

Shafts

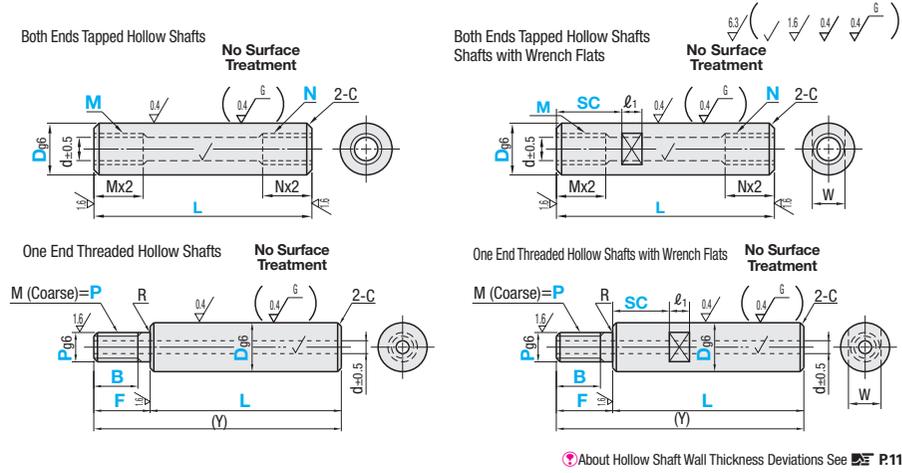
Both Ends Tapped Hollow / Both Ends Tapped Hollow with Wrench Flats / One End Threaded Hollow / One End Threaded Hollow with Wrench Flats



RoHS

- Features of Low Temp. Black Chrome Plating **P.128**
- Circularity and O.D. tolerance may not meet precision specification in areas approximately 15mm from wrench flats machined ends.
- 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 required for wrench flats machining and shaft end threading (effective thread length + approx. 10mm) may lower hardness **P.112**

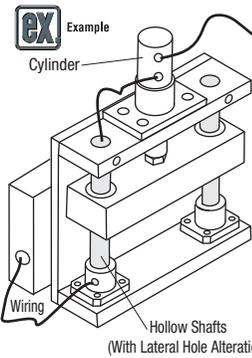
Type				Material	Hardness	Surface Treatment	D Tol.	
Both Ends Tapped	Both Ends Tapped with Wrench Flats	One End Threaded	One End Threaded with Wrench Flats				6	8, 10
SPJW	SPWR	SPJN	SPNR	SUJ2	Effective Hardened Depth of Induction Hardening P.112 SUJ2 58HRC~ SUS440C Equivalent 56HRC~	Hard Chrome Plating Plating Hardness: Hv750 ~ Plating Thickness: 5μ or More	6	-0.004
SSPJW	SSPWR	-	-	SUS440C Equivalent			8, 10	-0.005
PSPJW	PSPWR	PSPJN	PSPNR	SUJ2	SUS440C Equivalent 56HRC~	Low Temp. Black Chrome Plating	12-16	-0.006
RSPJW	RSPWR	RSPJN	RSPNR	SUJ2			20-30	-0.007
							35-50	-0.020



About Hollow Shaft Wall Thickness Deviations See **P.111**

Both Ends Tapped Hollow Shafts

Part Number Type	D	L specified in 1mm increment	M (Coarse), N (Coarse) Selection	Wrench Flats Dimensions			d	C
				SC	W	l1		
Not applicable to Both Ends Tapped Hollow Shafts								
SPJW	*6	20-600	3	5	8	2	0.5 or Less	
SSPJW (* marked sizes only)	*8	20-800(300)	4 *5	7	8	3(3)		
PSPJW	*10	20-800(400)	5 *6	8	8	4(4)		
RSPJW (D≤30, L≤500)	*12	32-1000(500)	*8 *T1 (RC1/8)	10	10	6(5)		
	*13	40-1000(500)	*10 *T1 (RC1/8)	11	11	7(5)		
	*16	48-1200(600)	*12 *T2 (RC1/4)	14	10	10(6)		
Both Ends Tapped Hollow with Wrench Flats	*20	64-1200(800)	*16 *T3 (RC3/8)	17	17	14(8)		
SPWR	*25	80-1200(1000)	*20	22	22	16(10)		
SSPWR (* marked sizes only)	*30	80-1500(1000)	*20	27	15	17(12)	1.0 or Less	
PSPWR	35	96-1500	24	30	30	19		
RSPWR (D≤30, L≤500)	40	96-1500	24 30	36	20	20		
	50	120-1500	30	41	20	26		



- When T1, T2 or T3 is selected as M or N, tapered thread machining is applied. (Ordering Code: MT1, NT1) L requires Mx2+Nx2≤L.
- When Mx2+4+Nx2.5+4≤L, tap pilot holes may go through. When L≤Mx2+Nx2, effective depth of larger diameter tap has priority.
- Only * marked D, M and N dimensions are applicable to Stainless Steel Shafts. L and d dimensions in () are applicable.

One End Threaded Hollow Shafts

Part Number Type	D	1mm Increment		P Selection	Wrench Flats Dimensions			d	(Y) Max.	R	C
		L	F		SC	W	l1				
One End Threaded Hollow Shafts	6	25-598		6	5	8	2	600			0.5 or Less
SPJN	8	25-798		8	7	8	3	800			
PSPJN	10	25-798		8 10	8	8	4	1000			
RSPJN (D≤30, L≤500)	12	25-998		10 12	10	6	6	1200			
	13	25-998		12	11	7	7				0.3 or Less
One End Threaded Hollow Shafts with Wrench Flats	16	25-1198	2≤F≤Px5	16	14	10	10				
SPNR	20	25-1198		20	17	14	14				1.0 or Less
PSPNR	25	25-1198		24	22	17	17	1500			
RSPNR (D≤30, L≤500)	30	25-1498		24 30	27	15	19				
	35	25-1498		30	30	19	19				
	40	25-1498		30	36	20	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.

Both Ends Tapped Hollow Shafts				One End Threaded Hollow Shafts			
Part Number	L	M	N	Part Number	L	F	B
SPJW20	- 500	- M16	- N16	SPJN 20	- 1051	- F30	- B30
SPWR30	- 680	- M20	- N20	SPNR 30	- 1270	- F60	- B28

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	L1201-1500	
SPJW SPWR	6													
	8													
	10													
	12													
	13													
	16													
RSPJW RSPWR	20													
	25													
	30													
	35													
	40													
SSPJW SSPWR	50													
	6													
	8													
	10													
	12													
	13													
PSPJW PSPWR	16													
	20													
	25													
	30													
	35													
	40													
SPJN SPNR	50													
	6													
	8													
	10													
	12													
	13													
RSPJN RSPNR	16													
	20													
	25													
	30													
	35													
	40													
PSPJN PSPNR	50													
	6													
	8													
	10													
	12													
	13													

(Table 1) Low Temp. Black Chrome Plating Additional Charge	D	Additional Price					
		Min. L - 50	L51-100	L101-150	L151-200	L201-300	L301-400
Suitable for RSPJW RSPWR	6						
	8						
	10						
	12						
	13						
	16						
	20						
	25						
	30						
	35						

(Table 2) Low Temp. Black Chrome Plating Additional Charge	D	Additional Price					
		Min. L - 50	L51-100	L101-150	L151-200	L201-300	L301-400
Suitable for RSPJN RSPNR	6						
	8						
	10						
	12						
	13						
	16						
	20						
	25						
	30						
	35						

For Low Temp. Black Chrome Plated Shafts, add Low Temp. Black Chrome Plating Additional Charge in (Table 1) and (Table 2) to the non-plated shaft Unit Price above.

Alterations	Both Ends Tapped Hollow Shafts		One End Threaded Hollow Shafts	
	Part Number	Alterations	Part Number	Alterations
DKC	SPJW30 - 500 - M20 - N20 - SC10	DKC	SPJN30 - 250 - F40 - B30 - P24 - DKC	DKC
LKC		LKC		LKC
VC		VC		VC
WSC		WSC		WSC
RH		RH		RH

When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm. **P.114** Alterations may lower hardness. See **P.112**