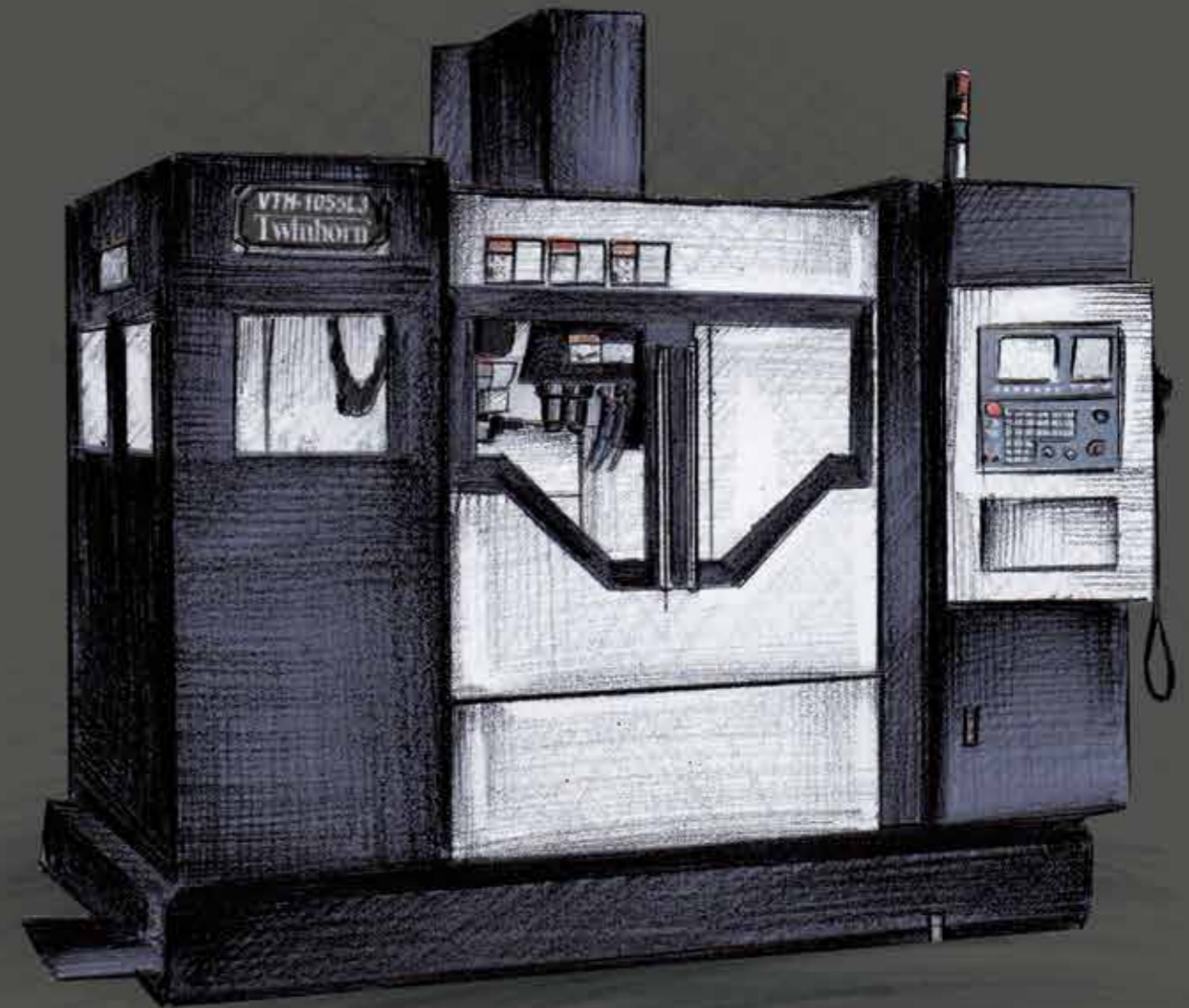


Twinhorn[®]



Twinhorn[®]

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www.design99.com.tw 201406.VTH Series(E2)1000P

VTH-855L3/1055L3
VTH-1055F

VERTICAL MACHINING CENTER
FIVE AXIS MACHINING CENTER

VTH-855L3/1055L3

Mechanical Properties

- All major parts are built with high tensile Meehanite FC 30 casting alloy provides outstanding wear-resistance and rigidity.
- High precision 40 mm, C3 class ball-screw with double nut pre-tention design on all three axis to enhance axis rigidity and accuracy stability.
- Extra widened seperated guide ways design on base, column and saddle provides best machine dynamic accuracy.
- Counter weightless design, upgraded direct linked Z axis motor and ball-screw provides best reaction on high speed movement.
- Z axis equipped with 45 mm linear guide way and extra length pad to enhance stability.



The innovative design of high-performance high-precision

Guide way cover

Enlarged guide way cover with big slop design for best chip collect and remove.

Fully coverd splash guard

Provides safety machining enviroment and highly efficient chip removal functions.

ATC System

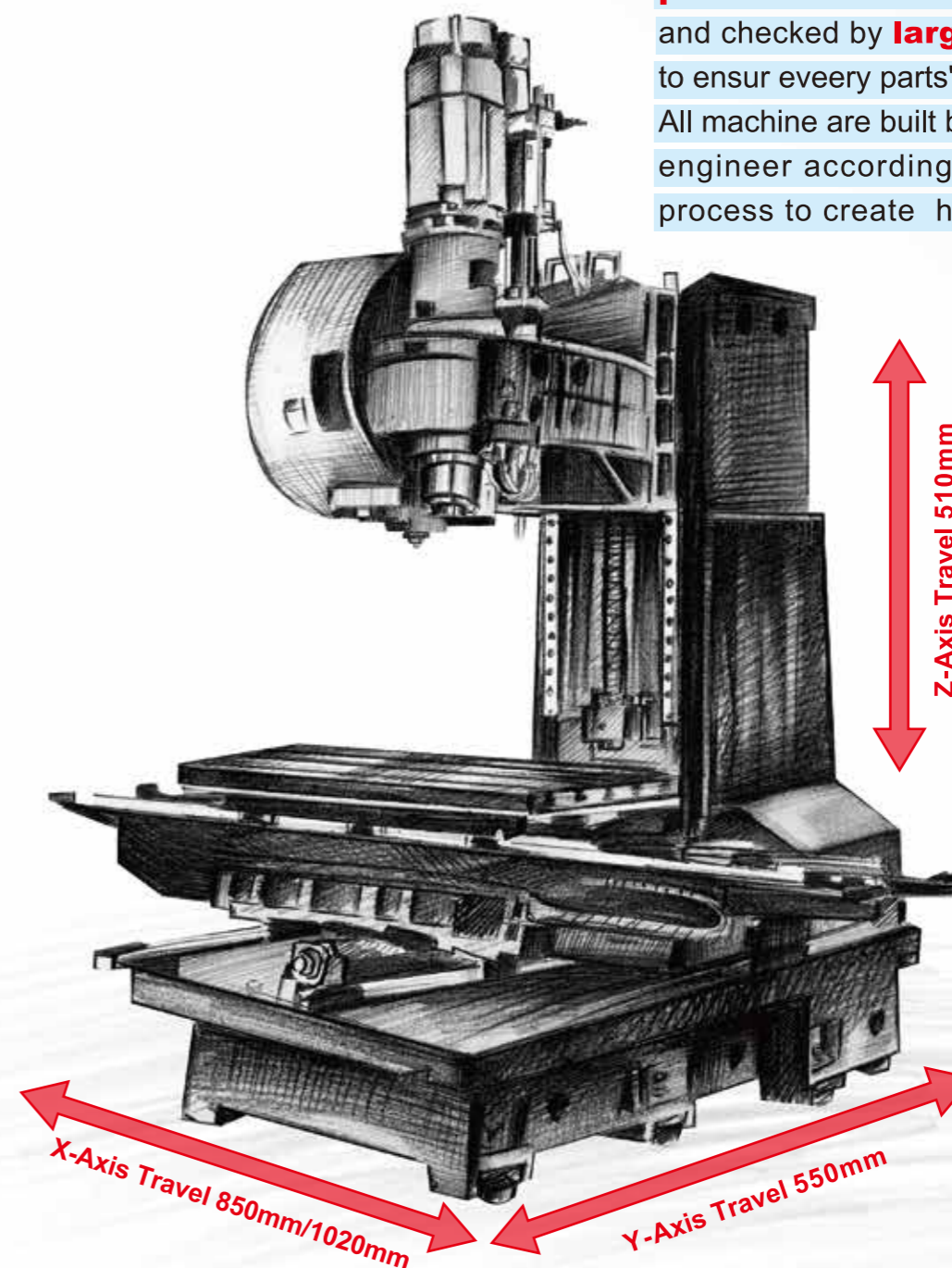
High accuracy CAM driven tool exchange system has most stable and efficient automatic tool management.

Twinhorn
High-quality

High Precision
5 Face Machining
Center

Large Scale
3d Probe

All casting parts are fine turned by **high precision 5 face machining center** and checked by **large scale 3D probe** to ensur eveery parts's geomatric accuracy. All machine are built by intensive expericed engineer according ISO standard SOP process to create high quality products.



VTH-1055F

Five axis machining center



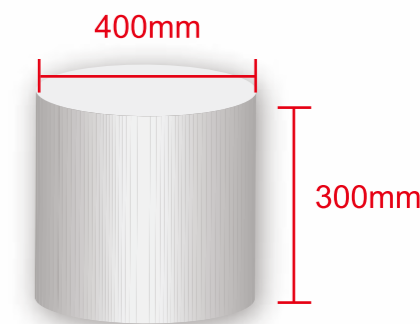
5 axis

Multi-functional , High-efficiency

High-efficiency, High-Accuracy



Max. work piece size
Φ400mm x H300mm
(Table size Φ320mm)
Max. Loading: 100kg



C-Axis Travel 360°

A-Axis Travel +30°~-120°

Z-Axis Travel 510mm

Y-Axis Travel 520mm

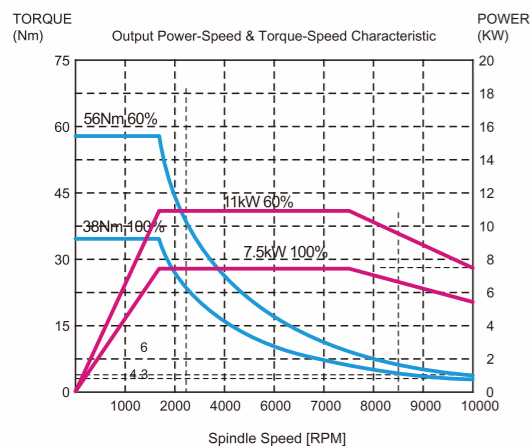
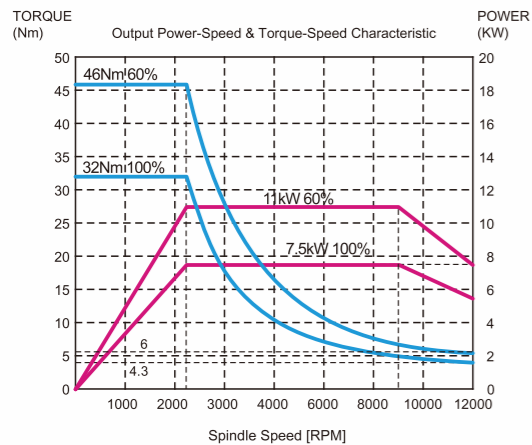
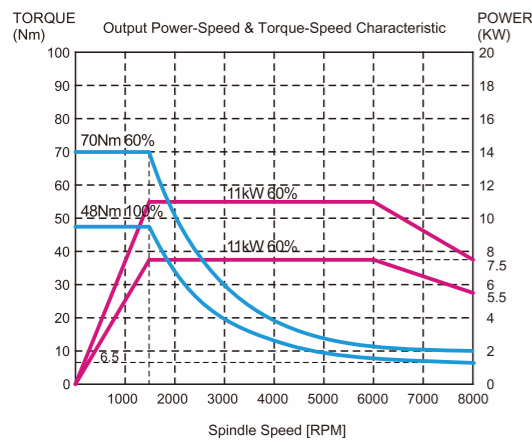
X-Axis Travel 900mm

VTH-855L3/1055L3 VTH-1055F

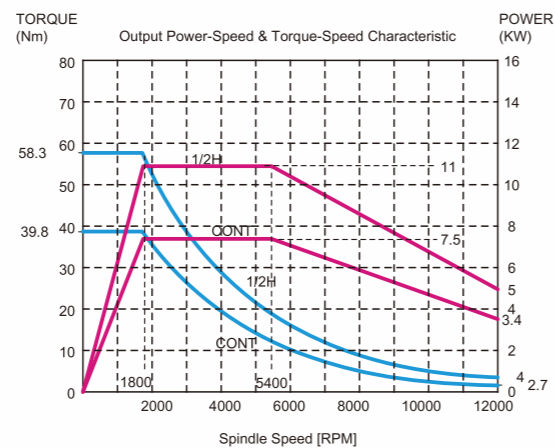
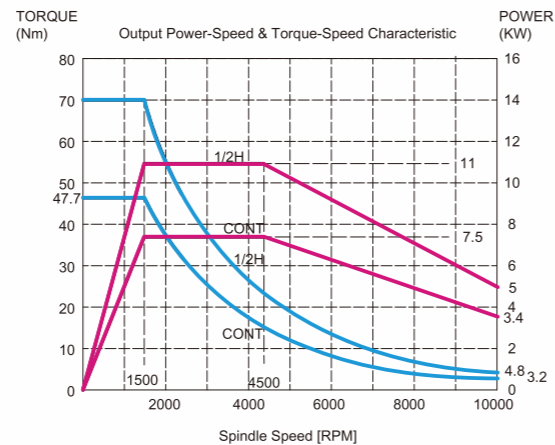
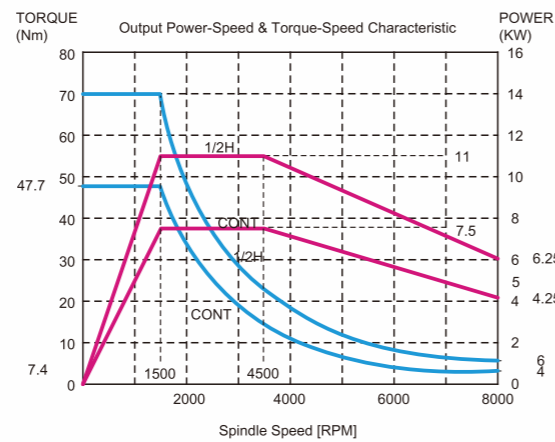


Spindle motor Torque chart

FANUC



MITSUBISHI



Belt type Spindle

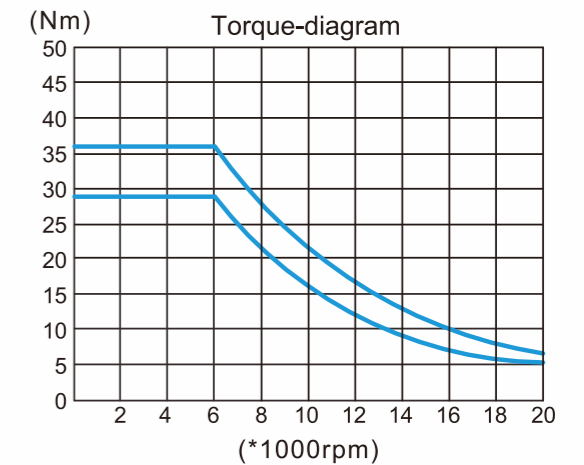
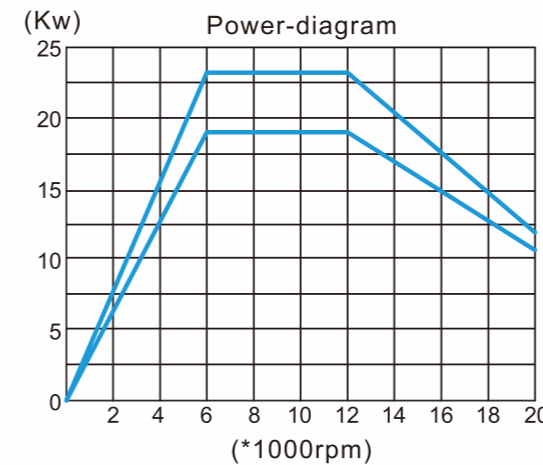
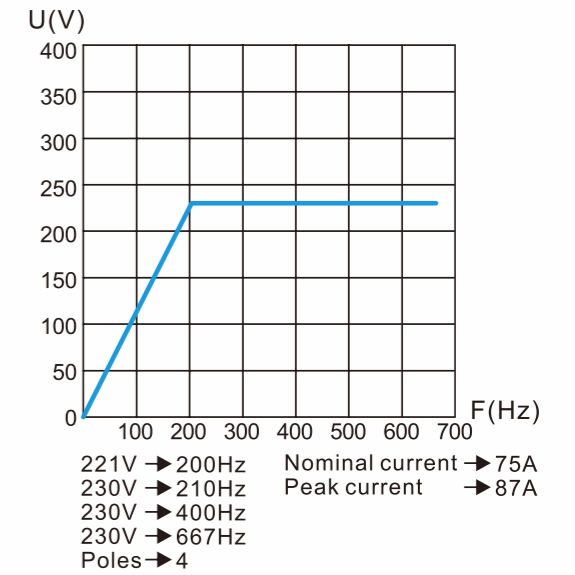
- P4 grade high precision angular contact bearings plus enlarged supporting position design largely increase axial and radial rigidity and cutting ability.
- Special Labyrinth packing and air-curtain design on spindle nose to prevent coolant/fine particle contamination.

Built-in type Spindle

- High power built-in type direct drive spindle with P4 grade angular contact bearings.



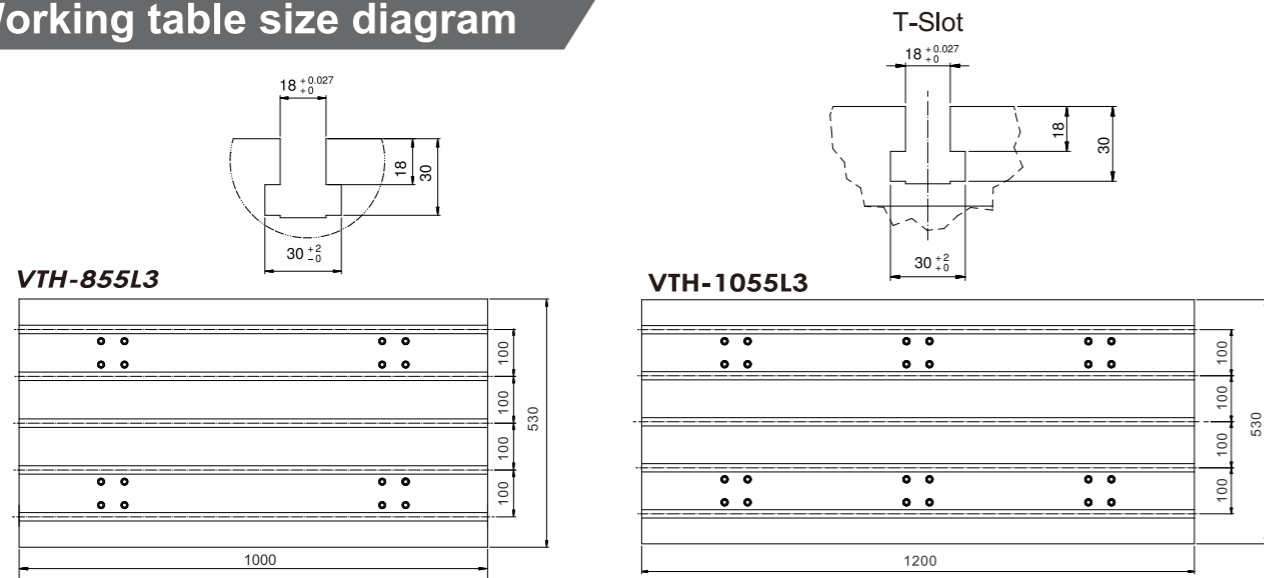
Motor Torque / Power Chart



VTH-855L3/1055L3

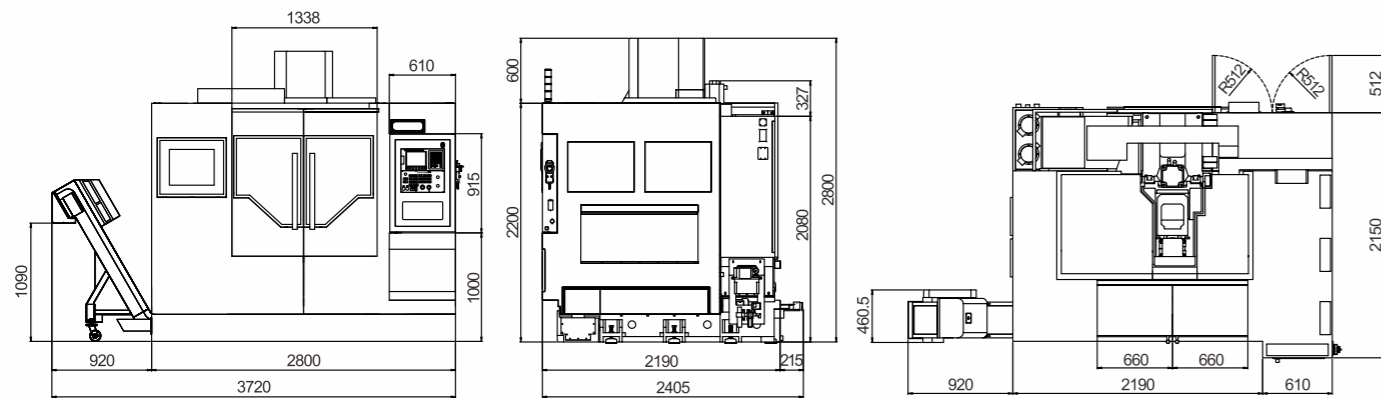
Unit:mm

Working table size diagram

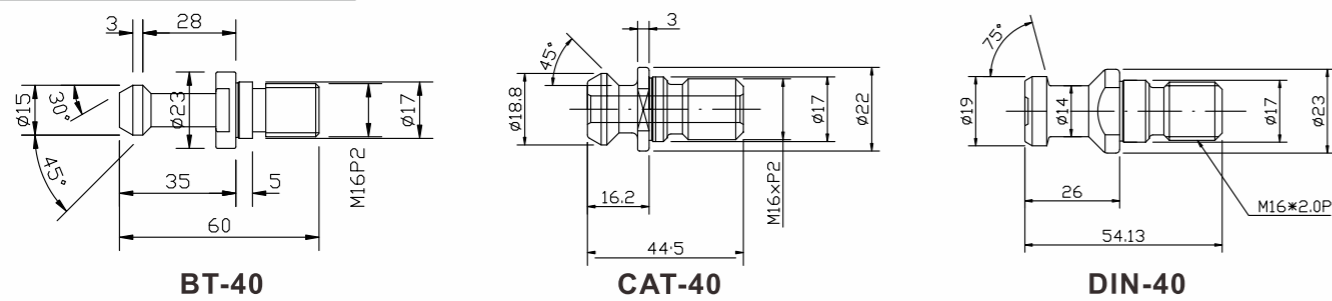


VTH-855L3/1055L3/1055F

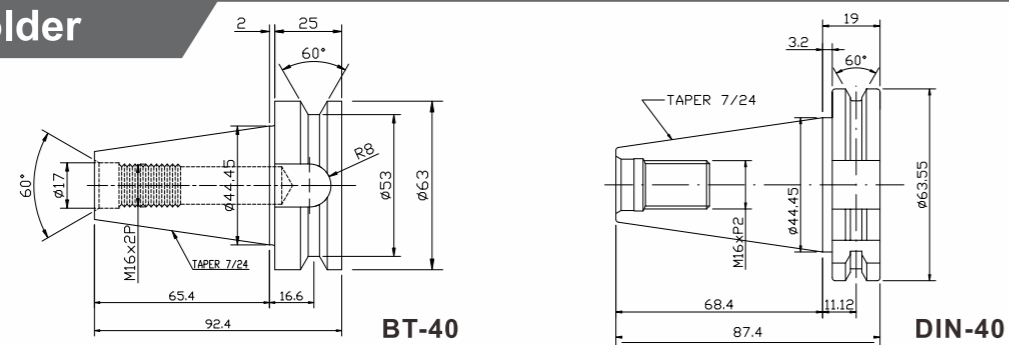
Machine outline / dimension



Tool pull stud



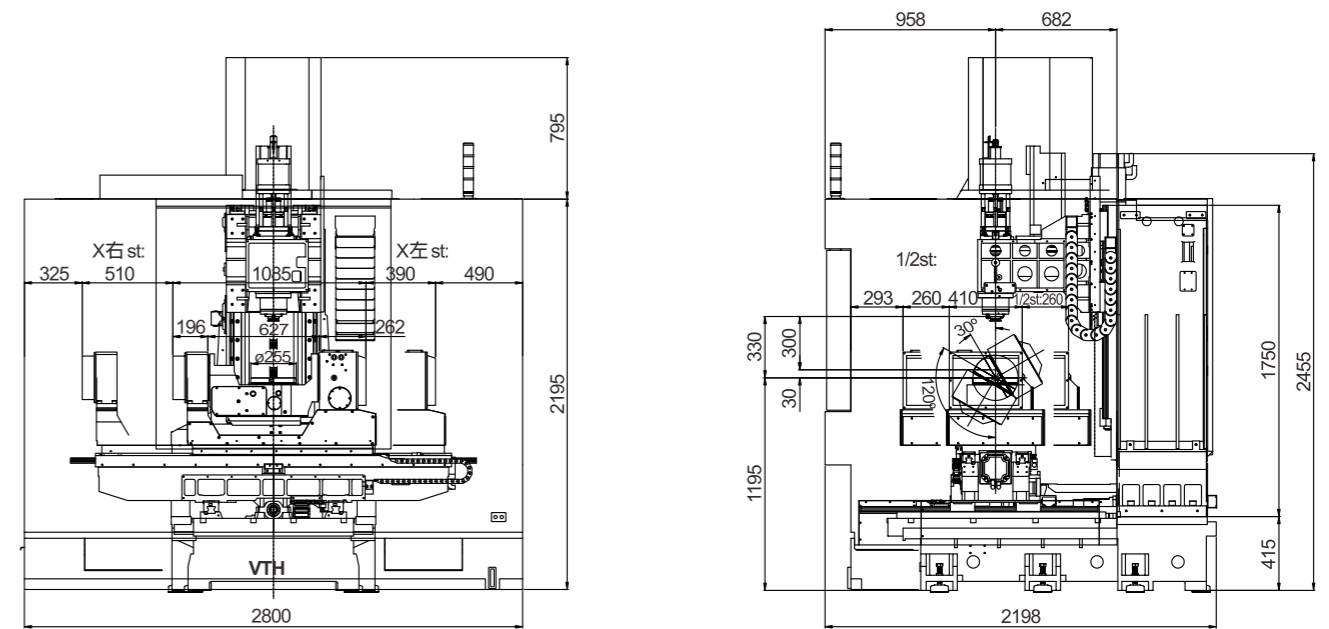
Tool holder



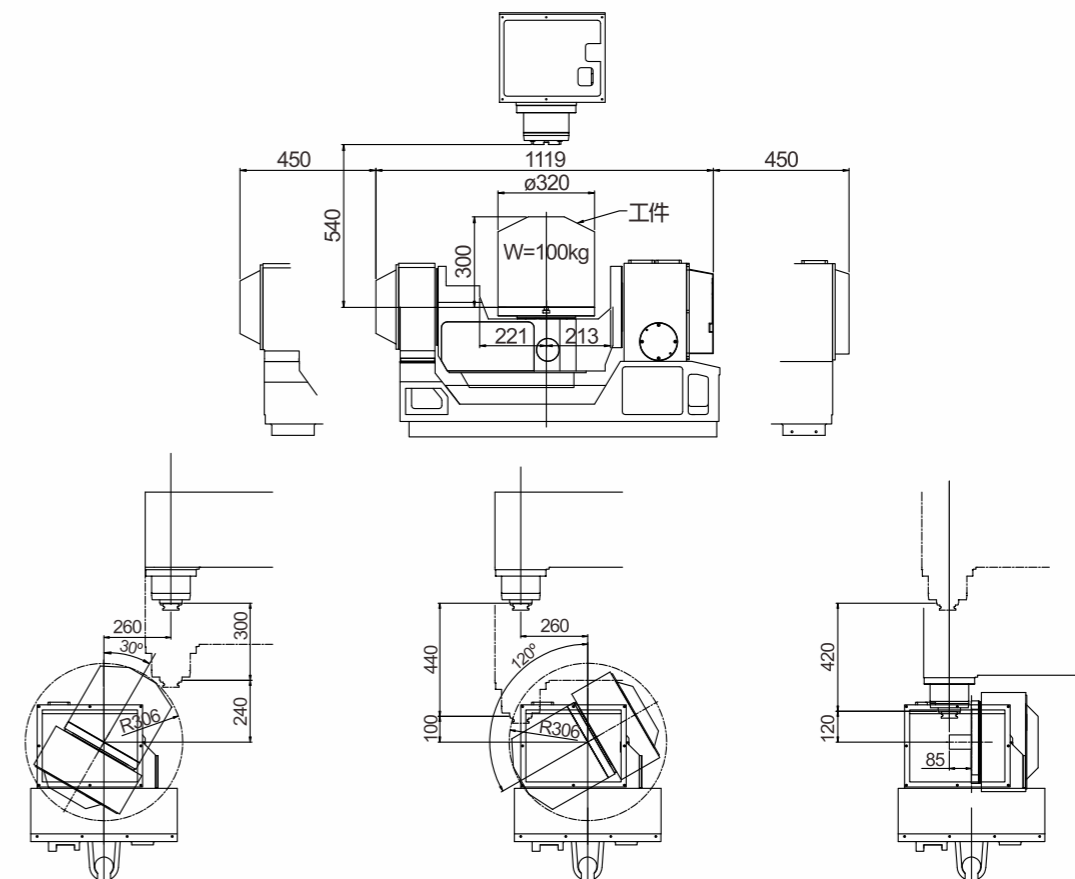
VTH-1055F

Unit:mm

Five axis functional machine outline / dimension



Five axis working area diagram



VTH-855L3/1055L3 Machine Specification

Model	VTH-855L3	VTH-1055L3
Work Table		
Table Size	1000x530mm (39.37"x20.86")	1200x530mm (47.24"x20.86")
T-slot Number/Wide/Pitch	5x18mmx100mm (5x0.71"x3.93")	
Max. Loading	500kg (1101 lbs)	600kg (1321 lbs)
Travel		
X axis	850mm (33.46")	1020mm (40.1")
Y axis	550mm (21.65")	
Z axis	510mm (20")	
Spindle		
Nose to work table top	150-660mm (5.9"-26")	
Center to Machine front	585mm (23")	
Taper	BT40 (opt.CAT40,DIN40)	
Speed	Belt Drive 8000rpm	
Front bearing Dia	70mm (2.75")	
Feed		
Rapid (X/Y/Z)	48 / 48/ 30m/ min opt.36 / 36/ 30m/ min	48 / 48/ 30m/ min opt.36 / 36/ 30m/ min
Cutting	10m/ min (394rpm)	
Accuracy VDI 3441(JIS B6336-2)(JIS B6338)		
Positioning	P 0.014mm (±0.004 / 300mm)	
Repeatibility	PS 0.010 (±0.003mm)	
ATC System		
Taper	BT 40	
Tool capacity	Arm 24	
Tool exchange time	T-T 1.8 sec, C-C 3.8 sec	
Max. Tool Dia (knife)	76mm (3")	
Max. Tool Dia (no knife)	120mm (4.7")	
Max. Tool Length	300mm (11.81")	
Max. Tool Weight	7kg (15.4 lbs)	
General		
Power required	15kVA	
Pressed air required	5-6 kg / cm ² , 200 L/min	
Machine diamention(WxDxH)	2800 x 2200 x 3200mm (108.26" x 81.88" x 126")	
Machine weight	5500kg (12115 lbs)	6500kg (14317lbs)

■ Both Specifications & Design characterisitcs are subject to change without prior notice.

Standard Features

- 24 Tool Arm-type ATC system
- Coolant system
- Fully enclosed splash guard
- Work lamp
- Auto. Lubrication system
- Machine status signal lamp
- Spindle air blast function
- Sides and Rear chip flush system
- Cutting air blast function
- Spindle air curtain system
- Rigid Tapping
- Heat exchanger for electrical cabinet
- Tool box and tools & Adjusting tool
- Leveling bolts and pads
- Operator / System / Maintainess Manuals

Optional features

- BT40/CAT40 Pull Stud
- Belt type Spindle 10000/12000 rpm
- Built-in type Spindle 10000/12000/16000/20000 rpm
- 4th axis system interface ready (pre-wired only)
- 4th axis system
- Spindle oil cooler
- Auto. Tool measure system
- CTS (Coolant Through Spindle) system
- Y direction spiral type chip transfer system
- Chain type chip conveyor system
- Oil skimmer system
- Pressed air gun
- Coolant gun
- Axis optical scale system

VTH-1055F Five axis machining center Specification

Model	VTH-1055F
Travel	
X Axis	900mm (35.43")
Y Axis	520mm (20.47")
Z Axis	510mm (20")
A Axis	+ 30° ~ -120°
C Axis	360°
Max. C axis Dia.	Ø400 mm
Max. A axis Speed	25 rpm
Max. C axis Speed	25 rpm
Work table size	Ø320 mm
T-slot size	14 mm
Max. Loading	100 kg (220.2 lbs)
Spindle	
Nose to Work table top	30-540mm (1.19"-21.25")
Center to machine front	958mm (37.71")
Taper	BT40 (opt.CAT40,DIN40)
Speed	Belt Drive : 80-8000rpm (opt. 10000, 12000rpm)
Front bearings Dia	70mm (2.75")
Feed	
Rapid (X/Y/Z)	48/48/30 m/min
Cutting	10m/min (394rpm)
Accuracy VDI 3441(JIS B6336-2)(JIS B6338)	
X/Y/Z Positioning	P0.014mm (±0.004/300mm)
X/Y/Z Repeatability	PS0.010 (±0.003mm)
C Axis Positioning	15"
A Axis Positioning	50"
C Axis Repeatability	6"
A Axis Repeatability	8"
ATC System	
Taper	BT 40
Tool capacity	Arm 24
Tool exchange time	T-T 1.8 sec , C-C 3.8 sec
Max. Tool Dia (knife)	76mm (3")
Max. Tool Dia (no knife)	120mm (4.7")
Max. Tool Length	300mm (11.81")
Max. Tool Weight	7 kg (15.4 lbs)
General	
Power required	25 kVA
Pressed air required	5-6 kg / cm ² , 200 L/min
Machine diamention(WxDxH)	2800 x 2200 x 3200mm (108.26" x 81.88" x 126")
Machine weight	6650 kg (14647 lbs)

■ Both Specifications & Design characterisitcs are subject to change without prior notice.

Standard Features

- 24 Tool Arm-type ATC system
- Coolant system
- Fully enclosed splash guard
- Work lamp
- Auto. Lubrication system
- Machine status signal lamp
- Spindle air blast function
- Sides and Rear chip flush system
- Cutting air blast function
- Spindle air curtain system
- Rigid Tapping
- Heat exchanger for electrical cabinet
- Tool box and tools & Adjusting tool
- Leveling bolts and pads
- Operator/System/Maintainess Manuals
- 4 and 5th Axis table system
- Spindle oil cooler

Optional features

- BT40/CAT40 Pull Stud
- Belt type Spindle 10000/12000 rpm
- Built-in type Spindle 10000/12000/16000/20000 rpm
- Auto. Tool measure system
- CTS (Coolant Through Spindle) system
- Y direction spiral type chip transfer system
- Chain type chip conveyor system
- Oil skimmer system
- Pressed air gun
- Coolant gun
- Axis optical scale system