


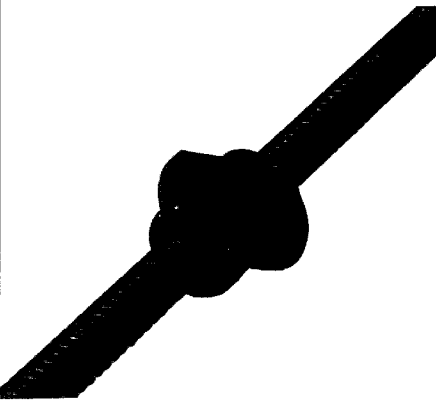
### Series

Normal and Medium Lead ( $\phi 10 \sim \phi 40$ )  
RBSM Series



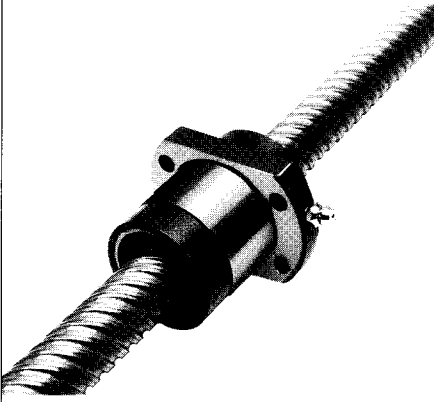
The method of ball return is adopted by return tube and nut flange is provided with one side flat to the tube side.

Large Lead  $l = D$  ( $\phi 12 \sim \phi 40$ )  
RBSD Series



The lead is same as screw shaft diameter and the method of ball return is adopted by end caps. Nut flange is provided with both sides flat. Ball screw nut incorporates with a double start thread.

Extra large Lead  $l = 2D$  ( $\phi 16 \sim \phi 32$ )  
RBSW Series



The lead is two times of screw shaft diameter and the method of ball return is adopted by end caps. Nut flange is provided with both sides flat. Ball screw nut incorporates with a triple start thread.

Combination Chart for Screw Shaft Dia and Lead

Lead \ Dia.	3	4	5	6	8	10	12	16	20	25	32	40	50	64
10	(M)			(M)										
12					(M)		(D)							
14		(M)	(M)											
16						(M)		(D)			(W)			
18					(M)									
20			(M)			(M)			(D)			(W)		
25			(M)			(M)				(D)			(W)	
28				(M)										
32						(M)					(D)			(W)
36						(M)								
40						(M)						(D)		

(M) : Normal, Medium Lead:  
RBSM Series

(D) : Large Lead:  
RBSD Series

(W) : Extra large Lead:  
RBSW Series

# Materials



Table 130 : Materials and Hardness

Item	Materials	Hardness
Nut	RBSM, D Series SCM420 (JISG4105)	H <sub>R</sub> C58~63
	RBSW Series SCM415 (JISG4105)	
Screw Shaft	RBSM, D Series SCM420 (JISG4105)	H <sub>R</sub> C57~62
	RBSW Series S45C (JISG4051)	
Steel Ball	SUJ-2 (JISG4805)	H <sub>R</sub> C62~67

# Lubrication



This series requires periodic lubrication to assure long term precision and high performance. The lubrication can be done easily by using the built-in oil ports around the nut flange's outside surface.

Table 131 : Recommended Lubricant

Oil	Turbine Oil 90~180
Grease	Lithium Soap Group Grease 2nd~3rd Grade

# Precision



Table 132 : Lead Precision

Accumulative Lead Error	±0.21/300mm
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This precision shall be equal to that of the C10 Grade in JISB1191 (for normal ball screws).

Table 133 : Axial Clearance

Units : mm

Model No.	Axial Clearance
RBSM-1003, 06	0.10
1208	
1404, 05	
1610	
1808	0.15
2005, 10	
2005, 10	0.20
2808	
3210	
3610	
4010	
RBSD-1212	
1616	
2020	0.12
2525	
3232	
4040	0.20
RBSW-1632	
2040	0.10
2550	
3264	0.15

Table 134 : Screw Shaft's Radial Deviation

Units : mm

Total Length	Screw Shaft Dia.			
	~12	12~20	20~32	32~50
~ 500	0.27	0.20	0.16	0.13
500~ 800	0.46	0.32	0.23	0.17
800~1000		0.42	0.30	0.22
1000~1600		0.73	0.50	0.34
1600~2000		1.00	0.69	0.46
2000~2500			0.93	0.61
2500~3000			1.30	0.82
3000~4000				1.10

These deviations shall be equal to those of the C10 Grade in JISB1191 (for normal ball screws).

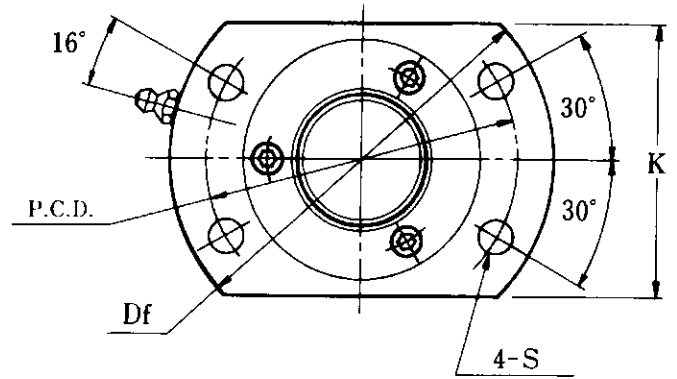
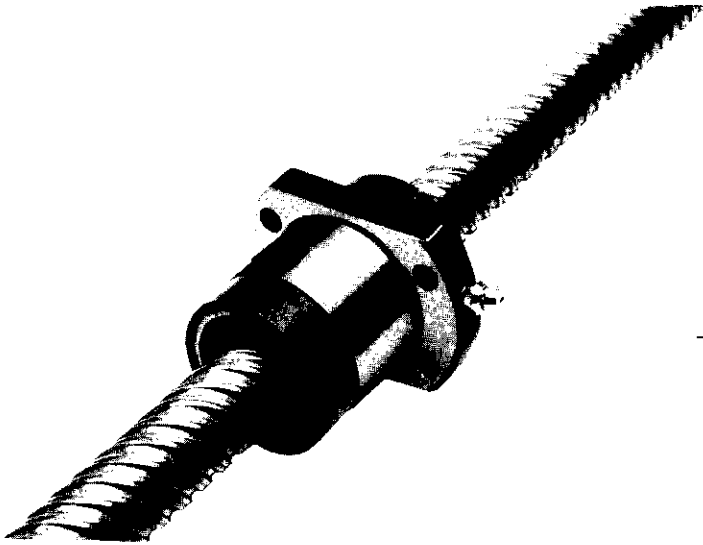
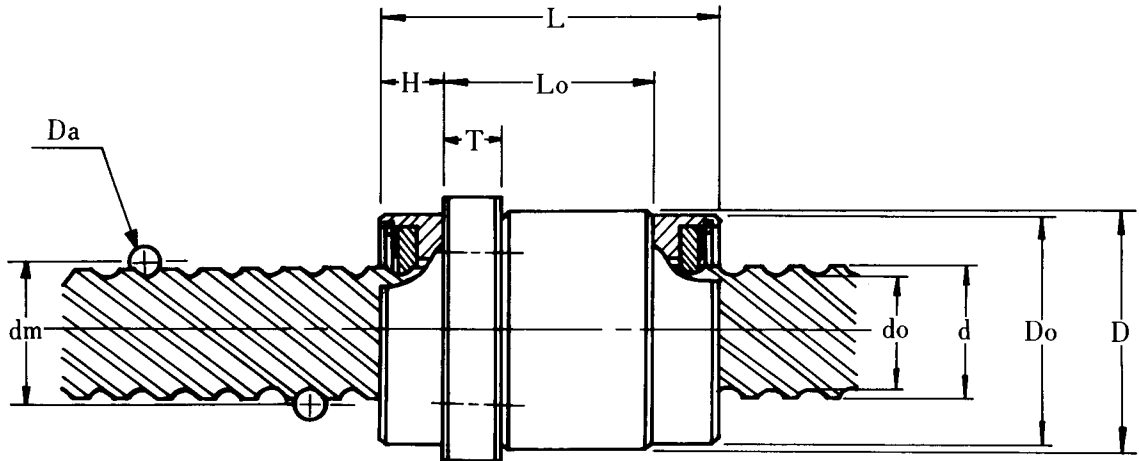


Table 141 : RBSW Series Dimensions Table

Model No.	Lead	d	dm	d <sub>6</sub>	Da	D (h6)	D <sub>6</sub>	Df	Major
									P.C.D.
<b>RBSW1632</b>	32	16	16.952	13.4	1/8"	35 $_{-0.016}^0$	34.2	56	44
<b>RBSW2040</b>	40	20	21.190	17.6	1/8"	40 $_{-0.016}^0$	39.2	62	50
<b>RBSW2550</b>	50	25	26.488	22.2	5/32"	50 $_{-0.016}^0$	49	76	62
<b>RBSW3264</b>	64	32	33.904	28.8	3/16"	60 $_{-0.019}^0$	59	94	76



Units : mm

Dimensions (mm)						Number of Ball Circuits	Basic Load Ratings		Weight (kgf)	
S	L	T	H	$L_o$	K		C (kgf)	$C_o$ (kgf)	Nut	Screw Shaft/m
4.5	51	10	11.5	28	38	3	582	913	0.33	1.36
5.5	58	10	11.5	35	44	3	672	1212	0.44	2.27
6.6	71	12	14	43	54	3	1020	1933	0.76	3.57
9	85	15	14.5	56	66	3	1534	3190	1.31	5.90