

Shafts

Both Ends Threaded Hollow

Type	Material	Hardness	Surface Treatment
SPJM			
PSPJM	SUJ2 Equivalent	Effective Hardened Depth of Induction Hardening P.112 58HRC~	Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 5μ or More
RSPJM			Low Temp. Black Chrome Plating

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.
 Shaft End Machined Area (Effective Thread Length + Approx. 10mm) Annealing may lower hardness.
 About Hollow Shaft Wall Thickness Deviations See **P.111**

Part Number Type	Dg6	1mm Increment		P, Q Selection	d	(Y) Max.	R	C
		L	F, T					
SPJM	6	25-596		6	2	600		
	8	25-796		8	3	800		
	10	25-796		8 10	4	1000	0.3	0.5 or Less
	12	25-996		10 12	6	1200		
	13	25-996		12	7			
	16	25-1196		16	10			
	20	25-1196		20	14			
	25	25-1196		24	16			
	30	25-1496		24 30	17			1.0 or Less
	35	25-1496		30	19			0.5 or Less
40	25-1496		30	20				

When D=P, or D=Q, specify F=B (T=S) as B (S) dimensions. However, L, F, and T dimensions have manufacturing priority and B (S) dimension of the product will be F (T)-(Pitchx2).
 Thread machining will not be applied to B=0 or S=0. B, S≥Pitch x3 is required.

Part Number - L - F - B - P - T - S - Q
 SPJM20 - 400 - F20 - B20 - P20 - T20 - S20 - Q20
 Part Number - L - F - B - P - T - S - Q - (DKC, LKC...etc.)
 SPJM30 - 300 - F40 - B30 - P24 - T50 - S40 - Q24 - DKC

Alterations	Revised O.D. Tolerance (Precision Grade)	Alteration to L dimension tolerance	Wrench Flats	Wrench Flats at Two Locations
	Code	DKC	LKC	SC
Spec.	O.D. tolerance is altered to h5. (Ordering Code) DKC	Changes L tolerance. (Ordering Code) LKC L<200 → L±0.03 200≤L<500 → L±0.05 L≥500 → L±0.1 Not applicable when D-P(Q)≤2 L dimensions can be specified in 0.1mm increment for LKC.	Adds wrench flats. (Ordering Code) SC5 SC=1mm increment SC+ℓ1≤L SC≥0 WSC+X+ℓ1x2<L WSC≥0 X=0 Orientation between two wrench flats is not coplanar.	Adds Wrench Flats at two locations. (Ordering Code) WSC12-X8 WSC+X+ℓ1x2<L WSC≥0 X=0 Orientation between two wrench flats is not coplanar.

For Low Temp. Black Chrome Plated Shafts, please add Low Temp. Black Chrome Plating Additional Charge above to the non-plated shafts Unit Price below.

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

Alterations may lower hardness. See **P.112**

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
SPJM	6												
	8												
	10												
	12												
	13												
	16												
	20												
	25												
	30												
	35												
40													
PSPJM	6												
	8												
	10												
	12												
	13												
	16												
	20												
	25												
	30												
	35												
40													

Shafts

One End Threaded, One End Tapped Hollow

Type	Material	Hardness	Surface Treatment
SPJD			
PSPJD	SUJ2 Equivalent	Effective Hardened Depth of Induction Hardening P.112 58HRC~	Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 5μ or More
RSPJD			Low Temp. Black Chrome Plating

Features of Low Temp. Black Chrome Plating **P.128**
 Circular L standard 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.
 Shaft End Machined Area (Effective Thread Length + Approx. 10mm) Annealing may lower hardness.
 About Hollow Shaft Wall Thickness Deviations See **P.111**

Part Number Type	Dg6	1mm Increment		P Selection	M (Coarse) Selection	d	(Y) Max.	R	C
		L	F						
SPJD	6	25-598		6	3	2	600		
	8	25-798		8	4 5	3	800		
	10	25-798		8 10	5 6	4	1000	0.3	0.5 or Less
	12	25-998		10 12	8 T1 (RC1/8)	6	1200		
	13	25-998		12	10 T1 (RC1/8)	7			
	16	25-1198		16	12 T2 (RC1/4)	10			
	20	25-1198		20	16 T3 (RC3/8)	14			
	25	25-1198		24	20	16			
	30	25-1498		24 30	20	17			1.0 or Less
	35	25-1498		30	24	19			0.5 or Less
40	25-1498		30	24 30	20				

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.

Overall length L requires Nx3L.

Ordering Example Part Number - L - F - B - P - N
 SPJD20 - 277 - F12 - B12 - P20 - N16

Part Number - L - F - B - P - N - (DKC, LKC, SC...etc.)
 SPJD30 - 250 - F40 - B30 - P24 - N20 - DKC

Alterations	Revised O.D. Tolerance (Precision Grade)	Alteration to L dimension tolerance	Wrench Flats	Wrench Flats at Two Locations
	Code	DKC	LKC	SC
Spec.	O.D. tolerance is altered to h5. (Ordering Code) DKC	Changes L tolerance. (Ordering Code) LKC L<200 → L±0.03 200≤L<500 → L±0.05 L≥500 → L±0.1 Not applicable when D-P≤2 L dimensions can be specified in 0.1mm increment.	Adds wrench flats. (Ordering Code) SC5 SC=1mm increment SC+ℓ1≤L SC≥0 WSC+X+ℓ1x2<L WSC≥0 X=0 Orientation between two wrench flats is not coplanar.	Adds Wrench Flats at two locations. (Ordering Code) WSC12-X8 WSC+X+ℓ1x2<L WSC≥0 X=0 Orientation between two wrench flats is not coplanar.

For Low Temp. Black Chrome Plated Shafts, please add Low Temp. Black Chrome Plating Additional Charge above to the non-plated shafts Unit Price below.

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

Alterations may lower hardness. See **P.112**

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
SPJD	6												
	8												
	10												
	12												
	13												
	16												
	20												
	25												
	30												
	35												
40													
PSPJD	6												
	8												
	10												
	12												
	13												
	16												
	20												
	25												
	30												
	35												
40													