

Taking CNC automatic lathes to **its new heights**

BMF-4260/4230-TSU

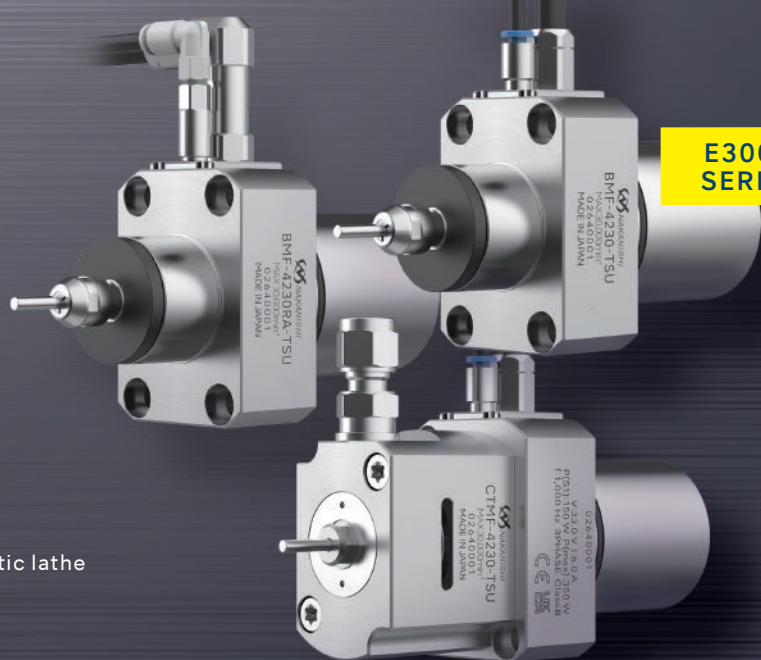
Flange type motor spindle for CNC automatic lathe

BMF-4260RA/4230RA-TSU

Flange type motor spindle with angle cord for CNC automatic lathe

CTMF-4230-TSU

Coolant-through motor spindle for CNC automatic lathe



**E3000i
SERIES**

Case Study of TSUGAMI CNC Precision Automatic Lathe

EM20-S6000 + RB-20×25

Straight type motor spindle

- O.D.: $\phi 25$ (When RB-20×25 is attached)
- Max. motor speed: 60,000 min⁻¹



BMF-4230RA-TSU*

Flange type torque motor spindle with angle cord

- O.D.: $\phi 42$
- Max. motor speed: 30,000 min⁻¹



BMF-4260RA-TSU*

Flange type motor spindle with angle cord

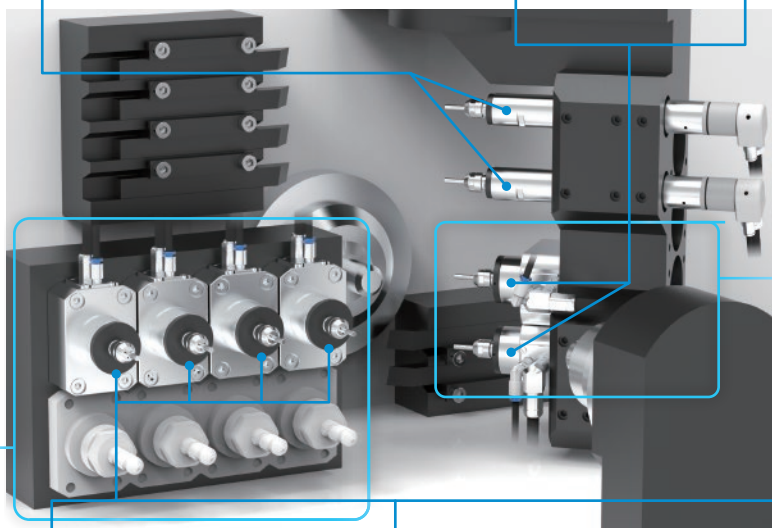
- O.D.: $\phi 42$
- Max. motor speed: 60,000 min⁻¹



*Available in December 2026

Models supporting back tool post mounting

- S205-II/S206-II
- S205A-II/S206A-II
- SS207-II (-5AX)
- B026/32-III
- B038-III
- SS267-III (-5AX)
- SS327-III (-5AX)



Models supporting modular type B-axis tool post mounting

- SS207-II -5AX
- SS267-III -5AX
- SS327-III -5AX

CTMF-4230-TSU

Coolant-through motor spindle

- O.D.: $\phi 42$
- Max. motor speed: 30,000 min⁻¹



BMF-4230-TSU

Flange type torque motor spindle

- O.D.: $\phi 42$
- Max. motor speed: 30,000 min⁻¹



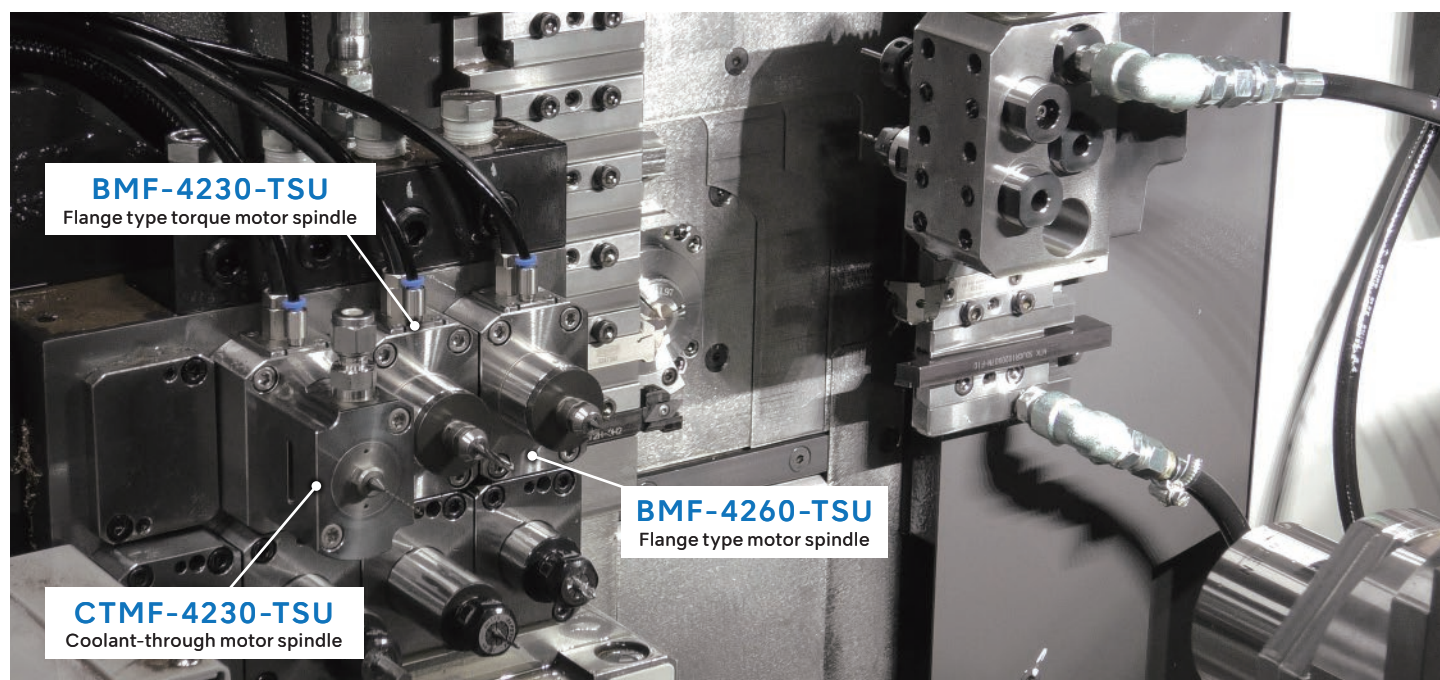
BMF-4260-TSU

Flange type motor spindle

- O.D.: $\phi 42$
- Max. motor speed: 60,000 min⁻¹



Case Study with TSUGAMI S206A-II



φ1 × 3 mm Brass Drilling

Motor spindle : BMF-4260-TSU
 Workpiece : Brass (C3604)
 Tool : Mitsubishi Materials Corp.
 DC-SSTD0100
 (φ1 drill bit for non-ferrous material drilling)
 Hole depth : 3 mm Non-pecking
 Coolant : Dry conditions

	Tool manufacturer's recommended conditions	Nakanishi's proposed conditions
Cutting speed [m/min]	63	188
Motor speed [min ⁻¹]	20,000	60,000
Feed/rev. [mm/rev]	0.02	0.033
Feed rate [mm/min]	400	2,000

5.0
times

φ3 × 13 mm Brass Drilling

Motor spindle : BMF-4230-TSU
 Workpiece : Brass (C3604)
 Tool : Mitsubishi Materials Corp.
 MAE0300MB
 (φ3 Solid carbide drill)
 Hole depth : 13 mm (3 mm/step)
 Coolant : Dry conditions

	Tool manufacturer's recommended conditions	Nakanishi's proposed conditions
Cutting speed [m/min]	90	283
Motor speed [min ⁻¹]	9,554	30,000
Feed/rev. [mm/rev]	0.15	0.183
Feed rate [mm/min]	1,433	5,500

3.8
times

SUS304 φ1 × 20 mm Through-Hole Drilling

Motor spindle : CTMF-4230-TSU
 Workpiece : Stainless Steel (SUS304)
 Tool : Mitsubishi Materials Corp.
 DVAS0100X20S040
 (φ1 Solid carbide drill)
 Hole depth : 20 mm (L/D=20) through-hole
 Guide holes : Yes (Pre-processed/Depth: 2 mm)

	Conventional conditions	Nakanishi's proposed conditions
Cutting speed [m/min]	31	60
Motor speed [min ⁻¹]	10,000	19,000
Feed/rev. [mm/rev]	0.01	0.02
Feed rate [mm/min]	100	350
Step (Pecking)	0.25 mm/step	No pecking
Coolant	External lubrication Water-insoluble cutting oil	Internal lubrication (20 MPa) Water-insoluble cutting oil
Processing time	85 sec	3.4 sec

96%
reduced



NAKANISHI INC.

Headquarters

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

*Specifications and design are subject to change without notice.

en.nakanishi-spindle.com
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