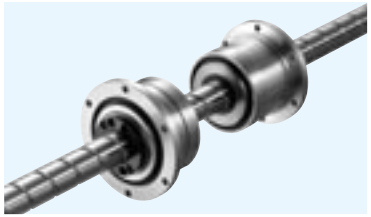
SPBR TYPE

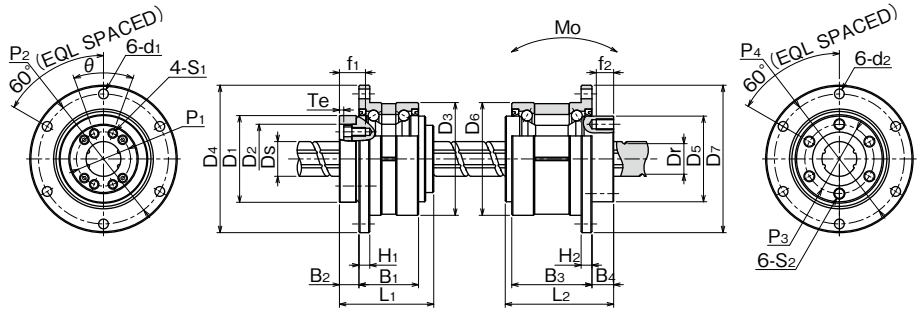


part number structure

example **SPBR 16 - 300 / CU**

- SPBR: SPBR type
- 16: nominal diameter
- 300: ball screw spline shaft total length
- CU: with special specification

Note: retainer material is resin.



ROTARY BALL SCREW NUT

part number	major dimensions										major dimensions of angular contact bearings						
	D_1 h7	tolerance	D_2 H7	tolerance	L_1	P_1 P.C.D.	θ	S_1	f_1	Te	D_3	tolerance	D_4	H_1	B_1	B_2	P_2 P.C.D.	d_1
	mm	μm	mm	μm	mm	mm			mm	mm	mm	μm	mm	mm	mm	mm	mm	mm
SPBR16	40	0 −25	32	+25 0	43.5	25	40°	M4	12	2	52	0 −7	68	5	27.5	9	60	4.5
SPBR20	50		39		54	31	40°	M5	16	2	62		78	6	34	11	70	4.5
SPBR25	58	0/−30	47		65	38	40°	M6	19	3	72		92	8	43	12.5	81	5.5

ball screw spline shaft Ds	lead	root diameter Dr	ball screw basic load rating dynamic Ca	ball screw basic load rating static Coa	angular contact bearings basic load rating dynamic CaR	angular contact bearings basic load rating static CoaR	※ maximum revolutions	moment of inertia for the nut	moment of inertia for the ball screw shaft	mass nut	mass shaft	ball screw nut maximum revolutions based on Dm·N	size
mm	mm	mm	kN	kN	kN	kN	rpm	kg·cm²	kg·cm²/mm	kg	kg/m	rpm	
16	16	13.4	4.62	8.59	11.1	22.2	4,000	0.60	4.43×10^{-4}	0.45	1.47	4,179	16
20	20	17.2	5.77	12.2	14.4	30.5	3,200	1.75	1.12×10^{-3}	0.76	2.33	3,414	20
25	25	21.9	8.62	19.2	18.2	39.8	2,800	3.86	2.74×10^{-3}	1.26	3.65	2,692	25

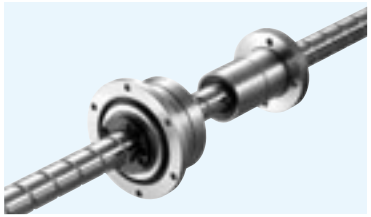
ROTARY BALL SPLINE NUT

part number	major dimensions						major dimensions of angular contact bearings							
	D_5 h7 h7	tolerance	L_2	P_3 P.C.D.	S_2	f_2	D_6	tolerance	D_7	H_2	B_3	B_4	P_4 P.C.D.	d_2
	mm	μm	mm	mm		mm	mm	μm	mm	mm	mm	mm	mm	mm
SPBR16	39.5	0 −25	50	32	M5	8	52	0 −7	68	5	37	10	60	4.5
SPBR20	43.5		63	36	M5	8	56		72	6	48	12	64	4.5
SPBR25	53	0/−30	71	45	M6	8	62		78	6	55	13	70	4.5

ball spline basic torque rating dynamic C_T N·m	ball spline basic torque rating static C_{OT} N·m	ball spline basic load rating dynamic C kN	ball spline basic load rating static Co kN	angular contact bearings basic load rating dynamic C_R kN	angular contact bearings basic load rating static C_{OR} kN	※ maximum revolutions rpm	allowable static moment Mo N·m	moment of inertia kg·cm²	mass nut kg
60	110	6.12	11.2	13.0	12.8	4,000	46	0.63	0.51
105	194	8.9	16.3	17.4	17.2	3,600	110	1.10	0.70
189	346	12.8	23.4	22.1	22.5	3,200	171	2.14	0.91

・Please select the smallest maximum revolutions (rpm) in case that more than one portion rotate at the same time.
※Maximum revolutions for grease lubrication.
・Moment of inertia is calculated excluding the angular contact bearings.

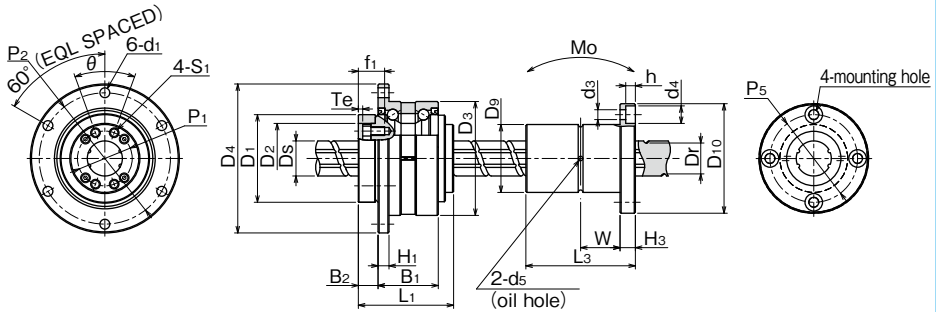
SPBF TYPE



part number structure

example **SPBF 16 - 300 / CU**

- SPBF: SPBF type
- 16: nominal diameter
- 300: ball screw spline shaft total length
- CU: with special specification



ROTARY BALL SCREW NUT

part number	major dimensions											major dimensions of angular contact bearings						
	D1 h7	tolerance	D2 H7	tolerance	L1	P1 P.C.D.	θ	S1	f1	Te		D3	tolerance	D4	H1	B1	B2	P2 P.C.D.	d1
	mm	μm	mm	μm	mm	mm			mm	mm		mm	μm	mm	mm	mm	mm	mm	mm
SPBF16	40	0 −25	32	+25 0	43.5	25	40°	M4	12	2		52	0 −7	68	5	27.5	9	60	4.5
SPBF20	50		39		54	31	40°	M5	16	2		62		78	6	34	11	70	4.5
SPBF25	58	0/−30	47		65	38	40°	M6	19	3		72		92	8	43	12.5	81	5.5

ball screw spline shaft Ds	lead	root diameter Dr	ball screw basic load rating dynamic Ca	ball screw basic load rating static Coa	angular contact bearings basic load rating dynamic CaR	angular contact bearings basic load rating static CoaR	※ maximum revolutions	moment of inertia for the nut	moment of inertia for the ball screw shaft	mass nut	mass shaft	ball screw nut maximum revolutions based on Dm·N	size
mm	mm	mm	kN	kN	kN	kN	rpm	kg·cm²	kg·cm²/mm	kg	kg/m	rpm	
16	16	13.4	4.62	8.59	11.1	22.2	4,000	0.60	4.43×10^{-4}	0.45	1.47	4,179	16
20	20	17.2	5.77	12.2	14.4	30.5	3,200	1.75	1.12×10^{-3}	0.76	2.33	3,414	20
25	25	21.9	8.62	19.2	18.2	39.8	2,800	3.86	2.74×10^{-3}	1.26	3.65	2,692	25

ROTARY BALL SPLINE NUT

part number	major dimensions								basic torque rating		basic load rating		allowable	moment of	mass
	D9 h6	tolerance	L3	tolerance	D10	H3	P5 P.C.D.	d3×d4×h	dynamic CT	static COT	dynamic C	static Co	static moment Mo	inertia	nut
	mm	μm	mm	mm	mm		mm	mm	N·m	N·m	kN	kN	N·m	kg·cm²	kg
SPBF16	31	0 −16	50	0 −0.2	50	7	40	4.5×8×4.4							
SPBF20	35		63		58	9	45	5.5×9.5×5.4							
SPBF25	42		71	0/−0.3	65	9	52	5.5×9.5×5.4							

W	d5	basic torque rating dynamic CT	basic torque rating static COT	basic load rating dynamic C	basic load rating static Co	allowable static moment Mo	moment of inertia	mass nut
mm	mm	N·m	N·m	kN	kN	N·m	kg·cm²	kg
18	2	60	110	6.12	11.2	46	0.52	0.2
22.5	2	105	194	8.9	16.3	110	1.11	0.33
26.5	3	189	346	12.8	23.4	171	2.01	0.45

・Please select the smallest maximum revolutions (rpm) in case that more than one portion rotate at the same time.
※Maximum revolutions for grease lubrication.
・Moment of inertia is calculated excluding the angular contact bearings.