

TOLERANCE RANGE		GAUGE SIZES	
		WEAR ALLOW ON GO	MANUFACTURING TOLERANCE
UP TO	0.009	0.001	$\pm 0.001$
//	0.01	0.002	$\pm 0.001$
//	0.025	0.004	$\pm 0.0015$
//	0.05	0.007	$\pm 0.002$
//	0.08	0.01	$\pm 0.0025$
//	0.1	0.013	$\pm 0.003$
//	0.13	0.016	$\pm 0.004$
//	0.2	0.02	$\pm 0.005$
//	0.3	0.03	$\pm 0.007$
//	0.4	0.04	$\pm 0.01$

PLUG GAUGE	SNAP GAUGE
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FORMULAS.

GO = Min. size + Wear allow  $\pm$  Manuf tol.

NOT GO = Max. size  $\pm$  Manuf tol.

GO SIZE

$\phi 10^{+0,1}$

$10,0 + 0,013 \pm 0,003 = 10,013 \pm 0,003$

NOT GO SIZE

$10,0 + 0,1 + 0,003 = 10,1 \pm 0,003$

FORMULAS.

GO = Max. size - Wear allow  $\pm$  Manuf tol.

NOT GO = Min size  $\pm$  Manuf tol.

GO SIZE

$\phi 46^{-0,06}$

$46 - 0,007 \pm 0,002 = 45,993 \pm 0,002$

NOT GO SIZE

$46 - 0,06 \pm 0,002 = 45,94 \pm 0,002$

WEAR ALLOWANCE = 10 % OF THE TOLERANCE RANGE.

MANUF. TOLERANCE = 10 % OF THE WEAR ALLOWANCE.

# TOLERANCE TABLE FOR SNAP & PLUG GAUGES

*Mc = 0.001*

Work piece Size Range	Quality Tol. Range	5		6		7		8		9		10		11		12		13		14		15		16	
		+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap	+Plug	-Snap
From 1	Tol. Range	5	7	9	14	25	40	60	90	140	250	400	600												
	Z 1	1	1	1.5	1.5	2	5	5	10	10	20	40	40												
	H / 2 +	1	1	1.5	1.5	1.5	2	2.5	2.5	4.5	4.5	4.5	4.5												
To 3	Y 1	1	1	1.5	1.5	3	0	0	0	0	0	0	0												
From 3	Tol. Range	5	8	12	18	30	48	75	120	180	300	480	750												
	Z 1	1	1.5	2	3	6	6	12	12	24	24	48	48												
	H / 2 +	1	1	1.5	1.5	1.5	2	2.5	2.5	6	6	6	6												
To 6	Y 1	1	1	1.5	1.5	3	0	0	0	0	0	0	0												
From 6	Tol. Range	6	9	15	22	36	58	90	150	220	360	580	900												
	Z 1	1	1.5	2	3	7	7	14	14	28	28	56	56												
	H / 2 +	1	1	1.5	1.5	1.5	2	3	3	7.5	7.5	7.5	7.5												
To 10	Y 1	1	1	1.5	1.5	3	0	0	0	0	0	0	0												
From 10	Tol. Range	8	11	18	27	43	70	110	180	270	430	700	1100												
	Z 1	1.5	2	2.5	4	8	8	16	16	32	32	64	64												
	H / 2 +	1	1	1.5	1.5	1.5	2.5	4	4	9	9	9	9												
To 18	Y 1	1.5	1.5	2	2	4	0	0	0	0	0	0	0												
From 18	Tol. Range	9	13	21	33	52	84	130	210	330	520	840	1300												
	Z 1	1.5	2	3	5	9	9	19	19	36	36	72	72												
	H / 2 +	1	1	2	2	3	3	4.5	4.5	10.5	10.5	10.5	10.5												
To 30	Y 1	2	1.5	3	3	4	0	0	0	0	0	0	0												
From 30	Tol. Range	11	16	25	39	62	100	160	250	390	620	1000	1600												
	Z 1	2	2.5	3.5	6	11	11	22	22	42	42	80	80												
	H / 2 +	1.5	1.5	2	2	3.5	3.5	5.5	5.5	12.5	12.5	12.5	12.5												
To 50	Y 1	2	2	3	3	5	0	0	0	0	0	0	0												
From 50	Tol. Range	13	19	30	46	74	120	190	300	460	740	1200	1900												
	Z 1	2	2.5	4	4	7	13	13	25	25	48	48	90	90											
	H / 2 +	1.5	1.5	2.5	2.5	4	4	6.5	6.5	15	15	15	15												
To 80	Y 1	2	2	3	3	5	0	0	0	0	0	0	0												
From 80	Tol. Range	15	22	35	54	87	140	220	350	540	870	1400	2200												
	Z 1	2.5	3	5	5	8	15	15	28	28	54	54	100	100											
	H / 2 +	2	2	3	3	5	5	7.5	7.5	17.5	17.5	17.5	17.5												
To 120	Y 1	3	3	4	4	6	0	0	0	0	0	0	0												
From 120	Tol. Range	18	25	40	63	100	160	250	400	630	1000	1600	2500												
	Z 1	3	4	6	6	9	18	18	32	32	60	60	110	110											
	H / 2 +	2.5	2.5	4	4	6	6	9	9	20	20	20	20												
To 180	Y 1	3	3	4	4	6	0	0	0	0	0	0	0												
From 180	Tol. Range	20	29	46	72	115	185	290	460	720	1150	1850	2900												
	Z 1	4	5	7	7	12	21	24	40	45	80	100	170	210											
	H / 2 +	3.5	3.5	5	5	7	7	10	10	23	23	23	23												
To 250	Y 1	3	4	5	6	7	0	0	0	0	0	0	0												
From 250	Tol. Range	23	32	52	81	130	210	320	520	810	1300	2100	3200												
	Z 1	5	6	8	8	14	24	27	45	50	90	110	190	240											
	H / 2 +	4	4	6	6	9	9	11.5	11.5	26	26	26	26												
To 315	Y 1	3	5	6	7	9	0	0	0	0	0	0	0												
From 315	Tol. Range	25	36	57	89	140	230	360	570	890	1400	2300	3600												
	Z 1	6	7	10	10	16	28	32	50	65	100	125	210	280											
	H / 2 +	4.5	4.5	6.5	6.5	9	9	12.5	12.5	28.5	28.5	28.5	28.5												
To 400	Y 1	4	6	6	8	9	0	0	0	0	0	0	0												
From 400	Tol. Range	27	40	63	97	155	250	400	630	970	1550	2500	4000												
	Z 1	7	8	11	11	18	32	37	55	70	110	145	240	320											
	H / 2 +	5	5	7.5	7.5	10	10	13.5	13.5	31.5	31.5	31.5	31.5												
To 500	Y 1	4	7	7	9	11	0	0	0	0	0	0	0												

SNAP GAUGE

GO = (Max - Z1) <sup>+ H</sup>

NO GO = Min <sup>+H/2</sup>

Wornout Size = Max + Y

PLUG GAUGE

GO = (Min + Z1) <sup>+H/2</sup>

NO GO = Max <sup>+ H/2</sup>

Wornout Size = Min - Y

H/2 = Manufacturing Tolerance

Y 1 = Margin for Wornout size

Z1 = Wearing Allowance