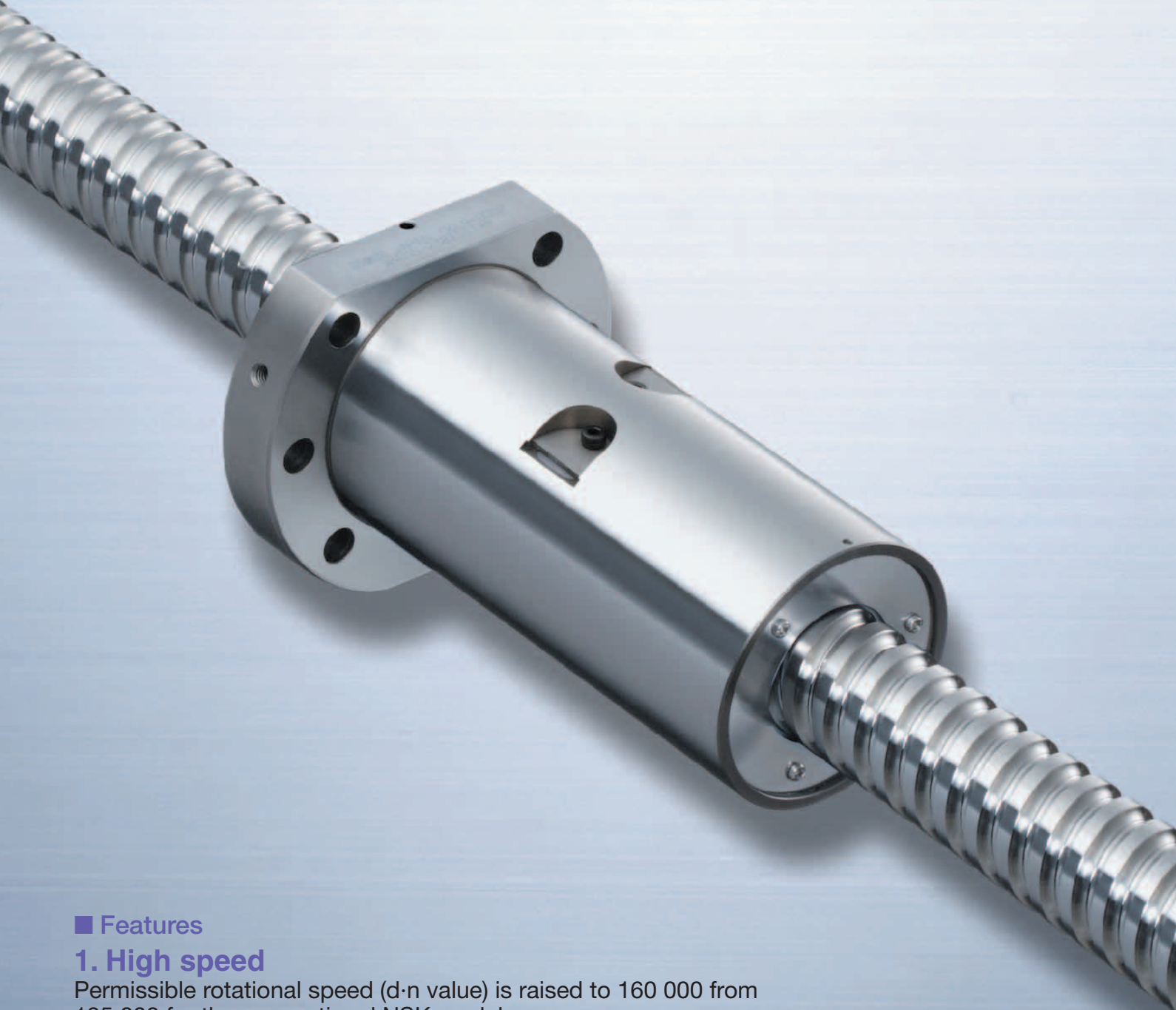


# New HMC Series

Ball Screws for High-Speed Machine Tools

**New!**

Upgraded version of the well-received HMC Series with a new ball circulation method that further enhances high-speed capability and reduces noise.



## ■ Features

### 1. High speed

Permissible rotational speed (d·n value) is raised to 160 000 from 135 000 for the conventional NSK model.

### 2. Low noise

New ball circulation method reduces noise level by at least 5 dB compared with the conventional NSK model.

# New HMC Series Ball Screws for High-Speed Machine Tools

## ■ Screw specifications

- Accuracy grade and axial play  
Compliant with JIS C3 and C5.  
Axial play is zero (offset preload).  
Please consult with NSK for specifications other than those shown above.
- Seal  
High-performance seals are featured as standard.
- Nut mounting dimensions  
Nut diameters are the same as the HMC Series (for high-speed machine tools). Please refer to Table 2 for specifications and dimensions.

## ■ Optional specification

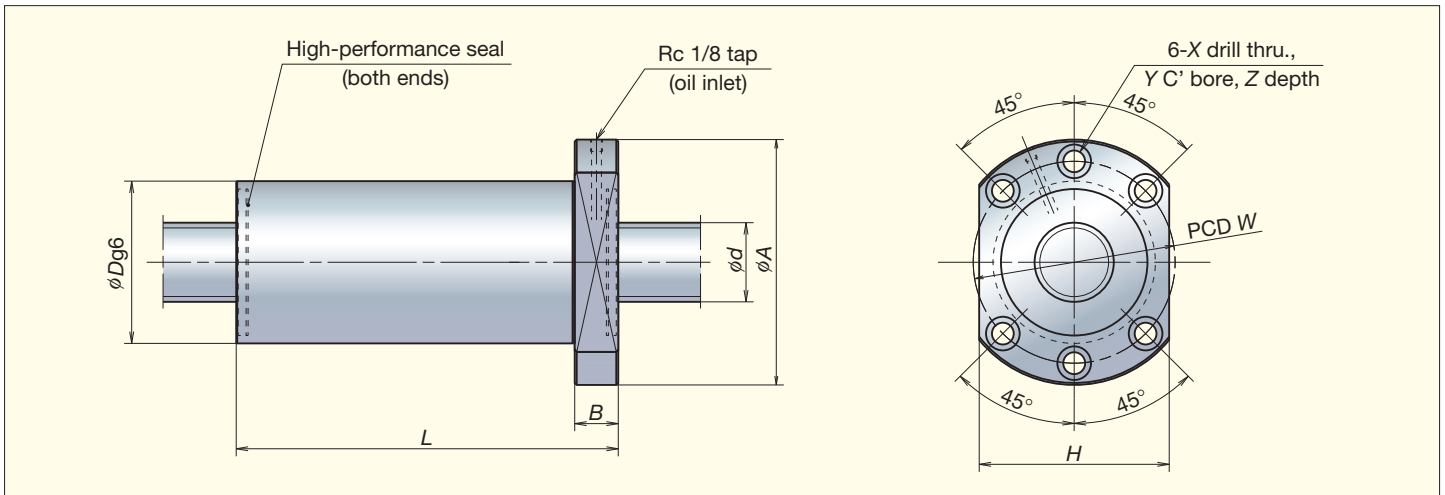
Hollow shaft ball screw for forced cooling is available as an option.

## ■ Maximum feeding speed

New ball circulation method significantly increases permissible rotational speed (d·n value). The d·n value is raised to 160 000 from 135 000 for the conventional NSK model.  
Maximum feeding speed is 120 m/min (for EM4030-6E).  
Please refer to Table 1 for more detailed information.

**Table 1 Maximum feeding speed**

Shaft diameter (mm)	Lead (mm)	Unit: m/min		
		20	25	30
40	80	80	100	120
45	71	71	89	—
50	64	64	80	96



**Table 2 Nut dimensions**

Nut model number	Main specifications		Basic load rating (N)			Rigidity (N/μm)	External dimensions					Mounting hole dimensions			
	Shaft diameter d	Lead	C <sub>a</sub>	C <sub>oa</sub>	5% C <sub>a</sub>		D	A	H	B	L	W	X	Y	Z
EM4020-6E	40	20	66 900	165 000	1 340	86	128	96	18	150	106	11	17.5	11	
EM4025-6E		25	79 100	191 000	1 370					182					
EM4030-6E		30	79 100	191 000	1 350					213					
EM4520-6E	45	20	69 100	186 000	1 470	92	134	102	18	150	112	11	17.5	11	
EM4525-6E		25	82 500	213 000	1 510					182					
EM5020-6E	50	20	73 200	206 000	1 600	98	140	107	18	150	118	11	17.5	11	
EM5025-6E		25	85 600	235 000	1 620					182					
EM5030-6E		30	85 600	235 000	1 630					213					

Remarks: 1. All ball screws have a right-hand thread. 2. Rigidity value is based on applying preload of 5% of load rating C<sub>a</sub>.

**Precaution:** Operating temperature range—Maximum operating temperature is 70°C

For more information about NSK products, please contact: [www.nsk.com](http://www.nsk.com)



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