


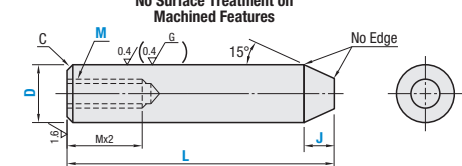
Shafts

One End Tapered / One End Tapped / One End Tapered / One End Stepped & Tapped



Shafts – One End Tapered / One End Tapped

Type		Material	Hardness	Surface Treatment	D Tolerance		
D Tol. g6	D Tol. h5				D	g6	h5
SFTF	SFLU	52100 Bearing Steel Equivalent	Induction Hardening	—	6	-0.004	0
SSFTF	SSFLU	SUS440C (13Cr) Stainless Steel Equivalent	Effective Hardened Depth P.199		8	-0.012	-0.005
PSFTF	PSFLU	52100 Bearing Steel Equivalent	52100 Bearing Steel Equivalent 58 HRC min.	Hard Chrome Plating Plating Hardness: 750 HV min. Plating Thickness: 5µ or More	10	-0.005	0
PSSFTF	PSSFLU	SUS440C (13Cr) Stainless Steel Equivalent	SUS440C (13Cr) Stainless Steel Equivalent 56 HRC min.		12	-0.014	-0.006
13					15	-0.006	0
15					16	-0.017	-0.008
18					18	-0.007	0
20					20	-0.020	-0.009




No Surface Treatment on Machined Features

Ⓢ Circularity, Straightness, Perpendicularity and Changes in Hardness P.198.

Ⓢ Annealing my lower hardness at shaft end machined areas (effective thread length + approx. 10 mm). P.199

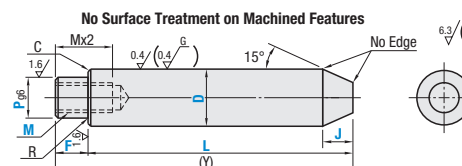
Part Number Type	D	1 mm Increments			M (Coarse Threads)					C		
		L	F	J	3	4	5	6	8		10	12
(D Tolerance g6) (D Tolerance h5)	6	25-200		5-7	3							0.5 or Less
	8	25-200		5-10	3	4	5					
	10	30-200		5-14	3	4	5	6				
SFTF SFLU	12	40-300		5-18	4	5	6	8				
SSFTF SSFLU	13	40-300		5-20	4	5	6	8				
PSFTF PSFLU	15	50-300		10-24	4	5	6	8				
PSSFTF PSSFLU	16	50-500		10-25	4	5	6	8	10			
	18	60-500		10-28	4	5	6	8	10	12		
	20	60-500		10-32	4	5	6	8	10	12		
											1.0 or Less	

Ⓢ Hardness of J+10 area will be lower due to annealing required by machining. Ⓢ Case hardening and plating layers do not remain on the tapered area.
 Ⓢ L requires L-J≥20



Shafts – One End Tapered / One End Stepped & Tapped

Type		Material	Hardness	Surface Treatment	D Tolerance		
D Tol. g6	D Tol. h5				D	g6	h5
SFTG	SFJU	52100 Bearing Steel Equivalent	Effective Hardened Depth of Induction Hardened P.199	—	6	-0.004	0
SSFTG	SSFJU	SUS440C (13Cr) Stainless Steel Equivalent	52100 Bearing Steel Equivalent 58 HRC min.		8	-0.012	-0.005
PSFTG	PSFJU	52100 Bearing Steel Equivalent	52100 Bearing Steel Equivalent 58 HRC min.	Hard Chrome Plating Plating Hardness: 750 HV min. Plating Thickness: 5µ or more	10	-0.005	0
PSSFTG	PSSFJU	SUS440C (13Cr) Stainless Steel Equivalent	SUS440C (13Cr) Stainless Steel Equivalent 56 HRC min.		12	-0.014	-0.006
13					15	-0.006	0
15					16	-0.017	-0.008
18					18	-0.007	0
20					20	-0.020	-0.009



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

Part Number Type	D	1 mm Increments			M (Coarse Threads)					(Y) Max.	R	C			
		L	F	J	3	4	5	6	8				10	12	
(D Tolerance g6) (D Tolerance h5)	8	25-198		6	5-10	3					200	0.3 or Less	0.5 or Less		
	10	30-198		6-8	5-14	3	4	5			200				
	12	40-298		6-10	5-18	3	4	5	6		300				
SFTG SFJU	13	40-298		6-11	5-20	3	4	5	6	8	300				
SSFTG SSFJU	15	50-298		6-13	10-24	3	4	5	6	8	10			300	
PSFTG PSFJU	16	50-498		6-14	10-25	3	4	5	6	8	10			500	
PSSFTG PSSFJU	18	60-498		8-16	10-28	4	5	6	8	10	12			500	
	20	60-498		8-17	10-32	4	5	6	8	10	12			500	
														500	1.0 or Less

Ⓢ P dimensions require M+3≤P. Ⓢ L requires L-J≥20

Part Number Example

One End Tapered – One End Tapped
 Part Number - L - J - M
 SFTF20 - 350 - J15 - M6

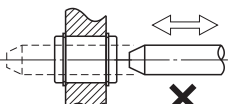
One End Tapered – One End Stepped and Tapped
 Part Number - L - F - P - J - M
 SFTG20 - 350 - F25 - P16 - J10 - M8

Part Number Alterations

One End Tapered – One End Tapped
 Part Number - L - J - M - (LKC / SC)
 SFTF20 - 350 - J15 - M6 - LKC

One End Tapered – One End Stepped and Tapped
 Part Number - L - F - P - J - M - (SC)
 SFTG20 - 350 - F25 - P16 - J10 - M8 - SC5


Application Example



Ⓢ Not suitable for usage requiring frequent insertions with Linear Bushings. (Linear bushing damages may result.)

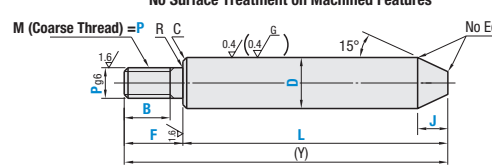
Shafts

One End Tapered / One End Threaded



Shafts – One End Tapered / One End Threaded

Type		Material	Hardness	Surface Treatment	D Tolerance		
D Tol. g6	D Tol. h5				D	g6	h5
SFTN	SFKU	52100 Bearing Steel Equivalent	Effective Hardened Depth of Induction Hardened P.199	—	6	-0.004	0
SSFTN	SSFKU	SUS440C (13Cr) Stainless Steel Equivalent	52100 Bearing Steel Equivalent 58 HRC min.		8	-0.012	-0.005
PSFTN	PSFKU	52100 Bearing Steel Equivalent	52100 Bearing Steel Equivalent 58 HRC min.	Hard Chrome Plating Plating Hardness: 750 HV min. Plating Thickness: 5µ or More	10	-0.005	0
PSSFTN	PSSFKU	SUS440C (13Cr) Stainless Steel Equivalent	SUS440C (13Cr) Stainless Steel Equivalent 56 HRC min.		12	-0.014	-0.006
13					15	-0.006	0
15					16	-0.017	-0.008
18					18	-0.007	0
20					20	-0.020	-0.009



No Surface Treatment on Machined Features

Ⓢ Circularity, Straightness, Perpendicularity and Changes in Hardness P.198.

Ⓢ Annealing my lower hardness at shaft end machined areas (effective thread length + approx. 10 mm). P.199

Part Number Type	D	1 mm Increments			P	1 mm Increments J	(Y) Max.	R	C
		L	F	B					
(D Tolerance g6) (D Tolerance h5)	6	25-198			3 4 5 6	5-7	200	0.3 or Less	0.5 or Less
	8	25-198			3 4 5 6 8	5-10	200		
	10	30-198			4 5 6 8 10	5-14	200		
SFTN SFKU	12	40-298			5 6 8 10 12	5-18	300		
SSFTN SSFKU	13	40-298			5 6 8 10 12	5-20	300		
PSFTN PSFKU	15	50-298			5 6 8 10 12	10-24	300		
PSSFTN PSSFKU	16	50-498			5 6 8 10 12 16	10-25	500		
	18	60-498			5 6 8 10 12 16	10-28	500		
	20	60-498			5 6 8 10 12 16 20	10-32	500		

Ⓢ 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).
 Ⓢ Thread machining will not be applied when B=0 is specified. Ⓢ L requires L-J≥20. Ⓢ B≥Pitch x 3 is required.

Part Number Example

One End Tapered – One End Threaded
 Part Number - L - F - B - P - J
 SFTN20 - 350 - F40 - B30 - P10 - J10

Part Number Alterations

One End Tapered – One End Threaded
 Part Number - L - F - B - P - J - (SC)
 SFTN20 - 350 - F40 - B30 - P10 - J10 - SC5

Alterations	Alteration to L Dimension Tolerance		Wrench Flats	
	LKC	SC	SC	SC
Code	LKC	SC	SC	SC
Spec.	Changes L Tolerance. Ordering Code: LKC Ⓢ L<200 → L±0.03 200≤L<500 → L±0.05 L=500 → L±0.1 Ⓢ L dimensions can be specified in 0.1 mm increment for LKC. Ⓢ Not applicable to D=P Ⓢ Not Applicable to One End Stepped and Tapped – One End Threaded		Adds wrench flats. Ordering Code: SC5 Ⓢ SC=1 mm increment Ⓢ SC+ℓ₁≤L SC≥0	
	D	W	ℓ₁	
	6	5	8	
	8	7		
	10	8		
	12	10		
	13	11		
	15	13		
	16	14		
	18	16		
	20	17		

Ⓢ Alterations may lower hardness. P.199