

Digimatic Caliper Gages



Internal Tube Thickness Measurement SERIES 209

Versatile ID measuring gages for hole diameters, groove thickness, tube diameter and hard-to-reach dimensions. The Digimatic Caliper Gages provide error-free LCD readings, as well as data output for SPC analysis.

Internal measurement type



Technical Data

Display: LCD Analog / Digital
Power Supply: AAA Battery (2 pcs.)
Dust/Water protection level: IP67

Function

Zerose, Preset, Auto power off, Inch/Metric, Conversion data hold, Max/Min value holding, Data output

Optional Accessories

- KPL8007-10** Holder (back Lug)
- 06AFM380E** USB cable (2m)*1
- 937387** SPC Cable (1m)*1
- 965013** SPC Cable (2m)*1
- 02AZD790E** U-Wave-T Cable*1
- 02AZD880G** U-Wave-Transmitter (buzzer)
- KPL1961-09** Interface adapter (cable)
- KPL1961-13** Interface adapter (Bluetooth)
- KPL0682-60** Bluetooth dongle*2

*1 requires interface adapter (KPL1962-09)

*2 requires interface adapter (KPL1962-13)

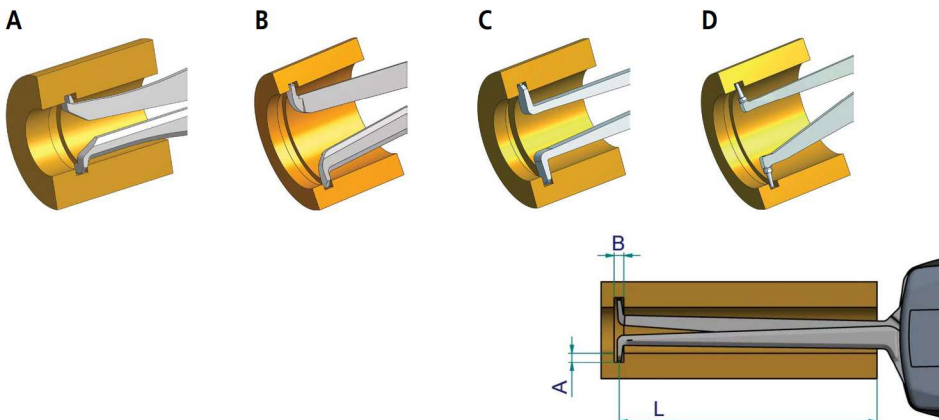
SPECIFICATIONS

Inch / Metric

Order No.	Range	Resolution	Accuracy	Measuring Depth (L)	Groove Depth (A)	Groove Width (B)	Measuring Contacts	Measuring Force (N)	Fig. Reference
209-934	0.09-0.49" / 2.5-12.5mm	10 Steps (switchable)*1	0.0005" / 0.015mm	0.47" / 12mm	.27" / 0.7mm	.02" / 0.4mm	Chisel R .0039" / 0.1mm	0.8-1.2	A
209-935	0.19-0.59" / 5-15mm		0.0005" / 0.015mm	1.37" / 35mm	.09" / 2.3mm	.03" / 0.8mm	Ball .024" / 0.6mm dia.	0.8-1.2	B
209-936	0.39-1.18" / 10-30mm		0.0010" / 0.03mm	3.34" / 85mm	.19" / 5.2mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	B
209-937	0.78-1.57" / 20-40mm		0.0010" / 0.03mm	3.34" / 85mm	.26" / 7.0mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	C
209-938	1.18-1.96" / 30-50mm		0.0010" / 0.03mm	3.34" / 85mm	.26" / 7.0mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	C
209-939	1.57-2.36" / 40-60mm		0.0010" / 0.03mm	3.34" / 85mm	.31" / 8.3mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	D
209-940	1.96-2.75" / 50-70mm		0.0010" / 0.03mm	3.34" / 85mm	.31" / 8.3mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	D
209-941	2.36-3.14" / 60-80mm		0.0010" / 0.03mm	3.34" / 85mm	.31" / 8.3mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	D
209-942	2.75-3.54" / 70-90mm		0.0010" / 0.03mm	3.34" / 85mm	.31" / 8.3mm	.05" / 1.2mm	Ball .04" / 1mm dia.	1.1-1.6	D
209-944	0.51-1.69" / 13-43mm		0.0015" / 0.04mm	5.00" / 127mm	.22" / 5.7mm	.06" / 1.5mm	Ball Ø.05" / 1.3mm	1.2-1.7	B
209-945	0.59-2.55" / 15-65mm		0.0020" / 0.05mm	7.40" / 188mm	.21" / 5.5mm	.07" / 1.9mm	Ball Ø.06" / 1.5mm	1.0-1.8	C
209-946	1.18-2.36" / 30-60mm		0.0015" / 0.04mm	5.19" / 132mm	.24" / 6.2mm	.07" / 1.8mm	Ball Ø.06" / 1.5mm	1.2-1.7	D
209-947	1.96-3.14" / 50-80mm		0.0015" / 0.04mm	5.19" / 132mm	.33" / 8.3mm	.09" / 2.4mm	Ball Ø.08" / 2mm	1.2-1.7	D
209-948	2.75-3.93" / 70-100mm		0.0015" / 0.04mm	5.19" / 132mm	.33" / 8.3mm	.09" / 2.4mm	Ball Ø.08" / 2mm	1.2-1.7	D
209-949	3.54-4.72" / 70-100mm		0.0015" / 0.04mm	5.19" / 132mm	.33" / 8.3mm	.09" / 2.4mm	Ball Ø.08" / 2mm	1.2-1.7	D
209-950	1.57-3.54" / 40-90mm		0.0020" / 0.05mm	7.55" / 192mm	.33" / 8.3mm	.09" / 2.4mm	Ball Ø.08" / 2mm	1.0-1.8	D

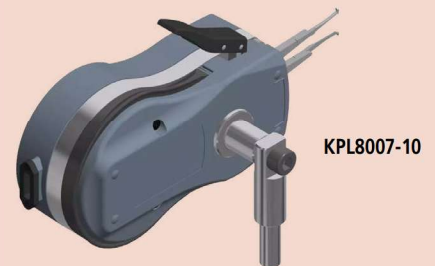
• Power Source: AAA Batteries (2 pcs)

*1 See Resolution Table



• Resolution Switching*

Resolution (in)		Resolution (mm)	
.0005	.0001	0.001	0.01
.0001	.001	0.002	0.02
		0.005	0.05



External Tube Thickness Measurement SERIES 209

Versatile OD measuring gages for groove thickness, tube thickness and hard-to-reach dimensions. Digimatic Caliper Gages provide error-free LCD readings, as well as data output for SPC analysis.

Technical Data

Display: LCD Analog / Digital
 Power Supply: AAA Battery (2 pcs.)
 Dust/Water protection level: IP67

Function

Zeroset, Preset, Auto power off, Inch/Metric, Conversion data hold, Max/Min value holding, Data output

External measurement type

209-932



SPECIFICATIONS

Inch / Metric

Order No.	Range	Resolution	Accuracy	Measuring Depth (L)	Moveable (Hb)	Fixed (Hf)	Measuring Contacts	Measuring Force (N)	Fig. Reference
209-930	0-0.39" / 0-10mm	10 Steps (switchable)*1	0.0005" / 0.02mm	1.37" / 35mm	.75" / 19.1mm	.73" / 18.6mm	Ball .059"/1.5mm dia.	1.2-1.6	A
209-931	0-0.39" / 0-10mm		0.0005" / 0.02mm	1.37" / 35mm	.85" / 21.7mm	.58" / 14.8mm	Desc .24" / 6mm dia.	0.8-1.2	C
209-932	0-0.78" / 0-20mm		0.0010" / 0.03mm	3.34" / 85mm	.97" / 24.7mm	.97" / 24.6mm	Ball .059"/1.5mm dia.	1.1-1.6	A
209-933	0-0.78" / 0-20mm		0.0010" / 0.03mm	3.34" / 85mm	.97" / 24.7mm	.10" / 2.5mm	Ball .059"/1.5mm dia.	1.1-1.6	B
209-951	0-1.18" / 0-30mm		0.0015" / 0.04mm	4.48" / 114mm	1.2" / 30mm	1.2" / 30mm	Ball Ø.12"/3mm	0.9-1.6	A
209-952	0-1.18" / 0-30mm		0.0015" / 0.04mm	4.48" / 114mm	1.2" / 30mm	.16" / 4mm	Ball Ø.12"/3mm	0.9-1.6	B
209-953	0-1.18" / 0-30mm		0.0020" / 0.05mm	4.48" / 114mm	1.4" / 36mm	.94" / 24mm	Disc Ø.197"/50mm	0.9-1.6	D
209-954	0-1.96" / 0-50mm		0.0020" / 0.05mm	6.57" / 167mm	1.2" / 30mm	1.2" / 30mm	Ball Ø.12"/3mm	0.8-1.7	A
209-955	0-1.96" / 0-50mm		0.0020" / 0.05mm	6.65" / 169mm	1.2" / 30mm	.17" / 4.3mm	Ball Ø.12"/3mm	0.8-1.7	B
209-956	0-1.96" / 0-50mm		0.0020" / 0.05mm	6.57" / 167mm	1.4" / 36mm	.94" / 24mm	Disc Ø.197"/50mm	0.8-1.7	D

• Power Source: AAA Batteries (2 pcs)
 *1 See Resolution Table

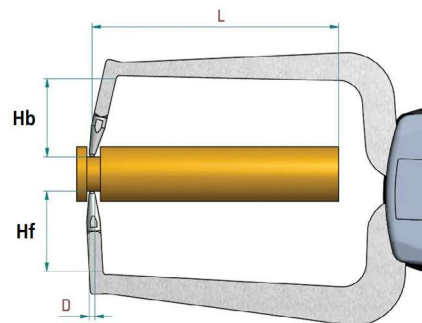
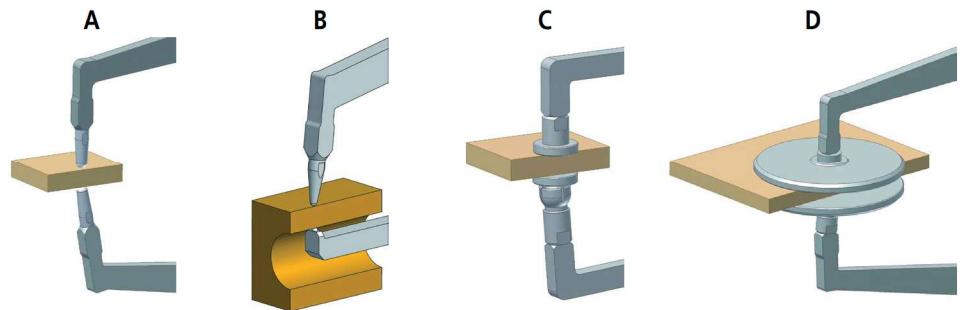
Optional Accessories

- KPL8007-10 Holder (back Lug)
- 06AFM380E USB cable (2m)*1
- 937387 SPC Cable (1m)*1
- 965013 SPC Cable (2m)*1
- 02AZD790E U-Wave-T Cable*1
- 02AZD880G U-Wave-Transmitter (buzzer)
- KPL1961-09 Interface adapter (cable)
- KPL1961-13 Interface adapter (Bluetooth)
- KPL0682-60 Bluetooth dongle*2

*1 requires interface adapter (KPL1962-09)
 *2 requires interface adapter (KPL1962-13)

• Resolution Switching*

Resolution (in)		Resolution (mm)	
.0005	.0001	0.001	0.01
.00001	.001	0.002	0.02
		0.005	0.05

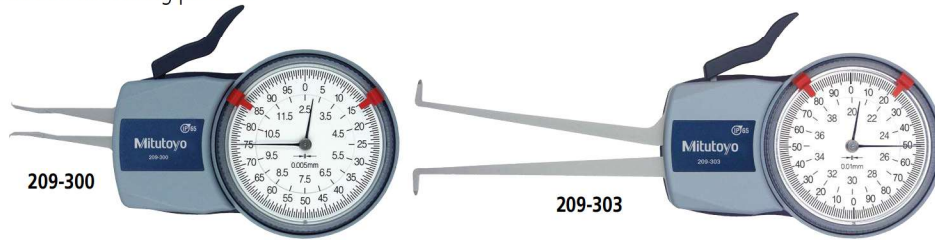


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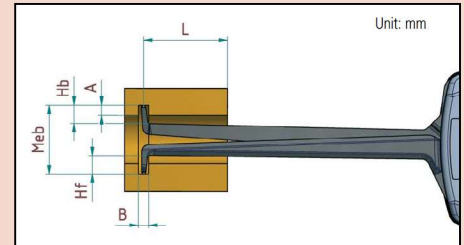
Dial Caliper Gages

Internal Measurement SERIES 209

The caliper is spring loaded and makes point contact at a constant measuring pressure.



DIMENSIONS



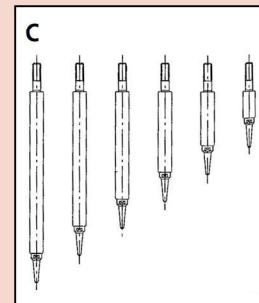
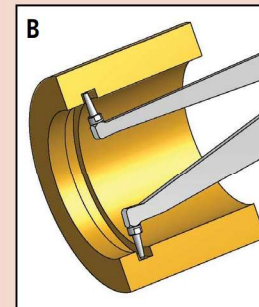
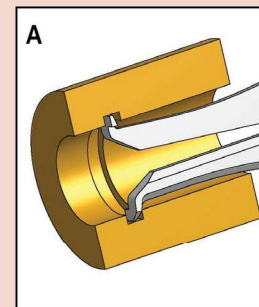
SPECIFICATIONS

Inch									
Order No.	Measuring Range	Graduation	Accuracy	Max. Measuring Depth L	Max. Groove Depth A	Min. Groove Width B	Measuring Contact Type	Size (mm)	Mass (g)
209-350	.10 - .50"	.0002"	± .0008"	.47"	.027"	.023"	A	R0.1	200
209-351	.20 - .60"	.0002"	± .0008"	1.37"	.09"	.032"	B	ø0.6	200
209-352	.40 - 1.2"	.0005"	± .0015"	3.3"	.19"	.06"	B	ø1	200
209-354	.80 - 1.6"	.0005"	± .0015"	3.3"	.26"	.06"	B	ø1	200
209-355	1.2 - 2"	.0005"	± .0015"	3.3"	.26"	.06"	B	ø1	200
209-356	1.6 - 2.4"	.0005"	± .0015"	3.3"	.31"	.06"	B	ø1	200
209-357	2 - 2.8"	.0005"	± .0015"	3.3"	.31"	.06"	B	ø1	200
209-358	2.4 - 3.2"	.0005"	± .0015"	3.3"	.31"	.06"	B	ø1	250
209-359	2.8 - 3.6"	.0005"	± .0015"	3.3"	.31"	.06"	B	ø1	250
209-360	3.2 - 4"	.0005"	± .0015"	3.3"	.31"	.06"	B	ø1	250
209-361*	2 - 4"	.0005"	± .0015"	3.3"	.31"	.06"	C	ø1	250
209-362*	3.6 - 5.6"	.0005"	± .0015"	3.3"	.31"	.06"	C	ø1	250
209-363*	5.2 - 7.2"	.0005"	± .0015"	3.3"	.31"	.06"	C	ø1	250

*Interchangeable contact points (additional anvil 4 pcs.) with ball point .04" dia. These Dial Caliper Gages are used only as comparison gages and should be used along with a setting ring or a micrometer.

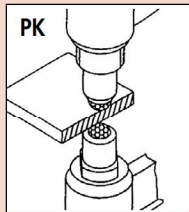
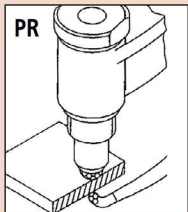
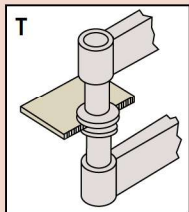
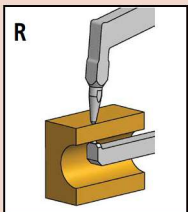
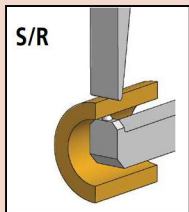
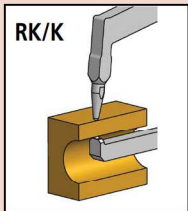
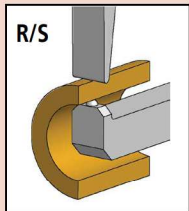
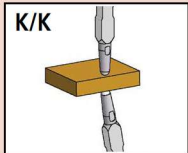
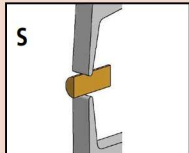
Metric									
Order No.	Measuring Range	Graduation	Accuracy	Max. Measuring Depth L	Max. Groove Depth A	Min. Groove Width B	Measuring Contact Type	Size (mm)	Mass(g)
209-300	2.5 - 12.5mm	0.005mm	±0.015mm	12mm	0.7mm	0.5mm	A	R0.1	155
209-301	5 - 15mm	0.005mm	±0.015mm	35mm	2.3mm	0.8mm	B	ø0.6	160
209-302	10 - 30mm	0.01mm	±0.03mm	85mm	5.2mm	1.2mm	B	ø1	180
209-303	20 - 40mm	0.01mm	±0.03mm	85mm	7mm	1.2mm	B	ø1	180
209-304	30 - 50mm	0.01mm	±0.03mm	85mm	7mm	1.2mm	B	ø1	185
209-305	40 - 60mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	B	ø1	195
209-306	50 - 70mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	B	ø1	195
209-307	60 - 80mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	B	ø1	200
209-308	70 - 90mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	B	ø1	200
209-309	80 - 100mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	B	ø1	200
209-310*	50 - 100mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	C	ø1	220
209-311*	90 - 140mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	C	ø1	230
209-312*	130 - 180mm	0.01mm	±0.03mm	85mm	8.3mm	1.2mm	C	ø1	240
209-901	15-65mm	0.05mm	±0.05	188	5	1.9	B	ø1.5mm	355
209-902	40-90mm	0.05mm	±0.05	192	8.5	2.4	B	ø2mm	370
209-903	70-120mm	0.05mm	±0.05	192	8.5	2.4	B	ø2mm	380

*Interchangeable contact point (additional anvil 5pcs.) with ball point 1mm dia. These Dial Caliper Gages are used only as comparison gages and should be used along with a setting ring or a micrometer.

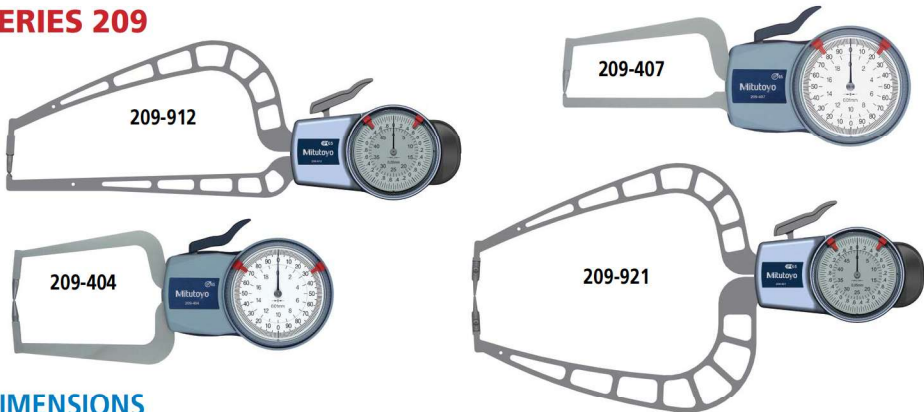


Dial Caliper Gages

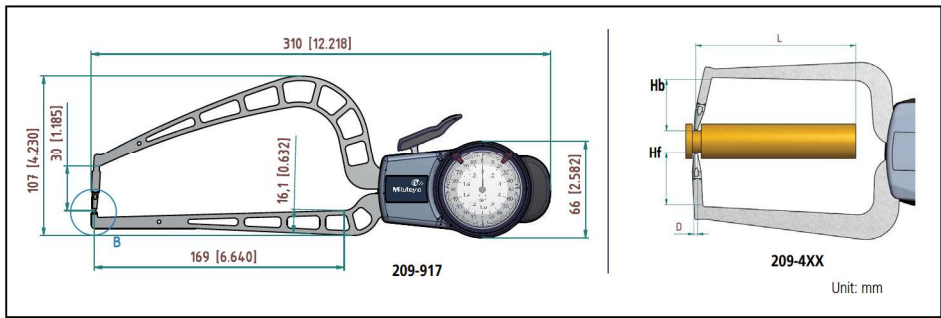
Type of Contact Points



External Measurement SERIES 209



DIMENSIONS



SPECIFICATIONS

Inch									
Order No.	Measuring Range	Graduation	Accuracy	Max. Measuring Depth L	Length Hb	Length Hf	Measuring Contact Type	Size (mm)	Mass (g)
209-450	0 - .40"	.0002"	± .0008"	1.37"	.75"	.75"	K/K	ø1.5	170
209-451	0 - .40"	.0002"	± .001"	1.37"	.85"	.58"	T	ø6	175
209-452	0 - .40"	.0002"	± .0008"	1.37"	.75"	.035"	RK/K	ø1.5	165
209-453	0 - .40"	.0002"	± .0008"	1.37"	.75"	.035"	R/S	Chisel R0.4, ø1.5	165
209-454	0 - .80"	.0005"	± .0015"	3.2"	.97"	.97"	S	Chisel R0.4	210
209-455	0 - .80"	.0005"	± .0015"	3.2"	.97"	.97"	K/K	ø1.5	210
209-456	0 - .80"	.0005"	± .0015"	3.2"	.97"	.10"	RK/K	ø1.5	200
209-457	0 - .80"	.0005"	± .0015"	3.2"	.97"	.10"	R/S	Chisel R0.4, ø1.5	200
209-916	0 - 2.0"	.001"	± .002"	6.6"	1.2"	1.2"	K/K	ø3	430
209-917	0 - 2.0"	.001"	± .002"	6.6"	1.2"	.18"	RK/K	ø3	400

Metric									
Order No.	Measuring Range	Graduation	Accuracy	Max. Measuring Depth L	Length Hb	Length Hf	Measuring Contact Type	Size (mm)	Mass (g)
209-402	0 - 10mm	0.005mm	±0.015mm	35mm	19.1mm	18.6mm	K/K	ø1.5	240
209-403	0 - 10mm	0.005mm	±0.02mm	35mm	21.7mm	14.8mm	T	ø6	175
209-404	0 - 20mm	0.01mm	±0.03mm	85mm	7mm	24.6mm	K/K	ø1.5	210
209-405	0 - 20mm	0.01mm	±0.03mm	85mm	7mm	24.6mm	S	R 0.4	210
209-406	0 - 20mm	0.01mm	±0.03mm	80mm	7mm	2.5mm	R/S	Chisel R0.4, ø1.5	200
209-407	0 - 20mm	0.01mm	±0.03mm	80mm	7mm	2.5mm	RK/K	ø1.5	200
209-603	0 - 10mm	0.1mm	±0.1mm	33mm	-	-	PR	ø2	40
209-911	0 - 50mm	0.05mm	±0.05mm	167mm	30mm	30mm	KK	Ball Ø3mm	430
209-912	0 - 50mm	0.05mm	±0.05mm	169mm	30mm	4.5mm	RK/K	Ball Ø3mm	400
209-921	0 - 50mm	0.05mm	±0.05mm	167mm	30mm	30mm	S	Chisel R0.75	490
209-922	0 - 50mm	0.05mm	±0.05mm	169mm	30mm	4.5mm	R/S	ø3, Chisel R0.75	400