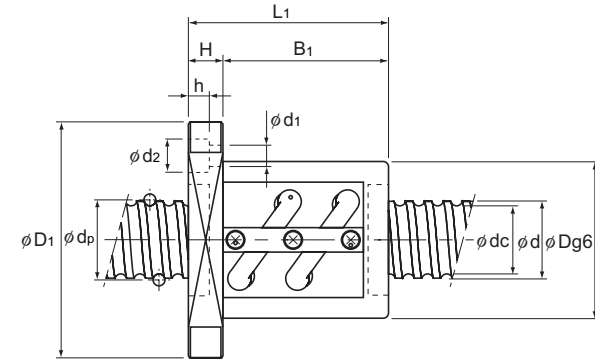
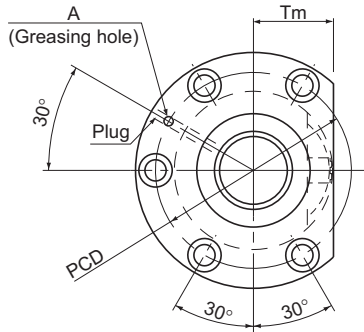


# Model SBN



Unit: mm

Model No.	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating		Rigidity K N/μm	Nut dimensions							Screw shaft inertial moment/mm kg·cm <sup>2</sup> /mm	Nut mass kg	Shaft mass kg/m		
						Ca kN	C <sub>a</sub> kN		Outer diameter D	Flange diameter D <sub>1</sub>	Overall length L <sub>1</sub>	H	B <sub>1</sub>	PCD	d <sub>1</sub> × d <sub>2</sub> × h				Tm	Greasing hole A
○ SBN 3210-7	32	10	33.75	26.4	1×3.5	43	73.1	836.7	74	108	120	15	105	90	9×14×8.5	38	M6	8.08×10 <sup>-3</sup>	3.1	3.6
○ SBN 3212-5	32	12	34	26.1	1×2.5	37.4	58.7	612.2	76	121	117	18	99	98	11×17.5×11	39	M6	8.08×10 <sup>-3</sup>	3.7	3.5
○ SBN 3610-7	36	10	37.75	30.4	1×3.5	45.6	82.3	920.9	77	120	123	18	105	98	11×17.5×11	40	M6	1.29×10 <sup>-2</sup>	3.8	5.0
○ SBN 3612-7	36	12	38	30.1	1×3.5	53.2	92.6	934.5	81	124	140	18	122	102	11×17.5×11	42	M6	1.29×10 <sup>-2</sup>	4.7	4.8
○ SBN 3616-5	36	16	38	30.1	1×2.5	39.7	66.4	676	81	124	140	18	122	102	11×17.5×11	42	M6	1.29×10 <sup>-2</sup>	4.7	5.6
○ SBN 4012-5	40	12	42	34.1	1×2.5	42	73.6	735.4	84	126	119	18	101	104	11×17.5×11	43	M6	1.97×10 <sup>-2</sup>	4.2	6.4
○ SBN 4016-5	40	16	42	34.1	1×2.5	41.9	73.8	736.6	84	126	144	18	126	104	11×17.5×11	43	M6	1.97×10 <sup>-2</sup>	4.9	7.3
○ SBN 4512-5	45	12	47	39.2	1×2.5	44.4	82.9	809.1	90	130	119	18	101	110	11×17.5×11	46	PT 1/8	3.16×10 <sup>-2</sup>	4.6	8.6
○ SBN 4516-5	45	16	47	39.2	1×2.5	44.3	83.1	810.1	90	130	140	18	122	110	11×17.5×11	46	PT 1/8	3.16×10 <sup>-2</sup>	5.3	9.6
○ SBN 5012-5	50	12	52	44.1	1×2.5	46.6	92.2	880.9	95	141	119	22	97	117	14×20×13	48	PT 1/8	4.82×10 <sup>-2</sup>	5.3	11.1
○ SBN 5016-5	50	16	52	44.1	1×2.5	46.6	92.4	881.7	95	141	143	22	121	117	14×20×13	48	PT 1/8	4.82×10 <sup>-2</sup>	6.1	12.2
○ SBN 5020-5	50	20	52	44.1	1×2.5	46.5	92.6	882.8	95	141	169	22	147	117	14×20×13	48	PT 1/8	4.82×10 <sup>-2</sup>	7.0	12.8

Note) With model SBN, the raising of both ends of the thread groove is not available. When designing your system this way, contact THK.  
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring. For dimensions of the ball screw nut with either accessory being attached, see B-778.

### Model number coding

**SBN4012-5 RR GO +1400L C5**

Model number | Seal symbol (\*1) | Overall screw shaft length (in mm) | Clearance in the axial direction (GO for all SBN variations) (\*2) | Accuracy symbol (\*3)

(\*1) See A-816. (\*2) See A-685. (\*3) See A-678.

Note) The rigidity values in the table represent the spring constants obtained from the load and the elastic deformation when providing a preload 10% of the basic dynamic load rating (Ca) and applying an axial load three times greater than the preload.

These values do not include the rigidity of the components related to mounting the ball screw nut. Therefore, it is normally appropriate to regard roughly 80% of the value in the table as the actual value.  
If the applied preload (Fa<sub>0</sub>) is not 0.1 Ca, the rigidity value (K<sub>N</sub>) is obtained from the following equation.

$$K_N = K \left( \frac{Fa_0}{0.1Ca} \right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table.