Rotary Shafts – D Tolerance h9 (Cold-drawn) / h7 (Ground) / g6 (Ground)

One End Stepped

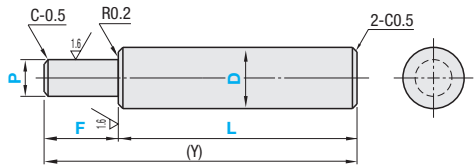
■Select from h9 (Cold-drawn), h7 (Ground) and g6 (Ground) for your applications. Furthermore, h7 or g6 can be selected for P part tolerance of h9 (Cold-drawn).

Type		Tolerance D	Tolerance P	M Material	S Surface Treatment
(1)	SFRMHP	h9 (Cold-drawn)	h7	S45C Equivalent	Black Oxide / Electroless Nickel Plating
	PSFRMHP				
	SSFRMHP			SUS304	-
(2)	SFRMGP		g6	S45C Equivalent	Black Oxide / Electroless Nickel Plating
	PSFRMGP				
	SSFRMGP			SUS304	-
(3)	SFRHP	h7 (Ground)	h7	S45C Equivalent	Black Oxide / Electroless Nickel Plating
	PSFRHP				
	SSFRHP			SUS304	-
(4)	SFRP	g6 (Ground)	g6	S45C Equivalent	Black Oxide / Electroless Nickel Plating
	PSFRP				
	SSFRP			SUS304	-
	HFRP			H SCM435 Hardness: 30 ~ 35HRC	Black Oxide

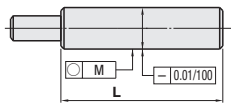
■Tolerance Table

D, P	h9 (Cold-drawn)	h7 (Ground)	g6 (Ground)
3	0 / -0.025	0 / -0.010	-0.002 / -0.008
3.1~6	0 / -0.030	0 / -0.012	-0.004 / -0.012
6.1~10	0 / -0.036	0 / -0.015	-0.005 / -0.014
10.1~18	0 / -0.043	0 / -0.018	-0.006 / -0.017
18.1~30	0 / -0.052	0 / -0.021	-0.007 / -0.020
30.1~50	0 / -0.062	0 / -0.025	-0.009 / -0.025

Surface roughness of Part D for h9 (Cold-drawn) is 6.3. Surface roughness for h7 (Ground) and g6 (Ground) is 1.6.
For Retaining Ring Groove Type, see **P.879**.

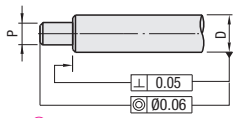


■Circularity and Straightness



Not applicable to h9 (Cold-drawn).

■Perpendicularity



Not applicable to h9 (Cold-drawn).

■Circularity of Part D

D over	D or Less	Circularity M
5	13	0.004
13	20	0.005
20	40	0.006
40	50	0.007

Not applicable to h9 (Cold-drawn).

■Tolerances of L, Y and Other Dimensions

Dimension over	Dimension or Less	Tolerance
2	6	±0.1
6	30	±0.2
30	120	±0.3
120	400	±0.5
400	1000	±0.8

(1)D tolerance h9 (Cold-drawn) / P tolerance h7 (2)D tolerance h9 (Cold-drawn) / P tolerance g6

Part Number Type	D	0.1mm Increment L	F	1mm Increment P	(Y)max.
(1)D Tol. h9 / P Tol. h7	6	15.0~398.0	2≤F≤Px5	3 4 5	400
SFRMHP	8	15.0~498.0		3≤P<D	500
PSFRMHP	10	15.0~598.0			600
SSFRMHP	12	15.0~698.0		5≤P<D	700
(2)D Tol. h9 / P Tol. g6	15	15.0~798.0			800
SFRMGP	20	30.0~998.0			1000
PSFRMGP	25	30.0~998.0		10≤P<D	
SSFRMGP	30	30.0~998.0			
(D6 is not available for SSFRMHP or SSFRMGP.)	35	40.0~998.0		16≤P<D	

(3)h7 (Ground)

Part Number Type	D	0.1mm Increment L	F	1mm Increment P	(Y)max.
	6	15.0~398.0	2≤F≤Px5	3 4 5	400
	8	15.0~498.0		3≤P<D	500
	10	15.0~598.0			600
SFRHP	12	15.0~698.0		5≤P<D	700
	15	15.0~798.0			800
PSFRHP	17	30.0~898.0			900
	20	30.0~998.0			1000
SSFRHP	25	30.0~998.0		10≤P<D	
	30	30.0~998.0			
	35	40.0~998.0		16≤P<D	
	40	40.0~998.0			
	50	40.0~998.0			

(4)g6 (Ground)

Part Number Type	D	0.1mm Increment L	F	1mm Increment P	(Y)max.
	6	15.0~398.0	2≤F≤Px5	3 4 5	400
	8	15.0~498.0		3≤P<D	500
	10	15.0~598.0			600
SFRP	12	15.0~698.0		5≤P<D	700
	13	15.0~698.0			
PSFRP	* 15	15.0~798.0			800
	16	15.0~898.0			900
SSFRP	17	30.0~898.0			
(D13, D16, D18 or D22 is not available for SSFRP.)	18	30.0~898.0			
	* 20	30.0~998.0			1000
*HFRP	22	30.0~998.0		10≤P<D	
(Only * marked sizes are available.)	* 25	30.0~998.0			
	* 30	30.0~998.0			
	* 35	40.0~998.0		16≤P<D	
	* 40	40.0~998.0			
	* 50	40.0~998.0			

When D-P≤2, chamfer C at the step is 0.2 or less. For HFRP, the upper limit for L dim. is 798.0.

Ordering Example

	Part Number	-	L	-	F	-	P
(1)D part h9 / P part h7	SFRMHP30	-	250	-	F30	-	P10
(3)h7 (Ground)	SFRHP25	-	200	-	F25	-	P15
(4)g6 (Ground)							