

Metal Washer

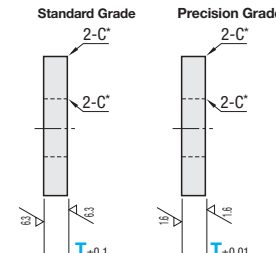
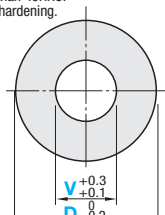
Hardened Type, Standard Grade / Precision Grade, T Dimension Selectable



RoHS 10

Part Number		Material	Surface Treatment	Hardness
Standard Grade	Precision Grade			
WSSBH	WASBH	S45C (WSSBH) / S45C Equivalent (WASBH)	Black Oxide	45~50HRC
WSSMH	WASMH	S45C Equivalent	Electroless Nickel Plating	
WSSSH	WASSH	SUS440C Equivalent	-	

Standard Grade is S45C Equivalent.
Depending on thickness and length, S45C Hardened Type may be less than 45HRC.
Stainless Steel Hardened Type (WSSSH, WASSH) may be discolored by hardening.



* D=16 or Less: C0.2 or Less
D=20 or More: C0.5 or Less

Part Number		V Selection	T Selection	Unit Price				
Type	D			Standard Grade		Precision Grade		
Standard Grade	4	2	1 2					
	5	2 3	1 2					
	6	2 3 4	1 2					
	8	2 3 4 5 6	1 2 3 5					
	10	2 3 4 5 6 8	1 2 3 5					
	12	3 4 5 6 8 10	1 2 3 5					
	13	4 5 6 8 10	1 2 3 5					
	14	4 5 6 8 10	1 2 3 5					
	15	4 5 6 8 10 12	1 2 3 5					
	16	4 5 6 8 10 12	1 2 3 5					
Precision Grade	20	4 5 6 8 10 12 15 16	2 3 5					
	25	6 8 10 12 15 16 20	2 3 5					
	30	8 10 12 15 16 20 25	2 3 5					
	35	10 12 15 16 20 25	3 5 10					
	40	10 12 15 16 20 25 30	3 5 10					
	50	10 12 15 16 20 25 30	3 5 10					
	60	15 16 20 25 30	3 5 10					



Part Number - V - T

WASBH14 - 10 - 5

Metal Washer

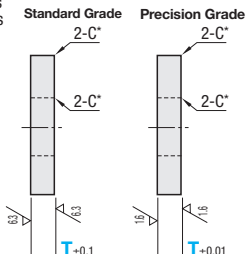
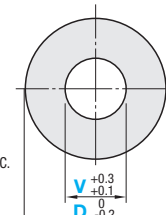
Hardened Type, Standard Grade / Precision Grade, Dimension Configurable



RoHS 10

Part Number		Material	Surface Treatment	Hardness
Standard Grade	Precision Grade			
FWSSCH	FWASCH	S45C Equivalent	-	45~50HRC
FWSSBH	FWASBH		Black Oxide	
FWSSMH	FWASMH		Electroless Nickel Plating	
FWSSK	FWASK	SKS3 Equivalent	-	55HRC~
FWSSKB	FWASKB		Black Oxide	
FWSSKM	FWASKM		Electroless Nickel Plating	
FWSSSH	FWASSH	SUS440C Equivalent	-	45~50HRC
FWSSSHR	-	SUS420J2	Low Temp. Black Chrome Plating	

Depending on thickness and length, S45C Hardened Type may be less than 45HRC.
Stainless Steel Hardened Type (FWSSSH, FWASSH) may be discolored by hardening.



* D=16 or Less: C0.2 or Less
D=20 or More: C0.5 or Less

Part Number	D	V 0.5mm Increment (V3 or More)	T 0.1mm Increment	Unit Price									
				Standard Grade					Precision Grade				
Standard Grade	4.0~10.0	0.5mm Increment	1.0~ 2.0	FWSSCH	FWSSBH	FWSSK	FWSSKB	FWSSSH	FWSSSHR	FWASCH	FWASBH	FWASK	FWASKB
	0.5mm Increment		2.1~ 5.0	FWSSMH	FWSSKM	FWASKM	FWASSH			FWASMH	FWASMH	FWASKM	FWASSH
	10.5~20.0		5.1~10.0										
	0.5mm Increment	2.0	1.0~ 2.0										
	1mm Increment		2.1~ 5.0										
	21~30		5.1~10.0										
	1mm Increment	2.6	1.0~ 2.0										
	31~40		2.1~ 5.0										
	1mm Increment		5.1~10.0										
	41~50	(0.5mm Increment)	1.0~ 2.0										
Precision Grade	0.5mm Increment		2.1~ 5.0										
	1mm Increment		5.1~10.0										
	51~60	3.0	1.0~ 2.0										
	1mm Increment		2.1~ 5.0										
	61~80		5.1~10.0										
	1mm Increment	90.0	5.0~10.0										
	81~100												
	1mm Increment		5.0~10.0										

⚠ D / V Machining Conditions
D≤60→V≤D-2
D≥61→V≤D-4

⚠ D / V Machining Conditions of Material SKS3
4≤D≤10→V≤D-2
61≤D≤80→V≤D-8
10.5≤D≤30→V≤D-4
81≤D≤100→V≤D-10
31≤D≤60→V≤D-6

⚠ No specification available for sizes without declaration of value.



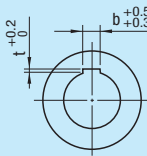
Part Number - D - V - T

FWSSKB - D71 - V50.0 - T10.0



Part Number - D - V - T - (KC, SC, WSC)

FWSSBH - D20 - V10 - T5 - KC

Alterations	Code	Spec.																																				
Keyway Relief	KC	Add an keyway relief. <u>Ordering Code</u> KC Machining Conditions ⚠ V≥8 ⚠ Not available for D61 ~ 100.																																				
																																						
		<table><tr><th>V</th><th>b</th><th>t</th><th>D-V</th></tr><tr><td>8~10.5</td><td>3</td><td>2.0</td><td>7 or More</td></tr><tr><td>11~12.5</td><td>4</td><td>2.5</td><td>8 or More</td></tr><tr><td>13~17.5</td><td>5</td><td>3.0</td><td>10 or More</td></tr><tr><td>18~22.5</td><td>6</td><td>3.5</td><td>12 or More</td></tr><tr><td>23~30.5</td><td>8</td><td>4.0</td><td>14 or More</td></tr><tr><td>31~38.5</td><td>10</td><td>4.0</td><td>14 or More</td></tr><tr><td>39~42.5</td><td>12</td><td>4.0</td><td>14 or More</td></tr><tr><td>43~44.0</td><td>14</td><td>4.5</td><td>16 or More</td></tr></table>	V	b	t	D-V	8~10.5	3	2.0	7 or More	11~12.5	4	2.5	8 or More	13~17.5	5	3.0	10 or More	18~22.5	6	3.5	12 or More	23~30.5	8	4.0	14 or More	31~38.5	10	4.0	14 or More	39~42.5	12	4.0	14 or More	43~44.0	14	4.5	16 or More
V	b	t	D-V																																			
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31~38.5	10	4.0	14 or More																																			
39~42.5	12	4.0	14 or More																																			
43~44.0	14	4.5	16 or More																																			

Alterations	Code	Spec.
One Flat	SC	Adds a flat. Ordering Code SC10 SC=1mm Increment SC≥V/2+2 ⚠ Not available for D4 ~ 8.
Two Flats	WSC	Adds two flats. Ordering Code WSC10 WSC=1mm Increment WSC≥V+4 ⚠ Not available for D4 ~ 8.