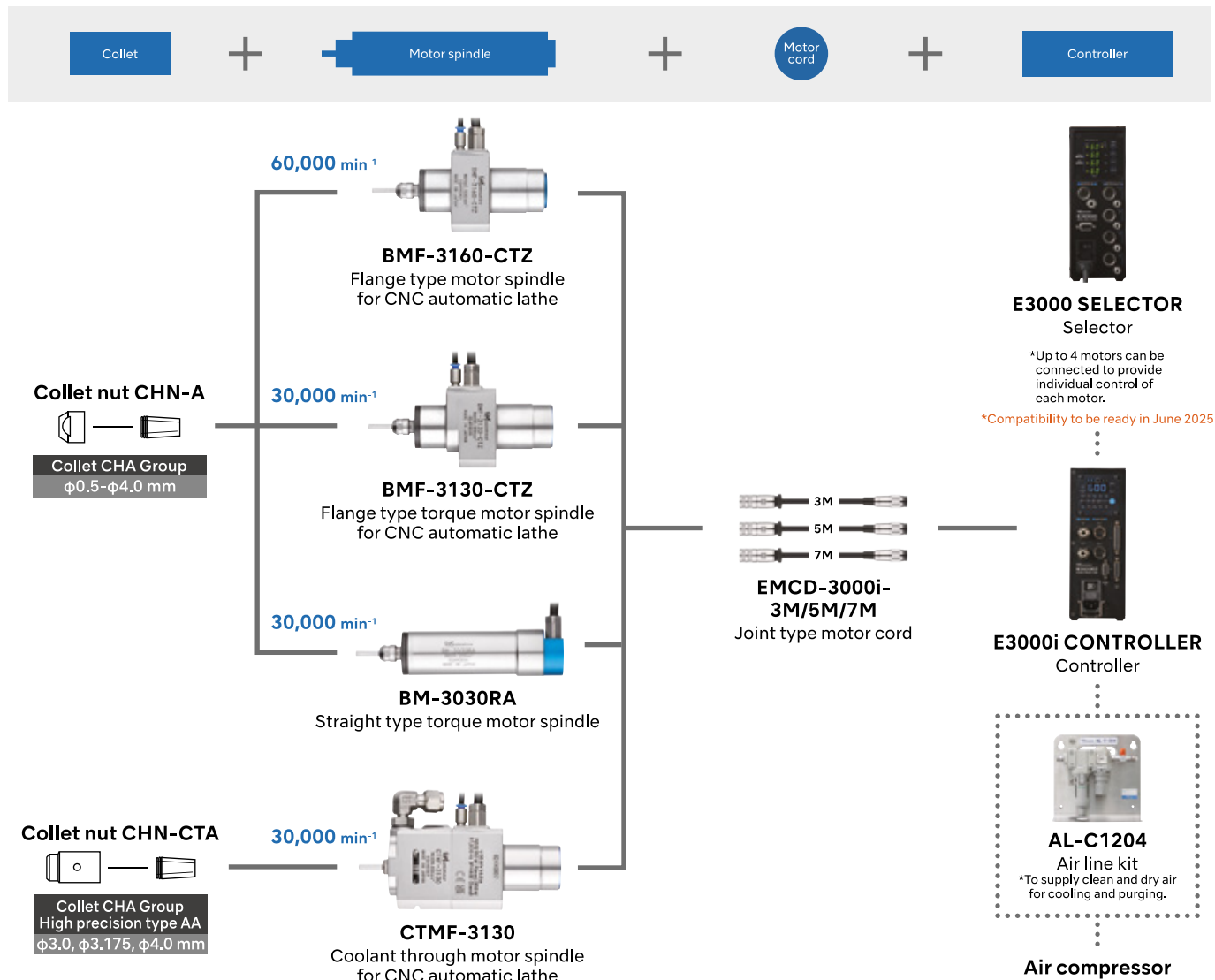


E3000i



E3000i Series system chart



Features of Motor Spindle

- **Various control functions realized by electric motor technology.**

Control of rotation speed, visualization of load factor, advanced adaptability to automation and stable machining performance.

- **Ultra-short body design with a min. length of 98.4 mm.**

For mounting on a CNC automatic lathes.

- ▶ Can be mounted in a narrow machining chamber
- ▶ Recommended as a new option for rotary tools

For mounting on special purpose machines.

- ▶ Enables downsizing of the dedicated machine itself

- **Realizes higher power than ever before.**

Equivalent body size up to now: maximum output of 150 W.

- ▶ Maximum output of 350 W has been realized

Expansion of applicable processing fields.

*Compared to iSpeed3 series having the smallest body size to date at Nakanishi.

- **Provides higher durability than rotary tools and speed-increasing spindles.**

Solves the challenges encountered at work sites by minimizing vibration and heat generation, and higher durability.

What the E3000i series can achieve.

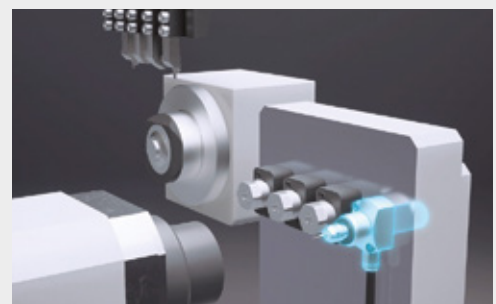
Benefits realized from mounting on a CNC automatic lathe:

1. The high speed spindles enable a high feed rate.

➔ **Increased machining efficiency**

2. The high precision motor spindles ensure a precise finish.

➔ **Increased machining accuracy**



E3000i Controller

- **Wide speed range**
The controllable speed ranges from 1,000 to 80,000 min⁻¹, while the 3-digit display allows speed setting in units of 200 min⁻¹.
- **Load monitor LED**
Load meter enables setting of optimum cutting conditions.

LOAD

Continuous load area

Intermittent load area

Overload
- **Controls E3000/E2000/iSpeed3/HES series motor spindles.**
- **Two motors can be connected to provide individual control of each motor.**
- **External inputs**
Motor ON/OFF, Rotating direction, Motor speed setting, Safety relay brake, etc.
- **External outputs**
Motor current, Rotating pulse, Error, Load, etc.
- **Parameter setting**
Maximum motor speed setting, Fix motor speed, etc.
- **Improved installation flexibility with interchangeable operation panel.**
The panel can be changed vertically, horizontally, or on the back, taking into consideration the installation space and the direction of the cord wiring.

[Other functions]

- Display function of motor current value:
Motor load status, prevents excessive tightening when mounting the spindles to machines.
- Air pressure display function:
Allows confirmation of air pressure supplied to the controller.
- Key hold function:
Disables button operation on the operation panel.

*For more information, please refer to the operation manual on our website.

Code No.	Motor speed	
7927	1,000-80,000 min ⁻¹	
Input voltage		
AC100-240 v Without plug Multiple output power		
Max. power	Power consumption	Net weight
350 w	AC1.8 A	3.0 kg
Air consumption		
1 Motor spindle: 30 NL/min (0.2-0.3 MPa)*		
2 Motor spindles: 60 NL/min (0.3-0.4 MPa)		
*in case of E3000i series		
Standard equipment and accessories		
Power cord: 3 m / ϕ6 mm Air hose with filter (K-251: 2058): 2 m		
Branch adapter / Connector cap: 2 pcs. / Reducer		
Connector cover A · B · Serial IF / Power cord hook		
Bracket (bottom·rear): 2 pcs. each / Rubber pad: 4 pcs.		
Fuse: 2 pcs. / Mounting screw: 8 pcs.		

Example of replaced control panel



Front side horizontal placement Rear side vertical replacement



Flange type motor spindle for CNC automatic lathe

[illegible]

Flange type torque motor spindle for CNC automatic lathe



Technical drawing of the BMF-3130-CTZ tool head, showing dimensions and specifications.

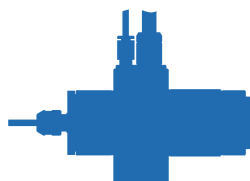
Dimensions (mm):

- Overall length: 91.9
- Tool mounting depth: 40.6
- Tool length: 14.2
- Tool diameter: $\phi 11.8$
- Tool mounting diameter: $\phi 30$
- Tool mounting length: 11.5
- Tool mounting diameter: $\phi 30$
- Tool mounting length: 21.2 (No clamping)
- Tool mounting diameter: $\phi 30$
- Tool mounting length: 33.2
- Tool mounting diameter: $\phi 30$
- Tool mounting length: 37.5 (No clamping)
- Tool mounting diameter: $\phi 30$

Specifications:

- Model: BMF-3130-CTZ
- MAX30,000 min⁻¹
- 02490001
- MADE IN JAPAN

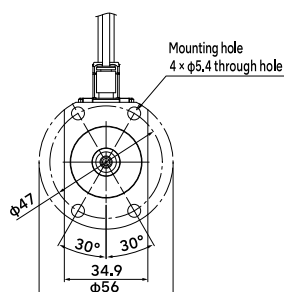
BMF-3160-CTZ

Code No. **7923**Model **BMF-3160-CTZ**

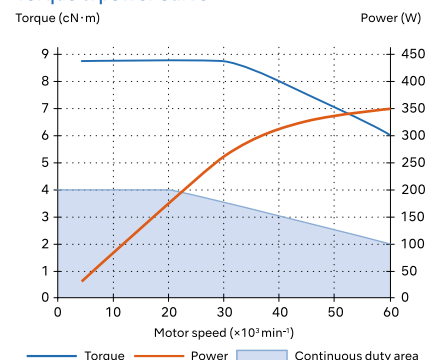
CAD drawings

CAD drawings (DXF/STEP) are available on our website

Mounting dimensions



Torque & power curve



O.D.	Motor speed	Max. power	Spindle accuracy	Collet	Min. bending cord radius	Net weight
φ31 mm	60,000 min⁻¹	350 w	Within 1 μm	CHA Group (φ0.5-φ4.0 mm)	60 mm	604 g
Standard equipment and accessories	Collet nut (CHN-A) / Wrench (8 × 5) · (9 × 11) / Hex. socket bolt (M5 × 35): 4 pcs. *Collet is sold separately.					
Options	Collet (CHA Group): φ0.5-φ4.0 mm					
	Motor cord: 3 m (7931), 5 m (7932), 7 m (7933)					

*Quick disconnect cord length: 0.5 m

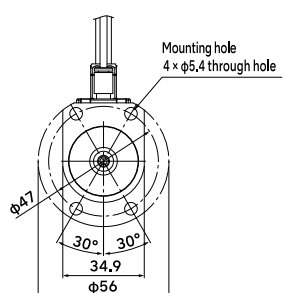
BMF-3130-CTZ

Code No. **7924**Model **BMF-3130-CTZ**

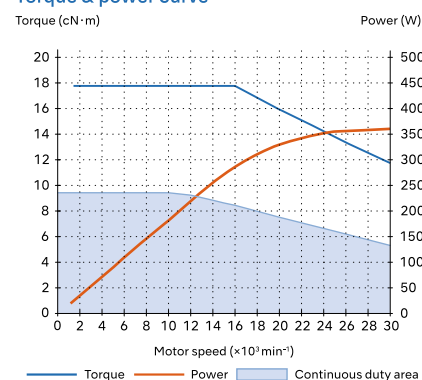
CAD drawings

CAD drawings (DXF/STEP) are available on our website

Mounting dimensions



Torque & power curve



O.D.	Motor speed	Max. power	Spindle accuracy	Collet	Min. bending cord radius	Net weight
φ31 mm	30,000 min⁻¹	350 w	Within 1 μm	CHA Group (φ0.5-φ4.0 mm)	60 mm	659 g
Standard equipment and accessories	Collet nut (CHN-A) / Wrench (8 × 5) · (9 × 11) / Hex. socket bolt (M5 × 35) · (M5 × 40): 2 pcs. each *Collet is sold separately.					
Options	Collet (CHA Group): φ0.5-φ4.0 mm					
	Motor cord: 3 m (7931), 5 m (7932), 7 m (7933)					

*Quick disconnect cord length: 0.5 m

Straight type torque motor spindle



Technical drawing of the Nakanishi BM-3030RA tool, showing dimensions and specifications.

Dimensions:

- Overall length: 107.5
- Tool mounting depth: 40.6
- Clamping area length: 52
- Distance from clamping area to tool tip: 23
- Distance from tool tip to clamping area: 11.5
- Distance from tool tip to end of tool: 14.2
- Distance from end of tool to clamping area: 76.3
- Tool tip diameter: $\phi 11.8$
- Clamping area diameter: $\phi 32$
- End of tool diameter: $\phi 30_{-0.01}^{0}$
- End of tool thread: (24.5)

Specifications:

- Model: BM-3030RA
- MAX 30,000min⁻¹
- 02490001
- MADE IN JAPAN

Coolant through motor spindle for CNC automatic lathe



Technical drawing of the NAKAMISHI CTMF-3130 tool holder. The drawing shows the front and side views of the tool holder with various dimensions and labels.

Dimensions:

- Overall length: 111.5
- Overall width: 74
- Overall height: 51.8
- Tool mounting depth: 49.5
- Wrench flats: 5.5
- Tool holder diameter: $\phi 30$
- Tool holder length: 37.5 (No clamping)
- Tool holder diameter: $\phi 31$
- Tool holder length: 24
- Tool holder diameter: $\phi 10.2$
- Tool holder length: 40.8
- Tool holder diameter: $\phi 8.1$

Labels:

- CTMF-3130
- MAX30,000min⁻¹
- 024X0007
- MADE IN JAPAN
- CE UK CA
- V:33.0 V I:6.0 A
- P(S1):150 W P(max):350 W
- f:1,000 Hz 3PHASE ClassB
- 024X0007

Notes:

- High pressure pump, hose, etc. are to be arranged by the customer.

!

High pressure pump and coolant hose, etc. are to be arranged by the customer.

BM-3030RA



Order by Code No.

Code No.

7925

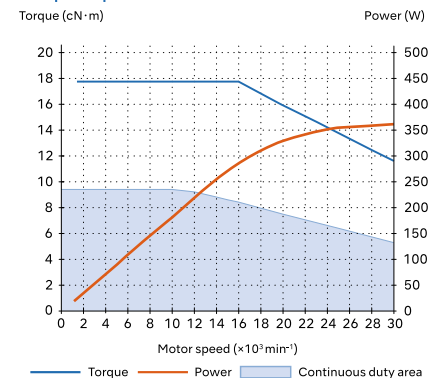
Model

BM-3030RA

CAD drawings

CAD drawings (DXF/STEP) are available on our website

Torque & power curve



O.D.	Motor speed	Max. power	Spindle accuracy	Collet	Min. bending cord radius	Net weight
φ30 mm	30,000 min⁻¹	350 w	Within 1 μm	CHA Group (φ0.5-φ4.0 mm)	60 mm	474 g
Standard equipment and accessories	Collet nut (CHN-A) / Wrench (8 × 5) · (9 × 11) *Collet is sold separately.					
Options	Collet (CHA Group): φ0.5-φ4.0 mm Motor cord: 3 m (7931), 5 m (7932), 7 m (7933)					

*Quick disconnect cord length: 0.5 m

CTMF-3130



Code No.

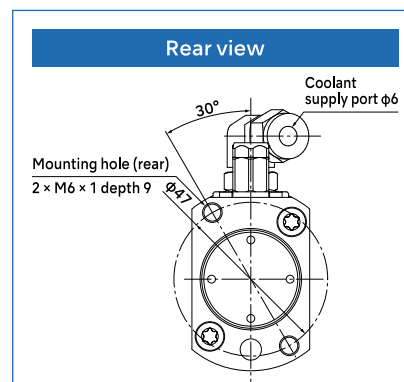
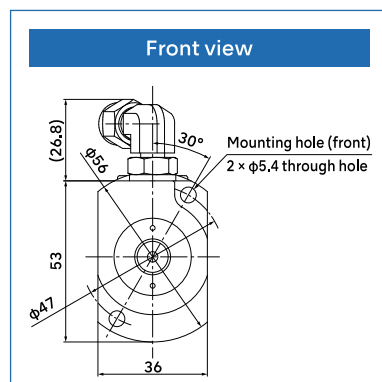
7926

Model

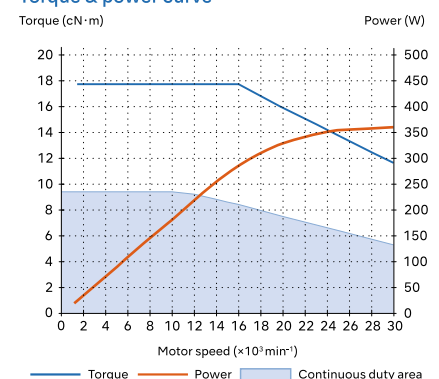
CTMF-3130

CAD drawings

CAD drawings (DXF/STEP) are available on our website



Torque & power curve



O.D.	Motor speed	Max. power	Spindle accuracy	Collet	Min. bending cord radius	Net weight
φ31 mm	30,000 min⁻¹	350 w	Within 1 μm	CHA Group AA (φ3.0, φ3.175, φ4.0 mm)	60 mm	1,100 g
Standard equipment and accessories	Wrench (8 × 5) · (9 × 11) / Hex. socket bolt (M5 × 80): 2 pcs. *Collet and Collet nut are sold separately.					
Specifications	Coolant pressure: 3.0-20.0 MPa / Coolant filtration: 5 μm or less					
Options	Collet (CHA group high precision type AA): φ3.0, φ3.175, φ4.0 mm Collet nut (CHN-CTA): 3.0, 3.175, 4.0 mm *Please match the Collet and Collet nut size. Motor cord: 3 m (7931), 5 m (7932), 7 m (7933)					

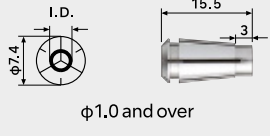
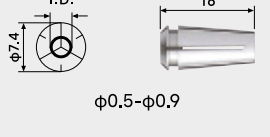
*Quick disconnect cord length: 0.5 m

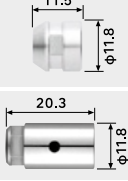
Accessories

Order by Code No.

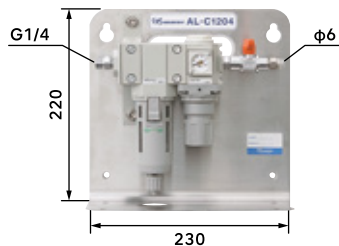
Motor cord	Code No.	Model	Cord length	Standard accessories	Compatible model
 Joint type	7931	EMCD-3000i-3M	3 m	Air hose Connector cap (included)	BMF-3160-CTZ BMF-3130-CTZ BM-3030RA CTMF-3130
	7932	EMCD-3000i-5M	5 m		
	7933	EMCD-3000i-7M	7 m		

*The minimum cord bending radius is 60 mm.

Collet	Code No.	Model	I.D.	Compatible model
 φ1.0 and over	91430	CHA-3.0	φ3.0	BMF-3160-CTZ BMF-3130-CTZ BM-3030RA CTMF-3130 *High precision type AA (Run-out accuracy within 2 μm)
	91440	CHA-4.0	φ4.0	
	91492	CHA-2.35	φ2.35	
	91493	CHA-3.175	φ3.175	
	91494	CHA-3.0AA	φ3.0AA*	
	91495	CHA-4.0AA	φ4.0AA*	
	91496	CHA-3.175AA	φ3.175AA*	
 φ0.5-φ0.9	914 □□	CHA-□□	φ0.5, φ0.6, φ0.7, φ0.8, φ0.9	
			φ1.0, φ1.5, φ2.0, φ2.5, φ3.5	
			φ1.1, φ1.2, φ1.3, φ1.4, φ1.6, φ1.7, φ1.8, φ1.9 φ2.1, φ2.2, φ2.3, φ2.4, φ2.6, φ2.7, φ2.8, φ2.9 φ3.1, φ3.2, φ3.3, φ3.4, φ3.6, φ3.7, φ3.8, φ3.9	

Collet nut	Code No.	Model	Compatible model
	2102	CHN-A	BMF-3160-CTZ BMF-3130-CTZ BM-3030RA
	7798 7799 7800	CHN-CTA-3.0 CHN-CTA-3.175 CHN-CTA-4.0	CTMF-3130

Bracket	Code No.	Model	Compatible model
—	7943	DL-Type brackets for securing the E3000i controller horizontally: 2 pcs.	E3000i Controller *Remove the rubber pad before fitting the brackets.

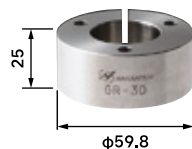
Air line kit
Filtration: 0.3 μm

■Air piping
Inlet: G1/4 male thread for connection hose
Outlet: φ6.0 mm

■Net weight: 1.9 kg

Code No.	4504	Model	AL-C1204
Standard accessories	Hose pipe (K-275): 2 m / Rubber pad: 4 pcs. Mounting screw (M6 × 20): 4 pcs. Washer: 4 pcs. / Hose band: 1 pc.		
Standard equipment	Air filter / Air regulator / Air pressure gauge ON-OFF valve		

Grip ring



■Net weight: 385 g

Code No.	1885	Model	GR-30
Standard accessories	Mounting bolt (M5 × 25L): 3 pcs.		
Compatible model	BM-3030RA		

Control panel
extension cord (4 m)

Code No.	7940	Model	E3000i-PEX4
Standard accessories	Assembled product (cord length: 4 m) Mounting screw (M3): 4 pcs. / Flange nut: 4 pcs.		

NAKANISHI INC.

Headquarters
700 Shimohinata, Kanuma, Tochigi 322-8666, Japan
TEL: +81-289-64-3520 / FAX: +81-289-62-1135

MAFRA
MAILE GMBH
PRÄZISIONSMASCHINEN
WWW.MAFRA.DE · INFO@MAFRA.DE
Telefon +49 781 9553 0

en.nakanishi-spindle.com
NAKANISHI INC. 2025
PR-K407E Ver.1 2025-05-26 010.YP

290



*Specifications and design are subject to change without notice.