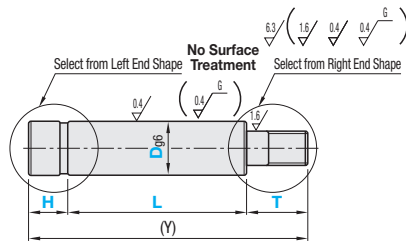


Shaft Ends Configurable

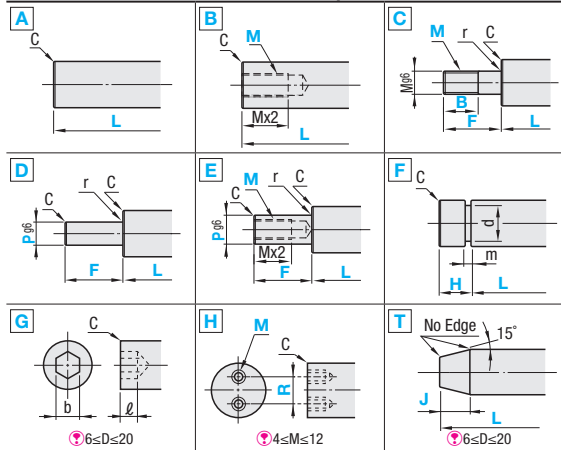


Type		Material	Hardness	Surface Treatment
D Tol. g6	D Tol. h5			
FSFJ	FSFU	EN 1.3505 Equiv.	Effective Hardened Depth of Induction Hardening P112	-
FSSFJ	FSSFU	EN 1.4125 Equiv.	EN 1.3505 Equiv.	-
FPSFJ	-	EN 1.3505 Equiv.	56HRC~	Hard Chrome Plating
FPSFJ	-	EN 1.4125 Equiv.	EN 1.4125 Equiv. 56HRC~	Plating Hardness: HV750 Plating Thickness: 5µ or More

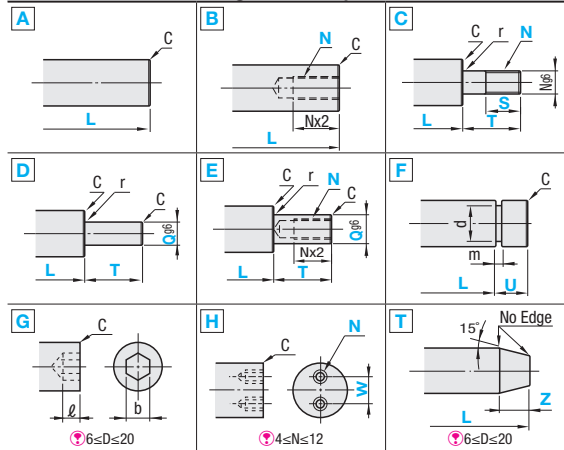
 (Y) dimensions need to be (Y) $\leq D \times 50$. (Y) ≤ 1500
 L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness  **P.111**



Left End Shape



Right End Shape



Machining Conditions **A** No alteration condition for Shape

B • When M3 ~ 8 M(N)≤D-3 • When M10 or 12 M(N)≤D-4 • When M16, 20 or 24 M(N)≤D-5 • When M30 M(N)≤D-6 L≥M(N)x4	C <table> <tr> <th>D</th><th>r</th></tr> <tr> <td>6~30</td><td>0.3 or Less</td></tr> <tr> <td>31~50</td><td>0.5 or Less</td></tr> </table> Specify M(N) dimensions.  B, S≥Pitchx3 is required.	D	r	6~30	0.3 or Less	31~50	0.5 or Less	D <table> <tr> <th>D</th><th>r</th></tr> <tr> <td>6~30</td><td>0.3 or Less</td></tr> <tr> <td>31~50</td><td>0.5 or Less</td></tr> </table>	D	r	6~30	0.3 or Less	31~50	0.5 or Less	E <table> <tr> <th>D</th><th>r</th><th>P(Q)=M(N)+3</th></tr> <tr> <td>6~30</td><td>0.3 or Less</td><td></td></tr> <tr> <td>31~50</td><td>0.5 or Less</td><td></td></tr> </table> • When M3 ~ 8 M(N)≤P(Q)-3 • When M10 or 12 M(N)≤P(Q)-4 • When M16, 20 or 24 M(N)≤P(Q)-5 • When M30 M(N)≤P(Q)-6	D	r	P(Q)=M(N)+3	6~30	0.3 or Less		31~50	0.5 or Less	
D	r																							
6~30	0.3 or Less																							
31~50	0.5 or Less																							
D	r																							
6~30	0.3 or Less																							
31~50	0.5 or Less																							
D	r	P(Q)=M(N)+3																						
6~30	0.3 or Less																							
31~50	0.5 or Less																							

F D dimensions 31 and 38 can not be specified.	G <table> <tr> <th>D</th><th>b</th><th>Max Scaled Depth Ø</th></tr> <tr> <td>6, 7</td><td>2.5</td><td>3.5</td></tr> <tr> <td>8, 9</td><td>3</td><td>4.5</td></tr> <tr> <td>10</td><td>4</td><td>6</td></tr> <tr> <td>12~15</td><td>5</td><td>7.5</td></tr> <tr> <td>16~19</td><td>6</td><td>9</td></tr> <tr> <td>20</td><td>8</td><td>12</td></tr> </table>	D	b	Max Scaled Depth Ø	6, 7	2.5	3.5	8, 9	3	4.5	10	4	6	12~15	5	7.5	16~19	6	9	20	8	12	H D≥16 D≥M+4+R D≥N+4+W R≥M+3 W≥N+3 Tap Depth Mx2 Nx2	T D-J(J+tan15°x2)≥2 (Tip diameter Ø2 or More) • L requires L-J(Z)≥20. • When both ends are in T shape, L-(J+Z)≥20 is required.
D	b	Max Scaled Depth Ø																						
6, 7	2.5	3.5																						
8, 9	3	4.5																						
10	4	6																						
12~15	5	7.5																						
16~19	6	9																						
20	8	12																						

⚠ When only one end requires alteration, select Shape A for the opposite end.

⚠ G and H will not be symmetrical when applied to both ends of the shaft.

⚠ When D=P or D=N is selected for shaft shape C, B(S) needs to be specified as $F=B(T=S)$. However, L, F, and T dimensions have manufacturing priority and B(S) dimension will be $F(T)=\text{Pitch } x2$.

Part Number			Selection		0.5mm Increment		1mm Increment					Selection		C																		
Type	Left End Shape	Right End Shape	D	L	F, T	B, S	H, U	P, Q	R, W	J, Z	M, N (Coarse)																					
(D Tol. g6) FSFJ FSSFJ FPFJ FPSSFJ	A B C D E F G H T	A B C D E F G H T	6 17 31 7 18 32 8 19 35 9 20 38 10 22 40 12 24 45 13 25 50 14 26 15 28 16 30	20.0~1500.0 (L≤Dx50)	2sF≤Px5 2sF≤Mx5 2sT≤Qx5 2sT≤Nx5	2sB≤Mx3 2sS≤Nx3 B≤F-2 S≤T-2 (When M, N≤6) B≤F-3 S≤T-3 (When M, N≤8, 10) B≤F-5 S≤T-5 (When M, N≥12)	2sH, U (When D=6) 3sH, U (When 6<D≤10) 4sH, U (When 10<D≤20) 5sH, U (When 20<D) H, U< $\frac{1}{2}$	D/3≤P, Q<D	D≥M+4+R R≥N+4+W D≥M+3 W≥N+3	<table><tr><th>D</th><th>J, Z</th></tr><tr><td>6, 7</td><td>5~7</td></tr><tr><td>8, 9</td><td>5~10</td></tr><tr><td>10</td><td>5~14</td></tr><tr><td>12</td><td>5~18</td></tr><tr><td>13, 14</td><td>5~20</td></tr><tr><td>15</td><td>10~24</td></tr><tr><td>16, 17</td><td>10~25</td></tr><tr><td>18, 19</td><td>10~28</td></tr><tr><td>20</td><td>10~32</td></tr></table>	D	J, Z	6, 7	5~7	8, 9	5~10	10	5~14	12	5~18	13, 14	5~20	15	10~24	16, 17	10~25	18, 19	10~28	20	10~32	3 4 5 6 8 10 12 16 20 24 30	0.2 or less when D-Q (P, M, N)≤4 0.5 or less when D<20, 1.0 or less when D≥20
D	J, Z																															
6, 7	5~7																															
8, 9	5~10																															
10	5~14																															
12	5~18																															
13, 14	5~20																															
15	10~24																															
16, 17	10~25																															
18, 19	10~28																															
20	10~32																															



Ordering Example

Part Number

Type Left End Right End

FSFJ A C - D12 - L100

□ □ □ □

-	T	-	N	-	S
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- T30 - N6 - S12



Alterations

For details, please see
Alteration Overview on **P113**.
Applicable to LKC, SC, WSC, PMC, PMS, QMC and
QMS only.

[illegible]