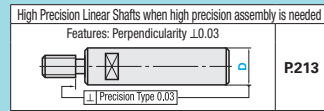


# Shafts

## One End Threaded with Undercut and Wrench Flats / Cross-Drilled Hole



- For High Precision Linear Shafts with high perpendicular precision of the shaft end ( $\perp 0.03$ ), see **P.213**.
- For Shafts w/o Wrench Flats or Cross-Drilled Hole, see **P.167**.

RoHS10

Type						Material	Hardness	Surface Treatment	D Tol.			
With Wrench Flats		With Cross-Drilled Hole							D	g6	h5	f8
D Tol. g6	D Tol. h5	D Tol. f8	D Tol. g6	D Tol. f8								
SAFS	SFSU	-	SFHS	-	EN 1.3505 Equiv.	Effective Hardened	-	-	-	-		
SSAFS	SSFSU	-	SSHFS	-	EN 1.4125 Equiv.	Depth of Induction						
PSAFS	PSFSU	-	PSHFS	-	EN 1.3505 Equiv.	Hardening <b>P.112</b>						
PSSAFS	PSSFSU	-	PSSHFS	-	EN 1.4125 Equiv.	EN 1.3505 Equiv.						
RSAFS	-	-	RSHFS	-	EN 1.3505 Equiv.	EN 1.4125 Equiv.	50HRC-	Hard Chrome Plating	Plating Hardness: HV750 -	Plating Thickness: 5µ or More		
-	-	PSAGS	-	PSHGS	EN 1.1191 Equiv.	-	Hard Chrome Plating	Plating Hardness: HV750 -	Plating Thickness: 10µ or More	-		
-	-	PSSAGS	-	-	EN 1.4301 Equiv.	-	-	-	-	-		

**With Wrench Flats**

**With Cross-Drilled Hole (D≤30, L≤500)**

Part Number Type	D	1mm Increment		Selection M (Coarse)	Wrench Flats Dimensions		Cross-Drilled Hole Dimensions		(Y) Max.	C
		L	F		SC	W	l1	H		
(With Wrench Flats) (D Tolerance g6) <b>SAFS</b> <b>SSAFS</b> <b>PSAFS</b> <b>PSSAFS</b> <b>RSAFS</b> (D≤30, L≤500)	8	25-795		6	7	8		3	800	0.5 or Less
	10	25-795		6 8	8			4	800	
	12	25-995		6 8 10	10			6	1000	
	13	25-995		6 8 10 12	11			7	1000	
	15	25-995		6 8 10 12	13			8	1000	
	16	25-1195		6 8 10 12	14	10		9	1200	
	18	25-1195	5=F≤Mx3	6 8 10 12 16	16			11	1200	
	20	25-1195		6 8 10 12 16	17			12	1200	
	25	25-1195		8 10 12 16 20 24	22			17	1200	
	30	25-1495		8 10 12 16 20 24	27	15		22	1500	
(D Tolerance f8) <b>PSAGS</b> <b>PSSAGS</b>	35	25-1495		10 12 16 20 24 30	30			27	1500	
	40	25-1495		12 16 20 24 30	36			30	1500	
	40	25-1495		12 16 20 24 30	36			30	1500	
	50	25-1495	F(g)≥Pitchx3	16 20 24 30	41			36	1500	
	50	25-1495		16 20 24 30	41			36	1500	

**Ordering Example** Part Number - L - F - M - SC - H  
 SAFS13 - 800 - F23 - M10 - SC20 - H15  
 SSHFS20 - 450 - F28 - M12 - H15

**Alterations** Part Number - L - F - M (MMC, MMS) - SC - H - (LKC--etc.)  
 SAFS30 - 250 - F20 - M10 - SC20 - H15 - 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 Not applicable when D-M≤2.
	FC	Set Screw Flat at One Location Ordering Code FC10-E8 FC, E=1mm Increment FC≤3xD When 1.5xD<FC, FC≤L/2 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 WFC≤3xD When 1.5xD<WFC, 2WFC≤L/2 A(E)=0 or A(E)≥2 Orientation between set screw flats is not coplanar. Not available in combination with FC.
	SX	Second Set of Wrench Flats Ordering Code SX15 Application Notes Only applicable to Shafts with Wrench Flats. SX=1mm Increment SC+SX+l1x2<L SX≥0 Orientation between two set screw flats is not coplanar.
	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)
	KC	Keyway is added at one location. Ordering Code KC10-G10 Application Notes Only applicable to D=12, 16, 20, 25 and 30.

Alteration Details **P.113**  
 Please see Shaft Alteration Overview for details if provided. **P.113**  
 When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm. **P.114**  
 Alterations may lower hardness. See **P.112**

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	
SAFS	8																										
	10																										
	12																										
	13																										
	15																										
	16																										
	18																										
	20																										
	25																										
	30																										
SSAFS	8																										
	10																										
	12																										
	13																										
	15																										
	16																										
	18																										
	20																										
	25																										
	30																										
PSAFS	8																										
	10																										
	12																										
	13																										
	15																										
	16																										
	18																										
	20																										
	25																										
	30																										
PSSAFS	8																										
	10																										
	12																										
	13																										
	15																										
	16																										
	18																										
	20																										
	25																										
	30																										

Part Number Type	D	Unit Price						
		Min. L	L101	L201	L401	L601	L801	L1001
PSAGS	8							
	10							
	12, 13							
	15, 16							
	18, 20							
	25							
	30							
	35							
	40							
	50							
PSSAGS	8							
	10							
	12, 13							
	15, 16							
	18, 20							
	25							
	30							
	35							
	40							
	50							