



SERIES 410

DIGITAL INTERNAL CALIPER GAUGE

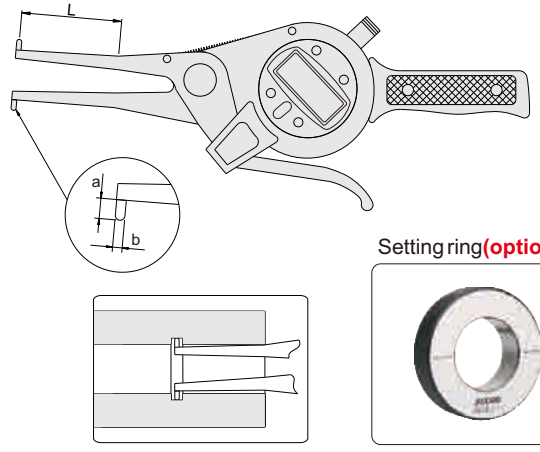
- ◆ Measure the internal dimension
- ◆ Resolution: 0.01mm/0.0005"



Code	Range	Accuracy	a	b	L
410-035-11	15-35mm/0.6-1.4"	±0.04mm	3	Ø3	50
410-035-11L	15-35mm/0.6-1.4"	±0.04mm	3	Ø3	200
410-055-11	35-55mm/1.4-2.2"	±0.04mm	6	Ø3	80
410-055-11L	35-55mm/1.4-2.2"	±0.04mm	6	Ø3	250
410-075-11	55-75mm/2.2-3"	±0.04mm	8	Ø3	90
410-075-11L	55-75mm/2.2-3"	±0.04mm	8	Ø3	250
410-095-11	75-95mm/3-3.8"	±0.04mm	8	Ø3	100
410-095-11L	75-95mm/3-3.8"	±0.04mm	8	Ø3	250
410-115-11	95-115mm/3.8-4.6"	±0.04mm	10	Ø3.2	120
410-115-11L	95-115mm/3.8-4.6"	±0.04mm	10	Ø3.2	250
410-135-11	115-135mm/4.6-5.4"	±0.04mm	10	Ø3.2	120
410-135-11L	115-135mm/4.6-5.4"	±0.04mm	10	Ø3.2	250

410-055-11

unit: mm



Setting ring (optional)

SERIES 411

INTERNAL DIAL CALIPER GAUGE

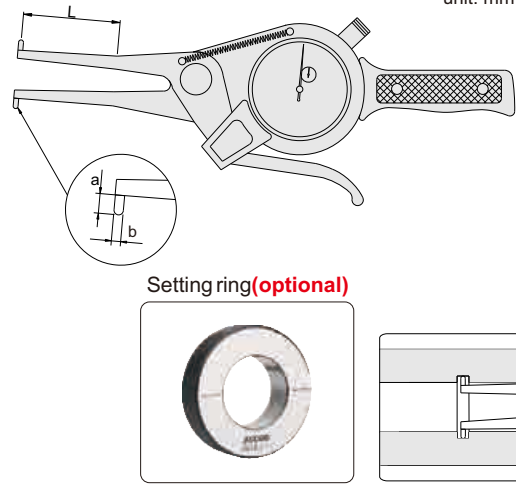
- ◆ Measure the internal dimension
- ◆ Graduation: 0.01mm



Code	Range	Accuracy	a	b	L
411-035-11	15-35mm	±0.04mm	3	Ø3	50
411-035-11L	15-35mm	±0.04mm	3	Ø3	200
411-055-11	35-55mm	±0.04mm	6	Ø3	80
411-055-11L	35-55mm	±0.04mm	6	Ø3	250
411-075-11	55-75mm	±0.04mm	8	Ø3	90
411-075-11L	55-75mm	±0.04mm	8	Ø3	250
411-095-11	75-95mm	±0.04mm	8	Ø3	100
411-115-11	95-115mm	±0.04mm	10	Ø3.2	120
411-135-11	115-135mm	±0.04mm	10	Ø3.2	120
411-155-11	135-155mm	±0.04mm	10	Ø3.4	190
411-175-11	155-175mm	±0.04mm	10	Ø3.4	190
411-195-11	175-195mm	±0.04mm	10	Ø3.4	190
411-215-11	195-215mm	±0.04mm	10	Ø3.4	190

411-035-11

unit: mm



Setting ring (optional)

SERIES 420

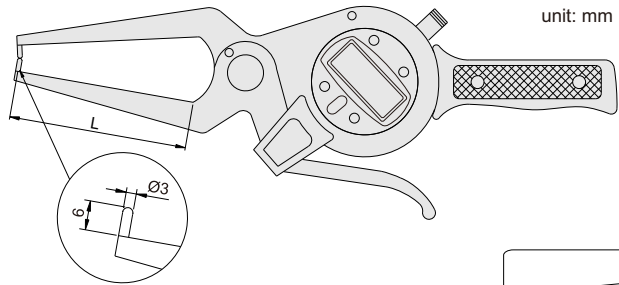
DIGITAL EXTERNAL CALIPER GAUGE



- ◆ Measure the external dimension
- ◆ Resolution: 0.01mm/0.0005"

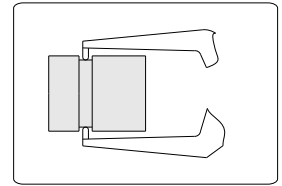


420-020-11



unit: mm

Code	Range	Accuracy	L
420-020-11	0-20mm/0-0.8"	±0.04mm	60
420-040-11	20-40mm/0.8-1.6"	±0.04mm	60
420-060-11	40-60mm/1.6-2.4"	±0.04mm	55
420-080-11	60-80mm/2.4-3.2"	±0.04mm	55
420-100-11	80-100mm/3.2-4"	±0.04mm	55



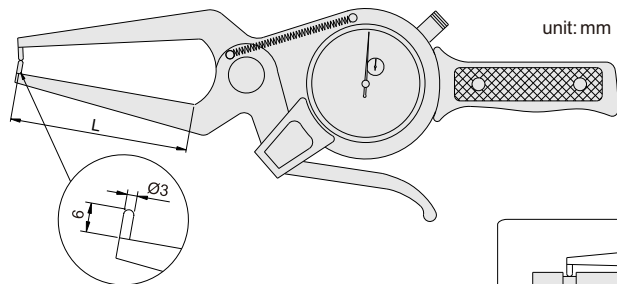
SERIES 421

EXTERNAL DIAL CALIPER GAUGE

- ◆ Measure the external dimension
- ◆ Graduation: 0.01mm

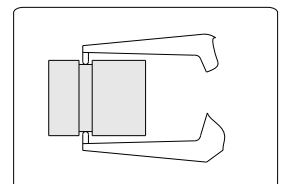


421-020-11



unit: mm

Code	Range	Accuracy	L
421-020-11	0-20mm	±0.04mm	60
421-040-11	20-40mm	±0.04mm	60
421-060-11	40-60mm	±0.04mm	55
421-080-11	60-80mm	±0.04mm	55
421-100-11	80-100mm	±0.04mm	55





SERIES 412

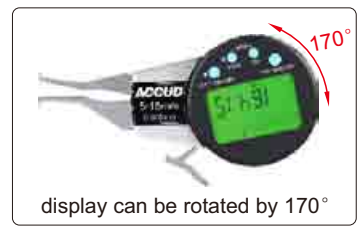
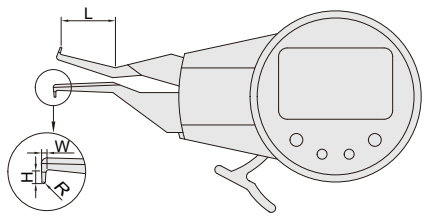
DIGITAL INTERNAL CALIPER GAUGE

- ◆ 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
- ◆ Automatic power off



412-015-11

unit: mm



Code	Range	Repeatability	Accuracy	L	H	W	R
412-015-11	5-15mm	0.01mm	±0.03mm	20	2	1.5	R0.3
412-025-11	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
412-030-11	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
412-040-11	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5
412-050-11	30-50mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5
412-060-11	40-60mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5

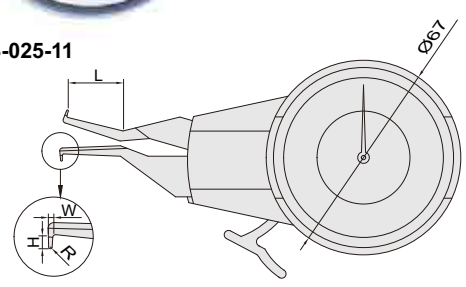
SERIES 413

INTERNAL DIAL CALIPER GAUGE



413-025-11

unit: mm



Code	Range	Graduation	Accuracy	L	H	W	R
413-015-11	5-15mm	0.01mm	±0.03mm	20	2	1.5	R0.3
413-025-11	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
413-030-11	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
413-040-11	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5
413-050-11	30-50mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5
413-060-11	40-60mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5

SERIES 422

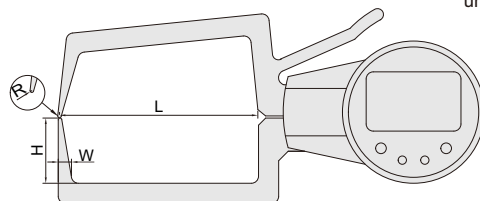
DIGITAL EXTERNAL CALIPER GAUGE



- ◆ 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
- ◆ Automatic power off



422-020-11



unit: mm

Code	Range	Repeatability	Accuracy	L	H	W	R
422-020-11	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-030-11	10-30mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-040-11	20-40mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-050-11	30-50mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-060-11	40-60mm	0.01mm	±0.03mm	80	25	6.5	R0.5



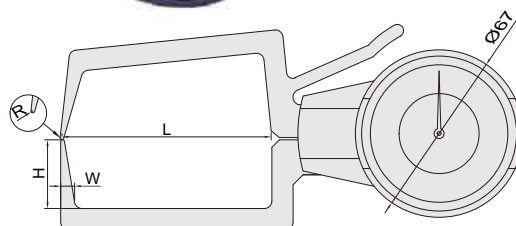
display can be rotated by 170°

SERIES 423

EXTERNAL DIAL CALIPER GAUGE



423-020-11



unit: mm

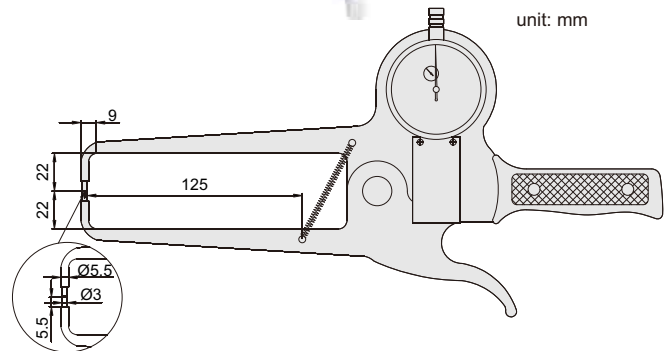
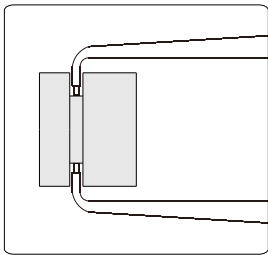
Code	Range	Graduation	Accuracy	L	H	W	R
423-020-11	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5
423-030-11	10-30mm	0.01mm	±0.03mm	80	25	6.5	R0.5
423-040-11	20-40mm	0.01mm	±0.03mm	80	25	6.5	R0.5
423-050-11	30-50mm	0.01mm	±0.03mm	80	25	6.5	R0.5
423-060-11	40-60mm	0.01mm	±0.03mm	80	25	6.5	R0.5



428

EXTERNAL DIAL CALIPER GAUGE

◆ Measure the external dimension



Code	Range	Graduation	Accuracy
428-050-05	0-50mm	0.05mm	±0.1mm

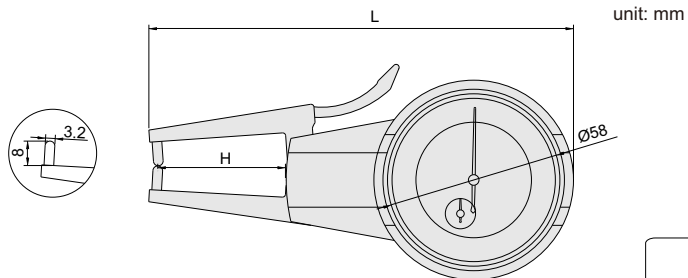
SERIES 425

EXTERNAL DIAL CALIPER GAUGE

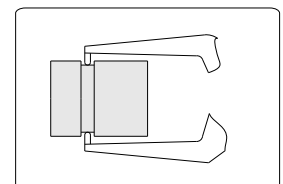
◆ Measure the external dimension



425-010-11



Code	Range	Graduation	Accuracy	L	H
425-010-11	0-10mm	0.01mm	±0.03mm	140	41
425-020-11	0-20mm	0.01mm	±0.03mm	192	92



THICKNESS

SERIES 419

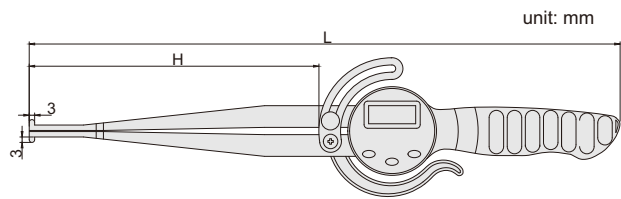
DIGITAL INTERNAL CALIPER GAUGE



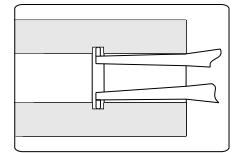
- ◆ For measuring the internal dimension
- ◆ Buttons: on/off, zero, data preset, mm/inch, data hold
- ◆ With fraction reading
- ◆ Automatic power off



419-008-11



Code	Range	Resolution	Accuracy	L	H
419-006-11	12.7-165mm/0.5-6.5"	0.1mm/0.01"/1/64"	0.2mm/0.01"	252	85
419-008-11	12.7-216mm/0.5-8.5"	0.1mm/0.01"/1/64"	0.3mm/0.02"	327	160



SERIES 429

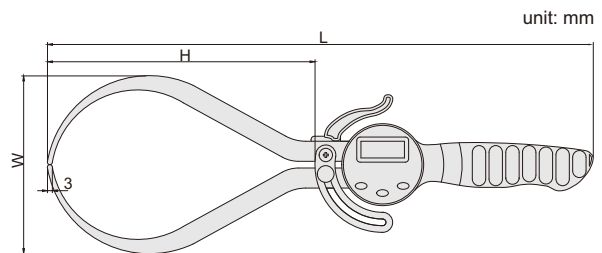
DIGITAL EXTERNAL CALIPER GAUGE



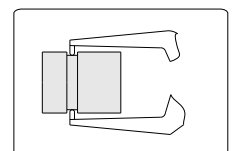
- ◆ For measuring the thickness
- ◆ Buttons: on/off, zero, data preset, mm/inch, data hold
- ◆ With fraction reading
- ◆ Automatic power off



429-008-11



Code	Range	Resolution	Accuracy	L	H	W
429-006-11	0-150mm/0-6"	0.1mm/0.01"/1/64"	0.2mm/0.01"	273	105	75
429-008-11	0-200mm/0-8"	0.1mm/0.01"/1/64"	0.3mm/0.02"	328	160	106



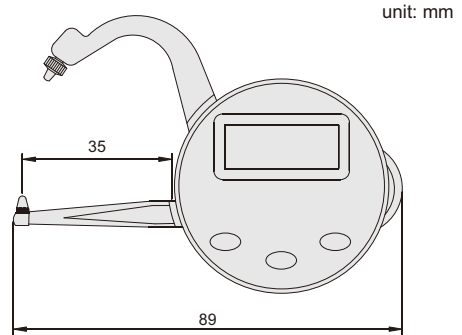
457

DIGITAL THICKNESS GAUGE



AGGUD

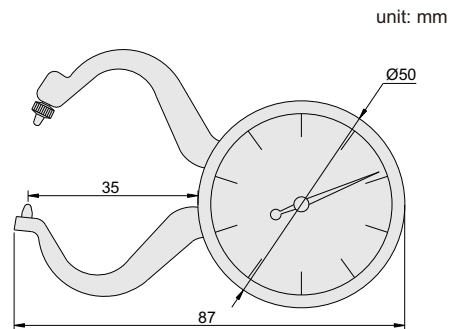
- ◆ Buttons: on/off, zero, mm/inch, data hold
- ◆ Automatic power off



Code	Range	Resolution	Accuracy	Repeatability
457-001-01	0-25.4mm/0-1"	0.01mm, 0.001"	0.05mm	0.02mm

451

THICKNESS GAUGE



Code	Range	Graduation	Accuracy
451-010-11	0-10mm	0.05mm	±0.1mm

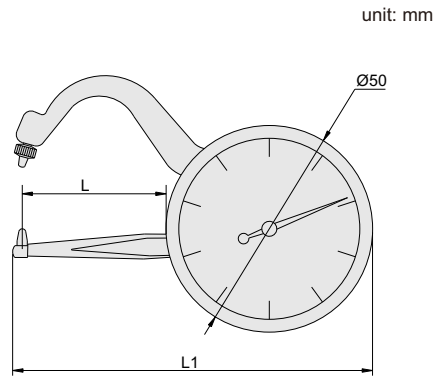
THICKNESS

SERIES 452

THICKNESS GAUGE



452-010-11

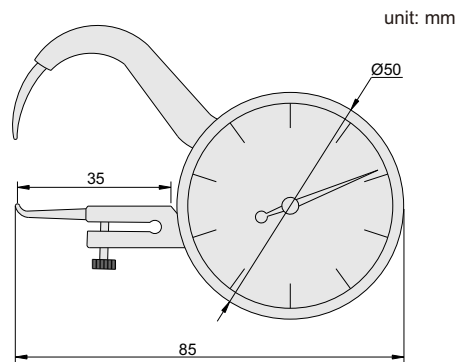


Code	Range	Graduation	Accuracy	L	L1
452-010-11	0-10mm	0.05mm	±0.1mm	35	85
452-010-12	0-10mm	0.05mm	±0.1mm	60	110

453

THICKNESS GAUGE WITH POINTED TIPS

- ◆ Pointed tips can be used for small grooves and recesses



Code	Range	Graduation	Accuracy
453-010-11	0-10mm	0.05mm	±0.1mm



SERIES 431

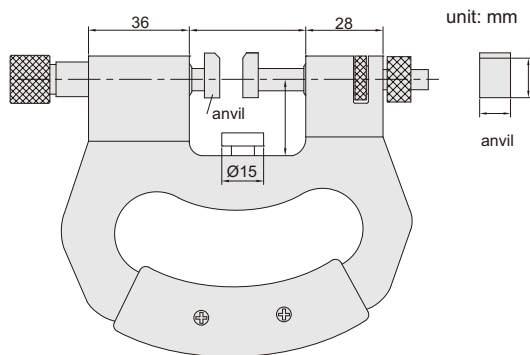
DIAL SNAP GAUGE



dial indicator is not included

431-025-11

- ◆ For quick Go/No-Go judgment of diameter of cylinders and shafts
- ◆ Anvil retracting stroke: 3mm
- ◆ Measuring force: 6-9N
- ◆ Carbide measuring faces
- ◆ Front edges of anvils are chamfered for easy workpiece insertion
- ◆ Optional indicators:
 - dial indicator, range 10mm, graduation 0.01mm (code 222-010-11)
 - digital indicator, range 12.7mm/0.5", resolution 0.001mm/0.00005" (code 211-010-03)
 - digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code 211-010-13)



Optional indicators (optional)

Code	Range	a	h
431-025-11	0-25mm	42	20
431-050-11	25-50mm	69	32.5
431-075-11	50-75mm	94	45
431-100-11	75-100mm	119	57.5
431-125-11	100-125mm	144	70
431-150-11	125-150mm	169	82.5
431-175-11	150-175mm	194	95
431-200-11	175-200mm	219	107
431-225-11	200-225mm	244	120
431-250-11	225-250mm	269	132
431-275-11	250-275mm	294	145
431-300-11	275-300mm	319	157



SERIES 442

HIGH PRECISION DIGITAL THICKNESS GAUGE



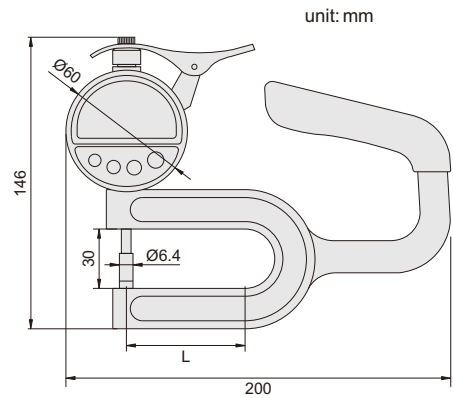
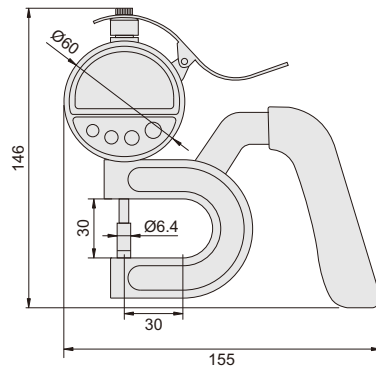
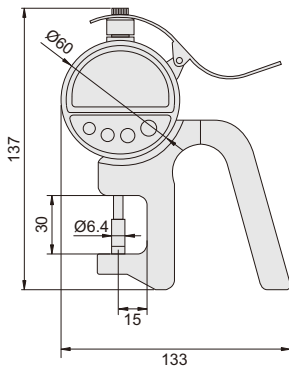
442-105-15



442-101-30



442-101-60



unit: mm

- ◆ Absolute encoder, the original data remains after power off
- ◆ With recharge cable (only 442-105-15 recharge and data output shared)
- ◆ Button: data output, on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement, max./min./rangemeasurement, tolerance set, hold
- ◆ Measuring force: 0.5-1N
- ◆ With analog reading
- ◆ Power: rechargeable battery, for 12 hours continuous working (full charge)

Cable (included)



Code	Range	Resolution	Accuracy	Repeatability	L
442-105-15	0-10mm/0-0.4"	0.0005mm/0.00002"	±0.0015mm	0.0005mm	-
442-101-15	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm	-
442-101-30	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm	-
442-101-60	0-10mm/0-0.4"	0.001mm/0.00005"	±0.003mm	0.001mm	60
442-101-00	0-10mm/0-0.4"	0.001mm/0.00005"	±0.004mm	0.001mm	100

SERIES 441

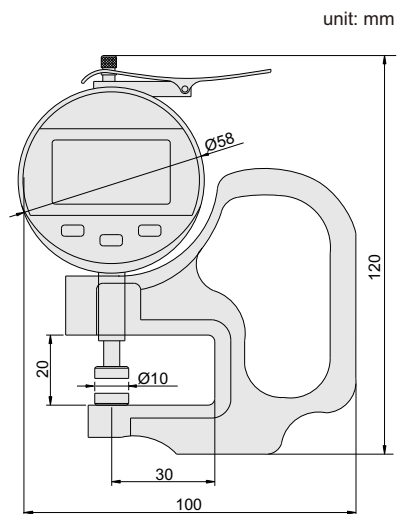
THICKNESS GAUGE



- ◆ Ceramic anvil
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



441-010-11



Resolution 0.001mm/0.00005"

Code	Range	Accuracy
441-010-01	0-10mm/0-0.4"	±0.005mm

Resolution 0.01mm/0.0005"

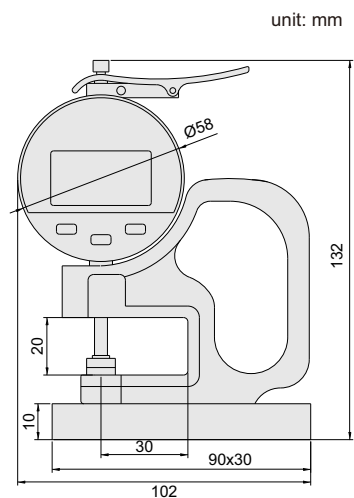
Code	Range	Accuracy
441-010-11	0-10mm/0-0.4"	±0.02mm

441

THICKNESS GAUGE



- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



Code	Range	Resolution	Accuracy
441-010-11B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

443

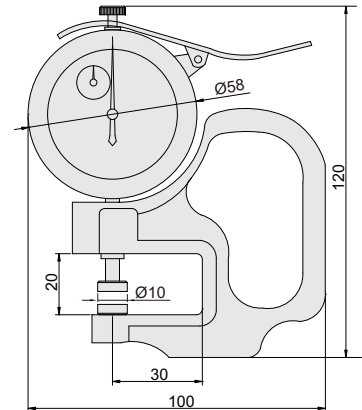
THICKNESS GAUGE



◆ Ceramic spindle tip and anvil



unit: mm



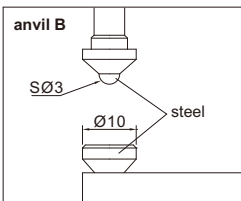
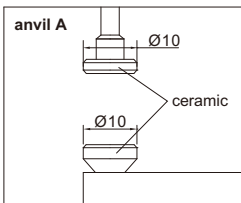
Code	Range	Graduation	Accuracy
443-001-01	0-1mm	0.001mm	±0.005mm

SERIES 443

THICKNESS GAUGE

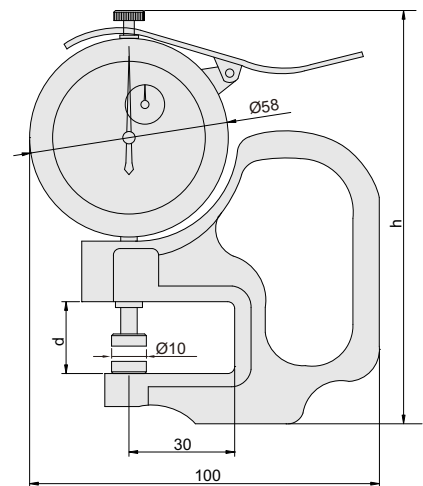


◆ Graduation: 0.01mm



443-010-11

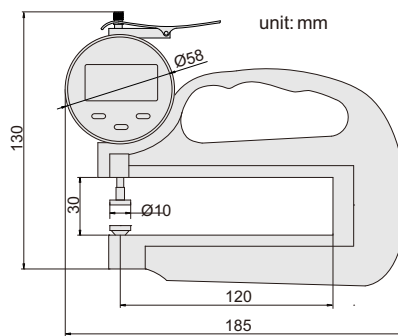
unit: mm



Code	Range	Accuracy	Anvil	d	h
443-010-11	0-10mm	±0.02mm	A	20	120
443-010-12	0-10mm	±0.02mm	B	20	120
443-030-11	0-30mm	±0.02mm	A	38	140

460**DIGITAL THICKNESS GAUGE**

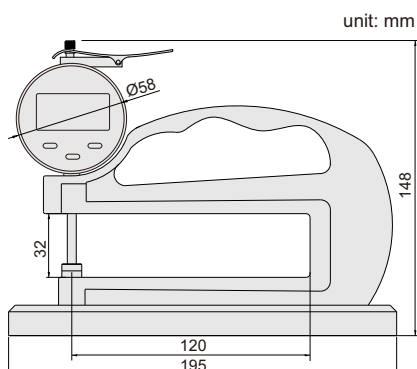
- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



Code	Range	Resolution	Accuracy
460-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

460**DIGITAL THICKNESS GAUGE**

- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ With metal base



Code	Range	Resolution	Accuracy
460-010-11B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

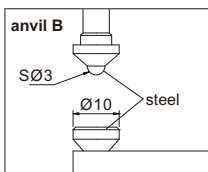
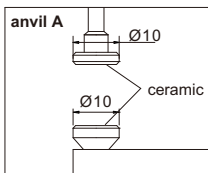


SERIES 444

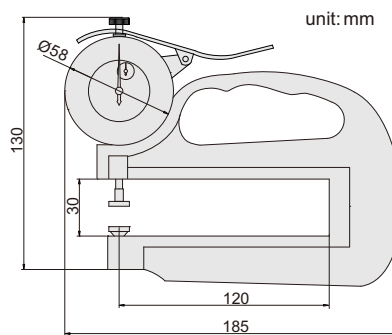
THICKNESS GAUGE



- ◆ Large throat depth, for large workpiece measurement
- ◆ Graduation: 0.01mm



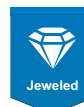
444-010-11



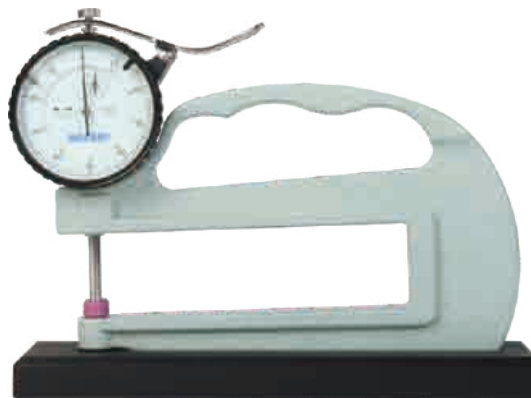
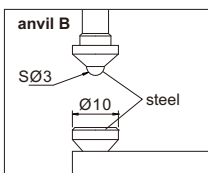
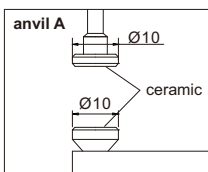
Code	Range	Accuracy	Anvil
444-010-11	0-10mm	±0.02mm	A
444-020-11	0-20mm	±0.03mm	A
444-010-12	0-10mm	±0.02mm	B
444-020-12	0-20mm	±0.03mm	B

SERIES 444

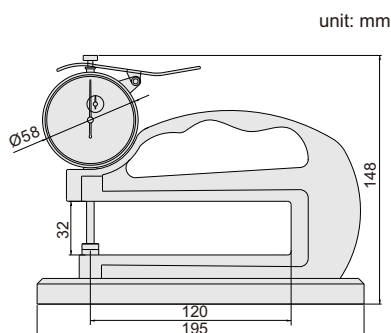
THICKNESS GAUGE



- ◆ Large throat depth, for large workpiece measurement
- ◆ Graduation: 0.01mm



444-010-11B



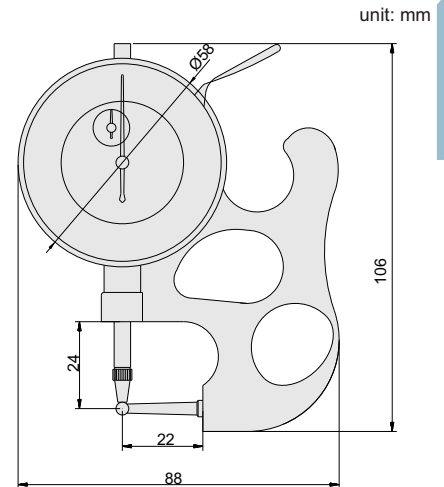
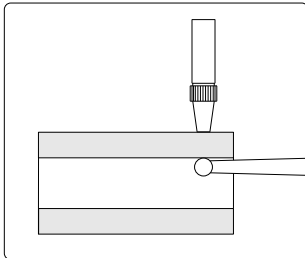
Code	Range	Accuracy	Anvil
444-010-11B	0-10mm	±0.02mm	A
444-020-11B	0-20mm	±0.03mm	A
444-010-12B	0-10mm	±0.02mm	B
444-020-12B	0-20mm	±0.03mm	B

448

THICKNESS GAUGE



- ◆ Measure the wall thickness of tube



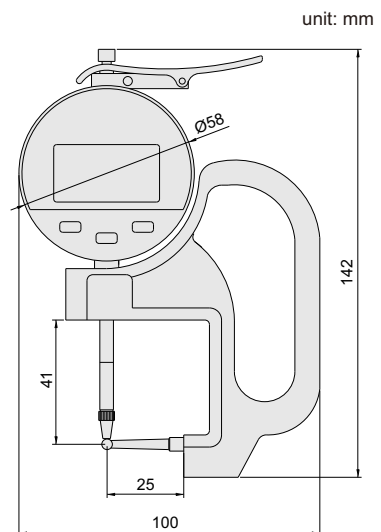
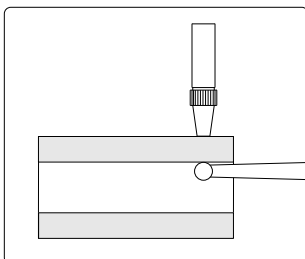
Code	Range	Accuracy	Graduation
448-010-11	0-10mm	±0.02mm	0.01mm

461

DIGITAL TUBE THICKNESS GAUGE



- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



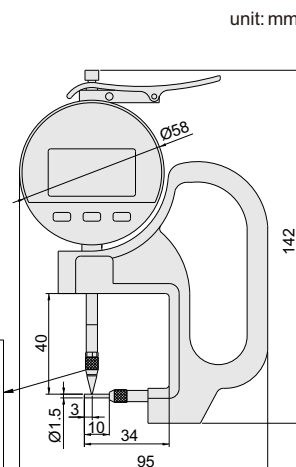
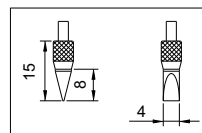
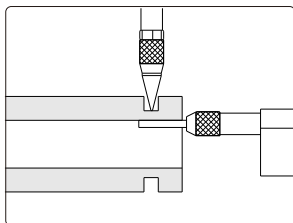
Code	Range	Resolution	Accuracy
461-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

462

DIGITAL TUBE THICKNESS GAUGE



- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



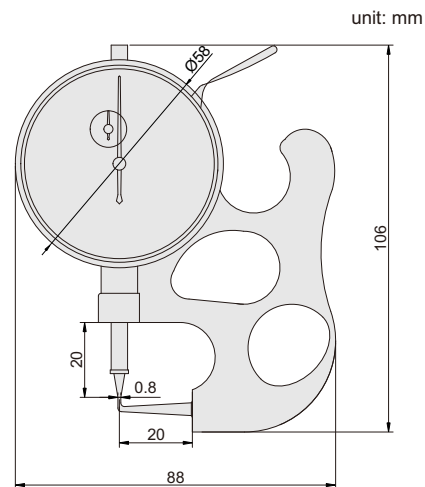
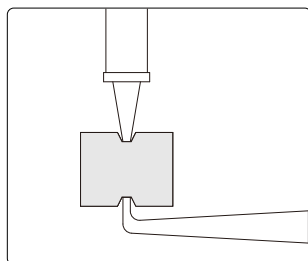
unit: mm

Code	Range	Resolution	Accuracy
462-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

464

POINT THICKNESS GAUGE

- ◆ Pointed tips can be used for small grooves and recesses



unit: mm

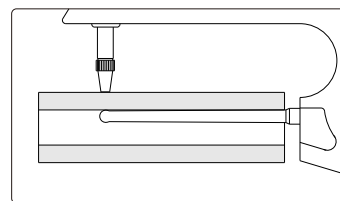
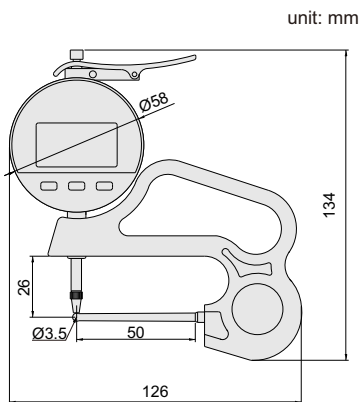
Code	Range	Accuracy	Graduation
464-010-11	0-10mm	±0.02mm	0.01mm

463

DIGITAL TUBE THICKNESS GAUGE



- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)

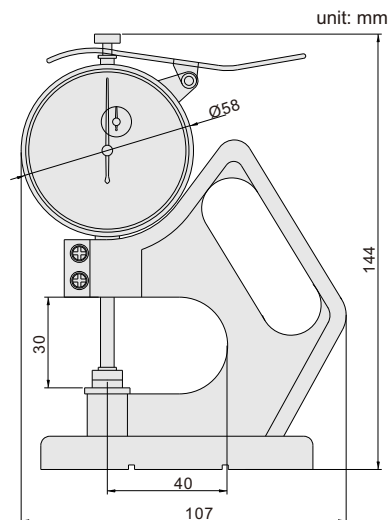


Code	Range	Resolution	Accuracy
463-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

449

THICKNESS GAUGE

- ◆ Graduation: 0.01mm
- ◆ Ceramic anvil, diameter: Ø10mm



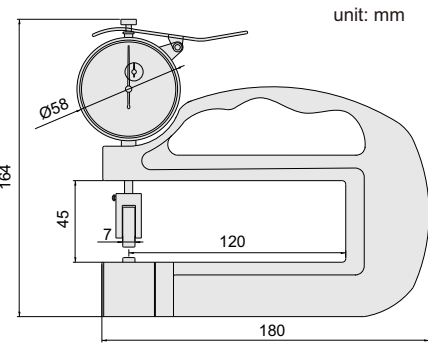
Code	Range	Accuracy
449-010-11	0-10mm	±0.02mm

445

THICKNESS GAUGE WITH ROLLING WHEEL



- ◆ For continuous measurement



Code	Range	Graduation	Accuracy
445-010-11	0-10mm	0.01mm	±0.02mm

SERIES 465

DIGITAL THICKNESS GAUGE WITH CONSTANT MEASURING FORCE

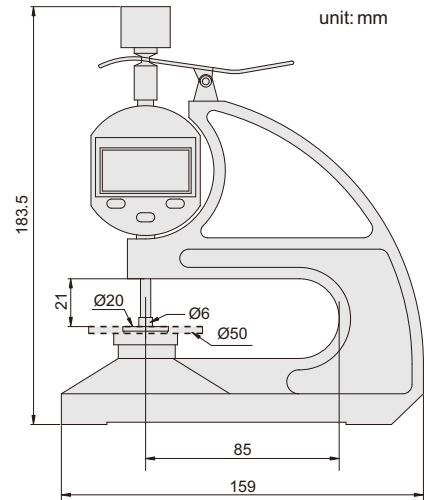
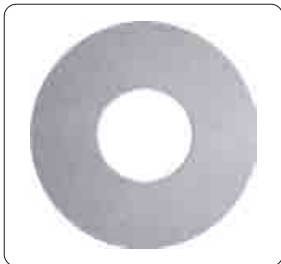


- ◆ Buttons: on/off, zero, unit (mm/in/fraction)
- ◆ Automatic power off
- ◆ With 50g standard weight block



465-010-01

Aluminum alloy stage

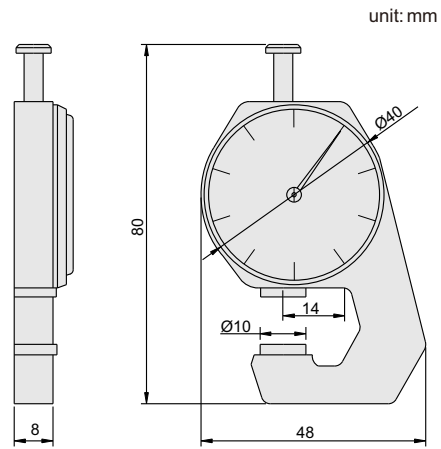


Code	Range	Resolution	Accuracy
465-010-01	0-12.7mm/0.5"	0.001mm/0.00005"	±0.005mm
465-010-11	0-12.7mm/0.5"	0.01mm/0.0005"	±0.02mm



446

THICKNESS GAUGE

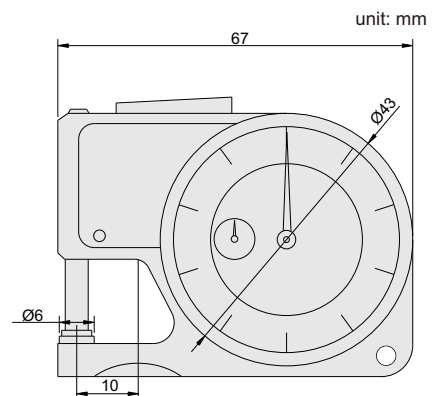


Code	Range	Graduation	Accuracy
446-010-11	0-10mm	0.1mm	±0.05mm

447

THICKNESS GAUGE

◆ Stainless steel spindle tip and anvil



Code	Range	Graduation	Accuracy
447-010-11	0-10mm	0.01mm	±0.02mm

450

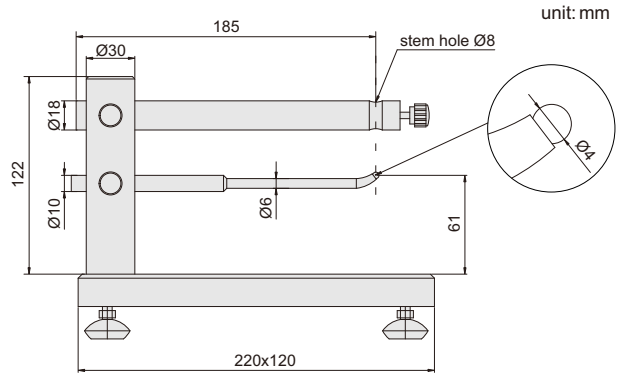
PET BOTTLE WALL THICKNESS GAUGE

- ◆ Optional accessories: digital indicator (code: 212-010-13)

Digital indicator is not included



Application



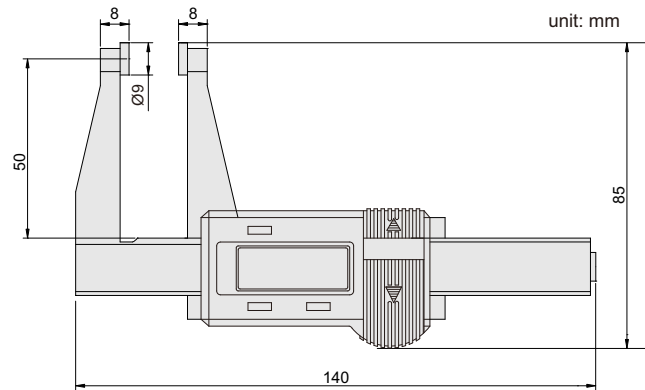
Code	Measuring thickness	Accuracy
450-010-11	12.7mm	±0.02mm

433

DIGITAL SNAP GAUGE



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output
- ◆ Made of stainless steel



Code	Range	Accuracy
433-002-11	0-50mm/0-2"	±0.03mm

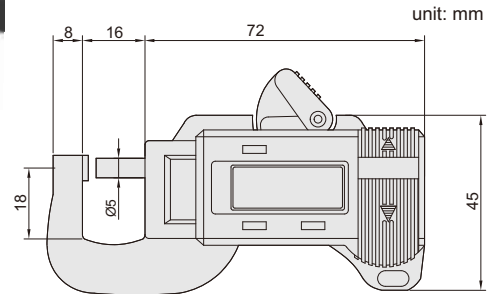


432

DIGITAL SNAP GAUGE



- Buttons: on/off, zero, mm/inch



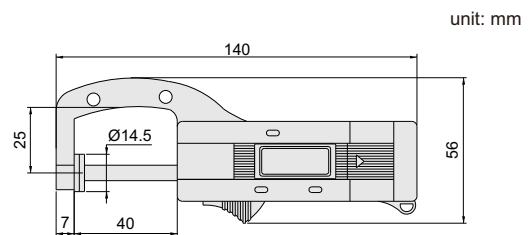
Code	Range	Resolution	Accuracy
432-012-11	0-12.7mm/0-0.5"	0.01mm/0.0005"	±0.03mm

434

DIGITAL SNAP GAUGE



- Buttons: on/off, zero, mm/inch
- Automatic power on/off



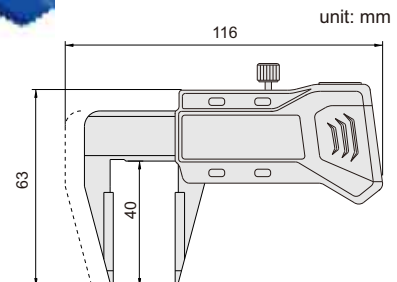
Code	Range	Resolution	Accuracy
434-001-11	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

435

DIGITAL SNAP GAUGE



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/in, INC
- Automatic power on/off
- Data output(cable code: 100-03 or 100-04)
- Made of stainless steel



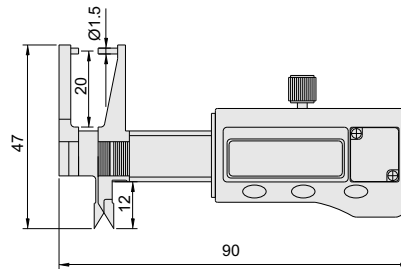
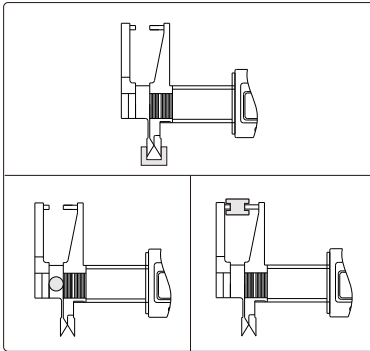
Code	Range	Accuracy
435-001-11	0-25mm/0-1"	±0.03mm

436

DIGITAL 3-PURPOSE SNAP GAUGE



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



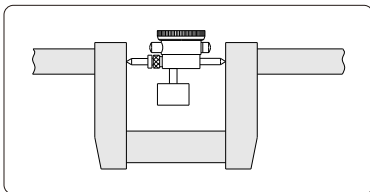
unit: mm

Code	Range	Accuracy
436-001-11	0-25mm/0-1"	±0.03mm

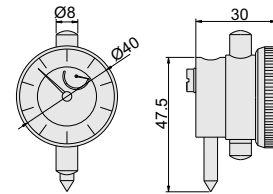
SERIES 298

CRANKSHAFT TESTER

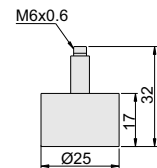
- ◆ To test crankshaft deflection
- ◆ The balance block is mounted on the back of dial indicator to keep the dial indicator facing up



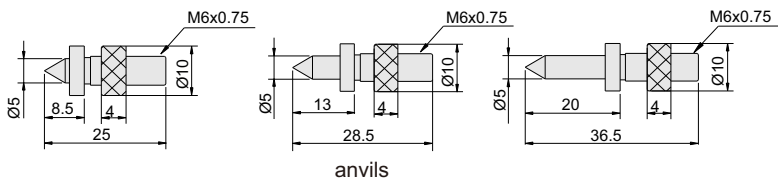
298-012-11



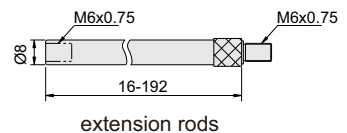
dial indicator



balance block



anvils



extension rods

Code	Range	Dial indicator range	Graduation	Accuracy	Extension rods
298-012-11	60-300mm	3mm	0.01mm	±0.016mm	16mm, 32mm, 64mm, 128mm
298-020-11	60-500mm	3mm	0.01mm	±0.016mm	16mm, 32mm, 64mm, 96mm, 128mm, 192mm