

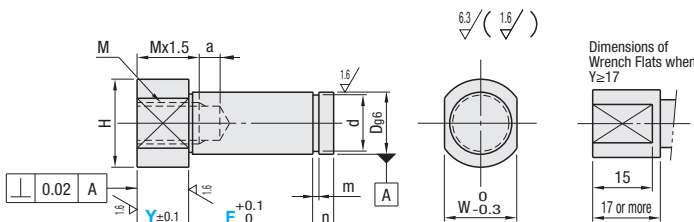
Cantilever Shafts

Screw Mount with Retaining Ring Groove

Standard



Type	Material	Surface Treatment
FXHA	S45C Equivalent	Black Oxide
PFXHA		Electroless Nickel Plating
SFXHA	SUS304	-



⚠ This type may have centering holes depending on dimensions.

Part Number Type	No.	Dg6	1mm Increment		M (Coarse)	H	W	Ref. Dim.	d Tolerance	m	n	Unit Price		
			Y	F								FXHA	PFXHA	SFXHA
FXHA PFXHA SFXHA	6	6	-0.004 -0.012		M 3	10	8	5	+0.075 0	0.7	2			
	6A	6	-0.004 -0.012		M 3	14	12							
	8	8	-0.005 -0.014		M 4	12	10	7	+0.090 0	0.9	3			
	8A	8	-0.005 -0.014		M 4	16	14							
	10	10	-0.006 -0.017		M 6	15	13	9.6	0 -0.090					
	10A	10	-0.006 -0.017		M 6	20	17							
	12	12	-0.007 -0.020		M 8	17	14	11.5	0 -0.110	1.15				
	13	13	-0.007 -0.020		M 8	18	15	12.4						
	15	15	-0.007 -0.020		M 8	20	17	14.3						
	16	16	-0.007 -0.020		M 10	21	18	15.2						
	17	17	-0.007 -0.020		M 10	23	20	16.2						
	18	18	-0.007 -0.020		M 10	23	20	16.2						
	20	20	-0.007 -0.020		M 12	26	24	19						
	20A	20	-0.007 -0.020		M 8	26	24	19						
	22	22	-0.007 -0.020		M 16	28	26	21	0 -0.210	1.35				
	22A	22	-0.007 -0.020		M 12	28	26	21						
	25	25	-0.007 -0.020		M 16	31	27	23.9						
	25A	25	-0.007 -0.020		M 12	31	27	23.9						
	30	30	-0.007 -0.020		M 20	36	32	28.6		1.65				
	30A	30	-0.007 -0.020		M 16	36	32	28.6						

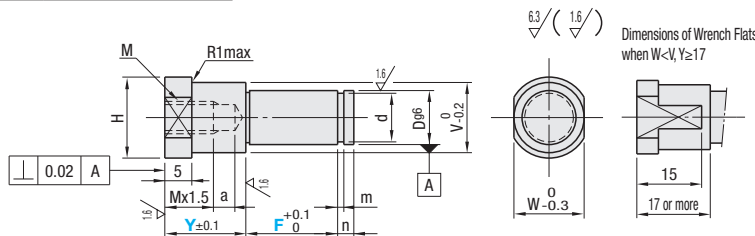
M	a
M 3~M10	5
M12~M20	7

When (Mx1.5)+a≥Y+F, the pilot hole for M goes through.
When Mx1.5≥Y+F, M also goes through.

Stepped



Type	Material	Surface Treatment
FXJA	S45C Equivalent	Black Oxide
PFXJA		Electroless Nickel Plating
SFXJA	SUS304	-



⚠ This type may have centering holes depending on dimensions.

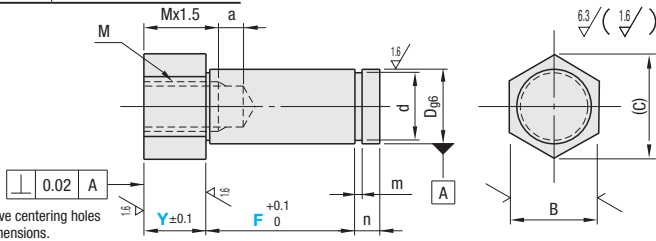
Part Number Type	No.	Dg6	1mm Increment		M (Coarse)	a	V	H	W	d		m	n	Unit Price				
			Y	F						Ref. Dim.	Tolerance			FXJA	PFXJA	SFXJA		
FXJA PFXJA SFXJA	6	6	-0.004 -0.012	5~100	M 3	5	8	10	8	5	+0.075 0	0.7	2					
	6A	6	-0.004 -0.012		M 3		12	14	12		10						12	10
	8	8	-0.005 -0.014		M 4		10	12	10	7	+0.090 0	0.9	3					
	8A	8	-0.005 -0.014		M 4		14	16	14		13						15	13
	10	10	-0.005 -0.014		M 6		13	15	13	9.6	0 -0.090	1.15	4					
	10A	10	-0.005 -0.014		M 6		18	20	17		15						17	14
	12	12	-0.006 -0.017		10~100		M 8	16	18	15	12.4	0 -0.110	1.35	5				
	13	13	-0.006 -0.017					M 8	18	20	17							14.3
	15	15	-0.006 -0.017				M10	19	21	18	15.2	0 -0.210	1.65					
	16	16	-0.006 -0.017					M10	20	22	19						16.2	20
	17	17	-0.006 -0.017	M12		21	23	20	17	0 -0.210	1.65							
	18	18	-0.006 -0.017			M12	24	26	24						19	26	28	26
	20	20	-0.007 -0.020	7~75		M 8	7	26	28	26	21	0 -0.210	1.35	5				
	20A	20	-0.007 -0.020															M 8
	22	22	-0.007 -0.020			M12		29	31	27	23.9	28.6						
	22A	22	-0.007 -0.020			M 8		34	36	32	28.6							
	25	25	-0.007 -0.020		M16	34		36	32	28.6	28.6							
	25A	25	-0.007 -0.020		M12	34		36	32	28.6								34
	30	30	-0.007 -0.020		M20	34		36	32	28.6	28.6							
	30A	30	-0.007 -0.020		M16	34		36	32	28.6								34

⚠ When W<V, wrench flats W reaches O.D.V. ⚠ When (Mx1.5)+a≥Y+F, the pilot hole for M goes through. When Mx1.5≥Y+F, M also goes through.

Hex



Type	Material	Surface Treatment
LXHA	S45C Equivalent	Black Oxide
PLXHA		Electroless Nickel Plating
SLXHA	SUS304	-

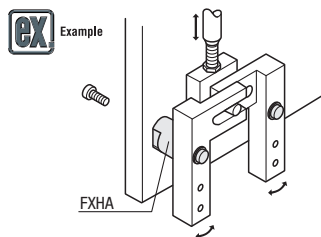


⚠ This type may have centering holes depending on dimensions.

Part Number Type	No.	Dg6	1mm Increment		M (Coarse)	a	B	(C)	Ref. Dim.	d Tolerance	m	n	Unit Price		
			Y	F									LXHA	PLXHA	SLXHA
LXHA PLXHA SLXHA	6	6	-0.004 -0.012		M 3		8	9.2	5	+0.075 0	0.7	2			
	8	8	-0.005 -0.014		M 4		10	11.5	7	+0.090 0	0.9	3			
	10	10	-0.006 -0.017		M 6		13	15.0	9.6	0 -0.090					
	12	12	-0.006 -0.017		M 8		14	16.2	11.5						
	13	13	-0.006 -0.017		M 8		17	19.6	12.4	0 -0.110	1.15				
	15	15	-0.006 -0.017		M 10		19	21.9	14.3						
	16	16	-0.006 -0.017		M 10		19	21.9	15.2						
	17	17	-0.006 -0.017		M 10		24	27.7	16.2						
	18	18	-0.006 -0.017		M 10		24	27.7	17						
	20	20	-0.007 -0.020		M 12		27	31.2	19	0 -0.210	1.35				
	22	22	-0.007 -0.020		M 12		27	31.2	21						
	25	25	-0.007 -0.020		M 16		32	36.9	23.9						
	25A	25	-0.007 -0.020		M 12		32	36.9	23.9						
	30	30	-0.007 -0.020		M 20		32	36.9	28.6		1.65				
	30A	30	-0.007 -0.020		M 16		32	36.9	28.6						

⚠ When (Mx1.5)+a≥Y+F, the pilot hole for M goes through. When Mx1.5≥Y+F, M also goes through.

Ordering Example	Part Number	-	Y	-	F
	FXHA12	-	5	-	F15
	PLXHA10	-	20	-	F35



Alterations	Part Number	-	Y	-	F	(YKC, WSC, APC, SET)
	FXHA15	-	20	-	F22	APC

	Y Dimension Tolerance	Four Wrench Flats	Adds a Pilot	Dimensions of Wrench Flats	Adds a Straight Slot	Y Dimension	Retaining Ring Set																																																																														
Alterations																																																																																					
Code	YKC	WSC	APC	FW	MM	YC	SET																																																																														
Spec.	Changes Y dimension tolerance to ± 0.05 . 🔴 Applicable to all types. Ordering Code YKC	Changes from two wrench flats to four wrench flats. 🔴 Applicable to Standard and Stepped Types. Ordering Code WSC	Adds a pilot to the shaft seat. 🔴 Applicable to all types. 🔴 For 8A and 12A, pilot depth is 2mm. Ordering Code APC <table border="1"><thead><tr><th>D</th><th>M</th><th>APC 96</th></tr></thead><tbody><tr><td>6</td><td>M 3</td><td>8</td></tr><tr><td>8</td><td>M 4</td><td>8</td></tr><tr><td>8A</td><td>M 5</td><td>8</td></tr><tr><td>10</td><td>M 6</td><td>10</td></tr><tr><td>12A</td><td>M 5</td><td>8</td></tr><tr><td>12</td><td>M 8</td><td>12</td></tr><tr><td>13</td><td></td><td>13</td></tr><tr><td>15</td><td></td><td>15</td></tr><tr><td>16</td><td></td><td>16</td></tr><tr><td>17</td><td>M10</td><td>17</td></tr><tr><td>18</td><td></td><td>18</td></tr><tr><td>20</td><td></td><td>20</td></tr><tr><td>22</td><td>M12</td><td>22</td></tr><tr><td>25</td><td>M16</td><td></td></tr><tr><td>25A</td><td>M12</td><td>25</td></tr><tr><td>30</td><td>M20</td><td></td></tr><tr><td>30A</td><td>M16</td><td>30</td></tr></tbody></table>	D	M	APC 96	6	M 3	8	8	M 4	8	8A	M 5	8	10	M 6	10	12A	M 5	8	12	M 8	12	13		13	15		15	16		16	17	M10	17	18		18	20		20	22	M12	22	25	M16		25A	M12	25	30	M20		30A	M16	30	Applies Wrench Flat Dimension Changes. 1mm Increment Ordering Code FW3 🔴 $0 \leq FW \leq 15$ 🔴 When FW=0, there are no Wrench Flats. 🔴 Applicable to Standard and Stepped Types.	Adds a straight slot to D. Ordering Code MM 🔴 It will not be aligned with wrench flats. <table border="1"><thead><tr><th>D</th><th>M</th><th>Y</th></tr></thead><tbody><tr><td>6-13</td><td>1, 2</td><td>1, 5</td></tr><tr><td>15-20</td><td>2, 0</td><td>2, 5</td></tr><tr><td>22-30</td><td>3, 0</td><td>3, 5</td></tr></tbody></table> 🔴 Applicable when $(M \times 15) + a < Y + F$.	D	M	Y	6-13	1, 2	1, 5	15-20	2, 0	2, 5	22-30	3, 0	3, 5	Increases Y dimension by increments. 0.1mm Increment Ordering Code YC10.8	Retaining Ring applicable to each shaft diameter is included. Ordering Code SET 🔴 Applicable to all types. Retaining Ring Shape No.=6, 8; E Type Retaining Ring No.=10 ~ 30A; C Type Retaining Ring Retaining Ring Material <table border="1"><thead><tr><th colspan="2">Centrifuge Shafts</th><th>Retaining Ring</th></tr><tr><th>Material</th><th>Surface Treatment</th><th>Material</th></tr></thead><tbody><tr><td>S45C</td><td>Black Oxide</td><td>Spring Steel</td></tr><tr><td>SUS304</td><td>Electroless Nickel Plating</td><td>SUS304-CSP</td></tr></tbody></table>	Centrifuge Shafts		Retaining Ring	Material	Surface Treatment	Material	S45C	Black Oxide	Spring Steel	SUS304	Electroless Nickel Plating	SUS304-CSP
D	M	APC 96																																																																																			
6	M 3	8																																																																																			
8	M 4	8																																																																																			
8A	M 5	8																																																																																			
10	M 6	10																																																																																			
12A	M 5	8																																																																																			
12	M 8	12																																																																																			
13		13																																																																																			
15		15																																																																																			
16		16																																																																																			
17	M10	17																																																																																			
18		18																																																																																			
20		20																																																																																			
22	M12	22																																																																																			
25	M16																																																																																				
25A	M12	25																																																																																			
30	M20																																																																																				
30A	M16	30																																																																																			
D	M	Y																																																																																			
6-13	1, 2	1, 5																																																																																			
15-20	2, 0	2, 5																																																																																			
22-30	3, 0	3, 5																																																																																			
Centrifuge Shafts		Retaining Ring																																																																																			
Material	Surface Treatment	Material																																																																																			
S45C	Black Oxide	Spring Steel																																																																																			
SUS304	Electroless Nickel Plating	SUS304-CSP																																																																																			