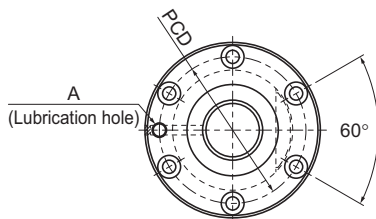


# SBN-V Small With Preload

DN value	130000
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Model No.	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating		Rigidity K N/μm
						Ca kN	C <sub>0a</sub> kN	
SBN 1604V-5	16	4	16.5	13.8	1×2.5	5.3	8	281
SBN 1605V-5	16	5	16.75	13.2	1×2.5	9.2	12.9	309
SBN 2004V-5	20	4	20.5	17.8	1×2.5	5.9	10.1	335
SBN 2005V-5	20	5	20.75	17.2	1×2.5	10.3	16.2	370
SBN 2010V-5	20	10	20.75	17.2	1×2.5	10.2	16.4	362
SBN 2504V-5	25	4	25.5	22.8	1×2.5	6.4	12.7	400
SBN 2505V-5	25	5	25.75	22.2	1×2.5	11.3	20.3	442
SBN 2506V-5	25	6	26	21.4	1×2.5	15.4	25.4	457
SBN 2805V-5	28	5	28.75	25.2	1×2.5	11.8	22.8	483
SBN 3205V-5	32	5	32.75	29.2	1×2.5	12.6	26.1	536
SBN 3206V-5	32	6	33	28.4	1×2.5	17.2	32.7	555

## Model number coding

**SBN1604V-5 QZ RR G0 +1200L C5**

Model No.

Contamination protection accessory symbol (\*1)

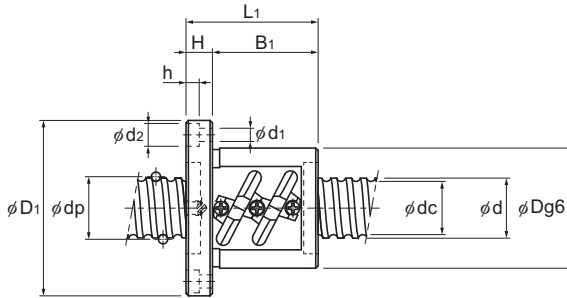
Accuracy symbol (\*2)

Overall screw shaft length (in mm)

With QZ lubricator  
(No code without QZ lubricator)

Symbol for Clearance in the axial direction  
(G0 for all SBN-V variations)

(\*1) See [A15-334](#). (\*2) See [A15-12](#).



Unit: mm

	Nut dimensions								Screw shaft inertial moment/mm kg·m <sup>2</sup> /mm	Nut mass kg	Shaft mass kg/m	Permissible rotational speed min <sup>-1</sup>
	Outer diameter	Flange diameter	Overall length	H	B <sub>1</sub>	PCD	d <sub>1</sub> × d <sub>2</sub> × h	Lubrication hole				
	Dg6	D <sub>1</sub>	L <sub>1</sub>				A					
	36	59	53	11	42	47	5.5 × 9.5 × 5.5	M6	5.05 × 10 <sup>-8</sup>	0.42	1.42	5000
	40	60	56	10	46	50	4.5 × 8 × 4.5	M6	5.05 × 10 <sup>-8</sup>	0.5	1.37	5000
	40	63	49	11	38	51	5.5 × 9.5 × 5.5	M6	1.23 × 10 <sup>-7</sup>	0.43	2.22	5000
	44	67	56	11	45	55	5.5 × 9.5 × 5.5	M6	1.23 × 10 <sup>-7</sup>	0.61	2.6	5000
	46	74	90	15	75	59	5.5 × 9.5 × 5.5	M6	1.23 × 10 <sup>-7</sup>	1.06	2.33	5000
	46	69	48	11	37	57	5.5 × 9.5 × 5.5	M6	3.01 × 10 <sup>-7</sup>	0.55	3.6	5000
	50	73	55	11	44	61	5.5 × 9.5 × 5.5	M6	3.01 × 10 <sup>-7</sup>	0.72	3.52	5000
	53	76	62	11	51	64	5.5 × 9.5 × 5.5	M6	3.01 × 10 <sup>-7</sup>	0.9	3.43	5000
	55	85	59	12	47	69	6.6 × 11 × 6.5	M6	4.74 × 10 <sup>-7</sup>	0.98	4.45	4520
	58	85	56	12	44	71	6.6 × 11 × 6.5	M6	8.08 × 10 <sup>-7</sup>	0.96	5.88	3960
	62	89	63	12	51	75	6.6 × 11 × 6.5	M6	8.08 × 10 <sup>-7</sup>	1.22	5.89	3930

Axial Clearance

Unit: mm

Clearance symbol	G0
Axial Clearance	0 or less

Note) The overall length of the nut will increase when equipping the QZ lubricating device. See **A15-344** for further details. It is not possible to chamfer both ends of the screw shaft. When designing your system this way, contact THK.

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

$$K_N = K \left( \frac{F_{a0}}{0.1C_a} \right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table