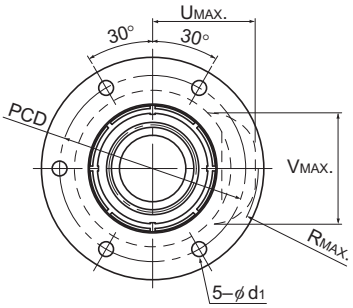
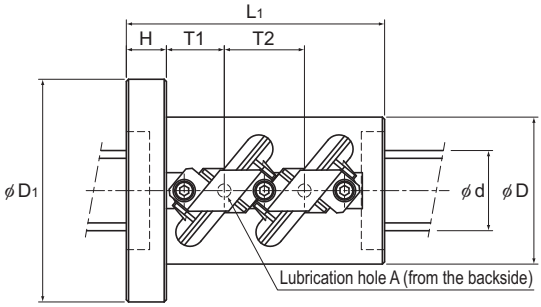
HBN
No Preload

DN value	130,000





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 × turns	Basic load rating Ca kN	Basic load rating C0a kN	Permissible load[1] FP kN	Rigidity K N/μm
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.
Certain precautions are necessary regarding the assembly method. (See **A15-244**.)
For high-load ball screws, the standard maximum length of the screw shaft is 3,000 mm. For lengths greater than this, please contact THK.

Axial Clearance

Unit: mm

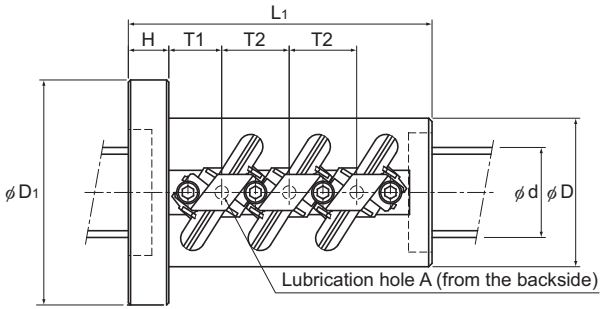
Clearance symbol	G2
Axial clearance	0 to 0.02

Model number coding

HBN3210-5 RR G2 +1200L C7

- HBN3210-5: Model number
- RR: Seal symbol[1]
- G2: 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.)
- +1200L: Overall screw shaft length (in mm)
- C7: Accuracy symbol[2]

[1] See **A15-356**. [2] See **A15-12**.



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_1	T1	T2	U_{MAX}	V_{MAX}	R_{MAX}	Lubrication hole A	$kg \cdot m^2/mm$	kg	kg/m	min^{-1}
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

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.

$$K_N = K \left(\frac{Fa}{0.3Ca} \right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table

Options⇒A15-355