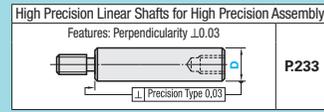


Shafts

One End Threaded One End Tapped with Undercut



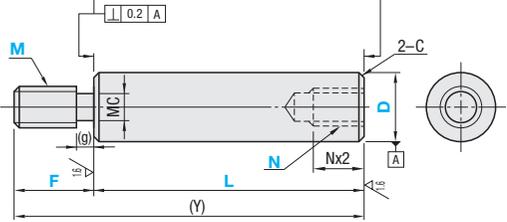
For High Precision Linear Shafts with high perpendicular precision of the shaft end (± 0.03), see P.233. For Shafts with Wrench Flats / Cross-Drilled Hole, see P.175.

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



Type			Material	Hardness	Surface Treatment	D Tol.			
D Tol. g6	D Tol. h5	D Tol. f8				D	g6	h5	f8
SAFD	SFDU	-	SUJ2	Effective Hardened Depth of Induction Hardening P.142	Hard Chrome Plating - Plating Hardness: HV750 -, Plating Thickness: 5µ or More	8	-0.005	0	-0.013
SSAFD	SSFUDU	-	SUS440C Equivalent			10	-0.014	-0.006	-0.035
PSAFD	PSFDU	-	SUJ2			12	-	-	-
PSSAFD	PSSFDU	-	SUS440C Equivalent	Low Temp. Black Chrome Plating	13	-0.006	0	-0.016	
RSAFD	-	-	SUJ2		15	-0.017	-0.008	-0.043	
-	-	PSAGD	S45C Equivalent	Hard Chrome Plating - Plating Hardness: HV750 -, Plating Thickness: 10µ or More	16	-	-	-	
-	-	PSSAGD	SUS304		18	-	-	-	
-	-	-	-	-	20	-0.007	0	-0.020	
-	-	-	-	-	25	-0.020	-0.009	-0.053	
-	-	-	-	-	35	-0.009	0	-0.025	
-	-	-	-	-	40	-0.025	-0.011	-0.064	
-	-	-	-	-	50	-	-	-	

For plated products, the surface roughness of D part is $\sqrt{0.4}$; and for unplated products, it is $\sqrt{0.6}$.



Part Number Type	D	1mm Increments		M (Coarse) Selection	N (Coarse) Selection	Y Max.	C	Coarse Thread Undercut Dimensions			
		L	F					M Pitch	MC	(g)	
(D Tol. g6) SAFD, SSAFD, PSAFD, PSSAFD, RSAFD (D≤30, L≤500)	8	25~995		6	3 4 5	800	0.5 or Less	6	1.0	4.4	2
	10	25~995		6 8	3 4 5 6	800		8	1.25	6.0	
	12	25~1195		6 8 10	4 5 6 8	1000		10	1.5	7.7	3
	13	25~1195		6 8 10 12	4 5 6 8	1000		12	1.75	9.4	
	15	25~1195		6 8 10 12	4 5 6 8 10	1000		16	2.0	13.0	4
	16	25~1195	5≤F≤Mx3	6 8 10 12	4 5 6 8 10	1200		20	2.5	16.4	
	18	25~1195		6 8 10 12 16	4 5 6 8 10 12	1200		24	3.0	19.6	5
	20	25~1195		6 8 10 12 16	4 5 6 8 10 12	1200		30	3.5	25.0	
	25	25~1193	F-g≥Pitchx3	8 10 12 16 20 24	4 5 6 8 10 12 16	1200					
	30	25~1493		8 10 12 16 20 24	6 8 10 12 16 20	1500					
(D Tol. f8) PSAGD, PSSAGD	35	25~1492		10 12 16 20 24 30	8 10 12 16 20 24	1500	1.0 or Less				
	40	40~1490		12 16 20 24 30	10 12 16 20 24 30	1500					
	50	50~1490		16 20 24 30	12 16 20 24 30	1500					

Full length L requires N×2.5+4≤L.

Ordering Example: Part Number - L - F - M - N
SAFD20 - 277 - F25 - M10 - N12

Alterations: Part Number - L - F - M(MMC, MMS) - N(NSC, ND) - (LKC...etc.)
SAFD30 - 250 - F40 - M20 - N20 - 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 → ±0.03 200≤L<500 → ±0.05
	WSC	Wrench Flats at Two Locations [Ordering Code] WSC12-X8 WSC, X = 1mm Increment WSC+X+δ1x2<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 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.
	MMC, MMS	Change to Fine Thread [Ordering Code] MMC14 (M is changed to MMC) MMS14 (M is changed to MMS)
	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 N×3. [Ordering Code] ND6 (N is changed to ND) Application Notes: Only applicable to D=10~30 and N=6~20 One End Tapped: ND×3.5+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.
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		
SAFD	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											
	20																											
	25																											
	30																											
SSAFD	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											
	20																											
	25																											
	30																											
PSAFD	8																											
	10																											
	12																											
	13																											
	15																											
	16																											
	18																											
	20																											
	25																											
	30																											

Part Number Type	D	Unit Price						
		Min. L	L51	L101	L151	L201	L301	L401
PSAGD	8							
	10							
	12, 13							
	15, 16							
	18, 20							
	25							
	30							
	35							
	40							
	50							
PSSAGD	8							
	10							
	12, 13							
	15, 16							
	18, 20							
	25							
	30							
	35							
	40							
	50							