


Cantilever Shafts

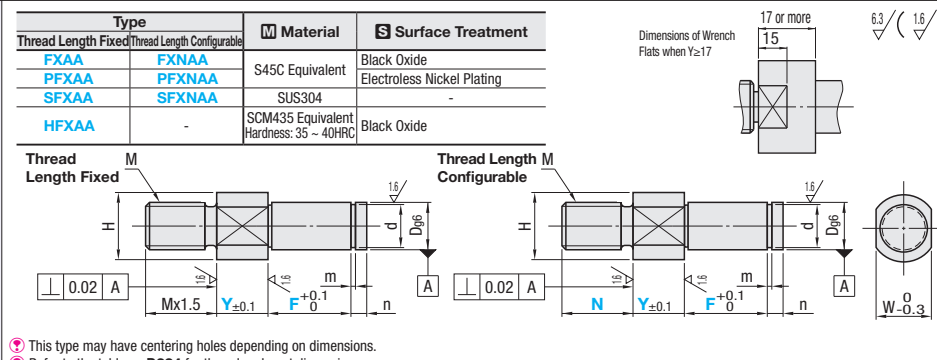
Threaded with Retaining Ring Groove

Standard



Type	Material	Surface Treatment
FXAA, FXNAA	S45C Equivalent	Black Oxide
PFXAA, PFXNAA	SUS304	Electroless Nickel Plating
SFXAA, SFXNAA	SUS304	-
HFXAA	SCM435 Equivalent Hardness: 35 ~ 40HRC	Black Oxide

Dimensions of Wrench Flats when $Y \geq 17$




RoHS 10

This type may have centering holes depending on dimensions.
Refer to the table on P884 for thread undercut dimensions.

Part Number	Type	No.	Dg6	1mm Increment		Y	F	N	H	W	M (Coarse)	d (Ref. Dim.)	Tolerance	m	n	Unit Price			
				Y	F											N	FXAA	PFXAA	SFXAA
3	3A	3	-0.002	2-30	3-50	3-6	7	5	M 3	2	+0.060	0.5	2	2	2				
4	4A	4	-0.004				8	6	M 4	3	0								
5	5A	5	-0.012	5-100	8-16	5-10	9	7	M 5	4	+0.075	0.7	3	3	3				
6	6A	6	-0.012				10	8	M 6	5	0								
8	8A	8	-0.005	10-20	12-24	8-16	12	10	M 8	7	+0.090	0.9	4	4	4				
10	10A	10	-0.014				14	12	M 10	9.6	-0.090								
12	12	12	-0.006	10-150	20-40	10-20	15	13	M12	11.5	0	1.15	4	4	4				
13	13	13	-0.017				16	14											
15	15	15	-0.006	4-60	20-40	20-40	17	15	M20	19	0	1.35	5	5	5				
16	16	16	-0.017				18	16											
17	17	17	-0.007	30A	30A	30A	21	18	M20	23.9	-0.210	1.65	5	5	5				
18	18	18	-0.020				22	19											
20	20	20	-0.007	30A	30A	30A	23	20	M20	28.6	-0.210	1.65	5	5	5				
22	22	22	-0.020				24	21											

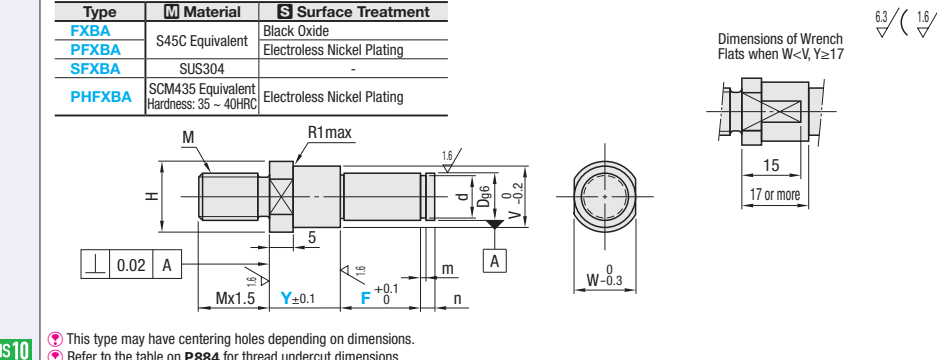
HFXAA is applicable to D6 or larger specifications. N is available for Thread Length Configurable Type only.

Stepped



Type	Material	Surface Treatment
FXBA, PFXBA	S45C Equivalent	Black Oxide
SFXBA	SUS304	Electroless Nickel Plating
PHFXBA	SCM435 Equivalent Hardness: 35 ~ 40HRC	Electroless Nickel Plating

Dimensions of Wrench Flats when $W < V, Y \geq 17$




RoHS 10

This type may have centering holes depending on dimensions.
Refer to the table on P884 for thread undercut dimensions.

Part Number	Type	No.	Dg6	1mm Increment		Y	F	V	H	W	M (Coarse)	d (Ref. Dim.)	Tolerance	m	n	Unit Price				
				Y	F											V	H	W	FXBA	PFXBA
3	3A	3	-0.002	7-30	3-50	3-50	5	7	5	M 3	2	+0.060	0.5	2	2	2				
4	4A	4	-0.008				6	8	6	M 4	3	0								
5	5A	5	-0.004	5-100	8-16	5-10	7	9	7	M 5	4	+0.075	0.7	3	3	3				
6	6A	6	-0.012				8	10	8	M 6	5	0								
8	8A	8	-0.005	10-20	12-24	8-16	10	12	10	M 8	7	+0.090	0.9	4	4	4				
10	10A	10	-0.014				12	14	12	M 10	9.6	-0.090								
12	12	12	-0.006	10-150	20-40	10-20	13	15	13	M12	11.5	0	1.15	4	4	4				
13	13	13	-0.017				14	16	14											
15	15	15	-0.006	7-60	20-40	20-40	16	18	15	M20	19	0	1.35	5	5	5				
16	16	16	-0.017				18	20	17											
17	17	17	-0.007	30A	30A	30A	19	21	18	M20	23.9	-0.210	1.65	5	5	5				
18	18	18	-0.020				20	22	19											
20	20	20	-0.007	30A	30A	30A	21	23	20	M20	28.6	-0.210	1.65	5	5	5				
22	22	22	-0.020				24	21	17											

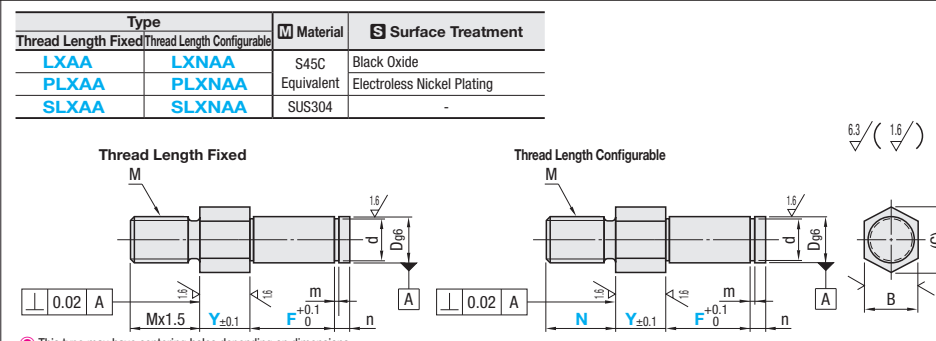
When $W < V$, wrench flats W reaches O.D.V. PHFXBA is applicable to D6 or larger specifications.

Hex



Type	Material	Surface Treatment
LXAA, LXNAA	S45C	Black Oxide
PLXAA, PLXNAA	Equivalent	Electroless Nickel Plating
SLXAA, SLXNAA	SUS304	-

Dimensions of Wrench Flats when $Y \geq 17$



RoHS 10

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		Y	F	N	B	C	M (Coarse)	d (Ref. Dim.)	Tolerance	m	n	Unit Price			
				Y	F											N	LXAA	PLXAA	SLXAA
3	3	3	-0.002	2-30	3-50	3-6	7	5	M 3	2	+0.060	0.5	2	2	2				
4	4	4	-0.008				8	6	M 4	3	0								
5	5	5	-0.004	5-100	8-16	5-10	9	7	M 5	4	+0.075	0.7	3	3	3				
6	6	6	-0.012				10	8	M 6	5	0								
8	8	8	-0.005	10-20	12-24	8-16	12	10	M 8	7	+0.090	0.9	4	4	4				
10	10	10	-0.014				14	12	M 10	9.6	-0.090								
12	12	12	-0.006	10-150	20-40	10-20	15	13	M12	11.5	0	1.15	4	4	4				
13	13	13	-0.017				16	14											
15	15	15	-0.006	4-60	20-40	20-40	17	15	M20	19	0	1.35	5	5	5				
16	16	16	-0.017				18	16											
17	17	17	-0.007	30A	30A	30A	19	17	M20	23.9	-0.210	1.65	5	5	5				
18	18	18	-0.020				20	19											
20	20	20	-0.007	30A	30A	30A	21	17	M20	28.6	-0.210	1.65	5	5	5				
22	22	22	-0.020				24	21											

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)

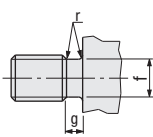
FXAA20 - 20 - F20 - YKC

Example



Alterations	Y Dimension Tolerance	Four Wrench Flats	Retaining Ring Set
	YKC	WSC	SET
Code	YKC	WSC	SET
Spec.	Changes Y dimension tolerance to ± 0.05 . Applicable to all types. Ordering Code: YKC	Changes 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 Cantilever Shafts Retaining Ring Material Material S45C Black Oxide Spring Steel SUS304 Electroless Nickel Plating SUS304-CSP SCM435 Black Oxide Spring Steel Electroless Nickel Plating SUS304-CSP

Thread Undercut Dimensions



Thread Dia. (M)	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