

Cantilever Shafts

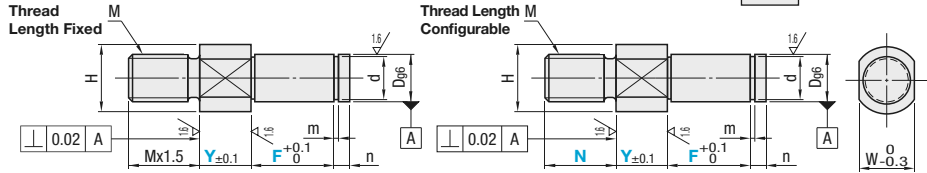
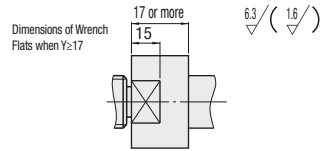
Threaded with Retaining Ring Groove

Standard



RoHS

Type		Material	Surface Treatment
Thread Length Fixed	Thread Length Configurable		
FXAA	FXNAA	EN 1.1191 Equiv.	Black Oxide
PFXAA	PFXNAA	EN 1.4301 Equiv.	Electroless Nickel Plating
SFXAA	SFXNAA	EN 1.4301 Equiv.	-
HFXAA	-	EN 1.7220 Equiv. Hardness: 35 - 40HRC	Black Oxide



This type may have centering holes depending on dimensions.
Refer to the table on P.884 for thread undercut dimensions.

Part Number	Type	No.	Dg6	1mm Increment		H	W	M (Coarse)	d (Ref. Dim.)	Tolerance	m	n	Unit Price														
				Y	F								N	FXAA	PFXAA	SFXAA	HFXAA	FXNAA	PFXNAA	SFXNAA							
	Thread Length Fixed	3	-0.002	2-30	3-50	7	5	M 3	2	+0.060	0.5	2															
		3A	-0.008																								
		4																									
		4A																									
		5	-0.004																								
		5A	-0.012																								
		6																									
		6A																									
		8																									
		8A																									
	Thread Length Configurable	10	-0.005	2-60	10-20	12	10	M 8	7	+0.090	0.9	3															
		10A	-0.014																								
		12																									
		12A																									
		13																									
		13A																									
		15	-0.006																								
		15A	-0.017																								
		16																									
		17																									
		18																									
		20		10-150	20-40	26	24	M20	19	0	1.35	4															
		20A																									
		22																									
		22A																									
		25	-0.007																								
		25A	-0.020																								
		30																									
		30A																									
		36																									
		32																									

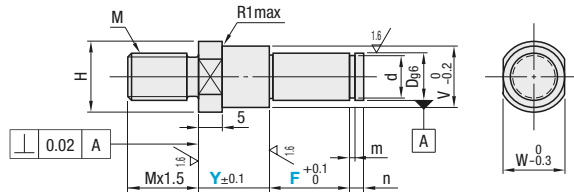
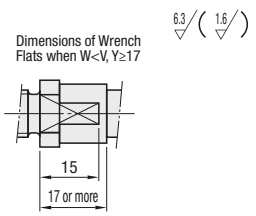
HFXAA is applicable to D6 or larger specifications. N is available for Thread Length Configurable Type only.

Stepped



RoHS

Type	Material	Surface Treatment
FXBA	EN 1.1191 Equiv.	Black Oxide
PFXBA	EN 1.4301 Equiv.	Electroless Nickel Plating
SFXBA	EN 1.4301 Equiv.	-
PHFXBA	EN 1.7220 Equiv. Hardness: 35 - 40HRC	Electroless Nickel Plating



This type may have centering holes depending on dimensions.
Refer to the table on P.884 for thread undercut dimensions.

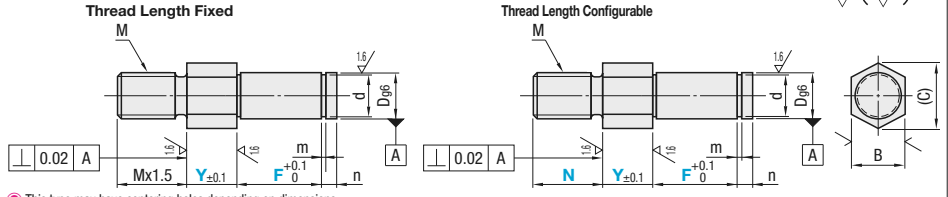
Part Number	Type	No.	Dg6	1mm Increment		V	H	W	M (Coarse)	d (Ref. Dim.)	Tolerance	m	n	Unit Price														
				Y	F									FXBA	PFXBA	SFXBA	PHFXBA											
	Thread Length Fixed	3	-0.002	7-30	3-50	5	7	5	M 3	2	+0.060	0.5	2															
		3A	-0.008																									
		4																										
		4A																										
		5	-0.004																									
		5A	-0.012																									
		6																										
		6A																										
		8																										
		8A																										
	Thread Length Configurable	10	-0.005	7-60	5-100	10	12	10	M 8	7	+0.090	0.9	3															
		10A	-0.014																									
		12																										
		12A																										
		13																										
		13A																										
		15	-0.006																									
		15A	-0.017																									
		16																										
		17																										
		18																										
		20		10-150	20-40	24	26	24	M20	19	0	1.35	4															
		20A																										
		22																										
		22A																										
		25	-0.007																									
		25A	-0.020																									
		30																										
		30A																										
		36																										
		32																										

When W < V, wrench flats W reaches O.D.V. PHFXBA is applicable to D6 or larger specifications.



RoHS

Type		Material	Surface Treatment
Thread Length Fixed	Thread Length Configurable		
LXAA	LXNAA	EN 1.1191 Equiv.	Black Oxide
PLXAA	PLXNAA		Electroless Nickel Plating
SLXAA	SLXNAA	EN 1.4301 Equiv.	-



⚠ This type may have centering holes depending on dimensions.
 ⚠ Refer to the table below for thread undercut dimensions.

Part Number	Type	No.	Dg6	1mm Increment			B	(C)	M (Coarse)	d		m	n	Unit Price						
				Y	F	N				Ref. Dim.	Tolerance			Thread Length Fixed LXAA	Thread Length Fixed PLXAA	Thread Length Fixed SLXAA	Thread Length Configurable LXNAA	Thread Length Configurable PLXNAA	Thread Length Configurable SLXNAA	
Thread Length Fixed LXAA PLXAA SLXAA	3	3	-0.002 -0.008	2-30	3- 50	3- 6 4- 8	6	6.9	M 3	2	+0.060 0	0.5	2							
	4	4	-0.004 -0.012						5-10	7	8.1			M 5	4	+0.075 0				
	5	5	-0.005 -0.014						6-12	8	9.2			M 6	5	+0.090 0				
	Thread Length Configurable LXNAA PLXNAA SLXNAA	6	6	-0.006 -0.017	2-60	5-100	8-16 10-20	10	11.5	M 8	7	+0.090 0	0.9	3						
		8	8							12-24	13	15.0			M10	9.6	0 -0.090			
		10	10							14	16.2	11.5			M12	12.4	0 -0.110			
		12	12	10-150	17	19.6	14.3	1.15	4											
		13	13				15.2													
		15	15				16.2													
		16	16	-0.007 -0.020	4-60	20-40	24	27.7	24	27.7	M20	19	0 -0.210	1.35	5					
17		17	M16								21									
18		18	M20								23.9									
20		20	-0.007 -0.020	4-60	20-40	27	31.2	27	31.2	M20	23.9	0 -0.210	1.65	5						
22	22	M16								28.6										
25	25	M20								28.6										
25A	25	-0.007 -0.020	4-60	20-40	32	36.9	32	36.9	M16	28.6	0 -0.210	1.65	5							
30	30								M16	28.6										
30A	30																			

⚠ N is available for Thread Length Configurable Type only.



Ordering Example

Part Number - Y - F - N
 FXAA10 - 25 - F18
 PLXNAA12 - 15 - F25 - N12



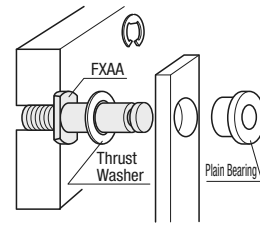
Alterations



Part Number - Y - F - N - (YKC, WSC, SET)
 FXAA20 - 20 - F20 - YKC

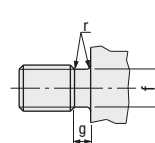


Example



Alterations	Y Dimension Tolerance	Four Wrench Flats	Retaining Ring Set																								
Code	YKC	WSC	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	Retaining Ring applicable to each shaft diameter is included. Ordering Code SET ⚠ Applicable to all types. Retaining Ring Shape No.=3 ~ 8A: E Type Retaining Ring No.=10 ~ 30A: C Type Retaining Ring Retaining Ring Material <table border="1"> <thead> <tr> <th colspan="2">Cantilever Shafts</th> <th colspan="2">Retaining Ring</th> </tr> <tr> <th>Material</th> <th>Surface Treatment</th> <th>Material</th> <th></th> </tr> </thead> <tbody> <tr> <td>EN 1.1191 Equiv.</td> <td>Black Oxide</td> <td>Spring Steel</td> <td></td> </tr> <tr> <td>EN 1.4301 Equiv.</td> <td>Electroless Nickel Plating</td> <td>EN 1.4301 (CSP) Equiv.</td> <td></td> </tr> <tr> <td>EN 1.7220 Equiv.</td> <td>Black Oxide</td> <td>Spring Steel</td> <td></td> </tr> <tr> <td></td> <td>Electroless Nickel Plating</td> <td>EN 1.4301 (CSP) Equiv.</td> <td></td> </tr> </tbody> </table>	Cantilever Shafts		Retaining Ring		Material	Surface Treatment	Material		EN 1.1191 Equiv.	Black Oxide	Spring Steel		EN 1.4301 Equiv.	Electroless Nickel Plating	EN 1.4301 (CSP) Equiv.		EN 1.7220 Equiv.	Black Oxide	Spring Steel			Electroless Nickel Plating	EN 1.4301 (CSP) Equiv.	
Cantilever Shafts		Retaining Ring																									
Material	Surface Treatment	Material																									
EN 1.1191 Equiv.	Black Oxide	Spring Steel																									
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EN 1.7220 Equiv.	Black Oxide	Spring Steel																									
	Electroless Nickel Plating	EN 1.4301 (CSP) Equiv.																									

⚠ Thread Undercut Dimensions



Thread Dia. (M)	Coarse Thread		
	g	r	f
3			2.1-2.4
4	1.2-1.5	0.2-0.3	2.9-3.2
5			3.9-4.1
6			4.3-4.9
8	1.5-2.5	0.2-0.6	6.3-6.6
10			8.1-8.3
12	1.5-3.0		9.8-10.1
16		0.2-1.0	13.6-13.8
20	1.5-4.0		17.0-17.2