

Digimatic Caliper Gages

SERIES 209 — Internal Tube Thickness Measurement

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

209-552



Technical Data

Accuracy:	Refer to the list of specifications
Resolution:	.001", .0005", or .0002" 0.01mm, 0.02mm, or 0.005mm
Display:	LCD Analog / Digital
Power Supply:	AAA Battery (2 pcs.)
Battery life:	Approx. 350 hours
Measuring Force:	0.9 - 1.8N
Dust/Water protection level:	IP67
Provided with inspection certificate:	

Function

Zero set, Preset, Auto power off, Inch/Metric, conversion Data hold, Max/Min value holding, Data output

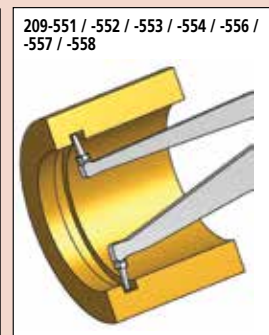
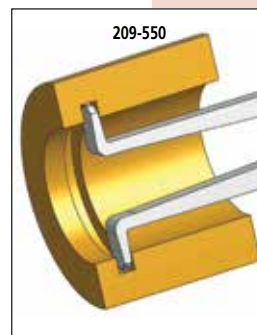
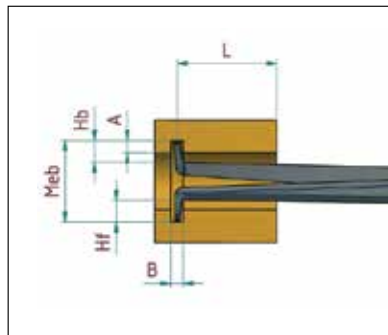
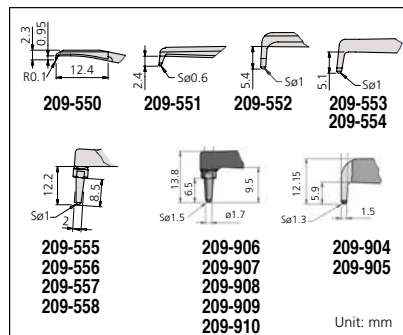
Optional Accessories

KPL1961-09:	SPC Adapter
937387	Digimatic cable (1m)
965013	Digimatic cable (2m)
KPL8004-50	Holder for stand

SPECIFICATIONS

Inch / Metric

Range	Order No.	Resolution	Accuracy	Max. Measuring Depth L	Max. Groove Depth A	Min. Groove Width B	Type of Measuring Contact	Mass(g)
.10 - .49" / 2.5 - 12.5mm	209-550	.0002" / 0.005mm	.0008" / 0.015mm	.47" / 12mm	.027" / 0.7mm	.023" / 0.5mm	Chisel R .0039" / 0.1mm	225
.20 - .59" / 5 - 15mm	209-551	.0002" / 0.005mm	.0008" / 0.015mm	1.37" / 35mm	.09" / 2.3mm	.032" / 0.8mm	Ball .024" / 0.6mm dia.	230
.39 - 1.18" / 10-30mm	209-552	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.19" / 5.2mm	.06" / 1.2mm	Ball .04" / 1mm dia.	250
.79 - 1.58" / 20-40mm	209-553	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.26" / 7mm	.06" / 1.2mm	Ball .04" / 1mm dia.	250
1.18 - 1.97" / 30-50mm	209-554	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.26" / 7mm	.06" / 1.2mm	Ball .04" / 1mm dia.	255
1.58 - 2.36" / 40-60mm	209-555	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.31" / 8.3mm	.06" / 1.2mm	Ball .04" / 1mm dia.	265
1.97 - 2.75" / 50-70mm	209-556	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.31" / 8.3mm	.06" / 1.2mm	Ball .04" / 1mm dia.	265
2.36 - 3.15" / 60-80mm	209-557	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.31" / 8.3mm	.06" / 1.2mm	Ball .04" / 1mm dia.	270
2.75 - 3.54" / 70-90mm	209-558	.0005" / 0.01mm	.0015" / 0.03mm	3.3" / 85mm	.31" / 8.3mm	.06" / 1.2mm	Ball .04" / 1mm dia.	270
0.51 - 1.69" / 13-43mm	209-904	.001" / 0.02mm	.002" / 0.04mm	5.0" / 127mm	.177" / 4.5mm	.079" / 2.0mm	Ball Ø.05" / 1.3mm	360
1.18 - 2.36" / 30-60mm	209-906	.001" / 0.02mm	.002" / 0.04mm	5.2" / 132mm	.256" / 6.5mm	.098" / 2.5mm	Ball Ø.06" / 1.5mm	370
1.97 - 3.15" / 50-80mm	209-907	.001" / 0.02mm	.002" / 0.04mm	5.2" / 132mm	.335" / 8.5mm	.098" / 2.5mm	Ball Ø.08" / 2mm	370
2.76 - 3.94" / 70-100mm	209-908	.001" / 0.02mm	.002" / 0.04mm	5.2" / 132mm	.335" / 8.5mm	.098" / 2.5mm	Ball Ø.08" / 2mm	375
3.54 - 4.72" / 90-120mm	209-909	.001" / 0.02mm	.002" / 0.04mm	5.2" / 132mm	.335" / 8.5mm	.098" / 2.5mm	Ball Ø.08" / 2mm	380
0.59 - 2.56" / 15-65mm	209-905	.001" / 0.02mm	.0024" / 0.06mm	7.4" / 188mm	.196" / 5mm	.087" / 2.2mm	Ball Ø.06" / 1.5mm	415
1.57 - 3.54" / 40-90mm	209-910	.001" / 0.02mm	.0024" / 0.06mm	7.56" / 192mm	.315" / 8mm	.098" / 2.5mm	Ball Ø.08" / 2mm	420



Edge R 0.1 mm

Ball Ø 0.6mm, Ø 1mm, Ø 1.3mm
Ø 1.5mm and Ø 2mm



Technical Data

Accuracy: Refer to the list of specifications
 Resolution: .001", .0005", or .0002"
 0.01mm, 0.02mm, or 0.005mm
 Display: Analog / Digital
 Power Supply: AAA Battery (2 pcs.)
 Battery life: Approx. 350 hours
 Measuring Force: 0.8 - 1.7N
 Dust/Water protection level: IP67
 Provided with inspection certificate.

Function

Zero set, Preset, Auto power off, Inch/Metric conversion, Data hold, Max/Min value holding, Data output
 * Contact type 3, 4 does not have max. min. value hold.

Digimatic Caliper Gages

SERIES 209 — External Tube Thickness Measurement

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.

External measurement type

209-572



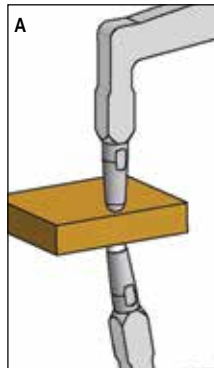
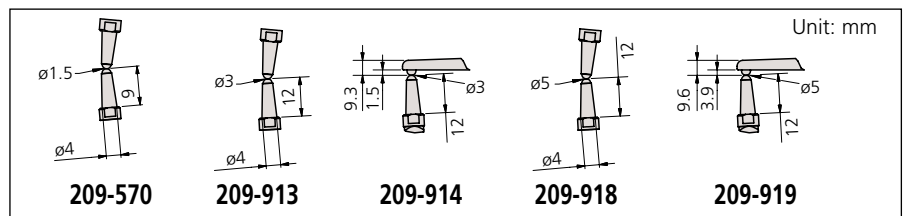
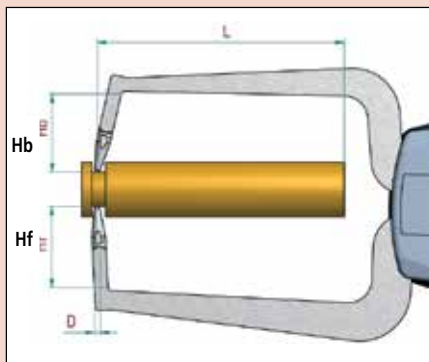
SPECIFICATIONS

Inch / Metric

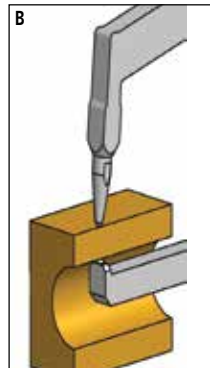
Range	Order No.	Resolution	Accuracy	Max. Measuring Depth L	Measuring Contact length Hb	Measuring Contact length Hf	Type of Measuring Contact/type of set up	Mass(g)
0 - .39" / 0-10mm	209-570	.0002" / 0.005mm	.0008" / 0.05mm	1.37" / 35mm	.75" / 19.1mm	.73" / 18.6mm	Ball .059" / 1.5mm dia. Both/ A	240
0 - .39" / 0-10mm	209-571	.0002" / 0.005mm	.001" / 0.02mm	1.37" / 35mm	.85" / 21.7mm	.58" / 14.8mm	Desc .24" / 6mm dia. Both/ C	175
0 - .78" / 0-20mm	209-572	.0005" / 0.01mm	.0015" / 0.03mm	3.2" / 85mm	.97" / 24.7mm	.97" / 24.6mm	Ball .059" / 1.5mm dia. Both/ A	280
0 - .78" / 0-20mm	209-573	.0005" / 0.01mm	.0015" / 0.03mm	3.2" / 80mm	.97" / 24.7mm	.10" / 2.5mm	Ball .059" / 1.5mm dia. Both/ B	270
0-1.18" / 0-30mm	209-913	.001" / 0.02mm	.002" / 0.04mm	4.5" / 114mm	1.17" / 30mm	1.17" / 30mm	Ball Ø.12" / 3mm A	430
0-1.18" / 0-30mm	209-914	.001" / 0.02mm	.002" / 0.04mm	4.58" / 116mm	1.17" / 30mm	.16" / 4mm	Ball Ø.12" / 3mm B	410
0-1.18" / 0-30mm	209-915	.001" / 0.02mm	.002" / 0.04mm	4.56" / 116mm	1.42" / 36mm	.94" / 24mm	Disc Ø1.97" / 50mm D	430
0-1.97" / 0-50mm	209-918	.001" / 0.02mm	.002" / 0.04mm	6.57" / 167mm	1.17" / 30mm	1.17" / 30mm	Ball Ø.12" / 3mm A	490
0-1.97" / 0-50mm	209-919	.001" / 0.02mm	.0024" / 0.06mm	6.57" / 167mm	1.17" / 30mm	.18" / 4.6mm	Ball Ø.12" / 3mm B	460
0-1.97" / 0-50mm	209-920	.001" / 0.02mm	.003" / 0.08mm	6.57" / 167mm	1.42" / 36mm	.94" / 24mm	Disc Ø1.97" / 50mm both/D	500

Optional Accessories

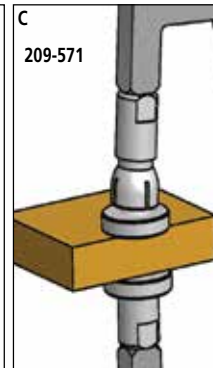
KPL1961-09: SPC Adapter
937387 Digimatic cable (1m)
965013 Digimatic cable (2m)
KPL8004-50 Holder for stand



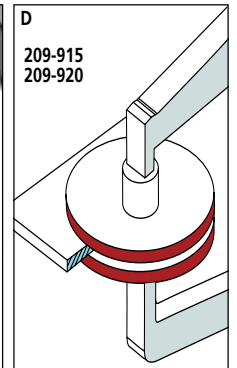
Ball Ø 1.5 and 3mm for wall thickness



Ball Ø 1.5 and 3mm for min. wall thickness Ø3mm / 9mm



Disc Ø6mm for flat surfaces



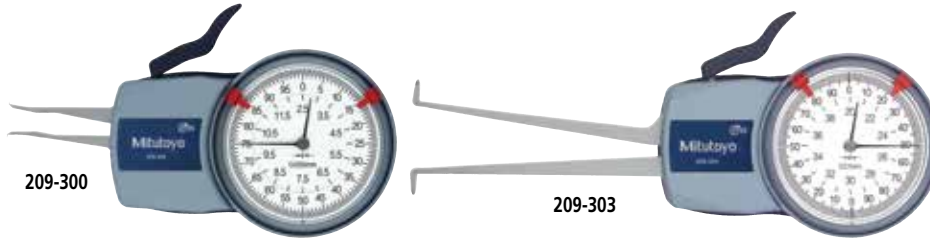
Disc Ø50mm for flat surfaces

Mitutoyo

Dial Caliper Gages

SERIES 209 — Internal Measurement

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



SPECIFICATIONS

Inch

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

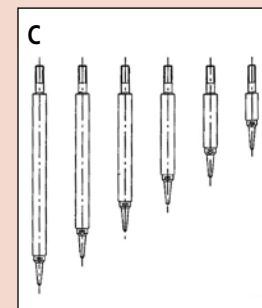
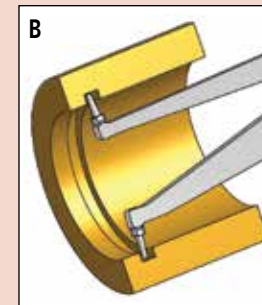
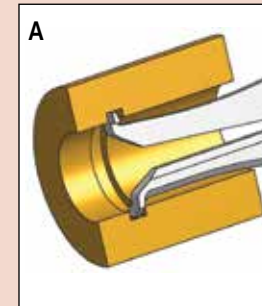
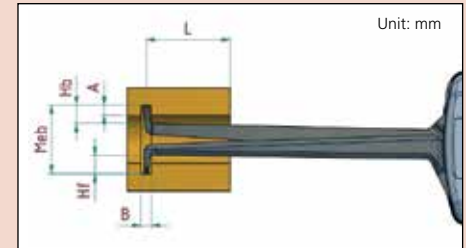
Metric

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



DIMENSIONS



Type of Contact Points

S Upper / Lower contact point
R0.4 / R0.4: **209-454, 209-405**
R0.75 / R0.75: **209-921**

K/K Upper / Lower contact point
ø2.0 / ø2.0 ball: **209-911, 209-916, 209-789**
ø1.5 / ø1.5 ball: **209-450, 209-455, 209-402, 209-404**

R/S R0.4 / ø1.5 carbide ball: **209-406, 209-453**

RK/K Upper / Lower contact point
ø1.5 / ø1.5 ball: **209-407, 209-452, 209-456**

S/R Upper / Lower contact point
R0.75 / ø2 ball: **209-922**

R Upper / Lower contact point
ø2 / ø2.5 ball: **209-912, 209-917**

T Upper / Lower contact point
209-451, 209-403:

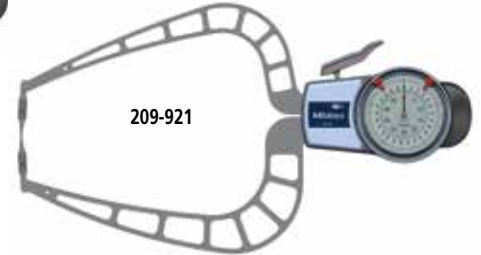
PR Upper / Lower contact point
ø2 / R0.5: **209-790, 209-603**

PK Upper / Lower contact point
209-789, 209-843:

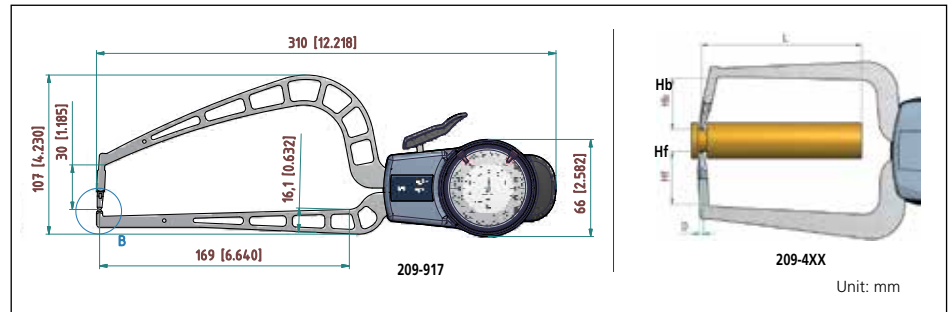
Dial Caliper Gages

SERIES 209 — External Measurement

IP65



DIMENSIONS



SPECIFICATIONS

Measuring Range	Order No.	Graduation	Accuracy	Max. Measuring Depth L	Length Hb	Length Hf	Measuring Contact Type	Size (mm)	Mass (g)
0 - .40"	209-450	.0002"	± .0008"	1.37"	.75"	.75"	K/K	ø1.5	170
0 - .40"	209-451	.0002"	± .001"	1.37"	.85"	.58"	T	ø6	175
0 - .40"	209-452	.0002"	± .0008"	1.37"	.75"	.035"	RK/K	ø1.5	165
0 - .40"	209-453	.0002"	± .0008"	1.37"	.75"	.035"	R/S	Chisel R0.4, ø1.5	165
0 - .50"	209-789	.005"	± .005"	1.38"	-	-	PK	ø2, Chisel R0.5	40
0 - .50"	209-790	.005"	± .005"	1.38"	-	-	PR	ø2	40
0 - .80"	209-454	.0005"	± .0015"	3.2"	.97"	.97"	S	Chisel R0.4	210
0 - .80"	209-455	.0005"	± .0015"	3.2"	.97"	.97"	K/K	ø1.5	210
0 - .80"	209-456	.0005"	± .0015"	3.2"	.97"	.10"	RK/K	ø1.5	200
0 - .80"	209-457	.0005"	± .0015"	3.2"	.97"	.10"	R/S	Chisel R0.4, ø1.5	200
0 - 2.0"	209-916	.001"	± .002"	6.6"	1.2"	1.2"	K/K	ø3	430
0 - 2.0"	209-917	.001"	± .002"	6.6"	1.2"	.18"	RK/K	ø3	400

Metric

Measuring Range	Order No.	Graduation	Accuracy	Max. Measuring Depth L	Length Hb	Length Hf	Measuring Contact	Size (mm)	Mass (g)
0 - 10mm	209-402	0.005mm	±0.015mm	35mm	19.1mm	18.6mm	K/K	ø1.5	240
0 - 10mm	209-403	0.005mm	±0.02mm	35mm	21.7mm	14.8mm	T	ø6	175
0 - 20mm	209-404	0.01mm	±0.03mm	85mm	7mm	24.6mm	K/K	ø1.5	210
0 - 20mm	209-405	0.01mm	±0.03mm	85mm	7mm	24.6mm	S	R 0.4	210
0 - 20mm	209-406	0.01mm	±0.03mm	80mm	7mm	2.5mm	R/S	Chisel R0.4, ø1.5	200
0 - 20mm	209-407	0.01mm	±0.03mm	80mm	7mm	2.5mm	RK/K	ø1.5	200
0 - 10mm	209-843	0.1mm	±0.1mm	36mm	-	-	PK	ø2, Chisel R0.5	40
0 - 10mm	209-603	0.1mm	±0.1mm	33mm	-	-	PR	ø2	40
0 - 50mm	209-911	0.05mm	±0.05mm	167mm	30mm	30mm	KK	Ball ø3mm	430
0 - 50mm	209-912	0.05mm	±0.05mm	169mm	30mm	4.5mm	RK/K	Ball ø3mm	400
0 - 50mm	209-921	0.05mm	±0.05mm	167mm	30mm	30mm	S	Chisel R0.75	490
0 - 50mm	209-922	0.05mm	±0.05mm	169mm	30mm	4.5mm	R/S	ø3, Chisel R0.75	400

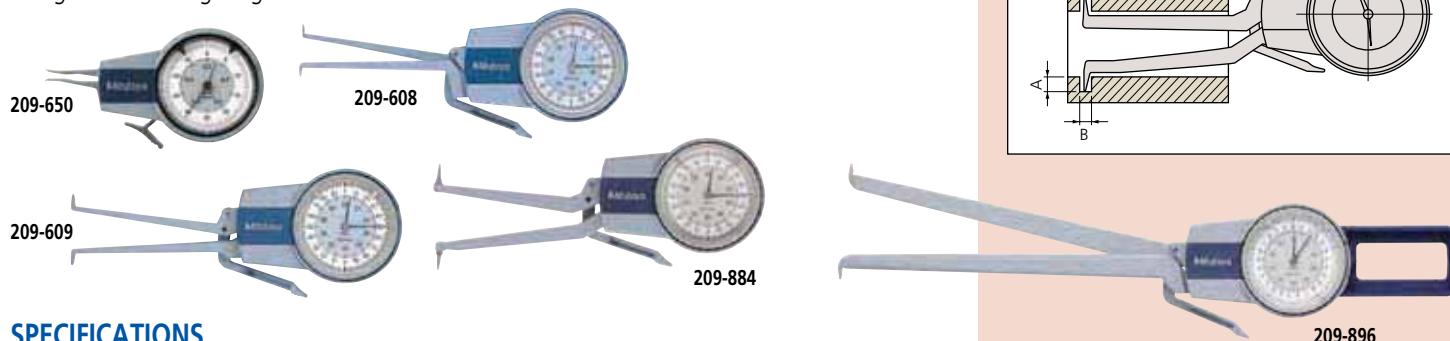
Mitutoyo

Dial Caliper Gages

SERIES 209 — Internal Measurement Type

These Dial Caliper Gages are used only as comparison gages, and should be used along with a Setting Ring or a micrometer.

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



SPECIFICATIONS

Inch

Measuring Range	Order No.	Graduation	Accuracy	Max. Measuring Depth L	Max. Groove Depth A	Min. Groove Width B	Measuring Contact Type	Size (mm)	Mass (g)
.10-.30"	209-730	.0002"	±.0008"	.4"	.28"	.24"	A	R0.1	120
.20-.40"	209-731	.0002"	±.0008"	.87"	.087"	.055"	B	ø0.6	120
.20-.60"	209-732	.0005"	±.001"	1.18"	.067"	.043"	A	R0.6	140
.40-.80"	209-733	.0005"	±.001"	1.97"	.157"	.079"	B	ø1	140
.40-1.4"	209-712	.0005"	±.0015"	3.15"	.18"	.07"	B	ø1	240
.80-1.2"	209-734	.0005"	±.001"	2.05"	.157"	.079"	B	ø1	140
1.0-2.0"	209-713	.0005"	±.0015"	3.15"	.200"	.1"	B	ø1	260
1.2-1.6"	209-735	.0005"	±.001"	2.24"	.177"	.079"	B	ø1	140
1.6-2.0"	209-736	.0005"	±.001"	2.24"	.177"	.079"	B	ø1	140
1.6-2.6"	209-760	.0005"	±.0015"	3.15"	.24"	.1"	B	ø1	300
2.2-3.2"	209-761	.0005"	±.0015"	3.15"	.24"	.1"	B	ø1	300
2.8-3.8"	209-762	.0005"	±.0015"	3.15"	.24"	.1"	B	ø1	310
3.2-4.2"	209-763	.0005"	±.0015"	3.15"	.24"	.1"	B	ø1	310
2.4-5.4"	209-715*	.0005"	±.0015"	3.15"	—	—	D	ø1	310
4.7-7.7"	209-716*	.0005"	±.0015"	3.15"	—	—	D	ø1	330

*Interchangeable contact points (additional anvil 4 pcs.) with ball point .04" dia.

Metric

Measuring Range	Order No.	Graduation	Accuracy	Max. Measuring Depth L	Max. Groove Depth A	Min. Groove Width B	Measuring Contact Type	Size (mm)	Mass(g)
2.5-7.5mm	209-650	0.005mm	±0.015mm	10mm	0.7mm	0.6mm	A	R0.1	120
5-10mm	209-651	0.005mm	±0.015mm	22mm	1.8mm	1.4mm	B	ø0.6	120
5-15mm	209-652	0.01mm	±0.02mm	23mm	1.7mm	1.1mm	B	ø0.6	140
10-20mm	209-653	0.01mm	±0.02mm	56mm	4.5mm	2.0mm	C	ø1	140
10-30mm	209-608	0.01mm	±0.03mm	80mm	4.5mm	1.8mm	B	ø1	240
15-65mm	209-896	0.05mm	±0.05mm	175mm	4.5mm	2.5mm	B	ø1.5	400
20-30mm	209-654	0.01mm	±0.02mm	56mm	4.5mm	2.0mm	B	ø1	140
20-40mm	209-609	0.01mm	±0.03mm	80mm	6.0mm	2.5mm	B	ø1	260
30-40mm	209-655	0.01mm	±0.02mm	56mm	4.5mm	2.0mm	B	ø1	140
30-50mm	209-600	0.01mm	±0.03mm	80mm	6.0mm	2.5mm	B	ø1	260
40-50mm	209-656	0.01mm	±0.02mm	57mm	4.5mm	2.0mm	B	ø1	140
40-60mm	209-884	0.01mm	±0.03mm	80mm	8mm	2.5mm	B	ø1	300
40-90mm	209-897	0.05mm	±0.05mm	175mm	8mm	2.5mm	B	ø2	440
50-70mm	209-885	0.01mm	±0.03mm	80mm	6mm	2.5mm	B	ø1	300
60-80mm	209-886	0.01mm	±0.03mm	80mm	8mm	2.5mm	B	ø1	310
70-90mm	209-887	0.01mm	±0.03mm	80mm	8mm	2.5mm	B	ø1	290
70-120mm	209-898	0.05mm	±0.05mm	175mm	8mm	3.3mm	B	ø2	440
80-100mm	209-888	0.01mm	±0.03mm	80mm	8mm	2.5mm	B	ø1	310
60-130mm	209-894*	0.01mm	±0.03mm	80mm	—	—	D	ø1	310
120-190mm	209-895	0.01mm	±0.04mm	80mm	—	—	D	ø1	330

*Interchangeable contact point (additional anvil 5pcs.) with ball point 1mm dia

DIMENSIONS

