

*F*antastic *P*erformance

# Vcenter-F76 / F106

## Vertical machining center

- **Travels (X/Y/Z):**  
760 / 500 / 510 mm (F76)  
1060 / 600 / 560 mm (F106)
- **Rapid feeds 32/32/32 m/min**
- **8000 rpm spindle output 15 kW (S3)**
- **Roller guideways and Ø40 mm ballscrews**
- **Screw chip removers included**



# Vcenter-F series: Your First VMC with Fantastic Performance

- Victor's own spindle (8000/10000 rpm)
- A-shaped column with long Y-axis travel
- Roller type guideways
- High rapid feeds 32 m/min

## X/Y/Z AXES

Travels: 760 / 500 / 510 mm (F76)  
1060 / 600 / 560 mm (F106)

Rapid feeds: 32/32/32 m/min

Ballscrew diameter: 40/40/40 mm

Guideways: 30/35/45 mm (F76)  
35/40/45 mm (F106)

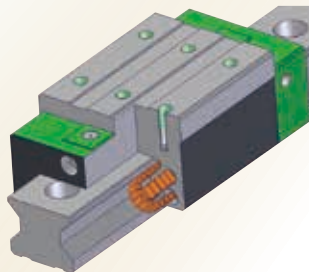
## ATC

Capacity: 24 tools (opt. 30)

Tool exchange time:

2.4 sec. (tool-tool)

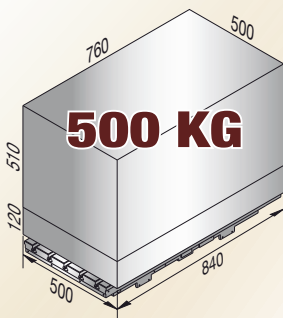
5.7 sec. (chip-chip)



Roller guides

## TABLE

Max. load: 500 kgs (F76)  
600 kgs (F106)

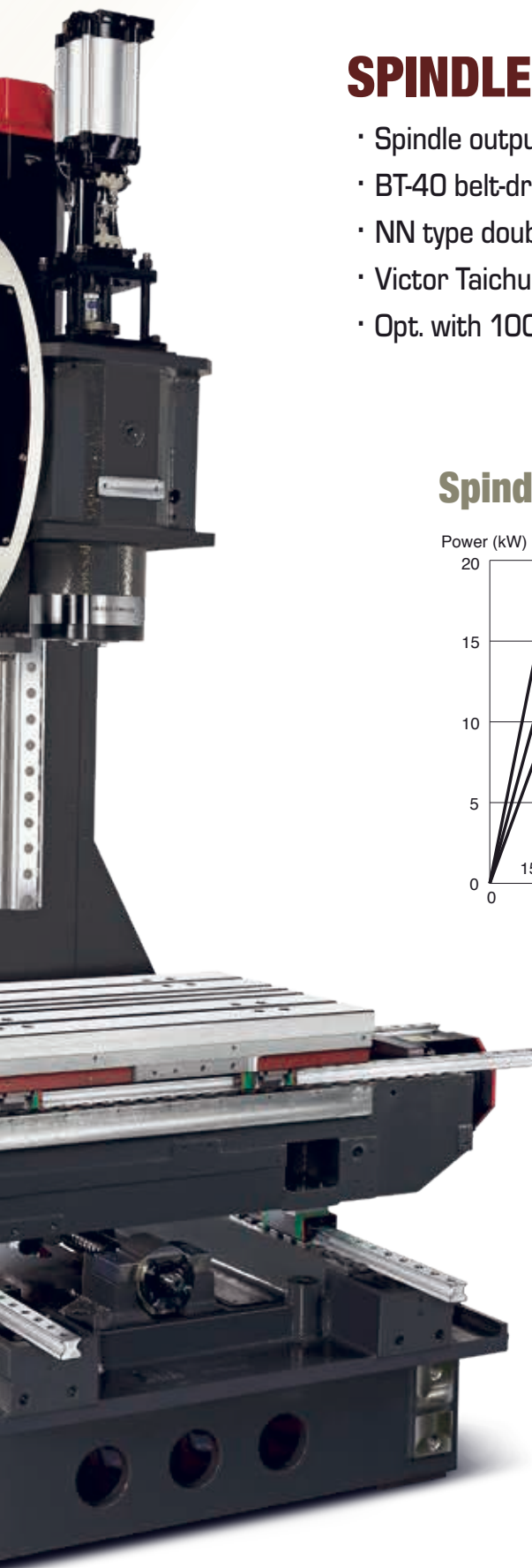


Vcenter-F76



Vcenter-F106



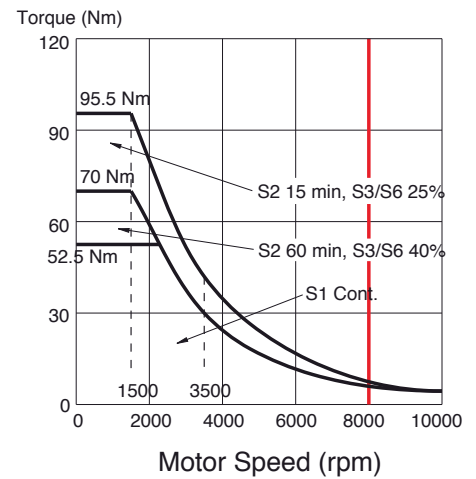
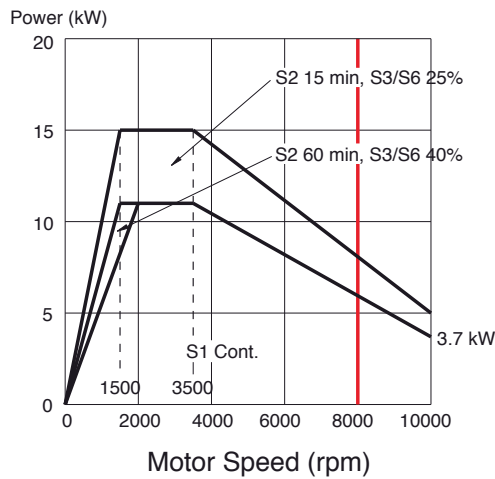


## SPINDLE

- Spindle output 15 kW
- BT-40 belt-driven 8000 rpm spindle
- NN type double roller bearings
- Victor Taichung's own spindle built in house
- Opt. with 10000 rpm spindle



### Spindle Output Diagram

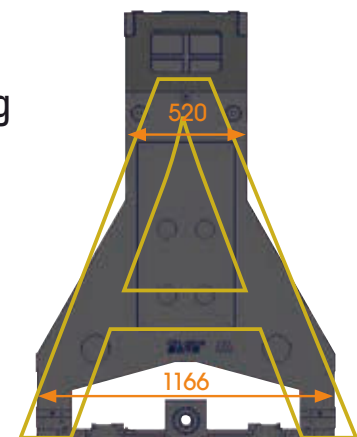


## STRUCTURE

- Wide span column
- Certificated casting



Certificated Casting  
**GA350**



Column with wide span

**1166 mm (F76)**  
**1270 mm (F106)**

# Vcenter-F series

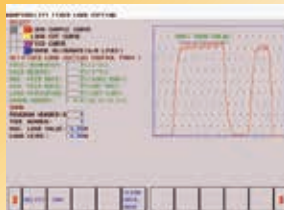
## Standard Accessories

Fanuc Oi-MF Plus (10.4") control with Manual Guide I (MGI)  
 + AICC-2 (200 blocks) for user friendly operation

Victor Taichung's GUI "VSS macros"



Smart workpiece measurement



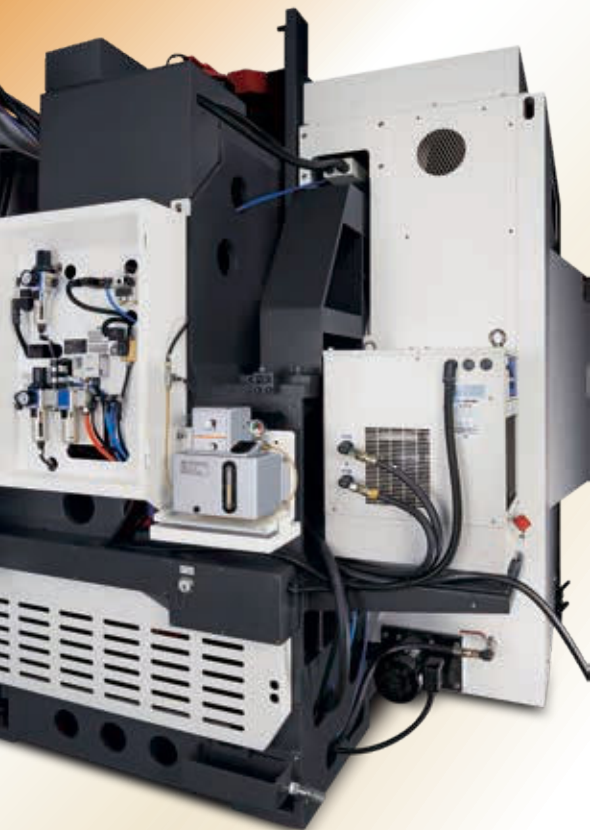
Adaptive cutting at constant loading



Tool management



Renishaw® GUI



Convenient maintenance



Arm type ATC + Coolant ring  
 + LED lights



Bottom guarding flush +  
 Screw chip removers

# Optional Accessories



Spindle oil cooler



CTS (Coolants Thru. Spindle)



Auto tool length measurement



Auto part measuring



Linear scales



4<sup>th</sup> axis interface for rotary table



Chip conveyor

# Machine Specification

Item	Unit	Vcenter-F76	Vcenter-F106
<b>Travel</b>	X axis travel	mm	760
	Y axis travel	mm	500
	Z axis travel	mm	510 (opt. 690)
<b>Distance</b>	Spindle center to column	mm	565
	Spindle nose to table surface	mm	120 ~ 630 (opt. 810)
<b>Table</b>	Table work area	mm	840 x 500
	Dimension of T-slot	mm	4 x 18 x 100
	Max. table load	kg	500
<b>Spindle</b>	Spindle taper		BT-40
	Spindle motor - cont. / 25% (15 min)	kW	11 / 15
	Spindle speed	rpm	8000 (opt. 10000)
<b>Feed rate</b>	Rapid feed rate - X/Y/Z (Fanuc)	m/min	32 / 32 / 32
	Axis acceleration - X/Y/Z	m/sec <sup>2</sup>	0.5G / 0.5G / 0.5G
	Axis feed motor - X/Y/Z	kW	2.5 / 2.5 / 3
	Cutting feedrate by table	m/min	20
	X/Y/Z ballscrew (dia. x pitch)	mm	40 x P16 (X/Y/Z)
	Linear guide width (X/Y/Z)	mm	30 / 35 / 45
<b>Tools</b>	Max. tool length	mm	300
	Max. tool weight	kg	7
	Magazine capacity		24 (opt. 30)
	Max. tool diameter (without adjacent tools)	mm	75 (150)
	Tool exchange time	sec.	2.4 (T-T), 5.7 (C-C)
	Pull stud angle	deg.	15 (JIS 40P)
<b>Accuracy (ISO 230-2)</b>	Positioning accuracy (bi-directional)	mm	0.010
	Repeatability	mm	0.007 (±0.0035)
	Power requirement	KVA	22 (excl. CTS)
<b>Machine</b>	Min/Max. air pressure	kg/cm <sup>2</sup>	5.5 ~ 6.5
	Coolant tank capacity	L.	220
	Std. NC controller (Fanuc)		0i-MF Plus (10.4")
	Floor space requirement	mm	2714 x 2782
	Max. machine height	mm	2578
	Machine weight	kg	5260
			6250

## Standard Accessories:

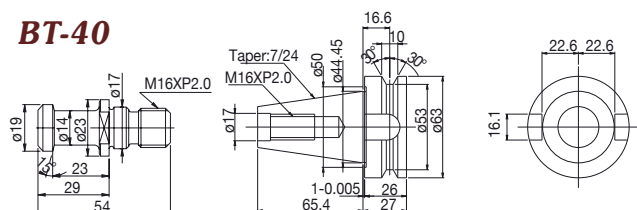
- Fully enclosed splash guard
- Fanuc 0i-MF Plus (10.4") control
- Screw-type chip remover (left disposal)
- Air blow (manual control)
- Rigid tapping
- Remote MPG
- Hand tools and toolbox
- T nuts for table slot
- 3-step warning light
- Leveling pads

## Optional Accessories:

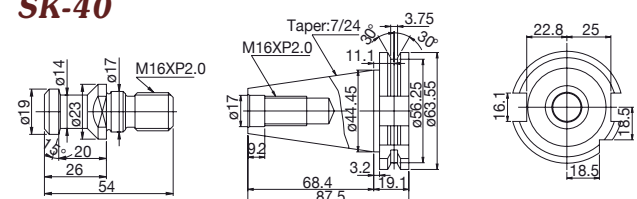
- Spindle oil cooler
- Air conditioner for electric cabinet
- Air blow (controlled by M-code)
- Auto power off
- Chip conveyor with cart
- Coolant through spindle (CTS)
- 10000 rpm spindle
- 30 tool magazine
- Auto tool length measurement
- Auto part measuring
- Stop block for special tools
- 4th/5th axis interface
- Auto door
- Oil skimmer
- Linear scales
- Air gun
- Coolant gun
- Rotary tables

## Tool Shank

### BT-40



### SK-40

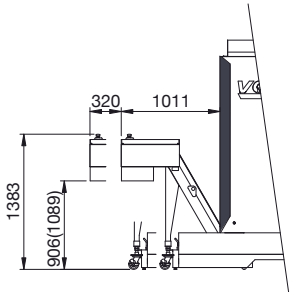
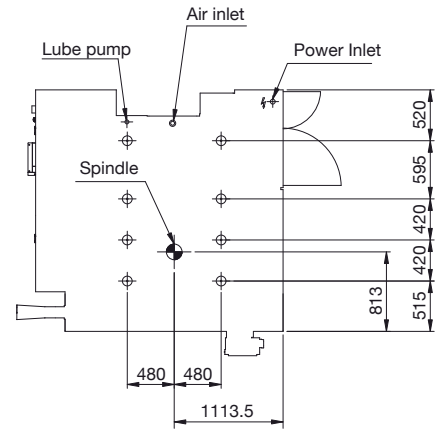
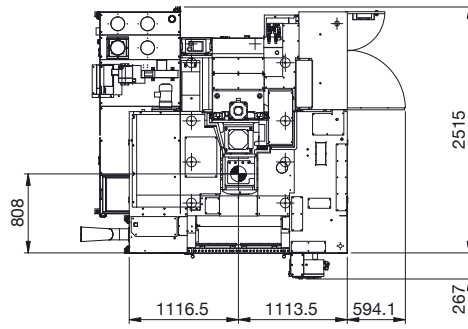
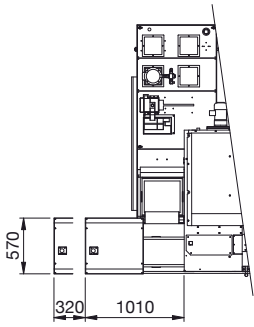


## Fanuc MGI + AICC-2

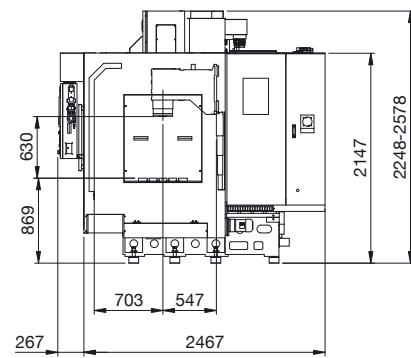
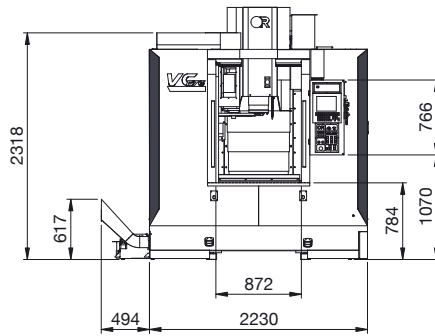


# Machine Layout

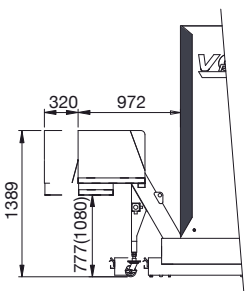
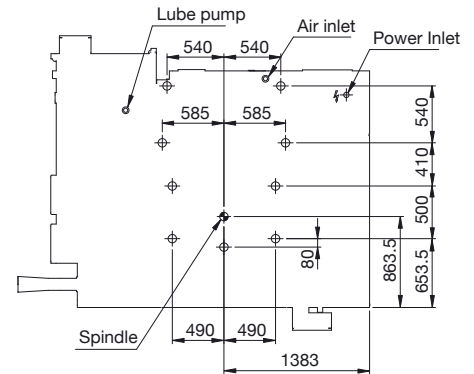
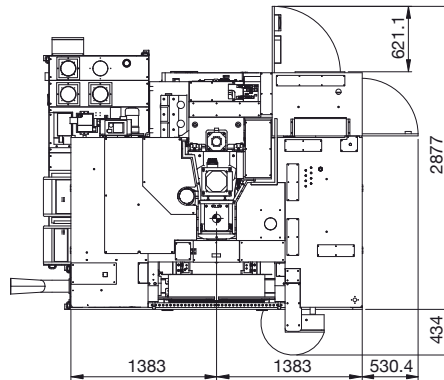
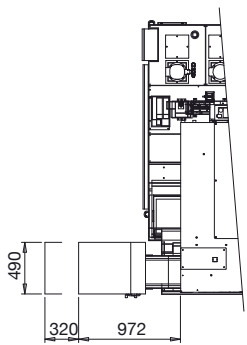
## Vcenter-F76



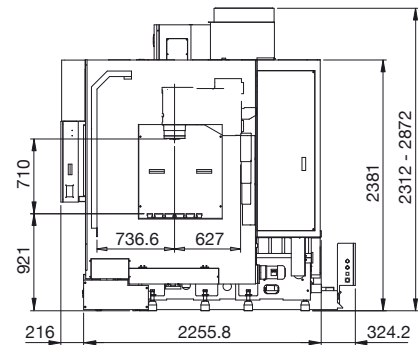
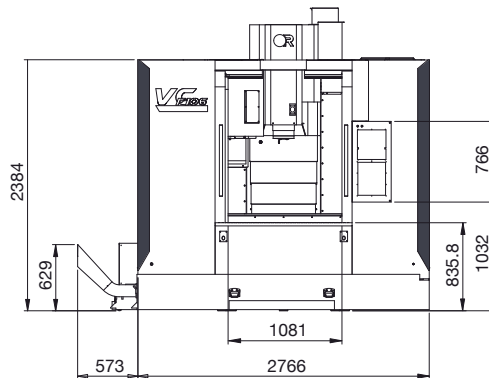
chip conveyor



## Vcenter-F106



chip conveyor



# Victor Taichung's FANUC Oi-MF Plus (10.4") Control Specification

## Standard

ITEM	SPECIFICATION	DESCRIPTION
<b>Operation &amp; Program Input:</b>		
1.	Input / Output interface	RS-232, PCMCIA Card, USB
2.	Tool Offset Pairs	± 6-digit, 400
3.	Program Number	O4-Digit
4.	Sequence Number	N5-Digit
5.	M Code Function	M3 digit
6.	S Code Function	S5 digit
7.	T Code Function	T2 digit
8.	Program Display	Program name 31 characters
9.	Positioning	G00
10.	Linear Interpolation	G01
11.	Circular Interpolation	G02, G03
12.	Helical interpolation	Std.
13.	Skip Function	G31
14.	Reference Position Return	G28, G30
15.	Absolute / Incremental Programming	G90 / G91
16.	Plane Selection	G17, G18, G19
17.	Polar coordinate Command	G16.
18.	Workpiece Coordinate System	G52, G53, G54~G59
19.	Addition of Workpiece Coordinate System Pair	48 Pairs
20.	Optional Chamfering / Corner R	Std.
21.	Sub Program Call	4 folds nested
22.	Custom macro B	Std.
23.	Addition of Custom Macro Common Variables	#100~#199, #500~#999
24.	Canned cycle For Drilling	G73 / G74 / G76, G80-G89
25.	Small hole peck drilling cycle	G83
26.	Program Stop / Program End	M00 / M01 / M02 / M30
27.	Scaling	G51
28.	Rigid tapping	M29
29.	Coordinate System Rotation	G68
30.	Programmable mirror image	G50.1
31.	Manual Guide I (MGI) conversational programming	Std.
32.	Fine Surface Machining	Std.
33.	Smooth tolerance control+	Std.
<b>Controlled Axes:</b>		
1.	Controlled Axes	3 Axes (X, Y, Z)
2.	Simultaneous Controlled Axes	4 Axes
3.	Least Input Increment	0.001 mm
4.	Least command increment	0.0001 mm
5.	HRV Control	HRV3+
6.	Unexpected disturbance torque detection (AIR-BAG)	Std.
7.	Backlash compensation	Std.
8.	Stored pitch error compensation	Std.
<b>Feed:</b>		
1.	Rapid Traverse Override	F0, 25%, 50%, 100%
2.	Feed Per Minute	G94 (mm/min)
3.	Feed rate Override	0~150%
4.	Spindle Override	50~120%

5.	Manual Handle Feed Rate	X1, X10, X100
6.	AI contour control (AICC, G05.1) (in total)	200 blocks
<b>Edit Operation</b>		
1.	Part Program Storage Length (in total)	5120m
2.	Part Program Editing / Protect	Std.
3.	Memory Card Editing (Max. 63 programs.)	Std.

## OPTIONS

ITEM	SPECIFICATION	DESCRIPTION
<b>With hardware included</b>		
1.	Data server (with PCB and CF card 1GB)	<input type="checkbox"/>
2.	Ethernet / IP (to be linked to robot)	<input type="checkbox"/>
3.	PROFIBUS-DP (to be linked to robot)	<input type="checkbox"/>
4.	CC-Link (to be linked to robot)	<input type="checkbox"/>
5.	Fast Ethernet (required for SCADA Web with additional RJ45 port)	<input type="checkbox"/>
<b>Without hardware included</b>		
6.	Tool load monitoring (with Victor own PLC)	<input type="checkbox"/>
7.	Cylindrical interpolation (G7.1) (used on 4th axis)	<input type="checkbox"/>
8.	Addition of work-piece coordinate systems 300 sets	<input type="checkbox"/>
9.	Tilted working plane indexing command	<input type="checkbox"/>
10.	Memory card program entry count extension (Max. 1000)	<input type="checkbox"/>

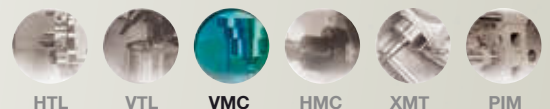
## Machine Color Option



Standard

RAL-7024

**VictorTaichung** profile:  
Sales turnover: USD 101.5 mil's (in 2019)\*  
No. of employees: 806  
\*Exchange rate: 1 USD=30 TWD.



HTL

VTL

VMC

HMC

XMT

PIM



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