

# Cantilever Shafts

## Screw Mount with Retaining Ring Groove

**Standard**

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

RoHS 10

This type may have centering holes depending on dimensions.

Part Number Type	No.	D96	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	5-100	M 3	10	8	5	+0.075 0	0.7	2			
	6A	6	-0.012		M 3	14	12							
	8	8	-0.005		M 4	12	10	7	+0.090 0	0.9	3			
	8A	8	-0.014		M 4	16	14							
	10	10	-0.006		M 6	15	13	9.6	0	1.15	4			
	10A	10	-0.017		M 6	20	17							
	12	12	-0.006	10-150	M 8	17	14	11.5	0	1.35	5			
	13	13	-0.017		M 8	18	15	12.4	-0.110					
	15	15	-0.006		M 10	20	17	14.3	0					
	16	16	-0.017		M 10	21	18	15.2	-0.110					
	17	17	-0.007		M 12	23	20	16.2	0					
	18	18	-0.020		M 12	23	20	17	-0.210					
	20	20	-0.007	4-75	M 8	26	24	19	0	1.65	5			
	20A	20	-0.020		M 8	28	26	21	-0.210					
	22	22	-0.007		M 16	31	27	23.9	0					
	22A	22	-0.020		M 12	31	27	23.9	-0.210					
	25	25	-0.007		M 16	36	32	28.6	0					
	25A	25	-0.020		M 12	36	32	28.6	-0.210					
30	30	-0.007		M 20										
30A	30	-0.020		M 16										

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	S45C Equivalent	Electroless Nickel Plating
SFXJA	SUS304	-

RoHS 10

This type may have centering holes depending on dimensions.

Part Number Type	No.	D96	1mm Increment		M (Coarse)	a	V	H	W	Ref. Dim.	d Tolerance	m	n	Unit Price		
			Y	F										FXJA	PFXJA	SFXJA
FXJA PFXJA SFXJA	6	6	-0.004	7-60	M 3	8	10	8	5	+0.075 0	0.7	2				
	6A	6	-0.012		M 3	12	14	12								
	8	8	-0.005		M 4	10	12	10	7	+0.090 0	0.9	3				
	8A	8	-0.014		M 4	14	16	14								
	10	10	-0.006		M 6	13	15	13	9.6	0	1.15	4				
	10A	10	-0.017		M 6	18	20	17	-0.090							
	12	12	-0.006	10-100	M 8	15	17	14	11.5	0	1.35	5				
	13	13	-0.017		M 8	16	18	15	12.4	-0.110						
	15	15	-0.006		M 10	18	20	17	14.3	0						
	16	16	-0.017		M 10	19	21	18	15.2	-0.110						
	17	17	-0.007		M 12	20	23	20	16.2	0						
	18	18	-0.020		M 12	21	23	20	17	-0.210						
	20	20	-0.007	7-75	M 8	24	26	24	19	0	1.65	5				
	20A	20	-0.020		M 8	26	28	26	21	-0.210						
	22	22	-0.007		M 12	29	31	27	23.9	0						
	22A	22	-0.020		M 8	29	31	27	23.9	-0.210						
	25	25	-0.007		M 16	34	36	32	28.6	0						
	25A	25	-0.020		M 12	34	36	32	28.6	-0.210						
30	30	-0.007		M 20												
30A	30	-0.020		M 16												

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	S45C Equivalent	Electroless Nickel Plating
SLXHA	SUS304	-

RoHS 10

This type may have centering holes depending on dimensions.

Part Number Type	No.	D96	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	5-100	M 3	8	9.2	5	+0.075 0	0.7	2				
	6A	6	-0.012		M 3	10	11.5	7	+0.090 0	0.9	3				
	8	8	-0.005		M 4	13	15.0	9.6	0	1.15	4				
	8A	8	-0.014		M 4	14	16.2	11.5	-0.090						
	10	10	-0.006		M 6	15	17	14.3	0	1.35	5				
	10A	10	-0.017		M 6	17	19.6	15.2	-0.110						
	12	12	-0.006	10-150	M 8	17	18	17	0	1.65	5				
	13	13	-0.017		M 8	18	18	16.2	-0.110						
	15	15	-0.006		M 10	20	20	19	0						
	16	16	-0.017		M 10	21	21	21	-0.210						
	17	17	-0.007		M 12	24	27.7	23.9	0						
	18	18	-0.020		M 12	24	27.7	23.9	-0.210						
	20	20	-0.007	4-75	M 16	27	31.2	28.6	0	1.65	5				
	25	25	-0.020		M 12	27	31.2	28.6	-0.210						
	25A	25	-0.020		M 16	32	36.9	28.6	0						
	30	30	-0.007		M 16	32	36.9	28.6	-0.210						
	30A	30	-0.020		M 16	32	36.9	28.6	-0.210						

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

Ordering Example: LXHA12 - 5 - F15, PLXHA10 - 20 - F35

Alterations: FXHA15 - 20 - F22 - APC

Alterations	YKC	WSC	APC	FW	MM	YC	SET
Y Dimension Tolerance	YKC	WSC	APC	FW	MM	YC	SET
Four Wrench Flats	YKC	WSC	APC	FW	MM	YC	SET
Adds a Pilot	YKC	WSC	APC	FW	MM	YC	SET
Dimensions of Wrench Flats	YKC	WSC	APC	FW	MM	YC	SET
Adds a Straight Slot	YKC	WSC	APC	FW	MM	YC	SET
Y Dimension	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	Applies Wrench Flat Dimension Changes. 1mm Increment Ordering Code FW3 0≤FW≤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. Applicable when (Mx1.5)+a<Y+F.	Increases Y dimension by increments. 0.1mm Increment Ordering Code YC10.8	Retaining Ring applicable to each shaft diameter is included. Ordering Code SET Retaining Ring Shape No.=6, 8; E Type Retaining Ring No.=10-30A; C Type Retaining Ring Retaining Ring Material Material Surface Treatment Retaining Ring S45C Black Oxide Spring Steel SUS304 Electroless Nickel Plating SUS304-CSP