


Metal Washers / Collars

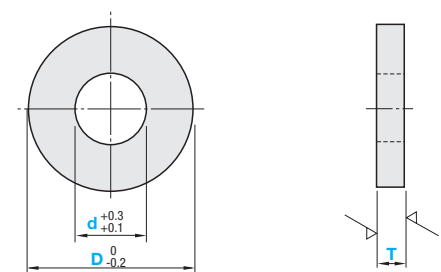
Shape	Size	Ordering Code	Accuracy	Material		Surface Treatment	Catalog Page
				Raw Material	Hardened Products		
Standard	O.D. D 4-60 I.D. V 2-30 Thickness T 1-10	Selectable	Standard Grade	S45C Standard Grade SUS304	S45C Standard Grade Equivalent SUS420J2	None Black Oxide Electroless Nickel Plating	P113 P114 P119
	O.D. D 4-30 I.D. V 2-25 Thickness T 1-10	Configurable	Standard Grade	S45C SUS304	-	None Black Oxide Electroless Nickel Plating	P113 P114
	O.D. D 4-100 I.D. V 0-90 Thickness T 1-10	Dimension Configurable	Standard Grade Precision Grade	SS400 S45C SUS304 A2017 Brass (JIS C3604)	S45C SKS3 SUS420J2 SUS40C for Precision Grade	None Black Oxide Electroless Nickel Plating Low Temp. Black Chrome Plating Anodize (Clear, Black)	P115 P120
Flanged	D Dim. 5-60 H Dim. 7-70 V Dim. 2-58 L Dim. 2-10	Dimension Configurable	Standard Grade Precision Grade	SS400 S45C SUS304	SUS420J2 SKS3	None Black Oxide Electroless Nickel Plating	P122
Counterbored	O.D. D 10-60 I.D. P 3.5-11 Thickness T 6-20	Selectable	Standard Grade	S45C SUS304	S45C SUS420J2 SUS40C for Precision Grade	None Black Oxide Electroless Nickel Plating	P123
	O.D. D 10-30 I.D. P 3.5-9 Thickness T 3-20	Configurable	Standard Grade Precision Grade	S45C SUS304	-	None Black Oxide Electroless Nickel Plating	P123
	O.D. D 10-100 I.D. P 3-88 Thickness T 3-50	Dimension Configurable	Standard Grade Precision Grade	S45C SUS304 SS400 A2017	S45C SUS420J2 SKS3	None Black Oxide Electroless Nickel Plating Clear Anodize	P124
Tapped	O.D. D 10-60 M Dia. 2-20 Thickness T 3-20	Selectable	Standard Grade	S45C SUS304	-	None Black Oxide Electroless Nickel Plating	P125
	O.D. D 6-30 M Dia. 2-12 Thickness T 3-20	Configurable	Standard Grade	S45C SUS304	-	None Black Oxide Electroless Nickel Plating	P125
	Thickness T 3-50	Dimension Configurable	Standard Grade	S45C SUS304 A2017	-	None Black Oxide Electroless Nickel Plating Clear Anodize	P125
Countersunk	O.D. D 14-30 Applicable Countersunk M Dia. 4-10 Thickness T 2.5-3	Selectable	Standard Grade	S45C SUS304	-	None Black Oxide Electroless Nickel Plating	P126
	O.D. D 10-60 Applicable Countersunk M Dia. 2-30 Thickness T 2-10	Dimension Configurable	Standard Grade	S45C SUS304 A2017	-	None Black Oxide Electroless Nickel Plating Clear Anodize	
With Screw Holes	O.D. D 20-80 Applicable Countersunk M Dia. 3-28 Thickness T 1-10	Dimension Configurable	Standard Grade	S45C SUS304 A2017	-	None Black Oxide Electroless Nickel Plating Clear Anodize	P126
Shape Selectable	O.D. D 10-50 I.D. V 3-30 Thickness T 3-10	Dimension Configurable	Standard Grade	S45C SUS304	-	None Black Oxide Electroless Nickel Plating	P127
Standard	I.D. V 3-25 O.D. D 5-30 Thickness L 10-35	Selectable	Standard Grade	S45C Equivalent SUS304	-	None Black Oxide Electroless Nickel Plating	P131
	O.D. D 4-60 I.D. V 2-30 Thickness L 10-100	Configurable	Standard Grade Precision Grade	S45C SUS304 A2017	-	None Black Oxide Electroless Nickel Plating Clear Anodize	P132 P137
	I.D. V 2-90 O.D. D 4-100 Thickness L 10-100	Dimension Configurable	Standard Grade Precision Grade	S45C SUS304 SS400 A2017 Brass (C3604)	S45C SUS420J2 SKS3	None Black Oxide Electroless Nickel Plating Low Temp. Black Chrome Plating Anodize (Clear, Black)	P133
Flanged	I.D. V 2-30 O.D. D 5-60 Length L 10-100	Selectable	Standard Grade	S45C SUS304 A2017	-	None Black Oxide Electroless Nickel Plating Clear Anodize	P139
	V Dim. 2-55 D Dim. 4-60 H Dim. 6-70 T Dim. 1-20 L Dim. 10-100	Dimension Configurable	Standard Grade Precision Grade	S45C SUS304 SS400 A2017 Brass (C3604)	S45C SUS420J2 SKS3	None Black Oxide Electroless Nickel Plating Anodize (Clear, Black)	P140
Thin-Walled Metal Collar	O.D. D 2-7 I.D. V 1-5 Length L 3-20	Selectable	Standard Grade	SUS304	-	None	P128
Hollow Collar	O.D. D 10.5-48.6 I.D. d 5.7-41.6 Length L 6-200	-	Standard Grade	SGP STPG370 (Sch40/80)	-	None Black Oxide	P128

Metal Washers Washers (Bulk Packages)

Have larger O.D. and are thicker compared to standard washers. As these washers are press finished, they are cheaper than the washers made by cutting.



Type	Material	Surface Treatment
PACK-PWTB	SPCC	Black Oxide
PACK-PWTM		Electroless Nickel Plating



T Dimension Tolerance	Tolerance
1	±0.08
2	±0.13
3	±0.15

Part Number	Type	d	D	T	Unit Price				Pieces in 1 pack
					PACK-PWTB		PACK-PWTM		
					1~4	5~10	1~4	5~10	
					Price per 1 pc.	Price per 1 pc.	Price per 1 pc.	Price per 1 pc.	
PACK-PWTB		3	10	1					100 pcs.
PACK-PWTM		4	10 12	2					100 pcs.
		5	12	2					100 pcs.
		6	15	2					100 pcs.
		6	20	3					50 pcs.
		8	20	3					50 pcs.
		10	20	3					50 pcs.

Sold by the package only

Ordering Example: Part Number - D - T
PACK-PWTB3 - 10 - 1

Example

Use when screw holes are large.

O.D. is larger as compared to standard washers, and grasping area is larger and hence can be fixed firmly.

Using Standard Washers



Using Metal Washers

