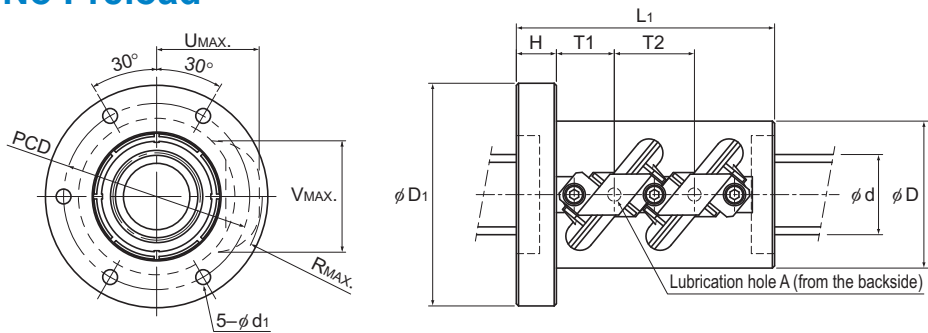


HBN
No Preload

DN value	130,000
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Models HBN3210 to 3612

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		Permissible load ¹ F _P kN	Rigidity K N/μm
						Ca kN	C ₀ a kN		
HBN 3210-5	32	10	34	26	2×2.5	102.9	191.3	31.9	1,077
HBN 3610-5	36	10	38	30	2×2.5	108.2	220.4	33.5	1,176
HBN 3612-5	36	12	38.4	29	2×2.5	141.1	267.7	43.7	1,207
HBN 4010-7.5	40	10	42	34	3×2.5	162.6	366	50.4	1,910
HBN 4012-7.5	40	12	42.4	33	3×2.5	212.4	441.6	65.8	1,922
HBN 5010-7.5	50	10	52	44	3×2.5	179.1	462.7	55.5	2,279
HBN 5012-7.5	50	12	52.4	43	3×2.5	235.7	572.2	73.1	2,345
HBN 5016-7.5	50	16	53	39.6	3×2.5	379.6	820.9	117.7	2,392
HBN 6316-7.5	63	16	66	52.6	3×2.5	427.1	1,043.8	132.4	2,898
HBN 6316-10.5	63	16	66	52.6	3×3.5	577.1	1,461.3	178.9	4,029
HBN 6320-7.5	63	20	66.5	49.6	3×2.5	578.8	1,283.1	179.4	3,030

¹ The permissible load F_P indicates the maximum axial load that the ball screw can receive.
Notes: This model is capable of achieving a longer service life than the conventional ball screw under a high load.

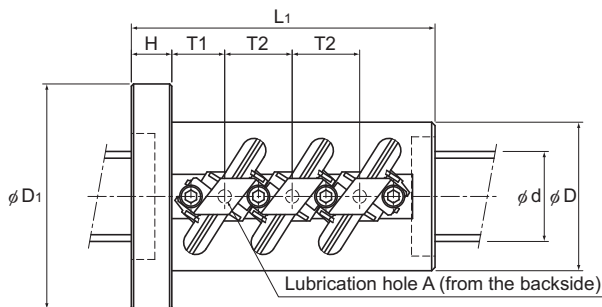
Axial Clearance		Unit: mm
Clearance symbol	G2	
Axial clearance	0 to 0.02	

Model number coding

HBN3210-5 RR G2 +1200L C7

Model number Seal symbol¹ Overall screw shaft length (in mm) Accuracy symbol²

Symbol for clearance in the axial direction
(For the axial clearance, this model has clearance G2 as standard.
Other clearance is also available at your request. Contact THK for details.)



Models HBN4010 to 6320

Unit: mm

	Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass	Permissible rotational speed
	Outer diameter D	Flange diameter D ₁	Overall length L ₁	H	PCD	d _i	T1	T2	U _{MAX}	V _{MAX}	R _{MAX}	Lubrication hole A				
	58	85	98	15	71	6.6	22	30	43	46	43.5	M6	8.08×10 ⁻⁷	1.8	5.26	3,820
	62	89	98	15	75	6.6	22	30	45	50	46	M6	1.29×10 ⁻⁶	1.9	6.79	3,420
	66	100	116	18	82	9	26	36	49	52.5	50	M6	1.29×10 ⁻⁶	2.8	6.55	3,380
	66	100	135	18	82	9	23.5	30	46.5	54	48	M6	1.97×10 ⁻⁶	2.9	8.52	3,090
	70	104	152	18	86	9	26	36	51	56	52	M6	1.97×10 ⁻⁶	3.7	5.24	3,060
	78	112	135	18	94	9	23.5	30	52	63.5	54.5	M6	4.82×10 ⁻⁶	3.7	13.7	2,500
	80	114	152	18	96	9	26	36	56	66	58.5	M6	4.82×10 ⁻⁶	4.4	13.34	2,480
	95	135	211	28	113	9	37.5	48	64.5	69.6	65.2	Rc1/8 (PT1/8)	4.82×10 ⁻⁶	10.0	12.1	2,450
	105	139	211	28	122	9	37.5	48	70.5	82	72.5		1.21×10 ⁻⁵	10.6	20.2	1,960
	105	139	259	28	122	9	53.5	64	70.5	82	73		1.21×10 ⁻⁵	17.4	20.2	1,960
	117	157	252	32	137	11	44	60	79	86.5	80		1.21×10 ⁻⁵	17.2	19.13	1,950

Ball Screw

The rigidity values in the table represent spring constants, each obtained from the load and the elastic deformation under an axial load equal to 30% of the basic axial dynamic load rating (Ca).

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 axial load (Fa) is not 30% of Ca, the rigidity value (K_n) is obtained from the following equation.

$$K_n = K \left(\frac{F_a}{0.3C_a} \right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table