

Art of Mold & Die Machining

Vcenter-M106

Vertical machining center

- Travels (X/Y/Z): 1060 / 700 / 700 mm
- Rapid feeds: 32 / 32 / 32 m/min
- SIEMENS® SINUMERIK 828D control
- BBT-40 / 15000 rpm spindle / 23.25 KW
- Roller type linear motion guideways
- Grease lubrication
- Screw chip removers included



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

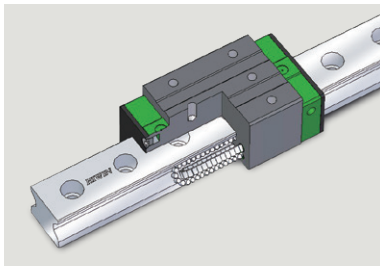


Vcenter-M series VMC for Mold & Die Machining

- ◆ 15000 rpm BBT-40 spindle with high power output 23.25 KW
- ◆ SIEMENS® SINUMERIK 828D control performs excellent contouring on part surface at high speed
- ◆ A-shaped column with long Y-axis travel 700 mm
- ◆ Wide base with 4 screws in Y-axis to avoid chips built-up
- ◆ Machine weight 8375 kg for high robustness

X/Y/Z AXES

- Travels: 1060/700/700 mm
- Rapid feeds: 32/32/32 m/min
- Ballscrew diameter: 45/40/45 mm
- Roller type LM guideways with grease lubrication



ATC

- 24 tools (opt. 32, 40)
- Column designed with a shoulder for carrying magazine
- Tool exchange time:
2.2 sec. (tool-tool)
7.0 sec. (chip-chip)



Additional pads for column supporting

TABLE

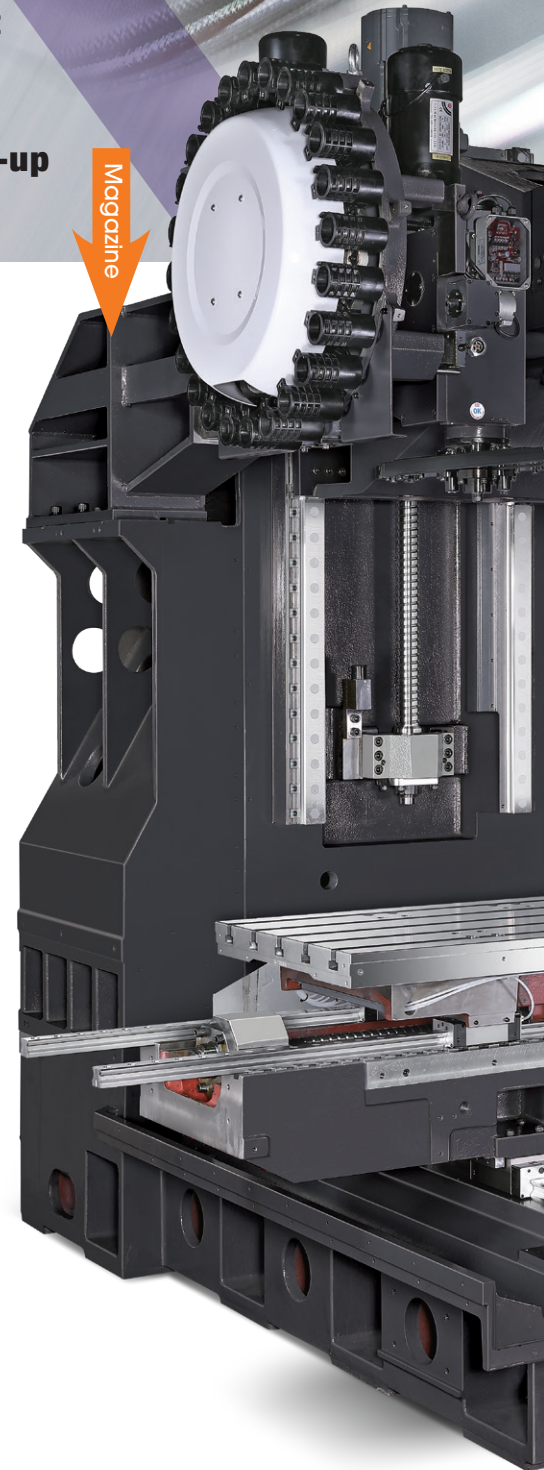
700 kg



1120 x 520 mm



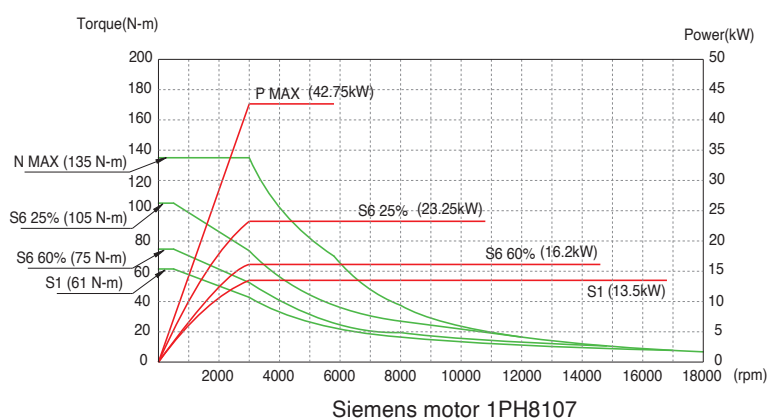
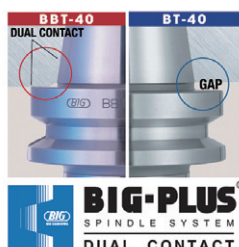
Λ-cover (Rear Y)





15000 rpm SPINDLE (23.25 kW, S6)

- BigPlus® BT-40 oil/air lubricated spindle
- Spindle power 23.25 kW (S6-25%) with oil cooling
- Lean headstock with reduced weight for quick response at high cutting feed

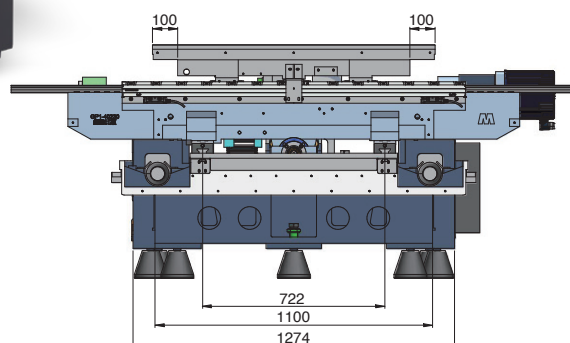


Certificated Casting

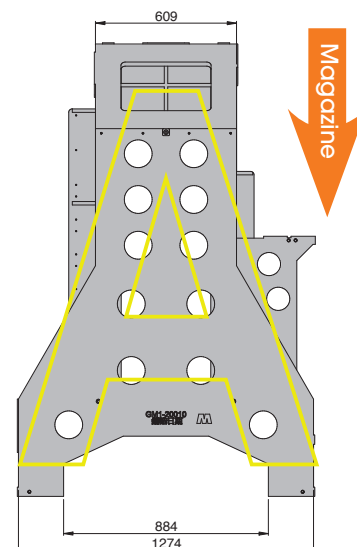
GA350

STRUCTURE

- Wide span column
- Large base
- Magazine mounted on shoulder



4 off screw chip removers

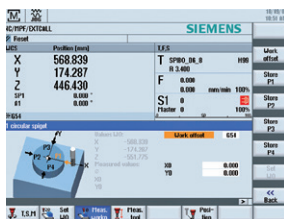


Wide column

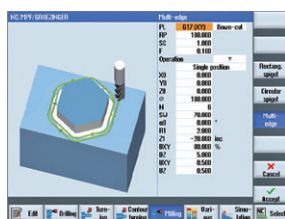
Vcenter-M series for Mold & Die Machining

SINUMERIK 828D control includes:

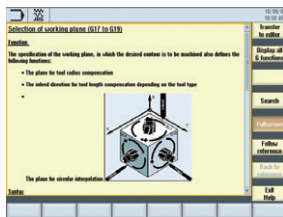
- ♦ 10.4" screen (opt. 15" touch screen)
- ♦ 10 MB on board (CF USB max. 32 GB)
- ♦ Conversational operation (Opt. ShopMill)
- ♦ Preview contouring 450 blocks (opt. 600 blocks)
- ♦ ProgramGUIDE with Animation Guidance
- ♦ 2D / 3D simulation



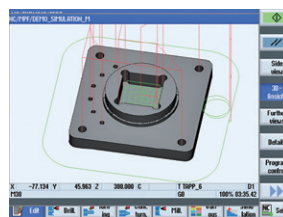
**Sinumerik Operate
(Conversational)**



Animation Guidance



Online Help



3D simulation



**Heat exchanger +
Enclosed rear guarding**



Lube Hybrid Lubrication

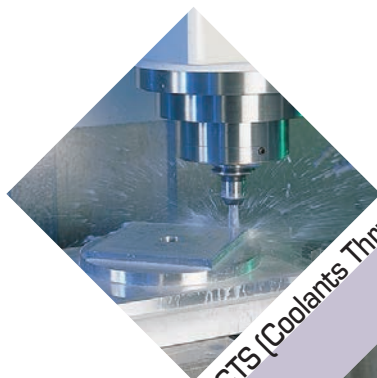


Spindle oil cooler



**Arm type ATC + Auto door for
magazine + Coolant ring + LED lights**

Optional Accessories



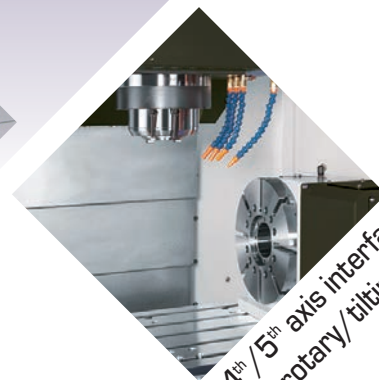
CTS (Coolants Thru. Spindle)



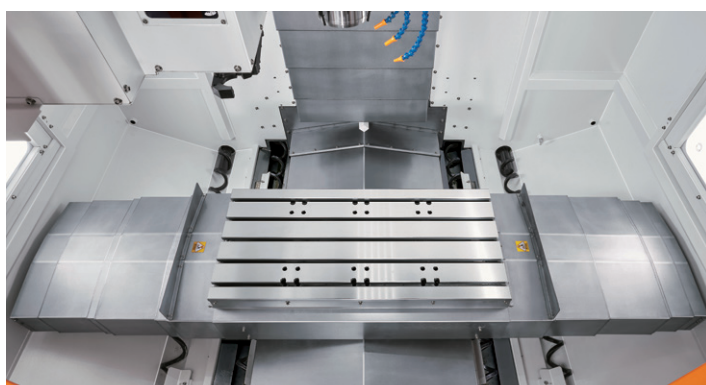
Auto part measuring
Auto tool length measurement



Linear scales



4th/5th axis interface
for rotary/tilting
table



Bottom guarding flush + Screw chip removers



Victor Taichung's SIEMENS 828D 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	0.000001 mm
4.	Least command Increment	0.000001 mm
5.	Measuring system Error	Std.
6.	Backlash Compensation	Std.
7.	Pitch Error Compensation	Std.

Operation & Program Input:

1.	Data Input/Output	Ethernet, USB, CF Card
2.	Number of tool/Edge max (T/D)	768/1536
3.	Animated cycle support	Std.
4.	Geometry processor for contour	Std.
5.	M Code	M3 digit
6.	S Code	S5 digit
7.	T Code	Readable text
8.	Programming language (High level)	Std.
9.	Orientation	Std.
10.	NURBS Interpolation	Std.
11.	3D Circular Interpolation	Std.
12.	Helical Interpolation	Std.
13.	Skip Function	Std.
14.	Zero Return	Std.
15.	Absolute/Incremental Programming	Std.
16.	Plane Section	Std.
17.	Polar Coordinate	Std.
18.	Workpiece Coordinate Command System	100 sets
19.	Number Of Basic Frames Max (G500)	1 set
20.	Separate Feed For Corners And Chamfers	Std.
21.	Subroutine Levels/Interrupt Routines	16/2
22.	User R Parameters	300
23.	Global R Parameters	Std.
24.	Basic Drilling/Milling Technology Cycles	Std.
25.	Program Stop / Program End	Std.

26.	Rigid Tapping	Std.
27.	HSC (CYCLE832)	Std.
28.	Animated machining step support (ShopMill/ShopTurn)	Opt.
29.	Incline Surface Cycle (CYCLE 800)	Std.
30.	Real Time Of Machining	Std.
31.	Programs on CF Card	Std. (Support 32GB, Industrial Level)
32.	Programs on CF USB Device	Std. (Support 32GB, Industrial Level)
33.	Macro Technique	Std.
34.	2D Simulation (Finished Part)	Std.
35.	3D Simulation (Finished Part)	Incl.
36.	OPC Server (4.5 SP3)	Incl.

Feed:

1.	Rapid Traverse Rate	0~120%
2.	Spindle Override	50~120%
3.	Manual Handle Feed Rate	X1, X10, X100
4.	Look Ahead Blocks	450

Edit Operation:

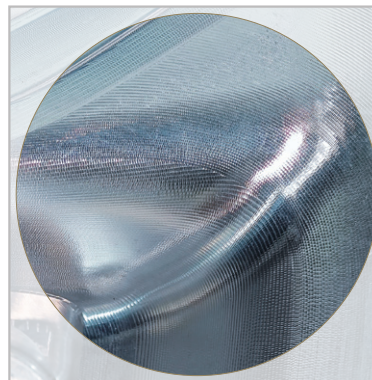
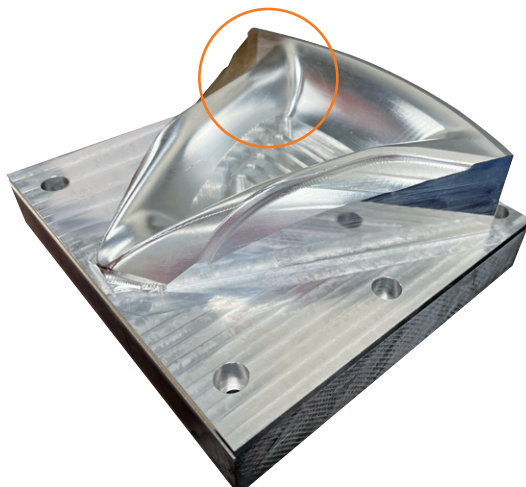
1.	Part Program Storage Length	10M
2.	Part Programs on PPU, Max	750
3.	Program GUIDE	Std.
4.	Synchronized Actions Numbers	24

Options

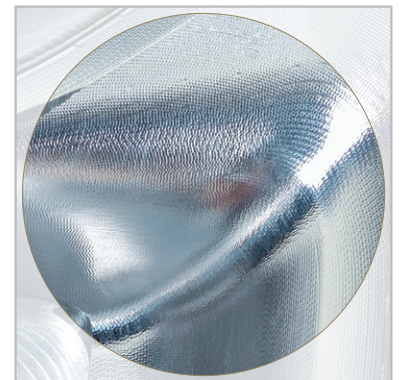
ITEM SPECIFICATION DESCRIPTION

1.	DXF Contour Converter	Opt.
2.	Top Surface (with Look Ahead 600 blocks)	Opt.
3.	Execution from external storage (EES)	Opt.
4.	Conversational programming ShopMill	Opt.
5.	Machining On Peripheral Face	Opt.
6.	Collision Avoidanced ECO	Opt.
7.	Part Program Storage Length (100M)	Opt.

Performance on Surface Profiling at High Cutting Feed



Cycle time: 13' 59"
(by Vcenter-M106)



Cycle time: 16' 02"
(by Vcenter-P106)

Material: Aluminum
Part dimension: R.250*H.50 mm
Spindle speed: 13500 rpm
Cutting feed: 10000 mm/min

Machine Specification

Item		Unit	Vcenter-M106
Travel	X axis travel	mm	1060
	Y axis travel	mm	700
	Z axis travel	mm	700
Distance	Spindle center to column	mm	792
	Spindle nose to table surface	mm	160 ~ 860
Table	Table work area	mm	1120 x 520
	Dimension of T-slot	mm	5 x 18 x 100
	Max. table load	kg	700
Spindle	Spindle taper		BBT-40
	Spindle motor - cont/60%/25% (Siemens 1PH8107)	kW	13.5 / 16.2 / 23.25 (oil cooling)
	Spindle speed	rpm	15000 (opt. 18000)
Feed rate	Rapid feed rate - X/Y/Z	m/min	32 / 32 / 32
	Axis acceleration - X/Y/Z	m/sec ²	0.5G / 0.5G / 0.5G
	Axis feed motor - X/Y/Z	kW	5.5 / 7.1 / 5.5
	Cutting feedrate by table	m/min	20
	X/Y/Z ballscrew (dia. x pitch)	mm	45 x P16 (X/Z), 40 x P16 (Y)
	Linear guide width (X/Y/Z)	mm	35 / 45 / 45
Tools	Max. tool length	mm	300
	Max. tool weight	kg	7
	Magazine capacity		24 (opt. 30, 40)
	Max. tool diameter (without adjacent tools)	mm	75 (150)
	Tool exchange time	sec.	2.2 (T-T), 7.0 (C-C)
	Pull stud angle	deg.	15 (JIS 40P)
	Tool selection method		Random
Accuracy (ISO 230-2)	Positioning accuracy (bi-directional)	mm	0.010
	Repeatability	mm	0.007 (± 0.0035)
Machine	Power requirement	KVA	33 (excl. CTS)
	Min/Max. air pressure	kg/cm ²	5.5 ~ 6.5
	Coolant tank capacity	L.	270
	Std. NC controller (Fanuc)		SINUMERIK 828D (10.4")
	Floor space requirement	mm	3733 x 3150
	Max. machine height	mm	3041
	Machine weight	kg	8375

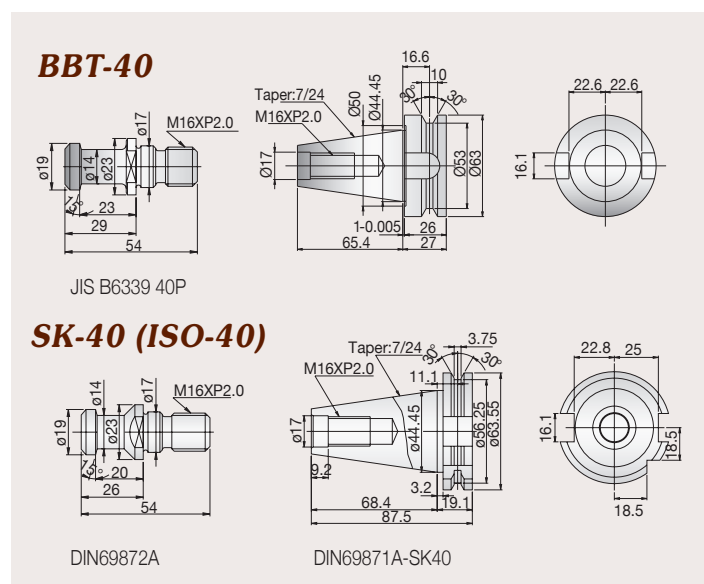
Standard Accessories:

- Fully enclosed splash guard
- SINUMERIK 828D (10.4") control
- Spindle oil cooler
- Screw-type chip remover (left disposal)
- Bottom guarding flushing coolants
- Rigid tapping
- Remote MPG
- Hand tools and toolbox
- T nuts for table slot
- 3-step warning light
- Auto power off
- Leveling pads

Optional Accessories:

- Air conditioner for electric cabinet
- Chip conveyor with cart
- Coolant through spindle (CTS)
- 30 or 40 tool magazine
- Auto tool length measurement
- Auto part measuring
- Stop block for special tools
- 4th/5th axis interface
- Auto door
- Linear scales
- Air gun
- Coolant gun
- Rotary tables
- 18000 rpm spindle

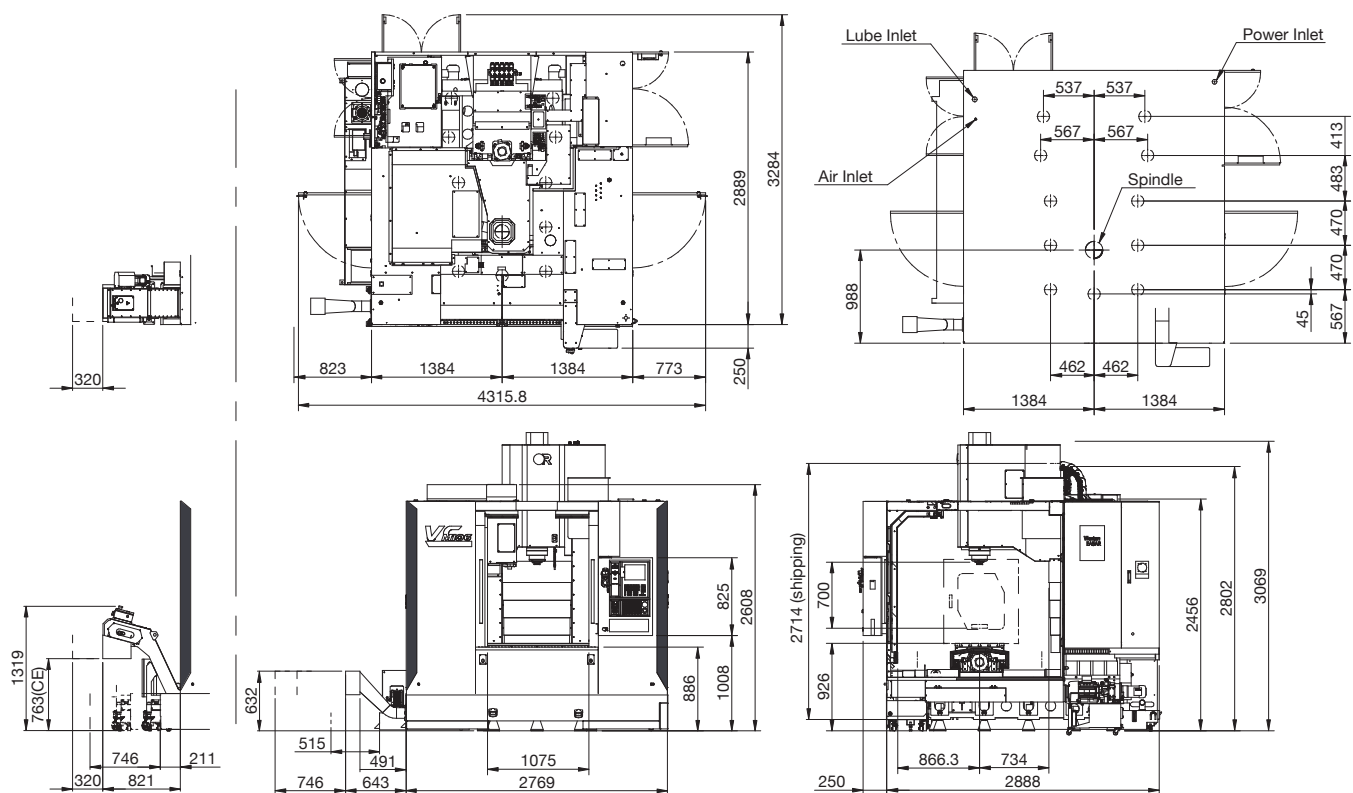
Tool Shank



Machine Color Option



Machine Layout



Unit: mm



Vcenter-G105
Gearhead machining center



Vcenter-AX630
5-axis machining center



VMT-X260
Multi-tasking turning center



THE VICTOR-TAICHUNG COMPANIES



HTL

VTL

VMC

HMC

XMT

PIM

TAIWAN

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