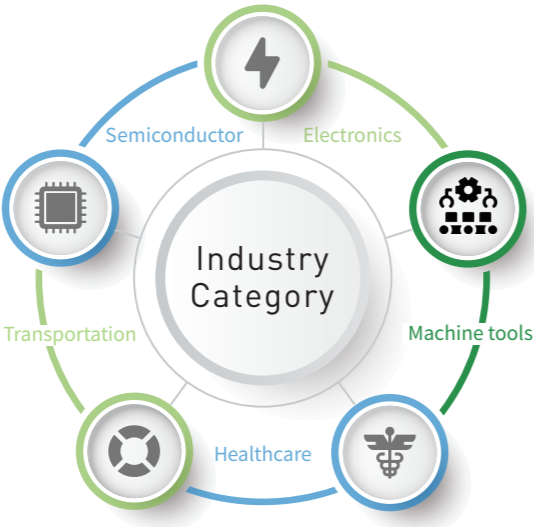


Applications

5-axis machining centers  
Turning & milling machines  
Various machine tools.

IM-1-		083	106	135	160
Max. speed under water cooling condition		50,000 rpm	40,000 rpm	24,000 rpm	12,000 rpm
Applicable spindle		#110 - #130	#140 - #160	#170 - #190	#200 - #220
Spindle	Turning	-	○	○	○
	Milling	○	○	○	○
	Grinding	○	○	○	○
	Drilling	○	○	○	-



Model Numbers for IM-1 Series

IM-1 - 135 CA - B 20 - M 1 0 - 0

External diameter of stator  
083 : 083 mm (Coming soon)  
106 : 106 mm  
135 : 135 mm  
160 : 160 mm (Coming soon)

Height of stator  
BA : 50 mm  
CA : 100 mm  
DA : 150 mm  
EA : 200 mm  
FA : 250 mm

Number of poles  
A : 2  
B : 4  
C : 6  
D : 8  
E : 10

Rated power\*1  
06 : 5.1~6 kW  
11 : 10.1~11 kW  
20 : 19.1~20 kW  
30 : 29.1~30 kW

Stator type  
0 : Without cooling jacket  
1 : With cooling jacket

Temperature sensor  
0 : PTC130+PTC150+Pt1000  
1 : PTC130+PTC150+Pt1000×3

Motor power cable length  
0: 500 mm  
1: 1000 mm  
2: 2000 mm

Motor voltage  
S : 220 V  
M : 380 V

Note: \* 1. Number can be used from 1~99.  
2. HIWIN can also customize a product to your specifications. Please contact HIWIN with your unique requirements.

HIWIN® MIKROSYSTEM



IM-1 Series

Permanent Magnet  
Synchronous Spindle Motor

HIWIN® MIKROSYSTEM

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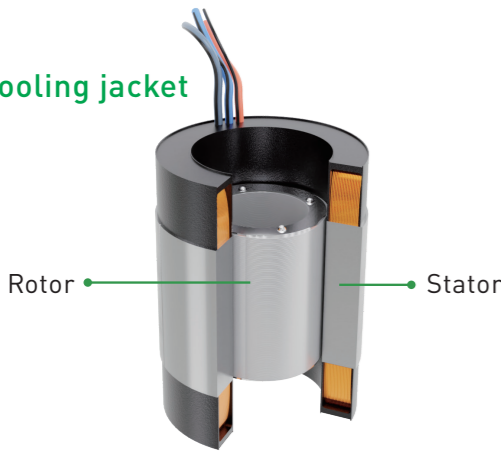
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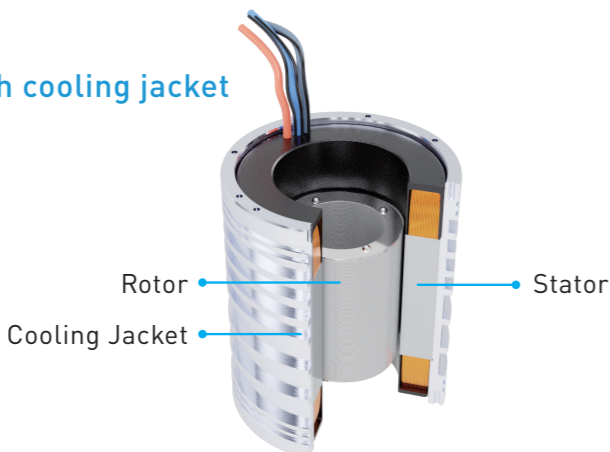
Overview

The IM-1 series is a permanent magnet AC synchronous spindle motor. It is a kit-style motor, supplied as a rotor and stator set. The stator can be provided with, or without, cooling jacket for efficient heat transfer and thermal management. It is designed to be integrated directly into a spindle assembly.

Without cooling jacket

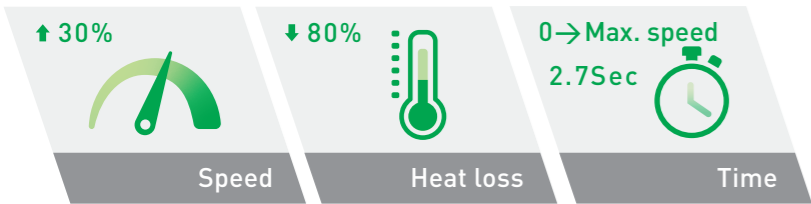


With cooling jacket



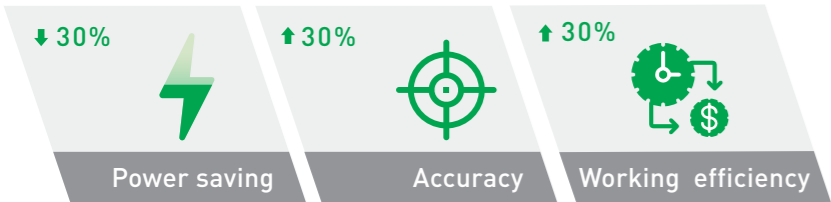
Advantages

1 Performance High power density ; Low loss



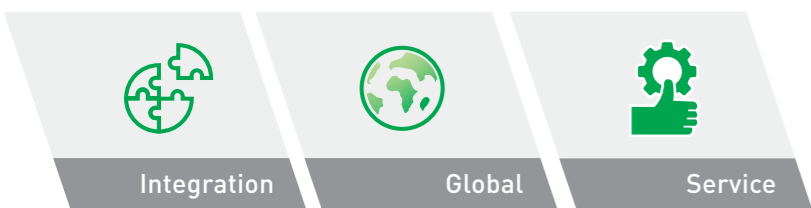
- Speed: Max. speed is increased by 10 ~ 30 %.
- Heat loss: The loss of heat in the motor is reduced by 80 %.
- Time: Acceleration time of motor from 0 to max, up to 50% faster to achieve max speed.

2 Value added High throughput ; Green energy



- Save energy and power: Reduced power consumption of spindle.
- Improve accuracy: Reduced thermal expansion of the mandrel of spindle.

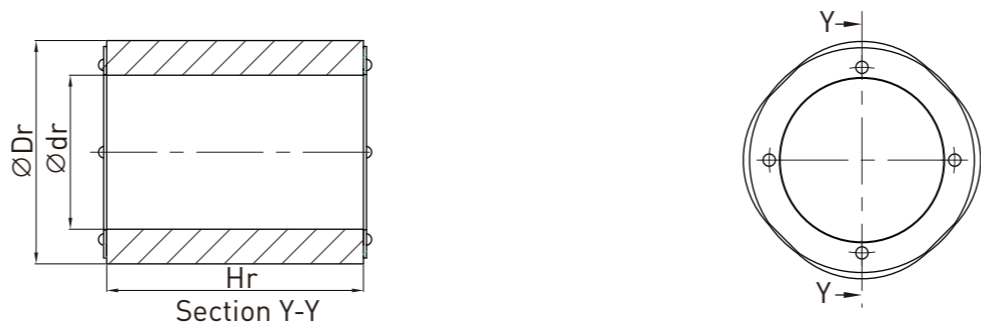
3 Global service Globalization



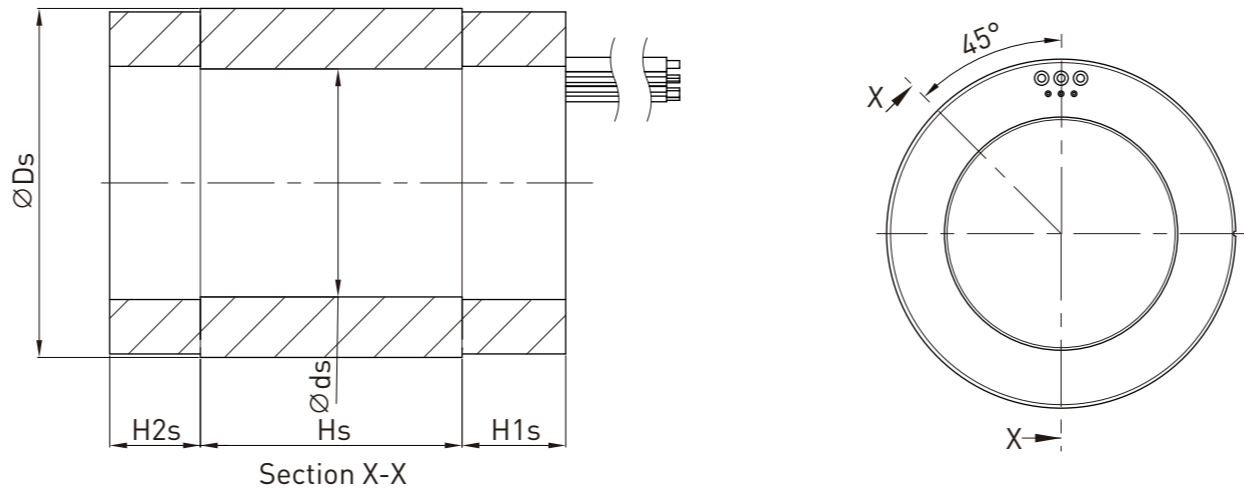
- Integrated supply chain and global service network.
- Broad assortment of alternate and compatible products.

Dimensions

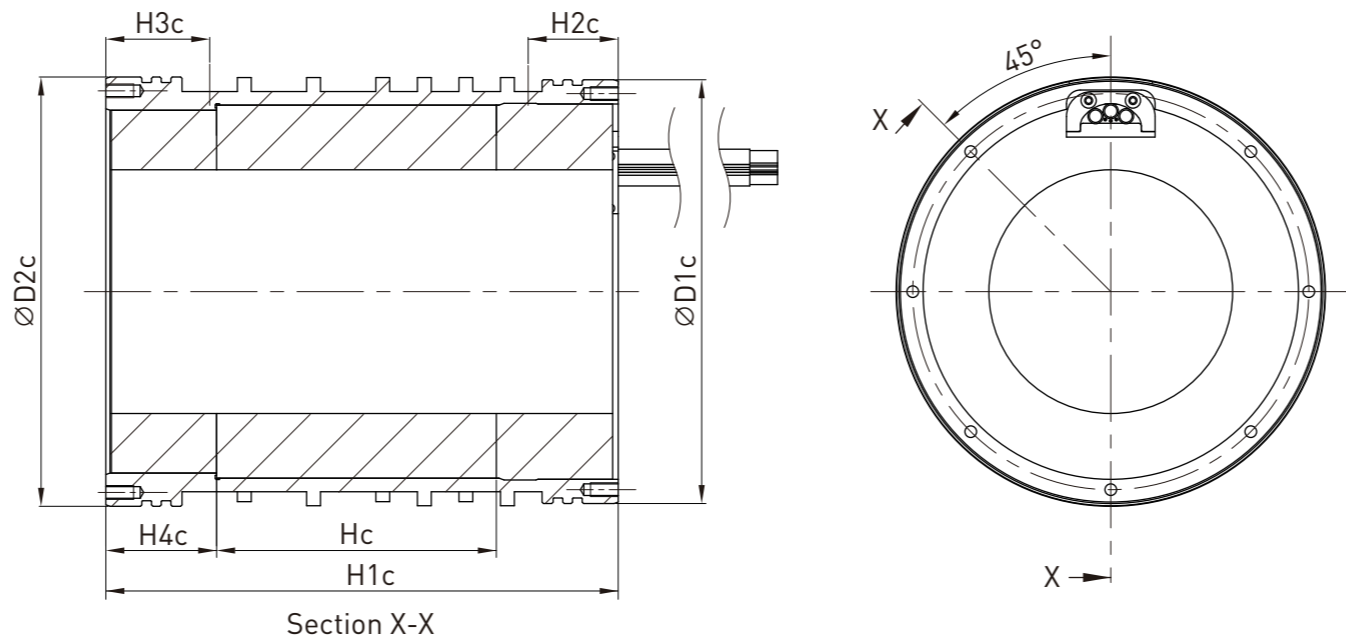
Rotor



Stator without cooling jacket



Stator with cooling jacket

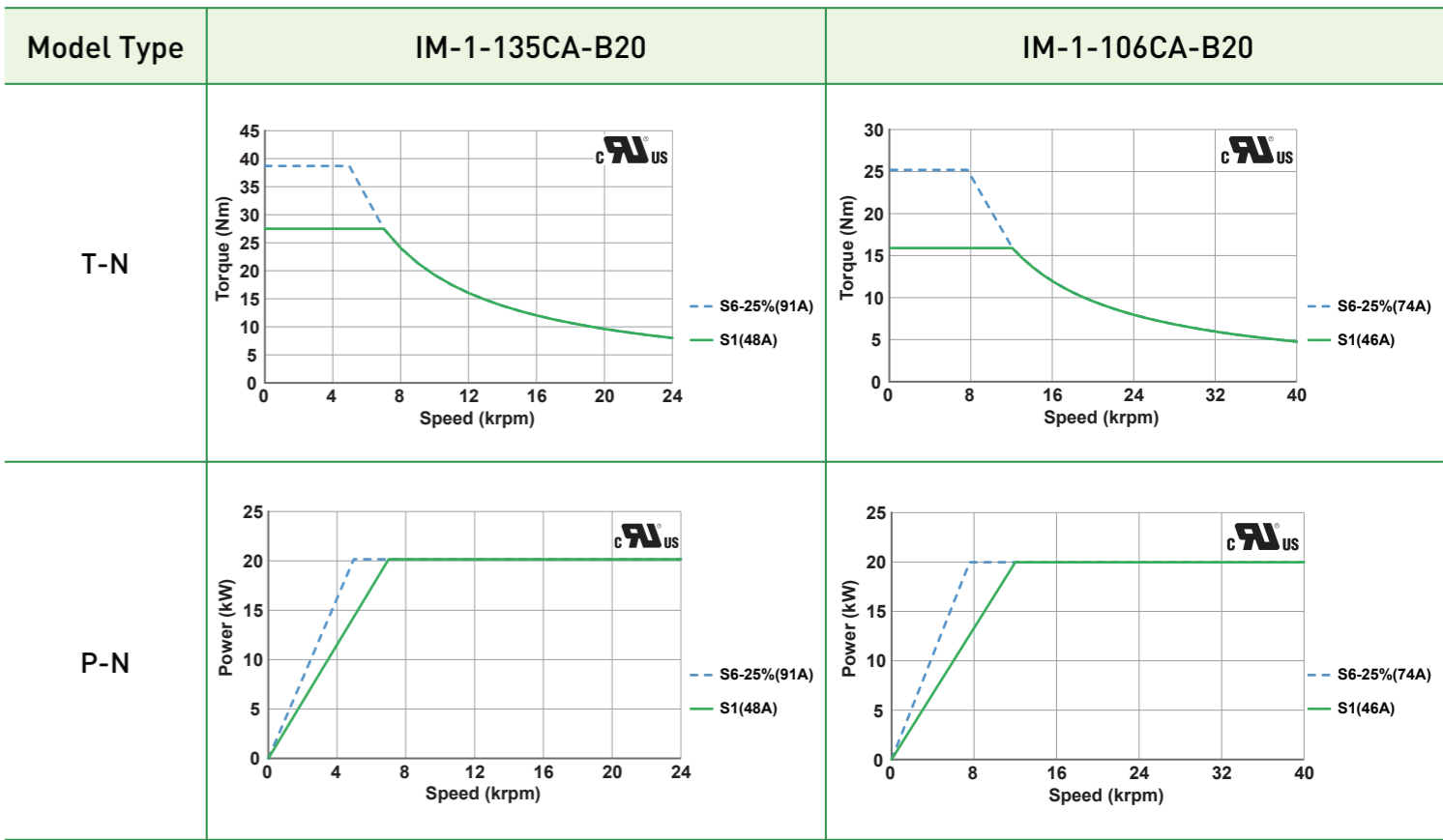


Unit : mm

Model Type		IM-1-135CA-B20	IM-1-106CA-B20
Rotor	ØDr	87	68
	Ødr	60	45
	Hr	100.1	100.1
Stator without cooling jacket	ØDs	134.7	106
	Øds	88	69
	Hs	101.15	101.15
	H1s	40 max	35 max
	H2s	35 max	30 max
Stator with cooling jacket	ØD1c	153	123
	ØD2c	155	125
	H1c	185	175
	H2c	32.5	27.5
	H3c	37.5	32.5
	H4c	40	35
	Hc	101.15	101.15

Note: 1. HIWIN reserves the right to change the dimensions. Please be subject to the approval drawing.  
2. Please confirm critical specifications with HIWIN prior to ordering.

Performance



Note: 1. 220V and 380V are covered in this range.  
2. The data for duty type S6 are valid for a 1 min. duty cycle.