



BORE GAGES

ELECTRONIC BORE GAGES

781XT AccuBore® ELECTRONIC BORE GAGES WITH OUTPUT

.080"-8"/2-200MM

AccuBore is a high-quality, trigger-activated, three-point contact bore gaging system with extended range. Its convenient single-hand operation provides speed and control. Simply squeeze the trigger, insert the gage into the bore and release the trigger for an instant reading from the large, easy-to-read digital display.

What makes AccuBore superior to other gages are features like the mechanically-driven parallel anvils which extend simultaneously, establishing a more true alignment to the axis of the bore. This provides consistent pressure, resulting in more accurate readings than models with spring-driven contacts which are subject to pressure variations.

Speed and convenience are further enhanced by the repositionable AccuBore indicator, which may be swiveled and rotated for left, right hand or even vertical viewing. The gage also features a set of "Go/No-Go" lights above the readout display that quickly indicate whether a bore measurement is within a preset tolerance window.

FEATURES

- Single-hand operation with right- and left-hand viewing flexibility
- Large, easy-to-read display
- Enhanced wear life with carbide-faced contacts – available from 1/2" to 8"
- Convenient "Go/No-Go" tolerance indicator lights
- True alignment with mechanically-driven parallel anvils
- Resolution .00005" (0.001mm)
- Accuracy of up to .00015" (.004mm)
- Push button inch/metric conversion
- Preset and preset recall
- Hold, max/min and zeroing capabilities
- Blind bore measurement is standard for .50" (12.7mm) and above
- Specialized heads available for thread, groove and other non-standard measurements on request
- Output capability for Statistical Process Control (SPC) analysis. Download data directly to a PC by an RS232 connection (Direct to PC cable available on request).



781XTZ-138

BORE GAGE MEASURING TIPS

Whether to use a two-point or three-point contact measuring tool is usually a matter of preference, but there are some differences.

A two-point contact rod-type inside micrometer is usually lighter, easier to handle, and more versatile over long ranges from approximately 6-107" (150-2700mm).

Any two-point contact micrometer, regardless of range, can probe a hole better to find the geometry of that hole than a three-point contact.

Most three-point contact tools have setting rings to ensure accuracy. If you desire very close tolerance work with two-point contact inside micrometers, it is recommended that they be set to a ring gage or to an outside micrometer.

A three-point contact micrometer has an advantage in that it can be seated in position more quickly than a two-point contact tool.

Usually these tools can also be read to a finer accuracy. The three-point tool will tell the maximum true diameter that can enter the hole a little faster than a two-point contact tool.

Micrometer heads used in these tools are accurate to ± 0.0001 " or 0.002mm, but overall accuracy on tools that add rods is dependent on good practice and technique.

To ensure accuracy, these practices should be followed:

- Always make sure that there are no specks of dirt between the clamping surfaces of the rods and micrometer heads
- Tighten all rods uniformly, not too tightly, not too loosely, but a fairly firm assembly
- Assembling long sections should be done vertically or, with support, horizontally
- Because temperature can affect long rods used in these tools, they should be assembled in the same environment in which they will be used





Output jack enables collection of measurement data for SPC analysis



AccuBore XT's indicator can be rotated, allowing easy reading from either the right or left hand, or when accessing difficult to reach holes



Sets include gage, contacts, setting rings, instructions, certificate of calibration and a 3v lithium battery in a protective carrying case

781XT AccuBore Electronic Bore Gages with output – 2-Point Contact (.080-.250" (2-6mm) Range)

Range		Accuracy		Approx Meas. Depth		Ring Diameter			
Inch	mm	Inch	mm	Inches	mm	Inches	mm	Cat. No.	EDP
.080-.100	2-2.5	.00015	.004	3/8	9	.100	2.54	781XTZ-100	68159
.100-.120	2.5-3							781XTZ-120	68160
.120-.160	3-4	.00015	.004	1/2	12	.160	4.06	781XTZ-160	68161
.160-.200	4-5	.00015	.004	3/4	18	.200	5.08	781XTZ-200	68162
.200-.250	5-6							781XTZ-250	68163

781XT AccuBore Electronic Bore Gages with output – 3-Point Contact (1/4-8" (6-200mm) Range) – Fixed Anvils

Range		Accuracy		Approx Meas. Depth		Ring Diameter			
Inch	mm	Inch	mm	Inches	mm	Inches	mm	Cat. No.	EDP
1/4-5/16	6-8	.00015	.004	2-1/4	58	.3125	7.94	781XTZ-312	68164
5/16-3/8	8-10							781XTZ-375	68165
3/8-1/2	10-12.5					.500	12.7	781XTZ-500	68166
1/2-5/8	12.5-16	.00015	.004	2-3/8	62	.500	12.7	781XTZ-625	68167
5/8-3/4	16-20					.750	19.05	781XTZ-750	68168
3/4-1	20-25	.00015	.004	2-5/8	66	.750	19.05	781XTZ-1	68651
1-1-3/8	25-35					1.375	34.93	781XTZ-138	67685
1-3/8-2	35-50	.00015	.004	3-1/16	80	1.375	34.93	781XTZ-2	67686
2-2-5/8	50-65	.0002	.005	3-1/16	80	2.625	65.68	781XTZ-258	67687
2-5/8-3-1/4	65-80					3.250	82.55	781XTZ-314	67688
3-1/4-4	80-100	.0002	.005	3-3/8	85	3.250	82.55	781XTZ-4	67689
4-5	100-125	.00025	.006	4	100	5.0	127.00	781XTZ-5	67690
5-6	125-150							781XTZ-6	67691
6-7	150-175	.0003	.007	4	100	7.0	177.80	781XTZ-7	67692
7-8	175-200							781XTZ-8	67693

Pistol Grip Gage Only With Indicator*

Range		Cat. No.	EDP
Inch	mm		
.080-.250"	2-6mm	781XTP-250	68705
1/4-3/4"	6-20mm	781XTP-750	68706
3/4-4"	20-100mm	781XTP-4	68707
4-12"	100-300mm	781XTP-12**	68708

Larger sizes available on special order.
Gages are also available with dial indicators on special order.
* Does not include heads, rings, etc.
** Heads above 8" available on special order.



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ELECTRONIC BORE GAGES

781XT AccuBore® ELECTRONIC BORE GAGES

See specifications on previous pages

781XT AccuBore Electronic Bore Gage Set – 2-Point Contact (.080-.250" [2-6 mm] Range)

Range		Number of Heads	Number of Rings	Cat. No.	EDP
Inch	mm				
.080-.250	2-6	5	3	S781XTBZ	68169

781XT AccuBore Electronic Bore Gage Sets – 3-Point Contact (.250-8" [6-200mm] Range – Fixed Anvils)

.250-.375	6-10	2	1	S781XTCZ	68170
.250-.750	6-20	5	3	S781XTHZ	68658
.375-.750	10-20	3	2	S781XTDZ	68171
.750-2.00	20-50	3	3	S781XTEZ	67694
.750-4.00	20-100	6	4	S781XTJZ	67697
2.00-4.00	50-100	3	2	S781XTFZ	67695
4.00-6.00	100-150	2	1	S781XTKZ	67698
4.00-8.00	100-200	4	4	S781XTGZ	67696
6.00-8.00	150-200	2	1	S781XTLZ	67699

Accessories for 781XT AccuBore Electronic Bore Gages

Description	Part No.	EDP
Cable Link to 772 Data Collector, 761 Multiplexer	PT61340	65648
Starrett Module #4 for 772 Data Collector, 761 Multiplexer	PT61285	65647
Two 3-volt Batteries, No. CR2032	PT99492	65650

Larger sizes available on special order.

Gages are also available with dial indicators on special order.



S780XTKZ

Extensions for 781XT AccuBore Electronic Bore Gages

Cat. No.	EDP	Ext. Size		Fits Models	Model Size	
		Inches	mm		Inches	mm
78/782F	65484	2.5	63	78XT/780XT/781XT/782XT - 250-375mm	1/4-5/16	6-8
78/782G	65485	3	75	78XT/780XT/781XT/782XT - 375-500mm	3/8-1/2	10-12.5
78/782H	65486	4	100	78XT/780XT/781XT/782XT - 625-750mm	1/2-3/4	12.5-20
78/782J	65487	6	150	78XT/780XT/781XT/782XT - 1 thru 2"	3/4-2	20-50
78/782K	65488	6	150	78XT/780XT/781XT/782XT - 2 thru 12"	2-12	50-300



Extensions from 2-1/2 - 6" can be added to the 781XT, enabling internal measurements in deep hole bores



ELECTRONIC BORE GAGES

780XT ELECTRONIC INTERNAL MICROMETERS WITH IP65 PROTECTION (WITH OUTPUT)

.080-12"/2-300MM

780XT Electronic Internal Micrometers provide IP65 level of protection against coolant, water, dirt and dust in hostile shop environments. In addition, they offer extended travel, reducing the need to exchange anvils.

The ground contact points seat the internal micrometer faster and more accurately than the spherical contacts found on other gages. These rugged and accurate internal micrometers are available individually or in sets from .080" (2mm) to 12" (300mm).



FEATURES

- Wide measurement range without changing anvils
- IP65 level of protection against coolant, water, dirt and dust
- Resolution to .00005" (0.001mm)
- Large high-contrast LCD digital readout is easy to read and reduces error
- RS232 output
- Carbide measuring faces on sizes above 1/2" (12.5mm) diameter
- Extensions available for deep holes
- Includes instant inch/millimeter conversion and preset + and - functions
- Precision ratchet stop provides correct contact pressure for accurate readings
- Each micrometer bore gage with head comes with a wooden case, complete with setting ring, contacts, adjusting wrench, spare battery, and instructions

BORE GAGES

780XT Electronic Internal Micrometers, 2-Point Contact (.080-.250" (2-6mm) Range)

Range Inch	mm	Accuracy		Approx. Meas. Depth		Ring Diameter		Cat. No.	EDP
		Inch	mm	Inch	mm	Inch	mm		
.080-.100"	2-2.5mm			3/8"	9mm	.100"	2.54mm	780XTZ-100	12015
.100-.120"	2.5-3mm							780XTZ-120	12016
.120-.160"	3-4mm	.00015"	.004mm	15/32"	12mm	.160"	4.06mm	780XTZ-160	12017
.160-.200"	4-5mm					.160"	4.06mm	780XTZ-200	12019
.200-.250"	5-6mm			3/4"	18mm	.200"	5.08mm	780XTZ-250	12020

780XT Electronic Internal Micrometers, 3-Point Contact (1/4-12" (6-300mm) Range), Fixed Anvils

1/4 - 5/16"	6-8mm					.3125"	7.94mm	780XTZ-312	12021
5/16 - 3/8"	8-10mm			2-1/4"	58mm			780XTZ-375	12022
3/8 - 1/2"	10-12.5mm					.500"	12.7mm	780XTZ-500	12024
1/2 - 5/8"	12.5-16mm	.00015"	.004mm			.500"	12.7mm	780XTZ-625	12025
5/8 - 3/4"	16-20mm			2-3/8"	62mm	.750"	19.05mm	780XTZ-750	12026
3/4 - 1"	20-25mm					.750"	19.05mm	780XTZ-1	12027
1 - 1-3/8"	25-35mm			2-5/8"	66mm			780XTZ-138	12028
1-3/8 - 2"	35-50mm			3-1/16"	80mm	1.375"	34.93mm	780XTZ-2	12029
2 - 2-5/8"	50-65mm	.00020"	.005mm					780XTZ-258	12030
2-5/8 - 3-1/4"	65-80mm			3-1/16"	80mm	2.625"	65.68mm	780XTZ-314	12032
3-1/4 - 4"	80-100mm	.00020"	.005mm	4"	100mm	3.250"	82.55mm	780XTZ-4	12033
4 - 5"	100-125mm							780XTZ-5	12034
5 - 6"	125-150mm	.00025"	.006mm	4-1/2"	115mm	5.0"	127.00mm	780XTZ-6	12035
6 - 7"	150-175mm							780XTZ-7	12036
7 - 8"	175-200mm	.00030"	.007mm	4-1/2"	115mm	7.0"	177.80mm	780XTZ-8	12037
8 - 9"	200-225mm							780XTZ-9	12038
9 - 10"	225-250mm	.00030"	.007mm	4-5/8"	118mm	9.0"	228.60mm	780XTZ-10	12039
10 - 11"	250-275mm							780XTZ-11	12040
11 - 12"	275-300mm	.00035"	.009mm	4-5/8"	118mm	11.0"	279.40mm	780XTZ-12	12041

Accessories for 780XT Electronic Internal Micrometers

Description	Part No.	EDP
Cable Link to PC	PT28318	12181
Two 3-volt Batteries, CR2032	PT99492	65650

See next page for sets.

IP PROTECTION

An IP number is composed of two numbers, the first referring to protection against solid objects and the second against liquids.

First number 6: Totally protected against dust

Second number 5: Protected against low pressure jets of water from all directions - limited ingress permitted



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ELECTRONIC BORE GAGES

780XT ELECTRONIC INTERNAL MICROMETERS WITH IP65 PROTECTION (WITH OUTPUT)

See specifications on previous page

780XT Electronic Internal Micrometer Sets, 2-Point Contact (.080-.250" [2-6mm] Range)					
Range		No. of Heads	No. of Rings	Cat. No.	EDP
Inch	mm				
.080-.250	2-6			S780XTBZ	12043
780XT Electronic Internal Micrometer Sets, 3-Point Contact (1/4-8" [6-200mm] Range), Fixed anvils					
1/4-3/8	6-10	2	1	S780XTCZ	12044
3/8-3/4	10-20	3	2	S780XTDZ	12045
3/4-2	20-50	3	2	S780XTEZ	12046
2-4	50-100	3	2	S780XFZ	12047
4-6	100-150	2	1	S780XTKZ	12049
4-8	100-200	4	2	S780XTGZ	12048
6-8	150-200	2	1	S780XTLZ	12050

INTERNAL EXTENSIONS FOR 78, 780, 781 INTERNAL MICROMETERS

Extensions from 2-1/2 - 6" can be added to both the 780XT and 78XT, enabling internal measurements in deep hole bores (Multiple extensions can also be used).

Internal Extensions						
Ext. Size			Model Size			
Inch	mm	Fits Models	Inch	mm	Cat. No.	EDP
2.5	63	78XT/780XT/781XT-312-375	1/4-3/8	6-10	78/782F	65484
3	75	78XT/780XT/781XT-375-500	3/8-1/2	10-12.5	78/782G	65485
4	100	78XT/780XT/781XT-625-750	1/2-3/4	12.5-20	78/782H	65486
6	150	78XT/780XT/781XT-1 thru 2	3/4-2	20-50	78/782J	65487
6	150	78XT/780XT/781XT-2 thru 12	2-12	50-300	78/782K	65488



VERNIER BORE GAGES

78XT BORE GAGES

.080-12"/1-300MM

The 78XT Bore Gages feature extended travel, reducing the need to exchange anvils. The ground contact points seat the internal micrometer faster and more accurately than the spherical contacts found in other gages. These rugged and accurate internal micrometers are available individually or in economical sets from .080-12" (2-300mm).

78XT Bore Gages, 2-Point Contact (.080-.250" Range)

Range Inch	Accuracy Inch	Approximate Measuring Depth Inch	Setting Ring Diameter Inch	Cat. No.	EDP
.080-.100	.00010	3/8	.100	78XTZ-100	68124
.100-.120	.00010	3/8	.100	78XTZ-120	68125
.120-.160	.00010	15/32	.160	78XTZ-160	68126
.160-.200	.00010	3/4	.160	78XTZ-200	68127
.200-.250	.00010	3/4	.200	78XTZ-250	68128

78XT Bore Gages, 3-Point Contact (1/4-12" Range)

1/4-5/16	.00015	2-1/4	.3125	78XTZ-312	68129
5/16-3/8	.00015	2-1/4	.3125	78XTZ-375	68130
3/8-1/2	.00015	2-1/4	.500	78XTZ-500	68131
1/2-5/8	.00015	2-7/16	.500	78XTZ-625	68132
5/8-3/4	.00015	2-7/16	.750	78XTZ-750	68133
3/4-1	.00015	2-5/8	.750	78XTZ-1	68134
1-1-3/8	.00015	2-5/8	1.375	78XTZ-138	67674
1-3/8-2	.00015	3-1/16	1.375	78XTZ-2	67675
2-2-5/8	.00020	3-1/16	2.625	78XTZ-258	67676
2-5/8-3-1/4	.00020	3-1/16	2.625	78XTZ-314	67677
3-1/4-4	.00020	4	3.250	78XTZ-4	67678
4-5	.00025	4	5.0	78XTZ-5	67679
5-6	.00025	4-1/2	5.0	78XTZ-6	67680
6-7	.00030	4-1/2	7.0	78XTZ-7	67681
7-8	.00030	4-1/2	7.0	78XTZ-8	67682
8-9	.00030	4-5/8	9.0	78XTZ-9	67857
9-10	.00030	4-5/8	9.0	78XTZ-10	67858
10-11	.00035	4-5/8	11.0	78XTZ-11	67859
11-12	.00035	4-5/8	11.0	78XTZ-12	67860

78XT Sets, 2-Point Contact (.250" Range)

Range	No. of Heads	No. of Rings	Cat. No.	EDP
.120-.250"	3	2	S78XTBZ	68152

78XT Sets, 3-Point Contact (1/4-4" Range)

1/4-3/8"	2	1	S78XTCZ	68153
3/8-3/4"	3	2	S78XTDZ	68154
3/4-2"	3	2	S78XTEZ	67683
2-4"	3	2	S78XTFZ	67684



78XTZ-138 Measuring a bore

FEATURES

- Wide measurement range without changing anvils
- Resolution from .0001" (0.0025mm) on the 2-point contact tool up to 1/4" (6mm) and .00025" (0.005mm) on the 3-point contact tools ranging from 1/4"-12" (6mm - 300mm)
- Tungsten carbide measuring faces on all 3-point heads above 1/2" (12.5mm)
- Ratchet stop ensures consistent measurements
- Self-centering contacts for true readings
- Blind bore measuring capability above 1/2" (12.5mm) diameter
- Extensions available up to 6" (150mm) for deep hole measuring
- Setting rings included
- Depth stop/collar also available for .080"-.250" (1-6mm) range
- Each micrometer bore gage is furnished in a case, complete with setting ring, contacts, wrenches, and instructions



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ELECTRONIC BORE GAGES

78MXT BORE GAGES

See specifications on previous page

78MXT Bore Gages, 2-Point Contact (1-6mm Range)					
Range (mm)	Accuracy (mm)	Approximate Measuring Depth (mm)	Setting Ring Dia (mm)	Cat. No.	EDP
1-1.15mm		6mm	1mm	78MXTZ-1.15	68135
1.15-1.3mm		6mm	1.3mm	78MXTZ-1.3	68136
1.3-1.5mm	0.003mm	6mm	1.3mm	78MXTZ-1.5	68137
1.5-1.75mm		8mm	1.75mm	78MXTZ-1.75	68138
1.75-2mm		8mm	1.75mm	78MXTZ-2	68139
2-2.5mm		9mm	2.5mm	78MXTZ-2.5	68140
2.5-3mm		9mm	2.5mm	78MXTZ-3	68141
3-4mm	0.004mm	12mm	4mm	78MXTZ-4	68142
4-5mm		18mm	4mm	78MXTZ-5	68143
5-6mm		18mm	5mm	78MXTZ-6	68144

78MXT Bore Gages, 3-Point Contact (6-300mm Range)					
Range (mm)	Accuracy (mm)	Approximate Measuring Depth (mm)	Setting Ring Dia (mm)	Cat. No.	EDP
6-8mm		58mm	8mm	78MXTZ-8	68145
8-10mm		58mm	8mm	78MXTZ-10	68146
10-12.5mm		58mm	12.5mm	78MXTZ-12.5	68147
12.5-16mm	0.004mm	62mm	12.5mm	78MXTZ-16	68148
16-20mm		62mm	20mm	78MXTZ-20	68149
20-25mm		66mm	20mm	78MXTZ-25	68150
25-35mm		66mm	35mm	78MXTZ-35	67861
35-50mm		80mm	35mm	78MXTZ-50	67862
50-65mm		80mm	65mm	78MXTZ-65	67863
65-80mm	0.005mm	80mm	65mm	78MXTZ-80	68650
80-100mm		100mm	80mm	78MXTZ-100	67864
100-125mm				78MXTZ-125	67865
125-150mm	0.006mm	115mm	125mm	78MXTZ-150	67866
150-175mm				78MXTZ-175	67867
175-200mm	0.007mm	115mm	175mm	78MXTZ-200	67868
200-225mm				78MXTZ-225	67869
225-250mm	0.008mm	118mm	225mm	78MXTZ-250	67870
250-275mm				78MXTZ-275	67871
275-300mm	0.009mm	118mm	275mm	78MXTZ-300	67872

78MXT Sets, 2-Point Contact (2-6mm Range)				
Range	No. of Heads	No. of Rings	Cat. No.	EDP
2-3 mm	2	1	S78MXTAZ	68155
3-6 mm	3	2	S78MXTBZ	68156

78XT Sets, 3-Point Contact (6-100mm Range)				
Range	No. of Heads	No. of Rings	Cat. No.	EDP
6-10mm	2	1	S78MXTCZ	68157
10-20mm	3	2	S78MXTDZ	68158
20-50mm	3	2	S78MXT EZ	67873
50-100mm	3	2	S78MXTFZ	67874



78MXTZ-150 in case



78MXTZ-100



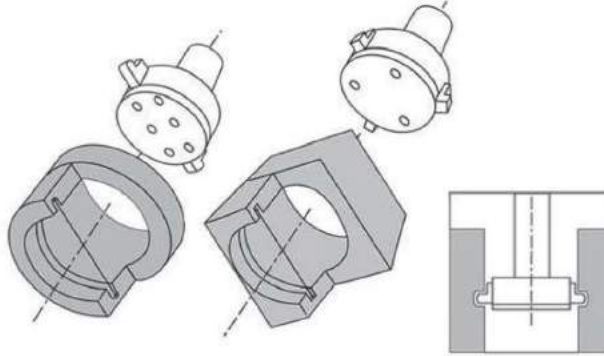
BORE GAGE HEADS

SPECIAL BORE GAGE MEASURING HEADS

We offer several configurations of special purpose measuring heads for 780, and 781 Bore Gages, available by special order. Some, but not all, of these will also work with the 78 Bore Gages.

GROOVE MEASURING HEADS

- **Groove.** Available as a 2-point system for ovality measurement.
- Various 2-point anvil forms available with diameters from .080-12" (2-300mm).
- **Grooves.** Available as a 3-point system
- Various 3-point anvil forms available for diameters from .250-12" (6-300mm).



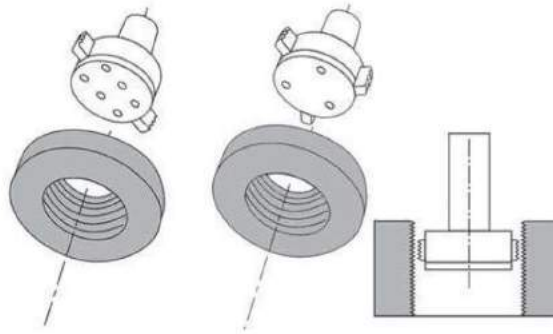
2-point and 3-point heads are available with various anvils to measure specialized internal grooves



THREAD MEASURING HEADS

Thread Measuring Heads are available as two point system from 8 to 5/16" (M4-8mm) and three point system from 3/8"-12" (9.5-300mm). Most forms available including UNC, UNF, UNJ, UNS, Buttress, Acme, Multi-start, LH and RH.

- **Thread.** Thread forms available as a 3-point system.
- **Internal.** To measure effective (functional) diameter, pitch diameter.
- Available as two point system from 8 to 5/16" (M4-8mm) Available as three point system from 3/8"-12" (9.5-300mm).
- Most forms available including UNC, UNF, UNJ, UNS, Buttress, Acme, Multi-start, LH and RH.

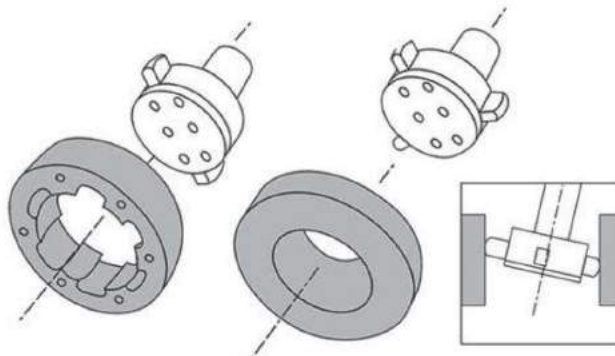


2-point and 3-point heads are available with various anvils to measure specialized internal grooves



SPHERICAL RADIUS MEASURING HEADS

- **Spherical Radius.** Available as 2-point to measure ovality or with 3-point contact.
- Available with diameters from .236-3.93" (6-100mm).
- **3-Point Spherical.** Available in .118-12" (3-300mm) range.
- Gives good repeatability even when somewhat out of line with bore center.



2-point and 3-point spherical radius heads heads are available



BORE GAGES



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DIAL BORE GAGES

3089 DIAL BORE GAGES

The 3089 Dial Bore Gages offer precision, a full compliment of features and excellent value.

3089 Dial Bore Gages						
Measuring Range	Probe Depth	Contacts	Spacers	Extension	Cat. No.	EDP
0.7-1.5"	6"	10	2	—	3089Z-131-715J	12456
1.4-2.4"	6"	6	4	—	3089Z-131-1424J	12457
2-6"	6"	11	4	(1x) 2"	3089Z-131-26J	12458
3089 Dial Bore Gage Set						
Range	Set Includes				Cat. No.	EDP
0.7-6"	3089Z-131-715J, 3089Z-131-1424J, 3089Z-131-26J				S3089Z-131-6J	13016

FEATURES

- Ergonomic design with non-slip insulating grip
- Carbide contacts for extended wear
- 2-point contact
- All anvils laser marked for easy selection
- Gage chart for quick and easy anvil selection
- Includes sturdy aluminum case with cutouts for gage and all accessories
- Resolution: .0005"



DIAL BORE GAGES

82, 82M DIAL BORE GAGES

.107-1.565"/2.7-39.75MM

Dial bore gages are available in convenient sets or with individual probes and dial indicators. Each set consists of a dial indicator, a body and actuating rod, two adjusting wrenches and the probes as specified below.

The head may be ordered separately (includes dial indicator, body, and two adjusting wrenches). Individual probes can also be ordered as listed. All probes are furnished with an actuating rod. These gages are also available with electronic indicators by special order.

Measurements are taken by comparison so some type of set master should be used as a reference standard. We recommend setting as close to the hole being measured as possible, and this can be easily done with gage blocks or with a micrometer. We can also furnish master setting rings by request.

- The split-ball contact is self-centering and the two-point contact makes the gage useful for detecting hole geometry problems like taper, bell-mouth and out-of-roundness
- Reads to .0001" and 0.002mm
- Useful for controlling approach to tolerance without removing the workpiece from a machine
- Interchangeable probes are hard chrome plated and polished
- Sets furnished in attractive, protective case.

A Sets Individual Probes Only for 82 and 82M Bore Gages			
Range			
Inch	mm	Cat. No.	EDP
.107-.140	2.7-3.55	82A2	66015
.139-.172	3.55-4.35	82A3	66016
.171-.203	4.35-5.15	82A4	66017
.202-.234	5.15-5.95	82A5	66018
.233-.266	5.9-6.76	82A6	66019
B Sets Individual Probes Only for 82 and 82M Bore Gages			
Range			
Inch	mm	Cat. No.	EDP
.217-.281	5.5-7.15	82B2	66020
.279-.344	7.1-8.75	82B3	66021
.342-.405	8.7-10.3	82B4	66022
.403-.469	10.25-11.9	82B5	66023
.467-.532	11.9-13.5	82B6	66024
.530-.594	13.5-15.1	82B7	66025
C Sets Individual Probes Only for 82 and 82M Bore Gages			
Range			
Inch	mm	Cat. No.	EDP
.560-.690	14.2-17.5	82C2	66028
.685-.815	17.4-20.7	82C3	66029
.810-.940	20.6-23.9	82C4	66030
.935-1.065	23.75-27.05	82C5	66031
1.060-1.190	26.9-30.2	82C6	66032
1.185-1.315	30.1-33.4	82C7	66033
1.310-1.440	33.3-36.6	82C8	66034
1.435-1.565	36.5-39.75	82C9	66035

All probes come complete with actuating rod.



82 Dial Bore Gages									
Total Range	No. of Probes	Range Each Probe	Max. Bore Depth	Graduation	Complete Sets		Heads		
					Cat. No.	EDP	Cat. No.	EDP	
.107-.266"	5	.107-.140"; .139-.172"; .171-.203"; .202-.234"; .233-.266"	13/16"	.0001"	82AZ	55791	82AB1	66013	
.217-.594"	6	.217-.281"; .279-.344"; .342-.405"; .403-.469"; .467-.532"; .530-.594"	1-1/2" 1-3/4"	.0001"	82BZ	55792	82AB1	66013	
.560-1.565"	8	.560-.690"; .685-.815"; .810-.940"; .935-1.065"; 1.060-1.190"; 1.185-1.315"; 1.310-1.440"; 1.435-1.565"	2-1/2" 5**	.0001"	82CZ	55793	82C1	66026	
82M Dial Bore Gages									
2.7-6.76mm	5	2.7-3.55mm; 3.55-4.35mm; 4.35-5.15mm; 5.15-5.95mm; 5.95-6.76mm	20.6mm	0.002 mm	82MAZ	66010	82MAB1	66014	
5.5-15.1mm	6	5.5-7.15mm; 7.1-8.75mm; 8.7-10.3mm 10.25-11.9mm; 11.9-13.5mm; 13.5-15.1mm	38mm 44mm	0.002 mm	82MBZ	66011	82MAB1	66014	
14.2-39.75mm	8	14.2-17.5mm; 17.4-20.7mm; 20.6-23.9mm 23.75-27.05mm; 26.9-30.2mm; 30.1-33.4mm; 33.3-36.6mm; 36.5-39.75mm	63mm 125mm*	0.002 mm	82MCZ	66012	82MC1	66027	

* Includes insertion of gage body into bore.



Check out our website for interactive features at starrett.com



NEW!

DIAL BORE GAGES

84A, 84MA DIAL BORE GAGES 1-1/2 – 12-1/8"/38-317.5MM

These bore gages allow for bore measurements beyond the size range of our 82 Bore Gage.

They are comparison gages and should be set with a master ring gage, gage blocks with parallel jaws, outside micrometers or vernier calipers. Ring gages are available by request, quoted by application. Good practice is to set the gage to zero, as near to the desired dimension as possible.

Gages are well balanced, easy to use and have the following features:

- Can be easily held to inspect bores and hole sizes without removing the workpiece
- An adjustable range screw and two centralizing plungers provide accurate, three-point contact for tool alignment in larger bores
- All contacts and centralized plungers are hardened tool steel for wear and spring-loaded for sensitivity
- The housing and knurled handle are aluminum for light weight and good balance
- Dial indicators have jewel bearings for sensitivity
- Bore depths are also available up to 12" (300mm) in 1" (25mm) increments on special order
- Furnished in finished wood case
- Available with longer reach lengths, carbide contacts or electronic indicators with output capability from our special order division



84MAZ-161-6

84AZ-111-5

84A Dial Bore Gages (1-1/2 - 12-1/2" Range)								
Total Range with Extension	Ext.	Range Each Extension (inches)	Max. Bore Depth	Plunger Travel	Indicator Grad.	Cat. No.	EDP	
1-1/2-3"	12	1.500-1.625", 1.625-1.750", 1.750-1.875", 1.875-2.000", 2.000-2.125",	3"	.020"	.0001"	84AZ-111-4J	00026	
		2.125-2.250", 2.250-2.375", 2.375-2.500", 2.500-2.625", 2.625-2.750", 2.750-2.875", 2.875-3.000"			.0005"	84AZ-134-4J	00030	
3-5-1/16"	11	3.000-3.187", 3.187-3.375", 3.375-3.562", 3.562-3.750", 3.750-3.937",	6"	.030"	.0001"	84AZ-111-5J	00027	
		3.937-4.125", 4.150-4.312", 4.312-4.500", 4.500-4.687", 4.687-4.875", 4.875-5.062"			.0005"	84AZ-134-5J	00031	
5-8"	4	5.000-5.750", 5.750-6.500", 6.500-7.250", 7.250-8.000"	6"	.030"	.0001"	84AZ-111-6J	00028	
					.0005"	84AZ-134-6J	00032	
8-12-1/2"	3	8.000-9.500", 9.500-11.000", 11.000-12.500"	7"	.030"	.0001"	84AZ-111-7J	00029	
					.0005"	84AZ-134-7J	00033	

84MA Dial Bore Gages (38.1 - 317.5mm Range)								
Total Range with Extension	Ext.	Range Each Extension (mm)	Max. Bore Depth	Plunger Travel	Indicator Grad.	Catalog No.	EDP	
3.175-76.2mm	12	38.1-41.28mm, 41.28-44.45mm, 44.45-47.62mm, 47.62-50.8mm, 50.8-	75mm	0.51mm	0.002 mm	84MAZ-161-4J	00034	
		53.98mm, 53.98-57.15mm, 57.15-60.32mm, 60.32-63.5mm, 63.5-66.68mm, 66.68-69.85mm, 69.85-73.02mm, 73.02-76.2mm			0.01 mm	84MAZ-181-4J	00038	
76.2-128.58mm	11	76.2-80.96mm, 80.96-85.72mm, 85.72-90.49mm, 90.49-95.25mm,	150mm	0.76mm	0.002 mm	84MAZ-161-5J	00035	
		95.25-100.01mm, 100.01-104.78mm, 104.78-109.54mm, 109.54-114.3mm, 114.3-119.06mm, 119.06-123.82mm, 123.82-128.58mm			0.01 mm	84MAZ-181-5J	00039	
127-203.2mm	4	127-146.05mm, 146.05-165.1mm, 165.1-184.15mm, 184.15-203.2mm	150mm	0.76mm	0.002 mm	84MAZ-161-6J	00036	
					0.01 mm	84MAZ-181-6J	00040	
203.2-317.5mm	3	203.2 - 241.3mm, 241.3 - 279.4mm, 279.4 - 317.5mm	175mm	0.76mm	0.002 mm	84MAZ-161-7J	00037	
					0.01 mm	84MAZ-181-7J	00041	



BORE GAGE SYSTEMS

NEW!

AccuPlug™ BORE GAGES

The AccuPlug consists of interchangeable indicators, handles, plugs, extensions and depth stops for a custom bore gage built specifically for your application needs.

The robust, easy to use AccuPlug range is designed to give the operator greater speed of use, unmatched measuring accuracy and superb repeatability, especially in harsh shop-floor environments. Advanced hand held ergonomics allied to an ingenious mechanical/electronic system render AccuPlug the easiest to operate Starrett bore gaging system to date. The flexible nature of the AccuPlug range means that they can be supplied fitted with easy to read electronic indicators (ideal for automatic data collection) or conventional analogue indicators.



FEATURES

- Ranges from 0.2362 - 11.0236" (6 - 280mm)
- Tough, robust construction
- Easy-to-use
- High accuracy dedicated plug-gages
- Flexible, modular
- Hand-held measurement
- Cost-effective
- High visibility display
- Protective indicator shroud (with some indicators)
- All setting rings supplied as standard with UKAS calibration certificates
- Repeatability: $\leq 1\mu\text{m}$
- Setting by means of a setting ring
- Quick and reliable measurement
- 2 - point measurement as standard
- Blind bore available
- Depth-stops available
- Extensions available for deeper bores
- Guide chamfer for easy entry into bore
- High durability, long-life plugs and contacts
- Easy to clean
- Plug body coatings: Hard-chrome (standard), T.i.N, Plain steel
- Measuring contacts: Tungsten carbide (standard), hard-chrome, ruby, ceramic

BORE GAGES



Check out our website for interactive features at starrett.com

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BORE GAGE SYSTEMS

AccuPlug® BORE GAGES



AccuPlug

Regular Bore*			
in	mm	Thread	Cat. No.
0.2362-0.7874	6-20	M6 x 0.75	802P-001
0.5906-0.9843	15-25	M10 x 1	802P-002
0.9843-1.3780	25-35	M10 x 1	802P-003
1.3780-1.7717	35-45	M10 x 1	802P-004
1.7717-2.3622	45-60	M10 x 1	802P-005
2.3622-3.1496	60-80	M10 x 1	802P-006
3.1496-3.9370	80-100	M10 x 1	802P-007
3.9370-4.9213	100-125	M10 x 1	802P-008
4.9213-5.9055	125-150	M10 x 1	802P-009
5.9055-6.8898	150-175	M10 x 1	802P-010
6.8898-7.8740	175-200	M10 x 1	802P-011
7.8740-8.8583	200-225	M10 x 1	802P-012
8.8583-9.8425	225-250	M10 x 1	802P-013
9.8425-11.0236	250-280	M10 x 1	802P-014

Blind Bore*			
in	mm	Thread	Cat. No.
0.2362-0.7874	6-20	M6 x 0.75	802BB-001
0.5906-0.9843	15-25	M10 x 1	802BB-002
0.9843-1.3780	25-35	M10 x 1	802BB-003
1.3780-1.7717	35-45	M10 x 1	802BB-004
1.7717-2.3622	45-60	M10 x 1	802BB-005
2.3622-3.1496	60-80	M10 x 1	802BB-006
3.1496-3.9370	80-100	M10 x 1	802BB-007
3.9370-4.9213	100-125	M10 x 1	802BB-008
4.9213-5.9055	125-150	M10 x 1	802BB-009

*See Technical Specifications for plug ranges.

Indicators

Description	Cat No.	EDP
0.0005"/.001mm Electronic Indicator, Full Function, 3/8" Stem	2900-4	09983
0.001mm Electronic Indicator, Full Functions, 8mm Stem	2900-4M	09988
0.0005"/.001mm Electronic Indicator, Full Function with TIR Runout and Hold Function, 3/8" Stem, Analog Digital Display	F2720AD	49500
0.0005"/.001mm Electronic Indicator, Full Function with TIR Runout and Hold Function, 8mm Stem, Analog Digital Display	F2720ADM	49504
0.0005" Mechanical Indicator with 3/8" Stem	647	00001
0.001mm Mechanical Indicator with 8mm Stem	647M	00002
Mini Electronic Indicator	M 10 Thread	M 6 Thread
With Shroud and M10 Holder Short 8mm Stem	802H10MI-001	802H6MI-001
With Shroud and M10 Holder Long 8mm Stem	802H10MI-002	802H6MI-002





Setting Rings		
Diameter Range		Cat. No.
in	mm	
0.2362-0.3937	6-10	802RX-001
0.3937-0.7874	10-20	802RX-002
0.7874-0.9843	20-25	802RX-003
0.9843-1.1811	25-30	802RX-004
1.1811-1.5748	30-40	802RX-005
1.5748-1.9685	40-50	802RX-006
1.9685-2.3622	50-60	802RX-007
2.3622-2.7559	60-70	802RX-008
2.7559-3.1496	70-80	802RX-009
3.1496-3.5433	80-90	802RX-010
3.5433-3.9370	90-100	802RX-011
3.9370-4.5276	100-115	802RX-012
4.5276-5.1181	115-130	802RX-013
5.1181-5.7087	130-145	802RX-014
5.7087-6.2992	145-160	802RX-015
6.2992-6.6929	160-170	802RX-016
6.6929-7.0866	170-180	802RX-017
7.0866-7.4803	180-190	802RX-018
7.4803-7.8740	190-200	802RX-019
7.8740-8.2677	200-210	802RX-020
8.2677-8.6614	210-220	802RX-021
8.6614-9.0551	220-230	802RX-022
9.0551-9.4488	230-240	802RX-023
9.4488-9.8425	240-250	802RX-024
9.8425-10.2362	250-260	802RX-025
10.2362-10.6299	260-270	802RX-026
10.6299-11.0236	270-280	802RX-027



Depth Stop		
Diameter Range		Cat. No.
in	mm	
2.3622-0.3347	6-8.5	802DS-001
0.3347-0.5118	8.5-13	802DS-002
0.5118-0.6890	13-17.5	802DS-003
0.6890-0.9843	17.5-25	802DS-004
0.9843-1.2795	25-32.5	802DS-005
1.2795-1.5748	32.5-40	802DS-006
1.5748-1.8701	40-47.5	802DS-007
1.8701-2.1654	47.5-55	802DS-008
2.1654-2.4606	55-62.5	802DS-009
2.4606-2.7559	62.5-70	802DS-010
2.7559-3.0512	70-77.5	802DS-011
3.0512-3.3465	77.5-85	802DS-012
3.3465-3.6417	85-92.5	802DS-013
3.6417-3.9370	92.5-100	802DS-014



Accessories			
M 6 Thread		M 10 Thread	
Description	Cat. No.	Description	Cat. No.
M6 Holder Short 3/8" Stem	802H6-001	M10 Holder Short 3/8" Stem	802H10-001
M6 Holder Long 3/8" Stem	802H6-002	M10 Holder Long 3/8" Stem	802H10-002
M6 Holder Short 8mm Stem	802H6-003	M10 Holder Short 8mm Stem	802H10-003
M6 Holder Long 8mm Stem	802H6-004	M10 Holder Long 8mm Stem	802H10-004
M6 100mm Extension	802E6-001	M10 100mm Extension	802E10-001



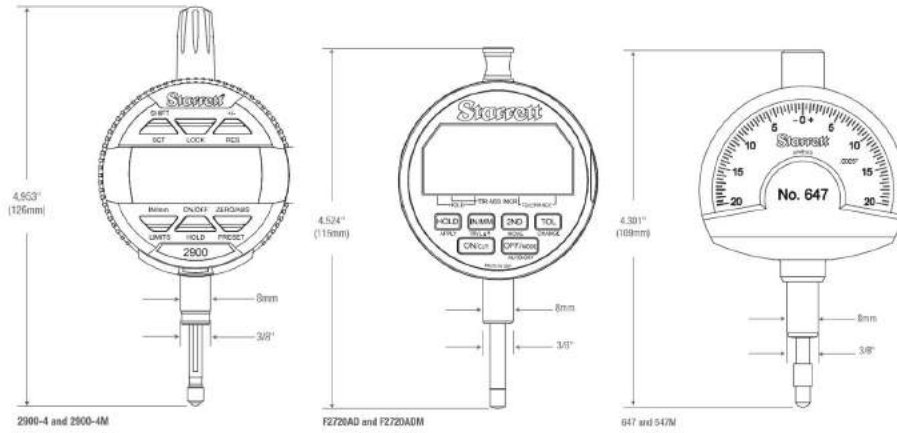
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BORE GAGE SYSTEMS

AccuPLUG™ BORE GAGING TECHNICAL SPECIFICATIONS

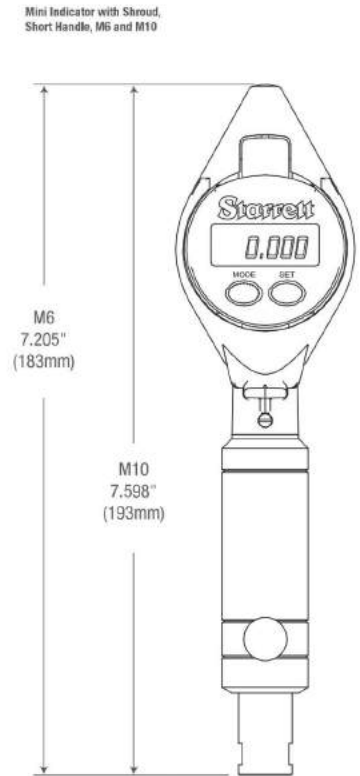
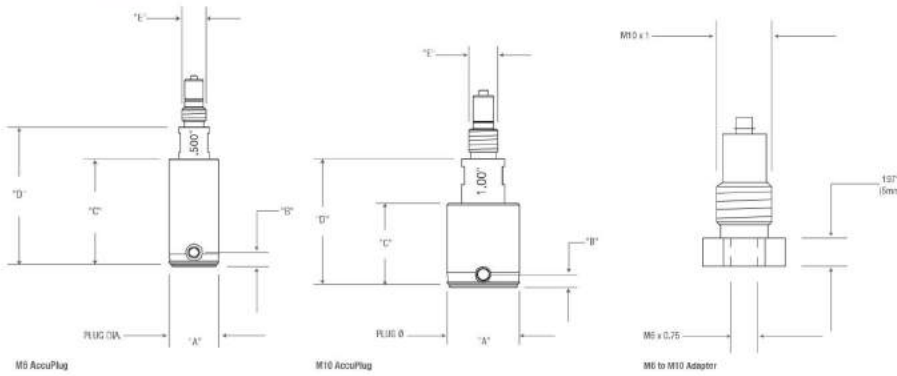
INDICATOR UNITS 8MM AND 3/8"



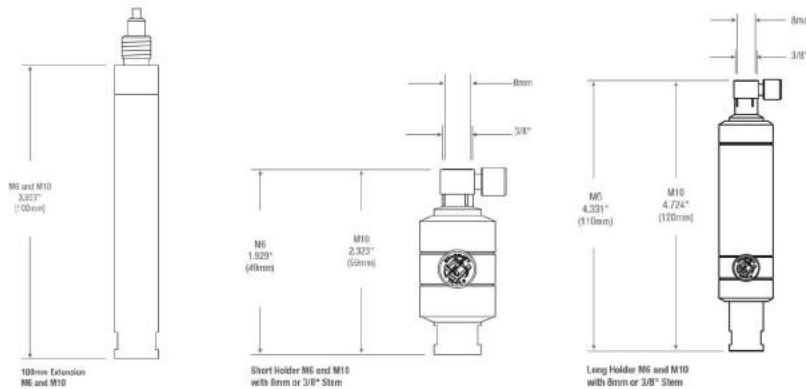
MINI INDICATOR UNITS



AccuPLUGS



ACCESSORIES



AccuPlug Dimension Specifications										
Plug Diameter "A"		Range		"B"		"C"		"D"		"E"
in	mm	in	mm	in	mm	in	mm	in	mm	
0.2362-0.7874	6-20	.006	0.15	.138	3.5	1.063	27	1.378	35	M6 x 0.75
0.5906-1.7717	15-45	.008	0.20	.177	4.5	1.102	28	1.713	43.5	M10 x 1
1.7717- 2.756	45-70	.008	0.20	.217	5.5	1.102	28	1.732	44	M10 x 1
2.756-11.0236	70-280	.008	0.20	.217"	5.5	1.378	35	1.732	44	M10 x 1

