
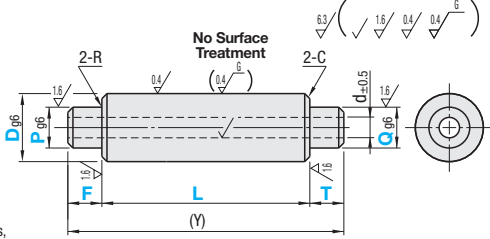


Shafts

Both Ends Stepped Hollow



Type	Material	Hardness	Surface Treatment
SPJQ	SUJ2 Equivalent P112 58HRC~	Effective Hardened Depth of Induction Hardening	Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 5µ or More
PSPJQ			
RSPJQ			



⚠ Features of Low Temp. Black Chrome Plating P.128
 ⚠ L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.111
 ⚠ Low temp. black chrome plating is not applied to the inside of hollow shafts, taps, bored holes and lateral holes, and may rust.
 ⚠ Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm).

⚠ About Hollow Shaft Wall Thickness Deviations See P.111

Type	Part Number		1mm Increment		(Y) Max.	d	R	C
	Dg6	L	F, T	P, Q				
SPJQ	6	-0.004 -0.012	25~596	2≤F≤Px3 2≤T≤Qx3	5≤P(Q)<D	600	2	0.5 or Less
	8	-0.005	25~796		6≤P(Q)<D	800	3	
	10	-0.014	25~796		7≤P(Q)<D	800	4	
	12	-0.006	25~996		10≤P(Q)<D	1000	6	
	13	-0.017	25~996		13≤P(Q)<D	1200	10	
PSPJQ	16	-0.007	25~1196	2≤F≤Px3 2≤T≤Qx3	16≤P(Q)<D	1200	14	1.0 or Less
	20	-0.020	25~1496		20≤P(Q)<D	1200	16	
	25	-0.007	25~1196		22≤P(Q)<D	1500	17	
	30	-0.020	25~1496		24≤P(Q)<D	1500	19	
RSPJQ (D≤30, L≤500)	40	-0.009 -0.025	25~1496		25≤P(Q)<D	1500	20	0.5 or Less
	50	-0.009 -0.025	25~1496		32≤P(Q)<D	1500	26	

Ordering Example: **Part Number** - L - F - P - T - Q

SPJQ20 - 400 - F25 - P16 - T25 - Q18

⚠ Alterations may lower hardness. See P.112

Alterations: **Part Number** - L - F - P - T - Q - (DKC, LKC, SC)

SPJQ20 - 400 - F25 - P16 - T25 - Q18 - LKC

Alterations	Revise O.D. Tolerance (Precision Grade)	Alteration to L dimension tolerance	Wrench Flats																																																				
	DKC	LKC	SC																																																				
Code	DKC	LKC	SC																																																				
Spec.	O.D. tolerance is altered to h5. (Ordering Code) DKC	Changes L tolerance. (Ordering Code) LKC	Adds wrench flats. (Ordering Code) SC5																																																				
	<table border="1"> <thead> <tr> <th>D</th> <th>h5 Tolerance</th> </tr> </thead> <tbody> <tr><td>6</td><td>0 -0.005</td></tr> <tr><td>8, 10</td><td>0 -0.006</td></tr> <tr><td>12~16</td><td>0 -0.008</td></tr> <tr><td>20~30</td><td>0 -0.009</td></tr> <tr><td>35~50</td><td>0 -0.011</td></tr> </tbody> </table>	D	h5 Tolerance	6	0 -0.005	8, 10	0 -0.006	12~16	0 -0.008	20~30	0 -0.009	35~50	0 -0.011	<table border="1"> <thead> <tr> <th>L</th> <th>h5 Tolerance</th> </tr> </thead> <tbody> <tr><td>L<200</td><td>L±0.03</td></tr> <tr><td>200≤L<500</td><td>L±0.05</td></tr> <tr><td>L≥500</td><td>L±0.1</td></tr> </tbody> </table>	L	h5 Tolerance	L<200	L±0.03	200≤L<500	L±0.05	L≥500	L±0.1	<table border="1"> <thead> <tr> <th>D</th> <th>W</th> <th>δ1</th> </tr> </thead> <tbody> <tr><td>6</td><td>5</td><td rowspan="2">8</td></tr> <tr><td>8</td><td>7</td></tr> <tr><td>10</td><td>8</td><td rowspan="2">10</td></tr> <tr><td>12</td><td>10</td></tr> <tr><td>13</td><td>11</td><td rowspan="2">15</td></tr> <tr><td>16</td><td>14</td></tr> <tr><td>20</td><td>17</td><td rowspan="2">20</td></tr> <tr><td>25</td><td>22</td></tr> <tr><td>30</td><td>27</td><td rowspan="2">15</td></tr> <tr><td>35</td><td>30</td></tr> <tr><td>40</td><td>36</td><td rowspan="2">20</td></tr> <tr><td>50</td><td>41</td></tr> </tbody> </table>	D	W	δ1	6	5	8	8	7	10	8	10	12	10	13	11	15	16	14	20	17	20	25	22	30	27	15	35	30	40	36	20	50
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	⚠ Not applicable to Low Temp. Black Chrome Plated Shafts.	⚠ Not applicable when D-P(Q)≤2	⚠ SC=1mm Increment ⚠ SC+δ1≤L ⚠ SC≥0																																																				

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
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Low Temp. Black Chrome Plating Additional Charge	D	Additional Price						
		Min. L - 50	L51-100	L101-150	L151-200	L201-300	L301-400	L401-500
	6							
	8							
	10							
	12							
	13							
	16							
	20							
	25							
	30							

⚠ For Low Temp. Chrome Plated Shafts, please add Low Temp. Black Chrome Plating Additional Charge on the left to the non-plated shaft Unit Price above.

⚠ Features of Low Temp. Black Chrome Plating P.128