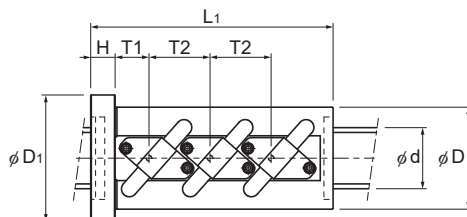
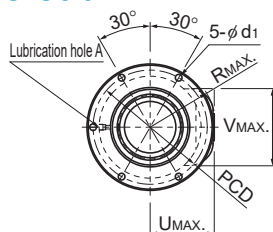


HBN-K and HBN-KA No Preload

DN value	120,000
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Models HBN10016K to 10025K

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	Threads	Basic load rating		Permissible load ¹ F _P kN	Rigidity K N/μm
							Ca kN	C _{0a} kN		
HBN10016K-10	100	16	103	89.6	4×2.5	1	673	2,244	314	5,619
HBN10016KA-10	100	16	103	89.6	4×2.5	1	673	2,244	314	5,619
HBN10020K-7.5	100	20	103.5	86.6	3×2.5	1	717	2,107	295	4,432
HBN10020KA-7.5	100	20	103.5	86.6	3×2.5	1	717	2,107	295	4,432
HBN10020K-10	100	20	103.5	86.6	4×2.5	1	919	2,810	393	5,830
HBN10020KA-10	100	20	103.5	86.6	4×2.5	1	919	2,810	393	5,830
HBN10020K-12.5	100	20	103.5	86.6	5×2.5	1	1,114	3,512	491	7,212
HBN10020KA-12.5	100	20	103.5	86.6	5×2.5	1	1,114	3,512	491	7,212
HBN10020K-7	100	20	103.5	86.6	2×3.5	1	674	1,956	273	4,129
HBN10020KA-7	100	20	103.5	86.6	2×3.5	1	674	1,956	273	4,129
HBN10020K-10.5	100	20	103.5	86.6	3×3.5	1	955	2,934	410	6,077
HBN10020KA-10.5	100	20	103.5	86.6	3×3.5	1	955	2,934	410	6,077
HBN10025K-7.5	100	25	104	83.6	3×2.5	1	921	2,532	354	4,565
HBN10025KA-7.5	100	25	104	83.6	3×2.5	1	921	2,532	354	4,565
HBN10025K-10	100	25	104	83.6	4×2.5	1	1,180	3,376	472	6,005
HBN10025KA-10	100	25	104	83.6	4×2.5	1	1,180	3,376	472	6,005
HBN10025K-12.5	100	25	104	83.6	5×2.5	1	1,429	4,220	590	7,429
HBN10025KA-12.5	100	25	104	83.6	5×2.5	1	1,429	4,220	590	7,429
HBN10025K-7	100	25	104	83.6	2×3.5	1	866	2,355	329	4,261
HBN10025KA-7	100	25	104	83.6	2×3.5	1	866	2,355	329	4,261
HBN10025K-10.5	100	25	104	83.6	3×3.5	1	1,227	3,533	494	6,273
HBN10025KA-10.5	100	25	104	83.6	3×3.5	1	1,227	3,533	494	6,273
HBN10025K-14	100	25	104	83.6	4×3.5	1	1,572	4,711	659	8,252
HBN10025KA-14	100	25	104	83.6	4×3.5	1	1,572	4,711	659	8,252

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

HBN10016K-10 RR G2 +1200L C7

Model number

Seal symbol¹Accuracy symbol²

Symbol for clearance in the axial direction

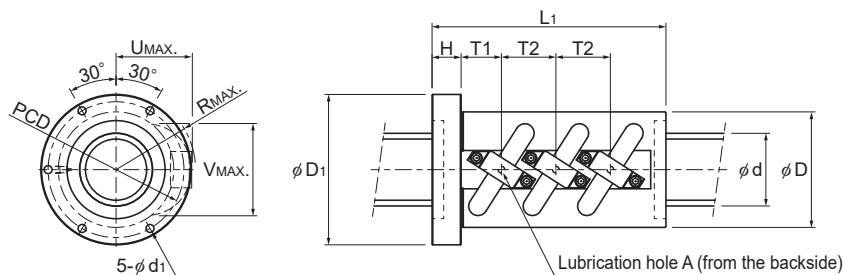
(For the axial clearance, this model has clearance G2 as standard.

Other clearance is also available at your request. Contact THK for details.)

Overall screw shaft length (in mm)

¹ See **A15-356**. ² See **A15-12**.

High-Thrust Ball Screw



Models HBN10016KA to 10025KA

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	T ₁	T ₂	U _{MAX}	V _{MAX}	R _{MAX}	Lubrication hole A	kg·m ² /mm	kg	kg/m	min ⁻¹
150	190	263	32	170	11	37.5	48	92	119	98.5	Rc1/8 (PT1/8)	7.71×10^{-5}	18.1	61	1,160
145	190	263	32	170	11	37.5	48	92	119	98.5		7.71×10^{-5}	16.3	61	1,160
154	194	252	32	174	11	44	60	96	123	101		7.71×10^{-5}	18.9	61	1,150
145	194	252	32	174	11	44	60	96	123	101		7.71×10^{-5}	15.6	61	1,150
154	194	312	32	174	11	44	60	96	123	101		7.71×10^{-5}	23.4	61	1,150
145	194	312	32	174	11	44	60	96	123	101		7.71×10^{-5}	19.2	61	1,150
154	194	372	32	174	11	44	60	96	123	101		7.71×10^{-5}	27.9	61	1,150
145	194	372	32	174	11	44	60	96	123	101		7.71×10^{-5}	22.8	61	1,150
154	194	232	32	174	11	44	80	97	128	105		7.71×10^{-5}	23.4	61	1,150
145	194	232	32	174	11	44	80	97	128	105		7.71×10^{-5}	20.5	61	1,150
154	194	312	32	174	11	44	80	97	128	105		7.71×10^{-5}	29.4	61	1,150
145	194	312	32	174	11	44	80	97	128	105		7.71×10^{-5}	25.3	61	1,150
167	207	322	40	187	11	55.5	75	105	127	109.5		7.71×10^{-5}	32	61	1,150
159	207	322	40	187	11	55.5	75	105	127	109.5		7.71×10^{-5}	28.2	61	1,150
167	207	397	40	187	11	55.5	75	105	127	109.5		7.71×10^{-5}	39.4	61	1,150
159	207	397	40	187	11	55.5	75	105	127	109.5		7.71×10^{-5}	34.5	61	1,150
167	207	472	40	187	11	55.5	75	105	127	109.5		7.71×10^{-5}	46.9	61	1,150
159	207	472	40	187	11	55.5	75	105	127	109.5		7.71×10^{-5}	41	61	1,150
167	207	297	40	187	11	55.5	100	105	127	109.5		7.71×10^{-5}	29.5	61	1,150
159	207	297	40	187	11	55.5	100	105	127	109.5		7.71×10^{-5}	26.3	61	1,150
167	207	397	40	187	11	55.5	100	105	127	109.5		7.71×10^{-5}	39.4	61	1,150
159	207	397	40	187	11	55.5	100	105	127	109.5		7.71×10^{-5}	34.8	61	1,150
167	207	497	40	187	11	55.5	100	105	127	109.5		7.71×10^{-5}	49.3	61	1,150
159	207	497	40	187	11	55.5	100	105	127	109.5		7.71×10^{-5}	43.3	61	1,150

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