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Dealer

CNC MACHINERY SALES AUSTRALIA

2023.A

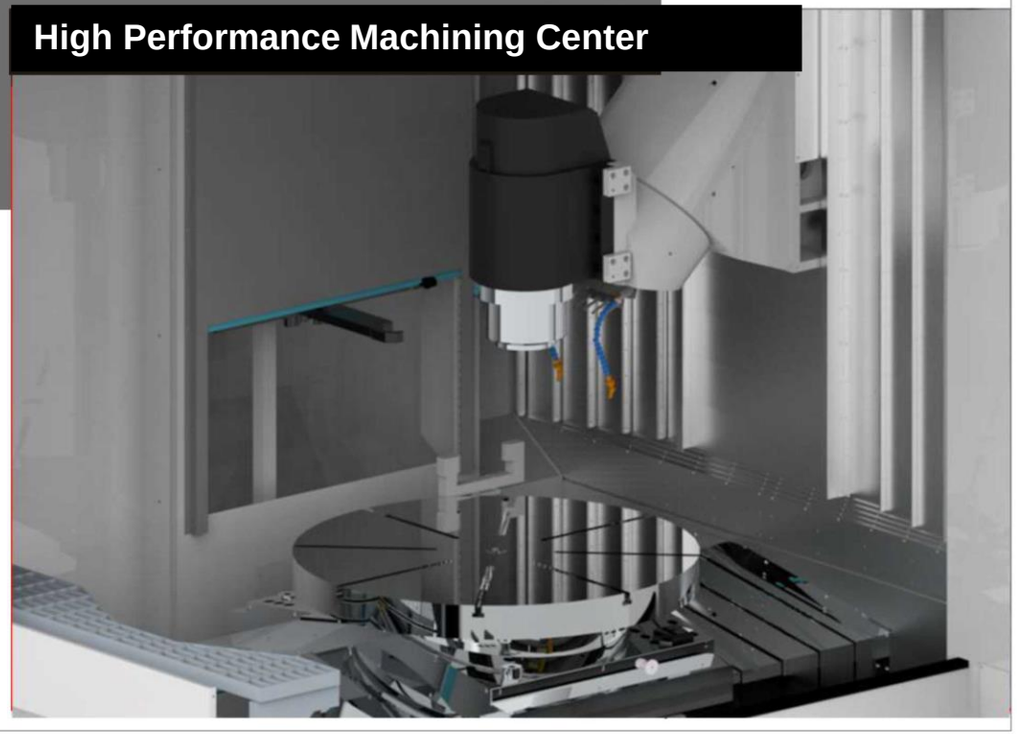
熱情領導 · 創新科技

HU Series

800
1000
1200
1600

High Efficiency Horizontal Machining Center

High Performance Machining Center



A new benchmark in five-axis machining

The 5-axis machine tool uses the highly stable HU series to achieve the highest machining performance and part accuracy under highly dynamic conditions with the highest precision, performance and efficiency. From difficult-to-cut materials in aircraft aviation to the highest surface quality requirements in mold manufacturing, HU series machine tools provide the best processing conditions.

unique

The new HU series makes every workpiece a masterpiece. Comprehensive cooling measures and the highest rigidity of the new and improved construction are the basis for maximum precision and maximum performance. The innovative wheel magazine can hold up to 40 tools, providing a minimum floor space.
Provides maximum flexibility.

Processed workpiece: oil drill bit

cutting performance

- **The power is increased by 50%, which can process difficult-to-cut materials.**
- **Less tool wear**
- **Better surface finish quality**

5-axis vertical and horizontal machining center

The structure of the whole machine has been optimized and designed, with larger working space, smaller interference, stronger cutting rigidity, and more compact installation space.

Axial structural properties

X, Y, Z axis guide rails use linear rolling guide rails

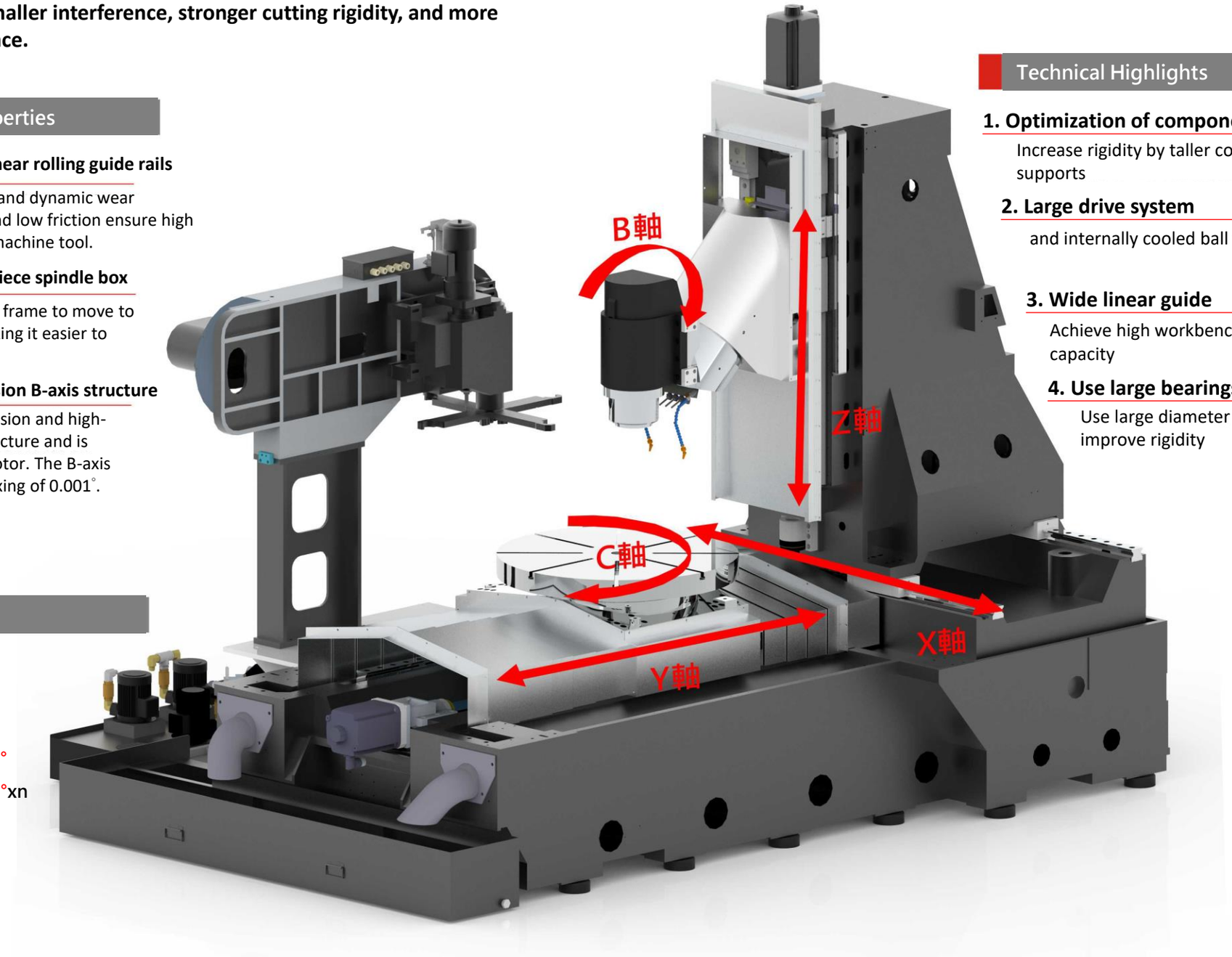
Good rigidity, high static load and dynamic wear capacity, smooth operation and low friction ensure high precision and stability of the machine tool.

Transverse structure workpiece spindle box

It is convenient for the center frame to move to the left end of the chuck, making it easier to process disc-type workpieces.

High rigidity and high precision B-axis structure

The B-axis adopts a high-precision and high-loading turntable bearing structure and is directly driven by a torque motor. The B-axis reaches a high-precision indexing of 0.001˚.



Axial specifications

X-Axis Travel 1000 mm

Y-Axis Travel 880 mm

Z-Axis Travel 710 mm

B-Axis Rotation range 195°

C-Axis Rotation range 360°xn

Technical Highlights

1. Optimization of component structure

Increase rigidity by taller columns and wider supports

2. Large drive system

and internally cooled ball thread as standard

3. Wide linear guide

Achieve high workbench load-bearing capacity

4. Use large bearings on the B and C axes

Use large diameter bearings to improve rigidity

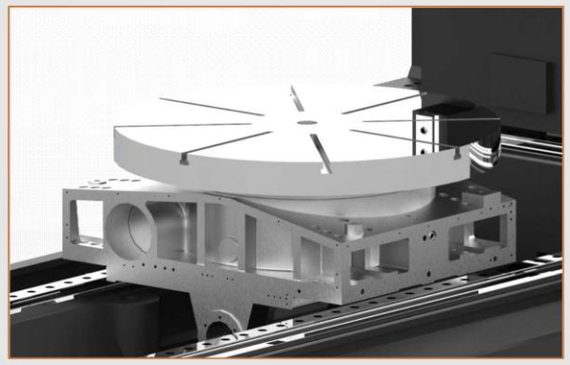
Highest rigidity ensures maximum processing performance

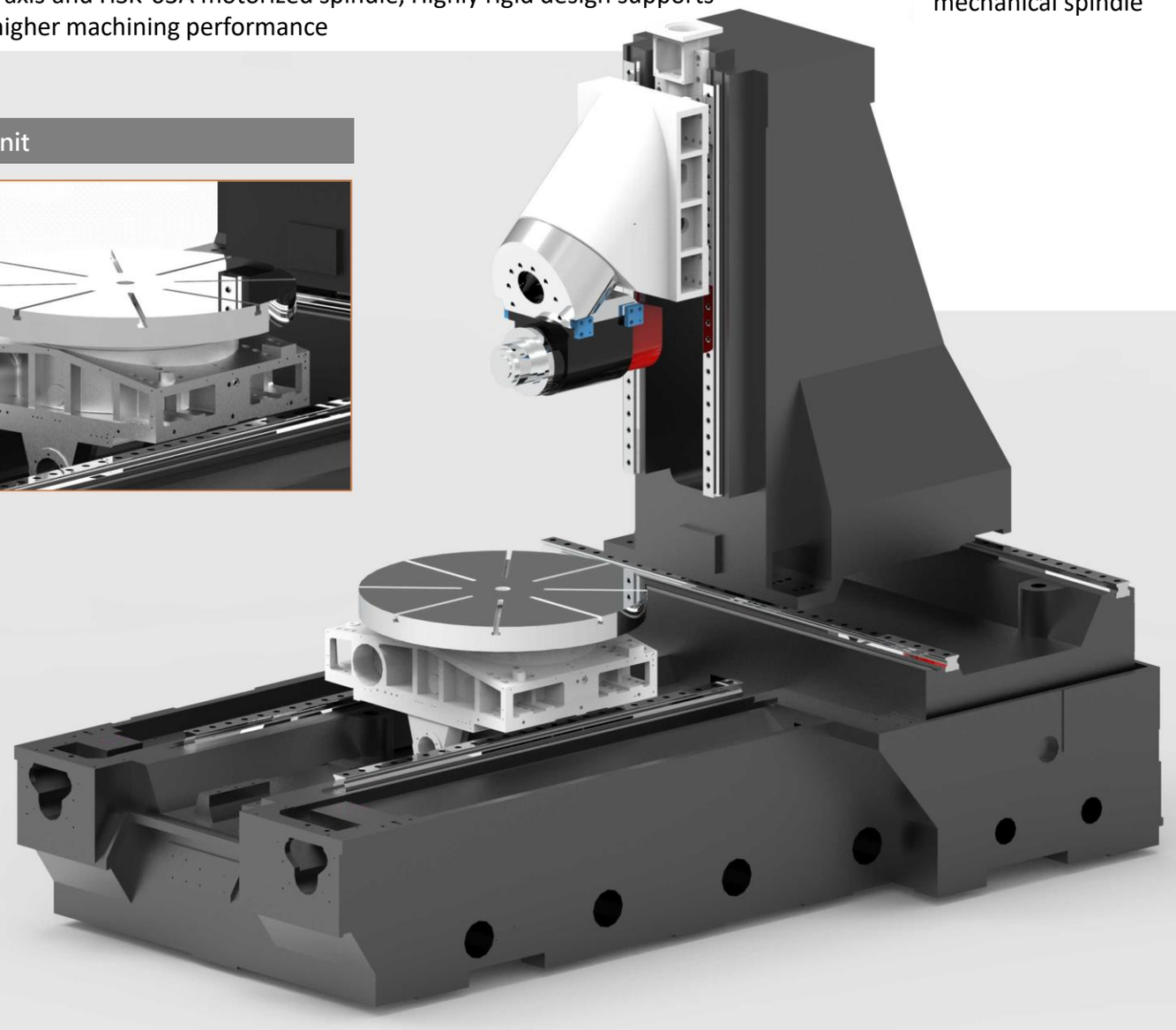
Highly stable and high-precision structural design further improves overall rigidity.

The basic structure was further optimized using finite element calculations and components were strengthened.

Equipped with B axis and HSK-63A motorized spindle, Highly rigid design supports high torque for higher machining performance

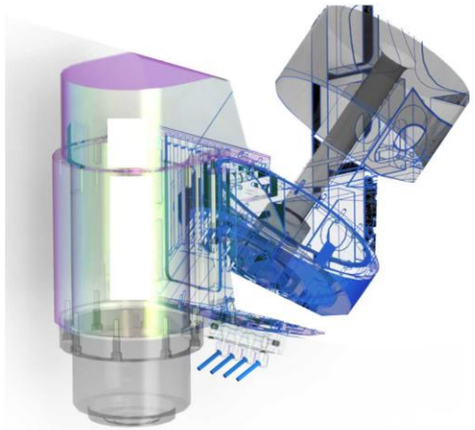
C-axis unit



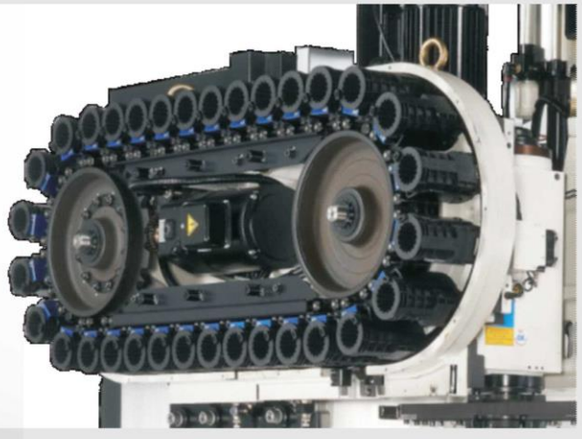


Spindle Transmission

5-axis universal milling head for mechanical spindle



ATC Unit



Tool specification

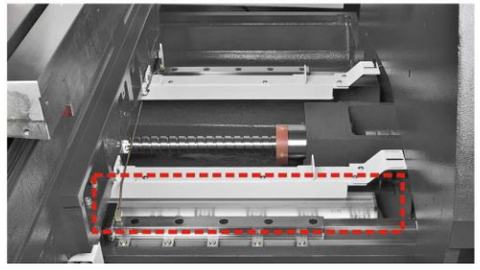
- Max. tool length : 350 m/m
- Max. tool dia : Ø70/Ø125 m/m
- Max. tool weight : 7 kg
- Number of Tools : 40T ST 60T OP

Machine

1 Full enclosed ATC

Full enclosed ATC design to prevent duct or oil mist go inside the ATC area.

2 High Precision Linear Scale



The X/Y/Z-axis can be equipped with a linear scale system to detect thermal displacement due to rapid movement of the machine. The thermal displacement result will be sent to the controller for compensation, suitable for high precision parts machining.

3 Tool Length Measurement OP

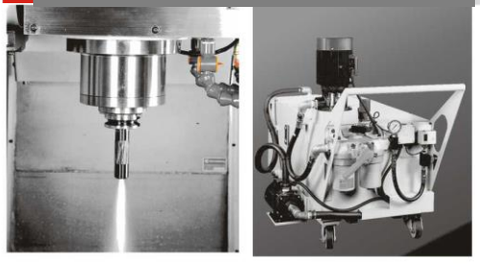
The automatic tool measuring system will measure the tool length and input the result into the controller automatically for compensation.

4 Workpiece Measurement System OP

Select Renishaw Workpiece Measurement System for use
•MP10 is used for workpiece coordinate setting and processing machine workpiece inspection.
•0MM module is able o send CNC message and receive from M12 interface.

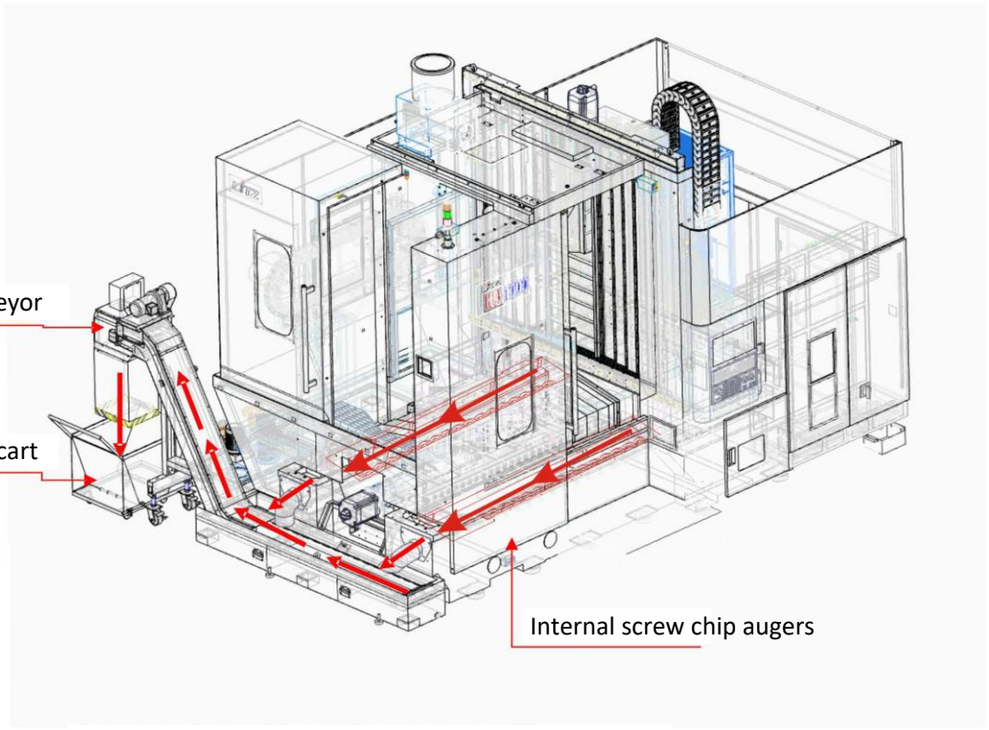
System characteristics
•Signal transmission range: MP10 is used for 3degree or70 degree, minimum at 130 degree
•360-dgree inspection is limited to a maximum length of6m.
•Battery lifetime allows continuosuse for 140 hours.
•Repeatability 1μm, Measurement speed: 480 mm/min.
•Measurement can use M code or automatic measurement
•Waterproof at IP68 level.
•Equipped with over-stroke probe damage protection.

5 Workpiece Measurement System OP



With the addition of the coolant through spindle system, the cutting coolant passes through the center of the spindle and is ejected at the tip of cutter to directly cool the workpiece and the cutting blade of the cutter by removing the heat generated from cutting in order to ensure excellent cutting quality, and it is suitable for component parts of deep hole processing.

7 Chip Management



Chip augers are provided on both sides of worktable, with track type chip conveyer and chip storage cart installed in front of machine. Via this chip removal mechanism, large amount of metal chips can be handled.

8 Selection of track type chip conveyor device

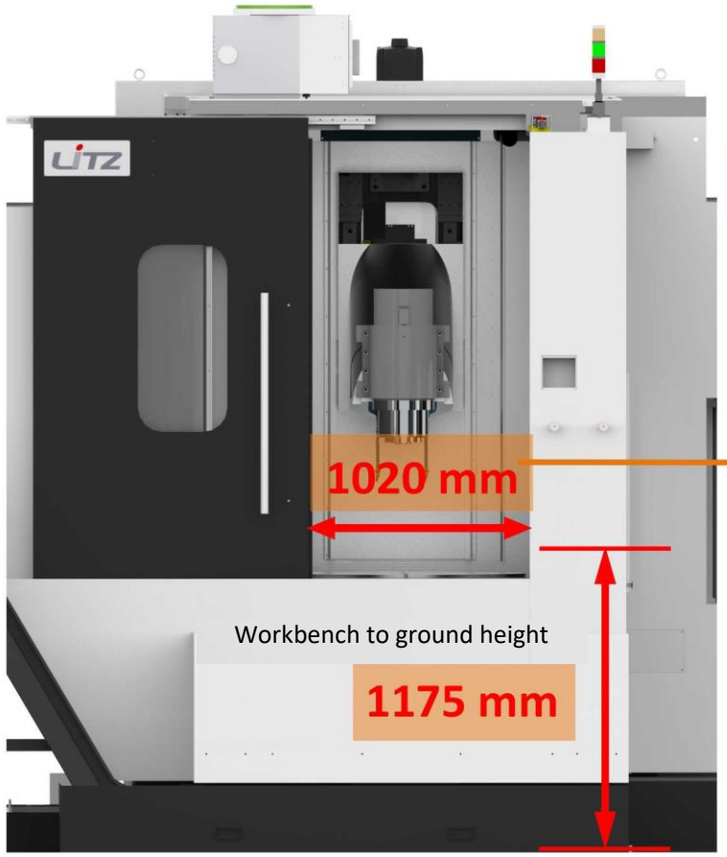
● : Excellent result ○ : OK X : Inferior result

Material			Steel	Cast iron	Al / colored metal	Mixed chips
Shape of chips						
Internal chip remover	Screw type		○	○ (Dry cutting)	○	○
Track type chip conveyor	Scrap type	Cast iron (heavy)	×	●	×	○
		Aluminum (light)	×	×	●	○
	Chain-type		●	○	×	○

Standard Function - Optional Function

Front and top door in one piece.

Wide opened front for easier loading/unloading.



Full ATC guard

Full ATC guarding can prevent dust or chip go inside the ATC.

Openable and closable protective cover on right side

Removable side doors help easier Maintenance and clean.

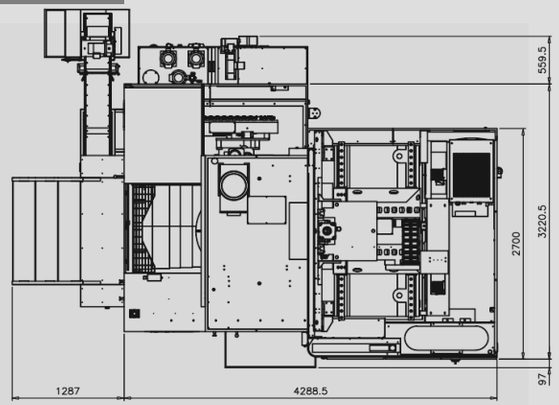
Rotatable operation panel

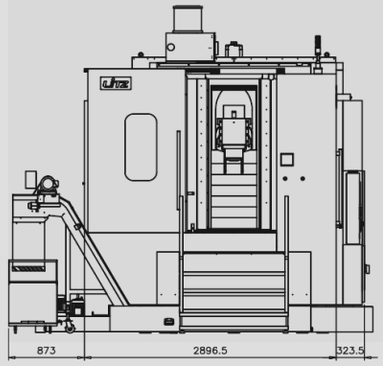
Ergonomic operation panel design..

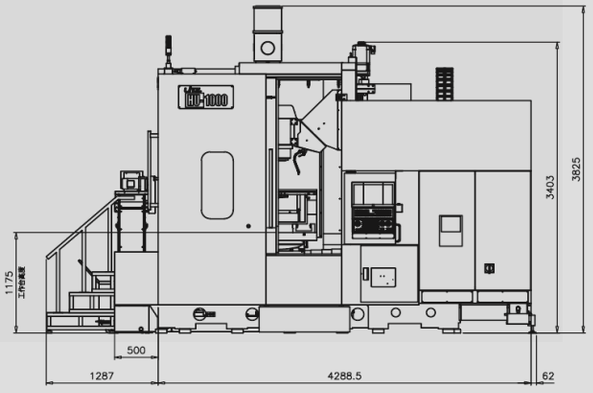
Machine Layout

Unit : mm

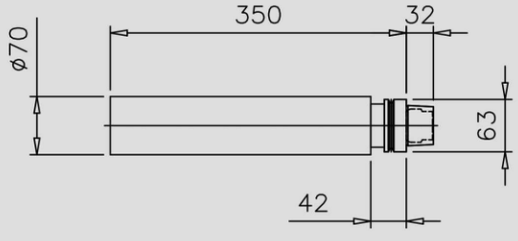
Layout Diagram





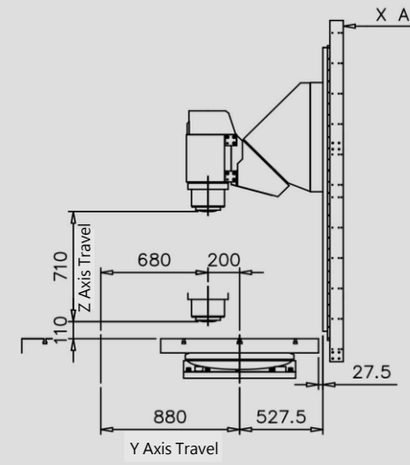


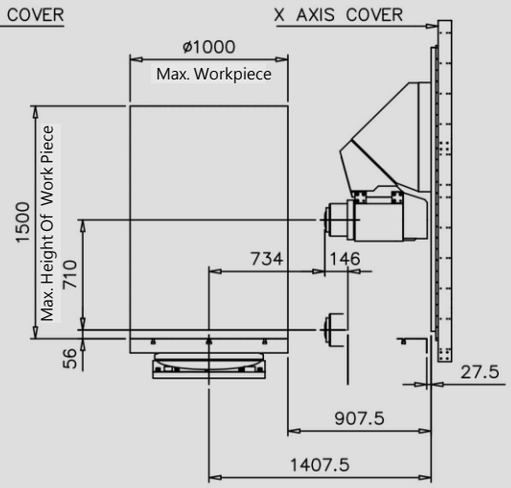
HSK-63A Tool Dimensions Diagram



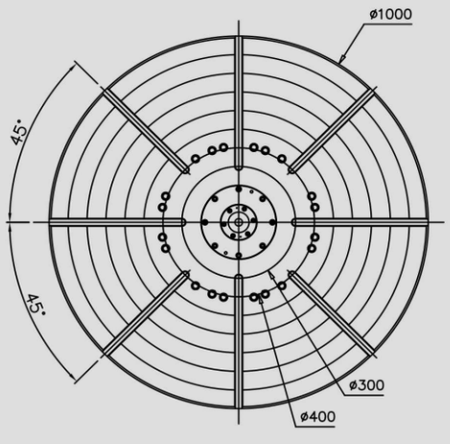
Unit : mm

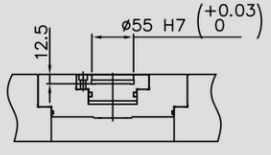
Maximum processing range

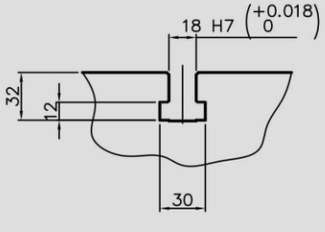




Worktable Dimensions







Technical Data

Model		HU-1000
Movement		
X/Y/Z Axis Travel	mm	1000/880/710
Swivel Head, B axis	deg	- 0~+180
Spindle Nose To Work Table (Vertical)	mm	110~820
Spindle Center To Work Table (Horizontal)	mm	56~766
From The Nose Of The Spindle To The Center Of The Work Table (Horizontal)	mm	-146~734
Work Table		
Work Table Size	mm	Ø1000
Max. Workpiece	mm	Ø1000
Max. Height Of Work Piece	mm	1500
Max. Load Of Work Table	Kg	1500
T-Slot	mm	18
Mini. Worktable Division Angle	Degree	0.001
Work Table To Ground Height	mm	1175
Spindle		
Max. Spindle Speed	RPM	18000
Max. Torque	N-m	154
Spindle Taper		ISO40
Spindle Bearing Inner Diameter	mm	Ø65
Spindle Transmission Mode		Build-In Motor
Feeds		
X/Y/Z Rapid Speed	mm/min	36000
Cutting Feed	mm/min	1-20000
Manual Feed	mm/min	1260
A.T.C.		
Tool Handle Type		HSK63A
Tool Storage Capacity	T	40
Max. Tool Diameter (Without Tool Adjacent)	mm	ø70 (ø125)
Max. Tool Length	mm	340
Max. Tool Weight	kg	7
Axis Accuracy		
Positioning Accuracy XYZ/BC		0.012mm/10"
Repeat Accuracy XYZ/BC		0.008mm/5"

- All pictures contained in this catalogue are for reference only.
- LITZ shall reserve all right to change the appearance or to suspend the specifications or options of machines

Optional List

HU-1000	
Spindle system	
Spindle System HSK-63A	●
Spindle System BT-40	○
Spindle System CAT-40	○
Spindle System DIN-40	○
Spindle Speed 18000 RPM	●
Torque motor drive	●
Spindle cooling system	●
B-axis rotary milling head	
Torque motor drive	●
0.001 degree division	●
C-axis rotary table	
Worm gear drive	●
0.001 degree division	●
Workbench T-slot (W18)	●
High-precision correspondence	
3-Axis Linear Scale	●
X/Y/Z Hollow cooling of shaft guide rod	●
B-Axis Linear Scale	●
C-Axis Linear Scale	●
Measuring System	
Tool length measuring system	★ ○
Centering Calibration Function	★ ○
Environmental response	
Oil demister system	○
Disc oil-water separator	○
In-machine oil-water separation system	●

Cutting fluid corresponding	
Coolant Through Spindle ECO(30Bar)	○
Coolant Through Spindle (70Bar)	○
Spindle annular water spray	●
Water spray outside the spindle	●
Spindle outer blowing system	●
control system	○
FANUC 31i-B (5-Axis/4-Interactive)	○
FANUC 31i-B5 (5-Axis/5-Interactive)	○
Siemens 840Dsl (5-Axis/5-Interactive)	●
Electrical Components	
M30 Automatic Shutdown System	●
Worklight	●
Alarm light	●
Air conditioner	○
Electrical box heat exchanger	●
Chip Conveying System	
Chain-type Chip Conveyor	★ ●
Chip Collector	●
Internal screw chip augers	●
Machine top chip removal system	●
ATC Unit	
Tool Magazine Capacity 40T	●
Automated response	
automatic front door	○
Safety System	
CE Safety Specification	○
Front door/side door safety switch	●
Others	
Rotary Window	○

●: Standard ○ : Optional ☆: Inquiry Needed