Shafts

One End Stepped and Tapped, One End Threaded / One End Stepped, One End Threaded

For products uncovered by the e-Catalog Standards, see P.131.

RoHS

- Shaft End Machined Area (Effective Thread Length + Approx. 10mm) Annealing may lower hardness.
- L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.141
- Features of Low Temp. Black Chrome Plating P.156

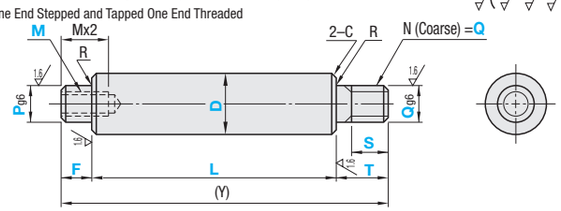
Type: One End Stepped and Tapped One End Threaded D Tol. g6	D Tol. h5	D Tol. f8	One End Stepped, One End Threaded D Tol. g6	D Tol. h5	D Tol. f8	M Material	H Hardness	S Surface Treatment
SFAB	SFUA	-	SFNB	SFUB	-	SUJ2	Effective Hardened Depth of Induction Hardening P.142 SUJ2 58HRC~ SUS440C Equivalent 56HRC~	-
SSFAB	SSFUA	-	SSFNB	SSFUB	-	SUS440C Equivalent		
PSFAB	PSFUA	-	PSFNB	PSFUB	-	SUJ2		Hard Chrome Plating - Plating Hardness: HV750 ~, Plating Thickness: 5μ or More ~
PSSFAB	PSSFUA	-	PSSFNB	PSSFUB	-	SUS440C Equivalent		Low Temp. Black Chrome Plating
RSFAB	-	-	RSFNB	-	-	SUJ2		
-	-	PSFGB	-	-	PSNGB	S45C Equivalent	-	Hard Chrome Plating - Plating Hardness: HV750 ~, Plating Thickness: 10μ or More ~
-	-	PSSFGB	-	-	PSSNGB	SUS304		

D	D Tol. g6	D Tol. h5	D Tol. f8
8	-0.005 -0.014	0 -0.006	-0.013 -0.035
10			
12	-0.006 -0.017	0 -0.008	-0.016 -0.043
13			
15			
16			
18			
20			
25	-0.007 -0.020	0 -0.009	-0.020 -0.053
30			
35	-0.009 -0.025	0 -0.011	-0.025 -0.064
40			
50			

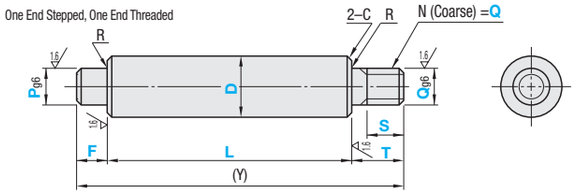
For plated products, the surface roughness of D part is 0.4/; and for unplated products, it is 0.4/ 6.

6.3/ (1.6/ 0.4/ 0.4/ 6)

One End Stepped and Tapped One End Threaded



One End Stepped, One End Threaded



Coarse Thread Dimensions M	Pitch
3	0.5
4	0.7
5	0.8
6	1.0
8	1.25
10	1.5
12	1.75
16	2.0
20	2.5
24	3.0
30	3.5

Part Number Type: One End Stepped and Tapped One End Threaded	One End Stepped, One End Threaded	D	1mm Increments L	F	T	S	P	M (Coarse) Selection	Q Selection	(Y) Max.	R	C
(D Tol. g6) SFAB	(D Tol. h5) SFUA	(D Tol. g6) SFNB	(D Tol. h5) SFUB	8	25~ 996	2≤F≤Px4	2≤T≤Qx5	(When Q≤6) S≤T-2	6	3	3 4 5 6 8	800	0.3 or Less	0.5 or Less
SSFAB	SSFUA	SSFNB	SSFUB	10	25~ 996				6~ 8	3 4 5	4 5 6 8 10	800		
PSFAB	PSFUA	PSFNB	PSFUB	12	25~1196			(When Q=8, 10) S≤T-3	6~10	3 4 5 6	5 6 8 10 12	1000		
PSSFAB	PSSFUA	PSSFNB	PSSFUB	13	25~1196				6~11	3 4 5 6 8	5 6 8 10 12	1000		
RSFAB		RSFNB		15	25~1196			(When Q≥12) S≤T-5	6~13	3 4 5 6 8 10	5 6 8 10 12	1000		
(D≤30,L≤500,Ymax.≤800)		(D≤30,L≤500,Ymax.≤800)		16	25~1196				6~14	3 4 5 6 8 10	5 6 8 10 12 16	1200		
(D Tol. f8)		(D Tol. f8)		18	25~1196				8~16	4 5 6 8 10 12	5 6 8 10 12 16	1200		
PSFGB		PSNGB		20	25~1196			(W/o Threads) S=0	8~17	4 5 6 8 10 12	6 8 10 12 16 20	1200		1.0 or Less
PSSFGB		PSSNGB		25	25~1196			S=0 is only applicable to One End Stepped and Tapped One End Threaded.	8~22	4 5 6 8 10 12 16	8 10 12 16 20 24	1200		
				30	25~1496				9~27	5 6 8 10 12 16 20 24	8 10 12 16 20 24 30	1500	0.5 or Less	
				35	25~1496				9~32	5 6 8 10 12 16 20 24	10 12 16 20 24 30	1500		
				40	25~1496				11~37	6 8 10 12 16 20 24 30	12 16 20 24 30	1500		
				50	25~1496			S≥Pitchx3	11~47	6 8 10 12 16 20 24 30	16 20 24 30	1500		

P dimensions require M+3≤P. L+F dimensions require Mx4 or more.
When D=Q, specify T=S as S dimensions. However, L and T dimensions have manufacturing priority and S dimension will be T-(Pitchx2).

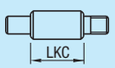
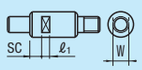
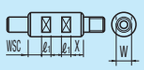
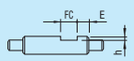
Ordering Example

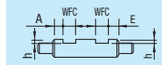
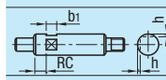
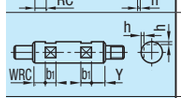
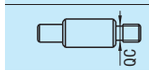
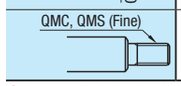
Part Number	L	F	P	M	T	S	Q
SFNB20	400	F25	P16		T35	S25	Q16
SFAB20	400	F25	P16	M10	T35	S25	Q16

Alterations

Part Number	L	F	P	M	T	S	Q(QMC, QMS)	(LKC···etc.)
SFAB20	400	F25	P16	M10	T35	S25	Q16	LKC-QC

Alteration Details P.143

Alterations	Code	Spec.
	LKC	Alteration to L dimension tolerance Ordering Code LKC Not applicable when D-P(Q)≤2. L dimensions can be specified in 0.1mm increment for LKC. L<200 ···L±0.03 200≤L<500 ···L±0.05 L≥500 ···L±0.1
	SC	Wrench Flats at One Location Ordering Code SC5 SC = 1mm Increment SC+ℓ1≤L SC≥0 Not available in combination with WSC. D / W / ℓ1: 8 / 7 / 8; 10 / 8; 12 / 10; 13 / 11; 15 / 13; 16 / 14 / 10; 18 / 16; 20 / 17; 25 / 22; 30 / 27 / 15; 35 / 30; 40 / 36 / 20; 50 / 41
	WSC	Wrench Flats at Two Locations Ordering Code WSC12-X8 WSC, X=1mm Increment WSC+X+ℓ1x2<L WSC(X)≥0 Orientation between wrench flats is not coplanar. Not available in combination with SC.
	FC	Set Screw Flat at One Location Ordering Code FC10-E8 FC, E=1mm Increment D≤30:FC≤5xD,D≥35:FC≥3xD E=0 or E≥2 Not available in combination with WFC. D / h: 8~18 / 1; 20~40 / 2; 50 / 3

Alterations	Code	Spec.
	WFC	Set Screw Flats at Two Locations Ordering Code WFC10-A8-E20 WFC, A, E=1mm Increment D≤30:WFC≤5xD,D≥35:WFC≥3xD A(E)=0 or A(E)≥2 Orientation between set screw flats is not coplanar. Not available in combination with FC. D / h: 8~18 / 1; 20~40 / 2; 50 / 3
	RC	90-deg. Set Screw Flat at One Location Ordering Code RC10 Application Notes Only applicable to D=10 ~ 30. Not available in combination with WRC.
	WRC	90-deg. Set Screw Flats at Two Locations Ordering Code WRC10-Y10 Application Notes Only applicable to D=10 ~ 30. Not available in combination with RC. Orientation between two set screw flats is not coplanar.
	QC	Undercut Ordering Code QC Application Notes Applicable to M=6 or more. Not Applicable to D=Q.
	QMC QMS	Change to Fine Thread Ordering Code QMC14 (Q is changed to QMC) QMS14 (Q is changed to QMS)

For details, see Shaft Alteration Overview. P.143

Please see Shaft Alteration Overview for details if provided. P.143
When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm.
Alterations may lower hardness. See P.142.

Part Number Type	D	Unit Price Min. L ~ 50	L51 ~ 100	L101 ~ 150	L151 ~ 200	L201 ~ 300	L301 ~ 400	L401 ~ 500	L501 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200	L1201 ~ 1496
SFAB SFUA	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												
SSFAB SSFUA	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												

For D tolerance h5, add the relevant surcharge to the prices above.

Part Number Type	D	Unit Price Min. L ~ 50	L51 ~ 100	L101 ~ 150	L151 ~ 200	L201 ~ 300	L301 ~ 400	L401 ~ 500	L501 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200	L1201 ~ 1496
PSFAB PSFUA	8												-
	10												-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												
PSSFAB PSSFUA	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												

For D tolerance h5, add the relevant surcharge to the prices above.

Part Number Type	D	Unit Price Min. L ~ 50	L51 ~ 100	L101 ~ 150	L151 ~ 200	L201 ~ 300	L301 ~ 400	L401 ~ 500	L501 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200	L1201 ~ 1496
SFNB SFUB	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												
SSFNB SSFUB	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												

For D tolerance h5, add the relevant surcharge to the prices above.

Part Number Type	D	Unit Price Min. L ~ 50	L51 ~ 100	L101 ~ 150	L151 ~ 200	L201 ~ 300	L301 ~ 400	L401 ~ 500	L501 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200	L1201 ~ 1496
PSFNB PSFUB	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												
PSSFNB PSSFUB	8											-	-
	10											-	-
	12												-
	13												-
	15												-
	16												-
	18												-
	20												-
	25												-
	30												
	35												
	40												
	50												

For D tolerance h5, add the relevant surcharge to the prices above.

Part Number Type	D	Unit Price Min. L ~ 100	L101 ~ 200	L201 ~ 400	L401 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200	L1201 ~ 1496
PSFGB PSNGB	8						-	-	-
	10						-	-	-
	12							-	-
	13							-	-
	15, 16								-
	18, 20								-
	25								-
	30								
	35								
	40								
	50								
PSSFGB PSSNGB	8						-	-	-
	10						-	-	-
	12							-	-
	13							-	-
	15, 16								-
	18, 20								-
	25								-
	30								
	35								
	40								
	50								

For One End Stepped Shafts, subtract the relevant charge from the prices above.

Part Number Type	D	Unit Price Min. L ~ 50	L51 ~ 100	L101 ~ 150	L151 ~ 200	L201 ~ 300	L301 ~ 400	L401 ~ 500
RSFAB RSFNB	8							
	10							
	12							
	13							
	15							
	16							
	18							
	20							
	25							
	30							

For One End Stepped Shafts, subtract the relevant charge from the prices above.