

TAKUMI When Precision Matters

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TAKUMI

BC Series



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.

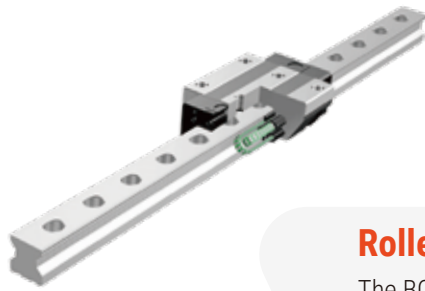
01

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

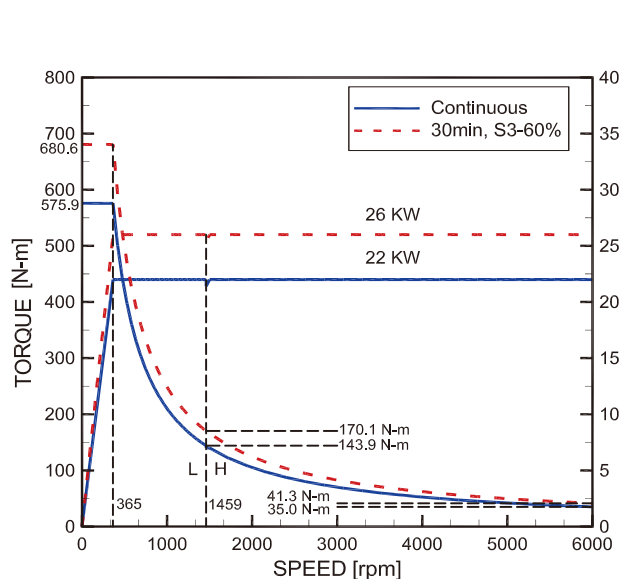
Drilling

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.

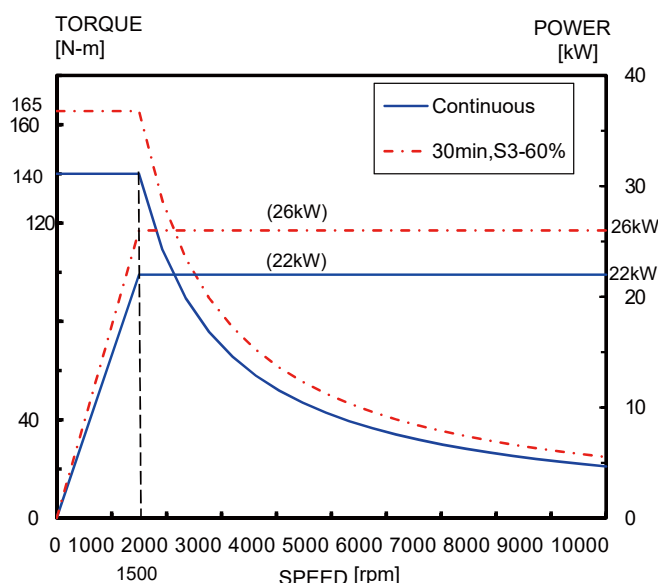
Spindle Power - Torque Curve



6,000rpm gear type spindle (Standard)

22/26 **575.9/680.6**

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



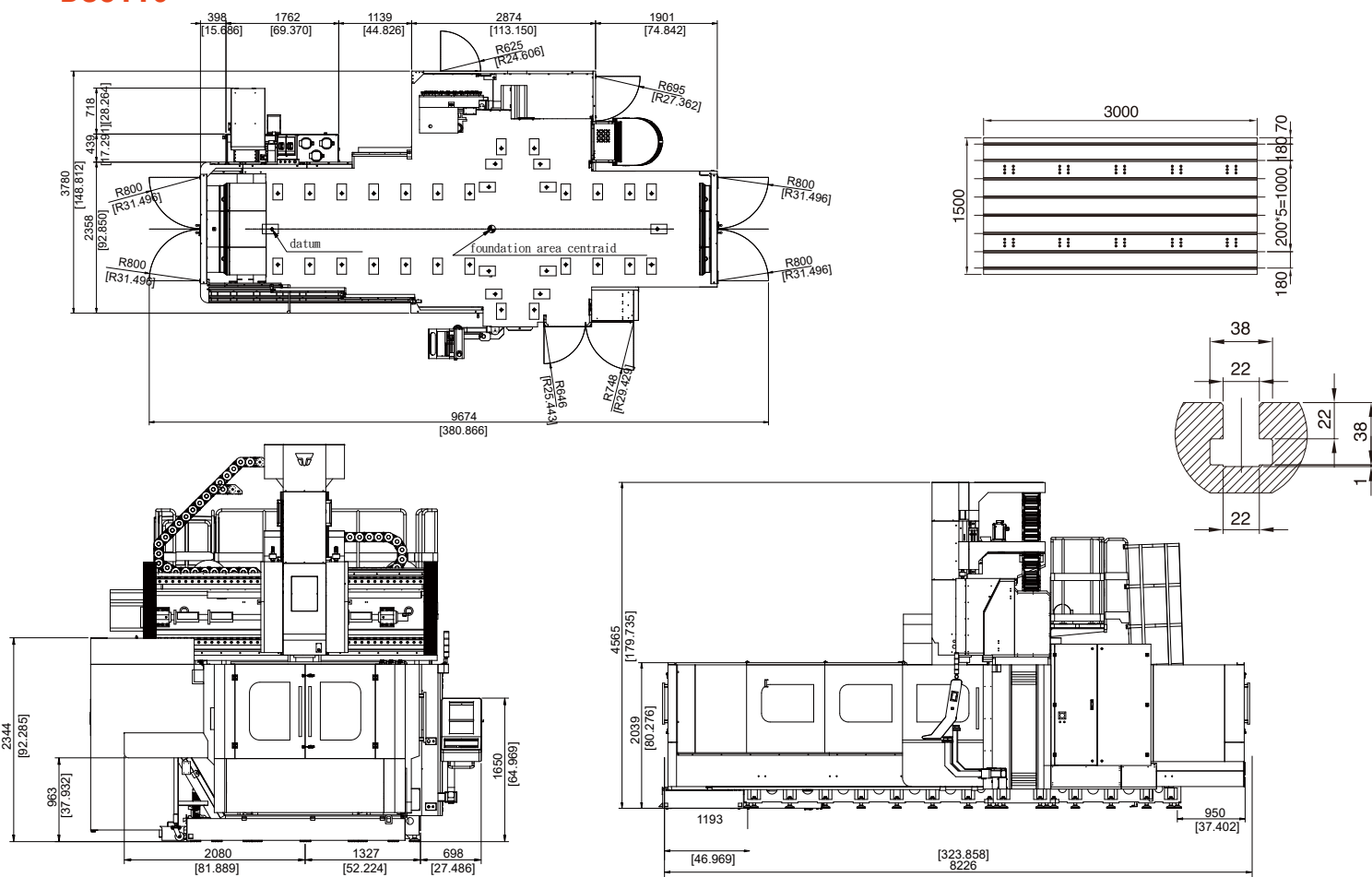
10,000rpm direct drive spindle (Optional)

22/26 **140/165**

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

05 Diagrams

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

Spindle	
Spindle type	Gear
Spindle speed	6000rpm
Spindle motor power	22kW/26kW (Cont./S3-60%)
Spindle taper	BT50

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

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

Net Weight		
Machine weight	24000	28000

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, Direct-drive spindle
 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

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