

Ball screw for high speed machine tools

HMD series

New ball recirculation system achieves
dramatically low noise and high speed

NEW



■ Features

1. High Speed

Max. speed ($d \cdot n$ value) improved from 135K to 160K
(compared to NSK conventional models)

2. Low noise

Noise level decreased by over 5dB
(compared to NSK conventional models)

HMD series for high speed speed machine tools

Ball screw specifications

- Accuracy class, clearance

Class C3 and C5 available.

Axial clearance 0 (offset preload) available.

※ Consult NSK for other specifications.

- Seal

Standard product is equipped with storage seal

- Nut mounting dimensions

Nut diameter is the same as conventional HMC series

Please refer to table 2 for details.

Optional features

Hollow shaft for cooling is available as an option.

Maximum speed

Thanks to the new ball recirculation method, maximum speed (d·n value) has increased dramatically.

Conventional HMC; 135K, New HMD; 160K

Max. speed 120m/min (with EM4030-6E ball screw)

See table 1 for details.

Table 1 Max. speed

Unit: m/min

Shaft dia [mm]	Lead [mm]	20	25	30
40		80	100	120
45		71	88	—
50		64	80	96

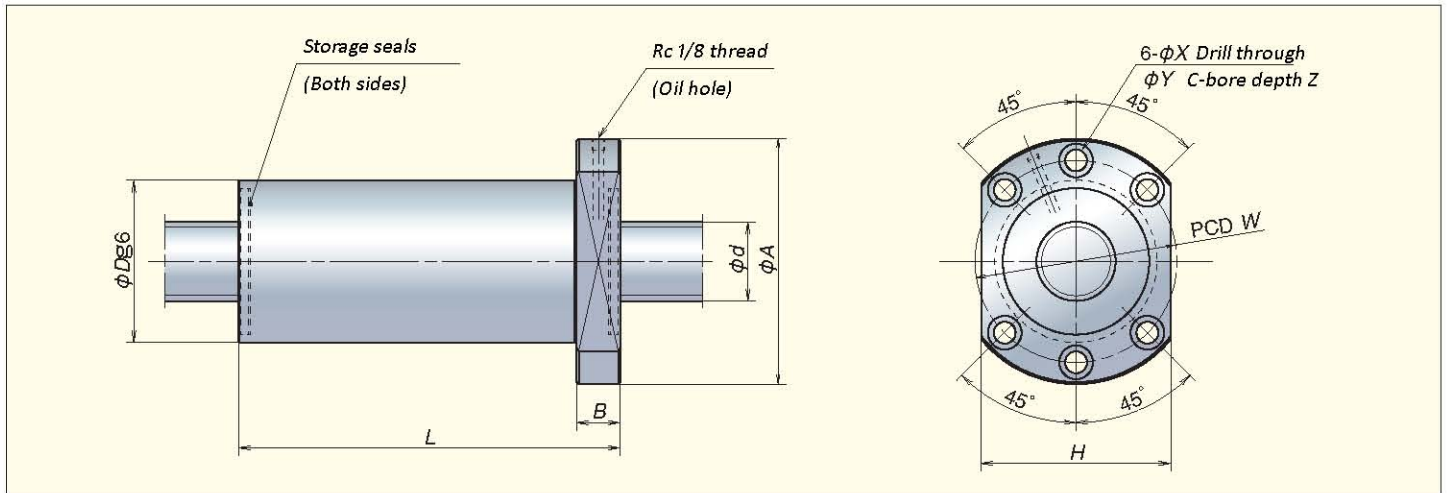


Table 2 Nut dimensions

Unit : mm

Model number	Spec		Basic load rating [N]			Rigidity [N/ μ m]	Outer Dimensions					Mounting hole dimensions			
	Shaft dia d	Lead	C_a	C_{oa}	$5\%C_a$		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					

Notes; Right hand screw is standard. Rigidity values shown are with preload which is 5% of C_a .

Important : Operating maximum temperature 70 °C

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