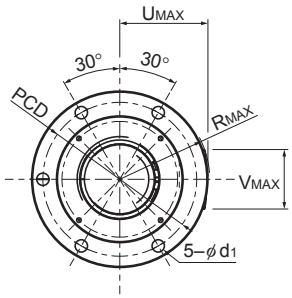
HBN-V
No Preload

DN value	160,000



Model No.	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Permissible load[1]	Rigidity
						Ca	C0a	FP	K
	d	Ph	dp	dc	Rows × turns	kN	kN	kN	N/μm
HBN5010V-7.5	50	10	52	44	3×2.5	189	506	71	1,977
HBN5012V-7.5	50	12	52.4	43.2	3×2.5	250	624	87	2,056
HBN5016V-7.5	50	16	53	39.6	3×2.5	410	902	126	2,516
HBN6316V-7.5	63	16	66	52.6	3×2.5	459	1,134	159	3,010
HBN6316V-10.5	63	16	66	52.6	3×3.5	598	1,544	216	4,040
HBN6320V-7.5	63	20	66.5	49.8	3×2.5	613	1,410	197	3,098
HBN6325V-10.5	63	25	66.5	49.8	3×3.5	797	1,920	269	4,154
HBN8016V-7.5	80	16	83	70.2	3×2.5	510	1,440	202	3,626
HBN8016V-10.5	80	16	83	70.2	3×3.5	668	1,970	276	4,888
HBN8020V-7.5	80	20	83.5	66.8	3×2.5	688	1,787	250	3,730
HBN8020V-10.5	80	20	83.5	66.8	3×3.5	899	2,442	342	5,022
HBN8025V-7.5	80	25	84	63.6	3×2.5	872	2,135	299	3,819
HBN8025V-10.5	80	25	84	63.6	3×3.5	1,139	2,912	408	5,133

[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

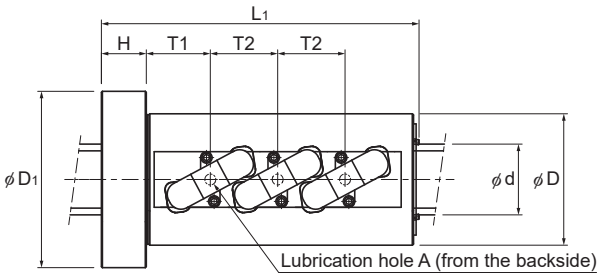
Unit: mm

Clearance symbol	G2
Axial clearance	0 to 0.02

Model number coding

HBN6320V-7.5 RR G2 +1400L C7

- HBN6320V-7.5: 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.)
- +1400L: Overall screw shaft length (in mm)
- C7: Accuracy symbol[2]



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}
75	109	143	18	92	9	31	30	50	48	52	M6	4.82×10^{-6}	3.0	13.7	3,070
80	114	163	18	96	9	35	36	54	48	55	M6	4.82×10^{-6}	4.0	13.4	3,050
95	129	213	28	112	9	43	48	64	48	65	Rc1/8 (PT1/8)	4.82×10^{-6}	8.7	12.1	3,010
105	139	213	28	122	9	43	48	71	57	71.5		1.21×10^{-5}	9.4	20.2	2,420
105	139	261	28	122	9	59	64	71	57	71.5		1.21×10^{-5}	11.4	20.2	2,420
117	157	257	32	137	11	51	60	78	57	79		1.21×10^{-5}	15.5	19.1	2,400
117	157	377	32	137	11	83.5	100	78	57	79		1.21×10^{-5}	22.4	25.2	2,400
120	154	219	32	137	9	43	48	79	70	80		3.16×10^{-5}	10.9	33.9	1,920
120	154	267	32	137	9	59	64	79	70	80		3.16×10^{-5}	13.2	33.9	1,920
130	170	257	32	150	11	50	60	86	69	87		3.16×10^{-5}	16.7	32.5	1,910
130	170	317	32	150	11	70	80	86	69	87		3.16×10^{-5}	20.5	32.5	1,910
145	185	315	40	165	11	60	75	95	68	95		3.16×10^{-5}	27.9	31.4	1,900
145	185	391	40	165	11	85.5	100	95	69	96		3.16×10^{-5}	34.4	31.4	1,900

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