

Both Ends Threaded with Undercuts

High Precision Linear Shafts for High Precision Assembly

Features: Perpendicularity ± 0.03

P.239

■ For High Precision Linear Shafts with high perpendicular precision of the shaft end ($\perp$ 0.03), see  **P.239**.



⚠️ Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm).

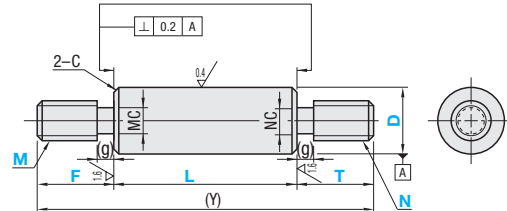
Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.141

🔔 Features of Low Temp. Black Chrome Plating P.156

Type			Material	Hardness	Surface Treatment
D Tol. g6	D Tol. h5	D Tol. f8			
SAFM	SFMU	-	SUJ2	Effective Hardened Depth of Induction Hardening P142 50HRC-52HRC SUS440C Equivalent 50HRC	Hard Chrome Plating - Plating Hardness: HV750 -, Plating Thickness: 5µ or More Low Temp. Black Chrome Plating
SSAFM	SSFMU	-	SUS440C Equivalent		
PSAFM	PSFMU	-	SUJ2		
PSSAFM	PSSFMU	-	SUS440C Equivalent		
RSAFM	-	-	SUJ2		
-	-	PSAGM	S45C Equivalent	-	Hard Chrome Plating - Plating Hardness: HV750 -, Plating Thickness: 10µ or More
-	-	PSSAGM	SUS304	-	

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

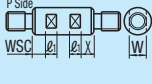
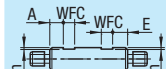
D Tol.			
D	g6	h5	f8
8	-0.005	0	-0.013
10	-0.014	-0.006	-0.035
12			
13			
15	-0.006	0	-0.016
16	-0.017	-0.008	-0.043
18			
20			
25	-0.007	0	-0.020
30	-0.020	-0.009	-0.053
35			
40	-0.009	0	-0.025
50	-0.025	-0.011	-0.064



Part Number		1mm Increments		Selection	(Y)	C	Coarse Thread Undercut Dimensions			
Type	D	L	F, T	M, N (Coarse)	Max.		M	Pitch	MC	(g)
(D Tol. g6) SAFM SSAFM PSAFM PSSAFM RSAFM (D≤30, L≤500, Ymax≤800) (D Tol. f8) PSAGM PSSAGM	(D Tol. h5) SFMU SSFMU PSFMU PSSFMU	8	25- 990	5≤F≤Mx3 5≤T≤Nx3 ♀ F-(g)≥Pitchx3 ♀ T-(g)≥Pitchx3	6	800	0.5 or Less			
	10	25- 990	6 8		800					
	12	25-1190	6 8 10		1000					
	13	25-1190	6 8 10 12		1000					
	15	25-1190	6 8 10 12		1000					
	16	25-1190	6 8 10 12		1200					
	18	25-1190	6 8 10 12 16		1200					
	20	25-1190	6 8 10 12 16		1200					
	25	25-1190	8 10 12 16 20 24		1200	1.0 or Less				
	30	25-1490	8 10 12 16 20 24		1500					
	35	25-1490	10 12 16 20 24 30		1500					
	40	25-1490	12 16 20 24 30		1500					
	50	25-1490	16 20 24 30		1500					

 Ordering Example Part Number - - - - -

Alterations Part Number - **L** - **F** - **M(MMC, MMS)** - **T** - **N** - (LKC -- etc.)
SAFM30 - 300 - F40 - M20 - T48 - N16 - LKC

Alterations	Code	Spec.																																																
	LKC	Alteration to L dimension tolerance <u>Ordering Code</u> 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																																																
P Side 	WSC	Wrench Flats at Two Locations <u>Ordering Code</u> WSC12-X8 WSC, X = 1mm Increment ⚡ WSC+X+Ø1x2<L ⚡ WSC(X)≥0 ⚡ Orientation between two set screw flats is not coplanar. <table><tr><th>D</th><th>W</th><th>Ø1</th><th>D</th><th>W</th><th>Ø1</th></tr><tr><td>8</td><td>7</td><td>8</td><td>20</td><td>17</td><td>10</td></tr><tr><td>10</td><td>8</td><td>10</td><td>25</td><td>22</td><td>12</td></tr><tr><td>12</td><td>10</td><td>12</td><td>30</td><td>27</td><td>15</td></tr><tr><td>13</td><td>11</td><td>10</td><td>35</td><td>30</td><td>16</td></tr><tr><td>15</td><td>13</td><td>10</td><td>40</td><td>36</td><td>20</td></tr><tr><td>16</td><td>14</td><td>10</td><td>50</td><td>41</td><td>20</td></tr><tr><td>18</td><td>16</td><td></td><td></td><td></td><td></td></tr></table>	D	W	Ø1	D	W	Ø1	8	7	8	20	17	10	10	8	10	25	22	12	12	10	12	30	27	15	13	11	10	35	30	16	15	13	10	40	36	20	16	14	10	50	41	20	18	16				
D	W	Ø1	D	W	Ø1																																													
8	7	8	20	17	10																																													
10	8	10	25	22	12																																													
12	10	12	30	27	15																																													
13	11	10	35	30	16																																													
15	13	10	40	36	20																																													
16	14	10	50	41	20																																													
18	16																																																	
	FC	Set Screw Flat at One Location <u>Ordering Code</u> FC10-E8 FC, A=1mm Increment ⚡ D≤30: FC≥5xD, D≥35: FC≥3xD ⚡ A=0 or A≥2 ⚡ Not available in combination with WFC. <table><tr><th>D</th><th>h</th></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>	D	h	8-18	1	20-40	2	50	3																																								
D	h																																																	
8-18	1																																																	
20-40	2																																																	
50	3																																																	
	WFC	Set Screw Flats at Two Locations <u>Ordering Code</u> 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. <table><tr><th>D</th><th>h</th></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>	D	h	8-18	1	20-40	2	50	3																																								
D	h																																																	
8-18	1																																																	
20-40	2																																																	
50	3																																																	

Alterations		Code	Spec.
	RC	90-deg. Set Screw Flat at One Location Ordering Code RC10 <i>Application Notes</i> Only applicable to D=10 ~ 30. ❌ Not available in combination with WRC.	For details, see Shaft Alteration Overview. ☞ P.143
	WRC	90-deg. Set Screw Flats at Two Locations Ordering Code WRC10-Y10 <i>Application Notes</i> Only applicable to D=10~30. ❌ Not available in combination with RC. ❌ Orientation between two set screw flats is not coplanar.	
	MMC MMS NMC NMS	Change to Fine Thread Ordering Code MMC14 (M is changed to MMC) MMS14 (M is changed to MMS) NMC14 (N is changed to NMC) NMS14 (N is changed to NMS)	

 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.

[illegible]

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

Part Number		Unit Price						
Type	D	Min. L 1	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500
RSAFM	8							
	10							
	12							
	13							
	15							
	16							
	18							
	20							
	25							
	30							

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

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