

TAKUMI When Precision Matters

TAKUMI

BC Series



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SBC-01-EN-202205

Double Column Machining Center

BC2116
BC3116



Double column structure

The one-piece design provides increased weight to absorb cutting vibration, and increased rigidity. The dual contact areas with the base eliminates pitch in the Y-axis and reduces the effect of machine leveling changes over time.

Outstanding ladder structure on the beam

The bridge utilizes a "ladder design" head casting and saddle which increases rigidity, reduces overhang and eliminates head deflection. The Y-axis cross rail saddle carries a constant weight, allowing for faster cutting while maintaining excellent part finish.



Twin hydraulic cylinders on spindle headstock

Z-axis is balanced with 2 hydraulic cylinders to minimize the workload of the motor and achieve smoother movement.

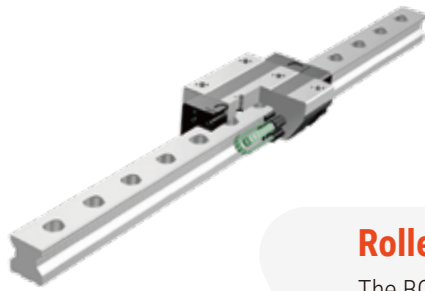
01

**BC Series
Frame**

BC Series

The Takumi BC Series, double column machining center, is designed for heavy duty machining of large parts and high precision dies and molds. Thanks to the high rigidity frame structure and a variety of manual change head, BC Series enables a wider range of machining applications.





Roller type LM guideways

The BC Series are equipped with LM roller guideways. It features higher load capacity and greater rigidity even at high acceleration. Additionally, they have greater contact area to support faster feeds, higher rigidity and higher weight bearing capability.

Various manual-change head option

Diverse head options for a wider range of machining applications.

90°Head N75ST-01 Universal head C50-TL02

Max. tool diameter	Ø150 (6")	Ø200 (8")
Gear ratio	1:1	1:1
Max. power	38kW	42kW
Max. speed	2000rpm	1200rpm
Spindle revolution	Forward	Forward



90°Head N75ST-01



Universal head C50-TL02



Large base with gear transmission on X-axis

Extra-wide base of X-axis and rib reinforced work table reduces vibrations while increasing machining stability. X-axis is equipped with gear mechanism transmission which ensures optimal rigidity for heavy-duty cutting condition.

02 BC Series Feed Axis

BC Series Spindle

03

Superior Cutting Performance



Face Milling

End Milling

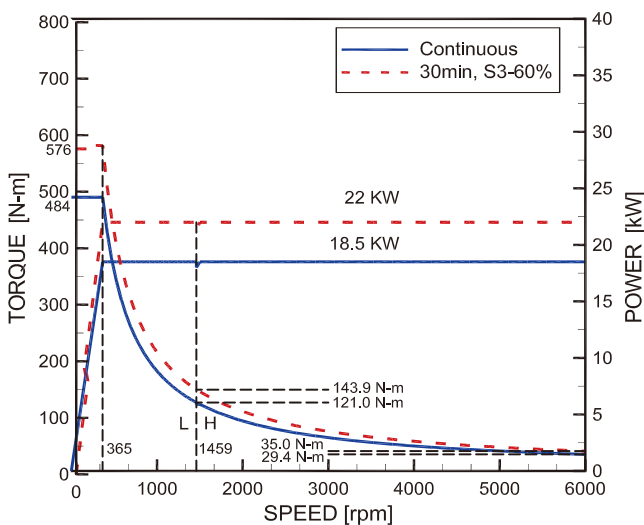
Drilling

Removal rate	631cm ³ /min	-	-
Material	S50C	S50C	S50C
Spindle speed	450rpm	800rpm	800rpm
Tool diameter	160mm	63mm	Ø49
Feed rate	810mm/min	400mm/min	250mm/min
Cut depth/width	6/130mm	40mm/10mm	147mm

*Gear type spindle, 6000rpm, 18.5/22kW motor power.

*Cutting performance is subject to change with different cutting conditions.

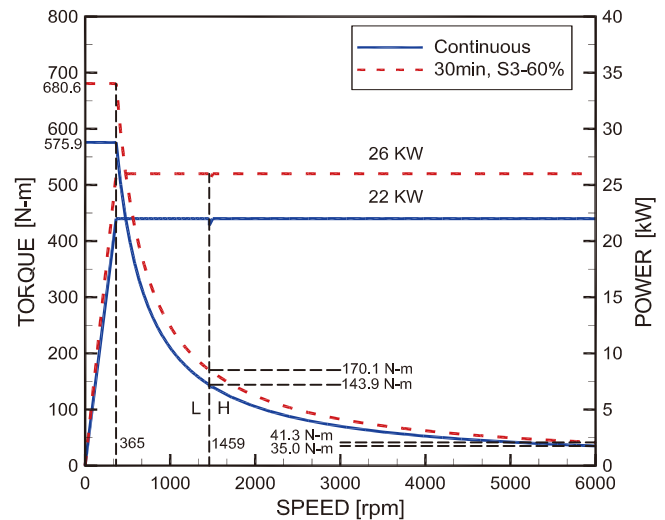
Spindle Power - Torque Curve



6,000rpm gear type spindle (Standard)

18.5/22 **484/576**

kW Power (Cont./S3-60%) N.m Torque (Cont./S3-60%)



6,000rpm gear type spindle (Optional)

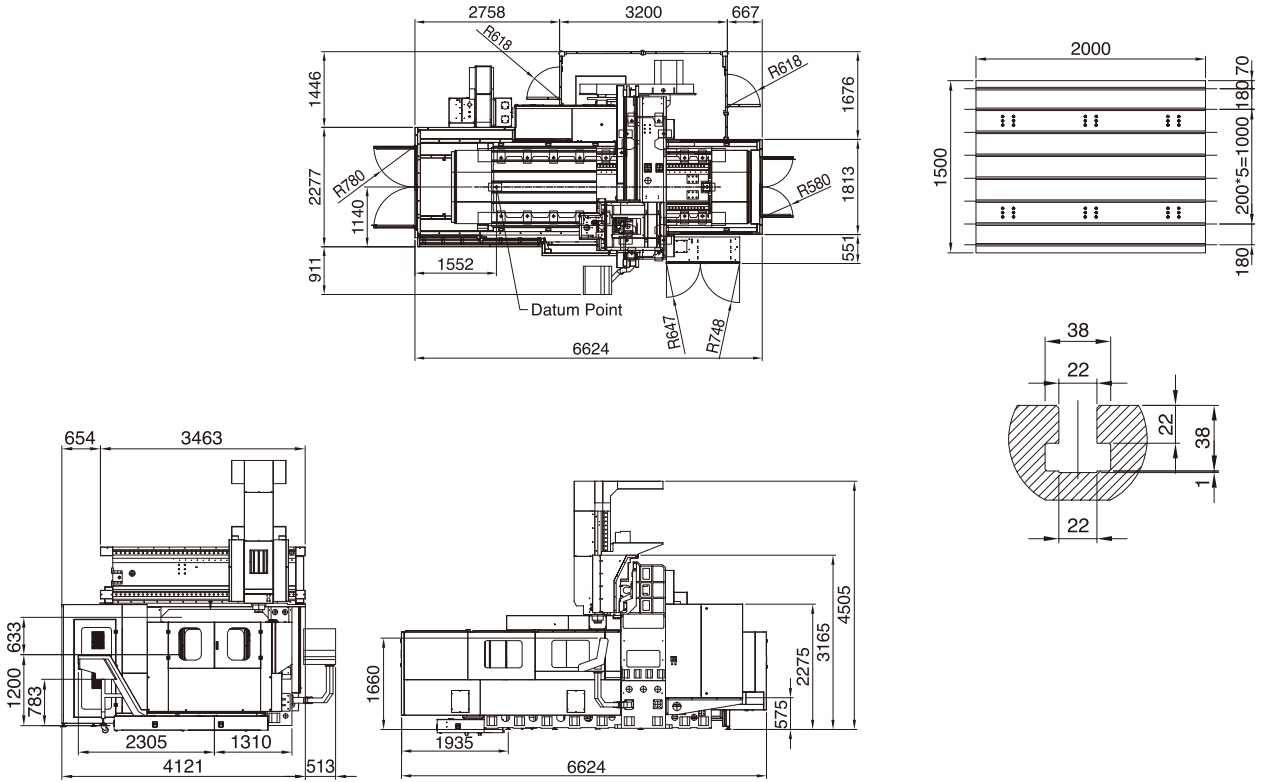
22/26 **575.9/680.6**

kW Power (Cont./S3-60%) N.m Torque (Cont./S3-60%)

Dimension

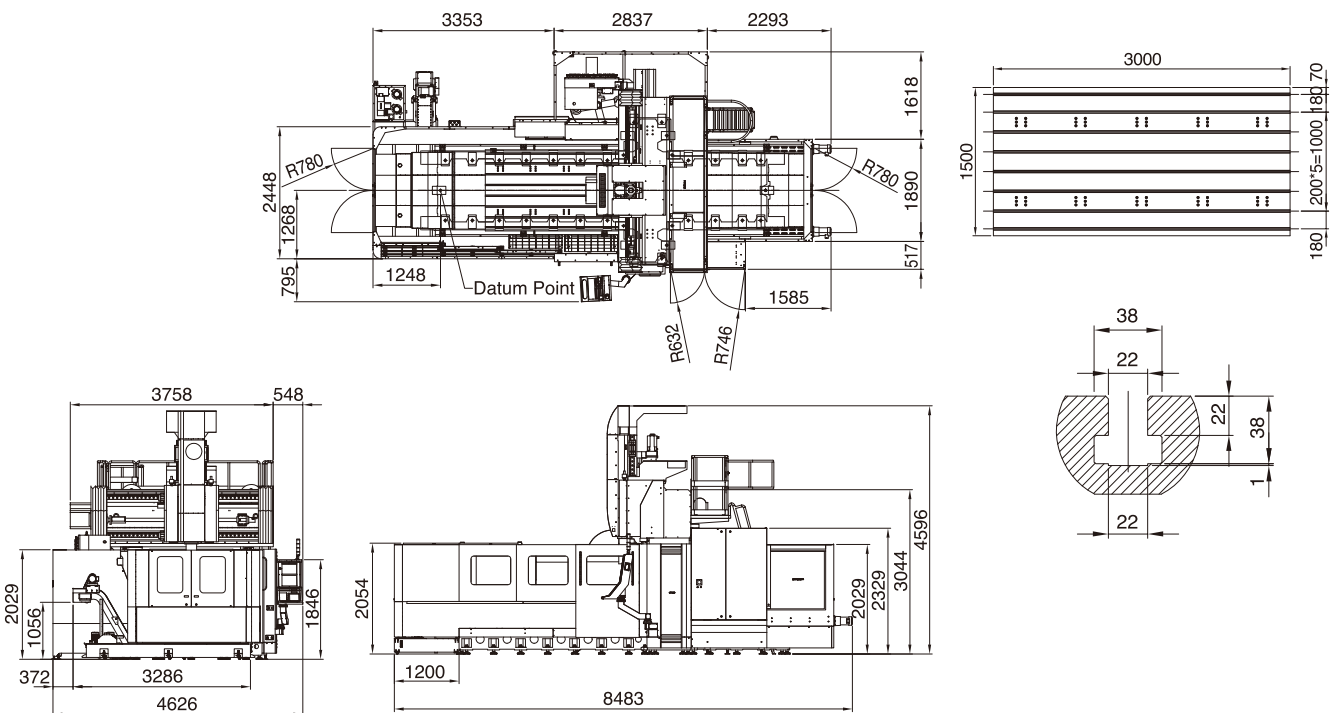
BC2116

Unit : mm



BC3116

Unit : mm



Machine Specification

Travel	BC2116	BC3116
X/Y/Z-axis	2100 / 1600 / 800mm	3100 / 1600 / 800mm
Distance from spindle nose to table	200-1000mm	
Distance between columns	1700mm	

Table	BC2116	BC3116
Dimension	2000 x 1500mm	3000 x 1500mm
Max. load	8000kg	10000kg
T-slot	22x 200 x 8mm	

Spindle	BC2116	BC3116
Spindle type	Gear	
Spindle speed	6000rpm	
Spindle motor power	18.5kW/22kW (Cont./S3-60%)	
Spindle taper	BT50	

Feed	BC2116	BC3116
Rapid feed (X/Y/Z)	24/24/15m/min	
Cutting feed	10000mm/min	
Motor power (X/Y/Z)	7.0/7.0/4.0kW	

ATC & Magazine	BC2116	BC3116
ATC type	Arm	
Number of tools	24pcs	
Max. tool diameter (next pockets empty)	125/215mm	
Max. tool length	400mm	
Max. tool weight	15kg	

Supply	BC2116	BC3116
Air pressure	6kgf/cm ²	
Electric power supply	55kVA	

Net Weight	BC2116	BC3116
Machine weight	24000	28000

* The specifications and information may be changed without prior notice.

Standard & Optional

Standard:

- Fanuc OiMF-Plus 10.4"
- 6,000rpm, BT50, Gear type spindle
- 24T Arm type
- Two hydraulic cylinders with pneumatic assistance
- Spindle air blast
- Cutting air blast
- Spindle cooling system
- Spindle gear box cooling system
- Cutting coolant system
- Heat exchanger for electrical cabinet
- Full chip enclosure (without top cover)
- Belt type chip conveyor
- Chip augers
- Coolant tank
- Oil skimmer
- 3-Color signal light
- Working light
- Leveling block and screws
- Maintenance tools
- Manuals
- Washing gun & air gun
- Manual pulse generator
- Automatic centralized lubrication system

Optional:

- Mitsubishi M830, 15"
- 10,000rpm, BBT50, Built-in spindle
- 22/26 kW motor power (For Fanuc control only)
- 32T, Arm Type
- 1,000 Z-axis travel
- Coolant through spindle (30bar)
- 3-Axis ballscrew cooling
- Linear scales (X/Y/Z)
- 90° Milling head
- Universal milling head
- Workpiece measurement
- Tool measurement
- Oil mist collector
- Oil mist device
- Transformer
- CE certification