VictorTaichung

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TÜVRheinland
ID:0091003197

Vturn-Q200

Quick & Quantitative

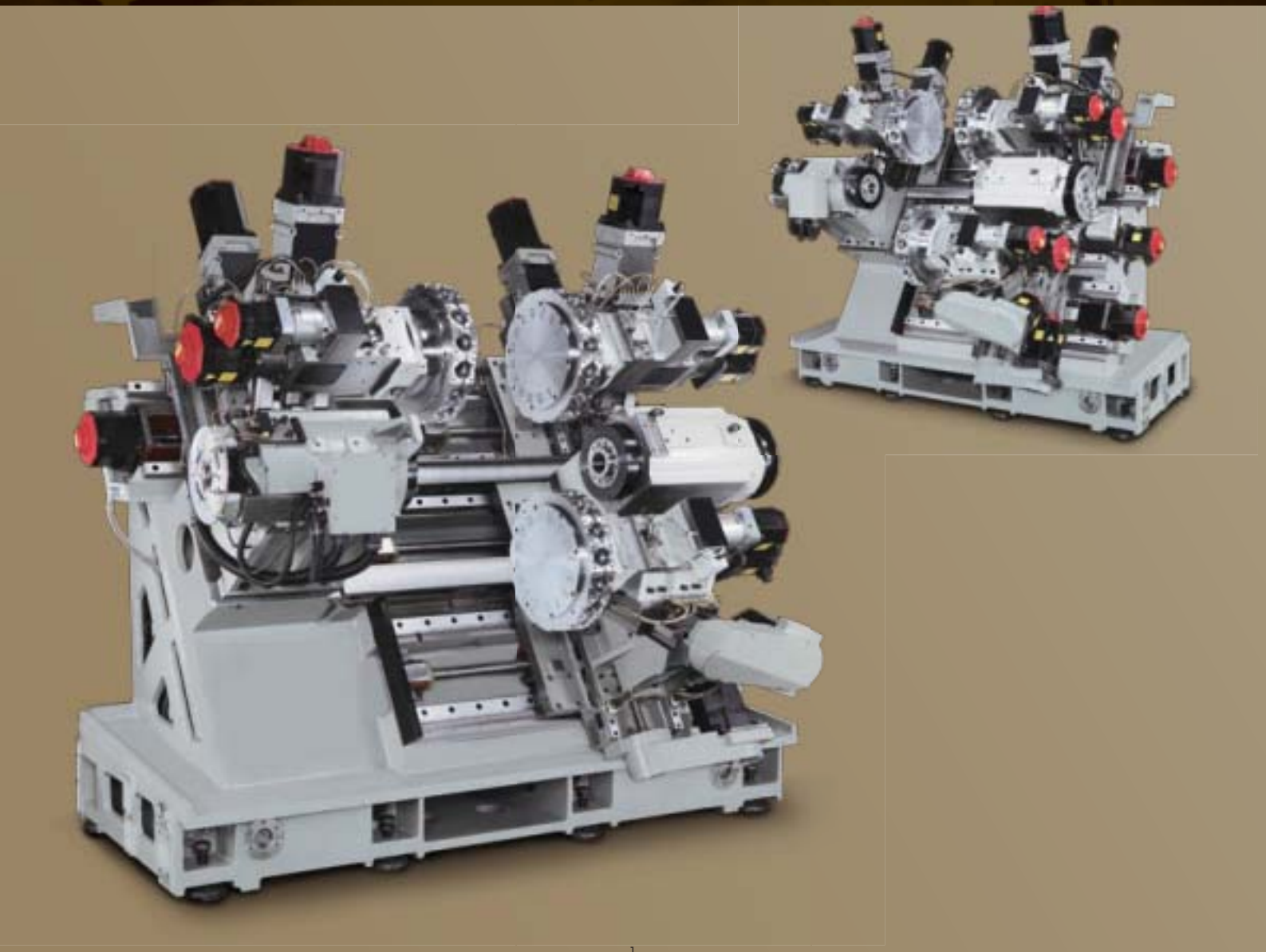
- *Three milling turrets with Y-axis*
- *Twin spindles with built-in motor*
- *Turning center with 48 live tools*
- *Built-in unmanned automation*

Victor Taichung - an established ISO-9001 & 14001 company

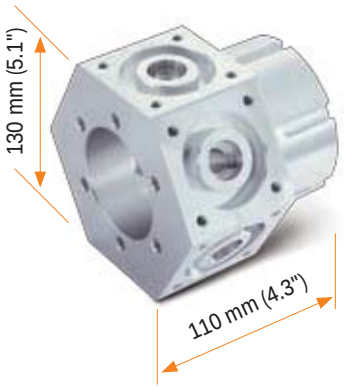
Vturn-Q200

Quick Production by Innovative 3rd Turret!

- *Minimizing the cutting time difference between OP-10 and OP-20 to balance cutting tempo.*
- *Offering sufficient 32 tools for both OP-10 and OP-20 machining applications at quicker tool exchange compared as multi-tasking lathes with ATC.*
- *Used as traveling steady rest, work rest or tailstock for more flexible applications.*
- *Turning slender shafts or drilling/tapping the symmetric holes with upper turret simultaneously ("balanced cutting")*

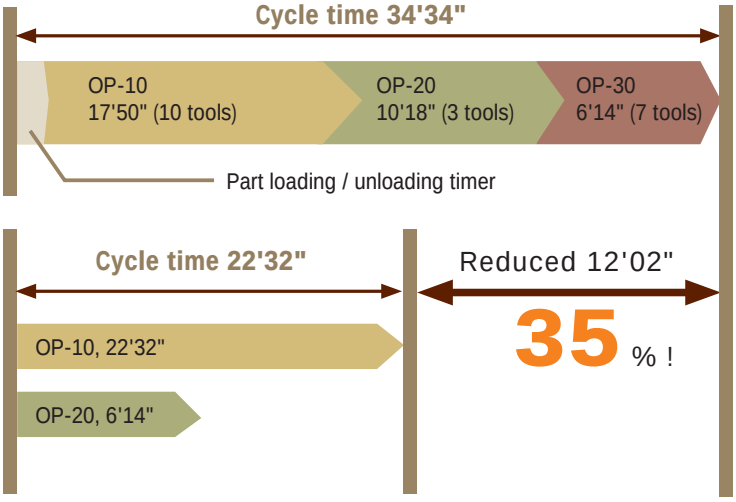


Machining Examples



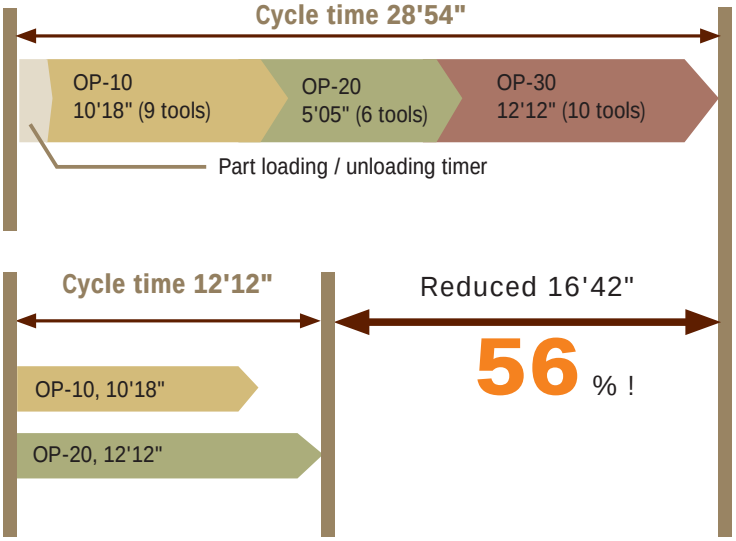
Vturn-A20YS
(2 spindles, 1 turret)

Vturn-Q200

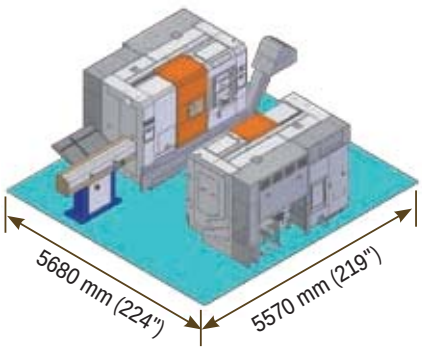


2 x Vturn-A20Y
(1 spindle, 1 turret)

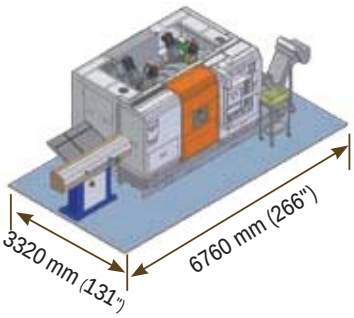
Vturn-Q200



Quantitative Production at smaller floor space



Approx. 30%
smaller!



Vturn-Q200

Quantitative Production by 3 Milling Turrets with Y-axis!

- *Y-axis (±45mm) on all 3 servo turrets.*
- *48 tool stations with BMT-55 interface.*
- *High torque at low milling rpm.*
- *Twin built-in spindles.*

T1
BMT-55
16 live tools

S1
Left spindle
22/25 kW
5000 rpm

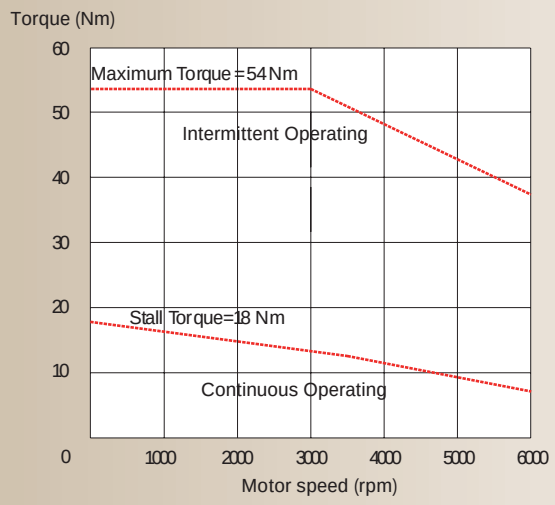
T2
BMT-55
16 live tools

VICTOR-TAICHUNG

22 Nm (4.5kW) Milling Motor x 3

T3

BMT-55
16 live tools



Fanuc α 22/6000is

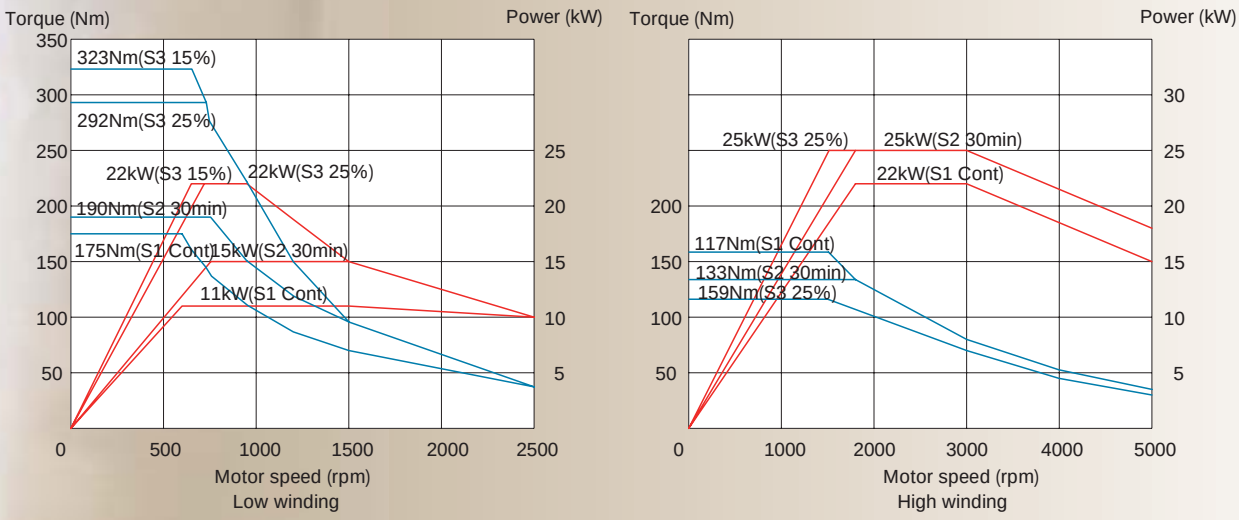
S2

Right spindle
22/25 kW
5000 rpm

S1↔S2

12 sec.
(2500 rpm)

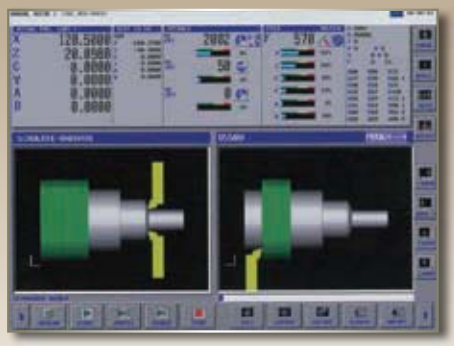
22/25 kW Built-in Spindle x 2



Fanuc α BiI 170S_8000 Type M

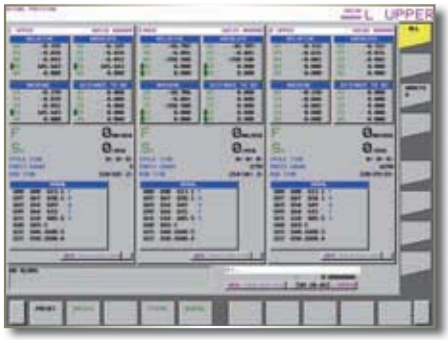
Fanuc 31i-B control with 15" color graphics

With 15" LCD included as standard, Victor Taichung's Fanuc 31i-B control package displays technical information for individual turret in one screen to let the machine operation become an easy job without switching different turret system. The 3D cutting simulation can be executed in MGI (Manual Guide i) and 2D on-line cutting by 3 tools (moving with turret during cutting along the part profile) on BOTH spindles can be done simultaneously.



Cutting Simulation in MGI (3D)

Fanuc "air bag" function (DTRQ: Unexpected Disturbance Torque detection) has been integrated into NC package to minimize damages caused by faulty operation. Unique feature additional monitor (Touch Panel) developed by Victor Taichung releases more information about machine status and sample programs for easier operation and maintenance.

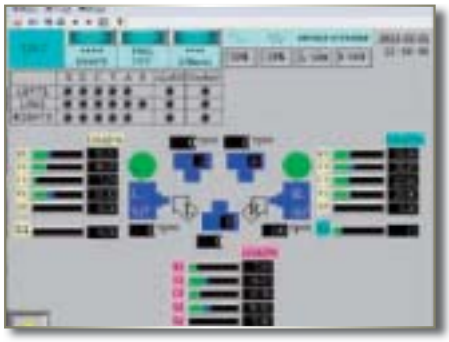


3 turret system in one screen

Tool offset setting & display

Cutting paths on 2 parts in MGI

Interactive menu



Machine status in one page

Energy saving for all peripherals

Victor Taichung's Fanuc 31i-B Control Specification

STANDARD:

ITEM	SPECIFICATION	DESCRIPTION
Control System:		
1	Control model	Fanuc 31i-B 3-path
2	Visual display unit	15" color LCD
3	Keyboard unit	Separate type MDI unit (standard keys) and extra Touch panel with command Keys
4	Unexpected disturbance torque detection ("Air bag")	Std.
Axes and Spindle control:		
1	Max. Controlled Axes	20
2	Simultaneously controlled axes	4 (L-Upper X1,Z1,C1 Y1, A1) + 5 (Lower X2,Z2,C2, Y2,A2,E2) + 4(R-Upper X3,Z3,C3 Y3, A3)
3	Spindles	2
4	Synchronous axes	Std. (twin spindles)
Input command:		
1	Least input increment	X,Z,Y,E: 0.001mm/0.0001 inch.
2	Least command increment	X: 0.0005mm, Z/Y/E: 0.001mm, C: 0.001deg.
3	Maximum programmable dimension	±999999.999mm/±39370.0767inch ±999999.999deg
4	Absolute / Incremental programming	X,Z,C,Y,E (absolute only for E) / U,W,H,V
5	Decimal input	Std.
6	Program code	EIA / ISO automatic recognition
7	Program storage memory	Back up by battery
8	Inch / Metric conversion	G20 / G21
9	Programmable data input	G10
Feed functions:		
1	Cutting feed (when AI contouring control is not executed)	X,Z,Y,E: 1-4800mm/min (0.01-188inch/min) B,C: 1-4800deg/min B.C: 0.01-4800.0000min/rev. (0.000001-50.000000inch/rev)
2	Dwell	G04
3	Feed per minute/ rev.	G98 / G99
4	Thread cutting	G32
5	Thread cutting retract	Std.
6	Continuous thread cutting	Std.
7	Handle feed	Manual pulse generator (MPG) 0.001/0.01/0.1mm (per pulse)
8	Automatic acceleration/deceleration	Std.
9	Linear acc/deceleration after cutting feed interpolation	Std.
10	Rapid feed override	F0, 25%, 50%, 100%
11	Cutting feedrate override	0~150% (each 10%)
12	AI contouring control (30 blocks/path)	G5.1
Program memory:		
1	Part program storage length	2560m (1MB)
2	Part program editing	Delete, insert, change
3	Program number search	Std.
4	Sequence number search	Std.
5	Address number search	Std.
6	No. of registered programs	1000 (in total)
7	Multiple program simultaneous editing	Std.
8	DNC through memory card	Std. (excl. memory card)
9	Extended part memory editing	Std.
Programming support:		
1	Circular interpolation	Std.
2	Direct drawing dimension programming	Std.
3	Canned cycles	Std.
4	Multiple repetitive canned cycles	Std. (G70~G76)
5	Multiple repetitive canned cycles II	Std. (G70~G76 TYPE II)
6	Synchronous control	Std. (for C-axis)
7	Sub programs	Std.
8	Balance cut	G68~G69
9	Custom macro	Std.
10	Addition to custom macro common variables	Std.
11	Manual Guide i	Std.
Setting and Display:		
1	Status Display	Std.
2	Clock Function	Std.
3	Current Position Display	Std.
4	Program Display	Program name 32 characters
5	Parameter Setting and Display	Std.
6	Self Diagnosis Function	Std.
7	Alarm Display	Std.
8	Alarm History Display	60.
9	Operation History Display	Std.
10	Help Function	Std.
11	Run Hour and Parts Count Display	Std.
12	Actual Cutting Feedrate Display	Std.
13	Display Spindle Speed and T Code At All Screens	Std.
14	Dynamic Graphic Display	Std. (Available in MGI by another function)
15	Servo Setting Screen	Std.
16	Display of Hardware and Software Configuration	Std.
17	Multi-Language Display	Std.
18	Data Protection Key	Std.
19	Erase CRT Screen Display	Std.
20	Spindle Setting Screen	Std.
Data interface:		
1	Ethernet (10/100BaseT)	Std.
2	PCMCIA port	Std. (excl. memory card)
3	RS-232-C	Std.

CONTROL OPTIONS:

1	Helical interpolation
2	Circular thread cutting (G35)
3	3-D coordinate system conversion
4	Data server (with PCB and ATA card)
5	Part Program Storage Length 5120m/2Mbyte (in total) Incl. Number of registered program 2000 (in total)
6	Part Program Storage Length 4Mbyte (in total) Incl. Number of registered program 4000 (in total)
7	Part Program Storage Length 8Mbyte (in total) Incl. Number of registered program 4000 (in total)
8	AI contour control II (G5.1 Q1) (200 blocks/path)
9	AICC II High-speed processing (600 blocks/path)
10	AICC II Look-ahead blocks expansion (1000 blocks/path)
11	Optional block skip 2-9 blocks
12	Polygon turning (by C-axis) with Victor's own PLC
13	Manual handle feed 2 (2nd MPG)
14	Profibus
15	DeviceNet

Standard Accessories

Ergonomic design for easy & safe operation

- Enclosed guarding with the high outlet chip conveyor fitted into the machine bed ensures no access to the machine during operation and no coolant leakages.
- Front removed coolant tank with High pressure coolants by Grundfos® pump SPK4-8 improves the machining quality on part surface. Oil skimmer is installed on coolant tank to separate the oil layer from coolants.
- Rotary control box with front mounted hydraulic gauges facilitate the easy adjustment and operation.
- Spindle oil cooler for twin DDS spindles.

Powerful hydraulic chuck

- Hydraulic 3-jaw hollow chuck is foot operated for easy and safe operation.

Showa® lubrication pump

- Qualified Japanese lube pumps (4 liters) assure long service life for machine operation.

Modularized Design for Simpler Applications by 2 Turrets

Vturn-Q200TTY2

- with Twin Turrets

Vturn-Q200T2Y2

- with Double Turrets.

Optional Accessories

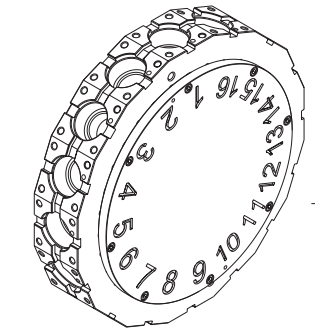
VICTOR-TAICHUNG

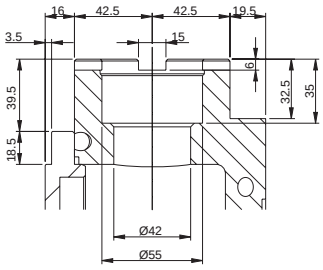
Manual Tool Presetter (Renishaw® Tool-Eye)

The detachable design of the tool presetter allows for more space for machining and measures the tool length and diameter automatically

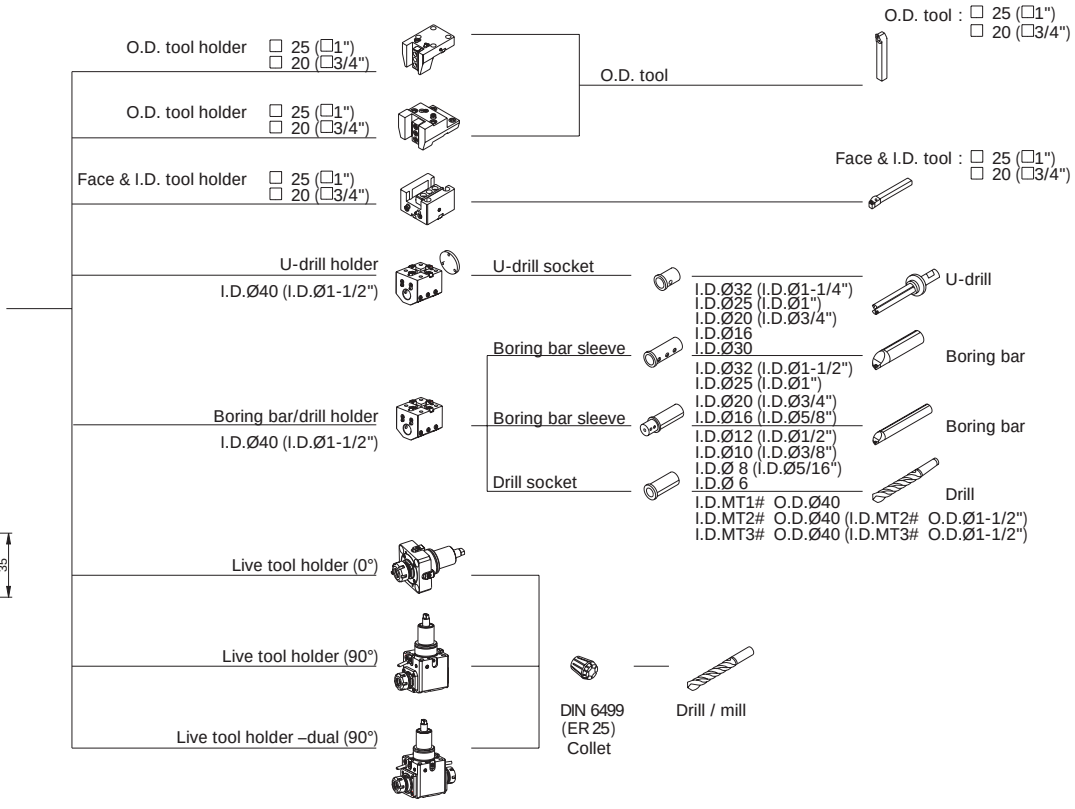
Robotic Part Catcher for Unmanned Operation

Linked to the bar feeder or work feeding system, the robotic part catcher collects the finished part and traverses outside either for manual pickup or for part receiver to consist of an unmanned machining line.

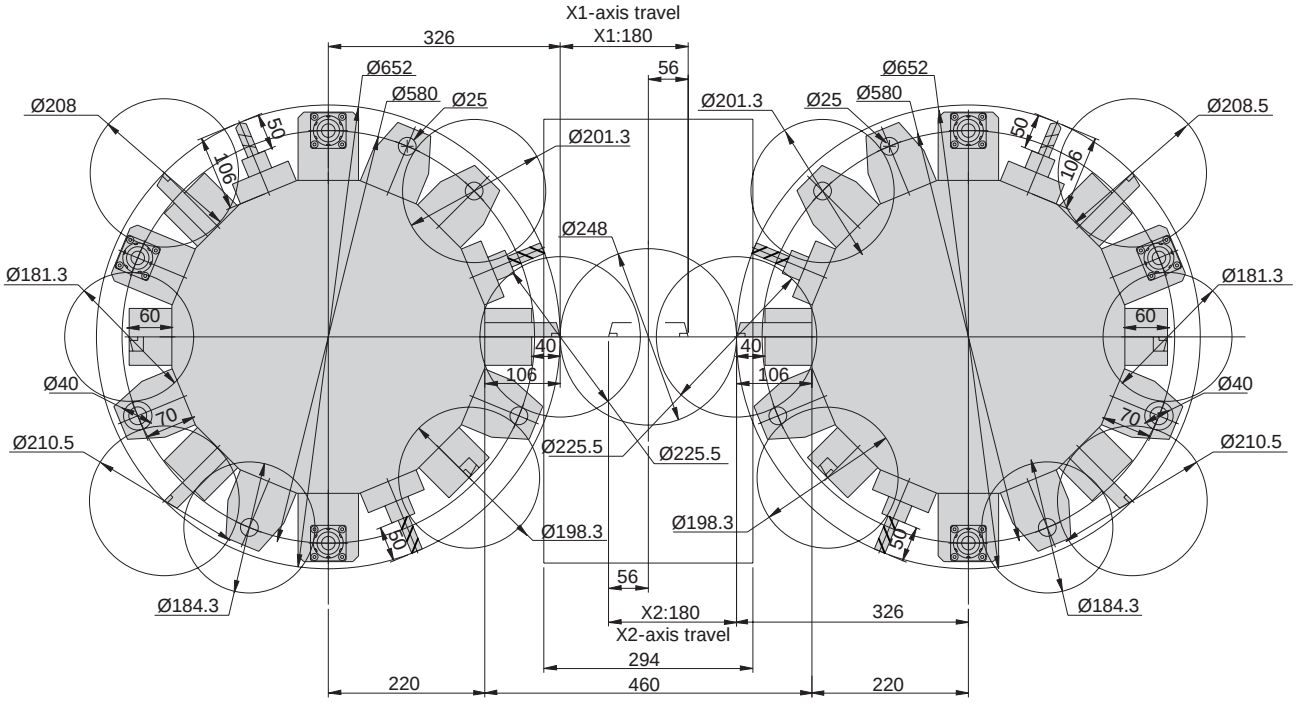




BMT-55 interface

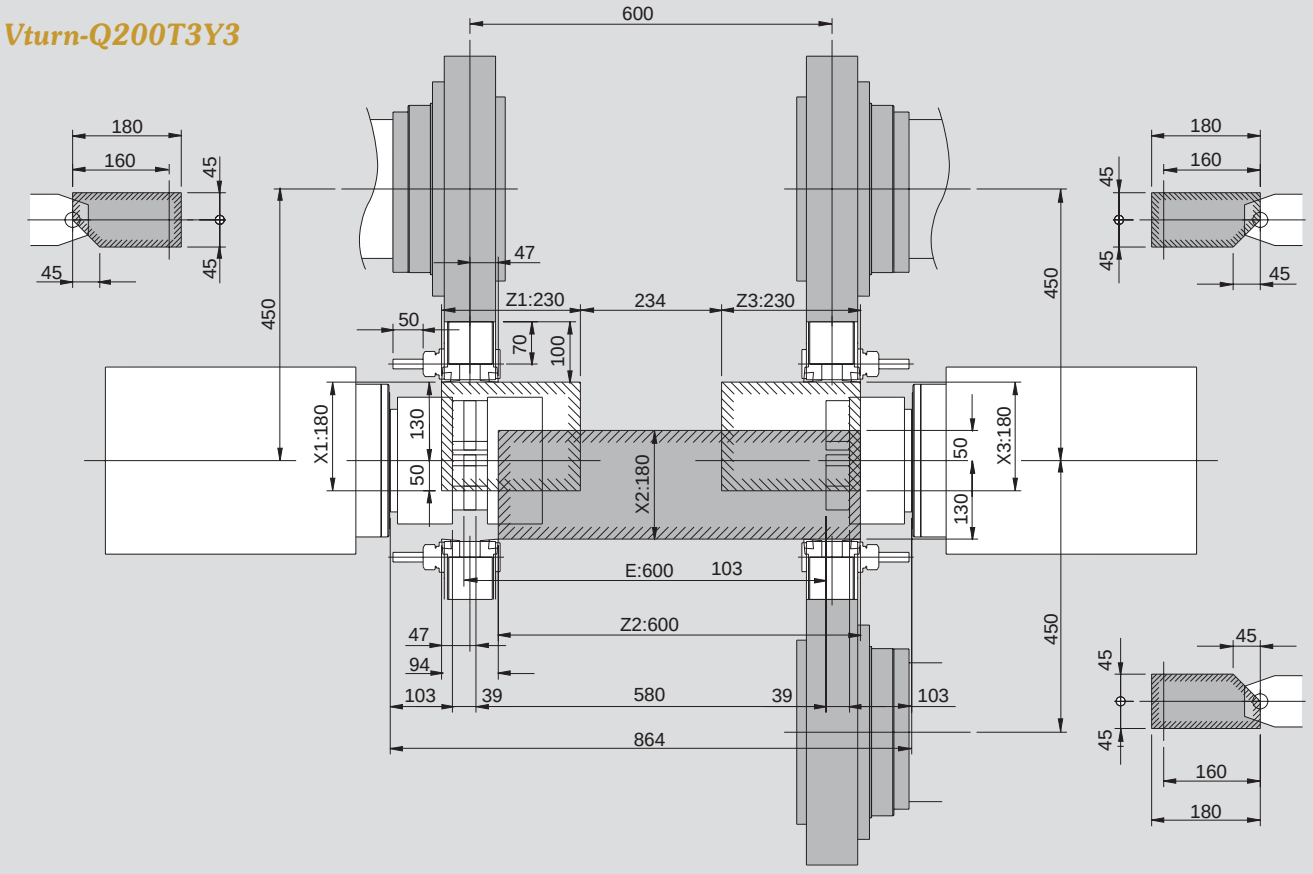


Technical Drawings

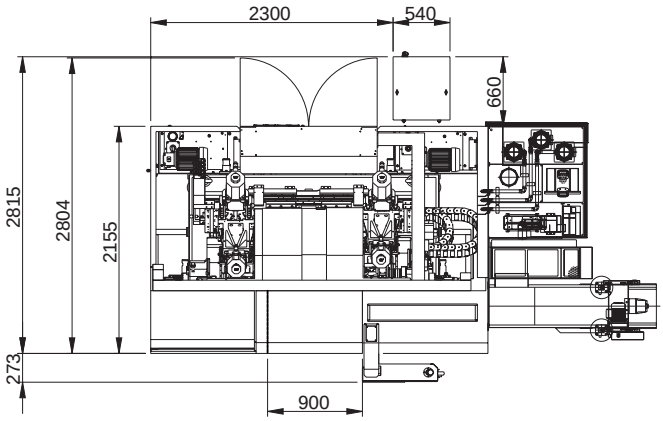


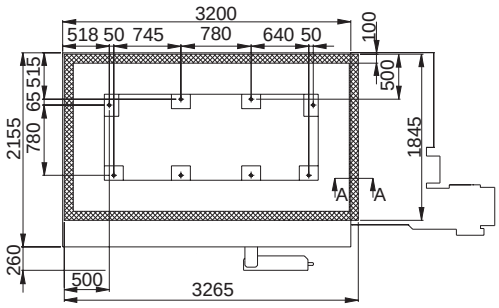
Machining Range

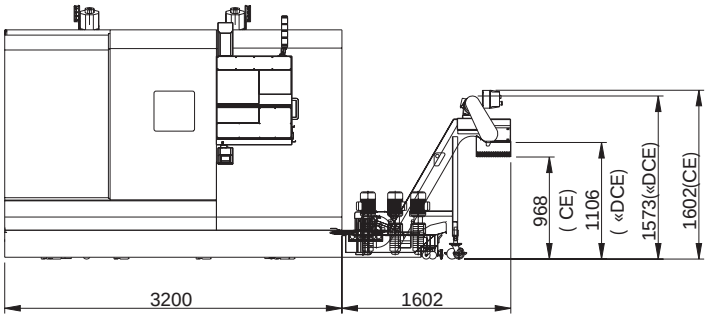
Vturn-Q200T3Y3

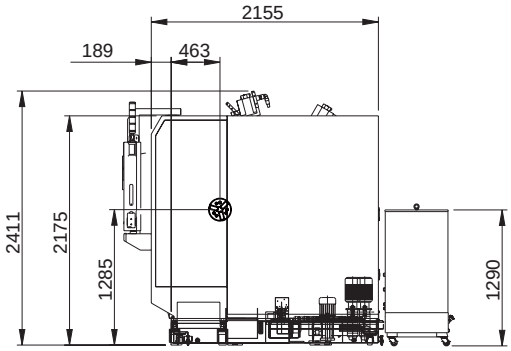


Machine Layout & Foundation

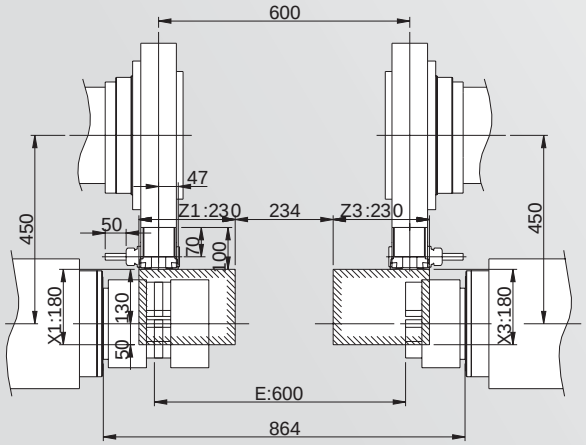




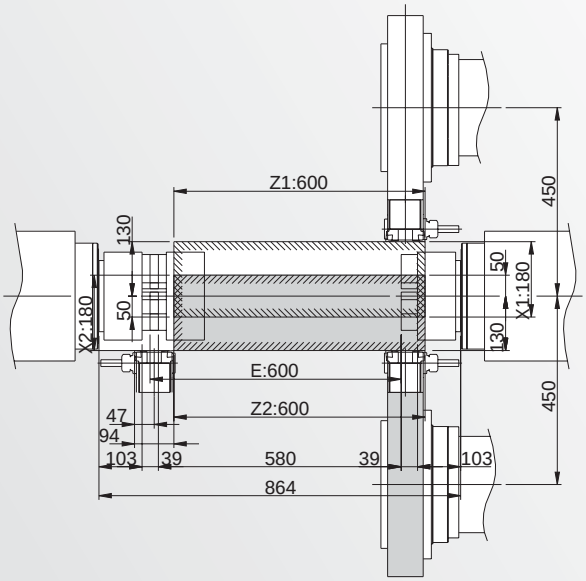




Vturn-Q200TTY2



Vturn-Q200T2Y2



Machine Specification

Items		Unit	Vturn-Q200T3Y3	Vturn-Q200TTY2	Vturn-Q200T2Y2
Capacity	Swing over bed	mm	330	330	330
	Between centers	mm	850	850	850
	Axis travel	mm	248	248	248
	Left spindle	mm	248	248	248
	Right spindle	mm	52	52	52
	Turret	mm	294	294	294
Axis travel	X1/X2/X3 axis travel	mm	180 (160+20)	180 (160+20)	180 (160+20)
	Z1/Z2/Z3 axis travel	mm	Z1/Z3: 230, Z2: 600	Z1/Z3: 230	Z1: 600, Z2: 600
	E axis travel (right spindle)	mm	600	600	600
	Y1/Y2/Y3 axis travel	mm	±45 (90)	±45 (90)	±45 (90)
	Rapid feedrate	m/min	X1/X2/X3: 24 Z1/Z2/Z3: 36 Y1/Y2/Y3: 10, E: 24	X1/X3: 24 Z1/Z3: 36 Y1/Y3: 10, E: 24	X1/X2: 24 Z1/Z2: 36 Y1/Y2: 10, E: 24
	Cutting federate	mm/min	X/Z=0~1260	X/Z=0~1260	X/Z=0~1260
Left spindle	Max. spindle speed	rpm	5000	5000	5000
	Spindle nose (chuck)	inch	A2-6 (8")	A2-6 (8")	A2-6 (8")
	Spindle bore	mm	62	62	62
	Bearing inside dia.	mm	100	100	100
Right spindle	Max. spindle speed	rpm	5000	5000	5000
	Spindle nose (chuck)	inch	A2-6 (8")	A2-6 (8")	A2-6 (8")
	Spindle bore	mm	62	62	62
	Bearing inside dia.	mm	100	100	100
Turret	No. of tools	no.	T1/T2/T3: 16	T1/T3: 16	T1/T2: 16
	No. of live tools	no.	16	16	16
	Tool shank size	mm	20	20	20
	Max. boring bar dia.	mm	25 (BMT-55)	25 (BMT-55)	25 (BMT-55)
	Exchange time (incl. turret disk up & down)	mm	1.0 (Adjacent) 1.3 (opposite)	1.0 (Adjacent) 1.3 (opposite)	1.0 (Adjacent) 1.3 (opposite)
	Milling speed	rpm	6000	6000	6000
Motor	Left spindle motor	kW	22/25	22/25	22/25
	Right spindle motor	kW	22/25	22/25	22/25
	Feed servo motor	kW	X1/X2/X3: 4 Z1/Z2/Z3: 3 Y1/Y2/Y3: 3	X1/X3: 4 Z1/Z3: 3 Y1/Y3: 3	X1/X2: 4 Z1/Z2: 3 Y1/Y2: 3
	Milling motor	kW	4.5	4.5	4.5
Coolant	Tank capacity	L.	420	420	420
Controller	FANUC		31i-B	31i-B	31i-B
Machine	Power requirement	kVA	88	84.6	84.6
	Dimension (L×W×H)	mm	4803 x 2335 x 2410	4803 x 2335 x 2410	4803 x 2335 x 2410
	Net weight	kg	12,000	10,500	10,500

Standard accessories:

- Hydraulic chuck with soft jaws
- Chip conveyor
- Hand wheel (Remote MPG)
- SHOWA® lubrication pump
- Coolant flush on Z-axis cover
- 3 step warning light
- Oil skimmer

Optional accessories:

- KITAGAWA® power chuck
- Manual tool presetter (Tool-eye)
- Robotic part catcher
- Part receiver for part catcher.
- Air conditioner for electrical cabinet (Panel cooler)
- Bar feeder interface
- Air blow
- Oil mist collector
- Hard jaws
- Auto door
- Steady rest for lower turret
- BMT-55 tool holders

THE VICTOR-TAICHUNG COMPANIES

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VictorTaichung was also marketed under the brand names VICTOR (outside North America) and FORTUNE GA1GE13EA

13020501 Macs TEL: 04-24733326