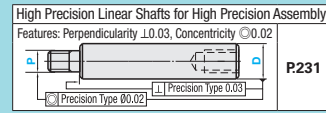


Shafts

One End Threaded One End Tapped



P.231

For High Precision Linear Shafts with high perpendicular precision of the shaft end ($\perp 0.03$), see P.231. For Shafts with Wrench Flats / Cross-Drilled Hole, see P.171.

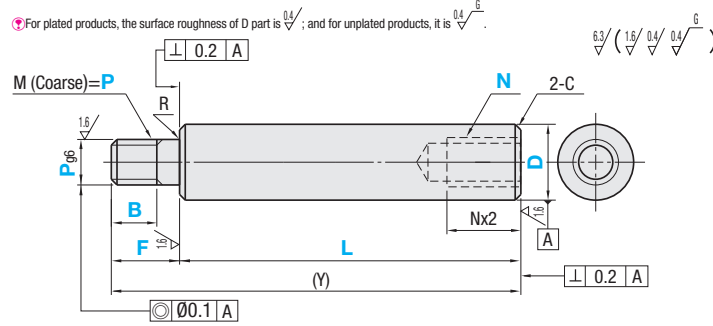
For products uncovered by the e-Catalog Standards, see P.131.



RoHS 10

- 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		D Tol. f8	Material	Hardness	Surface Treatment
SFAD	SFUD	-	SUJ2 Equivalent	Effective Hardened Depth of Induction Hardening	-
SSFAD	SSFUD	-	SUS400 or 13Cr stainless	-	Hard Chrome Plating - Plating Thickness: HV750 - Plating Thickness: 5µ or More
PSFAD	PSFUD	-	SUJ2 Equivalent	58HRC-56HRC	Low Temp. Black Chrome Plating
PSSFAD	PSSFUD	-	SUS400 or 13Cr stainless	-	Hard Chrome Plating - Plating Thickness: HV750 - Plating Thickness: 10µ or More
-	-	PSFGD	S45C Equivalent	-	-
-	-	PSSFGD	SUS304	-	-



D Tol.		
D	g6	f8
4	-	-
5	-0.004	0
6	-0.012	-0.005
8	-0.005	0
10	-0.014	-0.006
12	-	-
13	-0.006	0
15	-0.017	-0.008
16	-	-
18	-	-
20	-0.007	0
25	-0.020	-0.009
30	-	-
35	-0.009	0
40	-0.025	-0.011
50	-	-

Part Number Type	D	1mm Increments			P (Coarse) Selection	N (Coarse) Selection	(Y) Max.	R	C	Course Thread Dimensions M Pitch
		L	F	B						
(D Tol. g6) SFAD	4	25-298			3 4	2	300	0.2 or Less	0.2 or Less	3 0.5
	5	25-398			3 4 5	2.6 3	400	Less	Less	4 0.7
	6	25-798			3 4 5 6	3	600			5 0.8
	8	25-998			3 4 5 6 8	3 4 5	800			6 1.0
	10	25-998			4 5 6 8 10	3 4 5 6	800			8 1.25
	12	25-1198			5 6 8 10 12	4 5 6 8	1000			10 1.5
	13	25-1198			5 6 8 10 12	4 5 6 8	1000			12 1.75
	15	25-1198			5 6 8 10 12	4 5 6 8 10	1000			16 2.0
	16	25-1198			5 6 8 10 12 16	4 5 6 8 10 12	1200			20 2.5
	18	25-1198			5 6 8 10 12 16	4 5 6 8 10 12	1200			24 3.0
(D Tol. h5) SSFAD	4	25-298			3 4	2	300	0.5 or Less	0.5 or Less	3 0.5
	5	25-398			3 4 5	2.6 3	400	Less	Less	4 0.7
	6	25-798			3 4 5 6	3	600			5 0.8
	8	25-998			3 4 5 6 8	3 4 5	800			6 1.0
	10	25-998			4 5 6 8 10	3 4 5 6	800			8 1.25
	12	25-1198			5 6 8 10 12	4 5 6 8	1000			10 1.5
	13	25-1198			5 6 8 10 12	4 5 6 8	1000			12 1.75
	15	25-1198			5 6 8 10 12	4 5 6 8 10	1000			16 2.0
	16	25-1198			5 6 8 10 12 16	4 5 6 8 10 12	1200			20 2.5
	18	25-1198			5 6 8 10 12 16	4 5 6 8 10 12	1200			24 3.0
(D Tol. f8) PSFAD	4	25-298			3 4	2	300	1.0 or Less	1.0 or Less	3 0.5
	5	25-398			3 4 5	2.6 3	400	Less	Less	4 0.7
	6	25-798			3 4 5 6	3	600			5 0.8
	8	25-998			3 4 5 6 8	3 4 5	800			6 1.0
	10	25-998			4 5 6 8 10	3 4 5 6	800			8 1.25
	12	25-1198			5 6 8 10 12	4 5 6 8	1000			10 1.5
	13	25-1198			5 6 8 10 12	4 5 6 8	1000			12 1.75
	15	25-1198			5 6 8 10 12	4 5 6 8 10	1000			16 2.0
	16	25-1198			5 6 8 10 12 16	4 5 6 8 10 12	1200			20 2.5
	18	25-1198			5 6 8 10 12 16	4 5 6 8 10 12	1200			24 3.0

- Full length L requires Nx2.5+4<L.
- When D=P, specify F=B as B dimensions. However, L and F dimensions have manufacturing priority and B dimension of the product will be F-(Pitchx2).

Ordering Example: Part Number - L - F - B - P - N
SFAD20 - 277 - F25 - B12 - P10 - N12

Alterations: Part Number - L - F - B - P(PMC, PMS) - N(NSC, ND) - (LKC, WSC... etc.)
SFAD30 - 250 - F40 - B30 - P10 - N10 - LKC

Alteration Details P.143

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
	WSC	Wrench Flats at Two Locations [Ordering Code] WSC12-X8 [Application Notes] Applicable to D=6 or more WSC, X=1mm Increment WSC(X) < L WSC(X) ≥ 0 Orientation between two set screw flats is not coplanar.
	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.
	WFC	Set Screw Flats at Two Locations [Ordering Code] WFC8-A8-E4 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.

Alterations	Code	Spec.
	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.
	PMC PMS	Change to Fine Thread [Ordering Code] PMC14 (P is changed to PMC) PMS14 (P is changed to PMS)
	NSC	Change to Fine Tapped Thread [Ordering Code] NSC14 (N is changed to NSC) [Application Notes] Applicable to D=12 or more
	ND	Change the effective length of tapped part to Nx3. [Ordering Code] ND6 (N is changed to ND) [Application Notes] Only applicable to D=10-30 and N=6-20 One End Tapped: NDx3.5+7<L

- 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. P.144
- Alterations may lower hardness. See P.142.

Part Number Type	D	Unit Price																										
		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		
SFAD	4	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200	1300	1400	1498		
	5																											
	6																											
	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											
SSFAD	4																											
	5																											
	6																											
	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											
PSFAD	4																											
	5																											
	6																											
	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											
PSSFAD	4																											
	5																											
	6																											
	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											

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

Part Number Type	D	Unit Price						
		Min. L	L51	L101	L151	L201	L301	L401
RSFAD	4	50	100	150	200	300	400	500
	5							
	6							
	8							
	10							
	12							
	13							
	15							
	16							
	18							

Part Number Type	D	Unit Price						
		Min. L	L101	L201	L401	L601	L801	L1001
PSFGD	6							