

# INSPECTION BALL KITS

## GRADE 25 CHROME STEEL (R/C 60 MIN.)



Inspection ball kits are available from stock in the 14 most popular English sizes from 3/32" to 1.00", individually or all in a kit. The kit for each individual size contains 7 balls. A nominal fractional ball as well as one each of a +0.002", +001", +0005", +0002", and -0.001", -002". Kit BK-14 consists of all 14 individual size kits. The inspection ball kits are also excellent for ball sizing parts. Ball sizing is basically pushing a ball through a hole or tube which produces a certain finish or size.

Part #	Nominal Size		Price
BK-14	14 Sizes From 3/32" - 1" Kit	—	\$614.63
093-BK	3/32"	2.381 mm	44.17
125-BK	1/8"	3.175 mm	44.17
156-BK	5/32"	3.969 mm	44.17
187-BK	3/16"	4.763 mm	44.17
218-BK	7/32"	5.556 mm	44.17
250-BK	1/4"	6.35 mm	44.17
312-BK	5/16"	7.938 mm	46.03
375-BK	3/8"	9.525 mm	47.89
437-BK	7/16"	11.113 mm	47.89
500-BK	1/2"	12.7 mm	53.41
625-BK	5/8"	15.875 mm	53.41
750-BK	3/4"	19.05 mm	62.66
875-BK	7/8"	22.225 mm	73.71
100-BK	1"	25.4 mm	73.71

DECIMAL DIAMETER BALLS, OTHER MATERIALS AND  
TOLERANCES AVAILABLE

CALL FOR PRICING & DELIVERY

### Grade 25

BASIC DIAMETER

TOLERANCE =  $\pm .0001$

DEVIATION FROM  
SPHERICAL FORM  
.000025

**WILLIAM T. HUTCHINSON CO.**

TOLL FREE 1-800-544-7934 • (908) 688-0533 • FAX (908) 688-8296 • ESTABLISHED 1927

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# CLASS X MEYER GAGE MG-25 SERIES



## MG-25 PIN GAGE SETS

IN .0001" INCREMENTS OR .01mm INCREMENTS

Used as masters to calibrate measuring equipment and check linearity of comparators, micrometers, and calipers. These "Tenth Step" gage sets have unlimited applications, such as quality control inspection, prototype work and production layout. Inspectors select from the range of pins to find the size of a hole or slot. These round masters simulate a cylindrical part which unlike flat blocks can detect uneven wear on the tips of micrometers and calipers. The thin "line" of contact detects uneven face wear better than flat gage blocks with large contact area.

**SEE PAGE 67 FOR  
MORE CLASS X GAGE SETS**

### FEATURES:

- Each set contains 25 pieces of Class X tolerance (.00004") gage pins. Traceable to NIST.
- Choice of two tolerances Plus (+.00004") or Minus (-.00004").
- Sets consist of a center nominal size, and 12 gages larger in .0001" steps and 12 gages smaller in .0001" steps.
- Each gage is inspected and has a 2 micro-finish or better.
- Heat treated and through hardened to 60-62 Rockwell C.
- All pin gages over .060" or 1.51mm are laser marked with size direction of tolerance and serial number for traceability.

GAGE SET NO.	NOMINAL SIZE RANGE		SET PRICE
	<i>English</i>	<i>or Metric</i>	
MG1-25	.0110 to .0609	.28mm to 1.54mm	\$426.48
MG2-25	.0610 to .2509	1.55mm to 6.37mm	\$212.16
MG3-25	.2510 to .5009	6.38mm to 12.72mm	\$244.59
MG4-25	.5010 to .7499	12.73mm to 19.04mm	\$337.54
MG5-25	.7500 to .8129	19.05mm to 20.64mm	\$472.58

To order simply select your nominal size from any .0001" English or .01mm Metric increment and direction of tolerance. Then refer to the above chart to find the set price.

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# PRECISION PLUG GAGE SETS



## METRIC GAGE SETS

Gage Set Number	Gage Size	No. of Members	Price	Separate Member Price	Gage Set Number	Gage Size	No. of Members	Price	Separate Member Price
WTH-0	.011 - .060	50	95.31	4.54	WTH-0 mm	.22mm - 1.50mm	65	123.90	5.57
WTH-0-5	.0115 - .0605	50	100.31	4.54	WTH-01 mm	.23mm - 1.51mm	65	128.90	5.57
WTH-1	.061 - .250	190	214.43	4.06	WTH-1 mm	1.52mm - 7.70mm	310	436.79	5.06
WTH-1-5	.0615 - .2505	190	219.43	4.06	WTH-11 mm	1.53mm - 7.71mm	310	441.79	5.06
WTH-10	.011 - .250	240	293.84	—	WTH-2 mm	7.72mm - 12.70mm	250	470.15	5.06
WTH-105	.0115 - .2505	240	293.84	—	WTH-21 mm	7.73mm - 12.71mm	250	475.15	5.06
WTH-2	.251 - .500	250	317.66	4.06	WTH-3 mm	12.72mm - 15.30mm	130	650.98	6.37
WTH-2-5	.2515 - .5005	250	322.66	4.06	WTH-31 mm	12.73mm - 15.31mm	130	625.98	6.37
WTH-3	.501 - .625	125	373.27	5.57	WTH-4 mm	15.32mm - 17.80mm	125	552.74	9.99
WTH-3-5	.5015 - .6255	125	378.27	5.57	WTH-41 mm	15.33mm - 17.81mm	125	557.74	9.99
WTH-4	.626 - .750	125	412.97	8.09	WTH-5 mm	17.82mm - 20.36mm	128	656.19	12.01
WTH-4-5	.6265 - .7505	125	417.97	8.09	WTH-51 mm	17.83mm - 20.37mm	128	661.19	12.01
WTH-5	.751 - .832	82	701.39	12.14	WTH-6 mm	20.38mm - 22.04mm	84	785.55	14.07
WTH-5-5	.7515 - .8325	82	716.39	12.14	WTH-61 mm	20.39mm - 22.05mm	84	790.55	14.07
WTH-6	.833 - .916	84	818.27	13.87	WTH-7 mm	22.06mm - 23.72mm	84	907.13	15.76
WTH-6-5	.8335 - .9165	84	823.27	13.87	WTH-71 mm	22.07mm - 22.73mm	84	912.13	15.76
WTH-7	.917 - 1.000	84	857.25	14.34	WTH-8 mm	23.74mm - 25.40mm	84	932.06	17.72
WTH-7-5	.9175 - 1.0005	84	862.25	14.34	WTH-81 mm	23.75mm - 25.41mm	84	937.06	17.72

IN .02mm INCREMENTS

IN .001 INCREMENTS

### IMPORTANT: SPECIFY PLUS OR MINUS TOLERANCE WHEN ORDERING GAGES

#### PLASTIC CASES

EACH HOLE SIZE MARKED ON INSERT.

Plastic insert for WTH-0 set .....	\$16.00 each
Plastic insert for WTH-1 thru WTH-8 sets .....	33.06 each
Plastic case for WTH-0 set .....	16.53 each
Plastic case for WTH-1 thru WTH-7 sets .....	33.06 each
Plastic case with insert for WTH-0 set .....	33.06 each
Plastic case with insert for WTH-1 thru WTH-7 sets .....	66.13 each

#### USES

- Checking locations.
- Measuring hole sizes and depths
- Go and No-Go gaging.
- Setting micrometers.
- Checking distances between holes.

#### FEATURES

- All Gages 2" long
- No sharp edges
- Boxes and Gages both marked (WTH-0 pins not etched)
- 8 Micro finish or better
- All english gages are inspected within .0001 tolerance limits
- All metric gages are inspected within .0025mm tolerance limits
- Heat treated to a hardness of Rockwell C 60-62
- Each set packaged in its own plastic case

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# PRECISION PLUG GAGE SETS



## CLASS X GAGE SETS .001 INCREMENTS

Gage Set	Range	Number of Members	Price	Separate Member Price
WTH-OX	.011" - .060"	50	499.74	20.09
WTH-O5X	.0115 - .0605	50	499.74	20.09
WTH-1X	.061 - .250	190	1313.22	20.09
WTH-15X	.0615 - .2505	190	1313.22	20.09
WTH-2X	.251 - .500	250	1737.06	16.24
WTH-25X	.2515 - .5005	250	1737.06	16.24
WTH-3X	.501 - .625	125	1475.17	23.08
WTH-35	.5015 - .6255	125	1475.17	23.08
WTH-4X	.626 - .750	125	1563.36	23.08
WTH-45	.6265 - .7505	125	1563.36	23.08
WTH-5X\	.751 - .832	82	1313.49	28.62
WTH-55X	.7515 - .8325	82	1313.49	28.62
WTH-6X	.833 - .916	84	1382.97	28.62
WTH-65X	.8335 - .9165	84	1382.97	28.62
WTH-7X	.917 - 1.000	84	1586.07	28.62
WTH-75X	.9175 - 1.0005	84	1586.07	28.62

.000040 tolerance • Each set packaged in Plastic Case and Insert.

**GAGE SET LIBRARIES:** Conveniently store all your gages in one location  
**IMPORTANT! Specify plus or minus tolerance when ordering gages**

### .0001 (CLASS Z) LIBRARY SERIES

Model Number	Wt./lbs.	Range	Number of members	Price
L-S	87	.011" - .625"	(615 gages)	1,190.17
L-C	120	.011" - .750"	(740 gages)	1,723.86
L-1	120	.061" - .750"	(690 gages)	1,645.92
L-2	95	.061" - .5005"	(880 gages in .0005" increments)	1,396.54
L-2C	96	.011" - .5005"	(980 gages in .0005" increments)	1,552.40
L-3*	240	.061" - 1.000"	(940 gages)	4,195.83
L-4*	240	.011" - 1.000"	(990 gages)	4,273.76
L-5	140	.751" - 1.000"	(250 gages)	2,744.75

### .00004 (CLASS X) LIBRARY SERIES

Model Number	Wt./lbs.	Range	Number of members	Price
L-CX	120	.011" - .750"	(740 gages)	6,512.65
L-1X	122	.061" - .750"	(690 gages)	6,039.63
L-2X	98	.061" - .5005"	(880 gages in .0005 increments)	5,936.74
L-2CX	100	.011" - .5005"	(980 gages in .0005" increments)	6,787.90
L-3X*	260	.061" - 1.000"	(940 gages)	10,203.23
L-4X*	250	.011" - 1.000"	(990 gages)	10,606.76

\* Consists of one seven drawer cabinet.

### METRIC LIBRARY SERIES (.0025mm)

Model Number	Wt./lbs.	Range	Number of members	Price
L-10 mm	124	1.52mm - 17.80mm	(815 gages)	2,295.87
L-11 mm	124	1.53mm - 17.81mm	(815 gages)	2,295.87
L-20 mm	183	17.82mm - 25.40mm	(380 gages)	3,633.17
L-21 mm	183	17.83mm - 25.41mm	(380 gages)	3,633.17
L-30 mm**	305	1.52mm - 25.40mm	(1195 gages)	5,929.02
L-31 mm**	305	1.53mm - 25.41mm	(1195 gages)	5,929.02

\*\*Consists of 2 four drawer cabinets

### Upgrade Existing Sets

Model Number	Wt./lbs.	Description	Price
L-E 4	38	four drawer cabinet empty	412.50
L-IN 4	46	four drawer cabinet with four inserts of your choice	505.99

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# REVERSIBLE PLUG GAGES

Hutchinson HSS gages are an ideal low cost solution to a variety of dimensioning problems.

All gage members are made of M2 high speed steel hardness "C" 62-64.



**YOUR CHOICE OF THREE TOLERANCES**

+ .0002	+ .0000	+ .0001
- .0000	- .0002	- .0001

## 2" LONG HSS GAGE MEMBER PRICES

<table style="width: 100%; border-collapse: collapse;"> <tr><td>.0030-.0049 ..... 16.81</td></tr> <tr><td>.076 MM - .126 MM</td></tr> <tr><td>.0050-.0069 ..... 15.76</td></tr> <tr><td>.127 MM - .176 MM</td></tr> <tr><td>.0070-.0099 ..... 13.13</td></tr> <tr><td>.177 MM - .253 MM</td></tr> <tr><td>.0100-.0200 ..... 4.48</td></tr> <tr><td>.254 MM - .508 MM</td></tr> <tr><td>.0201-.0312 ..... 4.26</td></tr> <tr><td>.511 MM - .793 MM</td></tr> <tr><td>.0313-.0938 ..... 3.70</td></tr> <tr><td>.795 MM - 2.383 MM</td></tr> <tr><td>.0939 - .1250 ..... 3.91</td></tr> <tr><td>2.385MM - 3.175 MM</td></tr> <tr><td>.1251 - .1875 ..... 5.04</td></tr> <tr><td>3.178 MM - 4.763 MM</td></tr> <tr><td>.1876 - .2500 ..... 5.49</td></tr> <tr><td>4.765 MM - 6.350 MM</td></tr> </table>	.0030-.0049 ..... 16.81	.076 MM - .126 MM	.0050-.0069 ..... 15.76	.127 MM - .176 MM	.0070-.0099 ..... 13.13	.177 MM - .253 MM	.0100-.0200 ..... 4.48	.254 MM - .508 MM	.0201-.0312 ..... 4.26	.511 MM - .793 MM	.0313-.0938 ..... 3.70	.795 MM - 2.383 MM	.0939 - .1250 ..... 3.91	2.385MM - 3.175 MM	.1251 - .1875 ..... 5.04	3.178 MM - 4.763 MM	.1876 - .2500 ..... 5.49	4.765 MM - 6.350 MM	<table style="width: 100%; border-collapse: collapse;"> <tr><td>.2501-.3125 ..... 5.99</td></tr> <tr><td>6.353 MM - 7.938 MM</td></tr> <tr><td>.3126 - .3750 ..... 6.32</td></tr> <tr><td>7.940 MM - 9.525 MM</td></tr> <tr><td>.3751-.5000 ..... 7.12</td></tr> <tr><td>9.528. MM - 12.700 MM</td></tr> <tr><td>.5001 - .5625 ..... 8.48</td></tr> <tr><td>12.703 - 14.288 MM</td></tr> <tr><td>.5626 - .6250 ..... 9.17</td></tr> <tr><td>14.290 MM - 15.875 MM</td></tr> <tr><td>.6251 - .6875 ..... 10.28</td></tr> <tr><td>15.878 MM - 17.463 MM</td></tr> <tr><td>.6876 - .7500 ..... 11.15</td></tr> <tr><td>17.465 MM - 19.050 MM</td></tr> <tr><td>.7501 - .8125 ..... 12.50</td></tr> <tr><td>19.053 MM - 20.638 MM</td></tr> <tr><td>.8126 - .8750 ..... 13.61</td></tr> <tr><td>20.640 MM - 22.225 MM</td></tr> </table>	.2501-.3125 ..... 5.99	6.353 MM - 7.938 MM	.3126 - .3750 ..... 6.32	7.940 MM - 9.525 MM	.3751-.5000 ..... 7.12	9.528. MM - 12.700 MM	.5001 - .5625 ..... 8.48	12.703 - 14.288 MM	.5626 - .6250 ..... 9.17	14.290 MM - 15.875 MM	.6251 - .6875 ..... 10.28	15.878 MM - 17.463 MM	.6876 - .7500 ..... 11.15	17.465 MM - 19.050 MM	.7501 - .8125 ..... 12.50	19.053 MM - 20.638 MM	.8126 - .8750 ..... 13.61	20.640 MM - 22.225 MM	<table style="width: 100%; border-collapse: collapse;"> <tr><td>.8751 - .9375 ..... 15.98</td></tr> <tr><td>22.228 MM - 23.813 MM</td></tr> <tr><td>.9376-1.0000 ..... 17.45</td></tr> <tr><td>23.815 MM - 25.400 MM</td></tr> <tr><td>1.0001-1.0625 ..... 21.56</td></tr> <tr><td>25.403 MM - 26.988 MM</td></tr> <tr><td>1.0626-1.1250. .... 24.02</td></tr> <tr><td>26.990 MM - 30.163 MM</td></tr> <tr><td>1.1251 - 1.2500 ..... 28.56</td></tr> <tr><td>30.165 MM - 31.750 MM</td></tr> <tr><td>1.2501 - 1.3125 ..... 30.46</td></tr> <tr><td>31.753 MM - 33.338 MM</td></tr> <tr><td>1.3126 - 1.3750 ..... 33.32</td></tr> <tr><td>33.340 MM - 34.925 MM</td></tr> <tr><td>1.3751 - 1.4375 ..... 37.19</td></tr> <tr><td>34.928 MM - 36.513 MM</td></tr> <tr><td>1.4376 - 1.5000 ..... 40.91</td></tr> <tr><td>36.515 MM - 38.100 MM</td></tr> </table>	.8751 - .9375 ..... 15.98	22.228 MM - 23.813 MM	.9376-1.0000 ..... 17.45	23.815 MM - 25.400 MM	1.0001-1.0625 ..... 21.56	25.403 MM - 26.988 MM	1.0626-1.1250. .... 24.02	26.990 MM - 30.163 MM	1.1251 - 1.2500 ..... 28.56	30.165 MM - 31.750 MM	1.2501 - 1.3125 ..... 30.46	31.753 MM - 33.338 MM	1.3126 - 1.3750 ..... 33.32	33.340 MM - 34.925 MM	1.3751 - 1.4375 ..... 37.19	34.928 MM - 36.513 MM	1.4376 - 1.5000 ..... 40.91	36.515 MM - 38.100 MM
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### Standard Plug Gage Classes for Product Tolerances

Normal practice for product gage tolerance is to allow 10% of the product to be equally divided between "go" and "no-go". In the case of plug gages, "go" is normally a plus tolerance and "no-go" is normally a minus tolerance.

### Standard Gagemakers' Tolerance Chart

Size Range	CLASS XXXX	CLASS XXX	CLASS XX	CLASS X	CLASS Y	CLASS Z
.0009 - .010	.000005	.00001	.00002	.00004	.00007	.00010
.010 - .029	.000005	.00001	.00002	.00004	.00007	.00010
.029 - .825	.000005	.00001	.00002	.00004	.00007	.00010
.825 - 1.510	.000008	.000015	.00003	.00006	.00009	.00012
1.510 - 2.510	.00001	.00002	.00004	.00008	.00012	.00016
2.510 - 4.510	.000013	.000025	.00005	.00010	.00015	.00020
4.510 - 6.510	.000017	.000033	.000065	.00013	.00019	.00025
6.510 - 9.010	.00002	.00004	.00008	.00016	.00024	.00032
9.010 - 12.260	.000025	.00005	.00010	.00020	.00030	.00040

PLEASE USE THIS CHART FOR GAGES  
ON THE FOLLOWING PAGES

### Single or Double End Handles for above gages

Handle Number	Size Range	Price Each
1W	.000 - .075	11.00
2W	.075 - .180	10.00
3W	.180 - .281	11.00
4W	.281 - .406	13.50
5W	.406 - .510	16.00
6W	.510 - .635	20.00
7W	.635 - .760	22.75
8W	.760 - 1.010	32.00

All handles supplied complete with  
bushings.

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# TRILOCKS - STEEL AND CHROME

SIZE RANGE Above - Through	CLASS	STD GO MEMBER ONLY			STD NO GO MEMBER ONLY			HANDLE	
		Length	Steel	Chrome	Length	Steel	Chrome	No.	Price
<b>.760 IN - .947 IN</b> 19.30 MM - 24.05 MM	XX		107.22	214.44	3/4 in.	97.03	194.06	2 1/2	16.50
	X	1 1/4 IN	90.80	181.60	19.1MM	83.49	166.98		
	Y	31.8 MM	77.90	155.80		71.67	143.34		
	Z		64.80	129.60		60.96	121.92		
<b>.947 IN - 1.135 IN</b> 24.05 MM - 28.83 MM	XX		108.85	217.70	3/4 in.	98.10	196.20	3 1/2	17.50
	X	1 3/8 IN	93.26	186.52	19.1 MM	85.31	170.62		
	Y	34.9 MM	80.08	160.10		73.27	146.54		
	Z		69.09	138.18		64.80	129.60		
<b>1.135 IN - 1.510 IN</b> 28.83 MM - 38.35 MM	XX		116.89	233.78	3/4 IN.	104.86	209.72	4 1/2	20.00
	X	1 1/2 IN.	101.97	203.94	19.1 MM	93.04	186.08		
	Y	38.1 MM	84.56	169.12		77.14	154.28		
	Z		71.67	143.34		66.51	133.02		
<b>1.510 IN - 2.010 IN</b> 38.35 MM - 51.05 MM	XX		172.88	345.76		156.65	313.30	5 1/2	24.00
	X	1 7/8 IN	146.12	292.24	7/8 IN	127.42	254.84		
	Y	47.8 MM	131.29	262.58	22.2 MM	114.49	228.98		
	Z		107.01	214.02		100.13	200.26		
<b>2.010 IN - 2.510 IN</b> 51.05 MM - 63.75 MM	XX		207.57	415.14		188.88	377.76	6	25.00
	X	2 IN	172.88	345.76	7/8 IN	156.65	313.30		
	Y	50.8 MM	152.99	305.98	22.2 MM	133.77	267.54		
	Z		128.61	257.22		113.89	227.78		
<b>2.510 IN - 3.010 IN</b> 63.75 MM - 76.45 MM	XX		235.55	471.10		207.05	414.10	7	31.00
	X	2 IN	200.81	401.62	1 IN	167.94	335.88		
	Y	50.8 MM	172.88	345.76	25.4MM	150.53	301.06		
	Z		143.23	286.46		129.69	259.38		
<b>3.010 IN - 3.510 IN</b> 76.45 MM - 89.15 MM	XX		287.62	575.24		247.97	495.94	7	31.00
	X	2 IN	219.94	439.88	1 IN	204.68	409.36		
	Y	50.8 MM	205.33	410.66	25.4 MM	179.21	358.42		
	Z		175.99	351.98		154.28	308.56		
<b>3.510 IN - 4.010 IN</b> 89.15 MM - 101.85 MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	54.0 MM							
	Z								
<b>4.010 IN - 4.510 IN</b> 101.85 MM - 114.55 MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	50.8 MM							
	Z								
<b>4.510 IN - 5.010 IN</b> 114.55MM - 127.25 MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	54.0 MM							
	Z								
<b>5.010 IN - 5.510 IN</b> 127.25 MM - 139.95 MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	54.0 MM							
	Z								
<b>5.510 IN - 6.010 IN</b> 139.95 MM - 152.65 MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	54.0 MM							
	Z								
<b>6.010 IN - 6.510 IN</b> 152.65 MM - 165.35 MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	54.0 MM							
	Z								
<b>6.510 IN - 7.010 IN</b> 165.35MM - 178.05MM	XX				1 IN			7	31.00
	X	2 1/8 IN			25.4 MM				
	Y	54.0 MM							
	Z								

Prices  
on  
Application

Prices  
on  
Application

Additional sizes available through 8.010 in.

See page 74 for Progressive Trilocks

**Trilocks are also available in Carbide.**

**Call for pricing and delivery**



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# REVERSIBLE PLUG GAGES

Size / Range		Class	Tolerance in inches	Member Length	Reversible Go or No Go		AGD Handle single or double end	
Above	To and Including				Steel	Carbide	No.	Price
<b>.011 IN - .020 IN</b> .279 MM - .508 MM		XX	.00002	2 IN 50.8 MM	47.00	—	1 W	11.00
		X	.00004		39.00	—		
		Y	.00007		33.00	—		
		Z	.00010		32.00	—		
<b>.020 IN - .030 IN</b> .508 MM - .762 MM		XX	.00002	2 IN 50.8 MM	44.00	—	1 W	11.00
		X	.00004		36.00	—		
		Y	.00007		33.00	—		
		Z	.00010		29.00	—		
<b>.030 IN - .040 IN</b> .762 MM - 1.02 MM		XX	.00002	2 IN 50.8 MM	41.00	—	1 W	11.00
		X	.00004		21.00	—		
		Y	.00007		21.00	—		
		Z	.00010		21.00	—		
<b>.040 IN - .075 IN</b> 1.02 MM - 1.91 MM		XX	.00002	2 IN 50.8 MM	41.00	116.00	1 W	11.00
		X	.00004		21.00	110.00		
		Y	.00007		21.00	104.00		
		Z	.00010		21.00	98.00		
<b>.075 IN - .116 IN</b> 1.91 MM - 2.92 MM		XX	.00002	2 IN 50.8 MM	33.00	116.00	2 W	10.00
		X	.00004		22.00	110.00		
		Y	.00007		21.00	104.00		
		Z	.00010		20.00	98.00		
<b>.116 IN - .130 IN</b> 2.92 MM - 3.30 MM		XX	.00002	2 IN 50.8 MM	33.00	68.00	2 W	10.00
		X	.00004		22.00	62.00		
		Y	.00007		21.00	57.00		
		Z	.00010		17.00	55.00		
<b>.130 IN - .180 IN</b> 3.30 MM - 4.57 MM		XX	.00002	2 IN 50.8 MM	33.00	70.00	2 W	10.00
		X	.00004		22.00	67.00		
		Y	.00007		21.00	61.00		
		Z	.00010		17.00	57.00		
<b>.180 IN - .230 IN</b> 4.57 MM - 5.84 MM		XX	.00002	2 IN 50.8 MM	33.00	74.00	3 W	11.00
		X	.00004		22.00	70.00		
		Y	.00007		21.00	67.00		
		Z	.00010		18.00	61.00		
<b>.230 IN - .281 IN</b> 5.84 MM - 7.14 MM		XX	.00002	2 IN 50.8 MM	33.00	86.00	3 W	11.00
		X	.00004		22.00	79.00		
		Y	.00007		21.00	75.00		
		Z	.00010		18.00	72.00		
<b>.281 IN - .344 IN</b> 7.14 MM - 8.74 MM		XX	.00002	2 IN 50.8 MM	34.00	88.00	4 W	13.50
		X	.00004		26.00	81.00		
		Y	.00007		23.00	76.00		
		Z	.00010		18.00	73.00		
<b>.344 IN - .406 IN</b> 8.74 MM - 10.31 MM		XX	.00002	2 IN 50.8 MM	34.00	96.00	4 W	13.50
		X	.00004		26.00	92.00		
		Y	.00007		23.00	89.00		
		Z	.00010		18.00	87.00		
<b>.406 IN - .460 IN</b> 10.31 MM - 11.68 MM		XX	.00002	2 IN 50.8 MM	34.00	102.00	5 W	16.00
		X	.00004		27.00	98.00		
		Y	.00007		24.00	95.00		
		Z	.00010		20.00	90.00		
<b>.460 IN - .510 IN</b> 11.68 MM - 12.95 MM		XX	.00002	2 IN 50.8 MM	47.00	109.00	5 W	16.00
		X	.00004		27.00	102.00		
		Y	.00007		26.00	98.00		
		Z	.00010		24.00	95.00		

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# REVERSIBLE PLUG GAGES

Size / Range		Class	Tolerance in inches	Member Length	Reversible Go or No Go		AGD Handle single or double end	
Above	To and Including				Steel	Carbide	No.	Price
<b>.510 IN - .560 IN</b> 12.95 MM - 14.22 MM	XX	.00002	2 IN 50.8 MM	47.00	154.00	6 W	20.00	
	X	.00004		29.00	149.00			
	Y	.00007		26.00	143.00			
	Z	.00010		24.00	136.00			
<b>.560 IN - .635 IN</b> 14.22 MM - 16.13 MM	XX	.00002	2 IN 50.8 MM	47.00	185.00	6 W	20.00	
	X	.00004		29.00	176.00			
	Y	.00007		26.00	171.00			
	Z	.00010		24.00	164.00			
<b>.635 IN - .700 IN</b> 16.13 MM - 17.78 MM	XX	.00002	2 IN 50.8 MM	47.00	200.00	7 W	22.75	
	X	.00004		32.00	191.00			
	Y	.00007		28.00	184.00			
	Z	.00010		24.00	174.00			
<b>.700 IN - .760 IN</b> 17.78 MM - 19.30 MM	XX	.00002	2 IN 50.8 MM	58.00	247.00	7 W	22.75	
	X	.00004		32.00	238.00			
	Y	.00007		30.00	227.00			
	Z	.00010		29.00	219.00			
<b>.760 IN - .825 IN</b> 19.30 MM - 20.95 MM	XX	.00002	2 IN 50.8 MM	58.00	—	8 W	32.00	
	X	.00004		32.00	—			
	Y	.00007		30.00	—			
	Z	.00010		29.00	—			
<b>.825 IN - 1.000 IN</b> 20.95 MM - 25.40 MM	XX	.00003	2 IN 50.8 MM	58.00	—	8 W	32.00	
	X	.00006		47.00	—			
	Y	.00009		42.00	—			
	Z	.00012		38.00	—			

- Go gages supplied with plus tolerance
- No go gages supplied with minus tolerance
- Bi-lateral (Split) tolerances also available at above listed prices
- Extra long gages in steel and chrome are available up to 6 in (152.4mm) for diameters above .075
- Quantity discounts available - Call for quotation
- Certification of calibration available for additional charge
- All handles supplied complete with bushings
- For larger gauges - see trilocks on page 69.
- For class "X" gauges up to 6" long - see page 74.



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## RING GAGES

Size / Range Above To and Including	Class	Tolerance in inches	Standard A.G.D Blank size		Price Each		
			Length	O.D.	Steel	Chrome	Carbide
<b>.015 IN - .040 IN</b> 0.381 MM - 1.02 MM	XX	.00002	BLANK #000		PRICES ON APPLICATION	—	—
	X	.00004	$\frac{3}{32}$ IN	$\frac{15}{16}$ IN		—	—
	Y	.00007	2.37 MM	23.8 MM		—	—
	Z	.00010				—	—
<b>.040 IN - .100 IN</b> 1.02 MM - 2.54 MM	XX	.00002	BLANK #00		254.87	—	407.22
	X	.00004	$\frac{3}{16}$ IN	$\frac{15}{16}$ IN	229.39	—	366.51
	Y	.00007	4.8 MM	23.8 MM	203.90	—	325.79
	Z	.00010			203.90	—	325.79
<b>.100 IN - .150 IN</b> 2.54 MM - 3.81 MM	XX	.00002	BLANK #00		221.64	—	370.21
	X	.00004	$\frac{3}{16}$ IN	$\frac{15}{16}$ IN	119.47	—	333.19
	Y	.00007	4.8 MM	23.8 MM	177.31	—	296.16
	Z	.00010			177.31	—	296.16
<b>.150 IN - .185 IN</b> 3.81 MM - 4.70 MM	XX	.00002	BLANK #00		192.73	269.82	336.56
	X	.00004	$\frac{3}{16}$ IN	$\frac{15}{16}$ IN	173.46	242.84	302.90
	Y	.00007	4.8 MM	23.8 MM	154.18	215.86	269.24
	Z	.00010			154.18	215.86	269.24
<b>.185 IN - .230 IN</b> 4.70 MM - 5.84 MM	XX	.00002	BLANK #0		183.55	256.97	326.75
	X	.00004	$\frac{3}{8}$ IN	$\frac{15}{16}$ IN	165.20	231.27	294.08
	Y	.00007	9.5 MM	23.8 MM	146.83	205.58	261.41
	Z	.00010			146.83	205.58	261.41
<b>.230 IN - .365 IN</b> 5.84 MM - 9.27 MM	XX	.00002	BLANK #1		174.80	244.73	317.24
	X	.00004	$\frac{5}{16}$ IN	1 IN	157.33	220.26	285.51
	Y	.00007	14.3 MM	28.6 MM	139.85	195.78	253.79
	Z	.00010			139.85	195.78	253.79
<b>.365 IN - .510 IN</b> 9.27 MM - 12.95 MM	XX	.00002	BLANK #2		166.48	233.08	307.99
	X	.00004	$\frac{3}{4}$ IN	1 IN	149.84	209.78	277.20
	Y	.00007	19.1 MM	34.9 MM	133.19	186.46	246.40
	Z	.00010			133.19	186.46	246.40
<b>.510 IN - .825 IN</b> 12.95 MM - 20.95 MM	XX	.00002	BLANK #3		174.80	244.73	400.39
	X	.00004	$\frac{15}{16}$ IN	1 IN	157.33	220.26	360.36
	Y	.00007	23.8 MM	44.4MM	139.85	195.78	320.32
	Z	.00010			139.85	195.78	320.32
<b>.825 IN - 1.135 IN</b> 20.95 MM - 28.83 MM	XX	.00003	BLANK #4		183.55	256.97	520.51
	X	.00006	1 IN	2 IN	165.20	231.27	468.46
	Y	.00009	28.6 MM	54.0 MM	146.83	205.58	416.40
	Z	.00012			146.83	205.58	416.40

- Choice of three tolerances: Go - Unilateral minus  
No Go - Unilateral plus  
Master - Bilateral (split)
- Carbide rings have tungsten carbide inserts and steel jackets
- All ring gages are lapped to size and polished
- Roundness and taper of all gages will not exceed 50% of the applicable gagemakers size tolerance and are non-accumulative.

Also Available: Aluminum Ring Gage Holders — SEE PAGE 73



**WILLIAM T. HUTCHINSON CO.**

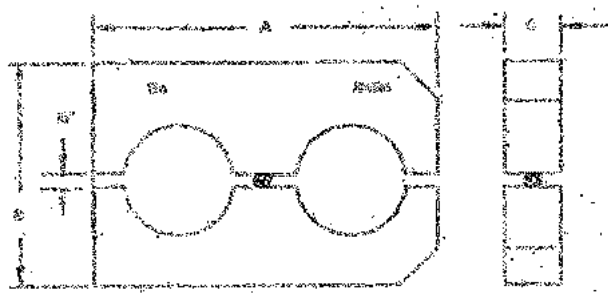
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## RING GAGES

Size / Range Above To and Including	Class	Tolerance in inches	Standard A.G.D Blank size		Price Each		
			Length	O.D.	Steel	Chrome	Carbide
<b>1.135 IN - 1.510 IN</b> 28.83 MM - 38.35 MM	XX	.00004	BLANK # 5		229.44	295.52	702.69
	X	.00006	1½ IN	2½ IN	206.49	265.97	632.42
	Y	.00009	33.3MM	63.5 MM	183.55	236.41	562.16
	Z	.00012			183.55	236.41	562.16
<b>1.510 IN - 2.010 IN</b> 38.35 MM - 51.05 MM	XX	.00004	BLANK #6		263.85	339.85	948.63
	X	.00008	1½ IN	4 IN	237.46	305.86	853.77
	Y	.00012	38.1 MM	101.6MM	211.08	271.87	758.90
	Z	.00016			211.08	271.87	758.90
<b>2.010 IN - 2.510 IN</b> 51.05 MM - 63.75 MM	XX	.00004	BLANK #7		311.34	424.80	1233.22
	X	.00008	1½ IN	4½ IN	280.21	382.32	1109.90
	Y	.00012	38.1 MM	101.6 MM	249.07	339.85	986.57
	Z	.00016			249.07	339.85	986.57
<b>2.510 IN - 3.010 IN</b> 63.75 MM - 76.45 MM	XX	.00005	BLANK #8		367.39	530.99	1541.52
	X	.00010	1½ IN	5 IN	330.65	477.91	1387.37
	Y	.00015	38.1 MM	127.0 MM	293.90	424.80	1233.22
	Z	.00020			293.90	424.80	1233.22
<b>3.010 IN - 3.510 IN</b> 76.45 MM - 89.15 MM	XX	.00005	#9		433.52	610.65	1926.90
	X	.00010	1½ IN	5½ IN	390.16	549.58	1734.22
	Y	.00015	38.1 MM	139.7 MM	346.82	488.51	1541.52
	Z	.00020			346.82	488.51	1541.52
<b>3.510 IN - 4.010 IN</b> 89.15 MM - 101.85 MM	XX	.00005	#10		511.55	702.21	2408.63
	X	.00010	1½ IN	6¾ IN	460.39	632.03	2167.78
	Y	.00015	38.1 MM	161.9 MM	409.24	561.80	1926.90
	Z	.00020			409.24	561.80	1926.90

## Ring Gage Holders



## Black Anodized Aluminum

FOR RING BLANK NO.	A	B	C	PRICE EACH
000	2-7/8	1-3/4	3/16	67.86
00	2-7/8	1-3/4	3/16	67.86
0	2-7/8	1-3/4	3/8	67.86
1	3-1/2	2-1/4	9/16	67.86
2	4-1/4	2-1/2	3/4	67.86
3	5	2-7/8	15/16	87.86
4	5-3/4	3-1/4	1-1/8	87.86
5	6-1/2	3-5/8	1-15/16	87.86

Chrome ring gages available in sizes up to 12.260 in (311.40 mm)

Steel ring gages available in sizes up to 16.010 in (406.65 mm)

Call for pricing and delivery

Quantity discounts available on all ring gages

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## EXTRA LENGTH CLASS "X" GAGES

Reversible pin gages in English and Metric up to 6" lengths. Ideal for deep and hard to reach holes or slots.

- Centerless lapped to a 5 microfinish
- Up to 6" long
- NIST Traceable
- Stabilized and heat treated to 60-62 RC
- Plus, Minus or Bilateral tolerance

Inch Size	Millimeter Size	3" Price	4" Price	5" Price	6" Price
.0100 IN - .0299 IN	.254 MM - .759 MM	163.43	223.44	407.06	526.73
.0300 IN - .0599 IN	.762 MM - 1.52 MM	87.90	119.77	218.31	293.34
.0600 IN - .2009 IN	1.52 MM - 5.10 MM	59.89	82.13	113.02	129.35
.2010 IN - .3749 IN	5.11 MM - 9.52 MM	62.97	83.66	115.92	131.29
.3750 IN - .6349 IN	9.53 MM - 16.13 MM	67.14	88.68	121.72	133.31
.6350 IN - .7500 IN	16.13 MM - 19.05 MM	67.14	91.27	131.37	144.89
.7501 IN - .8750 IN	19.05 MM - 22.23 MM	117.86	157.63	209.23	260.23
.8751 IN - 1.000 IN	22.23 MM - 25.40 MM	132.14	173.31	240.53	332.48

No guarantee of straightness, due to Centerless Grinding process on these products

## PROGRESSIVE TRILOCK GAGES

When you need to check parts quickly, Progressive plug gages are the best choice. Both the GO and NOGO diameters are stepped on a single gage member. All members are securely attached to a Trilock handle. All handles are marked with sizes and direction of tolerance.

- Class XX, X, Y, Z
- NIST traceable
- GO, NOGO tolerances
- Tool Steel 60/62 Rockwell C

Size / Range	Class	Tolerance Inches	Member Length	GO Portion	NOGO Portion	Steel	Chrome	Handle	
								#	Price
<b>1.5101 IN - 2.010 IN</b> 38.35 MM - 51.05 MM	XX	.00004	2 7/8 IN 73.0 MM	1 7/8 IN 47.6 MM	7/8 IN 22.2 MM	347.05	694.10	5 1/2	25.19
	X	.00008				278.14	556.28		
	Y	.00012				243.69	487.38		
	Z	.00016				196.60	393.20		
<b>2.0101 IN - 2.510 IN</b> 51.05 MM - 63.75 MM	XX	.00004	3 IN 76.2 MM	2 IN 50.8 MM	7/8 IN 22.2 MM	435.66	871.32	6	26.17
	X	.00008				351.97	703.94		
	Y	.00012				297.82	595.64		
	Z	.00016				246.13	492.26		
<b>2.5101 IN - 3.010 IN</b> 63.75 MM - 76.45 MM	XX	.00005	3 IN 76.2 MM	2 IN 50.8 MM	7/8 IN 22.2 MM	473.51	947.02	7	29.34
	X	.00010				406.13	812.26		
	Y	.00015				349.52	699.04		
	Z	.00020				287.98	575.96		
<b>3.0101 IN - 3.510 IN</b> 76.45 MM - 89.15 MM	XX	.00005	3 IN 76.2 MM	2 IN 50.8 MM	7/8 IN 22.2 MM	588.25	1176.50	7	29.34
	X	.00010				452.88	905.76		
	Y	.00015				403.66	807.32		
	Z	.00020				337.20	674.40		
<b>3.5101 IN - 4.010 IN</b> 89.15 MM - 101.85 MM	XX	.00005	3 1/8 IN 79.4 MM	2 1/8 IN 54.0 MM	7/8 IN 22.2 MM	712.77	1425.54	7	29.34
	X	.00010				547.66	1095.32		
	Y	.00015				494.84	989.68		
	Z	.00020				415.36	830.72		
<b>4.0101 IN - 4.510 IN</b> 101.85 MM - 114.55 MM	XX	.00005	3 1/8 IN 79.4 MM	2 1/8 IN 54.0 MM	7/8 IN 22.2 MM	807.62	1615.24	7	29.34
	X	.00010				648.66	1297.32		
	Y	.00015				564.06	1128.12		
	Z	.00020				464.06	928.12		

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