

The Art of Productivity



5-Axis Machining Centers

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Takumi



A division of Hurco Companies, Inc.



TKM-201812-U-500_CH



5-Axis Machining Centers

UC250 | UC400



- For more than 30 years, Takumi has been committed to the design, manufacture, sales and service of high-quality, high-speed machining centers worldwide.
- Takumi U series 5-Axis Machining centers provide you the Outstanding surface finish, High Precision, Efficiency and Throughput.

Machine shown with optional equipment



- Cost effective solution for 5-sided parts (capable of four-axis simultaneous machining)
- Small footprint, large workcube
- C-frame with mechanical trunnion mounted directly to saddle
- Choose between Fanuc and Mitsubishi controls

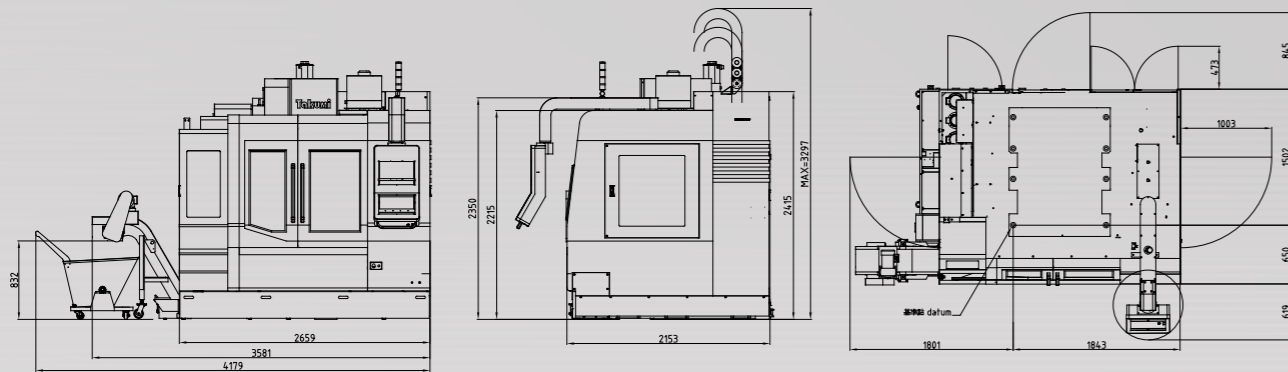
	UC250	UC400
Travels	860 x 520 x 610 mm	1067 x 610 x 520 mm
Table / capacity	Ø255 mm / 200 kg	Ø400 mm / 250 kg
Range (A/C)	+30° -110° / 360°	+30° -120° / 360°
Spindle	15,000 rpm / BBT40	15,000 rpm / BBT40
kW (cont./S3-25%)	9 / 15 kW	9 / 15 kW
ATC	24 stations swing arm	24 stations swing arm
Rapid traverse	36 / 36 / 36 m/min	36 / 36 / 36 m/min
Weight	6700 kg	7500 kg



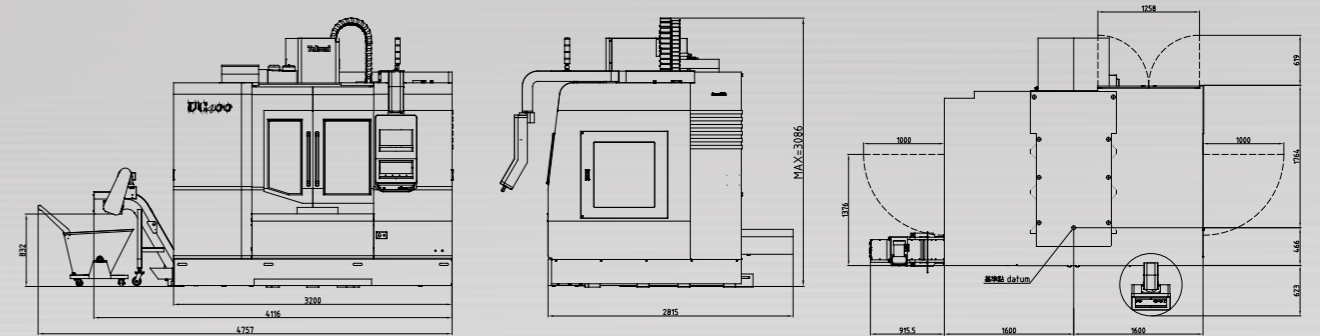
Machine specifications can be found on page 16



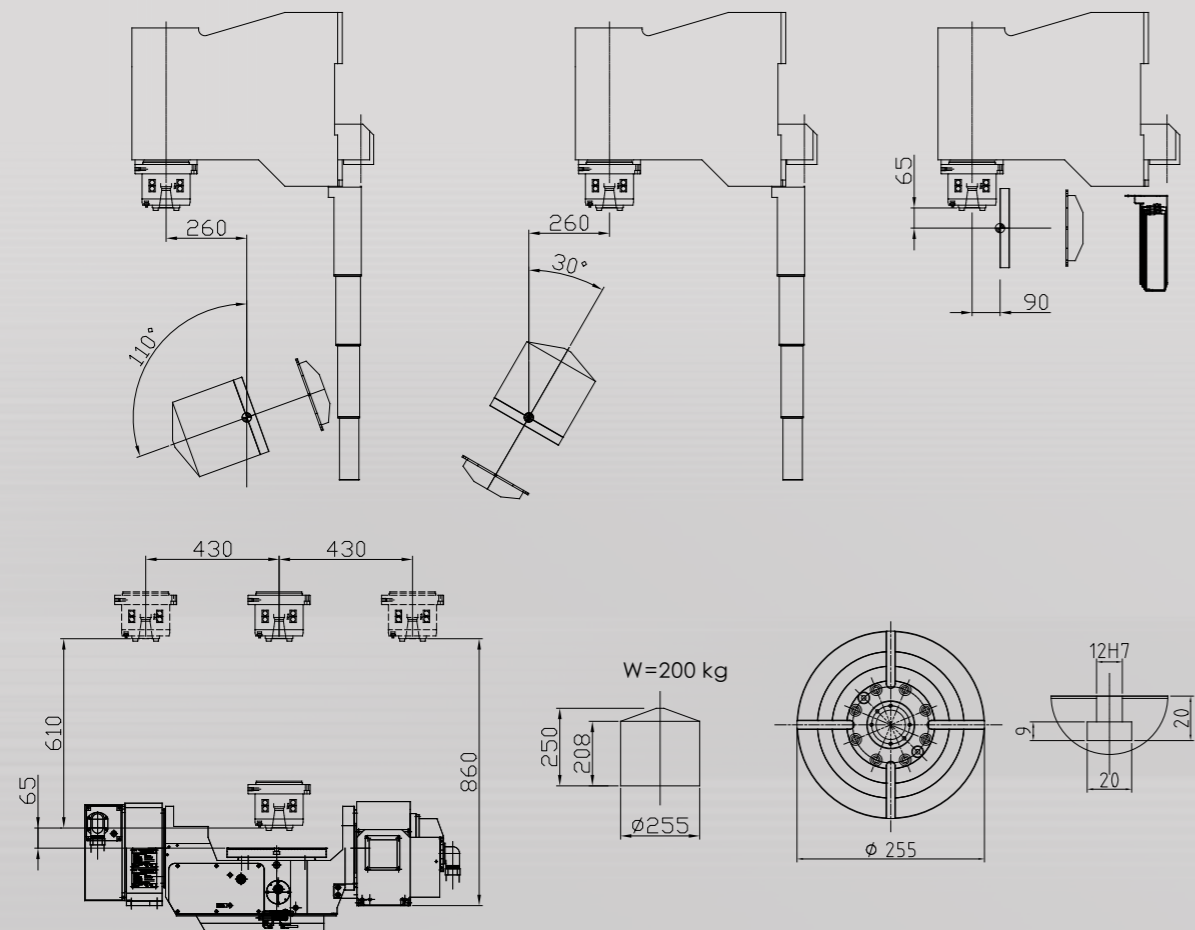
UC250 Layout



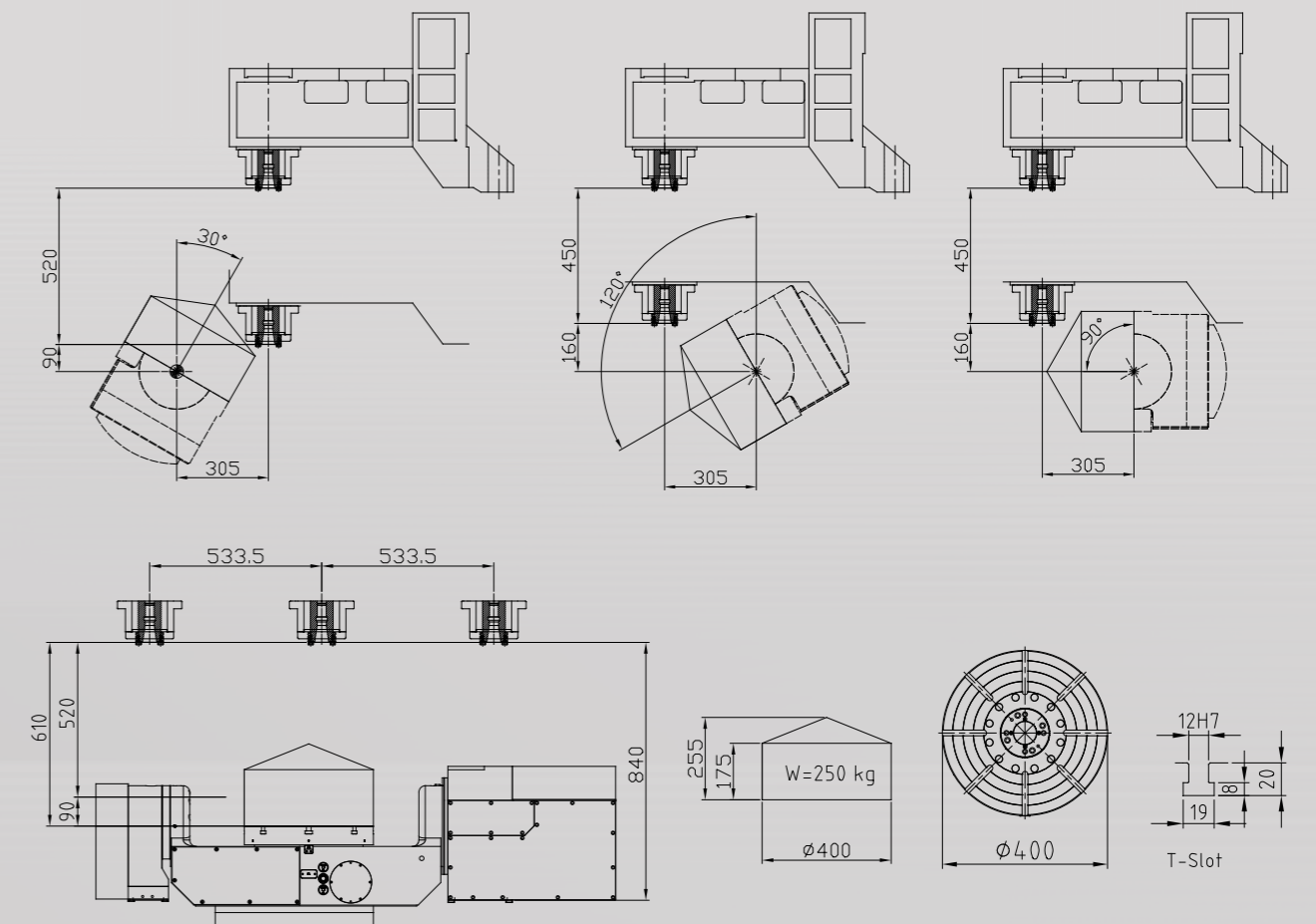
UC400 Layout



UC250 Machining Area



UC400 Machining Area

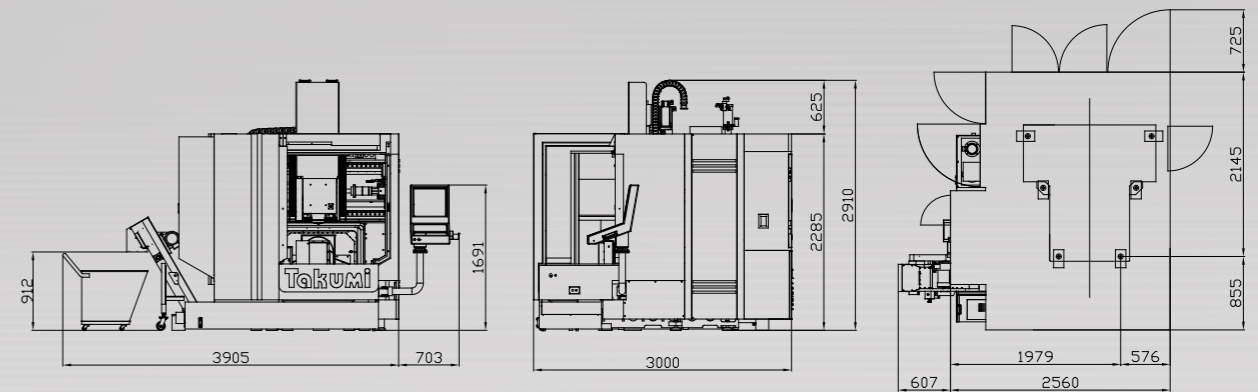




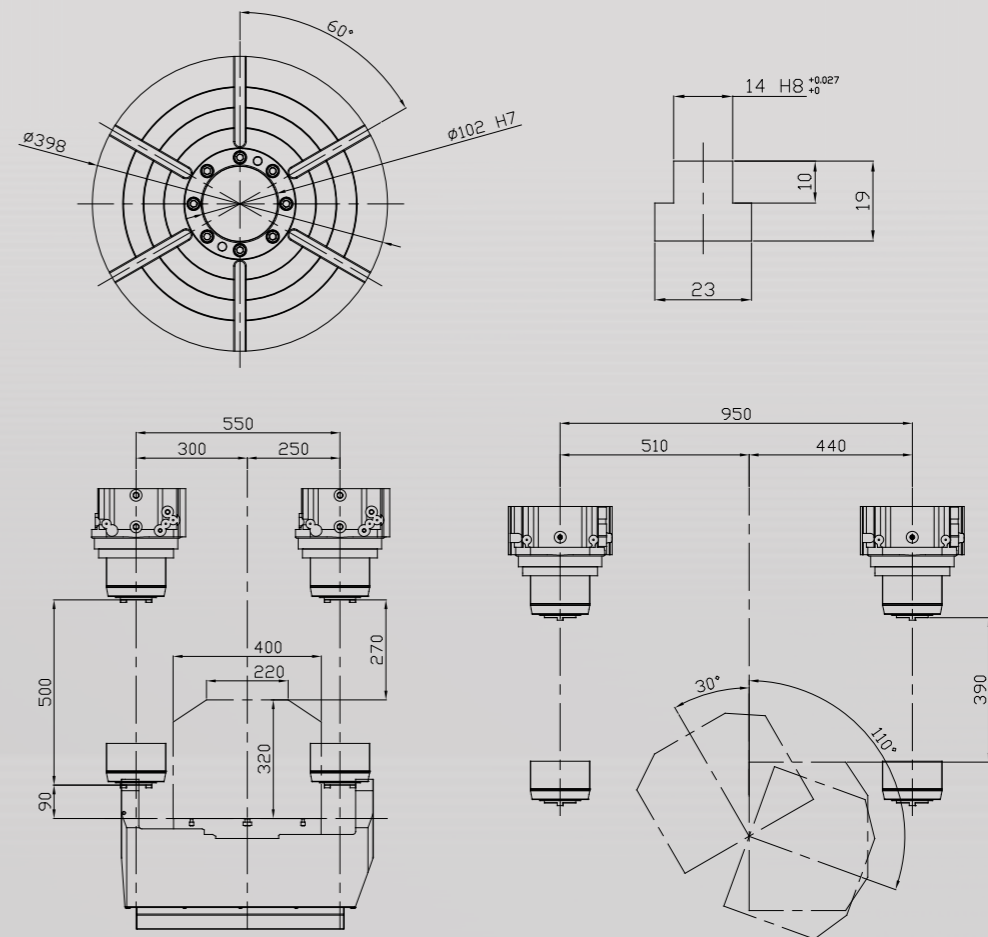
U400 | U600



U400 Layout

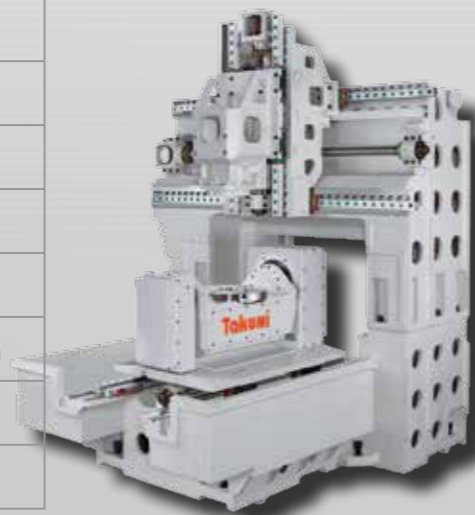


U400 Machining Area



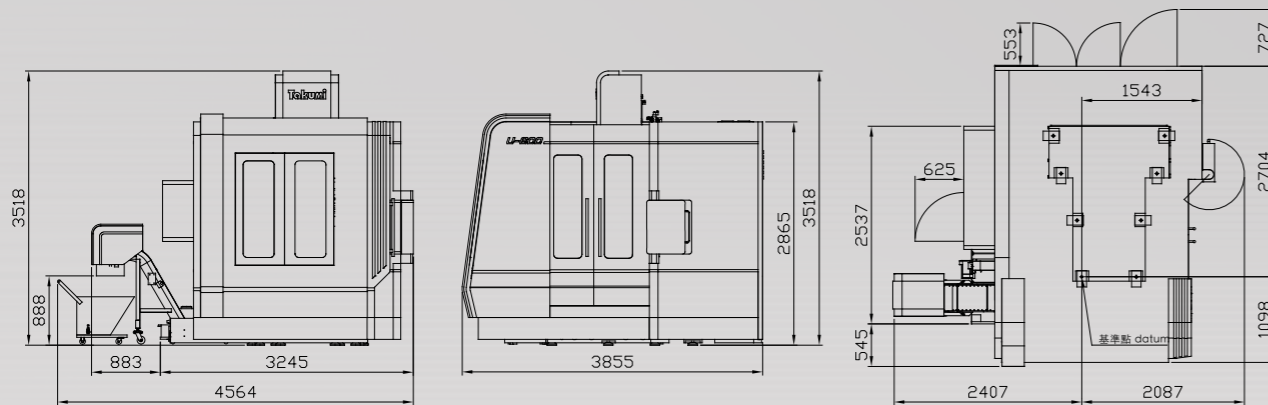
- Double-column style with trunnion mounted directly to saddle along the Y-axis
- Heavy-duty roller type linear motion guides
- Direct-drive spindle
- Heidenhain TNC640 control

	U400	U600
Travels	550 x 950 x 500 mm	660 x 1020 x 500 mm
Table / capacity	Ø 398 mm / 250 kg	Ø 600 mm / 500 kg
Range (A/C)	+30° -110° / 360°	+30° -110° / 360°
Spindle	15,000 rpm / BBT40	15,000 rpm / BBT40
kW (cont/S6-40%)	10 / 14 kW	10 / 14 kW
ATC	30 stations swing arm	40 stations swing arm
Rapid traverse	36 / 36 / 36 m/min	36 / 36 / 36 m/min
Weight	9,100 kg	14,000 kg

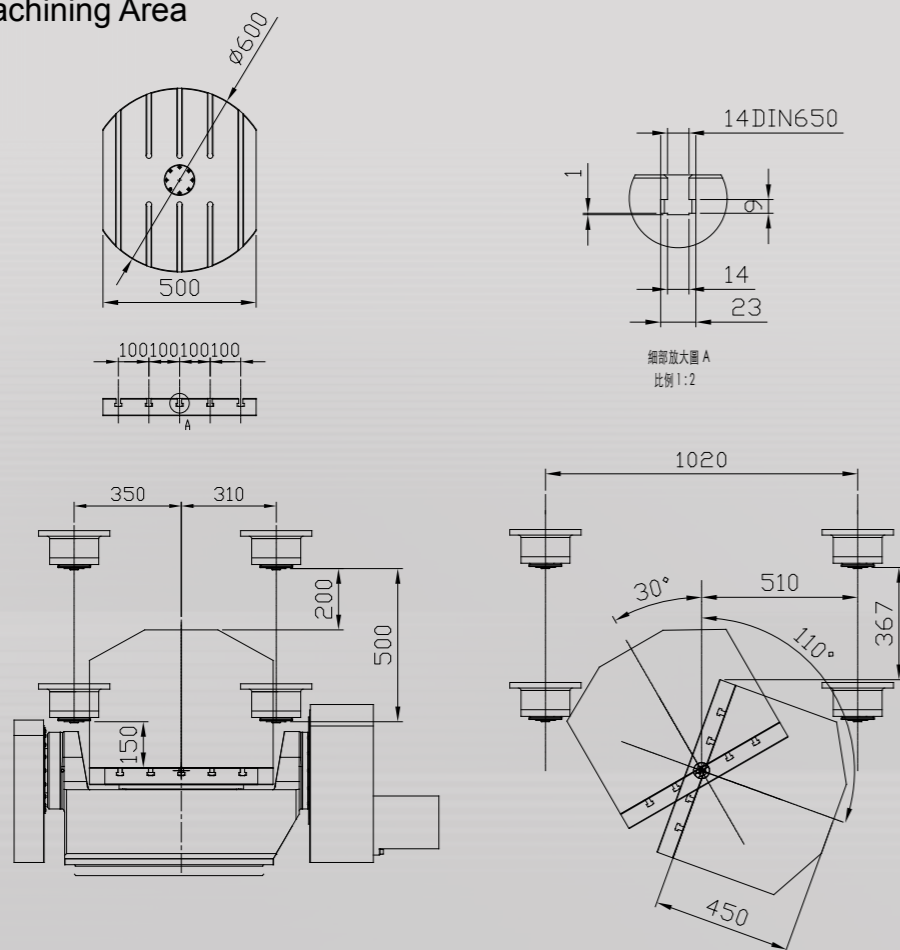


Machine shown with optional equipment

U600 Layout



U600 Machining Area



- Very fast and accurate, best solution for simultaneous 5-axis production parts
- Massive box design with gantry
- Triple torque tables with one 100 rpm C-axis and two 100 rpm A-axis
- Heidenhain TNC640 control

	U800
Travels	800 x 1150 x 750 mm
Table / capacity	$\phi 800$ mm / 1000 kg
Range (A/C)	+/- 120° / 360°
Spindle	20,000 rpm / HSK63A
kW (cont/S6-40%)	25 / 40 kW
ATC	32 stations armless
Rapid traverse	48 / 48 / 48 m/min
Weight	18,000 kg

Machine shown with optional equipment

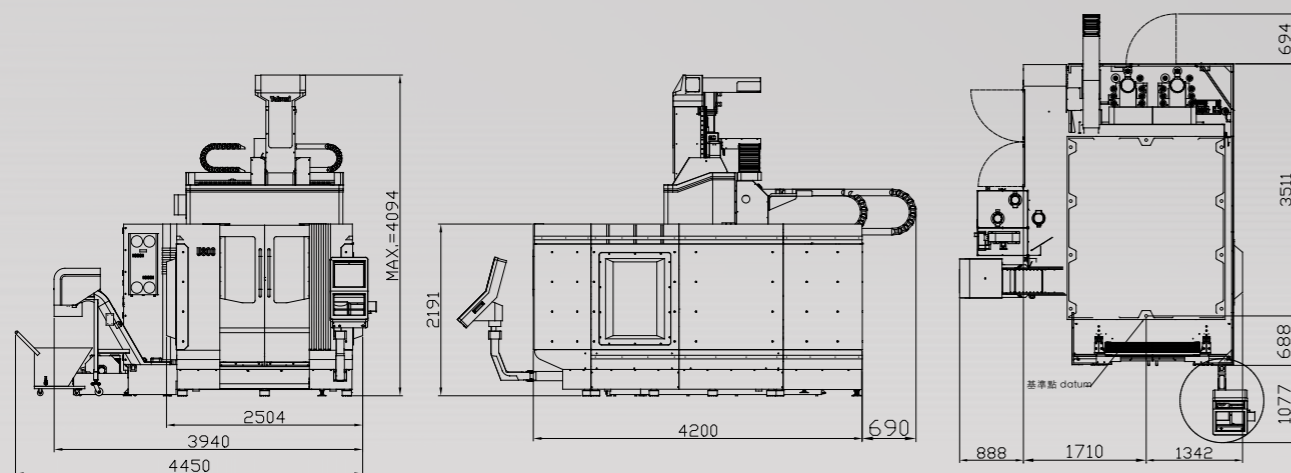


Takumi

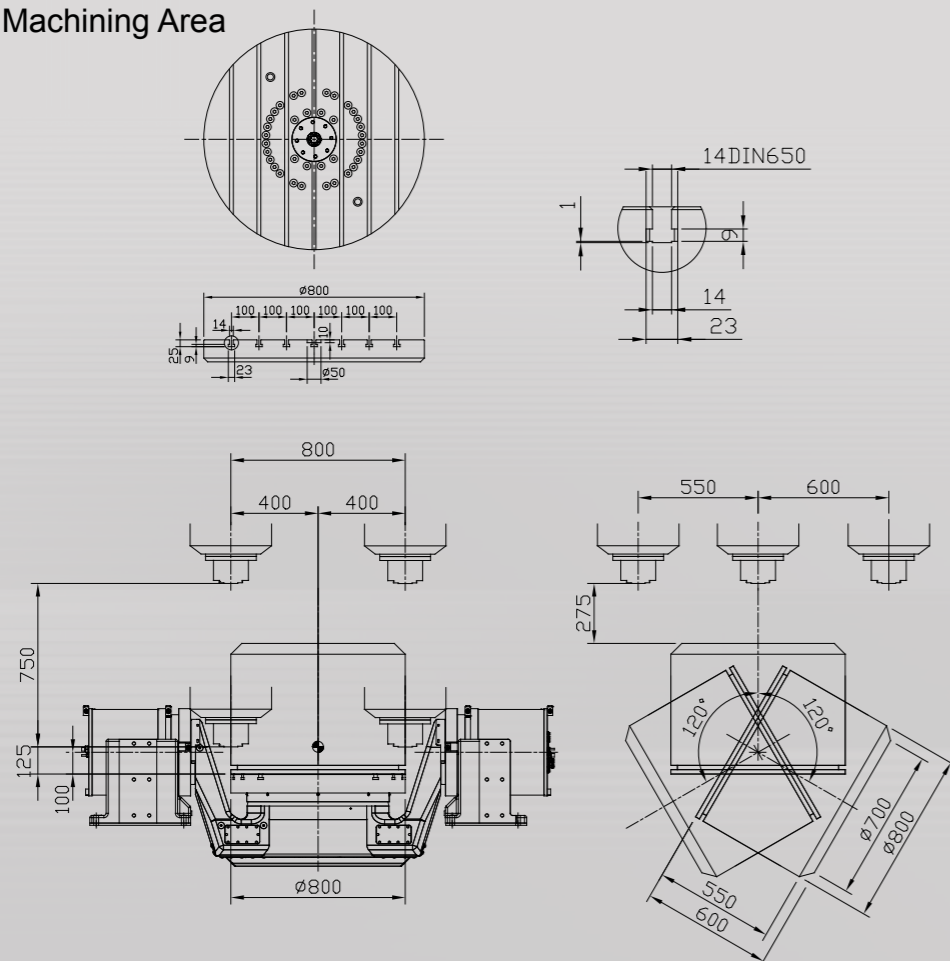
U Series

UB3222

U800 Layout



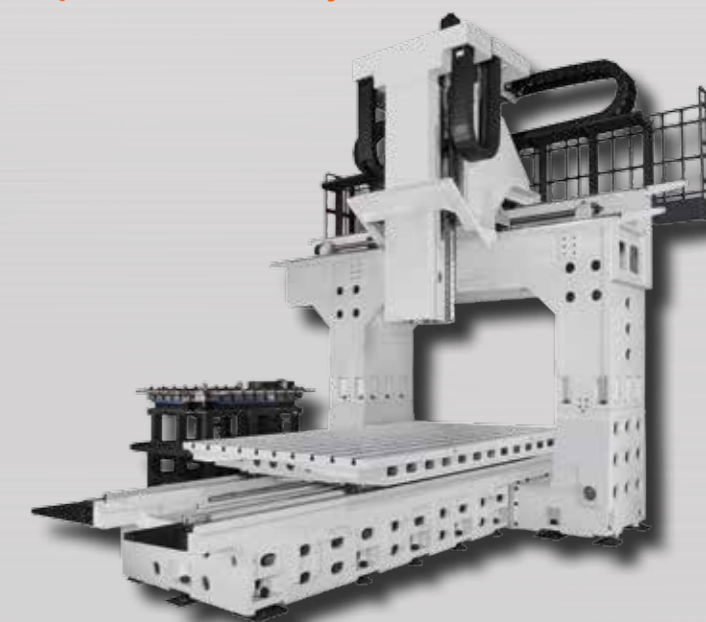
U800 Machining Area



- Designed for high-speed, high-efficiency applications
- Double-column style with heavy duty linear motion guide rollers
- German Kessler 2-axis head with high-torque B-axis driven by dual direct drive motors

	UB3222
Travels	3200 x 2250 x 1200 mm
Table / capacity	3320 x 2100 mm / 8500 kg
Range (C/B)	+/- 220° / +/- 105°
Spindle	12,000 rpm / HSK100A
kW (cont/S6-40%)	25 / 30 kW
ATC	32 stations armless
Rapid traverse	16 / 16 / 16 m/min
Weight	42,000 kg

Machine shown with optional equipment



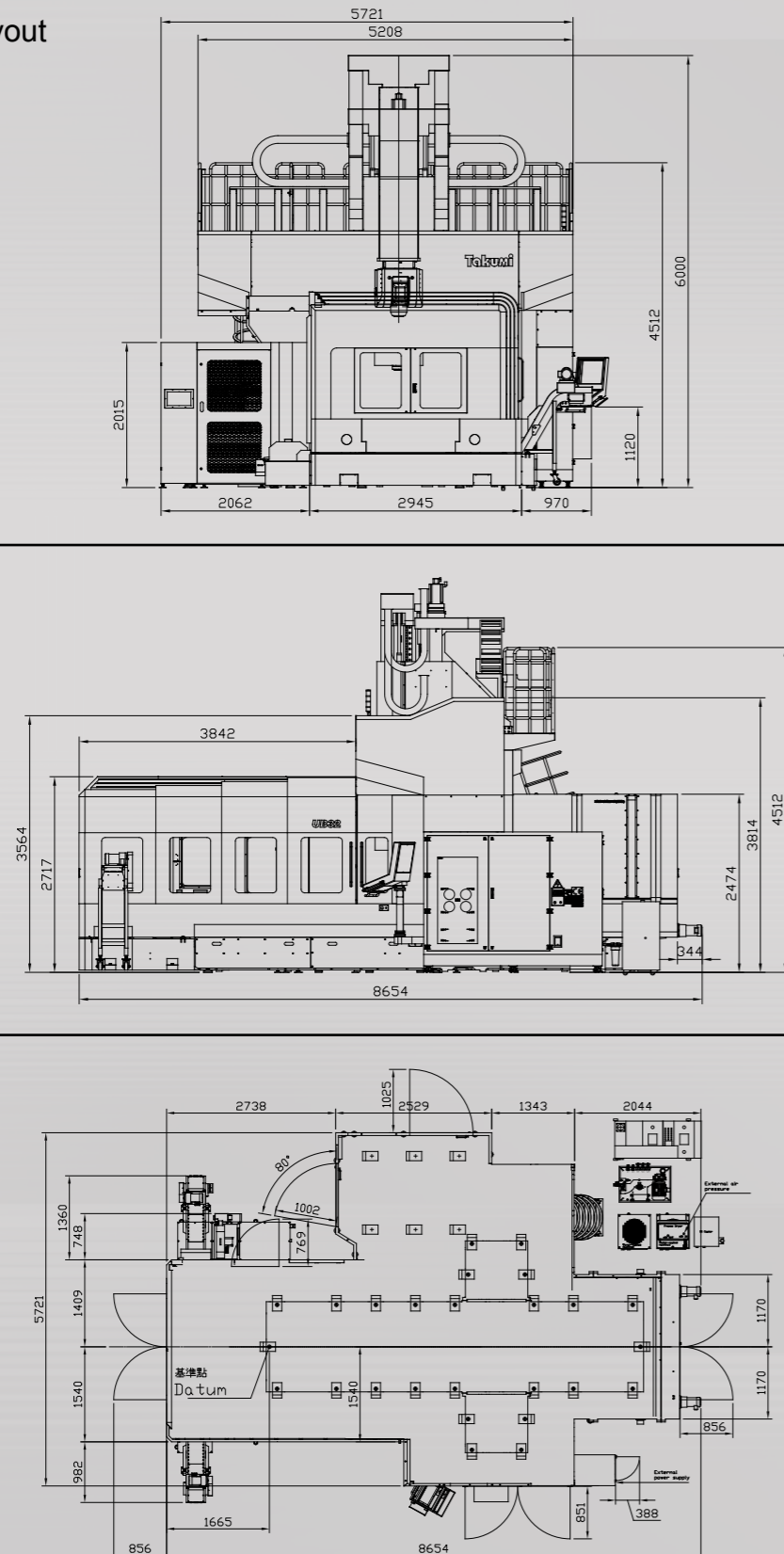
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Machine specifications can be found on page 16

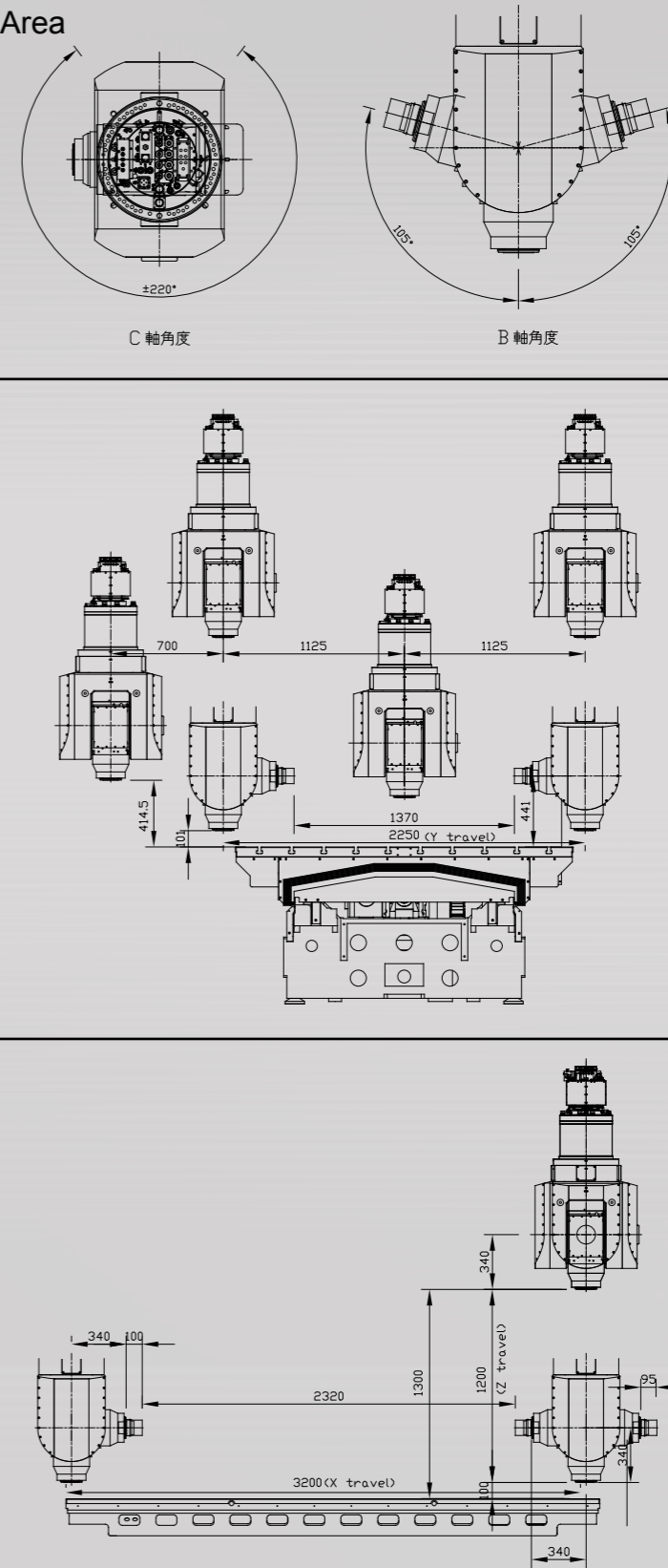


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UB3222 Layout



UB3222 Machining Area

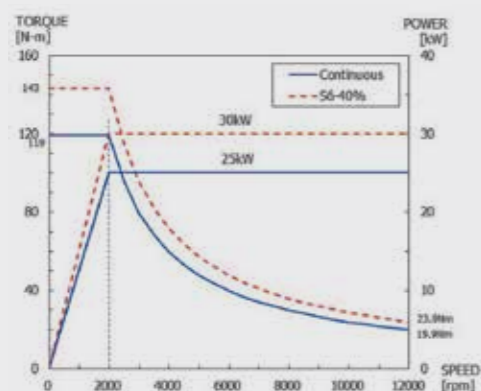




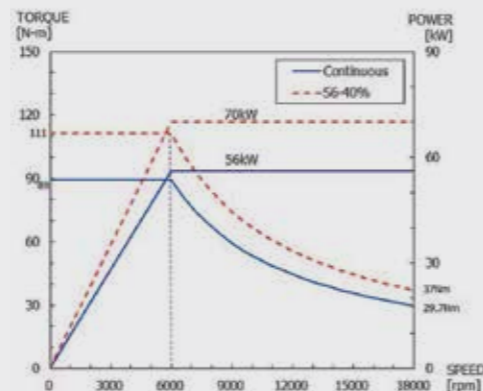
Spindles

Accessories

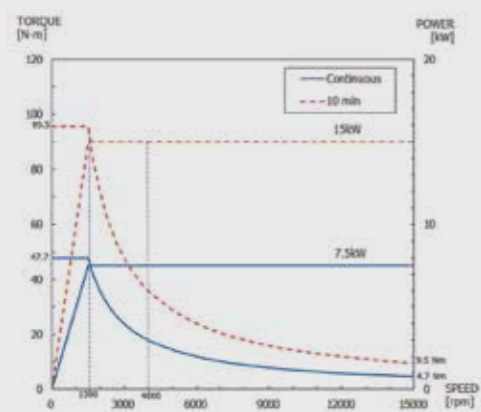
Spindle Power & Torque Chart



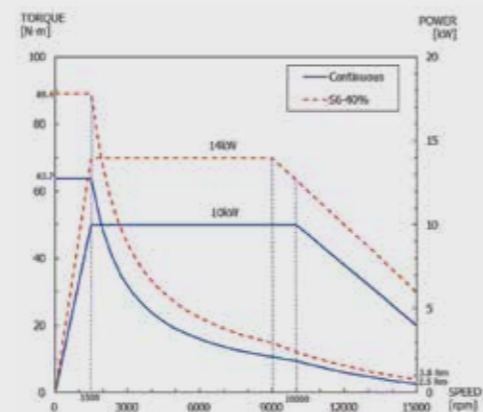
UB3222 / 12,000rpm (standard)



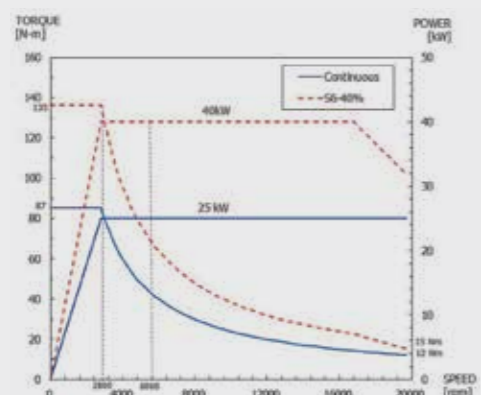
UB3222 / 18,000rpm (optional)



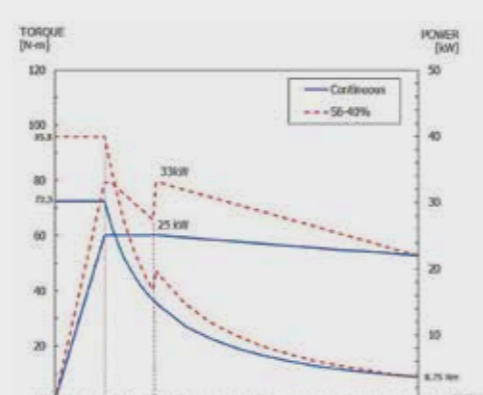
UC250,UC400 / 15,000rpm (standard)



U400,U600 / 15,000rpm(standard)



U800 / 20,000rpm (standard)
U400,U600 / 20,000rpm (optional)



U400,U600,U800 / 24,000rpm (optional)

UC250

Standard:

- FANUC Oi-MF controller
- 15,000 rpm, BBT40, Direct-drive spindle
- 24T, Arm type ATC
- Rotary encoder for rotary axis
- Spindle oil air lubrication device
- Spindle cooling system
- Centralized automatic lubrication system
- Air blast through spindle taper
- Cutting coolant system
- Full enclosed splash guard

- Washing gun & air gun
- Coolant tank & coolant flushing system
- Steel belt type chip conveyor
- Oil skimmer
- Working lamp
- 3-color signal lamp
- Heat Exchange
- Foundation pads & bolts kits
- Tool kits
- Operation manuals , PLC& electrical circuit diagrams

Optional:

- 32T, Arm type tool magazine
- 3-axis linear scales
- Scraper type chip conveyor
- Air through spindle system
- Coolant through spindle system (30/70 bar)
- Cutting oil mist device

- Oil mist collection device
- Automatic tool length measurement system
- Automatic workpiece measurement system
- CE safety standard
- Transformer

UC400

Standard:

- FANUC Oi-MF controller
- 15,000 rpm, BBT40, Direct-drive spindle
- 24T, arm type ATC
- Rotary encoder for rotary axis
- Spindle oil air lubrication device
- Spindle cooling system
- Centralized automatic lubrication system
- Air blast through spindle taper
- Cutting coolant system
- Full enclosed splash guard
- Washing gun & air gun
- Coolant tank & coolant flushing system

- Steel belt type chip conveyor
- Oil skimmer
- Working lamp
- 3-color signal lamp
- Heat exchange
- Foundation pads & bolts kits
- Tool kits
- Operation manuals , PLC& electrical circuit diagrams

Optional:

- 32T, Arm type ATC
- 3-axis linear scales
- Scraper type chip conveyor
- Air through spindle system
- Coolant through spindle system (30/70 bar)
- Cutting oil mist device

- Oil mist collection device
- Automatic tool length measurement system
- Automatic workpiece measurement system
- CE safety standard
- Transformer

U400

Standard:

- HEIDENHAIN TNC 640 controller
- 15,000 rpm, BBT40, Direct-drive spindle
- 30T, Arm type ATC
- Rotary encoder for rotary axis
- 3-axis linear scales
- DCM anti-collision monitoring function
- Spindle oil air lubrication device
- Spindle cooling system
- Centralized automatic lubrication system
- Air blast through spindle taper
- Cutting coolant system
- Full enclosed splash guard
- Washing gun & air gun

- Coolant tank & coolant flushing system
- Steel belt type chip conveyor
- Working lamp
- 3-color signal lamp
- Air conditioner
- Oil skimmer
- Foundation pads & bolts kits
- Tool kits
- Operation manuals , PLC& electrical circuit diagrams
- CE safety standard

Optional:

- 24,000 rpm , HSK-A63 , Built-in type spindle
- 20,000 rpm, HSK-A63, Built-in type spindle
- 50T, Arm type ATC
- Air through spindle system
- Coolant through spindle system (30/70 bar)
- Scraper type chip conveyor

- Cutting oil mist cooling device
- Oil mist collection device
- Automatic tool length measurement system
- Automatic workpiece measurement system
- Transformer



Accessories

Specifications

U600

Standard:

- HEIDENHAIN TNC 640 controller
- 15,000 rpm, BBT40, Direct-drive spindle
- 40T, Arm type ATC
- Rotary encoder for rotary axis
- 3-axis linear scales
- DCM anti-collision monitoring function
- Spindle oil air lubrication device
- Spindle cooling system
- Centralized automatic lubrication system
- Air blast through spindle taper
- Cutting coolant system
- Full enclosed splash guard
- Washing gun & air gun
- Coolant tank & coolant flushing system
- Steel belt type chip conveyor
- Working lamp
- 3-color signal lamp
- Air conditioner
- Oil skimmer
- Foundation pads & bolts kits
- Tool kits
- Operation manuals , PLC& electrical circuit diagrams
- CE safety standard

Optional:

- 24,000 rpm , HSK-A63 , Built-in type spindle
- 20,000 rpm, HSK-A63, Built-in type spindle
- 50T, Arm type tool magazine
- Air through spindle system
- Coolant through spindle system (30/70 bar)
- Scraper type chip conveyor
- Cutting oil mist cooling device
- Oil mist collection device
- Automatic tool length measurement system
- Automatic workpiece measurement system
- Transformer

U800

Standard:

- HEIDENHAIN TNC 640 controller
- 20,000 rpm , HSK-A63 , Built-in type spindle
- 32T, Flat type ATC
- Rotary Encoder for rotary axis
- 3-axis linear scales
- DCM anti-collision monitoring function
- Spindle oil air lubrication device
- Spindle cooling system
- Centralized automatic lubrication system
- Air blast through spindle taper
- Cutting coolant system
- Full enclosed splash guard
- Washing gun & air gun
- Coolant tank & coolant flushing system
- Steel belt type chip conveyor
- Working lamp
- 3-color signal lamp
- Air conditioner
- Oil skimmer
- Foundation pads & bolts kits
- Tool kits
- Operation manuals , PLC& electrical circuit diagrams
- CE safety standard

Optional:

- 24,000 rpm , HSK-A63 , Built-in type spindle
- 64T, Flat type ATC (32Tx2)
- Air through spindle system
- Coolant through spindle system (30/70 bar)
- Scraper type chip conveyor
- Cutting oil mist cooling device
- Oil mist collection device
- Automatic tool length measurement system
- Automatic workpiece measurement system
- Transformer

UB3222

Standard:

- HEIDENHAIN TNC 640 controller
- 12,000 rpm , HSK-A100 , Built-in type spindle
- 32T, Flat type ATC
- Rotary encoder for rotary axis
- 3-axis linear scales
- DCM anti-collision monitoring function
- Spindle oil air lubrication device
- Spindle cooling system
- Centralized automatic lubrication system
- Air blast through spindle taper
- Cutting coolant system
- Full enclosed splash guard
- Washing gun & air gun
- Coolant tank & coolant flushing system
- Steel belt type chip conveyor
- Working lamp
- 3-color signal lamp
- Air conditioner
- Oil skimmer
- Foundation pads & bolts kits
- Tool kits
- Operation manuals , PLC& electrical circuit diagrams
- CE safety standard

Optional:

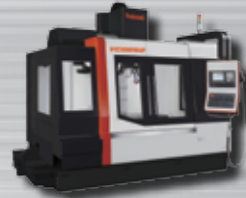
- 18,000 rpm , HSK-A63 , Built-in type spindle
- 48T, Flat type ATC
- 60T, Flat type ATC
- Air through spindle system
- Coolant through spindle system (30/70 bar)
- Scraper type chip conveyor
- Cutting oil mist cooling device
- Oil mist collection device
- Automatic tool length measurement system
- Automatic workpiece measurement system
- Transformer

	Unit	UC250	UC400	U400	U600	U800	UB3222
Travel							
Controller	-	FANUC 0i MF	FANUC 0i MF	Heidenhain TNC 640	Heidenhain TNC 640	Heidenhain TNC 640	Heidenhain TNC 640
Axes	-	4+1	4+1	5	5	5	5
X axis	mm	860	1,067	550	660	800	3,200
Y axis	mm	520	610	950	1,020	1,150	2,250
Z axis	mm	610	520	500	500	750	1,200
Distance from spindle nose to table	mm	65~675	90~610	90~590	160-660	125~875	100-1300
Table							
Table dimension	mm	Ø255	Ø400	Ø398	Ø600	Ø800	3320x2100
Max. load	kg	200	250	250	500	1,000	8500
T-slot	mm	N°4 WIDTH 12 - 90°	N°8 WIDTH 12-45°	N°6 WIDTH 14 - 60°	14x100x7	14x100x7	22x10x200
Spindle							
Type	-	Direct-drive	Direct-drive	Direct-drive	Direct-drive	Built-in	Built-in
Spindle speed	rpm	15,000	15,000	15,000	15,000	20,000	12,000
Motor power	kW	9/15 (S3-25%)	9/15 (S3-25%)	10/14 (S6-40%)	10/14 (S6-40%)	25/40 (S6-40%)	25/30 (S6-40%)
Spindle taper	-	BBT-40	BBT-40	BBT-40	BBT-40	HSK-A63	HSK-A100
Bearing lubrication	-	Grease	Grease	oil-air	oil-air	oil-air	oil-air
Feed rate							
Rapid traverse (X/Y/Z)	m/min	36x36x36	36x36x36	36x36x36	36x36x36	48x48x48	16/16/16
Cutting feed rate	m/min	12	12	20	20	24	10
Swiveling axis							
Rotary table diameter	mm	Ø255	Ø400	Ø398	Ø600	Ø800	N/A
Rotation range	Degree	C-axis 360	C-axis 360	C-axis 360	C-axis 360	C-axis 360	C-axis ±220
Positioning accuracy	"	C-axis ±10	C-axis ±10	C-axis ±5	C-axis ±5	C-axis ±5	C-axis ±2
Rotation speed	rpm	25	22.2	25	33	100	100
Rotation torque (cont.)	Nm	342	540	756	466	1,870	810
Turning axis							
Rotation range	Degree	A-axis +30 -110	A-axis +30 -110	A-axis +30 -110	A-axis +30 -110	A-axis ±120	B-axis ±105
Positioning accuracy	"	A-axis ±10	A-axis ±10	A-axis ±5	A-axis ±5	A-axis ±5	B-axis ±5
Rotation speed	rpm	16.6	22.2	25	25	80	100
Rotation torque (cont.)	Nm	720	2880	756	1,487	1870x2	382
ATC & Magazine							
ATC type	-	Arm	Arm	Arm	Arm	Flat type	Flat type
Magazine capacity	pcs	24	24	30	40	32	32
Max. tool diameter/next pocket empty	mm	75/120	75/120	75/150	75/150	90/125	125
Max. tool length	mm	250	250	300	300	300	300
Max. tool weight	kg	7	7	7	7	7	15
Space & System requirement							
Coolant tank capacity	L	300	400	340	560	540	1225
Pneumatic pressure	kgf/cm²	6	6	6	6	6	6
Electrical powerconsumption	kVA	40	60	60	60	80	70
Machine net weight	kg	6,700	7,500	9,100	14,000	18,000	42,000
Machine size (L x W x H)	mm	2160x2660x3300	2250x3200x3100	3000x2560x3170	3255x3855x3520	4200x3055x4120	8660X5730X6000

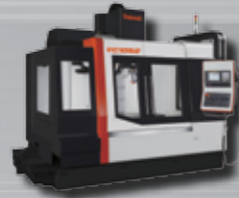
Product Line-Up



VC Series-Vertical Machining Centers | High Efficiency, Fast Rapids



VC0852



VC1052



VC1000

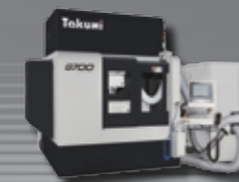


VC1200

G Series-High Speed Bridge Type Graphite Machining Centers (Dry Type)



G5



G700



G1000

V Series-Vertical Machining Centers | Heavy Duty Cutting



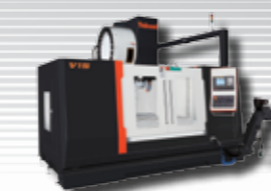
V10



V11



V12



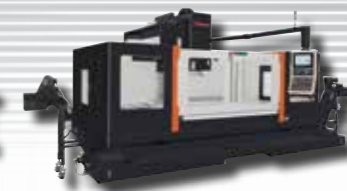
V15



V18



V20



V22



V32

H Series-High Speed Bridge Type Machining Centers | Unrivalled Performance and Accuracy



H6



H7



H10



H12



H13



H16



H22S / H22T



H32S / H32T

BC Series-Double Column Machining Centers | High Rigidity and High Precision Structure



BC2116



BC3116



BC3025



BC4025



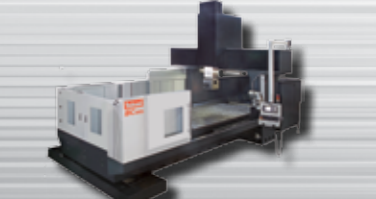
BC4030



BC5025



BC5030



BC5035

U Series-5-Axis Machining Centers | Unrivalled Performance



UC250



UC400



U400



U600



U800



UB3222



VT500

VT Series-Vertical Tapping Centers Fast Tapping

Machines shown with optional equipment