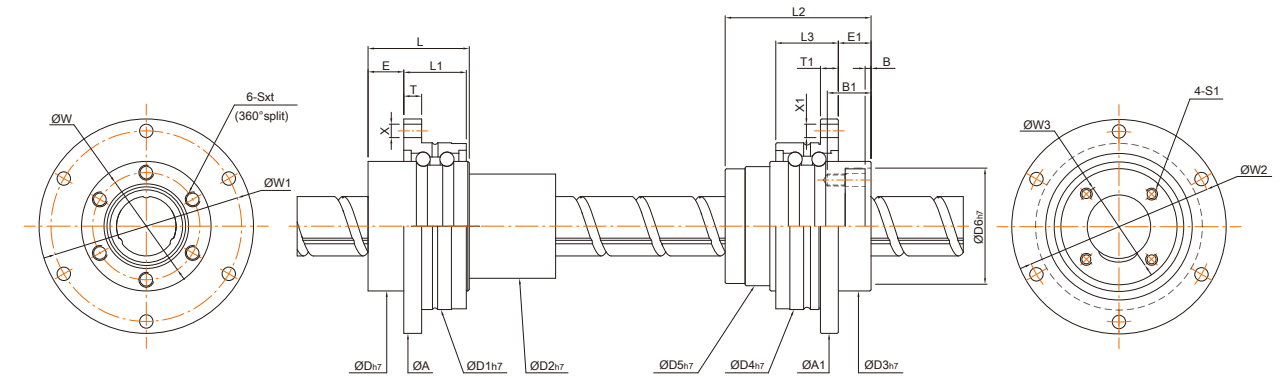
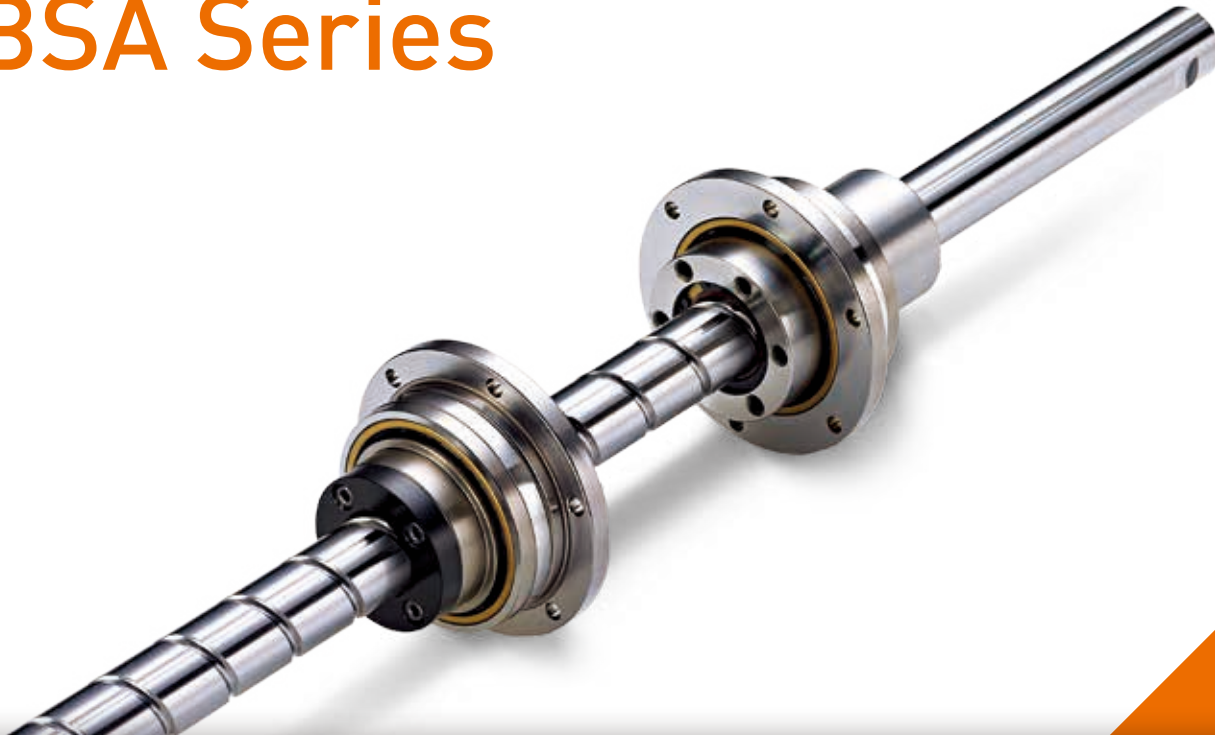


Precision Ball Screw Spline PBSA Series



Precision Ball Screw Spline PBSA Series



The Precision Ball Screw Spline contains Ball Screw grooves and Ball Spline grooves that cross each other on a single shaft. The Precision Ball Screw Spline nut has a special designed support bearing directly set up on the outer ring of the nuts. The Precision Ball Screw Spline is capable of performing three modes of motion (rotational, linear and spiral) with a single shaft by rotating or stopping the spline nut.

Features

► High Positioning Accuracy

The Ball Spline groove profile is designed Gothic arch. By applied preload, the backlash in the rotational direction is eliminated therefore having higher positioning accuracy.

► Lightweight and Compact

Spline nut and the support bearing is integration structure. The Spline nut is designed lightweight. Therefore, the highly accurate and compact design is achieved.

► Simple Installation

The balls recirculation in ball holder, prevent balls falling from the spline nut while assembling.

► Support Bearing

The support bearing of the Ball Screw is designed a contact angle of 45°, thus it has higher axial rigidity, while Ball Spline has a contact angle of 45°, thus it has the average force of axial and radial direction.

► Smooth Motion and Lower Noise

As the Ball Screw is adapting end cap recirculation structure, thus can be smooth motion with lower noise.

Application

► SCARA robot, Assembly robot, Automatic loader, and Machining center's, ATC equipment.

Ball Spline

Shaft diameter	Inner diameter	Basic load rating		Basic torque rating		Static permissible moment MA (N·m)	Nut diameter		L	X	W1	A	D1h7	T	L1	W	S×t	E	Support bearing basic load rating		Mass	
		Ca (kN)	Co (kN)	Ca (N·m)	Co (N·m)		Dh7	D2h7											Ca (kN)	Co (kN)	Nut (kg)	Shaft (kg/m)
16	8	7.6	12.4	31.4	34.3	60	36	31	50	4.5	56	64	48	6	21	30	M4×0.7P×6	10	6.74	6.36	0.33	1.09
20	10	11.2	19.5	56.8	55.8	120	43.5	35	63	4.5	64	72	56	6	21	36	M5×0.8P×8	12	7.49	8.16	0.48	1.76
25	15	15.2	25.3	105	103	180	52	42	71	5.5	75	86	66	7	25	44	M5×0.8P×8	13	9.45	10.65	0.75	2.33

Ball Screw

Screw size			Effective turns Circuit × Row	Basic load rating		Nut diameter D3h7	L2	X1	W2	A1	D4h7	D5h7	D6h7	T1	L3	W3	S1	B	B1	E1	Support bearing basic load rating		Mass	
O.D.	Inner diameter	Lead		Ca (kN)	Co (kN)																Ca (kN)	Co (kN)	Nut (kg)	Shaft (kg/m)
16	8	16	1.8×1	3.8	6.8	36	40	4.5	56	64	48	32	32	6	21	25	M4×0.7P	2.5	13	10	6.74	6.36	0.31	1.09
20	10	20	1.8×1	5.9	12.2	43.5	49	4.5	64	72	56	39	39	6	21	31	M5×0.8P	2	13	11	7.49	8.16	0.48	1.76
25	15	25	1.8×1	8.9	19.1	52	58	5.5	75	86	66	47	47	7	25	38	M6×1P	3	17	13	9.45	10.65	0.66	2.33