



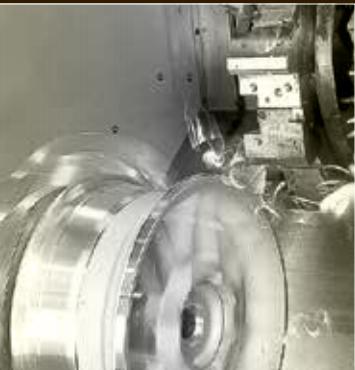
Management
System
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018
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ID: 0091003197

Integral Solution for Alloy Wheel Machining



Victor Taichung – an established ISO 9001, 14001 & 45001 company





Unique Facility Provider for Wheel Machining

*All series are equipped with auto-door, air conditioner
for elec. cabinet and chip conveyors*

Vturn-V22W/V26W (T4)

Vturn-V22W-T2

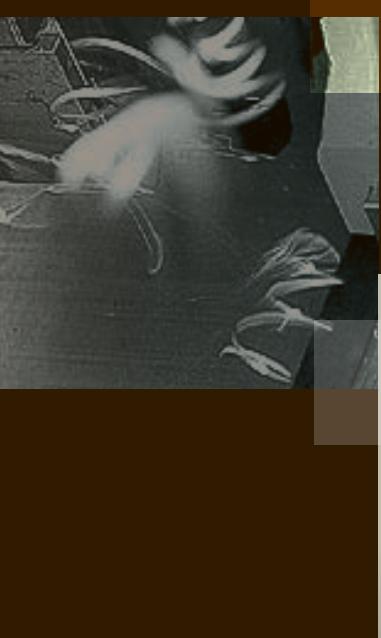
- Vertical 4-axis CNC lathe.
- Advanced solution for 15"~22" or 17"~26" wheel turning.
- A2-13/A2-11 rigid spindle by large diameter bearings .
- Two VDI turrets reduce cutting time by allowing 2 turning operations to be completed simultaneously.
- Vturn-V22W-T2 with single VDI-40 turret designed for OP-2 cutting.



Vturn-18W/22W/24W (T2)

- Horizontal CNC lathe.
- Cost effective solution for turning wheel size up to 24" .
- Finger chucks with flexible changeover kit for either OP-1 or OP- 2 turning.
- Fully enclosed guarding with high pressure coolant and large coolant tank minimizes the chip and coolant leakage.





Vcenter-22W

- Vertical 4-axis machining center with rotary table and drilling fixture.
- Flipping over wheel size up to 22" x11.5J or 24" x10J for rear boring on valve hole and TPMS hole.
- Ram and arm type ATC for quick tool changeover time.
- Four screw chip removers minimize chip build-up.



Vcenter-H26W

- Horizontal 4-axis machining center.
- Advanced solution for boring the PCD bolt and valve holes from BOTH sides assures higher positioning accuracy on wheels 21"~26".
- Rapid feed rate 48/48/48 m/min and built-in 8000rpm spindle (15/18kW) further reduce cycle time for high efficiency.



Vertical Lathes

Vturn-V22W/V26W (T4 & T2)

With the increasing demand for bigger Alloy wheel manufacturing, Victor Taichung has come up with an alternative solution for easier loading/unloading wheels and further reduces the spindle idle time.

Victor Taichung Vturn-V22W/V26W lathes are built from with new innovation to provide a 4 axis vertical CNC lathe specifically designed for Alloy wheel production.



Vturn-V22W-T2



Vturn-V22W (T4)



Vturn-V22W-T2

Rigid structure for reliable heavy-duty turning !

- 2 piece Meehanite cast iron base with heavy ribbing base quickly dissipates localized vibration throughout cast structure. Hand scraping is used to ensure perfect mating with both case blocks.
- **Rigid spindle** is supported by large diameter bearings to maintain tight run-out even under heavy cutting, while vertical orientation removes accuracy problems encountered due to overhang.
- Robust turrets with cast iron bodies and hydraulic operated are designed to easily handle interrupted cuts encountered in wheel machining.
- Hydraulic tank is easily accessed and uses a heat exchanger to maintain low oil temperature and filtration system to ensure stable operation.
- **Deep Angled bed design with 2 large holes around the spindle collects high volume of chips and coolants to reduce the cleaning frequency and according idle time.**

High powered spindle motor

- Fanuc high powered spindle motor 55kW (74HP) provides ample power to run heavy cuts with both turrets simultaneously and complements the high axis thrust force.
- Vturn-V22W-T2 with single turret and smaller motor 45kW (60HP) for OP-2 cutting.



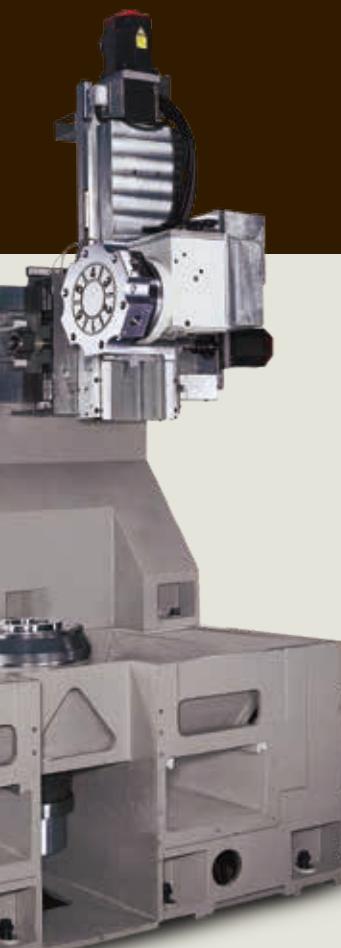
Outstanding features Stabilizes cutting process and reduces cycle times

Twin VDI turrets (T4)

- Reduced cutting times by allowing 2 machining operations to be completed simultaneously.
- Orientating to tools to be directly opposed during machining ensures a more stable cutting process.
- VDI tooling allows quick tool changeover.
- Exclusive offset-tooling design further enables the I.D. turning by two turrets moving simultaneously to double the cutting efficiency for the first operation OP-1.

OP-10 or OP-20 turning

- Fully hydraulic 3-finger chuck with stiff arm and pull-back clamping guarantees cutting stiffness, better surface finish and longer service life.
- Exclusive design for one single chuck with multiple arm-and-finger packages provides a cost-effective and high flexibility solution for the customers.
- No need to change the complete chuck for different size of wheel turning.
- Vturn-V22W with HC-V1320 or HC-V1522 chuck for 13"~18" or 15"~22" wheel turning.
- Vturn-V26W with HC-V1726 chuck for 17"~26" wheel turning.



Extra high efficient chip evacuation & removal

- TWO chip conveyors (T4) with king size coolant tank 950/1550 liters (250/408 gallons) for Vturn-V22W/V26W disposes high volume of chips and enhances the production without scratching on the wheel surface because of less chip build-up and high flow rate coolant pump Grundfos CM10-2.
- Oil skimmer effectively removes fine metal particles from the coolant to ensure stable coolant flow.

Vturn-V22W (T4)

Horizontal Lathes

Vturn-18W/22W/24W (T2)

Slant bed lathe has been specifically developed for max. efficiency in Alloy wheel processing. Horizontal type lathe minimizes chip build up in wheel to prevent swarf marring the surface during operation. The machine's ample capacity allows wheels of up to 24" on Vturn-24W (18" on Vturn-18W) to be processed. Specific features have been added to improve machine efficiency.

More Features Included

- High pressure coolants.
- Increased spindle power.
- Special 3 finger chuck and chip conveyor.
- No tailstock to reduce machine cost.

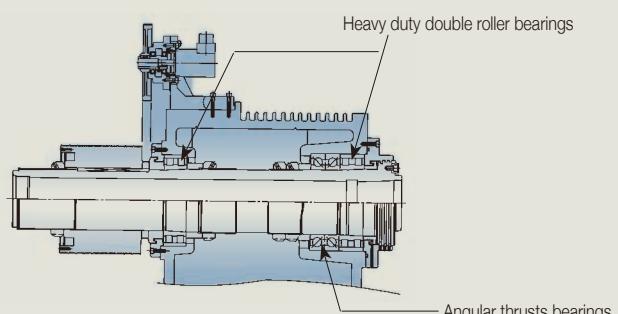
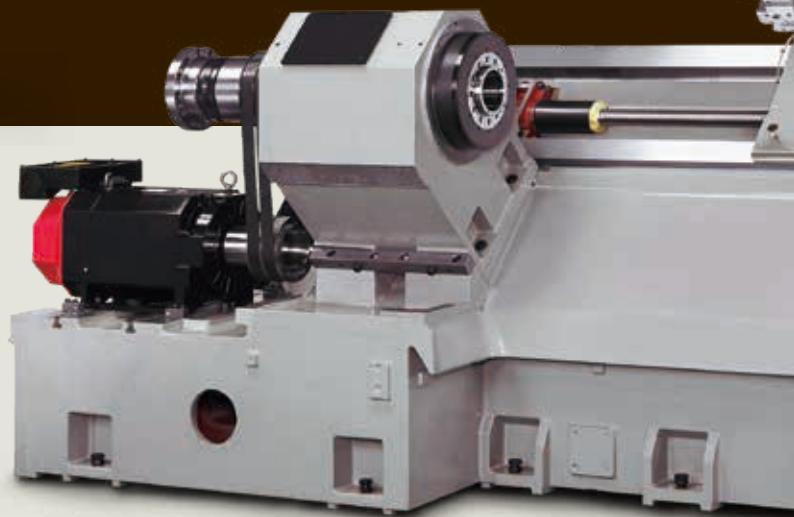


Rigid structure for accurate wheel turning !

- Meehanite cast iron structure with hardened box slideways quickly dampens cutting vibrations for high accuracy even under heavy cutting.
- Hydraulic driven turret with cast iron body easily handles continuous interrupted cutting common in wheel turning.
- Spindle supported by heavy duty roller bearings to maintain tight runout even under heavy cutting.

High performance for minimum wheel throughput time !

- Low pitched ballscrews are used to increase axis thrust force while Fanuc α30i spindle motor is offered as standard.
- This combination of high thrust axis drives and powerful spindle facilitates high metal removal rates for optimum productivity.
- As low rpm's are rarely used in wheel turning, a direct belt drive is used to reduce inertia of drive system and improve acceleration times.
- Optional **Built-in Spindle (DDS)** with consistent dynamic balancing ensures fine finish on wheel surface.





Efficient chip evacuation

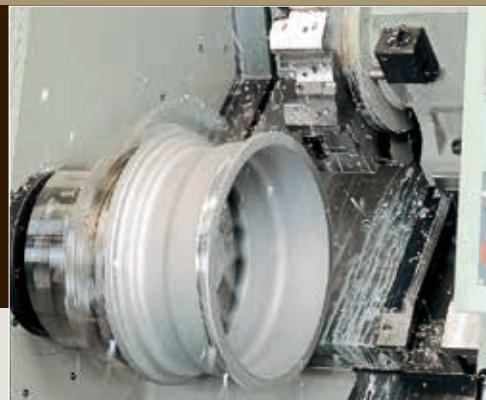
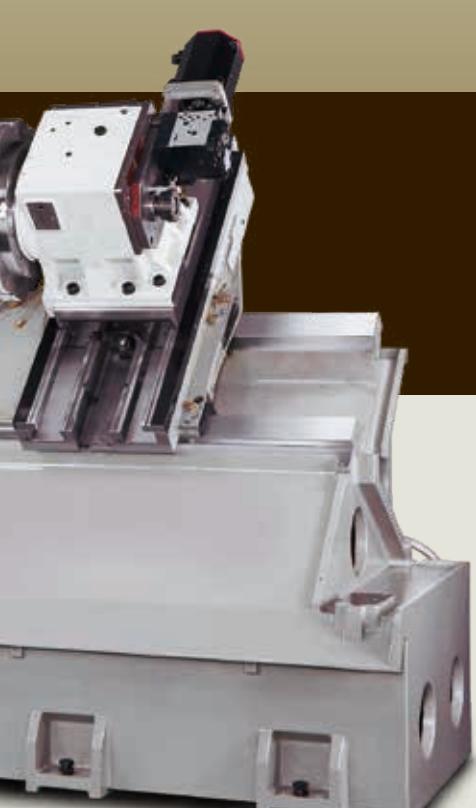
- **High pressure coolant pump (6.5 bars)** with 3 coolant pipes effectively washes chips away from the inside the wheel for coolant flow to prevent chip build-up within the wheel.
- **Large coolant tank** gives a coolant capacity of 360 liters (96 gallons) on Vturn-18W [400 liters (105 gallons) on Vturn-22W/24W].
- **Special chip conveyor** removing long spiral chips that are formed in wheel machining is offered as standard.

Simple, easy wheel loading for maximum operator efficiency

- Automatic door opening & closing reduces operator workload particularly needed when continuously handling larger sized wheels.
- Special 3 finger hydraulic chuck clamped by standard foot switch is used to clamp the wheel rim, allowing simple yet accurate loading of wheels without fear of damage or distortion to the wheel.

For OP-1 the hub locator at end of mandrel needs to be changed for different sizes only.

For OP-2 the height of mandrel must also be changed and the locator ring for different sizes



Finger chuck for OP-1 (brake side) or OP-2 (road side) turning

For both size machines the 3 finger chuck is set-up for a single operation specified on ordering as standard. Suitable arms and fingers are offered as standard to allow complete range of wheel sizes. Range of sizes as follows:

- **HC-1218** chuck with a clamping range of 12" to 18" wheels.
- **HC-1520** chuck with a clamping range of 15" to 20" wheels.
- **HC-1522** chuck with a clamping range of 15" to 22" wheels.
- **HC-1724** chuck with a clamping range of 17" to 24" wheels.

***Note:**

1. One size of spring loaded mandrel is offered as standard for OP-1 chuck.
2. One size of mandrel with a complete set of spacers is offered as standard for OP-2 chuck.
3. Changeover kit including mandrel and front plate to suit additional operation can be optionally ordered to allow both turning operations on the same chuck.

Finger chucks for OP-3 (diamond cutting)

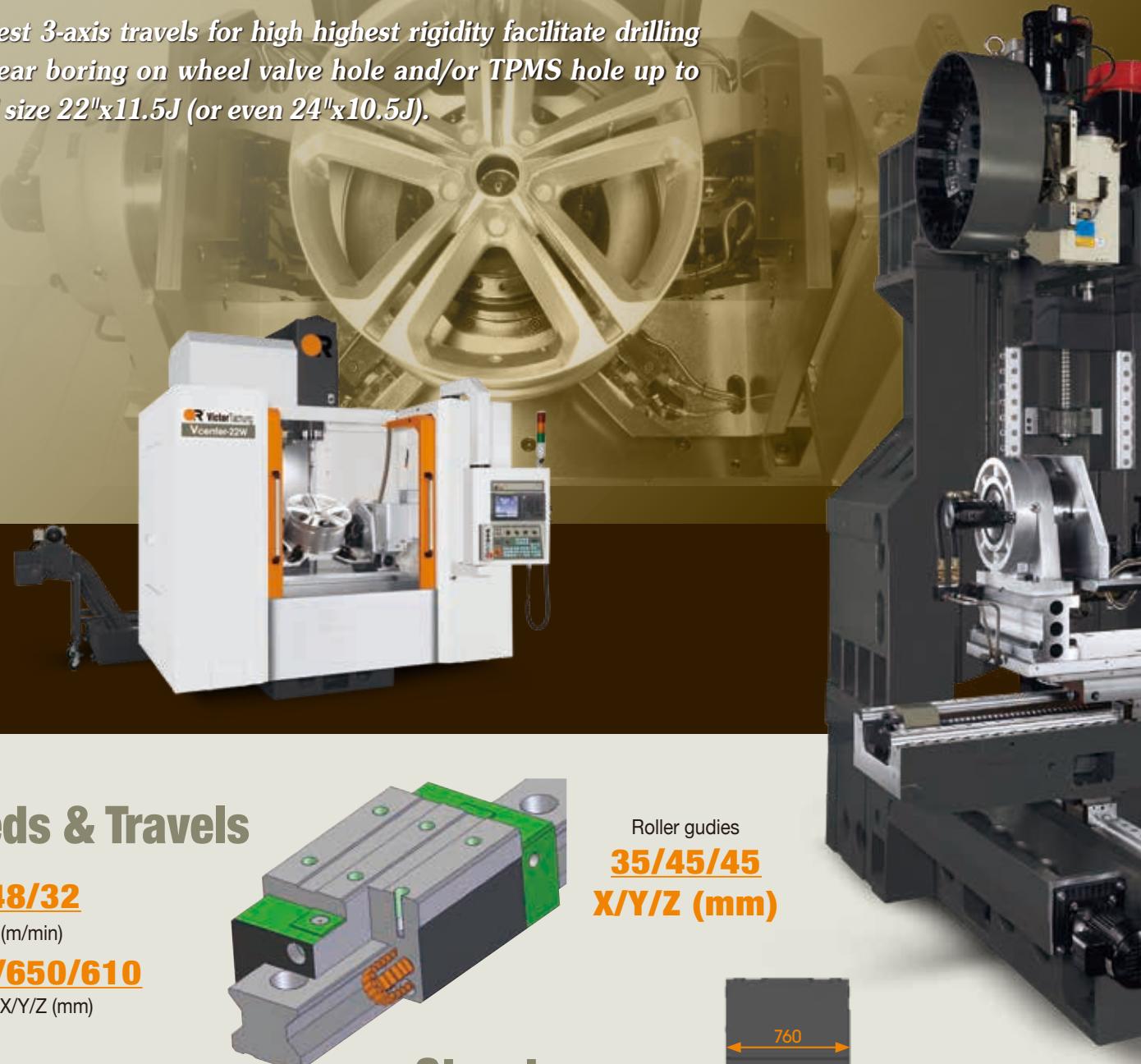
Diamond cutting on the front face turning is also popular for OP-2 for better finish on the wheel surface. ("OP-3" is only called by Victor Taichung for such a diamond cutting to avoid ambiguity). Besides the primary clamping on the outer rims using fingers, there exist a secondary clamping using the collet in the hub so the clamping quality is enhanced for better surface finish by diamond tools.

- Such type of finger chuck and built-in spindle are not recommended to be used compatibly with OP-1 chuck because the changeover is difficult and laborious.

Vertical Machining Center

Vcenter-22W

Shortest 3-axis travels for high highest rigidity facilitate drilling and rear boring on wheel valve hole and/or TPMS hole up to wheel size 22"x11.5J (or even 24"x10.5J).



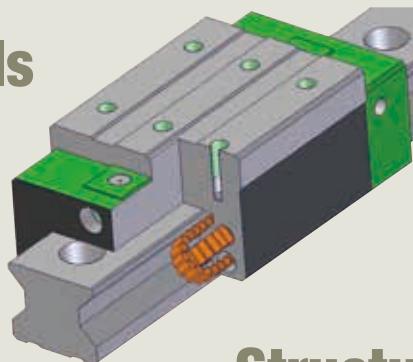
Feeds & Travels

48/48/32

X/Y/Z (m/min)

850/650/610

X/Y/Z (mm)



Roller guidies

**35/45/45
X/Y/Z (mm)**

Structure

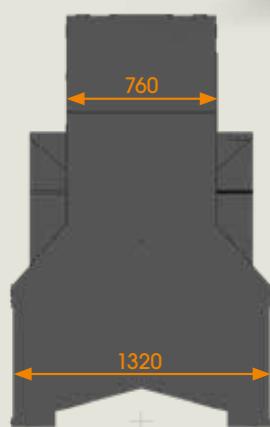
**ATC
2.0 (4.3)**
T-T (chip-chip)

16
Tools



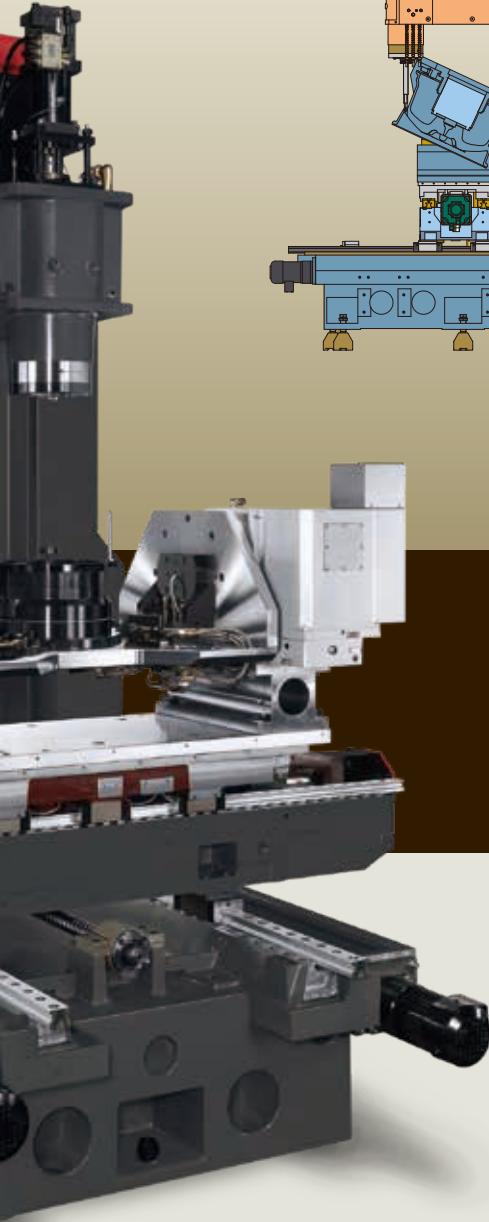
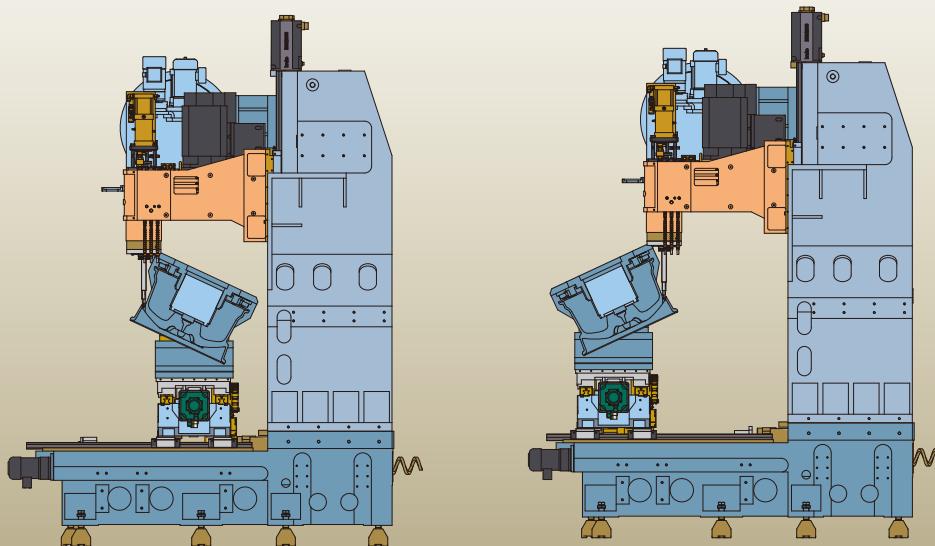
Certificated Casting

GM350



Wide column

1270



Full 4-axis Control with hydraulic Rotary Table &
Drilling fixture:

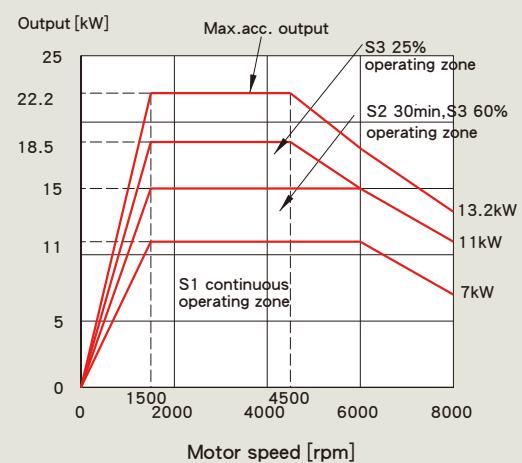
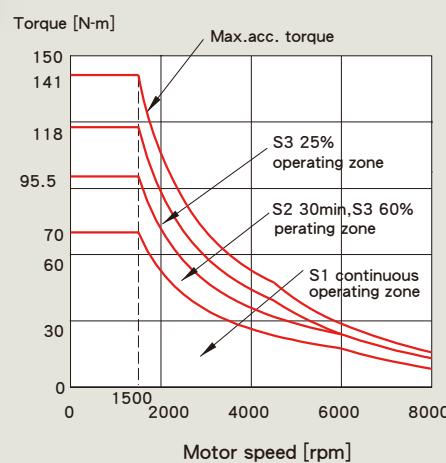


Bottom guarding flush + 4 screw chip removers:



High Power Spindle

18.5 kW (S3-25%)
8000 rpm.



Horizontal Machining Center

Vcenter-H26W

Following the increasing demands for the rear boring on wheel valve hole, VcenterH26W is launched to meet this requirement for OEM wheel manufacturers to cover wheel size 21"~26" machining.

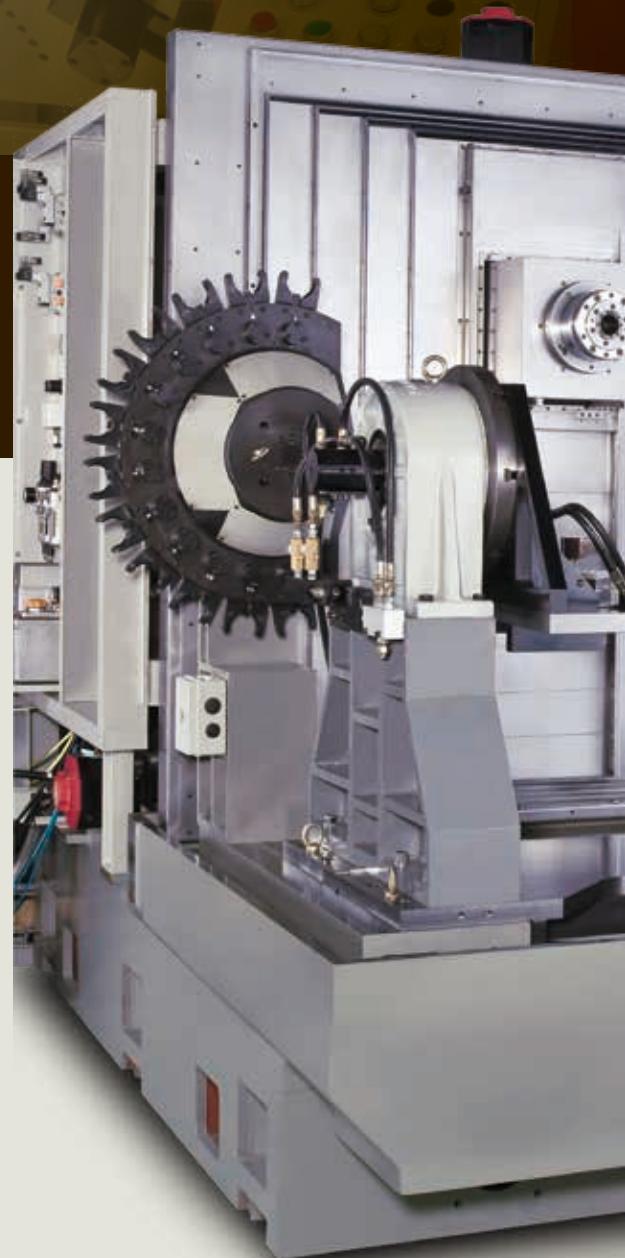
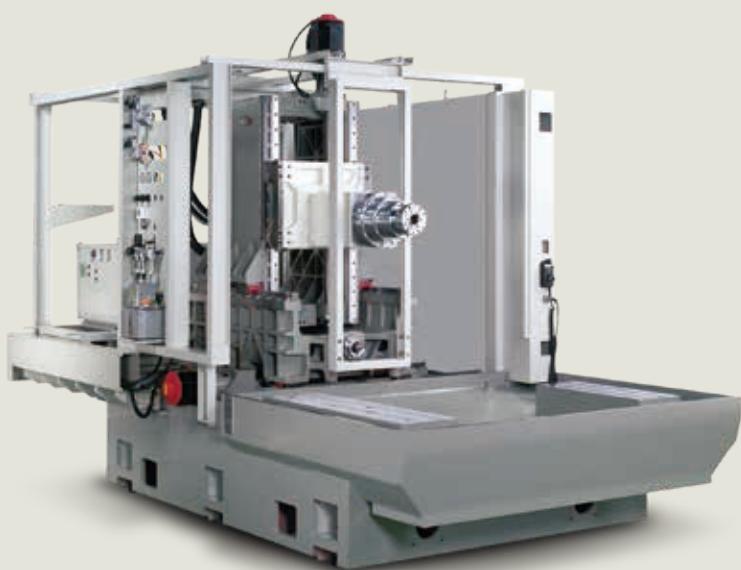
This 4-axis horizontal machining center also offers a flexible solution to after market wheel manufacturers on bigger wheel drilling.

Rapid feed rate 48/48/48 m/min

- 3-axis moving column design features high rapid feed rate 48/48/48 m/min.
- Axis acceleration 0.7G/0.7G/0.7G with high power 4.5/5.5/4.5 kW reaches highest efficiency.
- Steel type telescopic cover design.

ATC (Auto Tool Changer)

- Umbrella-type ATC without arms allows more space for machining larger wheels.



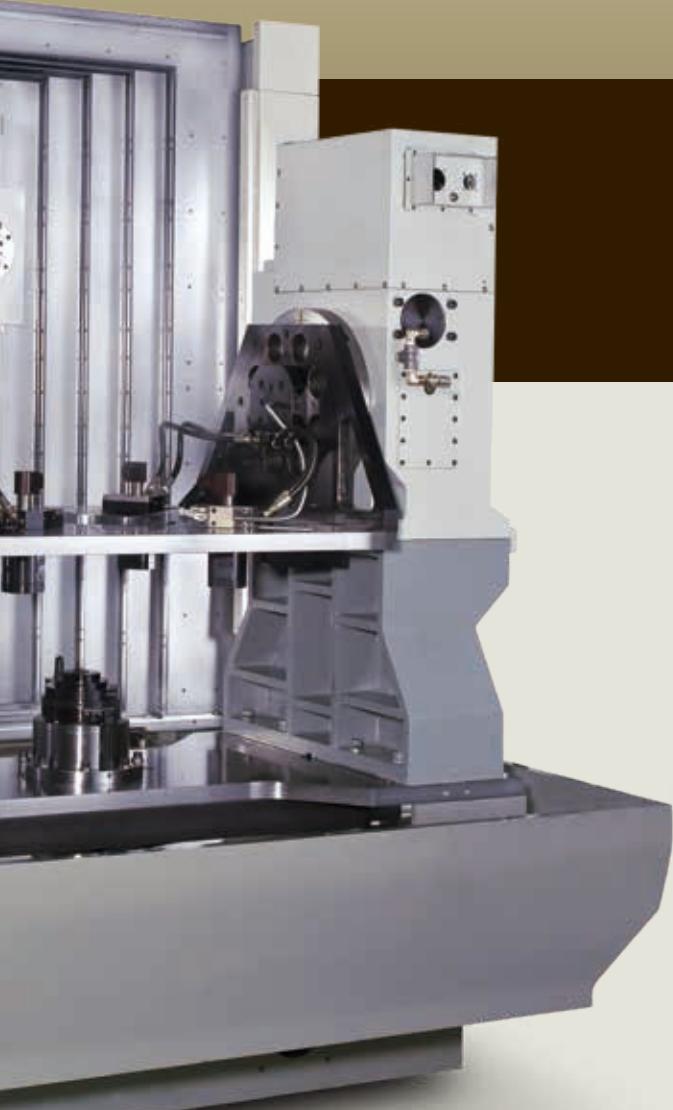
8000rpm built-in spindle

- Built-in 8000rpm spindle avoids belt vibration to affect machining quality.
- Dual winding (low/high winding) with power output 15/18kW further reduces cutting time.



PCD bolt and valve hole drilling fixture

- Advanced solution for boring the PCD bolt and valve holes from road side and braking side assures higher positioning accuracy on wheels 13"~26".
- Drilling at arbitrary angle thanks to CNC rotary table to rotate the fixture.
- Exclusive design on hydraulic fixture offers conventional solution on OP-3 drilling or the latest technology for OP-1 drilling before turning operation OP-2.



More features included

- Rotary operation panel.
- Big coolant tank 550 liters.
- High pressure coolants include top and bottom coolant flushing.
- Fixed location to collect chips and coolants so as to assure a clean working environment.
- Machine is shipped by HQ container for much lower sea freight.

Machining Cell & Automation

Automation oriented vertical turning center and horizontal machining center for reliable mass production.

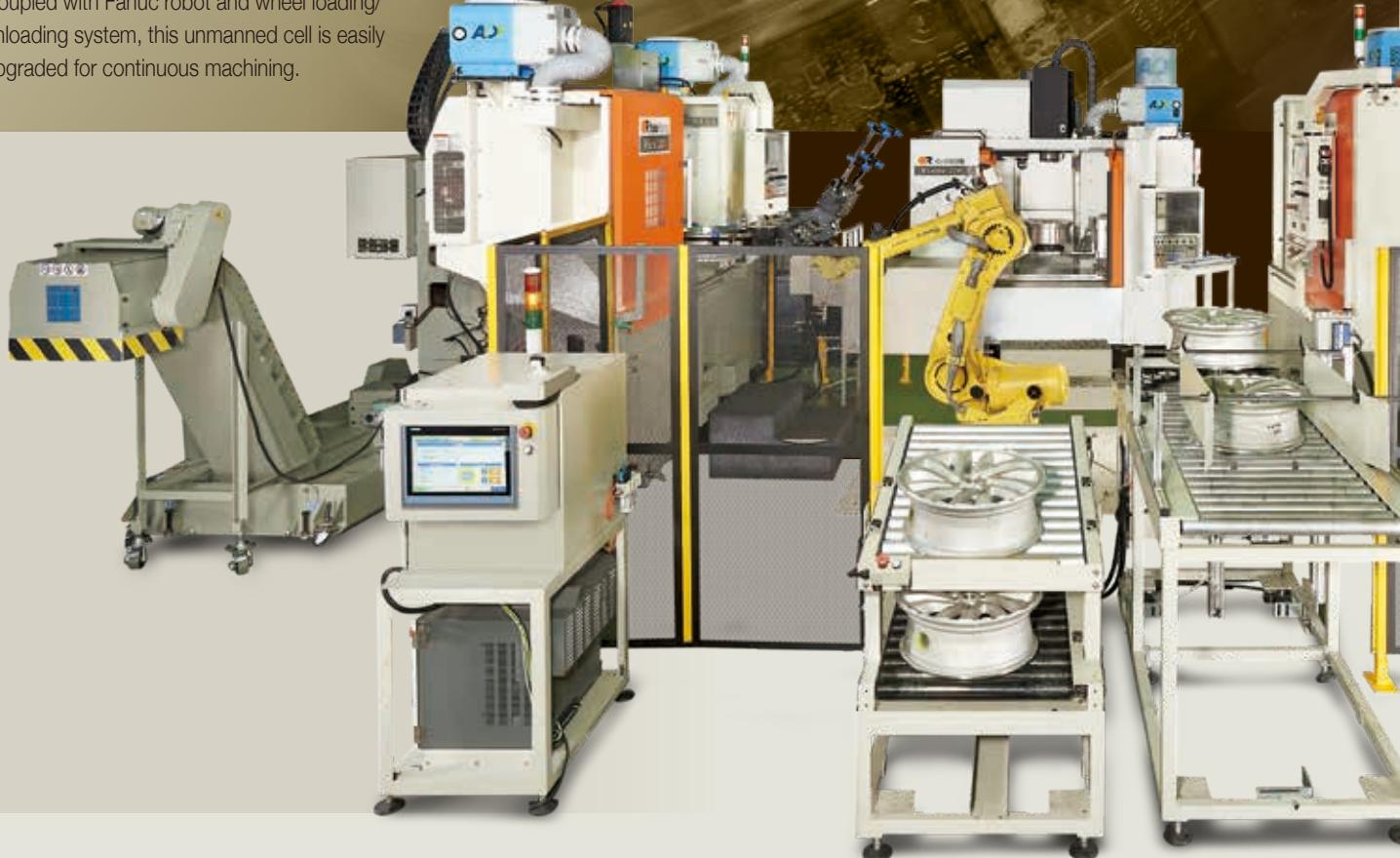
- Flexible line-up:

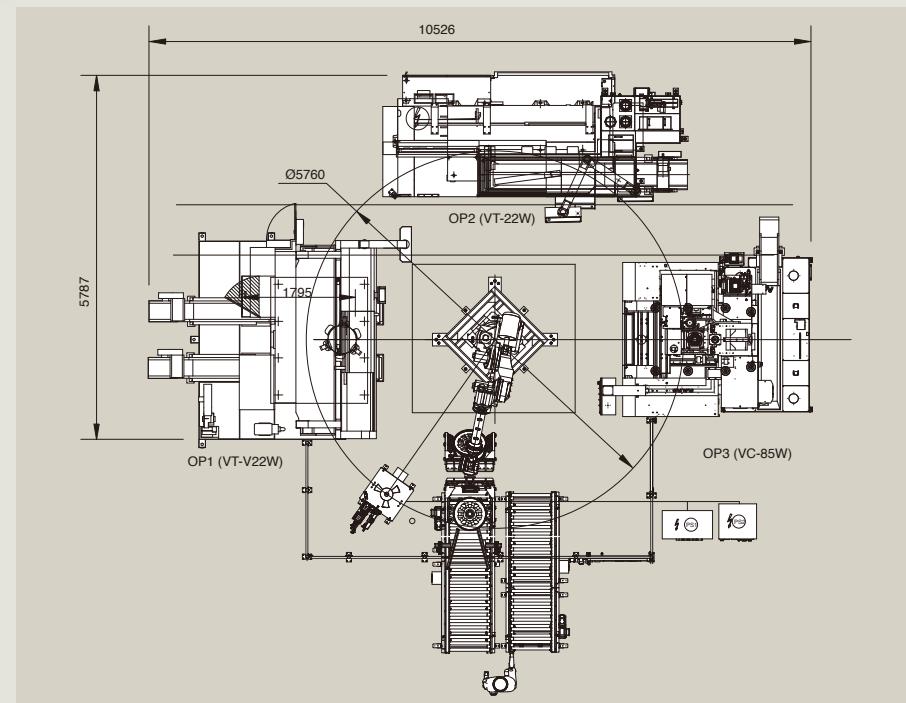
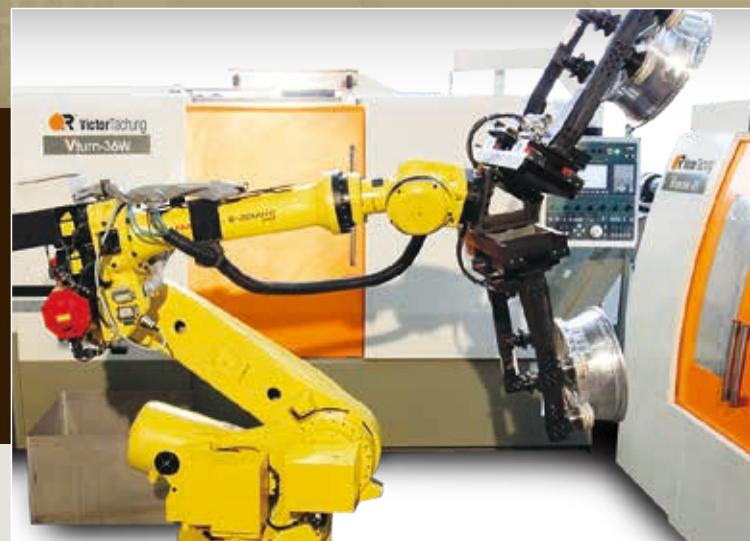
OP-10: Vturn-V22W (T4)

OP-20: Vturn-V22W-T2 or Vturn-22W/18W (T2)

OP-30: Vcenter-22W or Vcenter-H26W

- Coupled with Fanuc robot and wheel loading/unloading system, this unmanned cell is easily upgraded for continuous machining.





Vturn-V22W/V26W Specification

ITEM / MODEL		Vturn-V22W-T2	Vturn-V22W (T4)	Vturn-V26W
X1, X2 travel	mm (inch)	420 (16.5)	420 (16.5)	560 (22.0)
Z1, Z2 travel	mm (inch)	446 (17.6)	446 (17.6)	540 (21.2)
X1, X2 rapid feedrate	m/min (ipm)	20 (787.4)	20 (787.4)	20 (787.4)
Z1, Z2 rapid feedrate	m/min (ipm)	20 (787.4)	20 (787.4)	20 (787.4)
Maximum swing diameter for chuck with wheel	mm (inch)	750 (29.5)	750 (29.5)	850 (33.4)
Maximum turning diameter without adjacent tools	mm (inch)	630 (24.8)	630 (24.8)	730 (28.7)
Max. turning wheel size	inch	22.5 x 10.5	22.5 x 10.5	26.5 x 13
Spindle speed	rpm	2500	2500	2000
Spindle nose		A2-13	A2-13	A2-11
Spindle motor	kW (HP)	37/45 (49.6/60)	45/55 (60/74) Opt. 60/75 (80/100)	45/55 (60/74) Opt. 60/75 (80/100)
X1, X2 servo-motor	kW (HP)	4 (5.4)	4 (5.4)	4 (5.4)
Z1, Z2 servo-motor	kW (HP)	5 (6.7)	5 (6.7)	6 (8)
Turret disc		VDI-40	VDI-40 (Opt. VDI-50)	VDI-50
Number of tools		6	6+6	6+6
Tool to tool time	sec.	1.0	1.0	1.0
Machine dimension (incl. chip conveyor, excl. stepper)	mm (inch)	2000 x 3791 x 3405 (79 x 149 x 134)	3664 x 3670 x 3374 (144 x 145 x 133)	3880 x 4575 x 3610 (153 x 180 x 143)
Coolant tank	liter (gallon)	540 (142)	950 (250)	1550 (410)
Controller	Fanuc	0i-TF Plus (10.4")	0i-TF Plus (10.4")	0i-TF Plus (10.4")
Power requirement	kVA	61	74	80 (Opt. 100)
Machine weight	Kg (lbs)	7000 (15400)	11000 (24200)	14370 (31620)

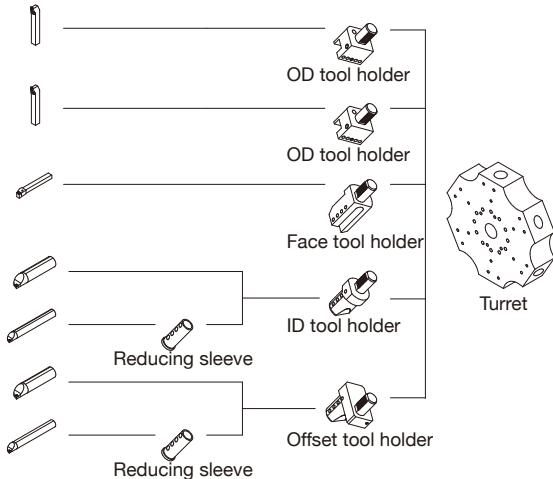
Standard accessories

- Fully enclosed guarding
- Finger chuck
- VDI tool holders including exclusive OFFSET tooling
- Auto door
- High pressure and high volume coolant (2 Grundfos pumps CM10-2)
- 2 Chip conveyors
- Remote MPG
- Oil mist remover
- Tool box
- Levelling blocks
- Air conditioner for electrical cabinet
- 3 step warning light
- Air blow system
- Stepper for operator

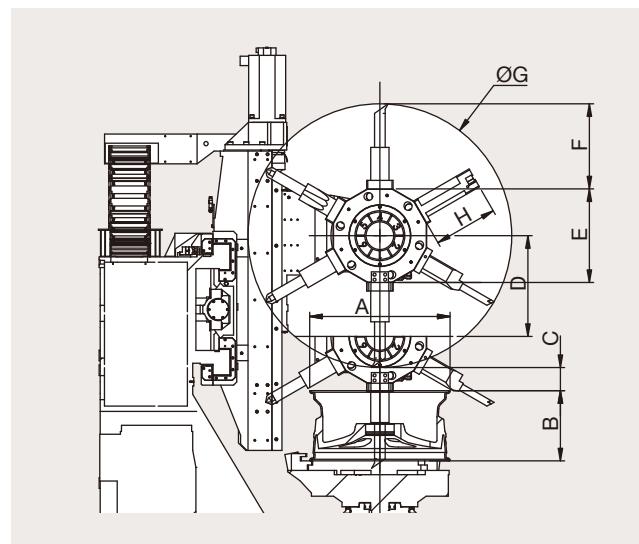
Optional accessories

- No chucks
- Wheel lifting device
- I/O interface for robot

Tooling Accessories



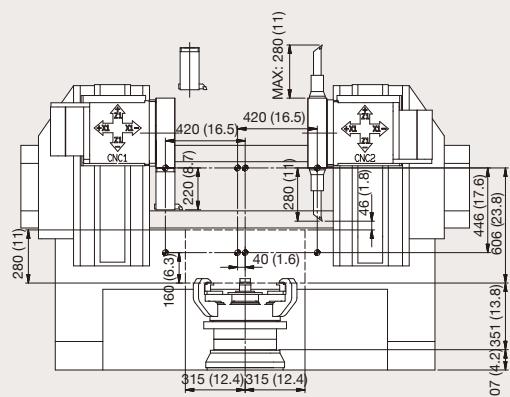
Tool Interference Chart



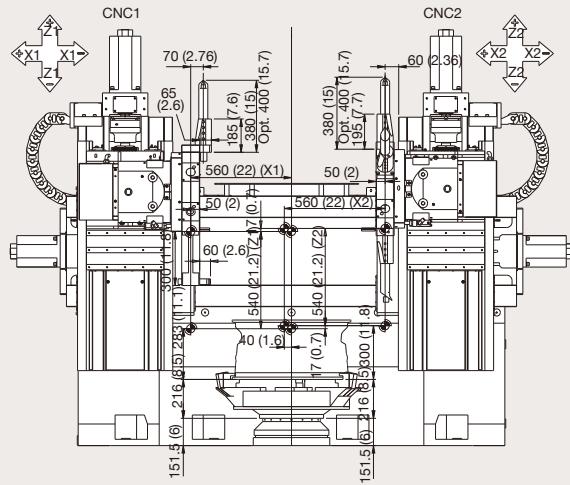
ITEM / MODEL	Vturn-V22W-T2	Vturn-V22W	Vturn-V26W
OD tool holder Ø25 mm (1")	2	4	-
OD tool holder Ø32 mm (1 1/4")	2	4	4
ID tool holder Ø40 mm (1 1/2")	2	4	-
ID tool holder Ø50 mm (2")	-	-	4
Face tool holder Ø25 mm (1")	1	1	-
Face tool holder Ø32 mm (1 1/4")	-	-	1
Offset ID tool holder Ø40 mm (1 1/2")	1	1	-
Offset ID tool holder Ø50 mm (2")	-	-	1
Reducing sleeve Ø40-32 mm (1 1/4")	1	2	-
Reducing sleeve Ø40-25 mm (1")	Opt.	Opt.	-
Reducing sleeve Ø50-32 mm (1 1/4")	-	-	2
Reducing sleeve Ø50-40 mm (1 1/2")	-	-	2

ITEM / MODEL	Vturn-22W-T2	Vturn-22W	Vturn-26W
A	571.5 (22.5")	571.5 (22.5")	673.1 (26.5")
B	266.7 (10.5")	266.7 (10.5")	330.2 (13")
C	64.6 (2.5")	29.6 (1.16")	91.7 (3.6")
D	305 (12")	305 (12")	468 (18.4")
E	400 (15.7")	400 (15.7")	440 (17.3")
F	280 (11")	280 (11")	380 (15") Opt. 400 (15.7")
G	950 (37.4")	950 (37.4")	1200 (Opt. 1240)
H	175 (6.9")	175 (6.9")	300 (11.8")

Moving range for Vturn-V22W

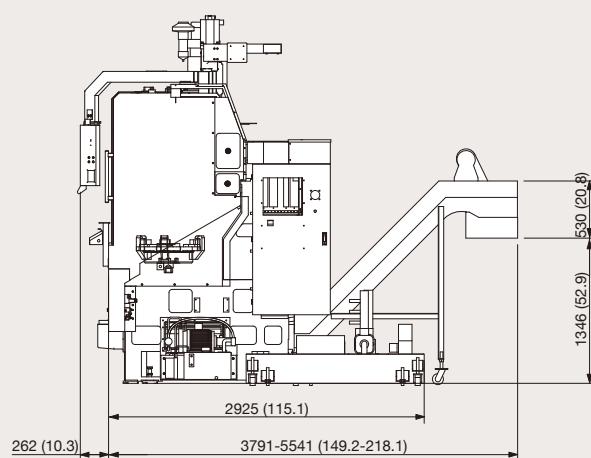
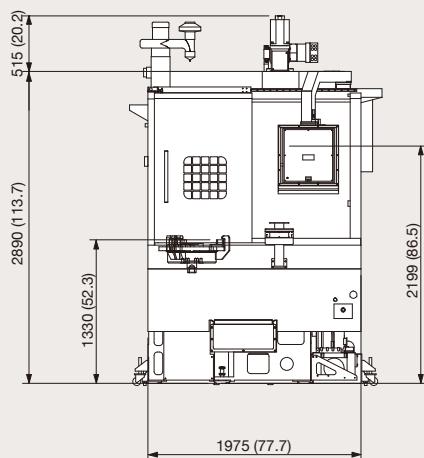


Moving range for Vturn-V26W



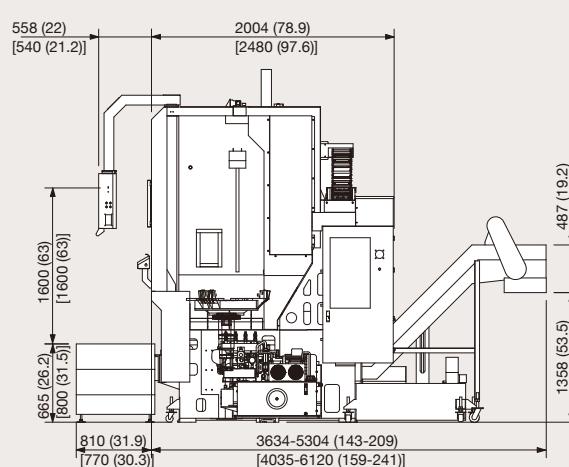
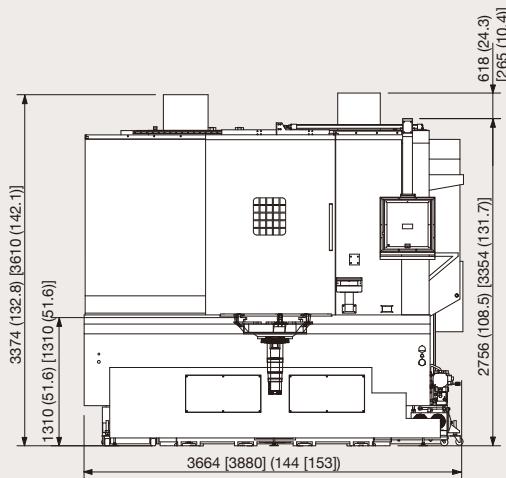
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Machine Layout for Vturn-V22W-T2



()=inch

Machine Layout for Vturn-V22W [V26W]



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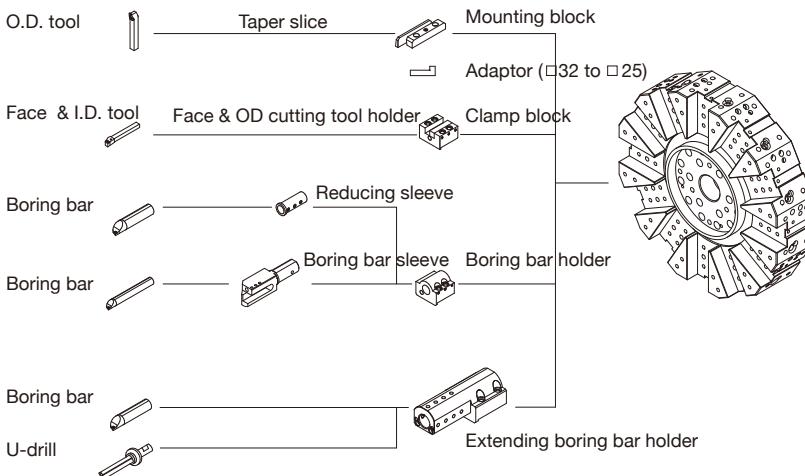
Vturn-18W/22W/24W Specification

ITEM / MODEL		Vturn-18W	Vturn-22W	Vturn-24W
Swing over bed diameter	mm (inch)	680 (26.7)	790 (31.1)	850 (33.4)
Standard turning diameter	mm (inch)	430 (16.9)	600 (23.6)	620 (24.4)
Maximum turning diameter	mm (inch)	530 (20.8)	620 (24.4)	720 (28.3)
Swing over carriage	mm (inch)	520 (20.4)	620 (24.4)	680 (26.7)
Hydraulic 3 jaw finger chuck		OP1 or OP2 (12"-18")	15"-20" or 17"-22"	20"-24"
X axis travel	mm (inch)	265+50 (10.4+1.97)	350+30 (13.8+1.18)	360+30 (14.2+1.18)
Z axis travel	mm (inch)	750 (29.5)	750 (29.5)	900 (35.4)
Rapid feed - X/Z axis	m/min (ipm)	20/20 (787/787)	18/20 (709/787)	18/20 (709/787)
Feed motor - X/Z axis	kW (HP)	3/4 (4/5.4)	4/4 (5.4/5.4)	4/4 (5.4/5.4)
Ballscrew diameter x pitch	mm (inch)	32 x P8 (1.26xP0.31) (X) 45 x P10 (1.77xP0.39) (Z)	40 x P6 (1.57xP0.24) (X) 50 x P8 (1.97xP0.31) (Z)	40 x P6 (1.57xP0.24) (X) 50 x P8 (1.97xP0.31) (Z)
Max. Spindle speed	rpm	2500	2000	2000
Spindle nose		A2-8	A2-8 (A2-11 built-in)	A2-8 (A2-11 built-in)
Spindle bearing dia.	mm (inch)	130 (5.1)	160 (6.3)	160 (6.3)
Spindle taper		1/20	1/20	1/20
AC Spindle motor (Cont. / 30 min.)	kW (HP)	30/37 (40/50)	30/37 (40/45)	30/37 (40/45)
Hole through spindle	mm (inch)	86 (3.4)	105 (4.13)	105 (4.13)
Hole through draw tube	mm (inch)	75 (2.95)	91 (3.58)	91 (3.58)
Tool stations	No.	10	12	12
I.D. tool size (max)	mm (inch)	50 (2)	50 (2)	50 (2)
Standard O.D. tool size	mm (inch)	□32 (1 1/4)	□32 (1 1/4)	□32 (1 1/4)
Coolant capacity	liter (gallon)	360 (94.7)	400 (105)	400 (105)
CNC Controller	Fanuc	Oi-TF Plus (10.4")	Oi-TF Plus (10.4")	Oi-TF Plus (10.4")
Approx. machine size	m (inch)	4.73 x 2 x 2.15 (186 x 79 x 85)	4.9 x 2.5 x 2.4 (192 x 100 x 95)	5.1 x 2.5 x 2.4 (198 x 100 x 95)
Power requirement	kVA	45	47	47
Net weight	Kg (lbs)	7620 (16760)	7920 (17420)	7920 (17420)

#1: All specifications are subject to alteration without notice for design improvement.

#2: Longer delivery depending on the optional accessories request.

Tooling Accessories



ITEM / MODEL	Vturn-18W	Vturn-22W	Vturn-24W
Mounting block	5	5	
Taper slice	5	5	
Adaptor (□32 to □25)	3	3	
Clamp block	1		Opt.
Face + O.D. cutting tool holder	1	1	
Boring bar holder 50 mm (2")	5	5	
Reducing sleeve			
Ø 50-32 mm (1 1/4")	2	2	
Ø 50-40 mm (1 1/2")	2	2	
Ø 50-□25 mm (1")	1	2	
Ø 50-□32 mm (1 1/4")	Opt.	1	
Extending boring bar holder			
Ø 32 mm (1 1/4")	2	2	
Ø 40 mm (1 1/2")	Opt.	Opt.	
Ø 50 (2")	2	2	

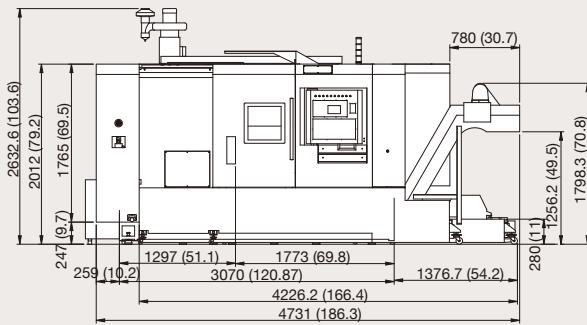
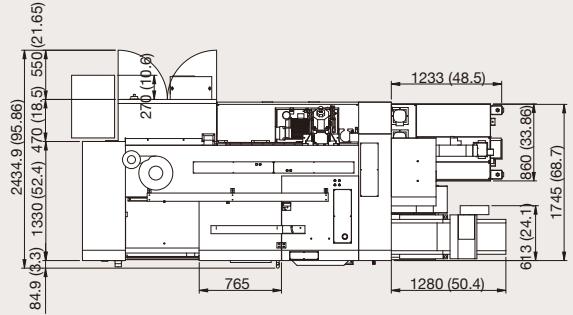
Standard accessories

- Oil skimmer
- 3 step warning light
- Japanese ballscrews
- Water & air gun interface
- Fully enclosed guard
- Tool box & hand tools
- Leveling blocks
- Tooling accessories
- Auto door
- High pressure coolant - Grundfos SPK 4-15 (or MTH4-50/5)
- Coolant nozzle
- Special chip conveyor
- Automatic lubrication
- Air conditioner for electrical cabinet

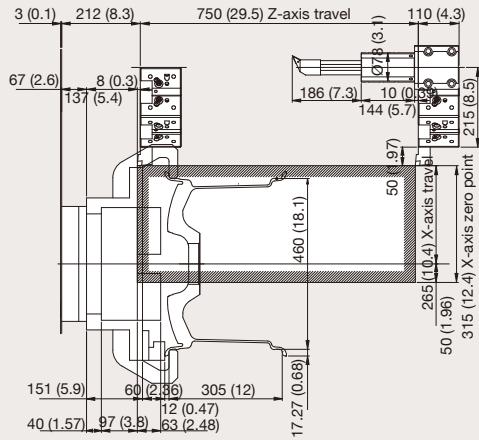
Optional accessories

- Homtech 3 jaw finger chuck (specify OP.1 or OP.2)
- Window on door
- Built-in spindle for OP3 diamond turning
- VDI turret - no extra charge, but no tool holders provided
- Higher power spindle 37/45 kW (50/60 HP)
- Air blow system
- Oil mist remover

Machine layout for Vturn-18W

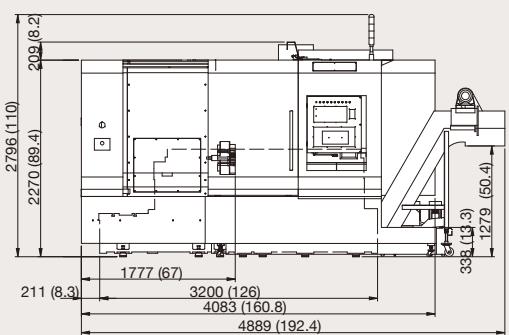
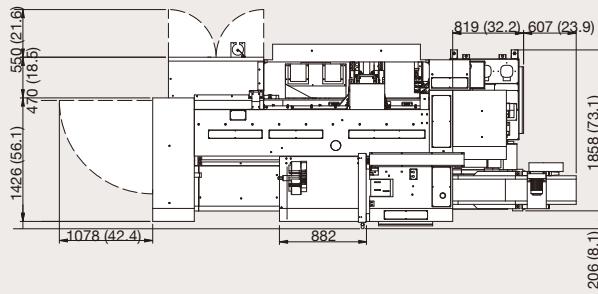


Moving range for Vturn-18W

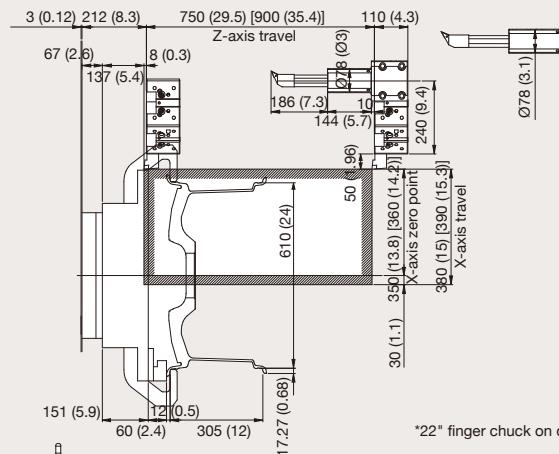


*18" finger chuck

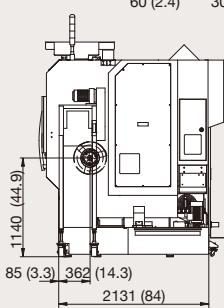
Machine layout for Vturn-22W/24W



Moving range for Vturn-22W [24W]



*22" finger chuck on drawing



()=inch

Vcenter-22W Specification

ITEM		Vcenter-22W
X axis travel	mm (inch)	850 (33.46)
Y axis travel	mm (inch)	650 (29.59)
Z axis travel	mm (inch)	610 (24.02)
Spindle center to column	mm (inch)	735 (28.93)
Spindle nose to table	mm (inch)	188~802 (7.4~31.57)
Wheel range (incl. rear boring)	inch	22 x 11.5J (or 24 x 10J)
Spindle motor (cont./30min/10min)	kW (HP)	11/15/18.5 (15/20/25)
Rotary table (A-axis)	deg	360 (22" x 11.5J)
Spindle speed	rpm	8000
X/Y/Z axis rapid feedrate	m/min (ipm)	48/48/32 (1890/1890/1260)
A axis feed rate	rpm	11
X/Y/Z/A axis feed motor	kW (HP)	3/3/3/3 (4/4/4/4)
Cutting feedrate by table	m/min (ipm)	10 (393)
X/Y/Z ballscrew (dia. x pitch)	mm (inch)	45 x P16 (1.77 x P0.63) (X) 40 x P16 (1.57 x P0.63) (Y/Z)
Linear guideway width	mm (inch)	35 /45/45 (1.4/1.8/1.8)
Max. tool length	mm (inch)	350 (13.8)
Max. tool weight	Kg (lbs)	7 (15.47)
Max. tool diameter [without adjacent tools]	mm (inch)	80[125] (3.15[4.92])
Tool exchange time	sec	2.0 (T-T), 4.3 (C-C)
Pull stud angle	deg.	15 (JIS 40P)
Magazine capacity		16 (disk)
Coolant tank	Liter (gallon)	410 (108.3)
Power requirement	kVA	25 (30 with CTS)
Controller	Fanuc	Oi-MF Plus (10.4", Type 1)
Machine dimension (incl. chip conveyor and stepper)	mm (inch)	3800 x 3828 x 3210 (149.6 x 150.7 x 126.4)
Machine weight	Kg (lbs)	7450 (16390)

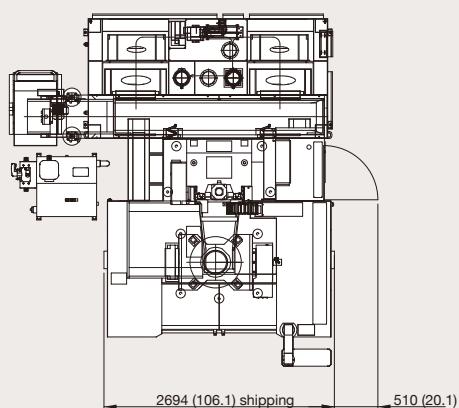
Standard accessories

- Fully enclosed guarding
 - Rigid tapping
 - Remote MPG (handwheel)
 - Air blow (with M-code)
 - Leveling pads
 - Oil skimmer
 - 4th axis interface
 - Rotary table with drilling fixture

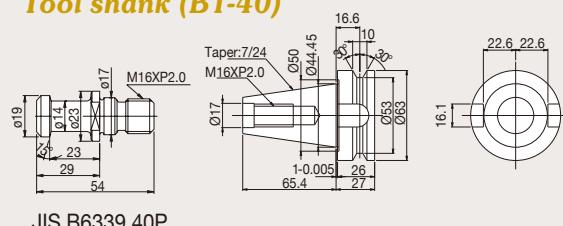
Optional accessories

- Chip conveyor
 - Auto door
 - Air conditioner for electrical cabinet (outside)
 - High pressure coolants
 - Coolant through spindle (CTS)
 - Tool length measurement
 - Part measuring
 - Oil mist collector
 - Without drilling fixture
 - Without rotary table

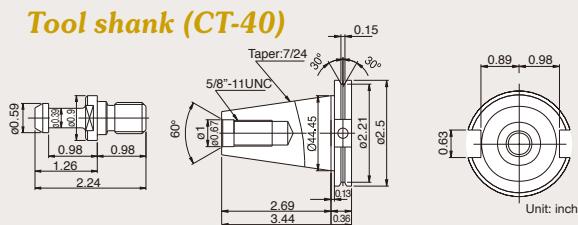
Machine layout for Vcenter-22W



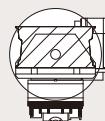
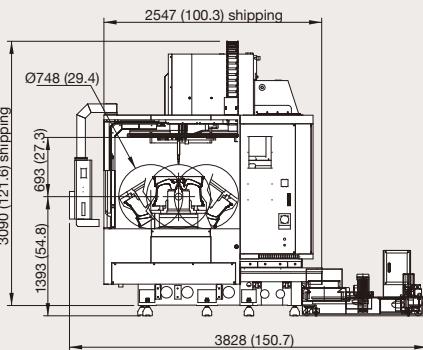
Tool shank (BT-40)



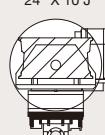
Tool shank (CT-40)



The diagram illustrates the dimensions of the KOMATSU PC200-8 Excavator. The total width of the machine is 3800 units (149.6 inches). The rear support width is 2694 units (106.1 inches). The height of the rear support is 896 units (35.3 inches). The height of the side boom is 1106 units (43.5 inches).



34" X 10 "



22" X 11 5.1

Vcenter-H26W Specification

ITEM	Vcenter-H26W	
X axis travel	mm (inch)	720 (28.34)
Y axis travel	mm (inch)	720 (28.34)
Z axis travel	mm (inch)	520 (20.47)
Spindle nose to table	mm (inch)	170~690 (6.69~27.16) 24" x 12J (opt. 26" x 10J)
Wheel range (incl. rear boring)		
Spindle motor (cont./30min)	kW (HP)	L: 15/18.5 (20/25) H: 18.5/22 (25/29.5)
Spindle speed	rpm	8000 (built-in)
Rotary table (A-axis)	deg	360
X/Y/Z axis rapid feedrate	m/min (ipm)	48/48/48 (1890/1890/1890)
A axis feed rate	rpm	11
X/Y/Z/A axis feed motor	kW (HP)	4.5/4.5/5.5/3 (6/6/7.4/4)
Max. tool length	mm (inch)	350 (13.8)
Max. tool weight	Kg (lbs)	7 (15.47)
Max. tool diameter [without adjacent tools]	mm (inch)	80[125] (3.15[4.92])
Tool exchange time	sec	10 (T-T), 15 (C-C)
Magazine capacity		12
Coolant tank	Liter (gallon)	550 (145)
Power requirement	kVA	45
Controller	Fanuc	0i-MF Plus (10.4")
Machine dimension (incl chip conveyor, excl. stepper)	mm (inch)	3540 x 4859 x 2645 (139.4 x 191.3 x 104.2)
Machine weight	Kg (lbs)	10500 (23100)

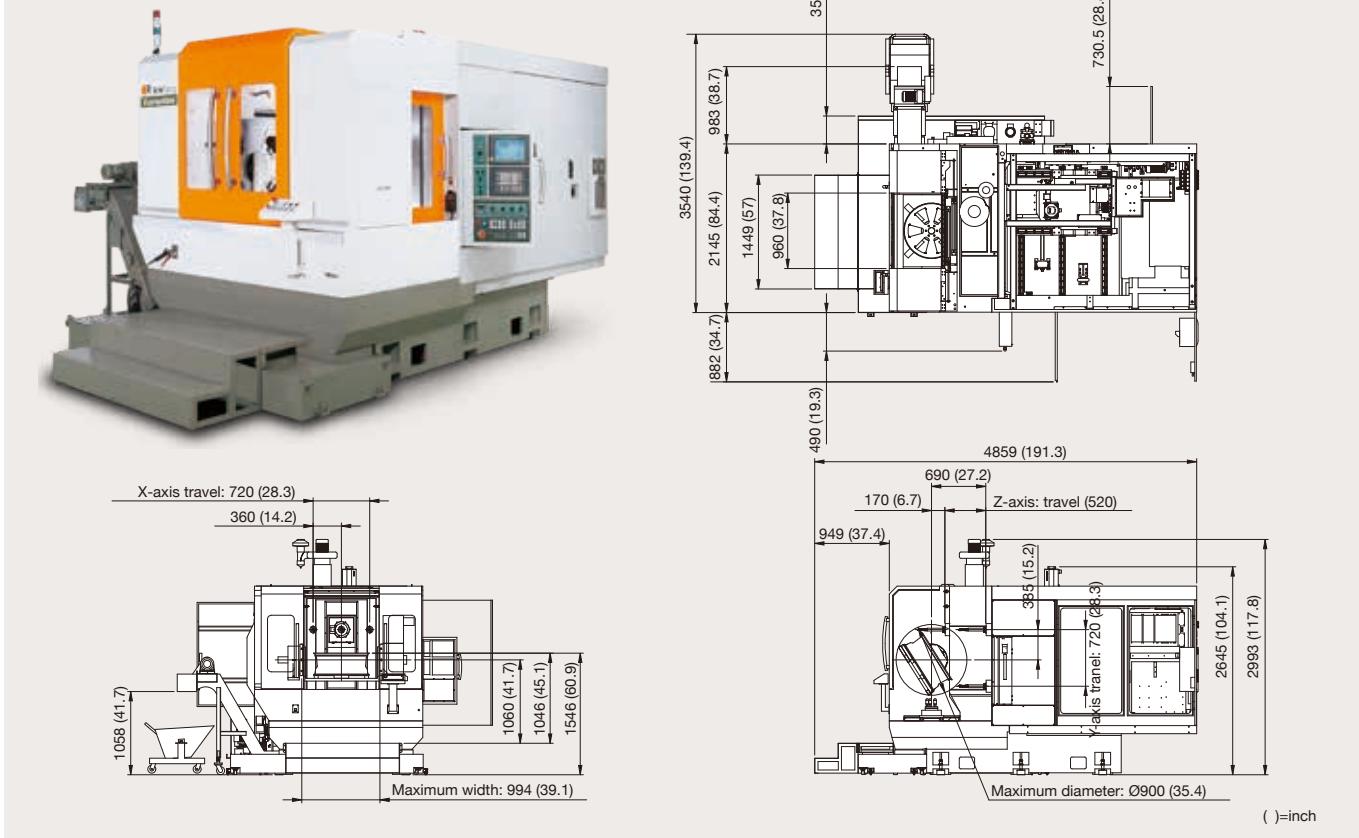
Standard accessories

- Auto door
- Oil skimmer
- Chip conveyor
- Rotary table with wheel clamping fixture HW-1724

Optional accessories

- CTS (Coolant through spindle)
- Tool length measurement
- Part measuring
- Oil mist collector
- Wheel clamping fixture HW-1926

Machine layout for Vcenter-H26W



Victor Taichung's Fanuc Oi-TF Plus (Type 1) Control Specifications



Standard:

ITEM	SPECIFICATION	DESCRIPTION
Controlled Axes:		
1.	Controlled Axes	2 Axes (X, Z)
2.	Simultaneous Controlled Axes	Position / Linear interpolation / Circular interpolation (2/2)
3.	Least Input Increment	0.001mm / 0.0001inch / 0.001deg.
4.	Least Input Increment 1/10	0.0001mm / 0.00001inch / 0.0001deg.
5.	Max. command value	± 99999.999mm (± 9999.999in)
6.	Fine Acceleration & Deceleration Control	Std.
7.	HRV Control	Std.
8.	Inch / Metric Conversion	Std. (G20/G21)
9.	Interlock	All Axes / Each Axis / Cutting Block Start
10.	Machine Lock	All Axes / Each Axis
11.	Emergency Stop	Std.
12.	Over-travel	Std.
13.	Stored Stroke Check 1	Std.
14.	Mirror Image	Each Axis
15.	Chamfering on/off	Std.
16.	Follow-up	Std.
17.	Unexpected disturbance torque detection function	Std. (to be used to tool load monitoring)
18.	Position switch (with Victor's own PLC)	Std. (to be used for security)

Operation:

1.	Automatic Operation	Std.
2.	MDI Operation	MDI B
3.	DNC Operation	Reader / Puncher Interface is Required
4.	DNC Operation with Memory Card	PCMCIA Card Attachment is Required
5.	Program Number Search	Std.
6.	Sequence Number Search	Std.
7.	Sequence number comparison and stop	Std.
8.	Buffer Register	Std.
9.	Dry Run	Std.
10.	Single Block	Std.
11.	JOG Feed	Std.
12.	Manual Reference Position Return	Std.
13.	Manual Handle Feed 1	Unit / Each Path
14.	Manual Handle Feed Rate	X1, X10, X100

Interpolation:

1.	Positioning	G00
2.	Threading synchronous cutting	Std.
3.	Multiple threading	Std.
4.	Threading retract	Std.
5.	Continuous threading	Std. (G76)
6.	Variable threading	Std. (G34)
7.	Linear Interpolation	G01
8.	Circular Interpolation	G02, G03 (multi-quadrant is possible)
9.	Dwell	G04
10.	Skip Function	G31
11.	Reference Position Return	G28
12.	Reference Position Return Check	G27
13.	2ND Reference Position Return	Std.

Feed:

1.	Rapid Traverse Rate	Std.
2.	Rapid Traverse Override	F0, 25%, 50%, 100%
3.	Feed Per Minute	G94 (mm/min)
4.	Feed Per Revolution	G95 (mm/rev)
5.	Tangential Speed Constant Control	Std.
6.	Cutting Feed rate Clamp	Std.
7.	Automatic Acceleration / Deceleration	Rapid traverse: linear; Cutting feed: exponential
8.	Linear accel / deceleration after cutting feed interpolation	Std.
9.	Feed rate Override	0~150%
10.	Jog Override	0~100%
11.	Feed Stop	Std.

Program Input:

1.	EIA / ISO Automatic Recognition	Std.
2.	Label Skip	Std.
3.	Parity Check	Std.
4.	Control In / Out	Std.
5.	Optional Block Skip	1
6.	Max. Programmable Dimension	± 8-Digit
7.	Program Number	O4-Digit
8.	Sequence Number	N5-Digit
9.	Absolute / Incremental Programming	G90/G91
10.	Decimal Point Programming / Pocket Calculator Type Decimal Point Programming	Std.
11.	Input Unit 10 Time Multiply	Std.
12.	Diameter/radius programming	Std.
13.	Plane Selection	G17, G18, G19
14.	Automatic Coordinate System Setting	Std.
15.	Work piece Coordinate System	G52, G53, G54~G59
16.	Direct Drawing Dimension Programming	Std.
17.	G code System A	Std.
18.	Chamfering/corner R	Std.
19.	Programmable Data Input	G10
20.	Sub Program Call	4 folds nested / 10 folds nested for 32IB
21.	Custom Macro B	Std.
22.	Canned Cycles	Std.
23.	Multiple Repetitive Cycle	Std. (G70~G76)
24.	Multiple Repetitive Cycle 2 (Pocket profile)	Std. (G70~G76 type II)
25.	Canned Cycle for Drilling	Std.
26.	Program Format	FANUC std. format
27.	Program Stop / Program End	M00 / M01 / M02 / M30
28.	Manual Guide i	Std.
29.	Optional block skip 2-9 blocks	Std.

Auxiliary Spindle Speed Function:

1.	Auxiliary Function Lock	Std.
2.	High Speed M / S / T Interface	Std.
3.	Spindle Speed Function	Std.
4.	Constant Surface Speed Control	Std.
5.	Spindle Override	50~120%
6.	Actual Spindle Speed Output	Std.
7.	1st Spindle Orientation	Std.
8.	1st Spindle Output Switching Function	Std.
9.	M Code Function	M3 digit
10.	S Code Function	S5 digit
11.	T Code Function	T2 digit
12.	Rigid Tapping (Spindle)	Std.

Tool Function & Tool Compensation:

1.	Tool Function	T7+1/T6+2digits
2.	Tool Offset Pairs	± 6-digit 64 pairs
3.	Tool Nose Radius Compensation	Std. (G40/G41/G42)
4.	Tool Geometry/wear Compensation	Std.
5.	Number of Tool Offsets (in total)	64 (0i-D), 99 sets (32i-B)
6.	Automatic Tool Offset	Std.
7.	Direct Input of Tool Offset Value Measured B	Std.

Accuracy Compensation:

1.	Backlash Compensation	Rapid Traverse / Cutting Feed
2.	Stored Pitch Error Compensation	Std.

Edit Operation:

1.	Part Program Storage Length (in total)	5120m (2MB)
2.	Number of Registerable programs (in total)	400
3.	Part Program Editing	Std.
4.	Program Protect	Std.
5.	Background Editing	Std.
6.	Memory card editing	Std.

Setting and Display:

1.	Status Display	Std.
2.	Clock Function	Std.
3.	Current Position Display	Std.
4.	Program Display	Program name 31 characters
5.	Parameter Setting and Display	Std.
6.	Self Diagnosis Function	Std.
7.	Alarm Display	Std.
8.	Alarm History Display	25
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.
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.
21.	Color LCD / MDI	10.4"

Data Input / Output:

1.	Reader / Puncher Interface	RS-232 interface
2.	Memory Card Interface	Std.
3.	External Work piece number search	9999
4.	Embedded Ethernet (10Mbps)	Std.
5.	USB port	Std.

OPTIONS:

With hardware included:

1.	Tool life management	<input type="checkbox"/>
2.	Quick program restart	<input type="checkbox"/>
3.	Data server (with PCB and CF card 1GB)	<input type="checkbox"/>
4.	Ethernet/IP (to be linked to robot)	<input type="checkbox"/>
5.	PROFINET (to be linked to robot)	<input type="checkbox"/>
6.	CC-Link (to be linked to robot)	<input type="checkbox"/>
7.	Fast Ethernet (required for SCADA Web with additional RJ45 port)	<input type="checkbox"/>

Without hardware included:

8.	Circular thread cutting (G35, G36)	<input type="checkbox"/>
9.	AICC-1 (G5.1 Q1,40 blocks)	<input type="checkbox"/>
10.	AICC-2 (G5.1 Q1,200 blocks)	<input type="checkbox"/>
11.	Arbitrary speed threading	<input type="checkbox"/>

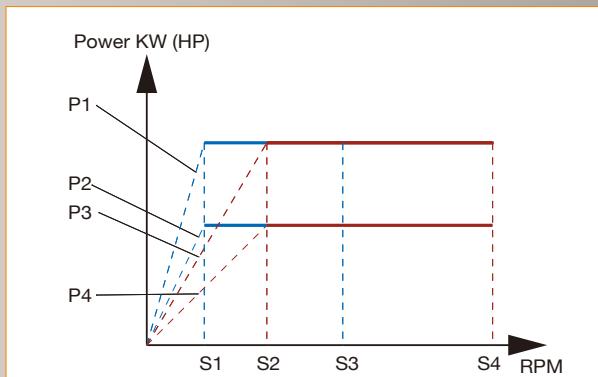
VICTOR's FANUC Oi-MF Plus(Type 1) / 31i-B Plus Control Specification



Standard

ITEM	SPECIFICATION	DESCRIPTION
Controlled Axes		
1.	Controlled Axes	3 Axes (X, Y, Z)
2.	Simultaneous Controlled Axes	4 Axes
3.	Least Input Increment	0.001 mm / 0.0001 inch / 0.001 deg.
4.	Least Input Increment 1/10	0.0001 mm / 0.00001 inch / 0.001 deg.
5.	Max. command value	±99999.999 mm (±9999.9999 in)
6.	Inch / Metric Conversion	Std. (G20/G21)
7.	Interlock	All Axes / Each Axis / Cutting Block Start
Operation		
1.	Automatic Operation	Std.
2.	MDI Operation	MDI B
3.	DNC Operation	Reader / Puncher Interface is Required
4.	DNC Operation with Memory Card	PCMCIA Card Attachment is Required
5.	Manual Handle Feed	1 Unit / Each Path
6.	Manual Handle Feed Rate	X1, X10, X100
Interpolation		
1.	Positioning	G00
2.	Exact Stop Mode	G61
3.	Exact Stop	G09
4.	Linear Interpolation	G01
5.	Circular Interpolation	G02, G03 (multi-quadrant is possible).
6.	Dwell	G04
7.	Helical interpolation	Std.
8.	Skip Function	G31
Feed		
1.	Rapid Traverse Rate	Std.
2.	Rapid Traverse Override	F0, 25%, 50%, 100%
3.	Feed Per Minute	G94 (mm/min)
4.	Tangential Speed Constant Control	Std.
5.	Cutting Feed rate Clamp	Std.
6.	Automatic Corner Deceleration	Std. (G64)
7.	Feed rate Override	0~200%
8.	Jog Override	0~100%
9.	Automatic Corner Override	G62.
10.	Feed Stop	Std.
11.	AI contour control (AICC, G05.1) (in total)	200 blocks (AICC-2)
12.	Look-ahead blocks expansion (in total)	1000 blocks (31i)
Program Input		
1.	EIA / ISO Automatic Recognition	Std.
2.	Label Skip	Std.
3.	Parity Check	Std.
4.	Control In / Out	Std.
5.	Optional Block Skip	1
6.	Max. Programmable Dimension	±8-Digit
7.	Program Number	O4-Digit
8.	Sequence Number	N5-Digit
9.	Absolute / Incremental Programming	G90/G91
10.	(Pocket Calculator Type) Decimal Point Programming	Std.
11.	Input Unit 10 Time Multiply	Std.
12.	Plane Selection	G17, G18, G19
13.	Rotary Axis Designation	Std.
14.	Rotary Axis Roll-Over Function	Std.
15.	Polar coordinate Command	G16.
16.	Coordinate System Setting	Std.
17.	Automatic Coordinate System Setting	Std.
18.	Workpiece Coordinate System	G52, G53, G54~G59
19.	Addition of Workpiece Coordinate System Pair	48 Pairs
20.	Manual Absolute On And Off	Std.
21.	Optional Chamfering/Corner R	Std.
22.	Programmable Data Input	G10
23.	Sub Program Call	4 (0i) or 10 (31i) folds nested
24.	Custom macro B	Std.
25.	Addition of Custom Macro Common Variables	#100~#199,#500~#999
26.	Interruption type custom macro	Std.
27.	Canned Cycles For Milling	G73/G74/G76, G80-G89, G98/G99
28.	Small hole peck drilling cycle	G83
29.	Circular Interpolation by R Programming	Std.
30.	Program Format	FANUC std. format
31.	Program Stop / Program End	M00/M01/M02/M30
32.	Reset	Std.
33.	Scaling	G51
34.	Coordinate System Rotation	G68
35.	Programmable mirror image	G50.1
36.	Manual Guide I (MGI) conversational programming	Std.
Optional		
37.	Optional block skip 9 blocks	Std.
38.	Quick program restart	Std.
39.	Jerk control	Std. (31i)
40.	NURBS interpolation	Std. (31i)
Auxiliary Spindle Speed Function		
1.	Auxiliary Function Lock	Std.
2.	High Speed M / S / T Interface	Std.
3.	Spindle Speed Function	Std.
4.	Spindle Override	50~200%
5.	1st Spindle Orientation	Std.
6.	M Code / S Code / T code Function	M3 / S5 / T2 digit
7.	Rigid tapping	Std.
Tool Function & Tool Compensation		
1.	Tool Function	T8 digit
2.	Tool Offset Pairs	± 6-digit, 400
3.	Tool Offset Memory C	STD (D/H codes are separated)
4.	Tool Length Compensation	G43-G44, G45-G48, G49
5.	Cutting Compensation C	Std.
Accuracy Compensation		
1.	Backlash Compensation	Rapid Traverse / Cutting Feed
2.	Stored Pitch Error Compensation	Std.
Edit Operation		
1.	Part Program Storage Length (in total)	5120m (2MB)(0), 10240m (4MB)(31i)
2.	Number of Registered programs (in total)	1000
3.	Part Program Editing / Protect	Std.
4.	Background Editing	Std.
5.	Memory Card Editing (Max. 1000 programs.)	Std.
Setting and Display		
1.	Clock Function	Std.
2.	Current Position Display	Std.
3.	Program Display	Program name 31 characters
4.	Parameter Setting and Display	Std.
5.	Self Diagnosis Function	Std.
6.	Alarm Display / Operation History Display	Std.
7.	Alarm History Display	50
8.	Help Function	Std.
9.	Run Hour and Parts Count Display	Std.
10.	Actual Cutting Feedrate Display	Std.
11.	Display of Spindle Speed and T Code At All Screens	Std.
12.	Graphic Function	Std.
13.	Dynamic graphic display	Std. (in MGI)
14.	Data Protection Key	Std.
15.	Erase CRT Screen Display	Std.
16.	Machining Condition Selecting Screen	Std.
17.	Color LCD / MDI	10.4" (0i), 15" (31i)
Data Input / Output		
1.	Reader / Puncher Interface	RS-232 interface
2.	Memory Card Interface	Std.
3.	Embedded Ethernet (10Mbps)	Std.
4.	USB Device	Std.
OPTIONS		
ITEM	SPECIFICATION	DESCRIPTION
With hardware included		
1.	Data server (with PCB and CF card 1GB)	<input type="checkbox"/> Std. (2GB)
2.	15" LCD with Panel iH (HMI) and touch screen - AI contour control 400 blocks	<input type="checkbox"/> Std.
3.	Part Program Storage Length 20480m (8MB in total)	N.A. <input type="checkbox"/>
4.	Ethernet/IP (to be linked to robot)	<input type="checkbox"/> <input type="checkbox"/>
5.	PROFINET (to be linked to robot)	<input type="checkbox"/> <input type="checkbox"/>
6.	CC-Link (to be linked to robot)	<input type="checkbox"/> <input type="checkbox"/>
7.	Fast Ethernet (required for SCADA Web with additional RJ45 port)	<input type="checkbox"/> <input type="checkbox"/>
8.	5-axis simultaneous control	N.A. <input type="checkbox"/> (31i-B5 Plus)
Without hardware included		
9.	Tool load monitoring (with Victor own PLC)	<input type="checkbox"/> <input type="checkbox"/>
10.	Tool retract and return (G10.6 with Victor own PLC)	<input type="checkbox"/> <input type="checkbox"/>
11.	Addition of work-piece coordinate systems 300 sets	<input type="checkbox"/> <input type="checkbox"/>
12.	Bi-directional Pitch Error Compensation	<input type="checkbox"/> <input type="checkbox"/>
13.	Cylindrical interpolation (G7.1) (used on 4th axis) - by plane distance command	Std. <input type="checkbox"/>
14.	Exponential interpolation (G2.3)	N.A. <input type="checkbox"/>
15.	Conical/spiral interpolation	N.A. <input type="checkbox"/>
16.	Polar coordinate interpolation	N.A. <input type="checkbox"/>
17.	Floating reference position return	N.A. <input type="checkbox"/>
18.	Hypothetical axis interpolation (G07)	N.A. <input type="checkbox"/>

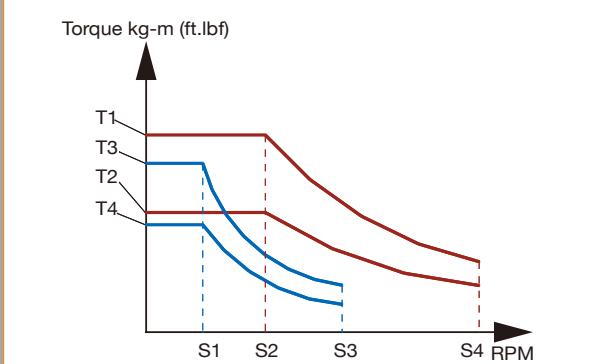
Spindle output for wheel machining



P1 (*30 min. in low winding)
 P2 (cont. in low winding)
 P3 (*30 min. in high winding)
 P4 (cont. in high winding)

S1 (base RPM in low winding)
 S2 (base RPM in high winding)
 S3 (max. RPM in low winding)
 S4 (max. RPM in high winding)

*30 min. may be replaced by 15%, 15 min. or 20 min. according to Fanuc technical specification



T1 (*30 min. in low winding)
 T2 (cont. in low winding)
 T3 (*30 min. in high winding)
 T4 (cont. in high winding)

S1 (base RPM in low winding)
 S2 (base RPM in high winding)
 S3 (max. RPM in low winding)
 S4 (max. RPM in high winding)

Model	Spindle Motor	Base Speed (rpm)	Max Speed (rpm)	P_Cont. KW (HP)	P. KW (HP)	Tor. Cont. Kg-m (ft.lbf)	Tor. Kg-m (ft.lbf)
Vturn-18W	α il30	799	2500	30 (40)	37 (50)-30 min.	34.4 (249)	42.4 (307)-30 min.
Vturn-22W/24W	α il30	911	2500	30 (40)	37 (50)-30 min.	34.4 (249)	42.4 (307)-30 min.
Opt. built-in	Bil250S	410	2500	22 (29.5)	26 (35)-30 min.	52.2 (377)	61.8 (446)-30 min.
Vturn-V22W-T2	α il40	410	2500	22 (29.5)	26 (35)-30 min.	52.2 (377)	61.8 (446)-30 min.
Vturn-V22W	α il50	821	2500	45 (60)	55 (73.7)-30 min.	53.4 (374)	65.1 (457)-30 min.
Vturn-V26W	α il50	681	2000	45 (60)	55 (73.7)-30 min.	53.4 (374)	65.1 (457)-30 min.
Opt.	α il60	681	2000	60 (80)	75 (100)-30 min.	57.4 (415)	68.8 (498)-30 min.
Vcenter-22W	α il12	1500	8000	11 (15)	18.5 (25)-15 min.	7.13 (51.6)	12.0 (86.9)-15 min.
Vcenter-H26W	Bil112L-18.5	Low winding High winding	1500 3500	15 (20) 18.5 (24.8)	18.5 (24.8)-15 min. 22 (29.5)-15 min.	9.72 (70.3) 3.6 (26)	11.94 (86.3)-15 min. 4.28 (30.9)-15 min.

※All specifications are subject to change without notice for design improvement.



THE VICTOR-TAICHUNG COMPANIES

VICTOR TAICHUNG profile:
 Sales turnover: USD 207 mil's (in 2021)*
 No. of employees: 778
 *Exchange rate: 1 USD=28 TWD.



TAIWAN

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