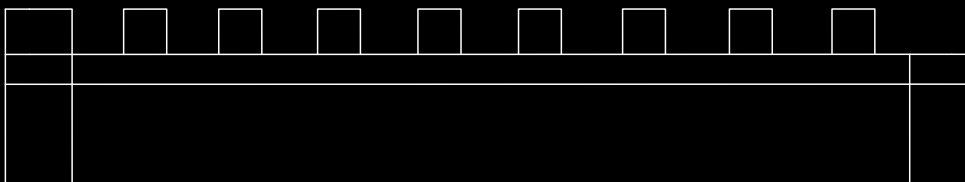


# Gauges

149	Rectangular Gauge Block Sets
152	Inch Individual Rectangular Gauge Blocks
153	Metric Individual Rectangular Gauge Blocks
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155	Caliper Calibration Gauge Sets
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159	Thread Plug Gauges and Ring Gauges
161	ANSI Inch Thread Ring Gauges
162	Whitworth Pipe Thread Plug Gauges and Ring Gauges
162	NPT Thread Plug Gauges and Ring Gauges
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165	Individual Inspection Gauge Balls
165	Precision Inspection Gauge Ball Sets
166	36 pcs Round Space Block Set
166	Individual Pin Gauges
167	Pin Gauge Sets
167	Pin Gauge Handles





## Rectangular Gauge Block Sets

650 Series

### FEATURES

- Individual serial numbers on each block, regardless of grade
- A complete certificate of calibration traceable to the NIST or DIN showing the deviation of each block
- Mirror polished surfaces provide superior wringing characteristics



650-63-0

### SPECIFICATIONS

#### Inch

Blocks Per Set	Blocks Included In Set	Grade	Steel	Ceramic
			Code No.	Code No.
81	1 Block: .050" 10 Blocks: .1000"- .1009" x .0001" step 49 Blocks: .101"- .149" x .001" step 17 Blocks: .150"- .950" x .050" step 4 Blocks: 1.000"-4.000" x 1.000" step	0	650-01-0	650-51-0
		AS-1	650-01-1	650-51-1
		AS-2	650-01-2	-
36	1 Block: .050" 10 Blocks: .1000"- .1009" x .0001" step 9 Blocks: .101"- .109" x .001" step 9 Blocks: .110"- .190" x .010" step 4 Blocks: .200"- .500" x .100" step 3 Blocks: 1", 2", 4"	0	650-02-0	650-52-0
		AS-1	650-02-1	650-52-1
		AS-2	650-02-2	-

#### Metric

1 mm base set

Blocks Per Set	Blocks Included In Set	Grade	Steel	Ceramic
			Code No.	Code No.
122	1 Blocks: 1.0005mm 9 Blocks: 1.001- 1.009mm x 0.001mm step 49 Blocks: 1.01- 1.49mm x 0.01mm step 4 Blocks: 1.6 - 1.9mm x 0.1mm step 49 Blocks: 0.5 - 24.5mm x 0.5mm step 8 Blocks: 30 - 100mm x 10mm step 2 Blocks: 25, 75mm	0	650-11-0	650-61-0
		1	650-11-1	650-61-1
		2	650-11-2	650-61-2
112	1 Blocks: 1.0005mm 9 Blocks: 1.001- 1.009mm x 0.001mm step 49 Blocks: 1.01- 1.49mm x 0.01mm step 49 Blocks: 0.5 - 24.5mm x 0.5mm step 4 Blocks: 25 - 100mm x 25mm step	0	650-17-0	650-67-0
		1	650-17-1	650-67-1
		2	650-17-2	650-67-2
103	1 Blocks: 1.005mm 49 Blocks: 1.01- 1.49mm x 0.01mm step 49 Blocks: 0.5- 24.5mm x 0.5mm step 4 Blocks: 25 - 100mm x 25mm step	0	650-12-0	650-62-0
		1	650-12-1	650-62-1
		2	650-12-2	650-62-2
88	1 Blocks: 1.0005mm 9 Blocks: 1.001- 1.009mm x 0.001mm step 49 Blocks: 1.01- 1.49mm x 0.01mm step 19 Blocks: 0.5 - 9.5mm x 0.5mm step 10 Blocks: 10 - 100mm x 10mm step	0	650-18-0	650-68-0
		1	650-18-1	650-68-1
		2	650-18-2	650-68-2
87	9 Blocks: 1.001- 1.009mm x 0.001mm step 49 Blocks: 1.01- 1.49mm x 0.01mm step 19 Blocks: 0.5 - 9.5mm x 0.5mm step 10 Blocks: 10 - 100mm x 10mm step	0	650-13-0	650-63-0
		1	650-13-1	650-63-1
		2	650-13-2	650-63-2
76	1 Blocks: 1.005mm 49 Blocks: 1.01- 1.49mm x 0.01mm step 19 Blocks: 0.5 - 9.5mm x 0.5mm step 4 Blocks: 10 - 40mm x 10mm step 3 Blocks: 50 - 100mm x 25mm step	0	650-19-0	650-69-0
		1	650-19-1	650-69-1
		2	650-19-2	650-69-2



## Rectangular Gauge Block Sets

650 Series

Metric 1 mm base set

Blocks Per Set	Blocks Included In Set	Grade	Steel	Ceramic
			Code No.	Code No.
56	1 Block: 0.5mm 9 Block: 1.001- 1.009mm x 0.001mm step 9 Block: 1.01- 1.09mm x 0.01mm step 9 Block: 1.1- 1.9mm x 0.1mm step 24 Block: 1- 24mm x 1mm step 4 Block: 25 - 100mm x 25mm step	0	650-20-0	650-70-0
		1	650-20-1	650-70-1
		2	650-20-2	650-70-2
47	1 Block: 1.005mm 20 Block: 1.01- 1.20mm x 0.01mm step 7 Block: 1.3 - 1.9mm x 0.1mm step 9 Block: 1- 9mm x 1mm step 10 Block: 10 - 100mm x 10mm step	0	650-14-0	650-64-0
		1	650-14-1	650-64-1
		2	650-14-2	650-64-2
47	1 Block: 1.005mm 9 Block: 1.01 - 1.09mm x 0.01mm step 9 Block: 1.1 - 1.9mm x 0.1mm step 24 Block: 1 - 24mm x 1mm step 4 Block: 25 - 100mm x 25mm step	0	650-15-0	650-65-0
		1	650-15-1	650-65-1
		2	650-15-2	650-65-2
46	9 Block: 1.001- 1.009mm x 0.001mm step 9 Block: 1.01- 1.09mm x 0.01mm step 9 Block: 1.1 - 1.9mm x 0.1mm step 9 Block: 1- 9mm x 1mm step 10 Block: 10 - 100mm x 10mm step	0	650-21-0	650-71-0
		1	650-21-1	650-71-1
		2	650-21-2	650-71-2
34	1 Block: 1.0005mm 9 Block: 1.001- 1.009mm x 0.001mm step 9 Block: 1.01 - 1.09mm x 0.01mm step 9 Block: 1.1- 1.9mm x 0.1mm step 6 Block: 1- 5 x 1mm step, 10mm	0	650-22-0	650-72-0
		1	650-22-1	650-72-1
		2	650-22-2	650-72-2
32	1 Block: 1.005mm 9 Block: 1.01 - 1.09mm x 0.01mm step 9 Block: 1.1 - 1.9mm x 0.1mm step 9 Block: 1- 9mm x 1mm step 4 Block: 10mm, 20mm, 30mm, 50mm	0	650-16-0	650-66-0
		1	650-16-1	650-66-1
		2	650-16-2	650-66-2
24	9 Block: 1.01-1.09mm x 0.01mm step 9 Block: 1.1 - 1.9mm x 0.1mm step 5 Block: 1 - 5 mm x 1mm step 1 Block: 10 mm	0	650-23-0	650-73-0
		1	650-23-1	650-73-1
19	9 Block: 1.1 - 1.9mm x 0.1mm step 5 Block: 1- 5 mm x 1mm step 2 Block: 10 - 20 mm x 10mm step 3 Block: 25mm, 50mm, 100 mm	0	650-24-0	650-74-0
		1	650-24-1	650-74-1
10	5 Block: 1 - 5 mm x 1mm step 2 Block: 10 - 20 mm x 10mm step 3 Block: 25mm, 50mm, 100 mm	0	650-25-0	650-75-0
		1	650-25-1	650-75-1

Metric

Blocks Per Set	Blocks Included In Set	Grade	Steel	Ceramic
			Code No.	Code No.
18	9 Block: 0.991 - 0.999mm x 0.001mm step 9 Block: 1.001 - 1.009mm x 0.001mm step	0	650-26-0	650-76-0
		1	650-26-1	650-76-1
		2	650-26-2	650-76-2
9	9 Block: 1.001 - 1.009mm x 0.001mm step	0	650-27-0	650-77-0
		1	650-27-1	650-77-1
		2	650-27-2	650-77-2
9	9 Block: 0.991 - 0.999mm x 0.001mm step	0	650-28-0	650-78-0
		1	650-28-1	650-78-1
		2	650-28-2	650-78-2



## Rectangular Steel Gauge Block Sets

650 Series

Metric 2 mm base Set

Blocks Per Set	Blocks Included In Set	Grade	ISO / DIN / JIS / GB	ASME
112	1 Block: 2.0005mm 9 Block: 2.001- 2.009mm x 0.001mm step 49 Block: 2.01- 2.49mm x 0.01mm step 49 Block: 0.5 - 24.5mm x 0.5mm step 4 Block: 25 - 100mm x 25mm step	0	650-29-0	650-79-0
		1	650-29-1	650-79-1
		2	650-29-2	650-79-2
88	1 Block: 2.005mm 9 Block: 2.001- 2.009mm x 0.001mm step 49 Block: 2.01- 2.49mm x 0.01mm step 19 Block: 0.5 - 9.5mm x 0.5mm step 10 Block: 10 - 100mm x 10mm step	0	650-30-0	650-80-0
		1	650-30-1	650-80-1
		2	650-30-2	650-80-2
88	1 Block: 2.0005mm 9 Block: 2.001- 2.009mm x 0.001mm step 49 Block: 2.01- 2.49mm x 0.01mm step 19 Block: 0.5 - 9.5mm x 0.5mm step 10 Block: 10 - 100mm x 10mm step	0	650-31-0	650-81-0
		1	650-31-1	650-81-1
		2	650-31-2	650-81-2
47	1 Block: 2.0005mm 9 Block: 2.001- 2.009mm x 0.001mm step 9 Block: 2.01- 2.09mm x 0.01mm step 9 Block: 2.1- 2.9mm x 0.1mm step 9 Block: 1- 9mm x 1mm step 10 Block: 10 - 100mm x 10mm step	0	650-32-0	650-82-0
		1	650-32-1	650-82-1
		2	650-32-2	650-82-2
46	9 Block: 2.001- 2.009mm x 0.001mm step 9 Block: 2.01- 2.09mm x 0.01mm step 9 Block: 2.1- 2.9mm x 0.1mm step 9 Block: 1- 9mm x 1mm step 10 Block: 10 - 100mm x 10mm step	0	650-33-0	650-83-0
		1	650-33-1	650-83-1
		2	650-33-2	650-83-2
33	1 Block: 2.005mm 9 Block: 2.01- 2.09mm x 0.01mm step 9 Block: 2.1- 2.9mm x 0.1mm step 9 Block: 1- 9mm x 1mm step 5 Block: 10mm, 20mm, 30mm, 60mm, 100mm	0	650-34-0	650-84-0
		1	650-34-1	650-84-1
		2	650-34-2	650-84-2
8	125mm, 150, 175, 200, 250, 300, 400, 500mm	0	650-35-0	650-85-0
		1	650-35-1	650-85-1
		2	650-35-2	650-85-2

## Rectangular Tungsten Steel Gauge Block Sets

650 Series

Blocks Per Set	Blocks Included In Set	Grade	Code No.
87	9 Block: 1.001- 1.009mm x 0.001mm step 49 Block: 1.01- 1.49mm x 0.01mm step 19 Block: 0.5 - 9.5mm x 0.5mm step 10 Block: 10 - 100mm x 10mm step	0	650-93-0
		1	650-93-1
103	1 Block: 1.005mm 49 Block: 1.01- 1.49mm x 0.01mm step 49 Block: 0.5 - 24.5mm x 0.5mm step 4 Block: 25 - 100mm x 25mm step	0	650-92-0
		1	650-92-1
112	1 Block: 1.0005mm 9 Block: 1.001- 1.009mm x 0.001mm step 49 Block: 1.01- 1.49mm x 0.01mm step 49 Block: 0.5 - 24.5mm x 0.5mm step 4 Block: 25 - 100mm x 25mm step	0	650-97-0
		1	650-97-1

## Inch Individual Rectangular Gauge Blocks

65X Series



651-87-0

### FEATURES

- ASME / DIN / JIS / GB Standard
- ASME Grade 0 is available for both Steel and Ceramic individuals
- ASME Grade 1 is only available for Steel

### SPECIFICATIONS

Size	Steel		Ceramic
	Grade 0	Grade 1	Grade 0
.05"	651-01-0	651-01-1	655-01-0
.05005"	651-02-0	651-02-1	655-02-0
.0503"	651-03-0	651-03-1	655-03-0
.0506"	651-04-0	651-04-1	655-04-0
.0507"	651-05-0	651-05-1	655-05-0
.0508"	651-06-0	651-06-1	655-06-0
.0509"	651-07-0	651-07-1	655-07-0
.052"	651-08-0	651-08-1	655-08-0
.053"	651-09-0	651-09-1	655-09-0
.054"	651-10-0	651-10-1	655-10-0
.055"	651-11-0	651-11-1	655-11-0
.056"	651-12-0	651-12-1	655-12-0
.058"	651-13-0	651-13-1	655-13-0
.06"	651-14-0	651-14-1	655-14-0
.1"	651-15-0	651-15-1	655-15-0
.10005"	651-16-0	651-16-1	655-16-0
.1001"	651-17-0	651-17-1	655-17-0
.1002"	651-18-0	651-18-1	655-18-0
.1003"	651-19-0	651-19-1	655-19-0
.1004"	651-20-0	651-20-1	655-20-0
.1005"	651-21-0	651-21-1	655-21-0
.1006"	651-22-0	651-22-1	655-22-0
.1007"	651-23-0	651-23-1	655-23-0
.1008"	651-24-0	651-24-1	655-24-0
.1009"	651-25-0	651-25-1	655-25-0
.101"	651-26-0	651-26-1	655-26-0
.102"	651-27-0	651-27-1	655-27-0
.103"	651-28-0	651-28-1	655-28-0
.104"	651-29-0	651-29-1	655-29-0
.105"	651-30-0	651-30-1	655-30-0
.106"	651-31-0	651-31-1	655-31-0
.107"	651-32-0	651-32-1	655-32-0
.108"	651-33-0	651-33-1	655-33-0
.109"	651-34-0	651-34-1	655-34-0
.11"	651-35-0	651-35-1	655-35-0
.111"	651-36-0	651-36-1	655-36-0

Size	Steel			Ceramic
	Grade 0	Grade 1	Grade 0	Grade 0
.112"	651-37-0	651-37-1	655-37-0	
.113"	651-38-0	651-38-1	655-38-0	
.114"	651-39-0	651-39-1	655-39-0	
.115"	651-40-0	651-40-1	655-40-0	
.116"	651-41-0	651-41-1	655-41-0	
.117"	651-42-0	651-42-1	655-42-0	
.118"	651-43-0	651-43-1	655-43-0	
.119"	651-44-0	651-44-1	655-44-0	
.12"	651-45-0	651-45-1	655-45-0	
.121"	651-46-0	651-46-1	655-46-0	
.122"	651-47-0	651-47-1	655-47-0	
.123"	651-48-0	651-48-1	655-48-0	
.124"	651-49-0	651-49-1	655-49-0	
.125"	651-50-0	651-50-1	655-50-0	
.126"	651-51-0	651-51-1	655-51-0	
.127"	651-52-0	651-52-1	655-52-0	
.128"	651-53-0	651-53-1	655-53-0	
.129"	651-54-0	651-54-1	655-54-0	
.13"	651-55-0	651-55-1	655-55-0	
.131"	651-56-0	651-56-1	655-56-0	
.132"	651-57-0	651-57-1	655-57-0	
.133"	651-58-0	651-58-1	655-58-0	
.134"	651-59-0	651-59-1	655-59-0	
.135"	651-60-0	651-60-1	655-60-0	
.136"	651-61-0	651-61-1	655-61-0	
.137"	651-62-0	651-62-1	655-62-0	
.138"	651-63-0	651-63-1	655-63-0	
.139"	651-64-0	651-64-1	655-64-0	
.14"	651-65-0	651-65-1	655-65-0	
.141"	651-66-0	651-66-1	655-66-0	
.142"	651-67-0	651-67-1	655-67-0	
.143"	651-68-0	651-68-1	655-68-0	
.144"	651-69-0	651-69-1	655-69-0	
.145"	651-70-0	651-70-1	655-70-0	
.146"	651-71-0	651-71-1	655-71-0	
.147"	651-72-0	651-72-1	655-72-0	

Size	Steel			Ceramic
	Grade 0	Grade 1	Grade 0	Grade 0
.148"	651-73-0	651-73-1	655-73-0	
.149"	651-74-0	651-74-1	655-74-0	
.15"	651-75-0	651-75-1	655-75-0	
.16"	651-76-0	651-76-1	655-76-0	
.17"	651-77-0	651-77-1	655-77-0	
.18"	651-78-0	651-78-1	655-78-0	
.19"	651-79-0	651-79-1	655-79-0	
.2"	651-80-0	651-80-1	655-80-0	
.21"	651-81-0	651-81-1	655-81-0	
.25"	651-82-0	651-82-1	655-82-0	
.3"	651-83-0	651-83-1	655-83-0	
.35"	651-84-0	651-84-1	655-84-0	
.4"	651-85-0	651-85-1	655-85-0	
.45"	651-86-0	651-86-1	655-86-0	
.5"	651-87-0	651-87-1	655-87-0	
.55"	651-88-0	651-88-1	655-88-0	
.6"	651-89-0	651-89-1	655-89-0	
.65"	651-90-0	651-90-1	655-90-0	
.7"	651-91-0	651-91-1	655-91-0	
.75"	651-92-0	651-92-1	655-92-0	
.8"	651-93-0	651-93-1	655-93-0	
.85"	651-94-0	651-94-1	655-94-0	
.9"	651-95-0	651-95-1	655-95-0	
.95"	651-96-0	651-96-1	655-96-0	
1"	651-97-0	651-97-1	655-97-0	
2"	651-98-0	651-98-1	655-98-0	
3"	651-99-0	651-99-1	655-99-0	
4"	652-00-0	652-00-1	656-00-0	
5"	652-01-0	652-01-1	656-01-0	
6"	652-02-0	652-02-1	-	
7"	652-03-0	652-03-1	-	
8"	652-04-0	652-04-1	-	
10"	652-05-0	652-05-1	-	
12"	652-06-0	652-06-1	-	
16"	652-07-0	652-07-1	-	
20"	652-08-0	652-08-1	-	



## Metric Individual Rectangular Gauge Blocks

653 / 654 Series

### FEATURES

- ASME / DIN / JIS / GB Standard
- Steel Grade 0 and Grade 1

### SPECIFICATIONS

	Grade 0	Grade 1
Size	Code No.	Code No.
0.5mm	653-01-0	653-01-1
1mm	653-02-0	653-02-1
1.001mm	653-03-0	653-03-1
1.002mm	653-04-0	653-04-1
1.003mm	653-05-0	653-05-1
1.004mm	653-06-0	653-06-1
1.005mm	653-07-0	653-07-1
1.006mm	653-08-0	653-08-1
1.007mm	653-09-0	653-09-1
1.008mm	653-10-0	653-10-1
1.009mm	653-11-0	653-11-1
1.01mm	653-12-0	653-12-1
1.02mm	653-13-0	653-13-1
1.03mm	653-14-0	653-14-1
1.04mm	653-15-0	653-15-1
1.05mm	653-16-0	653-16-1
1.06mm	653-17-0	653-17-1
1.07mm	653-18-0	653-18-1
1.08mm	653-19-0	653-19-1
1.09mm	653-20-0	653-20-1
1.1mm	653-21-0	653-21-1
1.11mm	653-22-0	653-22-1
1.12mm	653-23-0	653-23-1
1.13mm	653-24-0	653-24-1
1.14mm	653-25-0	653-25-1
1.15mm	653-26-0	653-26-1
1.16mm	653-27-0	653-27-1
1.17mm	653-28-0	653-28-1
1.18mm	653-29-0	653-29-1
1.19mm	653-30-0	653-30-1
1.2mm	653-31-0	653-31-1
1.21mm	653-32-0	653-32-1
1.22mm	653-33-0	653-33-1
1.23mm	653-34-0	653-34-1
1.24mm	653-35-0	653-35-1
1.25mm	653-36-0	653-36-1
1.26mm	653-37-0	653-37-1
1.27mm	653-38-0	653-38-1
1.28mm	653-39-0	653-39-1
1.29mm	653-40-0	653-40-1
1.3mm	653-41-0	653-41-1
1.31mm	653-42-0	653-42-1
1.32mm	653-43-0	653-43-1
1.33mm	653-44-0	653-44-1
1.34mm	653-45-0	653-45-1

	Grade 0	Grade 1
Size	Code No.	Code No.
1.35mm	653-46-0	653-46-1
1.36mm	653-47-0	653-47-1
1.37mm	653-48-0	653-48-1
1.38mm	653-49-0	653-49-1
1.39mm	653-50-0	653-50-1
1.4mm	653-51-0	653-51-1
1.41mm	653-52-0	653-52-1
1.42mm	653-53-0	653-53-1
1.43mm	653-54-0	653-54-1
1.44mm	653-55-0	653-55-1
1.45mm	653-56-0	653-56-1
1.46mm	653-57-0	653-57-1
1.47mm	653-58-0	653-58-1
1.48mm	653-59-0	653-59-1
1.49mm	653-60-0	653-60-1
1.5mm	653-61-0	653-61-1
1.6mm	653-62-0	653-62-1
1.7mm	653-63-0	653-63-1
1.8mm	653-64-0	653-64-1
1.9mm	653-65-0	653-65-1
2mm	653-66-0	653-66-1
2.5mm	653-67-0	653-67-1
3mm	653-68-0	653-68-1
3.5mm	653-69-0	653-69-1
4mm	653-70-0	653-70-1
4.5mm	653-71-0	653-71-1
5mm	653-72-0	653-72-1
5.5mm	653-73-0	653-73-1
6mm	653-74-0	653-74-1
6.5mm	653-75-0	653-75-1
7mm	653-76-0	653-76-1
7.5mm	653-77-0	653-77-1
8mm	653-78-0	653-78-1
8.5mm	653-79-0	653-79-1
9mm	653-80-0	653-80-1
9.5mm	653-81-0	653-81-1
10mm	653-82-0	653-82-1
10.5mm	653-83-0	653-83-1
11mm	653-84-0	653-84-1
11.5mm	653-85-0	653-85-1
12mm	653-86-0	653-86-1
12.5mm	653-87-0	653-87-1
13mm	653-88-0	653-88-1
13.5mm	653-89-0	653-89-1
14mm	653-90-0	653-90-1

	Grade 0	Grade 1
Size	Code No.	Code No.
14.5mm	653-91-0	653-91-1
15mm	653-92-0	653-92-1
15.5mm	653-93-0	653-93-1
16mm	653-94-0	653-94-1
16.5mm	653-95-0	653-95-1
17mm	653-96-0	653-96-1
17.5mm	653-97-0	653-97-1
18mm	653-98-0	653-98-1
18.5mm	653-99-0	653-99-1
19mm	654-00-0	654-00-1
19.5mm	654-01-0	654-01-1
20mm	654-02-0	654-02-1
20.5mm	654-03-0	654-03-1
21mm	654-04-0	654-04-1
21.5mm	654-05-0	654-05-1
22mm	654-06-0	654-06-1
22.5mm	654-07-0	654-07-1
23mm	654-08-0	654-08-1
23.5mm	654-09-0	654-09-1
24mm	654-10-0	654-10-1
24.5mm	654-11-0	654-11-1
25mm	654-12-0	654-12-1
30mm	654-13-0	654-13-1
40mm	654-14-0	654-14-1
50mm	654-15-0	654-15-1
60mm	654-16-0	654-16-1
70mm	654-17-0	654-17-1
75mm	654-18-0	654-18-1
80mm	654-19-0	654-19-1
90mm	654-20-0	654-20-1
100mm	654-21-0	654-21-1
125mm	-	654-22-1
150mm	-	654-23-1
175mm	-	654-24-1
200mm	-	654-25-1
250mm	-	654-27-1
300mm	-	654-29-1
400mm	-	654-31-1
500mm	-	654-33-1
600mm	-	654-35-1
700mm	-	654-37-1
800mm	-	654-39-1
900mm	-	654-41-1
1000mm	-	654-43-1
-	-	-



## Metric Individual Rectangular Ceramic Gauge Blocks 657 / 658 Series

### FEATURES

- ASME / DIN / JIS / GB Standard
- Ceramic Grade 0

### SPECIFICATIONS

Size	Code No.
0.5mm	657-01-0
1mm	657-02-0
1.001mm	657-03-0
1.002mm	657-04-0
1.003mm	657-05-0
1.004mm	657-06-0
1.005mm	657-07-0
1.006mm	657-08-0
1.007mm	657-09-0
1.008mm	657-10-0
1.009mm	657-11-0
1.01mm	657-12-0
1.02mm	657-13-0
1.03mm	657-14-0
1.04mm	657-15-0
1.05mm	657-16-0
1.06mm	657-17-0
1.07mm	657-18-0
1.08mm	657-19-0
1.09mm	657-20-0
1.1mm	657-21-0
1.11mm	657-22-0
1.12mm	657-23-0
1.13mm	657-24-0
1.14mm	657-25-0
1.15mm	657-26-0
1.16mm	657-27-0
1.17mm	657-28-0
1.18mm	657-29-0
1.19mm	657-30-0
1.2mm	657-31-0
1.21mm	657-32-0
1.22mm	657-33-0
1.23mm	657-34-0
1.24mm	657-35-0
1.25mm	657-36-0
1.26mm	657-37-0
1.27mm	657-38-0
1.28mm	657-39-0
1.29mm	657-40-0
1.3mm	657-41-0

Size	Code No.
1.31mm	657-42-0
1.32mm	657-43-0
1.33mm	657-44-0
1.34mm	657-45-0
1.35mm	657-46-0
1.36mm	657-47-0
1.37mm	657-48-0
1.38mm	657-49-0
1.39mm	657-50-0
1.4mm	657-51-0
1.41mm	657-52-0
1.42mm	657-53-0
1.43mm	657-54-0
1.44mm	657-55-0
1.45mm	657-56-0
1.46mm	657-57-0
1.47mm	657-58-0
1.48mm	657-59-0
1.49mm	657-60-0
1.5mm	657-61-0
1.6mm	657-62-0
1.7mm	657-63-0
1.8mm	657-64-0
1.9mm	657-65-0
2mm	657-66-0
2.5mm	657-67-0
3mm	657-68-0
3.5mm	657-69-0
4mm	657-70-0
4.5mm	657-71-0
5mm	657-72-0
5.5mm	657-73-0
6mm	657-74-0
6.5mm	657-75-0
7mm	657-76-0
7.5mm	657-77-0
8mm	657-78-0
8.5mm	657-79-0
9mm	657-80-0
9.5mm	657-81-0
10mm	657-82-0

Size	Code No.
10.5mm	657-83-0
11mm	657-84-0
11.5mm	657-85-0
12mm	657-86-0
12.5mm	657-87-0
13mm	657-88-0
13.5mm	657-89-0
14mm	657-90-0
14.5mm	657-91-0
15mm	657-92-0
15.5mm	657-93-0
16mm	657-94-0
16.5mm	657-95-0
17mm	657-96-0
17.5mm	657-97-0
18mm	657-98-0
18.5mm	657-99-0
19mm	658-00-0
19.5mm	658-01-0
20mm	658-02-0
20.5mm	658-03-0
21mm	658-04-0
21.5mm	658-05-0
22mm	658-06-0
22.5mm	658-07-0
23mm	658-08-0
23.5mm	658-09-0
24mm	658-10-0
24.5mm	658-11-0
25mm	658-12-0
30mm	658-13-0
40mm	658-14-0
50mm	658-15-0
60mm	658-16-0
70mm	658-17-0
75mm	658-18-0
80mm	658-19-0
90mm	658-20-0
100mm	658-21-0
-	-
-	-

## Caliper Calibration Gauge Sets

659 Series



659-31-1

### FEATURES

- DIN / GB Standard
- Material: Hardened Steel
- Grades 0 and 1 are available

### SPECIFICATIONS

For DIN Standard

Individual Blocks in Set	Grade	Code No.	
30.0mm, 41.3mm, 131.4mm, Master Ring: Ø4.0mm, Ø25.0mm	0-150mm	1	659-31-1
41.3mm, 131.4mm, 243.5mm, Master Ring: Ø4.0mm, Ø25.0mm	0-300mm	0	659-32-0

For GB Standard

Individual Blocks in Set	Grade	Code No.	
10mm, 20mm, 20mm, 41.2mm, 81.5mm, 121.8mm	0-150mm	1	659-41-1
10mm, 20mm, 20mm, 51.2mm, 121.5mm, 191.8mm	0-200mm	1	659-42-1
10mm, 20mm, 20mm, 101.2mm, 201.5mm, 291.8mm	0-300mm	1	659-43-1
10mm, 20mm, 20mm, 41.2mm, 51.2mm, 81.5mm, 101.2mm, 121.5mm, 121.8mm, 191.8mm, 201.5mm, 291.8mm	0-300mm	1	659-40-1

## Micrometer Calibration Gauge Sets

659 Series



659-71-1

### FEATURES

- DIN / GB Standard
- Steel or Ceramic, Grade 1

### SPECIFICATIONS

For DIN Standard

Blocks in Set	Range	Grade	Steel Set	Ceramic Set
			Code No.	Code No.
5.1mm, 10.3mm, 15.0mm, 20.2mm, 25.0mm	0-25mm	1	659-21-1	659-71-1

For GB Standard

Blocks in Set	Range	Grade	Steel Set	Ceramic Set
			Code No.	Code No.
5.12mm, 10.24mm, 15.36mm, 21.5mm, 25.0mm	0-25mm	1	659-22-1	659-72-1
5.12mm, 10.24mm, 15.36mm, 21.5mm, 25.0mm, 30.12mm, 35.24mm, 40.36mm, 46.5mm, 50.0mm, 55.12mm, 60.24mm, 65.36mm, 71.5mm, 75.0mm, 80.12mm, 85.24mm, 90.36mm, 96.5mm, 100mm	0-100mm	1	659-23-1	659-73-1



## Gauge Block Accessories

660 Series

### FEATURES

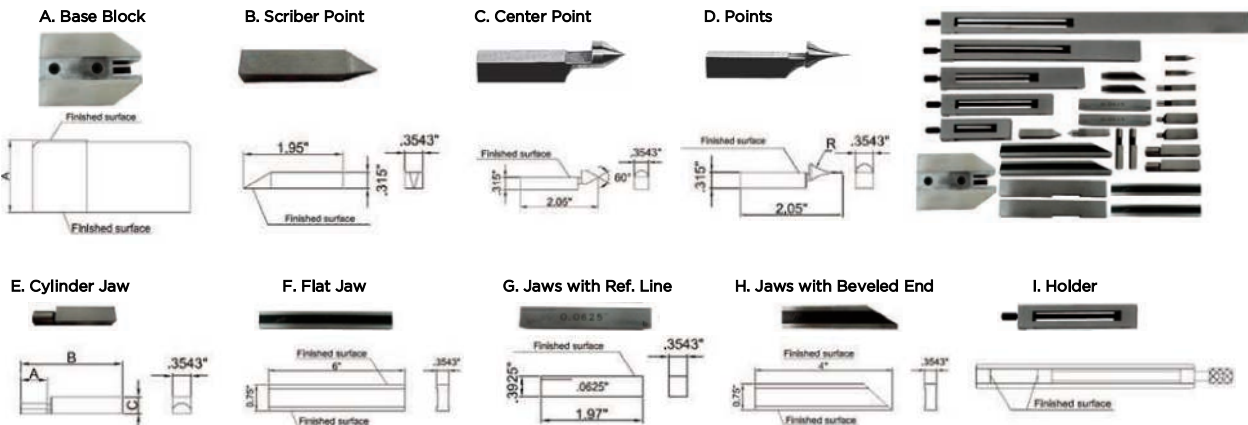
- The gauge block accessory set is used to firmly connect rectangular gauge blocks with the gauge holding devices. A series of universal precision measuring surfaces and base are provided to increase the measurement flexibility

### SPECIFICATIONS

Metric		12 pcs Set	17 pcs Set	
Description	Dimension	Individuals in Set	Individuals in Set	Code No.
Gauge Holder	0-50mm	1 pc	1 pc	<b>660-10-1</b>
	0-100mm	1 pc	1 pc	<b>660-10-2</b>
	100-200mm	1 pc	1 pc	<b>660-10-3</b>
Cylinder Jaws	R2 x 10mm	1 pair	1 pair	<b>660-11-1</b>
	R5 x 15mm	1 pair	1 pair	<b>660-11-2</b>
	R10 x 40mm	1 pair	1 pair	<b>660-11-3</b>
Scriber	15mm	1 pc	1 pc	<b>660-12-3</b>
Center Point	8 x 8mm	1 pc	1 pc	<b>660-12-4</b>
Parallel Jaw	8 x 19 x 100mm	-	1 pair	<b>660-12-7</b>
Base Block		1 pc	1 pc	<b>660-05-0</b>
Bevel Jaw	60mm	-	1 pair	<b>660-06-2</b>
Straight Edge	100mm	-	1 pc	<b>660-06-4</b>



Inch				27 pcs Set	14 pcs Set	
#	Description/Use	Dimension	Accuracy	Individuals in Set	Individuals in Set	Code No.
A	Base Block	4 x 2-3/4 x 1.7"	Height: $\pm 0.002$ "	1 pc	-	<b>660-05-5</b>
B	Scriber Point	1.950" Length	Flatness: $\pm 0.0002$ " / 2"	1 pc	-	<b>660-13-1</b>
C	Center Point	2.05" Length	Concentricity: $\pm 0.004$ "	1 pc	-	<b>660-13-4</b>
D	Points	2.05" Length	Concentricity: $\pm 0.002$ "	1 pair	-	<b>660-13-5</b>
E	Cylinder Jaws	Radius x A x B x C	Radius: $\pm 0.0003$ "			
		.1"x.236"x1.58"x.315"	Pair: $\pm 0.0004$ "	1 pair	1 pair	<b>660-14-1</b>
		.2"x.507"x1.965"x.315"		1 pair	1 pair	<b>660-14-2</b>
		.25"x.516"x2.366"x.315"		1 pair	1 pair	<b>660-14-3</b>
		.5"x.800"x2.945"x.512"		1 pair	1 pair	<b>660-14-4</b>
		.75"x1.2"x4.92"x.768"		1 pair	-	<b>660-14-5</b>
F	Flat Jaws	.750" Height, 6" Length	Parallelism: $\pm 0.0004$ "	1 pair	-	<b>660-13-7</b>
G	Jaws with Ref. Line	.0625" Ref. line	Line Height: $\pm 0.002$ "	1 pair	-	<b>660-14-6</b>
H	Jaws with Beveled End	.750" Height, 4" Length	Flatness: $\pm 0.0002$ " / 2"	1 pair	1 pair	<b>660-14-8</b>
		.750" Height, 6" Length		1 pair	1 pair	<b>660-14-9</b>
I	Holders	2.250" Capacity, 4.175" Length	Working surfaces	1 pcs	1 pc	<b>660-15-1</b>
		4.000" Capacity, 6.5" Length	accurately ground	1 pc	-	<b>660-15-2</b>
		6.000" Capacity, 8.5" Length	and lapped	1 pc	1 pc	<b>660-15-3</b>
		10.000" Capacity, 12" Length		1 pc	-	<b>660-15-4</b>



## Check Masters

660 / 661 Series



661-12-0

### FEATURES

- Check masters are used to provide the incremental positioning error during the calibration of Coordinate Measuring Machines or machine tools
- Can be used in either vertical or horizontal position
- The individual gauging surfaces are made of zirconium based ceramic that resist corrosion and provide stability to size change over time



660-12-0

### SPECIFICATIONS

Range	Pitch	Accuracy	Parallelism	Horizontal	Vertical
				Code No.	Code No.
<b>Inch</b>					
12"	1"/.5"	±.00005"	.00004"	<b>660-12-1</b>	<b>661-12-1</b>
24"	1"/.5"	±.00007"	.00006"	<b>660-24-1</b>	<b>661-24-1</b>
<b>Metric</b>					
300mm	20mm/10mm	±1.2µm	1µm	<b>660-12-0</b>	<b>661-12-0</b>
600mm	20mm/10mm	±1.8µm	1.5µm	<b>660-24-0</b>	<b>661-24-0</b>

Customized pitch for special purpose is available also

## Optical Flats and Parallels

605 Series



605-51-1

### FEATURES

- Used to verify the flatness and parallelism of micrometer measuring faces
- Each set has four individual thicknesses as per chart
- Flatness: 0.1µm. Parallelism: 0.2µm

### SPECIFICATIONS

#### Optical Flats

Dimensions	Flatness	Code No.
Ø45 x 15mm	0.03µm	<b>605-51-1</b>
Ø60 x 20mm	0.03µm	<b>605-51-3</b>



605-52-1

#### Optical Parallels Diameter: 30mm

Micrometers Range	Dimensions	Code No.
0-25mm	15.62, 15.75, 15.87, 16.00mm	<b>605-52-1</b>
25-50mm	40.62, 40.75, 40.87, 41.00mm	<b>605-52-2</b>
50-75mm	65.62, 65.75, 65.87, 66.00mm	<b>605-52-3</b>
75-100mm	90.62, 90.75, 90.87, 91.00mm	<b>605-52-4</b>

## Plug Gauges and Ring Gauges

670 / 675 Series



670-10-7



675-10-0

### FEATURES

- Hardened steel
- Plug Gauge Accuracy according to DIN 7162/7164
- Plug Gauge Sizes according to DIN 2245
- Ring Gauge Accuracy according to DIN 2250

### SPECIFICATIONS

#### Plug Gauges

Size	H7 Code No.
2mm	670-02-7
3mm	670-03-7
4mm	670-04-7
5mm	670-05-7
6mm	670-06-7
7mm	670-07-7
8mm	670-08-7
9mm	670-09-7
10mm	670-10-7
11mm	670-11-7
12mm	670-12-7
13mm	670-13-7
14mm	670-14-7
15mm	670-15-7
16mm	670-16-7
17mm	670-17-7
18mm	670-18-7
19mm	670-19-7
20mm	670-20-7
21mm	670-21-7
22mm	670-22-7
23mm	670-23-7
24mm	670-24-7
25mm	670-25-7
26mm	670-26-7
27mm	670-27-7
28mm	670-28-7
30mm	670-30-7
32mm	670-32-7

Size	H7 Code No.
34mm	670-34-7
35mm	670-35-7
36mm	670-36-7
37mm	670-37-7
38mm	670-38-7
40mm	670-40-7
42mm	670-42-7
44mm	670-44-7
45mm	670-45-7
46mm	670-46-7
47mm	670-47-7
48mm	670-48-7
50mm	670-50-7
52mm	670-52-7
55mm	670-55-7
60mm	670-60-7
62mm	670-62-7
65mm	670-65-7
68mm	670-68-7
70mm	670-70-7
72mm	670-72-7
75mm	670-75-7
80mm	670-80-7
85mm	670-85-7
90mm	670-90-7
95mm	670-95-7
98mm	670-98-7
100mm	671-00-7
-	-

#### Ring Gauge

Size	Code No.
2.0mm	675-02-0
2.2mm	675-02-2
2.5mm	675-02-5
2.8mm	675-02-8
3.0mm	675-03-0
3.5mm	675-03-5
4.0mm	675-04-0
4.5mm	675-04-5
5.0mm	675-05-0
6.0mm	675-06-0
7.0mm	675-07-0
8.0mm	675-08-0
9.0mm	675-09-0
10mm	675-10-0
11mm	675-11-0

Size	Code No.
12mm	675-12-0
13mm	675-13-0
14mm	675-14-0
15mm	675-15-0
16mm	675-16-0
17mm	675-17-0
18mm	675-18-0
19mm	675-19-0
20mm	675-20-0
21mm	675-21-0
22mm	675-22-0
23mm	675-23-0
24mm	675-24-0
25mm	675-25-0
26mm	675-26-0

Size	Code No.
27mm	675-27-0
28mm	675-28-0
30mm	675-30-0
32mm	675-32-0
33mm	675-33-0
34mm	675-34-0
35mm	675-35-0
36mm	675-36-0
37mm	675-37-0
38mm	675-38-0
40mm	675-40-0
42mm	675-42-0
44mm	675-44-0
45mm	675-45-0
46mm	675-46-0

Size	Code No.
47mm	675-47-0
48mm	675-48-0
50mm	675-50-0
52mm	675-52-0
55mm	675-55-0
58mm	675-58-0
60mm	675-60-0
62mm	675-62-0
65mm	675-65-0
68mm	675-68-0
70mm	675-70-0
72mm	675-72-0
75mm	675-75-0
80mm	675-80-0
82mm	675-82-0

Size	Code No.
85mm	675-85-0
88mm	675-88-0
90mm	675-90-0
92mm	675-92-0
95mm	675-95-0
98mm	675-98-0
100mm	676-00-0
125mm	676-12-5
150mm	676-50-0
175mm	676-17-5
200mm	676-00-1
225mm	676-22-5
250mm	676-50-1
275mm	676-27-5
-	-

## Thread Plug Gauges and Ring Gauges

68X Series



682-14-5



685-14-5



686-14-5

### FEATURES

- ISO-Metric Thread
- Per DIN 13

### SPECIFICATIONS

	Plug Gauge 6H	Ring Gauge"GO" 6g	Ring Gauge"NO GO" 6g
Size	Code No.	Code No.	Code No.
<b>ISO-Metric Coarse Thread</b>			
M2	680-02-0	-	-
M2.5	680-02-5	-	-
M3	680-03-0	683-03-1	684-03-0
M3.5	680-03-5	683-03-6	684-03-5
M4	680-04-2	683-04-1	684-04-0
M5	680-05-2	683-05-1	684-05-0
M6	680-06-2	683-06-1	684-06-0
M8	680-08-2	683-08-1	684-08-0
M9	680-09-2	683-09-1	684-09-0
M10	680-10-2	683-10-1	684-10-0
M12	680-12-2	683-12-1	684-12-0
M14	680-14-2	683-14-1	684-14-0
M16	680-16-2	683-16-1	684-16-0
M18	680-18-2	683-18-1	684-18-0
<b>ISO-Metric Fine Thread</b>			
M2.0x0.35	682-02-0	685-02-0	686-02-0
M2.2x0.35	682-02-8	685-02-8	686-02-8
M2.5x0.35	682-02-9	685-02-9	686-02-9
M3.0x0.35	682-03-0	685-03-0	686-03-0
M3.5x0.35	682-03-9	685-03-9	686-03-9
M4.0x0.35	682-04-0	685-04-0	686-04-0
M4.5x0.35	682-04-9	685-04-9	686-04-9
M5.0x0.35	682-05-0	685-05-0	686-05-0
M6.0x0.35	682-06-0	685-06-0	686-06-0
M4.0x0.5	682-04-1	685-04-1	686-04-1
M5.0x0.5	682-05-1	685-05-1	686-05-1
M6.0x0.5	682-06-1	685-06-1	686-06-1
M8.0x0.5	682-08-1	685-08-1	686-08-1
M10x0.5	682-10-1	685-10-1	686-10-1
M12x0.5	682-12-1	685-12-1	686-12-1
M6.0x0.75	682-06-2	685-06-2	686-06-2
M7.0x0.75	682-07-2	685-07-2	686-07-2
M8.0x0.75	682-08-2	685-08-2	686-08-2
M10x0.75	682-10-2	685-10-2	686-10-2
M12x0.75	682-12-2	685-12-2	686-12-2
M8.0x1	682-08-3	685-08-3	686-08-3
M9.0x1	682-09-3	685-09-3	686-09-3
M10x1	682-10-3	685-10-3	686-10-3
M11x1	682-11-3	685-11-3	686-11-3
M12x1	682-12-3	685-12-3	686-12-3
M14x1	682-14-3	685-14-3	686-14-3
M16x1	682-16-3	685-16-3	686-16-3
M18x1	682-18-3	685-18-3	686-18-3

	Plug Gauge 6H	Ring Gauge"GO" 6g	Ring Gauge"NO GO" 6g
Size	Code No.	Code No.	Code No.
M20	680-20-2	683-20-1	684-20-0
M22	680-22-2	683-22-1	684-22-0
M24	680-24-2	683-24-1	684-24-0
M27	680-27-2	683-27-1	684-27-0
M30	680-30-2	683-30-1	684-30-0
M33	680-33-2	683-33-1	684-33-0
M36	680-36-2	683-36-1	684-36-0
M39	680-39-2	683-39-1	684-39-0
M42	680-42-2	683-42-1	684-42-0
M45	680-45-2	683-45-1	684-45-0
M48	680-48-2	683-48-1	684-48-0
M52	680-52-2	683-52-1	684-52-0
M56	680-56-2	683-56-1	684-56-0
M60	680-60-2	683-60-1	684-60-0
M20x1	682-20-3	685-20-3	686-20-3
M21x1	682-21-3	685-21-3	686-21-3
M22x1	682-22-3	685-22-3	686-22-3
M23x1	682-23-3	685-23-3	686-23-3
M24x1	682-24-3	685-24-3	686-24-3
M25x1	682-25-3	685-25-3	686-25-3
M26x1	682-26-3	685-26-3	686-26-3
M27x1	682-27-3	685-27-3	686-27-3
M28x1	682-28-3	685-28-3	686-28-3
M30x1	682-30-3	685-30-3	686-30-3
M32x1	682-32-3	685-32-3	686-32-3
M33x1	682-33-3	685-33-3	686-33-3
M34x1	682-34-3	685-34-3	686-34-3
M35x1	682-35-3	685-35-3	686-35-3
M36x1	682-36-3	685-36-3	686-36-3
M38x1	682-38-3	685-38-3	686-38-3
M39x1	682-39-3	685-39-3	686-39-3
M40x1	682-40-3	685-40-3	686-40-3
M42x1	682-42-3	685-42-3	686-42-3
M45x1	682-45-3	685-45-3	686-45-3
M48x1	682-48-3	685-48-3	686-48-3
M50x1	682-50-3	685-50-3	686-50-3
M52x1	682-52-3	685-52-3	686-52-3
M55x1	682-55-3	685-55-3	686-55-3
M56x1	682-56-3	685-56-3	686-56-3
M58x1	682-58-3	685-58-3	686-58-3
M60x1	682-60-3	685-60-3	686-60-3
M62x1	682-62-3	685-62-3	686-62-3

## Thread Plug Gauges and Ring Gauges

68X Series

Size	Plug Gauge	Ring Gauge "GO"	Ring Gauge "NO GO"
	6H Code No.	6g Code No.	6g Code No.
<b>ISO-Metric Fine Thread</b>			
M64x1	682-64-3	685-64-3	686-64-3
M65x1	682-65-3	685-65-3	686-65-3
M68x1	682-68-3	685-68-3	686-68-3
M70x1	682-70-3	685-70-3	686-70-3
M72x1	682-72-3	685-72-3	686-72-3
M75x1	682-75-3	685-75-3	686-75-3
M76x1	682-76-3	685-76-3	686-76-3
M78x1	682-78-3	685-78-3	686-78-3
M80x1	682-80-3	685-80-3	686-80-3
M10x1.25	682-10-4	685-10-4	686-10-4
M12x1.25	682-12-4	685-12-4	686-12-4
M14x1.25	682-14-4	685-14-4	686-14-4
M12x1.5	682-12-5	685-12-5	686-12-5
M14x1.5	682-14-5	685-14-5	686-14-5
M16x1.5	682-16-5	685-16-5	686-16-5
M18x1.5	682-18-5	685-18-5	686-18-5
M20x1.5	682-20-5	685-20-5	686-20-5
M22x1.5	682-22-5	685-22-5	686-22-5
M24x1.5	682-24-5	685-24-5	686-24-5
M25x1.5	682-25-5	685-25-5	686-25-5
M26x1.5	682-26-5	685-26-5	686-26-5
M27x1.5	682-27-5	685-27-5	686-27-5
M28x1.5	682-28-5	685-28-5	686-28-5
M30x1.5	682-30-5	685-30-5	686-30-5
M32x1.5	682-32-5	685-32-5	686-32-5
M33x1.5	682-33-5	685-33-5	686-33-5
M34x1.5	682-34-5	685-34-5	686-34-5
M35x1.5	682-35-5	685-35-5	686-35-5
M36x1.5	682-36-5	685-36-5	686-36-5
M38x1.5	682-38-5	685-38-5	686-38-5
M40x1.5	682-40-5	685-40-5	686-40-5
M42x1.5	682-42-5	685-42-5	686-42-5
M45x1.5	682-45-5	685-45-5	686-45-5
M48x1.5	682-48-5	685-48-5	686-48-5
M50x1.5	682-50-5	685-50-5	686-50-5
M52x1.5	682-52-5	685-52-5	686-52-5
M55x1.5	682-55-5	685-55-5	686-55-5
M56x1.5	682-56-5	685-56-5	686-56-5
M58x1.5	682-58-5	685-58-5	686-58-5
M60x1.5	682-60-5	685-60-5	686-60-5
M62x1.5	682-62-5	685-62-5	686-62-5
M64x1.5	682-64-5	685-64-5	686-64-5
M65x1.5	682-65-5	685-65-5	686-65-5
M68x1.5	682-68-5	685-68-5	686-68-5
M70x1.5	682-70-5	685-70-5	686-70-5
M72x1.5	682-72-5	685-72-5	686-72-5
M75x1.5	682-75-5	685-75-5	686-75-5
M76x1.5	682-76-5	685-76-5	686-76-5
M78x1.5	682-78-5	685-78-5	686-78-5
M80x1.5	682-80-5	685-80-5	686-80-5
M18x2	682-18-6	685-18-6	686-18-6
M20x2	682-20-6	685-20-6	686-20-6
M22x2	682-22-6	685-22-6	686-22-6
M24x2	682-24-6	685-24-6	686-24-6
M26x2	682-26-6	685-26-6	686-26-6
M27x2	682-27-6	685-27-6	686-27-6

Size	Plug Gauge	Ring Gauge "GO"	Ring Gauge "NO GO"
	6H Code No.	6g Code No.	6g Code No.
M28x2	682-28-6	685-28-6	686-28-6
M30x2	682-30-6	685-30-6	686-30-6
M32x2	682-32-6	685-32-6	686-32-6
M33x2	682-33-6	685-33-6	686-33-6
M34x2	682-34-6	685-34-6	686-34-6
M35x2	682-35-6	685-35-6	686-35-6
M36x2	682-36-6	685-36-6	686-36-6
M38x2	682-38-6	685-38-6	686-38-6
M39x2	682-39-6	685-39-6	686-39-6
M40x2	682-40-6	685-40-6	686-40-6
M42x2	682-42-6	685-42-6	686-42-6
M45x2	682-45-6	685-45-6	686-45-6
M48x2	682-48-6	685-48-6	686-48-6
M50x2	682-50-6	685-50-6	686-50-6
M52x2	682-52-6	685-52-6	686-52-6
M55x2	682-55-6	685-55-6	686-55-6
M56x2	682-56-6	685-56-6	686-56-6
M58x2	682-58-6	685-58-6	686-58-6
M60x2	682-60-6	685-60-6	686-60-6
M62x2	682-62-6	685-62-6	686-62-6
M64x2	682-64-6	685-64-6	686-64-6
M68x2	682-68-6	685-68-6	686-68-6
M70x2	682-70-6	685-70-6	686-70-6
M72x2	682-72-6	685-72-6	686-72-6
M75x2	682-75-6	685-75-6	686-75-6
M76x2	682-76-6	685-76-6	686-76-6
M78x2	682-78-6	685-78-6	686-78-6
M80x2	682-80-6	685-80-6	686-80-6
M82x2	682-82-6	685-82-6	686-82-6
M85x2	682-85-6	685-85-6	686-85-6
M88x2	682-88-6	685-88-6	686-88-6
M90x2	682-90-6	685-90-6	686-90-6
M92x2	682-92-6	685-92-6	686-92-6
M95x2	682-95-6	685-95-6	686-95-6
M98x2	682-98-6	685-98-6	686-98-6
M100x2	683-00-6	685-00-6	686-00-6
M30x3	682-30-7	685-30-7	686-30-7
M33x3	682-33-7	685-33-7	686-33-7
M36x3	682-36-7	685-36-7	686-36-7
M39x3	682-39-7	685-39-7	686-39-7
M40x3	682-40-7	685-40-7	686-40-7
M42x3	682-42-7	685-42-7	686-42-7
M45x3	682-45-7	685-45-7	686-45-7
M48x3	682-48-7	685-48-7	686-48-7
M50x3	682-50-7	685-50-7	686-50-7
M52x3	682-52-7	685-52-7	686-52-7
M55x3	682-55-7	685-55-7	686-55-7
M56x3	682-56-7	685-56-7	686-56-7
M58x3	682-58-7	685-58-7	686-58-7
M60x3	682-60-7	685-60-7	686-60-7
M62x3	682-62-7	685-62-7	686-62-7
M64x3	682-64-7	685-64-7	686-64-7
M65x3	682-65-7	685-65-7	686-65-7
M68x3	682-68-7	685-68-7	686-68-7
M70x3	682-70-7	685-70-7	686-70-7
M72x3	682-72-7	685-72-7	686-72-7



## Whitworth Pipe Thread Plug Gauges and Ring Gauges 690 Series

- Right hand, DIN ISO 228

### SPECIFICATIONS

	Plug Gauge	Ring Gauge "GO"	Ring Gauge "NO GO"
Size	Code No.	Code No.	Code No.
G1/16	690-01-1	-	-
G1/8	690-02-1	690-02-3	690-02-4
G1/4	690-03-1	690-03-3	690-03-4
G3/8	690-04-1	690-04-3	690-04-4
G1/2	690-05-1	690-05-3	690-05-4
G5/8	690-06-1	690-06-3	690-06-4
G3/4	690-07-1	690-07-3	690-07-4
G7/8	690-08-1	690-08-3	690-08-4
G1	690-09-1	690-09-3	690-09-4

	Plug Gauge	Ring Gauge "GO"	Ring Gauge "NO GO"
Size	Code No.	Code No.	Code No.
G1-1/8	690-10-1	690-10-3	690-10-4
G1-1/4	690-11-1	690-11-3	690-11-4
G1-1/2	690-12-1	690-12-3	690-12-4
G1-3/4	690-13-1	690-13-3	690-13-4
G2	690-14-1	690-14-3	690-14-4
G2-1/4	690-15-1	690-15-3	690-15-4
G2-1/2	690-16-1	690-16-3	690-16-4
G2-3/4	690-17-1	690-17-3	690-17-4
G3	690-18-1	690-18-3	690-18-4

## NPT Thread Plug Gauges and Ring Gauges

690 Series

- NPT ANSI/ASME B.1.20.1\*



690-45-3



690-46-1

	Plug Gauge	Ring Gauge
Size	Code No.	Code No.
1/8"-27	690-41-1	690-41-3
1/4"-18	690-42-1	690-42-3
3/8"-18	690-43-1	690-43-3
1/2"-14	690-44-1	690-44-3
3/4"-14	690-45-1	690-45-3
-	-	-

	Plug Gauge	Ring Gauge
Size	Code No.	Code No.
1"-11.5	690-46-1	690-46-3
1-1/4"-11.5	690-47-1	690-47-3
1-1/2"-11.5	690-48-1	690-48-3
2"-11.5	690-49-1	690-49-3
2-1/2"-8	690-50-1	690-50-3
3"-8	690-51-1	690-51-3

## Inch Master Setting Ring Gauges

679 Series

### FEATURES

- Hardened steel

Size	Accuracy	Taper/Ovality	Code No.	Size	Accuracy	Taper/Ovality	Code No.
.100"	± .00004"	.000012"	679-01-0	1.800"	± .00008"	.000028"	679-11-0
.160"	± .00005"	.000015"	679-02-0	2.000"	± .00010"	.000031"	679-12-0
.175"	± .00005"	.000015"	679-03-0	2.800"	± .00010"	.000031"	679-13-0
.225"	± .00005"	.000015"	679-04-0	3.600"	± .00012"	.000039"	679-14-0
.240"	± .00005"	.000015"	679-05-0	4.000"	± .00012"	.000039"	679-19-0
.350"	± .00005"	.000015"	679-06-0	5.000"	± .00016"	.000047"	679-15-0
.500"	± .00006"	.000019"	679-07-0	7.000"	± .00016"	.000047"	679-16-0
.650"	± .00006"	.000019"	679-08-0	9.000"	± .00019"	.000055"	679-17-0
1.000"	± .00008"	.000024"	679-09-0	11.000"	± .00023"	.000062"	679-18-0
1.400"	± .00008"	.000028"	679-10-0	-	-	-	-



## ANSI Inch Thread Plug Gauges and Adjustable Ring Gauges

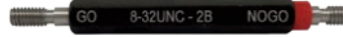
695 Series



695-21-0



695-21-1



695-41-2



695-32-5

### FEATURES

- Aluminum handle
- ANSI Standard

### SPECIFICATIONS

	Master Gauge "GO" (Class 2A)	Master Gauge "NO GO" (Class 2A)	Plug Gauge Double End (Class 2B)	Ring Gauge "GO" (Class 2A)	Ring Gauge "NO GO" (Class 2A)
Size	Code No.	Code No.	Code No.	Code No.	Code No.
0 - 80	695-01-0	695-01-1	695-01-2	695-01-4	695-01-5
1 - 64	695-02-0	695-02-1	695-02-2	695-02-4	695-02-5
1 - 72	695-03-0	695-03-1	695-03-2	695-03-4	695-03-5
2 - 56	695-04-0	695-04-1	695-04-2	695-04-4	695-04-5
2 - 64	695-05-0	695-05-1	695-05-2	695-05-4	695-05-5
3 - 48	695-06-0	695-06-1	695-06-2	695-06-4	695-06-5
3 - 56	695-07-0	695-07-1	695-07-2	695-07-4	695-07-5
4 - 40	695-08-0	695-08-1	695-08-2	695-08-4	695-08-5
4 - 48	695-09-0	695-09-1	695-09-2	695-09-4	695-09-5
5 - 40	695-10-0	695-10-1	695-10-2	695-10-4	695-10-5
5 - 44	695-11-0	695-11-1	695-11-2	695-11-4	695-11-5
6 - 32	695-12-0	695-12-1	695-12-2	695-12-4	695-12-5
6 - 40	695-13-0	695-13-1	695-13-2	695-13-4	695-13-5
8 - 32	695-14-0	695-14-1	695-14-2	695-14-4	695-14-5
8 - 36	695-15-0	695-15-1	695-15-2	695-15-4	695-15-5
10 - 24	695-16-0	695-16-1	695-16-2	695-16-4	695-16-5
10 - 32	695-17-0	695-17-1	695-17-2	695-17-4	695-17-5
12 - 24	695-18-0	695-18-1	695-18-2	695-18-4	695-18-5
12 - 28	695-19-0	695-19-1	695-19-2	695-19-4	695-19-5
1/4 - 20	695-20-0	695-20-1	695-20-2	695-20-4	695-20-5
1/4 - 28	695-21-0	695-21-1	695-21-2	695-21-4	695-21-5
1/4 - 32	695-22-0	695-22-1	695-22-2	695-22-4	695-22-5
5/16 - 18	695-23-0	695-23-1	695-23-2	695-23-4	695-23-5
5/16 - 24	695-24-0	695-24-1	695-24-2	695-24-4	695-24-5
5-16 - 32	695-25-0	695-25-1	695-25-2	695-25-4	695-25-5
3/8 - 16	695-26-0	695-26-1	695-26-2	695-26-4	695-26-5
3/8 - 24	695-27-0	695-27-1	695-27-2	695-27-4	695-27-5
3/8 - 32	695-28-0	695-28-1	695-28-2	695-28-4	695-28-5
7/16 - 14	695-29-0	695-29-1	695-29-2	695-29-4	695-29-5
7/16 - 20	695-30-0	695-30-1	695-30-2	695-30-4	695-30-5
7/16 - 28	695-31-0	695-31-1	695-31-2	695-31-4	695-31-5
1/2 - 13	695-32-0	695-32-1	695-32-2	695-32-4	695-32-5
1/2 - 20	695-33-0	695-33-1	695-33-2	695-33-4	695-33-5
1/2 - 28	695-34-0	695-34-1	695-34-2	695-34-4	695-34-5
9/16 - 12	695-35-0	695-35-1	695-35-2	695-35-4	695-35-5
9/16 - 18	695-36-0	695-36-1	695-36-2	695-36-4	695-36-5
9/16 - 24	695-37-0	695-37-1	695-37-2	695-37-4	695-37-5
5/8 - 11	695-38-0	695-38-1	695-38-2	695-38-4	695-38-5
5/8 - 18	695-39-0	695-39-1	695-39-2	695-39-4	695-39-5
5/8 - 24	695-40-0	695-40-1	695-40-2	695-40-4	695-40-5
3/4 - 10	695-41-0	695-41-1	695-41-2	695-41-4	695-41-5
3/4 - 16	695-42-0	695-42-1	695-42-2	695-42-4	695-42-5
3/4 - 20	695-43-0	695-43-1	695-43-2	695-43-4	695-43-5
7/8 - 9	695-44-0	695-44-1	695-44-2	695-44-4	695-44-5
7/8 - 14	695-45-0	695-45-1	695-45-2	695-45-4	695-45-5
7/8 - 20	695-46-0	695-46-1	695-46-2	695-46-4	695-46-5
1 - 8	695-47-0	695-47-1	695-47-2	695-47-4	695-47-5
1 - 12	695-48-0	695-48-1	695-48-2	695-48-4	695-48-5





## ANSI Metric Thread Plug Gauges and Ring Gauges 696 Series

### FEATURES

- Aluminum handle
- ANSI Standard

### SPECIFICATIONS

Size	Plug Gauge "GO" (6H) Code No.	Plug Gauge "NO GO" (6H) Code No.	Plug Gauge Double End (6H) Code No.	Ring Gauge "GO" (6g) Code No.	Ring Gauge "NO GO" (6g) Code No.
M1.6 X 0.35	696-01-0	696-01-1	696-01-2	-	-
M1.8 X 0.35	696-02-0	696-02-1	696-02-2	-	-
M2 X 0.4	696-03-0	696-03-1	696-03-2	-	-
M2.2 X 0.45	696-04-0	696-04-1	696-04-2	-	-
M2.5 X 0.45	696-05-0	696-05-1	696-05-2	696-05-4	696-05-5
M3 X 0.5	696-06-0	696-06-1	696-06-2	696-06-4	696-06-5
M3.5 X 0.6	696-07-0	696-07-1	696-07-2	696-07-4	696-07-5
M4 X 0.7	696-08-0	696-08-1	696-08-2	696-08-4	696-08-5
M4.5 X 0.75	696-09-0	696-09-1	696-09-2	696-09-4	696-09-5
M5 X 0.8	696-10-0	696-10-1	696-10-2	696-10-4	696-10-5
M6 X 1	696-11-0	696-11-1	696-11-2	696-11-4	696-11-5
M7 X 1	696-12-0	696-12-1	696-12-2	696-12-4	696-12-5
M8 X 1	696-13-0	696-13-1	696-13-2	696-13-4	696-13-5
M8 X 1.25	696-14-0	696-14-1	696-14-2	696-14-4	696-14-5
M10 X 1.25	696-15-0	696-15-1	696-15-2	696-15-4	696-15-5
M10 X 1.5	696-16-0	696-16-1	696-16-2	696-16-4	696-16-5
M12 X 1.25	696-17-0	696-17-1	696-17-2	696-17-4	696-17-5
M12 X 1.75	696-18-0	696-18-1	696-18-2	696-18-4	696-18-5
M14 X 1.5	696-19-0	696-19-1	696-19-2	696-19-4	696-19-5
M14 X 2	696-20-0	696-20-1	696-20-2	696-20-4	696-20-5
M16 X 1.5	696-21-0	696-21-1	696-21-2	696-21-4	696-21-5
M16 X 2	696-22-0	696-22-1	696-22-2	696-22-4	696-22-5
M18 X 1.5	696-23-0	696-23-1	696-23-2	696-23-4	696-23-5
M18 X 2.5	696-24-0	696-24-1	696-24-2	696-24-4	696-24-5
M20 X 1.5	696-25-0	696-25-1	696-25-2	696-25-4	696-25-5
M20 X 2.5	696-26-0	696-26-1	696-26-2	696-26-4	696-26-5
M22 X 1.5	696-27-0	696-27-1	696-27-2	696-27-4	696-27-5
M24 X 2	696-28-0	696-28-1	696-28-2	696-28-4	696-28-5
M24 X 3	696-29-0	696-29-1	696-29-2	696-29-4	696-29-5
M27 X 2	696-30-0	696-30-1	696-30-2	696-30-4	696-30-5
M27 X 3	696-31-0	696-31-1	696-31-2	696-31-4	696-31-5
M30 X 2	696-32-0	696-32-1	696-32-2	696-32-4	696-32-5
M30 X 3.5	696-33-0	696-33-1	696-33-2	696-33-4	696-33-5
M33 X 2	696-34-0	696-34-1	696-34-2	696-34-4	696-34-5
M33 X 3.5	696-35-0	696-35-1	696-35-2	696-35-4	696-35-5
M36 X 3	696-36-0	696-36-1	696-36-2	696-36-4	696-36-5
M36 X 4	696-37-0	696-37-1	696-37-2	696-37-4	696-37-5
M39 X 3	696-38-0	696-38-1	696-38-2	696-38-4	696-38-5
M39 X 4	696-39-0	696-39-1	696-39-2	696-39-4	696-39-5

## Individual Inspection Gauge Balls

679 Series



### FEATURES

- Chrome steel hardened to 63 HRC
- Ground and lapped
- Grade 25 accuracy - AFBMA certified
- Certificate NOT supplied with individual gauge balls

### SPECIFICATIONS

Size	Code No.	Size	Code No.
1/16"	679-22-0	1/2"	679-38-0
3/32"	679-24-0	17/32"	679-39-0
1/8"	679-25-0	9/16"	679-40-0
9/64"	679-26-0	19/32"	679-41-0
5/32"	679-27-0	5/8"	679-42-0
3/16"	679-28-0	21/32"	679-43-0
7/32"	679-29-0	11/16"	679-44-0
1/4"	679-30-0	23/32"	679-45-0
9/32"	679-31-0	3/4"	679-46-0
5/16"	679-32-0	25/32"	679-47-0
11/32"	679-33-0	13/16"	679-48-0
3/8"	679-34-0	7/8"	679-49-0
13/32"	679-35-0	15/16"	679-50-0
7/16"	679-36-0	1"	679-51-0
15/32"	679-37-0	-	-

Size	Code No.	Size	Code No.
1mm	679-57-0	14mm	679-70-0
2mm	679-58-0	15mm	679-71-0
3mm	679-59-0	16mm	679-72-0
4mm	679-60-0	17mm	679-73-0
5mm	679-61-0	18mm	679-74-0
6mm	679-62-0	19mm	679-75-0
7mm	679-63-0	20mm	679-76-0
8mm	679-64-0	21mm	679-77-0
9mm	679-65-0	22mm	679-78-0
10mm	679-66-0	23mm	679-79-0
11mm	679-67-0	24mm	679-80-0
12mm	679-68-0	25mm	679-81-0
13mm	679-69-0	-	-

## Precision Inspection Gauge Ball Sets

679 Series



### FEATURES

- Meets all grade 25 AFBMA standards
- Chrome alloy steel, hardened to 63 HRC
- Surface finish to 1.5 Micro-Inches
- Within .0001"/0.0025 mm of actual size
- Spherical accuracy within 0.000025"/0.0006 mm
- Inches - includes: 32 pairs in Inch sizes 1/32" to 1"
- Metric - includes: 25 pairs in Metric sizes 1mm to 25 mm in 1 mm increments

### SPECIFICATIONS

	QTY	Description	Code No.
Ball Set - Inch	26 Pair	1/32" to 1"	679-90-1
Ball Set - Metric	25 Pair	1mm to 25 mm in 1 mm increments	679-90-0

## 36 pcs Round Space Block Set

679 Series



### FEATURES

- For quickly setting stops and set ups in lathes, milling machines, drill presses, etc. Also excellent for setting sine bars
- Each block marked for size. Overall diameter: .750"
- 1/4"-28 threaded hole through center of block
- Working surfaces hardened to HRC 58-60
- Working surfaces precision ground and lapped to  $\pm .000050$ "
- 4 connecting screws supplied to form desired length

### SPECIFICATIONS

Description	Included	Code No.
36 PCS Set	.050, .060, .0625, .070, .080, .090, .100, .101, .102, .103, .104, .105, .106, .107, .108, .109, .110, .120, .125, .130, .140, .150, .160, .170, .180, .190, .200, .300, .400, .500, .600, .700, .800, .900, 1.00 (2 ea.)	679-95-0

## Individual Pin Gauges



### SPECIFICATIONS

Inch		Bright Finish
Size	Tolerance	Code No.
.011" - 1.000" x 0.001 step	+0/-0.0002 Minus	21-0011 to 21-1000
.011" - 1.000" x 0.001 step	+0.0002/-0 Plus	22-0011 to 22-1000

Metric		
Size	Accuracy	Code No.
0.10 - 10.00 x 0.01 step	$\pm 0.0008\text{mm}$	800-01-0 to 801-00-0
10.01 - 20.00 x 0.01 step	$\pm 0.0015\text{mm}$	801-00-1 to 802-00-0
20.01 - 30.00 x 0.01 step	$\pm 0.0020\text{mm}$	802-00-1 to 803-00-0
0.20 - 10.00 x 0.001 step	$\pm 0.0008\text{mm}$	810-02-00 to 811-00-00
0.10 - 30.00 x 0.01 step	+0.002mm/0	P800-01-0 to P803-00-0
0.10 - 30.00 x 0.01 step	0/-0.002mm	M800-01-0 to M803-00-0

# GAUGES



## Pin Gauge Sets

697 Series



### FEATURES

- For quick and accurate measurements. Measure hole sizes, slot widths, calculate distances between holes, use as Go/NoGo gaging, etc.
- Furnished in attractive molded plastic case.
- Class ZZ guaranteed to .0002"/0.005 mm tolerance limit.
- Inspected with equipment which has been calibrated and is traceable to NIST.
- Marked with size and direction of tolerance on gauge over .060"/1.5 mm.
- Hardened drill rod RC 60-62, 2 inches long.
- 10 micron finish or better.
- Certificate of accuracy included.

### SPECIFICATIONS

Qty	Range	Surface	Accuracy: +0.0002" -0"		Accuracy: -0.0002" +0"	
			Code No.	Code No.	Code No.	Code No.
<b>Sets</b>						
50	.011" - .060" x 0.001 step	Bright Finish	697-01-0		697-01-2	
190	.061" - .250" x 0.001 step	Bright Finish	697-02-0		697-02-2	
250	.251" - .500" x 0.001 step	Bright Finish	697-03-0		697-03-2	
125	.501" - .625" x 0.001 step	Bright Finish	697-04-0		697-04-2	
125	.626" - .750" x 0.001 step	Bright Finish	697-05-0		697-05-2	
82	.751" - .832" x 0.001 step	Bright Finish	697-06-0		697-06-2	
84	.833" - .916" x 0.001 step	Bright Finish	697-07-0		697-07-2	
84	.917" - 1.000" x 0.001 step	Bright Finish	697-08-0		697-08-2	

## Pin Gauge Handles

697 Series



### FEATURES

- Comfortable, ergonomically designed handle for pin gauge
- Can be used with GO pin (green) on one end, NO GO pin (red) on opposite end

### SPECIFICATIONS

Gauge Size Range	Code No.
0.011" - 0.060"	697-41-0
0.061" - 0.250"	697-41-1
0.251" - 0.500"	697-41-2
0.501" - 0.625"	697-41-3
0.626" - 0.750"	697-41-4
0.751" - 0.832"	697-41-5
0.833" - 1.000"	697-41-6

## Pin Gauge Sets

698 \ 699 Series

### SPECIFICATIONS

Range	Step	Length	Accuracy
0.05 - 0.09mm step	0.01mm	5-10mm	±0.5µm
0.10 - 0.19mm step	0.01mm	40mm	±0.8µm
0.200 - 0.999mm step	0.01mm	40mm	±0.8µm
1.000 - 10.000mm step	0.01mm	50mm	±0.8µm
10.01 - 20.00mm step	0.01mm	50mm	±1.5µm
20.01 - 30.00mm step	0.01mm	50mm	±2µm

Qty	Range	Code No.	Qty	Range	Code No.
<b>Metric Sets</b>		<b>Code No.</b>	<b>Metric Sets</b>		<b>Code No.</b>
24	0.06 - 0.29mm x 0.01mm step	<b>698-20-0</b>	51	0.50 - 0.75mm x 0.005mm step	<b>698-20-1</b>
31	0.20 - 0.50mm x 0.01mm step	<b>698-21-0</b>	51	0.75 - 1.00mm x 0.005mm step	<b>698-21-1</b>
51	0.50 - 1.00mm x 0.01mm step	<b>698-22-0</b>	51	1.00 - 1.25mm x 0.005mm step	<b>698-22-1</b>
51	1.00 - 1.50mm x 0.01mm step	<b>698-23-0</b>	51	1.25 - 1.50mm x 0.005mm step	<b>698-23-1</b>
51	1.50 - 2.00mm x 0.01mm step	<b>698-24-0</b>	51	1.50 - 1.75mm x 0.005mm step	<b>698-24-1</b>
51	2.00 - 2.50mm x 0.01mm step	<b>698-25-0</b>	51	1.75 - 2.00mm x 0.005mm step	<b>698-25-1</b>
51	2.50 - 3.00mm x 0.01mm step	<b>698-26-0</b>	51	2.00 - 2.25mm x 0.005mm step	<b>698-26-1</b>
51	3.00 - 3.50mm x 0.01mm step	<b>698-27-0</b>	51	2.25 - 2.50mm x 0.005mm step	<b>698-27-1</b>
51	3.50 - 4.00mm x 0.01mm step	<b>698-28-0</b>	51	2.50 - 2.75mm x 0.005mm step	<b>698-28-1</b>
51	4.00 - 4.50mm x 0.01mm step	<b>698-29-0</b>	51	2.75 - 3.00mm x 0.005mm step	<b>698-29-1</b>
51	4.50 - 5.00mm x 0.01mm step	<b>698-30-0</b>	51	3.00 - 3.25mm x 0.005mm step	<b>698-30-1</b>
51	5.00 - 5.50mm x 0.01mm step	<b>698-31-0</b>	51	3.25 - 3.50mm x 0.005mm step	<b>698-31-1</b>
51	5.50 - 6.00mm x 0.01mm step	<b>698-32-0</b>	51	3.50 - 3.75mm x 0.005mm step	<b>698-32-1</b>
51	6.00 - 6.50mm x 0.01mm step	<b>698-33-0</b>	51	3.75 - 4.00mm x 0.005mm step	<b>698-33-1</b>
51	6.50 - 7.00mm x 0.01mm step	<b>698-34-0</b>	51	4.00 - 4.25mm x 0.005mm step	<b>698-34-1</b>
51	7.00 - 7.50mm x 0.01mm step	<b>698-35-0</b>	51	4.25 - 4.50mm x 0.005mm step	<b>698-35-1</b>
51	7.50 - 8.00mm x 0.01mm step	<b>698-36-0</b>	51	4.50 - 4.75mm x 0.005mm step	<b>698-36-1</b>
51	8.00 - 8.50mm x 0.01mm step	<b>698-37-0</b>	51	4.75 - 5.00mm x 0.005mm step	<b>698-37-1</b>
51	8.50 - 9.00mm x 0.01mm step	<b>698-38-0</b>	51	5.00 - 5.25mm x 0.005mm step	<b>698-38-1</b>
51	9.00 - 9.50mm x 0.01mm step	<b>698-39-0</b>	51	5.25 - 5.50mm x 0.005mm step	<b>698-39-1</b>
51	9.50 - 10.00mm x 0.01mm step	<b>698-40-0</b>	51	5.50 - 5.75mm x 0.005mm step	<b>698-40-1</b>
51	10.00 - 10.50mm x 0.01mm step	<b>698-41-0</b>	51	5.75 - 6.00mm x 0.005mm step	<b>698-41-1</b>
51	10.50 - 11.00mm x 0.01mm step	<b>698-42-0</b>	51	6.00 - 6.25mm x 0.005mm step	<b>698-42-1</b>
51	11.00 - 11.50mm x 0.01mm step	<b>698-43-0</b>	51	6.25 - 6.50mm x 0.005mm step	<b>698-43-1</b>
51	11.50 - 12.00mm x 0.01mm step	<b>698-44-0</b>	51	6.50 - 6.75mm x 0.005mm step	<b>698-44-1</b>
51	12.00 - 12.50mm x 0.01mm step	<b>698-45-0</b>	51	6.75 - 7.00mm x 0.005mm step	<b>698-45-1</b>
51	12.50 - 13.00mm x 0.01mm step	<b>698-46-0</b>	51	7.00 - 7.25mm x 0.005mm step	<b>698-46-1</b>
51	13.00 - 13.50mm x 0.01mm step	<b>698-47-0</b>	51	7.25 - 7.50mm x 0.005mm step	<b>698-47-1</b>
51	13.50 - 14.00mm x 0.01mm step	<b>698-48-0</b>	51	7.50 - 7.75mm x 0.005mm step	<b>698-48-1</b>
51	14.00 - 14.50mm x 0.01mm step	<b>698-49-0</b>	51	7.75 - 8.00mm x 0.005mm step	<b>698-49-1</b>
51	14.50 - 15.00mm x 0.01mm step	<b>698-50-0</b>	51	8.00 - 8.25mm x 0.005mm step	<b>698-50-1</b>
51	15.00 - 15.50mm x 0.01mm step	<b>698-51-0</b>	51	8.25 - 8.50mm x 0.005mm step	<b>698-51-1</b>
51	15.50 - 16.00mm x 0.01mm step	<b>698-52-0</b>	51	8.50 - 8.75mm x 0.005mm step	<b>698-52-1</b>
51	16.00 - 16.50mm x 0.01mm step	<b>698-53-0</b>	51	8.75 - 9.00mm x 0.005mm step	<b>698-53-1</b>
51	16.50 - 17.00mm x 0.01mm step	<b>698-54-0</b>	51	9.00 - 9.25mm x 0.005mm step	<b>698-54-1</b>
51	17.00 - 17.50mm x 0.01mm step	<b>698-55-0</b>	51	9.25 - 9.50mm x 0.005mm step	<b>698-55-1</b>
51	17.50 - 18.00mm x 0.01mm step	<b>698-56-0</b>	51	9.50 - 9.75mm x 0.005mm step	<b>698-56-1</b>
51	18.00 - 18.50mm x 0.01mm step	<b>698-57-0</b>	51	9.75 - 10.00mm x 0.005mm step	<b>698-57-1</b>
51	18.50 - 19.00mm x 0.01mm step	<b>698-58-0</b>	50	0.300 - 1.525mm x 0.025mm step	<b>699-21-0</b>
51	19.00 - 19.50mm x 0.01mm step	<b>698-59-0</b>	190	1.550 - 6.275mm x 0.025mm step	<b>699-22-0</b>
51	19.50 - 20.00mm x 0.01mm step	<b>698-60-0</b>	140	6.300 - 9.775mm x 0.025mm step	<b>699-23-0</b>
20	0.10 - 0.29mm x 0.01mm step	<b>699-20-0</b>	110	9.800 - 12.525mm x 0.025mm step	<b>699-24-0</b>
61	13.0 - 19.0mm x 0.1mm step	<b>699-26-0</b>	18	12.550 - 12.975mm x 0.025mm step	<b>699-25-0</b>