

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

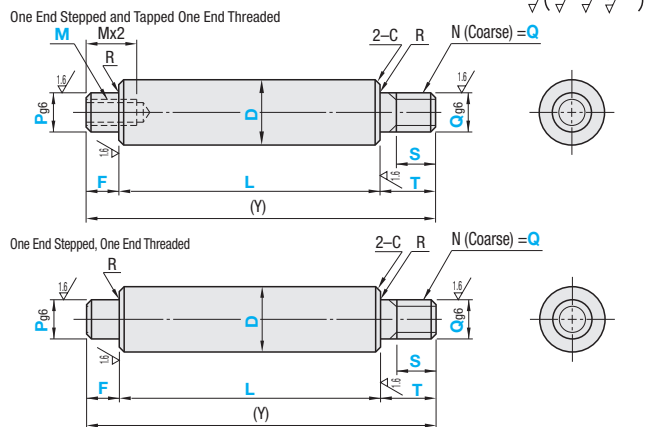


RoHS10

- ❖ Shaft End Machined Area (Effective Thread Length + Approx. 10mm) Annealing may lower hardness.
- ❖ L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness  **P141**
- ❖ Features of Low Temp. Black Chrome Plating  **P156**

Type						Material	Hardness	Surface Treatment
One End Stopped and Tapped One End Threaded			One End Stopped, One End Threaded					
D Tol. g6	D Tol. h5	D Tol. f8	D Tol. g6	D Tol. h5	D Tol. f8			
SFAB	SFUA	-	SFNB	SFUB	-	SUJ2	Effective Hardened Depth of Induction Hardening P142	-
SSFAB	SSFUA	-	SSFNB	SSFUB	-	SUS40C Equivalent		SUJ2 S8PRC-S6PRC
PSFAB	PSFUA	-	PSFNB	PSFUB	-	SUJ2	Hardness: H7/50 ~, Plating Thickness: 5µ or More ~	Hard Chrome Plating - Plating Thickness: 5µ or More ~
PSFAB	PSFUA	-	PSFNB	PSFUB	-	SUS40C Equivalent		
RSFAB	-	-	RSFNB	-	-	SUJ2	Low Temp. Black Chrome Plating	Low Temp. Black Chrome Plating
-	-	PSFGB	-	-	PSNGB	S4SC Equivalent		
-	-	PSFGB	-	-	PSNGB	SUS304	-	Hard Chrome Plating - Plating Thickness: H7/50 ~, Plating Thickness: 10µ or More ~

📌 For plated products, the surface roughness of D part is $\sqrt[0.4]{\frac{0.4}{B}}$; and for unplated products, it is $\sqrt[0.4]{\frac{0.4}{B}}$



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

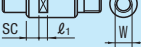
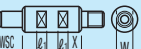
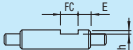
Coarse Thread Dimensions	
M	Pitch
3	0.5
4	0.7
5	0.8
6	1.0
8	1.25
10	1.5
12	1.75
16	2.0
20	2.5
24	3.0
30	3.5

Part Number				1mm Increments					M (Coarse Selection)		Q Selection				(Y) Max.	R	C	
Type				D	L	F	T	S	P									
One End Stepped and Tapped		One End Threaded		One End Stepped, One End Threaded				(When Q≤6)	6	3	3 4 5 6 8				800			
								S≤T-2	6-8	3 4 5	4 5 6 8 10				800			
(D Tol. g6)	(D Tol. h5)	(D Tol. g6)	(D Tol. h5)					(When Q=8, 10)	6-10	3 4 5 6	5 6 8 10 12				1000		0.5 or Less	
SFAB	SFUA	SFNB	SFUB					S≤T-3	6-11	3 4 5 6 8	5 6 8 10 12				1000			
SSFAB	SSFUA	SSFNB	SSFUB					(When Q≥12)	6-13	3 4 5 6 8 10	5 6 8 10 12				1200			
PSFAB	PSFUA	PSFNB	PSFUB					S≤T-5	6-14	3 4 5 6 8 10	5 6 8 10 12 16				1000		0.3 or Less	
PSSFAB	PSSFUA	PSSFNB	PSSFUB					(W/o Threads)	8-16	4 5 6 8 10 12	5 6 8 10 12 16				1200			
RSFAB		RSFNB						S=0	8-17	4 5 6 8 10 12	6 8 10 12 16 20				1200			
(D≤30, L≤500, Ymax≤800)	(D≤30, L≤500, Ymax≤800)							↑ 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			
(D Tol. f8)	(D Tol. f8)							↑ S=0 is only applicable to One End Stepped and Tapped One End Threaded	9-27	5 6 8 10 12 16 20 24	8 10 12 16 20 24 30				1500		1.0 or Less	
PSFGB	PSNGB							↑ S=0 is only applicable to One End Stepped and Tapped One End Threaded	9-32	5 6 8 10 12 16 20 24	10 12 16 20 24 30				1500		0.5 or Less	
PSSFGB	PSSNGB							↑ S=Pitch3x	11-37	6 8 10 12 16 20 24 30	12 16 20 24 30				1500			
									11-47	6 8 10 12 16 20 24 30	16 20 24 30				1500			

- ! P dimensions require $M+3 \leq P$. ! L+F dimensions require $M \times 4$ or more.
 ! When $D=Q$, specify $T=S$ as S dimensions. However, L and T dimensions have manufacturing priority and S dimension will be $T-(Pitch \times 2)$.

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

Alterations	Code	Spec.																											
	LKC	Alteration to L dimension tolerance <u>Ordering Code</u> 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 <u>Ordering Code</u> SC5 SC = 1mm increment ♡ SC+ℓ1≤L SC≥0 ✖ Not available in combination with WSC. <table border="1"> <thead> <tr> <th>D</th><th>W</th><th>ℓ1</th></tr> </thead> <tbody> <tr><td>8</td><td>7</td><td></td></tr> <tr><td>10</td><td>8</td><td>8</td></tr> <tr><td>12</td><td>10</td><td></td></tr> <tr><td>13</td><td>11</td><td></td></tr> <tr><td>15</td><td>13</td><td></td></tr> </tbody> </table>	D	W	ℓ1	8	7		10	8	8	12	10		13	11		15	13										
D	W	ℓ1																											
8	7																												
10	8	8																											
12	10																												
13	11																												
15	13																												
	WSC	Wrench Flats at Two Locations <u>Ordering Code</u> WSC12-X8 WSC, X=1mm increment ♡ WSC+ℓ1+ℓ2≤L ♡ WSC(X)≥0 ✖ Combination between wrench flats is not coplanar. Not available in combination with SC. <table border="1"> <thead> <tr> <th>D</th><th>W</th><th>h</th></tr> </thead> <tbody> <tr><td>16</td><td>14</td><td></td></tr> <tr><td>18</td><td>16</td><td>10</td></tr> <tr><td>20</td><td>17</td><td></td></tr> <tr><td>25</td><td>22</td><td></td></tr> <tr><td>30</td><td>27</td><td>15</td></tr> <tr><td>35</td><td>30</td><td></td></tr> <tr><td>40</td><td>36</td><td>20</td></tr> <tr><td>50</td><td>41</td><td></td></tr> </tbody> </table>	D	W	h	16	14		18	16	10	20	17		25	22		30	27	15	35	30		40	36	20	50	41	
D	W	h																											
16	14																												
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20	17																												
25	22																												
30	27	15																											
35	30																												
40	36	20																											
50	41																												
	FC	Set Screw Flat at One Location <u>Ordering Code</u> 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. <table border="1"> <thead> <tr> <th>D</th><th>E</th><th>h</th></tr> </thead> <tbody> <tr><td>8-18</td><td>1</td><td></td></tr> <tr><td>20-40</td><td>2</td><td></td></tr> <tr><td>50</td><td>3</td><td></td></tr> </tbody> </table>	D	E	h	8-18	1		20-40	2		50	3																
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8-18	1																												
20-40	2																												
50	3																												

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

[illegible]

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

[illegible]

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

Part Number		Unit Price							
Type	D	Min. L 100	L101 200	L201 400	L401 600	L601 800	L801 1000	L1001 1200	L1201 1400
PSFGB PSNGB	8						-	-	
	10						-	-	-
	12							-	-
	13							-	-
	15, 16								-
	18, 20								-
	25								-
	30								
	35								
	40								
PSSFGB PSSNGB	8						-	-	-
	10						-	-	-
	12							-	-
	13							-	-
	15, 16								-
	18, 20								-
	25								-
	30								
	35								
	40								

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

[illegible]

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

[illegible]

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

Part Number		Unit Price						
Type	D	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.