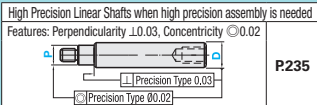


Shafts

One End Stepped and Threaded One End Tapped



For High Precision Linear Shafts with high perpendicular precision of the shaft end ($\perp 0.03$), see P.235.

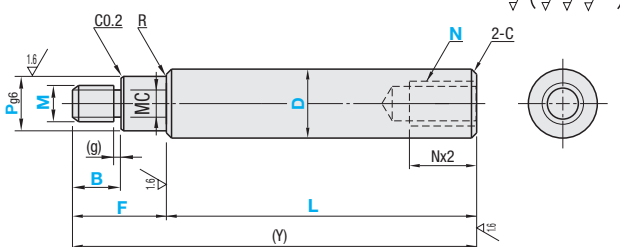


RoHS10

- Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm).
- P.142
- L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.141
- Features of Low Temp. Black Chrome Plating P.156

Type			Material	Hardness	Surface Treatment
D Tol. g6	D Tol. h5	D Tol. f8			
SFAY	SFUJ	-	SUJ2	Effective Hardened Depth of Induction Hardening P.142 SUJ2 58HRC~ SUS440C Equivalent 56HRC~	Hard Chrome Plating - Plating Hardness: HV750 ~, Plating Thickness: 5μ or More ~ Low Temp. Black Chrome Plating
SSFAY	SSFUJ	-	SUS440C Equivalent		
PSFAY	PSFUJ	-	SUJ2		
PSSFAY	PSSFUJ	-	SUS440C Equivalent		
RSFAY	-	-	SUJ2		
-	-	PSFGY	S45C Equivalent	-	Hard Chrome Plating - Plating Hardness: HV750 ~, Plating Thickness: 10μ or More ~
-	-	PSSFGY	SUS304		

For plated products, the surface roughness of D part is $\sqrt{0.4}$; and for unplated products, it is $\sqrt{0.8}$.



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

Part Number		1mm Increments				M (Coarse) Selection		N (Coarse) Selection		(Y) Max.		R		C	
Type	D	L	F	B	P										
(D Tol. g6)	8	25~ 990				6		3 4 5		800		0.5			
(D Tol. h5)	12	25~ 990				6 8		3 4 5 6		800		0.3			
SFAY	12	25~1190				6 8 10		4 5 6 8		1000		0.3			
SSFAY	13	25~1190				6 8 10		4 5 6 8		1000		0.3			
PSFAY	15	25~1190				6 8 10 12		4 5 6 8 10		1000		0.3			
PSSFAY	16	25~1190				6 8 10 12		4 5 6 8 10		1200		0.3			
RSFAY	18	25~1190				6 8 10 12 16		4 5 6 8 10 12		1200		0.3			
(D≤30, L≤500)	20	25~1190				6 8 10 12 16		4 5 6 8 10 12		1200		0.3			
(D Tol. f8)	25	25~1190				8 10 12 16 20		4 5 6 8 10 12 16		1200		1.0			
PSFGY	30	25~1490				8 10 12 16 20 24		6 8 10 12 16 20		1500		0.5			
PSSFGY	35	25~1490				10 12 16 20 24 30		8 10 12 16 20 24		1500		0.5			
	40	40~1490				12 16 20 24 30		10 12 16 20 24 30		1500		0.5			
	50	50~1490				16 20 24 30		12 16 20 24 30		1500		0.5			

Full length L requires Nx2.5+4≤L. F-B≥2 is required.

Ordering Example: SFAY20 - 277 - F25 - B12 - P10 - M8 - N12

Alterations: SFAY30 - 250 - F40 - B20 - P15 - M8 - N10 - LKC

Alterations	Code	Spec.
LKC		Alteration to L dimension tolerance (Ordering Code) LKC 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.
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.

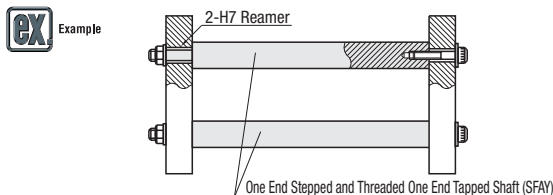
- Please see Shaft Alteration Overview for details if provided. P.143
- When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm.
- Alterations may lower hardness. See P.142.

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.
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 WFC.
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.
MMC, MMS (Fine)		Change to Fine Thread (Ordering Code) MMC14 (M is changed to MMC) MMS14 (M is changed to MMS)
NSC (Fine)		Change to Fine Tapped Thread (Ordering Code) NSC14 (N is changed to NSC) (Application Notes) Applicable to D=12 or more
ND (Nx3)		Change the effective length of tapped part to Nx3. (Ordering Code) NDG (N is changed to ND) (Application Notes) Only applicable to D=10~30, N=6~20 One End Tapped: NDx3.5+7≤L

Part Number		Unit Price																									
Type	D	Min. L	L51	L101	L151	L201	L251	L301	L351	L401	L451	L501	L551	L601	L651	L701	L751	L801	L851	L901	L951	L1001	L1101	L1201	L1301	L1401	
SFAY SFUY	8																					-	-	-	-	-	
	10																					-	-	-	-	-	
	12																						-	-	-	-	
	13																							-	-	-	
	15																							-	-	-	
	16																								-	-	
	18																							-	-	-	
	20																							-	-	-	
	25																								-	-	-
	30																								-	-	-
SSFAY SSFUY	35																								-	-	-
	40																								-	-	-
	50																								-	-	-
	8																						-	-	-	-	
	10																						-	-	-	-	
	12																							-	-	-	
	13																							-	-	-	
	15																							-	-	-	
	16																							-	-	-	
	18																							-	-	-	
PSFAY PSFUY	20																							-	-	-	
	25																							-	-	-	
	30																							-	-	-	
	35																							-	-	-	
	40																							-	-	-	
	50																							-	-	-	
	8																						-	-	-	-	
	10																						-	-	-	-	
	12																							-	-	-	
	13																							-	-	-	
PSSFAY PSSFUY	15																							-	-	-	
	16																							-	-	-	
	18																							-	-	-	
	20																							-	-	-	
	25																							-	-	-	
	30																							-	-	-	
	35																							-	-	-	
	40																							-	-	-	
	50																							-	-	-	

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

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



Part Number		Unit Price							
Type	D	Min. L	L101	L201	L401	L601	L801	L1001	L1201
PSFGY	8	100	200	400	600	800	1000	1200	1490
	10								
	12								
	13								
	15, 16								
	18, 20								
	25								
	30								
	35								
	40								
PSSFGY	8								
	10								
	12, 13								
	15, 16								
	18, 20								
	25								
	30								
	35								
	40								
	50								