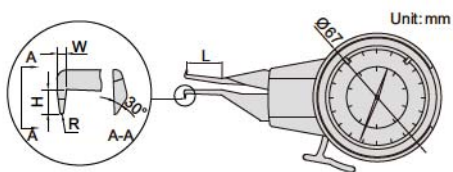


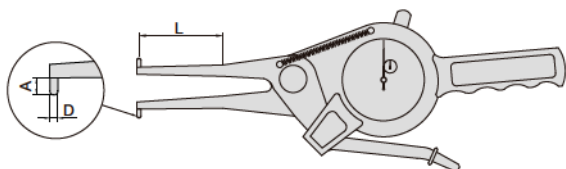
INTERNAL DIAL CALIPER GAGES



2222-15

Code	Range	Graduation	Accuracy	L	H	W	R
2222-15	5-15mm	0.01mm	±0.03mm	20	2	2.5	R0.3
2222-25	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
2222-301	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
2222-401	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5
2222-501	30-50mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5
2222-60	40-60mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5

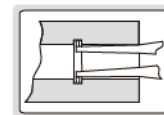
INTERNAL DIAL CALIPER GAGES



2321-35

Code	Range	Graduation	Accuracy	L	A	D
2321-35	15-35mm	0.01mm	±0.04mm	50	3	Ø3
2321-AL35	15-35mm	0.01mm	±0.04mm	200	3	Ø3
2321-55	35-55mm	0.01mm	±0.04mm	80	6	Ø3
2321-AL55	35-55mm	0.01mm	±0.04mm	250	8	Ø3
2321-75	55-75mm	0.01mm	±0.04mm	90	8	Ø3
2321-AL75	55-75mm	0.01mm	±0.04mm	250	8	Ø3
2321-95	75-95mm	0.01mm	±0.04mm	100	8	Ø3
2321-115	95-115mm	0.01mm	±0.04mm	120	10	Ø3.2
2321-135	115-135mm	0.01mm	±0.04mm	120	10	Ø3.2

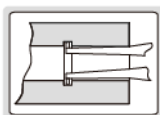
■ Carbide measuring tips



DATA OUTPUT



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

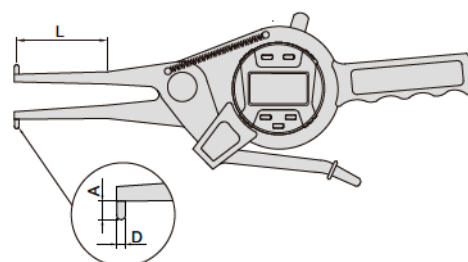


DIGITAL INTERNAL CALIPER GAGES



2151-35

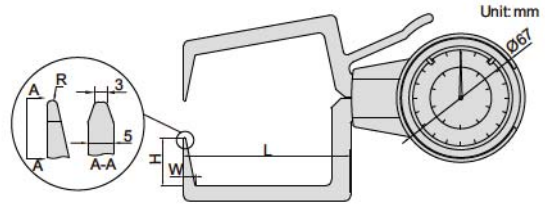
Code	Range	Resolution	Accuracy	L	A	D
2151-35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	50	3	Ø3
2151-AL35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	200	3	Ø3
2151-55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	80	6	Ø3
2151-AL55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	250	8	Ø3
2151-75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	90	8	Ø3
2151-AL75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	250	8	Ø3
2151-95	75-95mm/3-3.8"	0.01mm/0.0005"	±0.04mm	100	8	Ø3
2151-115	95-115mm/3.8-4.6"	0.01mm/0.0005"	±0.04mm	120	10	Ø3.2
2151-135	115-135mm/4.6-5.4"	0.01mm/0.0005"	±0.04mm	120	10	Ø3.2



EXTERNAL DIAL CALIPER GAGES



2333-201



Unit: mm

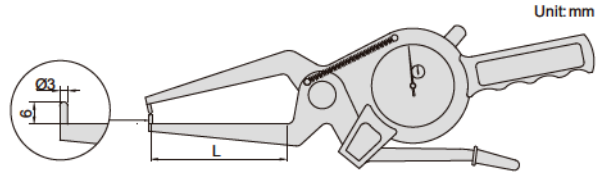
Code	Range	Graduation	Accuracy	L	H	W	R
2333-201	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-301	10-30mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-401	20-40mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-501	30-50mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-601	40-60mm	0.01mm	±0.03mm	80	25	6.5	R0.5

(mm)

EXTERNAL DIAL CALIPER GAGES



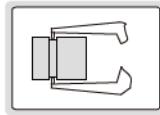
2332-20



Unit: mm

Code	Range	Graduation	Accuracy	L (mm)
2332-20	0-20mm	0.01mm	±0.04mm	60
2332-40	20-40mm	0.01mm	±0.04mm	60
2332-60	40-60mm	0.01mm	±0.04mm	55
2332-80	60-80mm	0.01mm	±0.04mm	55
2332-100	80-100mm	0.01mm	±0.04mm	55

- Carbide measuring tips



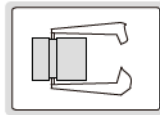
DIGITAL EXTERNAL CALIPER GAGES

DATA OUTPUT

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

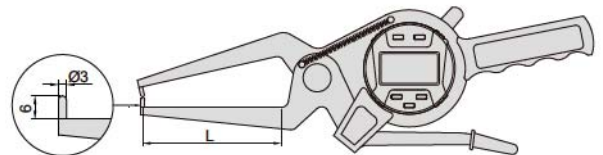


2132-20



Unit: mm

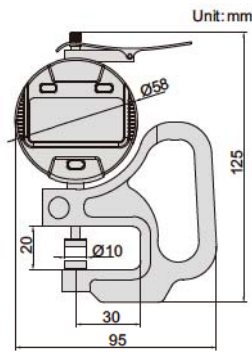
Code	Range	Resolution	Accuracy	L (mm)
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	60
2132-40	20-40mm/0.8-1.6"	0.01mm/0.0005"	±0.04mm	60
2132-60	40-60mm/1.6-2.4"	0.01mm/0.0005"	±0.04mm	55
2132-80	60-80mm/2.4-3.2"	0.01mm/0.0005"	±0.04mm	55
2132-100	80-100mm/3.2-4"	0.01mm/0.0005"	±0.04mm	55



DIGITAL THICKNESS GAGES

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

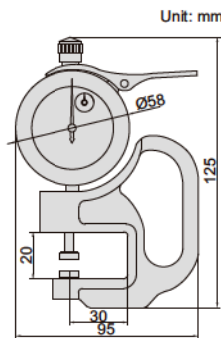
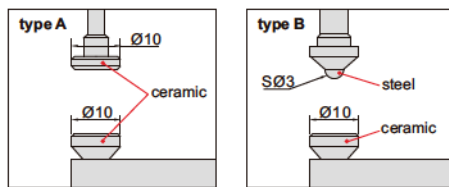
Code	Range	Resolution	Accuracy
2871-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2871-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm



DATA OUTPUT

2871-101

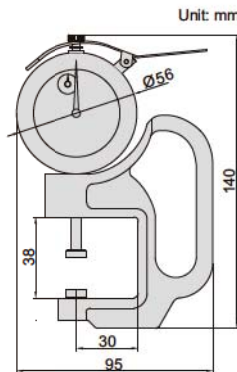
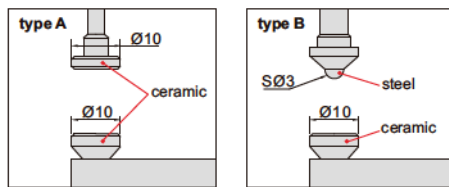
THICKNESS GAGES



Code	Range	Graduation	Accuracy	Type
2364-10	0-10mm	0.01mm	±0.02mm	A
2364-10B	0-10mm	0.01mm	±0.02mm	B

2364-10

THICKNESS GAGES

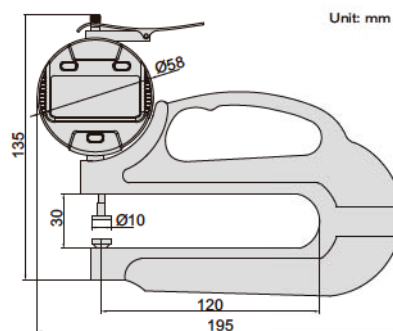


Code	Range	Graduation	Accuracy	Type
2366-30	0-30mm	0.01mm	±0.035mm	A
2366-30B	0-30mm	0.01mm	±0.035mm	B

2366-30

DIGITAL THICKNESS GAGE

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

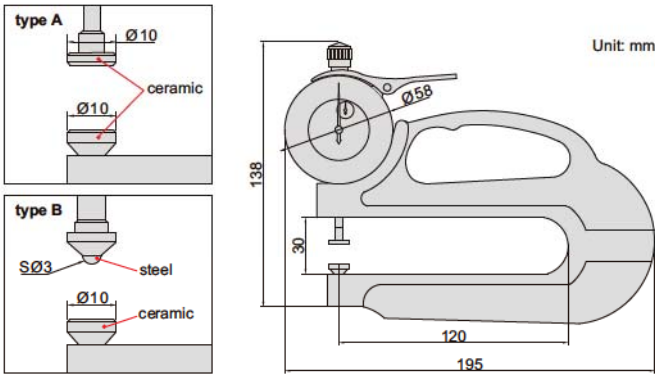


DATA OUTPUT

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

2872-10

THICKNESS GAGES



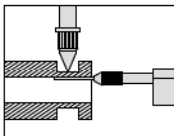
2365-10

Code	Range	Graduation	Accuracy	Type
2365-10	0-10mm	0.01mm	±0.02mm	A
2365-20	0-20mm	0.01mm	±0.03mm	A
2365-10B	0-10mm	0.01mm	±0.02mm	B
2365-20B	0-20mm	0.01mm	±0.03mm	B

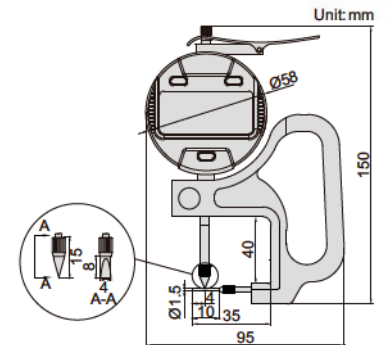
DIGITAL TUBE THICKNESS GAGE

DATA OUTPUT

Measure wall thickness of groove



2873-10

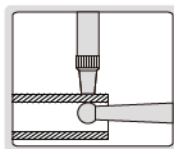


- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

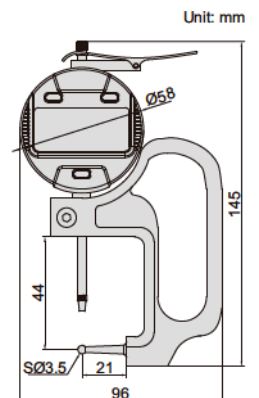
Code	Range	Resolution	Accuracy
2873-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

DIGITAL TUBE THICKNESS GAGE

DATA OUTPUT



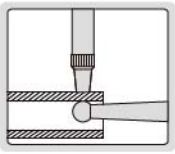
2876-10



- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

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

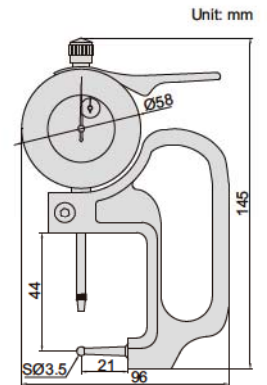
TUBE THICKNESS GAGE



- Measure tube wall thickness

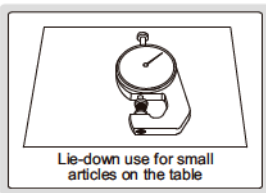


2367-10A



Code	Range	Graduation	Accuracy
2367-10A	0-10mm	0.01mm	±0.02mm

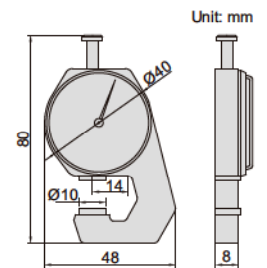
SUITABLE FOR JEWELLERY



THICKNESS GAGE



2361-10



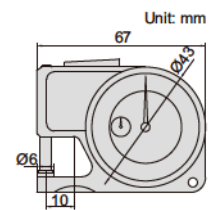
Code	Range	Graduation	Accuracy
2361-10	0-10mm	0.1mm	±0.05mm

THICKNESS GAGE

- Stainless steel spindle tip and anvil

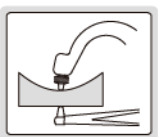


2363-10

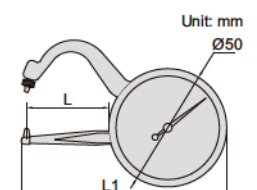


Code	Range	Graduation	Accuracy
2363-10	0-10mm	0.01mm	±0.03mm

THICKNESS GAGES

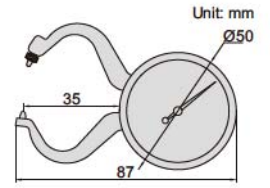
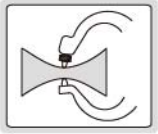


2862-101



Code	Range	Graduation	Accuracy	(mm)	
				L	L1
2862-101	0-10mm	0.05mm	±0.1mm	35	85
2862-102	0-10mm	0.05mm	±0.1mm	60	110

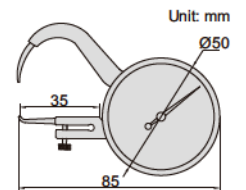
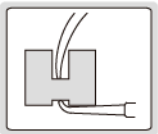
THICKNESS GAGE



2863-10

Code	Range	Graduation	Accuracy
2863-10	0-10mm	0.05mm	±0.1mm

THICKNESS GAGE WITH POINTED TIPS



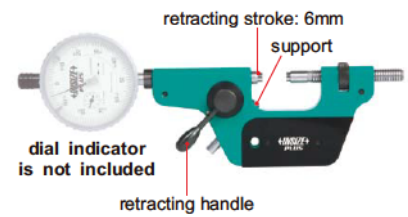
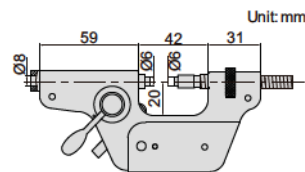
2866-10

- Pointed tips fit into small grooves and recesses

Code	Range	Graduation	Accuracy
2866-10	0-10mm	0.05mm	±0.1mm

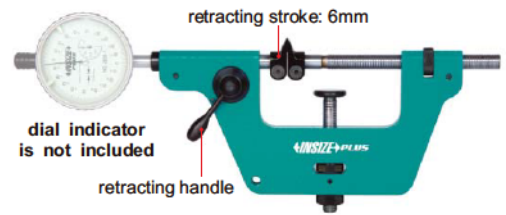
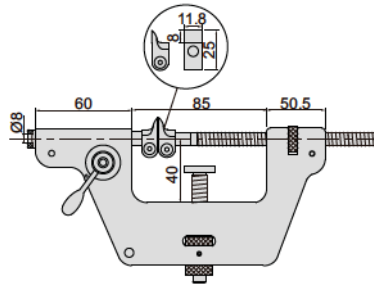
DIAL SNAP GAGES

INSIZE PLUS
MADE IN FRANCE



3337-40

- For quick Go/No-Go judgement
- Carbide measuring faces
- Height of support is adjustable
- Optional accessory: dial indicators (graduation 0.001mm) and digital indicators (resolution 0.001mm)

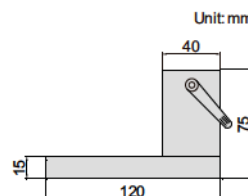


3337-60

Code	Range	Parallelism of measuring faces	Retracting stroke	Remark
3337-40	0-40mm	1µm	6mm	
3337-60	0-60mm	3µm	6mm	jaw type measuring tips

Stand (optional)

Code
3337-STAND



3337-STAND

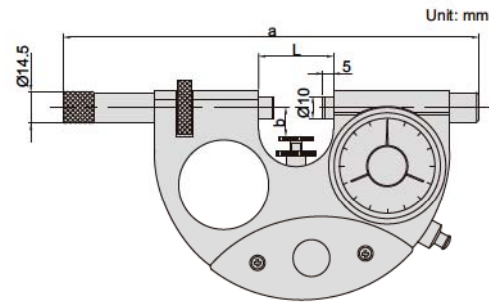
DIAL SNAP GAGES

INSIZE PLUS
MADE IN GERMANY

IP54
WATERPROOF



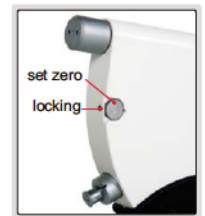
3335-25



Unit: mm

- Quick Go/No-Go measurement for mass production
- Anvil retracting stroke: 2.5mm
- Dial indicator: measuring range $\pm 0.07\text{mm}$, graduation $1\mu\text{m}$, accuracy $1\mu\text{m}$
- Constant measuring force over the whole range: 8.5N
- Carbide measuring faces
- IP54 dust/waterproof
- Zero position of dial indicator is adjustable and can be locked (supplied with locking wrench)
- Adjustable platform height

Code	Range	L	a	b
3335-25	0-25mm	35	191	<15
3335-50	25-50mm	60	215	<25
3335-75	50-75mm	84	239	<37.5
3335-100	75-100mm	110	265	<50

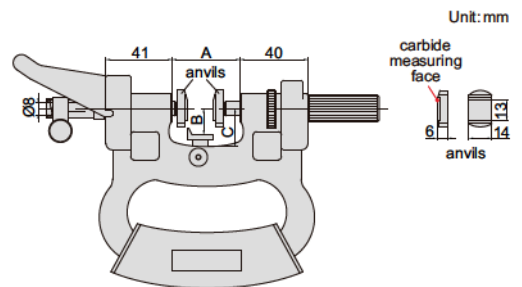


DIAL SNAP GAGES

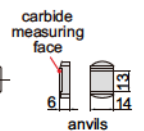


dial indicator is not included

2186-25



Unit: mm



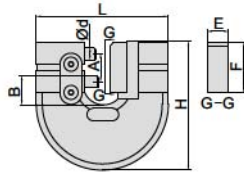
- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Flatness of anvil: $1.5\mu\text{m}$
- Repeatability: $1\mu\text{m}$
- Carbide measuring faces for anvils
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional accessory: dial indicators and digital indicators (reading 0.001mm or 0.01mm)

Code	Range	Parallelism of measuring faces	A	B	C
2186-25	0-25mm	$4\mu\text{m}$	42	11-18	20
2186-50	25-50mm	$4\mu\text{m}$	69	11-32	41
2186-75	50-75mm	$5\mu\text{m}$	94	17-41	51
2186-100	75-100mm	$6\mu\text{m}$	119	31-55	65
2186-125	100-125mm	$6\mu\text{m}$	144	42-70	75
2186-150	125-150mm	$8\mu\text{m}$	169	55-82	90
2186-175	150-175mm	$8\mu\text{m}$	194	68-95	100
2186-200	175-200mm	$10\mu\text{m}$	219	85-110	115
2186-225	200-225mm	$10\mu\text{m}$	244	95-120	130
2186-250	225-250mm	$10\mu\text{m}$	269	110-135	145
2186-275	250-275mm	$12\mu\text{m}$	294	120-150	160
2186-300	275-300mm	$12\mu\text{m}$	319	128-160	170

ADJUSTABLE SNAP GAGES



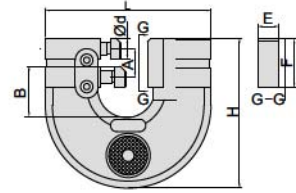
2187-6



0-6mm



2187-19



over 6mm

- 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

Code	Range	L	A	B	E	F	H	Ød
2187-6	0-6mm	74	15	17.5	12.2	27.2	71.5	7
2187-13	6-13mm	85	15	26	12.2	27.2	79.5	12.3
2187-19	13-19mm	93	15	27	12.2	27.2	83	12.3
2187-25	19-25mm	100	15	33.5	12.2	27.2	89.5	12.3
2187-32	25-32mm	111	18	38.5	15.2	35.2	104	15.3
2187-38	32-38mm	117	18	41.5	15.2	35.2	105	15.3
2187-44	38-44mm	123	18	44.5	15.2	35.2	109	15.3
2187-51	44-51mm	130	18	48	15.2	35.2	117	15.3
2187-57	51-57mm	136	18	45	15.2	35.2	119	15.3
2187-63	57-63mm	143	18	50	15.2	35.2	122	15.3
2187-70	63-70mm	156	20	58	15.2	35.2	132	15.3
2187-76	70-76mm	163	20	60.5	15.2	35.2	137	15.3
2187-82	76-82mm	169	20	64.5	15.2	35.2	140	15.3
2187-89	82-89mm	175	20	66.5	15.2	35.2	146	15.3
2187-95	89-95mm	181	20	69.5	15.2	35.2	149	15.3
2187-101	95-101mm	188	20	70	15.2	35.2	154	15.3
2187-108	101-108mm	198	24	79	15.2	39.2	166	15.3
2187-114	108-114mm	204	24	81	15.2	39.2	172	15.3

Code	Range	L	A	B	E	F	H	Ød
2187-120	114-120mm	210	24	86	15.2	39.2	179	15.3
2187-127	120-127mm	217	24	89.5	15.2	39.2	186	15.3
2187-133	127-133mm	223	24	92.5	15.2	39.2	192	15.3
2187-139	133-139mm	229	24	95.5	15.2	39.2	197	15.3
2187-146	139-146mm	235	24	98.5	15.2	39.2	201	15.3
2187-152	146-152mm	242	24	102	15.2	39.2	205	15.3
2187-163	152-163mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-175	163-175mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-188	175-188mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-200	188-200mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-213	200-213mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-225	213-225mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-238	225-238mm	349.5	21.4	144.7	18.2	39.2	250	18.3
2187-250	238-250mm	349.5	21.4	149	18.2	39.2	250	18.3
2187-263	250-263mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-275	263-275mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-288	275-288mm	400	21.4	170.7	18.2	39.2	291	18.3
2187-300	288-300mm	400	21.4	170.7	18.2	39.2	291	18.3

DIAL SNAP GAGES

ATTENTION: NOT SUITABLE FOR 0.001MM INDICATORS

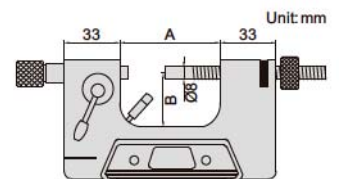
- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Optional accessory:
 - dial indicators (graduation 0.01mm),
 - digital indicators (resolution 0.01mm/0.0005")



dial indicator is not included

2184-50W

Code	Range	A	B
2184-25W	0-25mm	34	18
2184-50W	0-50mm	62	32
2184-100W	50-100mm	112	62
2184-150W	100-150mm	162	85
2184-200W	150-200mm	212	110

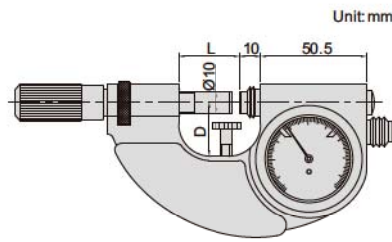


- Go/No-Go judgement for mass production
- Dial indicator: range $\pm 0.04\text{mm}$, graduation 0.001mm , accuracy 0.001mm
- IP54 dust/waterproof
- Measuring force: 5-10N
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

IP54
WATERPROOF

ATTENTION:
BASIC MODEL

DIAL SNAP GAGES



3334-25

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

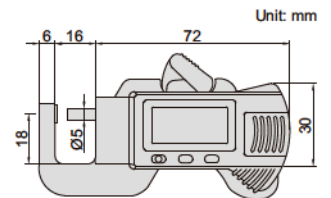
DIGITAL SNAP GAGE

DATA
OUTPUT

- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2)



2166-12



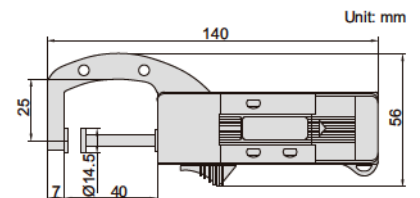
Code	Range	Resolution	Accuracy
2166-12	0-12mm/0-0.5"	0.01mm/0.0005"	$\pm 0.03\text{mm}$

DIGITAL SNAP GAGE

ATTENTION: NO
DATA OUTPUT



2167-25



Code	Range	Resolution	Accuracy
2167-25	0-25mm/0-1"	0.01mm/0.0005"	$\pm 0.03\text{mm}$

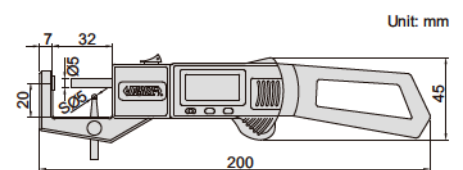
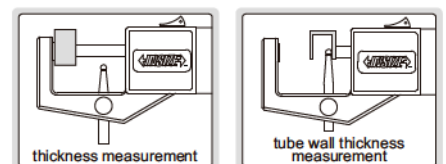
DIGITAL SNAP GAGE

DATA
OUTPUT



2163-25

- Resolution: $0.01\text{mm}/0.0005\text{''}$
- Accuracy: $\pm 0.04\text{mm}$
- For thickness and tube wall thickness measurement
- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2A)



Code	Thickness range	Tube wall thickness range
2163-25	0-25mm/0-1"	0-2mm/0.08"

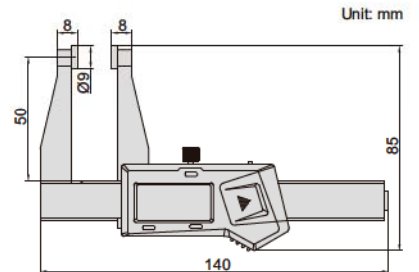
DIGITAL SNAP GAGE

DATA OUTPUT

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



1163-50A



Code	Range	Resolution	Accuracy
1163-50A	0-50mm/0-2"	0.01mm/0.0005"	±0.03mm

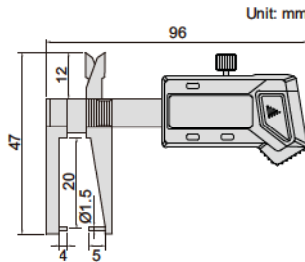
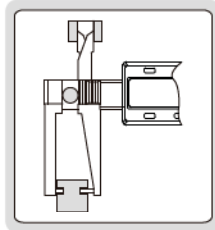
DIGITAL 3-PURPOSE SNAP GAGE



ATTENTION: NO DATA OUTPUT

SUITABLE FOR JEWELLERY

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



2164-25A

Code	Range	Resolution	Accuracy
2164-25A	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

STEP AND GAP GAGE

DATA OUTPUT



zero setting block (included)



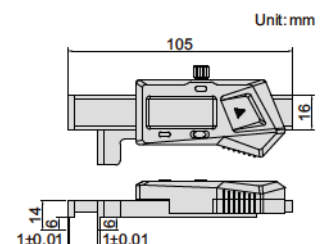
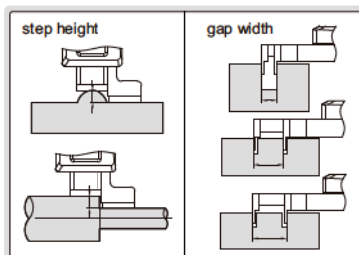
front



back

2168-12

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

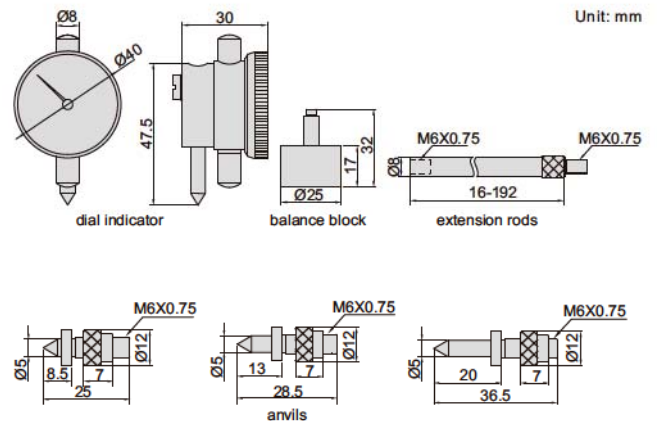


Code	Range	Accuracy
2168-12	0-12.7mm/0-0.5"	±0.03mm

CRANKSHAFT TESTERS

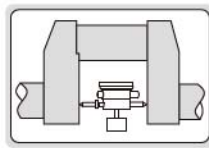


2841-500



Unit: mm

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



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

GAGE BLOCKS

Accuracy according to ISO3650

Nominal length (mm)	Grade 0		Grade 1		Grade 2	
	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length
over 0.5 to 10	±0.12µm	0.10µm	±0.20µm	0.16µm	±0.45µm	0.30µm
over 10 to 25	±0.14µm	0.10µm	±0.30µm	0.16µm	±0.60µm	0.30µm
over 25 to 50	±0.20µm	0.10µm	±0.40µm	0.18µm	±0.80µm	0.30µm
over 50 to 75	±0.25µm	0.12µm	±0.50µm	0.18µm	±1.00µm	0.35µm
over 75 to 100	±0.30µm	0.12µm	±0.60µm	0.20µm	±1.20µm	0.35µm
over 100 to 150	±0.40µm	0.14µm	±0.80µm	0.20µm	±1.60µm	0.40µm
over 150 to 200	±0.50µm	0.16µm	±1.00µm	0.25µm	±2.00µm	0.40µm
over 200 to 250	±0.60µm	0.16µm	±1.20µm	0.25µm	±2.40µm	0.45µm
over 250 to 300	±0.70µm	0.18µm	±1.40µm	0.25µm	±2.80µm	0.50µm
over 300 to 400	±0.90µm	0.20µm	±1.80µm	0.30µm	±3.60µm	0.50µm
over 400 to 500	±1.10µm	0.25µm	±2.20µm	0.35µm	±4.40µm	0.60µm
over 500 to 600	±1.30µm	0.25µm	±2.60µm	0.40µm	±5.00µm	0.70µm
over 600 to 700	±1.50µm	0.30µm	±3.00µm	0.45µm	±6.00µm	0.70µm
over 700 to 800	±1.70µm	0.30µm	±3.40µm	0.50µm	±6.50µm	0.80µm
over 800 to 900	±1.90µm	0.35µm	±3.80µm	0.50µm	±7.50µm	0.90µm
over 900 to 1000	±2.00µm	0.40µm	±4.20µm	0.60µm	±8.00µm	1.00µm

Grade and application

Grade	Application
0	To be used as basic standards in calibration laboratories by skilled inspection staff, to calibrate or set high accuracy measuring instruments, to calibrate gage blocks of grade 1 and 2.
1	To be used in inspection rooms, to check gages, inspect high accuracy parts and set measuring instruments.
2	To be used in workshops, to check production gages, set measuring instruments and mount tools.