

Built-in Spindle Motor achieving
high performance machine tool spindle

FANUC

BUILT-IN SPINDLE MOTOR Bi-B series



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FANUC BUILT-IN SPINDLE MOTOR Bi-B series

Features

- **Bi-B** series offers high power up to high speed range and is suitable for every kind of machine tool spindle.
- Large torque at low speed and high power at high speed achieved by speed range control
- Suitable model available for every kind of machine tool spindle from a wide range of line-up
- High response, high precision, high efficiency and lower motor loss achieved by Spindle HRV Control
- Larger torque and higher power due to efficient heat radiation of stator resin mold (Option)
- Stator with or without cooling jacket selectable for stator resin mold
- Even larger torque and higher power with copper-bar rotor (Some models)
- Water cooling available in addition to conventional oil cooling
- S6 short-time rated output equal to S3 available due to FANUC original spindle control



FANUC BUILT-IN SPINDLE MOTOR BiS-B series

Features

- **BiS-B** series has two types of motor: IPM type (interior magnet) is suitable for turning with large torque at low speed and SPM type (surface magnet) is suitable for milling with high speed rotation.
- Compact size and large torque achieved with strong neodymium magnets
- Low torque ripple achieved by optimizing magnetic circuit design
- High speed and high power achieved by using Sub Module SM
- Larger torque and higher power due to efficient heat radiation of stator resin mold
- Stator with or without cooling jacket selectable for stator resin mold
- Water cooling available in addition to conventional oil cooling



System configuration

FANUC SERVO AMPLIFIER
 α *i*-B series/ β *i*-B series

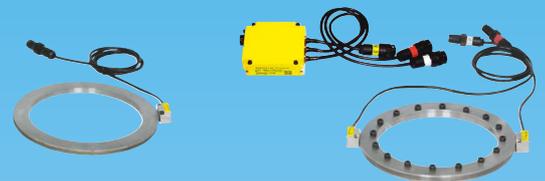
FANUC BUILT-IN SPINDLE MOTOR
 β *i*-B series/ β *i*S-B series



Sub Module SM
 (only β *i*S-B series)



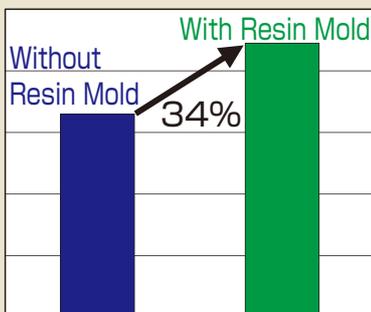
α *i*BZ SENSOR / α *i*cz SENSOR



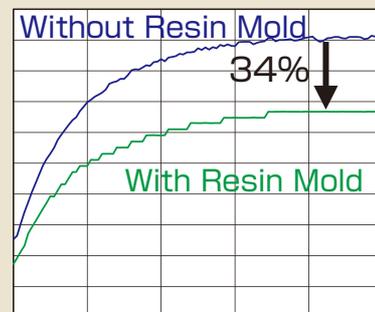
Stator resin mold (β *i*-B series : Option, β *i*S-B series : Standard)

- Larger torque, higher power or lower temperature rise due to efficient heat radiation of stator resin mold (Necessary to increase chiller capacity)

[Example]



Continuous rated output

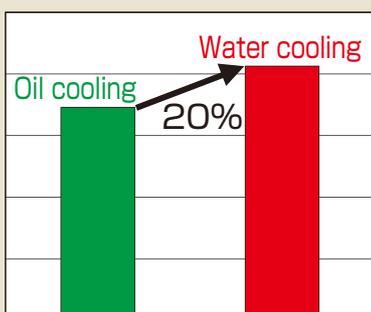


Temperature rise at the same output

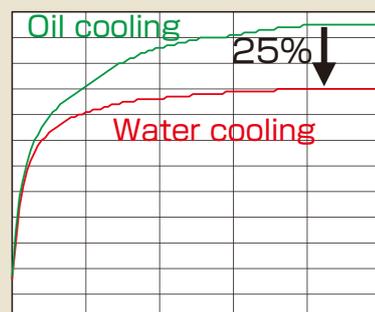
Output specification with water cooling

- Larger torque, higher power or lower temperature rise due to higher the heat removal with water cooling (Necessary to increase chiller capacity)

[Example]



Continuous rated output

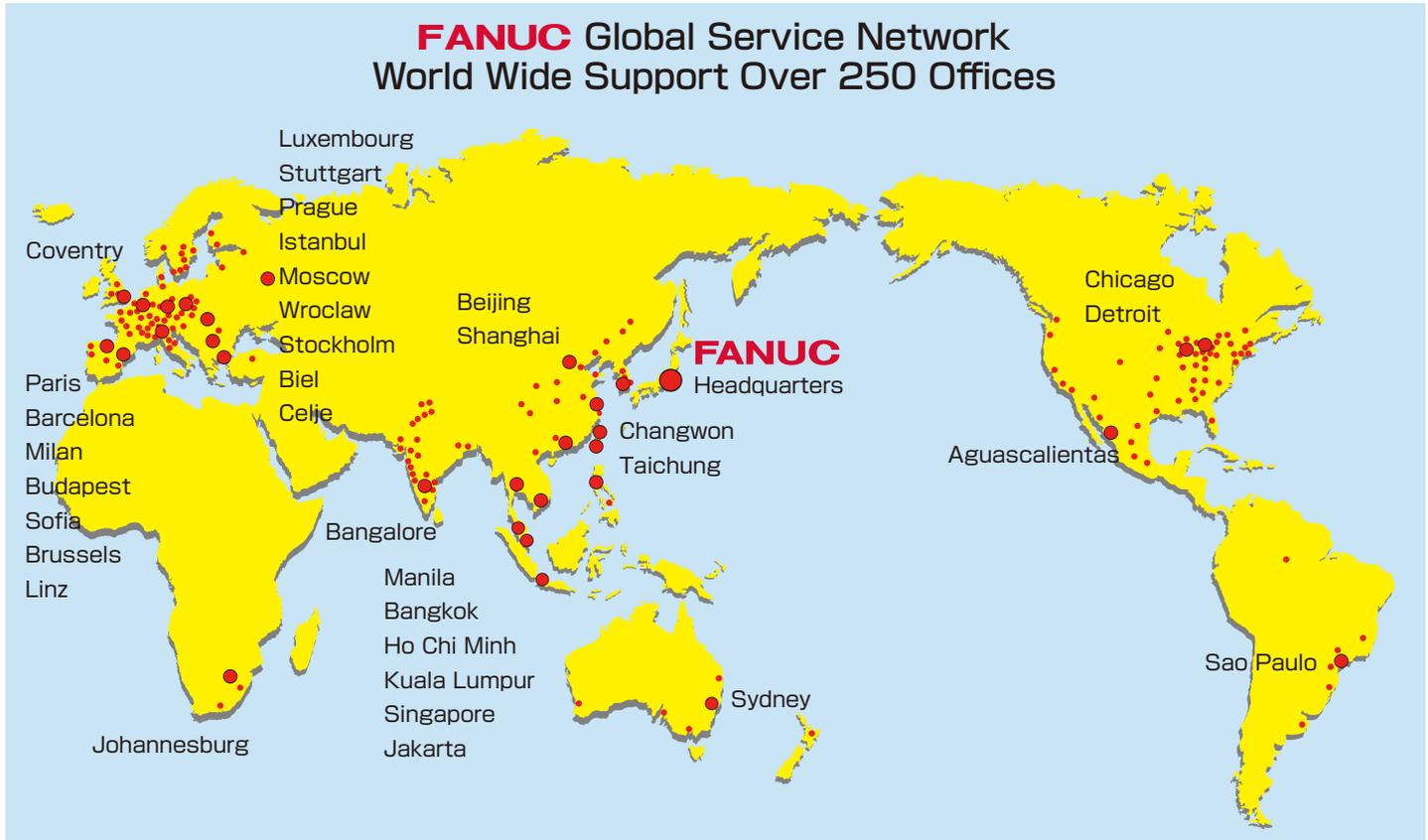


Temperature rise at the same output

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Worldwide Customer Service and Support

FANUC operates customer service and support network worldwide through subsidiaries and affiliates. FANUC provides the highest quality service with the prompt response at any location nearest you.



FANUC Training Center

FANUC Training Center operates versatile training courses to develop skilled engineers effectively in several days.

Inquiries : Yamanakako-mura, Yamanashi,
Japan 401-0501

Phone : 81-555-84-6030
Fax : 81-555-84-5540



FANUC CORPORATION

•Headquarters Oshino-mura, Yamanashi 401-0597, Japan
Phone: 81-555-84-5555 Fax: 81-555-84-5512 <http://www.fanuc.co.jp>

FANUC America Corporation
1800 Lakewood Boulevard,
Hoffman Estates, Illinois 60192, U.S.A
<http://www.fanucamerica.com/>

FANUC Europe Corporation, S.A.
Zone Industrielle, L-6468 Echternach,
Grand-Duché de Luxembourg
<http://www.fanuc.eu/>

BEIJING-FANUC Mechatronics CO., LTD
No.9 Xinxu Road, Shangdi Information Industry Base,
Haidian District, Beijing CHINA 100085
<http://www.bj-fanuc.com.cn/>

KOREA FANUC CORPORATION
101, Wanam-ro(st), Seongsan-gu, Changwon-si,
Gyeongsangnam-do, 642-290 Republic of Korea
<http://www.fkc.co.kr/>

TAIWAN FANUC CORPORATION
No.10, 16th Road, Taichung Industrial Park, Taichung, Taiwan
<http://www.fanuctaiwan.com.tw/>

FANUC INDIA PRIVATE LIMITED
41-A, Electronics City, Bangalore, 560 100, India
<http://www.fanucindia.com/>

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