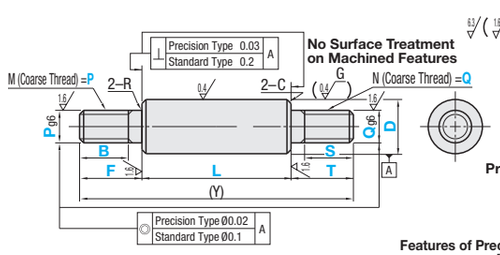
Shafts - Standard / Precision -

Both Ends Threaded

For One End Threaded with Undercut, see P.133. For Shafts with Wrench Flats and Cross-Drilled Hole see P.131.

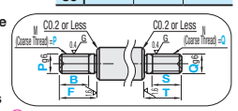
Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm). P.98
Circularity, Straightness, Perpendicularity Concentricity, Changes in Hardness P.97
Features of Low Temp. Black Chrome Plating P.112

Type				Material	Hardness	Surface Treatment
Precision Type	Standard					
D Tol. g6	D Tol. g6	D Tol. h5	D Tol. f8			
VFBM	SFAM	SFUM	-	52100 Bearing Steel	Effective Hardened Depth of Induction Hardened P.98	-
VSFBM	SSFAM	SSFUM	-	440C Stainless Steel		
VPFBM	PSFAM	PSFUM	-	52100 Bearing Steel	52100 Bearing Steel 58HRC~	Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 5μ or More
VPSFBM	PSSFAM	PSSFUM	-	440C Stainless Steel	440C Stainless Steel 56HRC~	
VRBM	RSFAM	-	-	52100 Bearing Steel		Low Temp. Black Chrome Plating
-	-	-	PSFGM	1045 Carbon Steel	-	Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 10μ or More
-	-	-	PSSFGM	304 Stainless Steel		



D	D Tol. g6	D Tol. h5	D Tol. f8
4			-
5	-0.004 -0.012	0 -0.005	
6			-0.010 -0.028
8	-0.005 -0.014	0 -0.006	-0.013 -0.035
10			
12			
13	-0.006 -0.017	0 -0.008	-0.016 -0.043
15			
16			
18			
20			
25	-0.007 -0.020	0 -0.009	-0.020 -0.053
30			
35			
40	-0.009 -0.025	0 -0.011	-0.025 -0.064
50			

Precision Type



Precision shafts have grinding undercuts at the bottom of threads and centering holes on end faces.

Features of Precision Shafts
Concentricity is ◎ Ø0.02
Perpendicularity is ⊥ 0.03

Thread machining will not be applied to B=0 or S=0. D>P (Q)

Part Number Type	D	1mm Increment L	F, T	B, S	P, Q	(Y) Max.	R	C
Precision Type (D Tolerance g6) VFBM VSFBM VPFBM VPSFBM VRBM	5	25~292	2≤F≤Px5 2≤T≤Qx5	(When P≤6) B≤F-2 (When P=8, 10) B≤F-3 (When P≥12) B≤F-5 (When Q≤6) S≤T-2 (When Q=8, 10) S≤T-3 (When Q≥12) S≤T-5 (W/o Threads) B=0 S=0 ◉B, S≥Pitchx3	3	300	0.2 or Less	0.2 or Less
	6	25~292			3 4	300	0.3 or Less	0.5 or Less
	8	25~292			3 4 5 6	300		
	10	25~340			4 5 6 8	350		
	12	25~340			5 6 8 10	350		
	13	25~340			5 6 8 10	350		
	15	25~340			5 6 8 10 12	350		
	16	25~340			5 6 8 10 12	350		
	18	25~340			5 6 8 10 12 16	350		
	20	25~440			6 8 10 12 16	450		1.0 or Less
	25	25~436			8 10 12 16 20	450		
	30	25~436			8 10 12 16 20 24	450		

Coarse Thread Dimension M, N	Pitch
3	0.5
4	0.7
5	0.8
6	1.0
8	1.25
10	1.5
12	1.75
16	2.0
20	2.5
24	3.0
30	3.5

◉Shafts have grinding undercuts at the bottom of threads. ◉Shaft ends may have centering holes.

Part Number Type	D	1mm Increment L	F, T	B, S	P, Q	(Y) Max.	R	C
Standard Type (D Tolerance g6) SFAM SSFAM PSFAM PSSFAM RSFAM (D≤30, L≤500, Ymax≤800) (D Tolerance f8) PSFGM (D≥6) PSSFGM (D≥6) / (D Tolerance h5) SFUM SSFUM PSFUM PSSFUM	4	25~ 296	2≤F≤Px5 2≤T≤Qx5	(When P≤6) B≤F-2 (When P=8, 10) B≤F-3 (When P≥12) B≤F-5 (When Q≤6) S≤T-2 (When Q=8, 10) S≤T-3 (When Q≥12) S≤T-5 (W/o Threads) B=0 S=0 ◉B, S≥Pitchx3	3	300	0.2 or Less	0.2 or Less
	5	25~ 396			3 4	400	0.3 or Less	0.5 or Less
	6	25~ 596			3 4 5	600		
	8	25~ 796			3 4 5 6	800		
	10	25~ 796			4 5 6 8	800		
	12	25~ 996			5 6 8 10	1000		
	13	25~ 996			5 6 8 10 12	1000		
	15	25~ 996			5 6 8 10 12	1000		
	16	25~1196			5 6 8 10 12	1200		
	18	25~1196			5 6 8 10 12 16	1200		
	20	25~1196			6 8 10 12 16	1200		1.0 or Less
	25	25~1196			8 10 12 16 20 24	1200		
	30	25~1496			8 10 12 16 20 24	1500		
	35	25~1496			10 12 16 20 24 30	1500	0.5 or Less	
	40	25~1496			12 16 20 24 30	1500		
	50	25~1496			16 20 24 30	1500		

Price Configure Online

Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
SFAM SFUM	4						-	-	-	-	-	-	-
	5							-	-	-	-	-	-
	6									-	-	-	-
	8										-	-	-
	10										-	-	-
	12, 13											-	-
	15, 16												-
	18, 20												-
	25												-
	30												
	35												
	40												
	50												
SSFAM SSFUM	4						-	-	-	-	-	-	-
	5							-	-	-	-	-	-
	6									-	-	-	-
	8										-	-	-
	10										-	-	-
	12, 13											-	-
	15, 16												-
	18, 20												-
	25												-
	30												
	35												
	40												
	50												

Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
PSFAM PSFUM	4						-	-	-	-	-	-	-
	5							-	-	-	-	-	-
	6									-	-	-	-
	8										-	-	-
	10										-	-	-
	12, 13											-	-
	15, 16												-
	18, 20												-
	25												-
	30												
	35												
	40												
	50												
PSSFAM PSSFUM	4						-	-	-	-	-	-	-
	5							-	-	-	-	-	-
	6									-	-	-	-
	8										-	-	-
	10										-	-	-
	12, 13											-	-
	15, 16												-
	18, 20												-
	25												-
	30												
	35												
	40												
	50												

Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
RSFAM	4									-	-	-	-
	5												-
	6												
	8												
	10												
	12, 13												
	15, 16												
	18, 20												
	25												
	30												

Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
VFBM	5												-
	6												-
	8												-
	10												
	12												
	13												
	15												
	16												
	18												
	20												
	25												
	30												

Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
VPFBM	5												-
	6												-
	8												-
	10												
	12												
	13												
	15												
	16												
	18												
	20												
	25												
	30												

Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
VSFBM	5												-
	6												-
	8												-
	10												
	12												
	13												
	15												
	16												
	18												
	20												
	25												
	30												

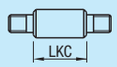
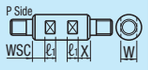
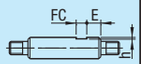
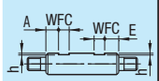
Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
VPSFBM	5												-
	6												-
	8												-
	10												
	12												
	13												
	15												
	16												
	18												
	20												
	25												
	30												

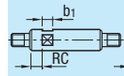
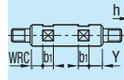
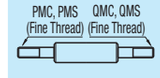
Part Number Type	D	Unit Price Min. L 50	L51 100	L101 150	L151 200	L201 300	L301 400	L401 500	L501 600	L601 800	L801 1000	L1001 1200	L1201 1496
VRBM	5												-
	6												-
	8												-
	10												
	12												
	13												
	15												
	16												
	18												
	20												
	25												
	30												

Example

Alterations Part Number - L - F - B - P (PMC, PMS) - T - S - Q (QMC, QMS) - (LKC, etc.)
SFAM30 - 300 - F40 - B30 - P20 - T50 - S40 - Q16 - LKC

Alteration Details P.99

Alterations	Code	Spec.	Price Adder
	LKC	Alteration to L Dimension Tolerance Ordering Code LKC Application Notes Applicable when L=200 or less for precision type. ⊗Not applicable when D-P(Q)≤2. 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+ℓ1x2<L ◉WSC (X)≥0 ⊗Orientation between set screw flats is random	D W ℓ1: 6 5; 8 7 8; 10 8; 12 10 10; 13 11; 15 13; 16 14 D W ℓ1: 18 16; 20 17 10; 25 22; 30 27 15; 35 30; 40 36 20; 50 41
	FC	Set Screw Flat at One Location Ordering Code FC10-E8 Application Notes ⊗Not applicable to precision shafts. FC, E=1mm Increment ◉FC≤3xD ◉When 1.5xD<FC, FC≤L/2 ◉E=0 or E≥2 ⊗Not available in combination with WFC.	D h: 4~5 0.5; 6~18 1; 20~40 2; 50 3
	WFC	Set Screw Flats at Two Locations Ordering Code WFC8-A8-E4 Application Notes ⊗Not applicable to precision shafts. 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 random. Not available in combination with FC.	D h: 4~5 0.5; 6~18 1; 20~40 2; 50 3

Alterations	Code	Spec.	Price Adder
	RC	90-deg. Set Screw Flat at One Location Ordering Code RC10 Application Notes Only applicable to D=10~30. ⊗Not applicable to precision shafts. ⊗Not available in combination with WRC.	
	WRC	90-deg. Set Screw Flats at Two Locations Ordering Code WRC10-Y10 Ordering Code Only applicable to D=10~30. ⊗Not applicable to precision shafts. ⊗Not available in combination with RC. ⊗Orientation between set screw flats is random.	For details, see Shaft Alteration Overview P.99
	PMC PMS QMC QMS	Change to Fine Thread Ordering Code PMC14 (P is changed to PMC) PMS14 (P is changed to PMS) QMC14 (Q is changed to QMC) QMS14 (Q is changed to QMS)	

◉Please see Shaft Alteration Overview for details if provided. P.99
◉When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm.
◉Alterations may lower hardness. Please see P.98.

Ordering Example
Part Number - L - F - B - P - T - S - Q
SFAM20 - 300 - F30 - B20 - P8 - T20 - S15 - Q10
VFBM15 - 200 - F28 - B16 - P6 - T17 - S12 - Q12

Days to Ship Configure Online