≤1kg: ±1g 1kg<m≤4kg: ±2g m>4kg: ±3g | m≤2.5kg: ±2.5g 2.5kg<m≤10kg: ±5g m>10kg: ±7.5g | m≤5kg: ±5g 5kg<m≤20kg: ±10g m>20kg: ±15g |
| Units | kg, lb | | |
| Operation temperature | -10~40°C | | |
| Power | rechargeable battery (6V/3.2Ah), power adapter (12V/500mA) | | |
| Dimensions of pan | 263×204mm | | |



8001-30



ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting
- Overload alarm
- Automatic power off

SPECIFICATION

| Code | 8601-100 |
|-----------------------|---|
| Maximum weighing | 100g |
| Minimum weighing | 0.1g |
| Resolution (d) | 0.01g |
| Accuracy (m is load) | 0.1g≤m≤1g: ±0.03g; 1g<m≤30g: ±0.05g 30g<m≤50g: ±0.07g; m>50g: ±0.14g |
| Units | g, oz, dwt, ozt |
| Dimension of pan | 55×64mm |
| Dimension (L×W×H) | 108×65×21mm |
| Operation temperature | -10~40°C |
| Power supply | 2×AAA batteries |



8601-100



use of pan

**ATTENTION:
LOW ACCURACY**

ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

ATTENTION:
LOW ACCURACY

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting
- Overload alarm
- Automatic power off

SPECIFICATION

| | |
|-----------------------|--|
| Code | 8602-200 |
| Maximum weighing | 200g |
| Minimum weighing | 0.2g |
| Resolution (d) | 0.02g |
| Accuracy (m is load) | 0.2g ≤ m ≤ 2g: ±0.06g; 2g < m ≤ 60g: ±0.1g 60g < m ≤ 100g: ±0.14g; m > 100g: ±0.28g |
| Units | g, oz, dwt, ozt |
| Dimension of pan | 55×64mm |
| Dimension (L×W×H) | 120×70×17mm |
| Operation temperature | -10~40°C |
| Power supply | 2×CR2032 batteries |



8602-200



use of pan

ELECTRONIC CRANE SCALES

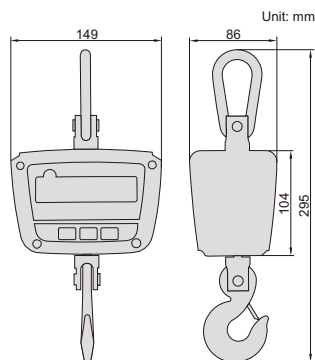
IP65
WATERPROOF



8201-150KG



Remote controller
(included)



Unit: mm

- Dust/waterproof level: IP65
- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Aluminum alloy die casting case with high strength

SPECIFICATION

| Code | 8201-50KG | 8201-150KG | 8201-300KG |
|---------------------------|--|---------------|---------------|
| Maximum weighing | 50kg | 150kg | 300kg |
| Minimum weighing | 0.4kg | 1.0kg | 2.0kg |
| Resolution (d) | 0.02kg/0.01kg | 0.05kg/0.02kg | 0.10kg/0.05kg |
| Verification interval (e) | 0.02kg | 0.05kg | 0.10kg |
| Accuracy | ±0.02kg | ±0.05kg | ±0.10kg |
| Operation temperature | -10~40°C | | |
| Operation humidity | 30%~90% RH | | |
| Overload alarm | 100%F.S.+9e | | |
| Maximum safe load | 125%F.S. | | |
| Limited overload | 400%F.S. | | |
| Power supply | rechargeable battery 6V/3Ah (for 40 hours working) | | |
| Stable reading time | ≤8s | | |

STANDARD DELIVERY

| | |
|-------------------|------|
| Main unit | 1 pc |
| Remote controller | 1 pc |
| Battery charger | 1 pc |

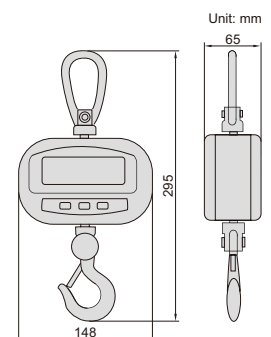
ELECTRONIC CRANE SCALES (BASIC TYPE)



8202-150KG



Remote controller
(included)



Unit: mm

- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Plastic case

SPECIFICATION

| Code | 8202-50KG | 8202-150KG | 8202-300KG |
|---------------------------|--|---------------|---------------|
| Maximum weighing | 50kg | 150kg | 300kg |
| Minimum weighing | 0.4kg | 1.0kg | 2.0kg |
| Resolution (d) | 0.02kg/0.01kg | 0.05kg/0.02kg | 0.10kg/0.05kg |
| Verification interval (e) | 0.02kg | 0.05kg | 0.10kg |
| Accuracy | ±0.02kg | ±0.05kg | ±0.10kg |
| Operation temperature | -10~40°C | | |
| Operation humidity | 30%~90% RH | | |
| Overload alarm | 100%F.S.+9e | | |
| Maximum safe load | 125%F.S. | | |
| Limited overload | 400%F.S. | | |
| Power supply | 4×1.5V AA batteries (for 40 hours working) | | |
| Stable reading time | ≤8s | | |

STANDARD DELIVERY

| | |
|-------------------|------|
| Main unit | 1 pc |
| Remote controller | 1 pc |

PLATFORM SCALES

DATA
OUTPUT

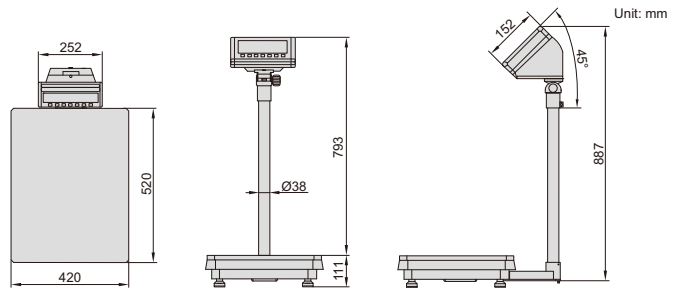


printer (optional)

- LCD large screen display with LED backlight
- Weighing, overweight alarm, counting, keyboard lock, accumulating, auto zero and animal scale
- Units: kg, g, lb, oz



8501-AL150



SPECIFICATION

| Code | 8501-AL60 | 8501-AL150 | 8501-AL300 |
|-----------------------|--|------------|------------|
| Maximum weighing | 60kg | 150kg | 300kg |
| Minimum weighing | 100g | 200g | 400g |
| Resolution (d) | 5g | 10g | 20g |
| Accuracy | ±10g | ±20g | ±30g |
| Operation temperature | -10~40°C | | |
| Material | platform: stainless steel, base: die-cast aluminum | | |
| Dimension of platform | 420×520mm | | |
| Power | rechargeable lead acid battery (6V/4Ah) | | |
| Output | RS232 | | |
| Weight | 18.3kg | | |

OPTIONAL ACCESSORY

| | |
|---------|--------------|
| Printer | 8001-PRINTER |
|---------|--------------|

WEIGHT SETS



- Supplied with manufacturer inspection certificate



8910-200GM1

SPECIFICATION AND SHAPE

| Weight | Specification | | | | |
|-------------|---------------|-------------|--------------|--------------|---------------|
| | 1mg~100g | 1mg~200g | 1mg~1kg | 1mg~2kg | 1mg~5kg |
| 1mg | ◆ | ◆ | ◆ | ◆ | ◆ |
| 2mg | ◆◆* | ◆◆* | ◆◆* | ◆◆* | ◆◆◆* |
| 5mg | ◆ | ◆ | ◆ | ◆ | ◆ |
| 10mg | ◆ | ◆ | ◆ | ◆ | ◆ |
| 20mg | ◆◆* | ◆◆* | ◆◆* | ◆◆* | ◆◆◆* |
| 50mg | ◆ | ◆ | ◆ | ◆ | ◆ |
| 100mg | ◆ | ◆ | ◆ | ◆ | ◆ |
| 200mg | ◆◆* | ◆◆* | ◆◆* | ◆◆* | ◆◆◆* |
| 500mg | ◆ | ◆ | ◆ | ◆ | ◆ |
| 1g | ◆◆ | ◆◆ | ◆◆ | ◆◆ | ◆◆ |
| 2g | ◆◆* | ◆◆* | ◆◆* | ◆◆* | ◆◆◆* |
| 5g | ◆ | ◆ | ◆ | ◆ | ◆ |
| 10g | ◆ | ◆ | ◆ | ◆ | ◆ |
| 20g | ◆◆* | ◆◆* | ◆◆* | ◆◆* | ◆◆◆* |
| 50g | ◆ | ◆ | ◆ | ◆ | ◆ |
| 100g | ◆ | ◆ | ◆ | ◆ | ◆ |
| 200g | | ◆◆* | ◆◆* | ◆◆* | ◆◆◆* |
| 500g | | | ◆ | ◆ | ◆ |
| 1kg | | | ◆ | ◆ | ◆ |
| 2kg | | | | ◆◆* | ◆◆◆* |
| 5kg | | | | | ◆ |
| Quantity | 21 pcs | 23 pcs | 25 pcs | 27 pcs | 28 pcs |
| Total range | 1mg~211.11g | 1mg~611.11g | 1mg~2111.11g | 1mg~6111.11g | 1mg~11111.11g |

- ◆ sheet
- ◆* sheet, with mark
- ◆ cylinder
- ◆* cylinder, with mark

| Code | Specification | Class and material |
|-------------|---------------|--------------------------|
| 8910-100GM1 | 1mg~100g | M1 (304 stainless steel) |
| 8910-200GM1 | 1mg~200g | M1 (304 stainless steel) |
| 8910-1KGM1 | 1mg~1kg | M1 (304 stainless steel) |
| 8910-2KGM1 | 1mg~2kg | M1 (304 stainless steel) |
| 8910-5KGM1 | 1mg~5kg | M1 (304 stainless steel) |

INCH PRODUCTS

DIAL CALIPERS

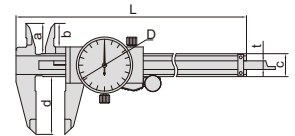
SHOCK PROOF

INSPECTION CERTIFICATE

- Dial indicator graduation 0.001"
- Shockproof dial indicator
- Made of stainless steel



1311-6



| Code | Range | Accuracy | L | a | b | c | d | D | t |
|----------|-------|----------|---------|--------|--------|--------|--------|------------|--------|
| 1311-6* | 0-6" | ±0.0015" | 9.252" | 0.827" | 0.650" | 0.630" | 1.575" | 1.535" DIA | 0.256" |
| 1311-8* | 0-8" | ±0.0020" | 11.339" | 0.945" | 0.748" | 0.630" | 1.890" | 1.535" DIA | 0.256" |
| 1311-12* | 0-12" | ±0.0020" | 16.142" | 1.102" | 0.866" | 0.787" | 2.441" | 1.752" DIA | 0.295" |

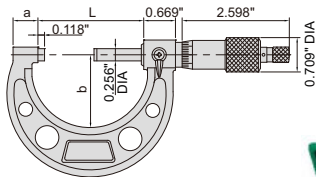
*Supplied with manufacturer inspection certificate

OUTSIDE MICROMETERS

INSPECTION CERTIFICATE



3203-2A



3203-44A

- Graduation 0.0001"
- Carbide measuring faces
- Ratchet stop type
- Supplied with setting standards (except 0-1")

Individual

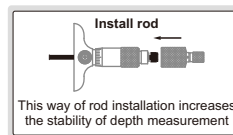
| Code | Range | Accuracy | L | a | b |
|----------|-------|----------|--------|--------|--------|
| 3203-1A* | 0-1" | 0.00015" | 1.260" | 0.354" | 1.102" |
| 3203-2A* | 1-2" | 0.00015" | 2.244" | 0.551" | 1.496" |
| 3203-3A* | 2-3" | 0.00020" | 3.228" | 0.591" | 1.929" |
| 3203-4A* | 3-4" | 0.00020" | 4.213" | 0.591" | 2.362" |
| 3203-5A* | 4-5" | 0.00025" | 5.236" | 0.650" | 2.874" |
| 3203-6A* | 5-6" | 0.00025" | 6.220" | 0.650" | 3.346" |

Set

| Code | Range | Micrometers included | Packaging |
|-----------|-------|--|-----------------|
| 3203-33A* | 0-3" | 3203-1A, 3203-2A, 3203-3A | blow mould case |
| 3203-44A* | 0-4" | 3203-1A, 3203-2A, 3203-3A, 3203-4A | blow mould case |
| 3203-66A* | 0-6" | 3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A | blow mould case |

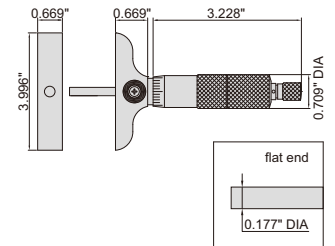
*Supplied with manufacturer inspection certificate

DEPTH MICROMETER



3241-6

- Graduation 0.001"
- Micrometer head accuracy: ±0.00012"
- Rod accuracy: ±[0.001+0.0005(L/3)]", L is the measuring range in inch
- Rods with flat end
- Ratchet stop



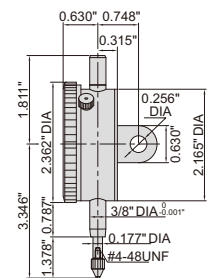
| Code | Range | Rods |
|--------|-------|-------|
| 3241-6 | 0-6" | 6 pcs |

DIAL INDICATOR

INSPECTION CERTIFICATE



2307-1



- Meet ASME B89.1.10M-2001
- Graduation: 0.001"
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs, contact points

| Code | Range | Accuracy | | Range/rev | Dial reading |
|---------|-------|---------------|---------|-----------|--------------|
| | | First 2.5 rev | Overall | | |
| 2307-1* | 1" | ±0.001" | ±0.002" | 0.1" | 0-100 |

*Supplied with manufacturer inspection certificate

INCH PRODUCTS

DIAL TEST INDICATOR

INSPECTION CERTIFICATE

JEWELLED BEARING

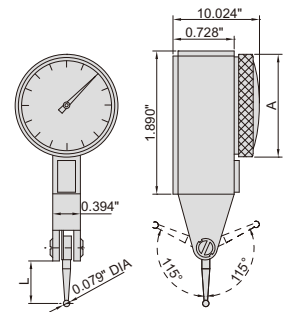
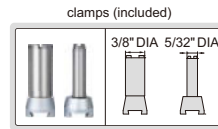


2380-31

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA
- Optional accessory: styli

| Code | Range | Graduation | Accuracy | Dial reading | A (DIA) | L |
|----------|-------|------------|----------|--------------|---------|-------|
| 2380-31* | 0.03" | 0.001" | ±0.001" | 0-15-0 | 1.181" | 0.50" |

*Supplied with manufacturer inspection certificate

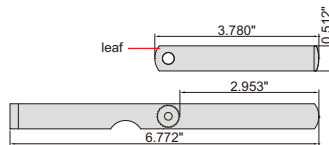


FEELER GAGE

- 0.010" is made of brass, others are made of hardened alloy steel
- Each blade is marked with inch/metric size



4608-31



| Thickness of leaves included | Accuracy |
|---|-----------|
| 0.010" (brass) | ±0.00039" |
| 0.0015", 0.002" | ±0.0002" |
| 0.0025", 0.003", 0.004", 0.005", 0.006", 0.007" | ±0.00028" |
| 0.008", 0.009" | ±0.00035" |
| 0.010", 0.011" | ±0.00039" |
| 0.012", 0.013" | ±0.00047" |
| 0.014", 0.015" | ±0.00051" |
| 0.016", 0.017" | ±0.00055" |
| 0.018", 0.019" | ±0.00059" |
| 0.020", 0.021" | ±0.00067" |
| 0.022", 0.023" | ±0.00071" |
| 0.024", 0.025", 0.026" | ±0.00075" |
| 0.028" | ±0.00091" |
| 0.030" | ±0.00094" |
| 0.032", 0.035" | ±0.00102" |

| Code | Range | Quantity of Leaves |
|---------|----------------|--------------------|
| 4608-31 | 0.0015"~0.035" | 32 |

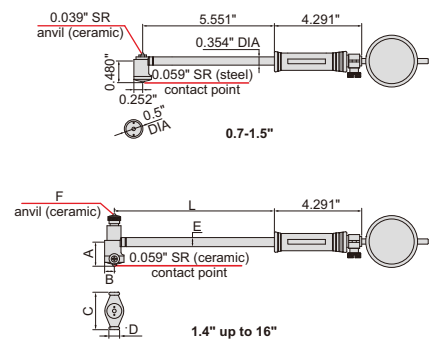
BORE GAGES

- Optional accessory: setting ring (code 6313), long handle (code 7351) bore gage setter (code 2395-400)

ATTENTION: NOT SUITABLE FOR 0.00005" OR 0.0001" DIAL INDICATORS



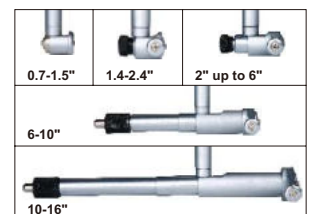
2323-6



With dial indicator

| Code | Range | Indicator | Accuracy | Repeatability |
|---------|----------|---|-----------|---------------|
| 2323-15 | 0.7-1.5" | dial indicator, range 0.25", graduation 0.0005" | ±0.00075" | 0.00015" |
| 2323-24 | 1.4-2.4" | | ±0.0009" | 0.00015" |
| 2323-6 | 2-6" | | ±0.0009" | 0.00015" |
| 2323-10 | 6-10" | | ±0.0009" | 0.00015" |
| 2323-16 | 10-16" | | ±0.0009" | 0.00015" |

| Range | A | B | C | D | E | F | L |
|----------|---------|--------|---------|------------|------------|----------|--------|
| 1.4-2.4" | 0.866" | 0.354" | 10.063" | 0.512" DIA | 0.504" DIA | 0.079" R | 5.551" |
| 2-6" | 10.024" | 0.354" | 1.378" | 0.512" DIA | 0.504" DIA | 0.079" R | 5.551" |
| 6-10" | 2.224" | 0.512" | 2.933" | 0.591" DIA | 0.504" DIA | 0.079" R | 9.488" |
| 10-16" | 3.406" | 0.591" | 3.996" | 0.591" DIA | 0.571" DIA | 0.098" R | 9.488" |



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| Measuring Length | | Permissible Error | | Error | | Measuring Length | | Permissible Error | | Error | |
|------------------|--------------------|-------------------|----------|----------|----------------|------------------|------|-------------------|----------|----------|----------|
| | | External | Internal | External | Internal | | | 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 | | / | / | | | | |

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