



V 650 5AX Introduce

March 3, 2022

HT project team



Appearance



Specification

| Control | |
|----------------------------------|----------------------------|
| Control type | Siemens SINUMERIK ONE |
| Travels | |
| X axis travel | 620 |
| Y axis travel | 520 |
| Z axis travel | 460 |
| B axis swiveling range | -50~+110° |
| C axis rotary range | 360° |
| Spindle nose to table @ 0 deg. | 150~610 mm |
| 3 axis slide ways | Linear guide (roller type) |
| 5 AX Rotary table | |
| Table Diameter Size | Ø650 |
| Table load capacity (Horizontal) | 300kg |
| Table load capacity (Tilting) | 200kg |
| T slot (Q'ty x size x Dist) | 5x18x100 |

Specification

| Spindle | |
|---|--------------------|
| Spindle taper | BBT40 |
| Spindle speed | 15000 |
| Spindle transmission | Direct type |
| Spindle Power (S1/S6 40%) | 11/16.5 Kw |
| Spindle Torque (S1/S6 40%) | 52.5/78.7 Nm |
| Automatic Tool Changer (ATC) | |
| Type | Swing Arm |
| Tool capacity | 60T |
| Max. Tool Diameter (Full) | Ø75 |
| Max. Tool Diameter (Adj. Pockets Empty) | Ø130 |
| Max. Tool Length | 250mm |
| Max. Tool Weight | 8kg |
| Axes Drives | |
| X, Y, Z-Axis Rapid Traverse Rate | 36 / 36 / 36 m/min |
| X, Y, Z-Axis Maximum Feed rate | 15 m/min |

Detron APC table compare

| General Specifications | |
|--|--------|
| Machine Weight | 8200kg |
| Machine Overall Length (approx.) | 4250mm |
| Machine Overall Depth (approx.) | 4120mm |
| Machine Overall Height (approx.) | 3100mm |
| Miscellaneous Standard Features | |
| B/C axes with encoders | V |
| Spindle Chiller | V |
| Central Grease Lubrication | V |
| Air gun & coolant gun | V |
| LED work light | V |
| Chip conveyor | V |
| Heat exchanger | V |
| Remote handwheel | V |
| Central lubrication system | V |
| LED work light | V |
| High pressure water scour for chip removal | V |

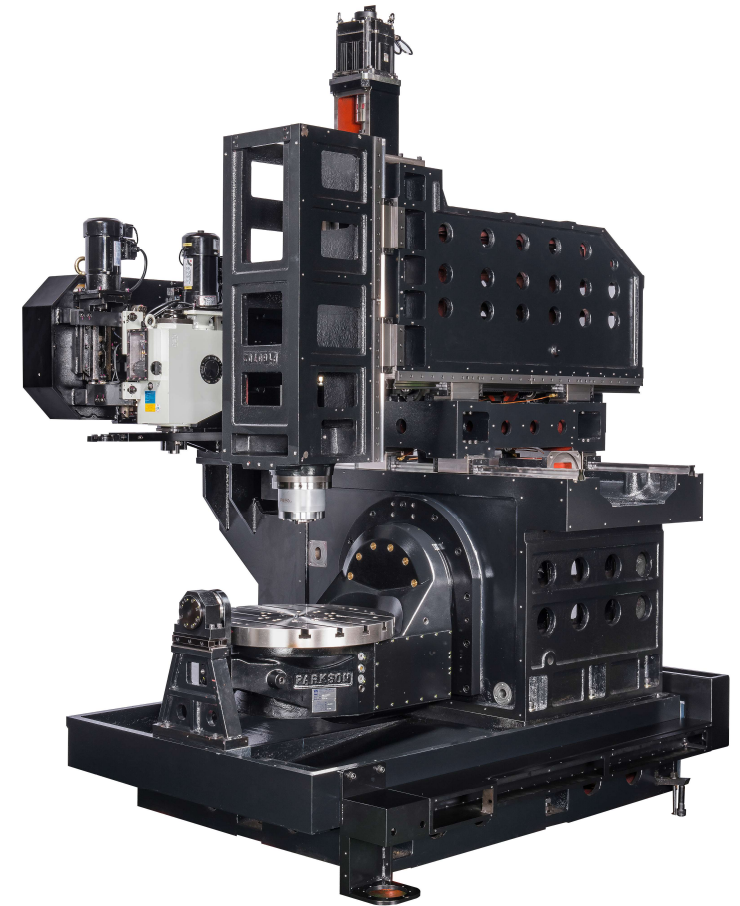
Machine structure

Mechanical strength of machine

Guided by Finite Element Analysis and utilizing high tension Meehanite casting structure allows one-piece bed, column and saddle to reach optimal design. Mechanical strength of machine can sustain extremely heavy cutting while maintaining long-term excellent accuracy.

Column adopts one-piece thick ribs structure with 4 large-sized linear blocks on each side well support saddle which remains steady while fast movement machining on Y-axis.

X / Y / Z axes are direct driven by AC servo motor with absolute encoder, which provides powerful thrust and fast acceleration.



Machine structure

Movable column C-shape structure design

Movable column C-shape provides the best rigidity.

Rotary table with one-piece iron casting provides excellent ductility and greater anti-vibration ability.

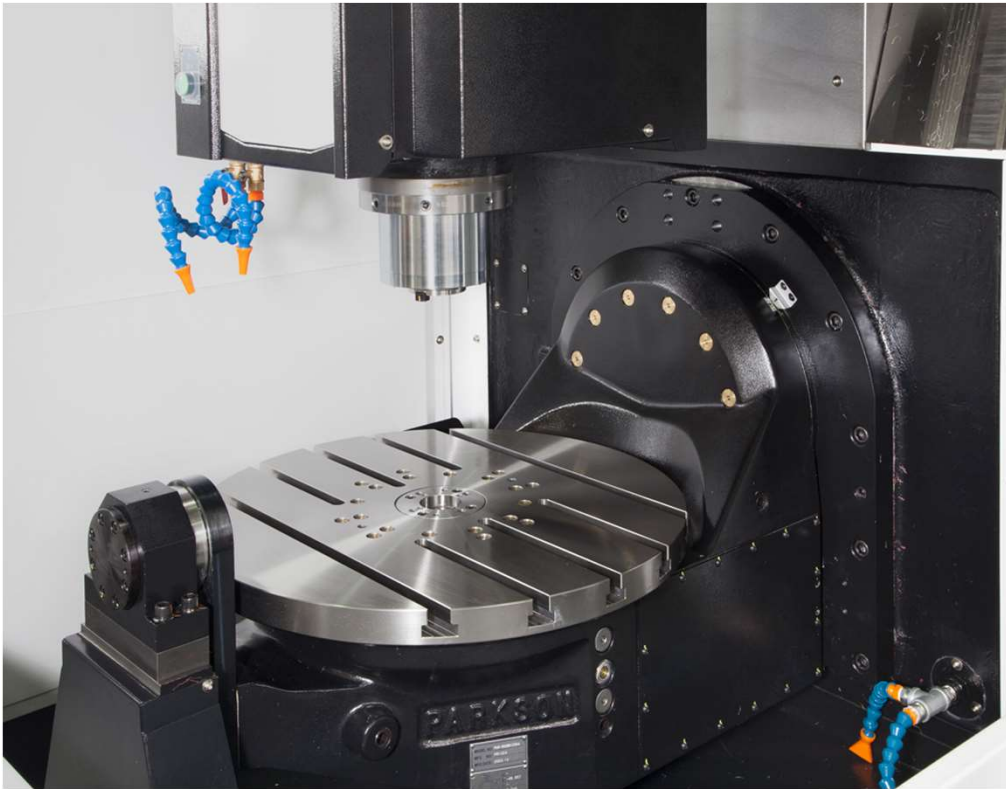
Standard table 650mm(25.59")

Base slope designs

Machine base slop design and standard with high pressure chip wash down efficiently removes tiny chips and ensure the cleaning of the machine.



Rotary Table



- Table size $\Phi 650\text{mm}$
- B $-50^{\circ} \sim +110^{\circ}$
- C 360° (cont.)
- Max. work piece $\Phi 520\text{mm} \times \text{H}330\text{mm}$
- Load capacity V: 200kg, H: 300kg
- Clamping force A: 169 kg/cm^2 , C: 263 kg/cm^2
- T slots $5 \times 18\text{mm} \times 100\text{mm}$

3-Axis

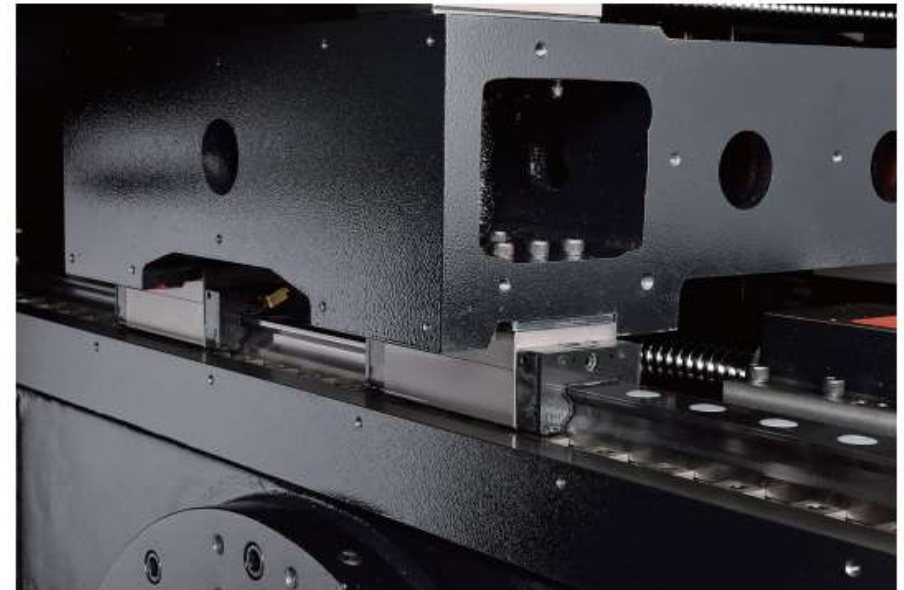
Standard with roller type linear guide ways which feature low friction and free from stick-and-slip problems. Such characteristics are especially suitable for highspeed 3D cutting. The surface finishing result has become remarkable. The need of manual polishing is unnecessary.



Strong linear guide way block gives full support of head casting.

Roller type linear guide ways

The Linear Motion Guideways feature low friction and free from stick-and-slip problems. Such the characteristics are especially suitable for highspeed 3D cutting and finishing. The quality of workpiece surface is increased; the need of manual polishing of workpiece surfaces is reduced.



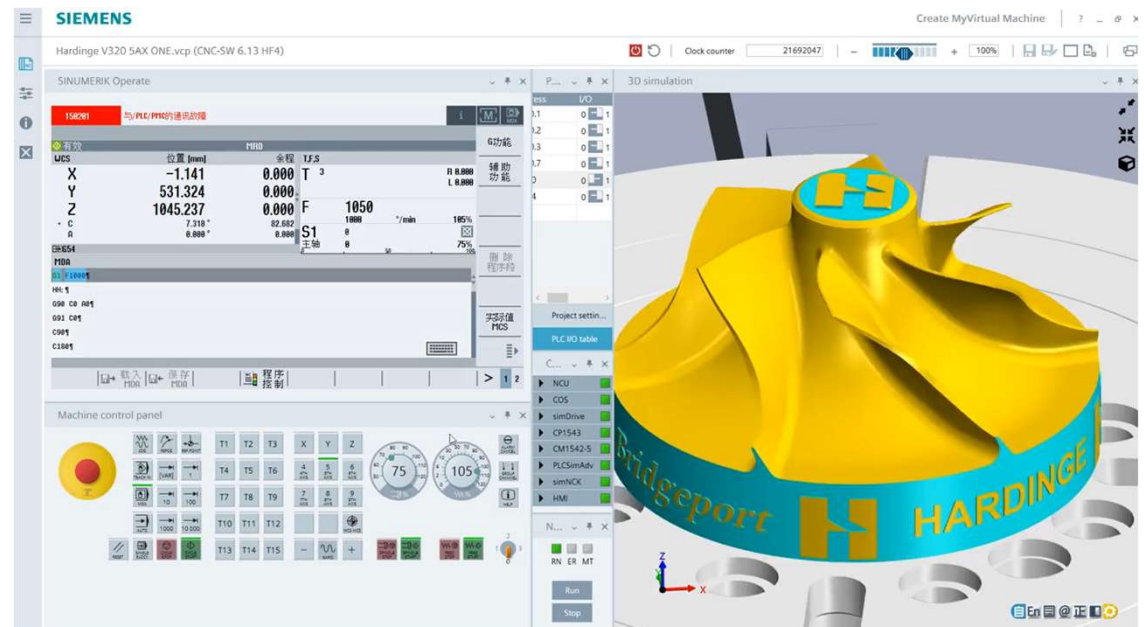
Siemens SINUMERIK ONE control

Sinumerik

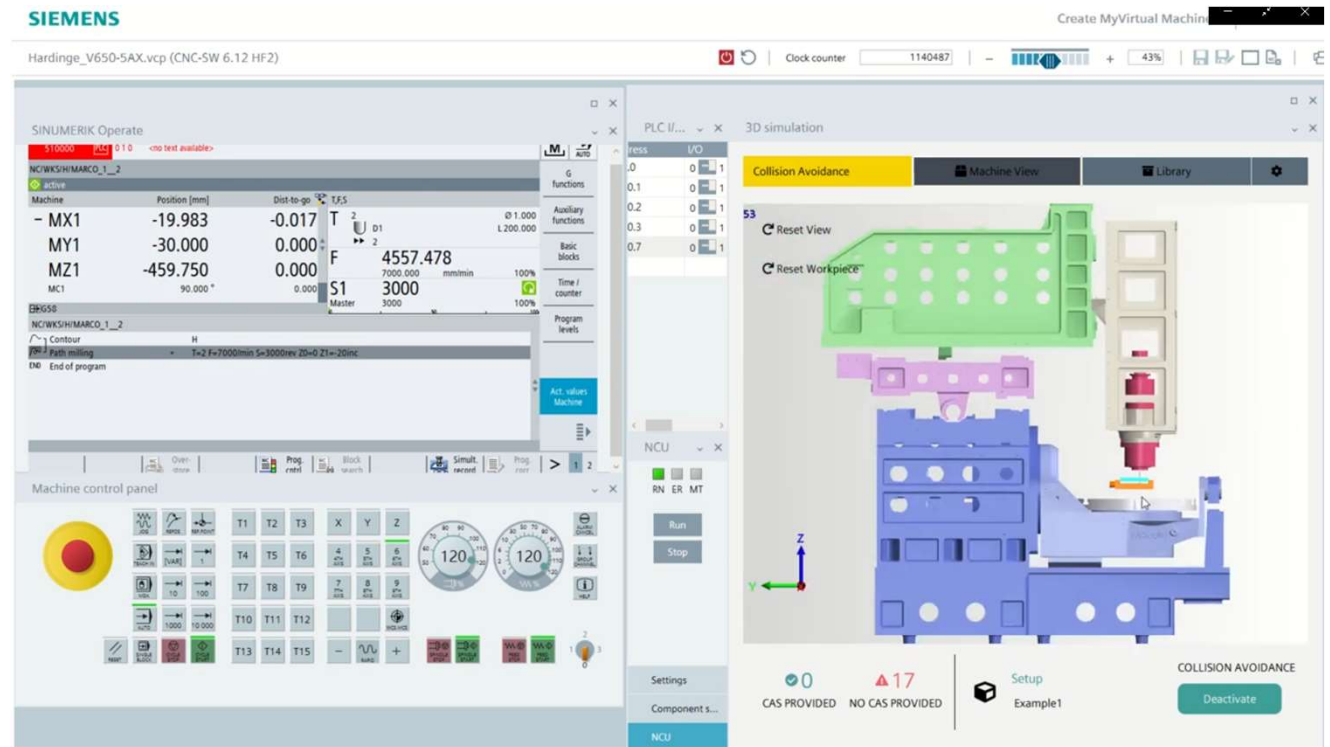


CMVM: Creating MyVirtual Machine Software Package

Machine performance and cutting parts evaluation by virtual machines.



Siemens SINUMERIK ONE control



[Create MyVirtual Machine](#)

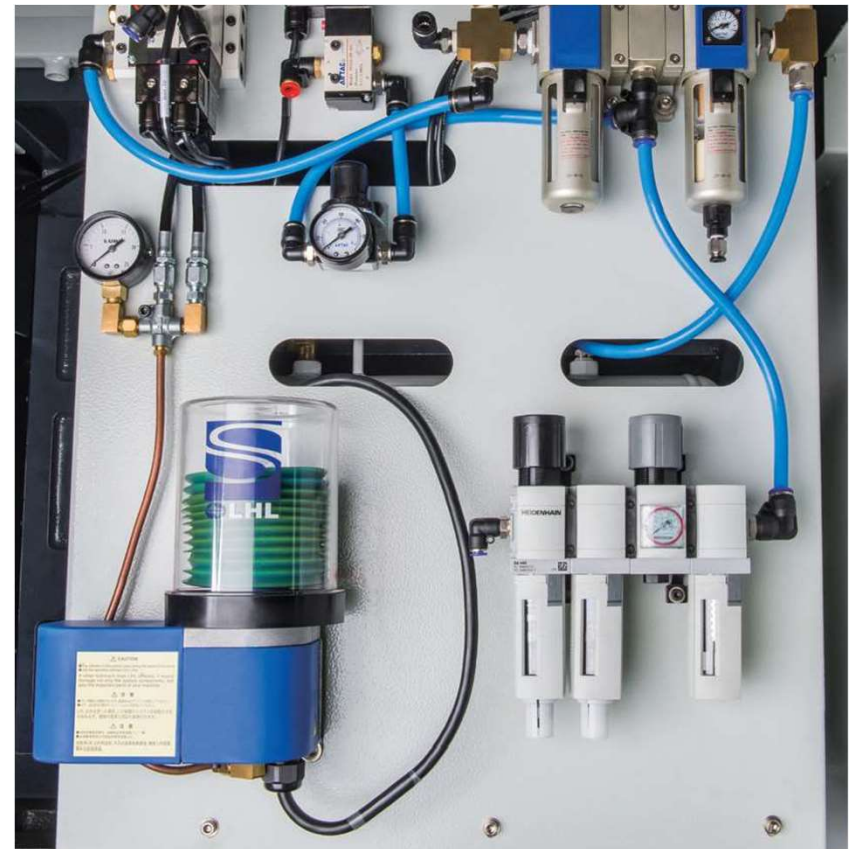


LHL Lubrication system

LHL

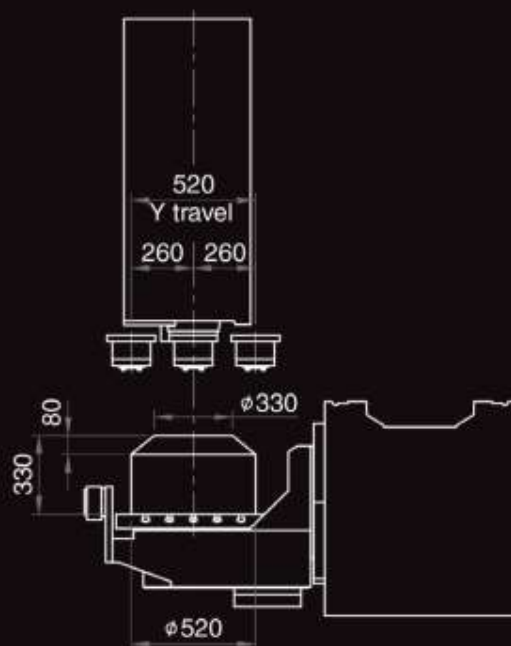
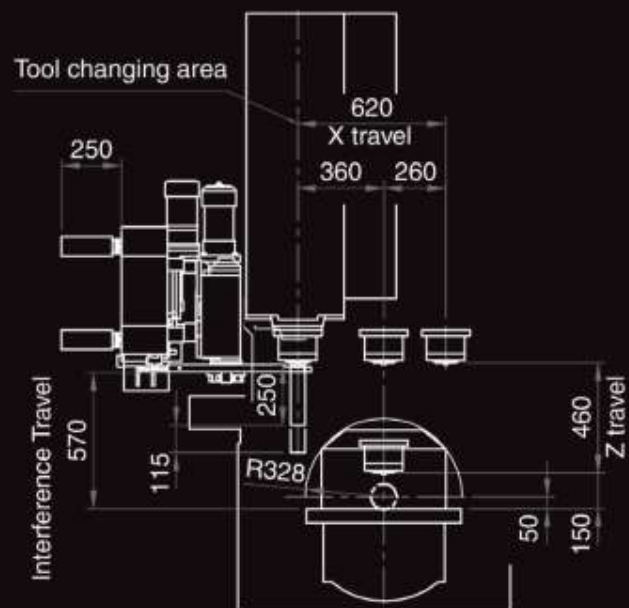
Standard with lubrication. 90% less oil than the normal lubrication system.

Pump motor consumes 80% less electricity.

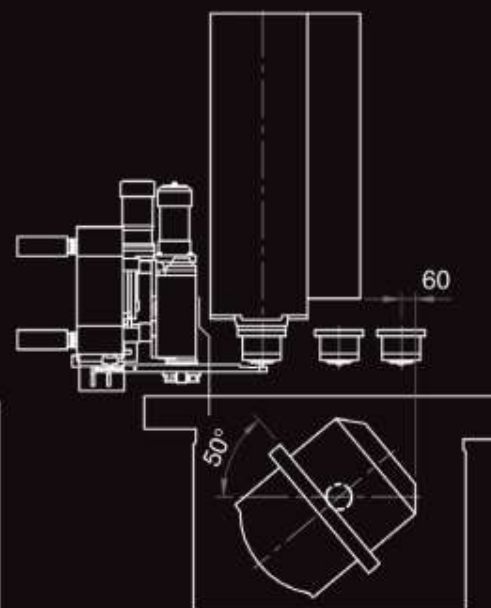


Interference illustration

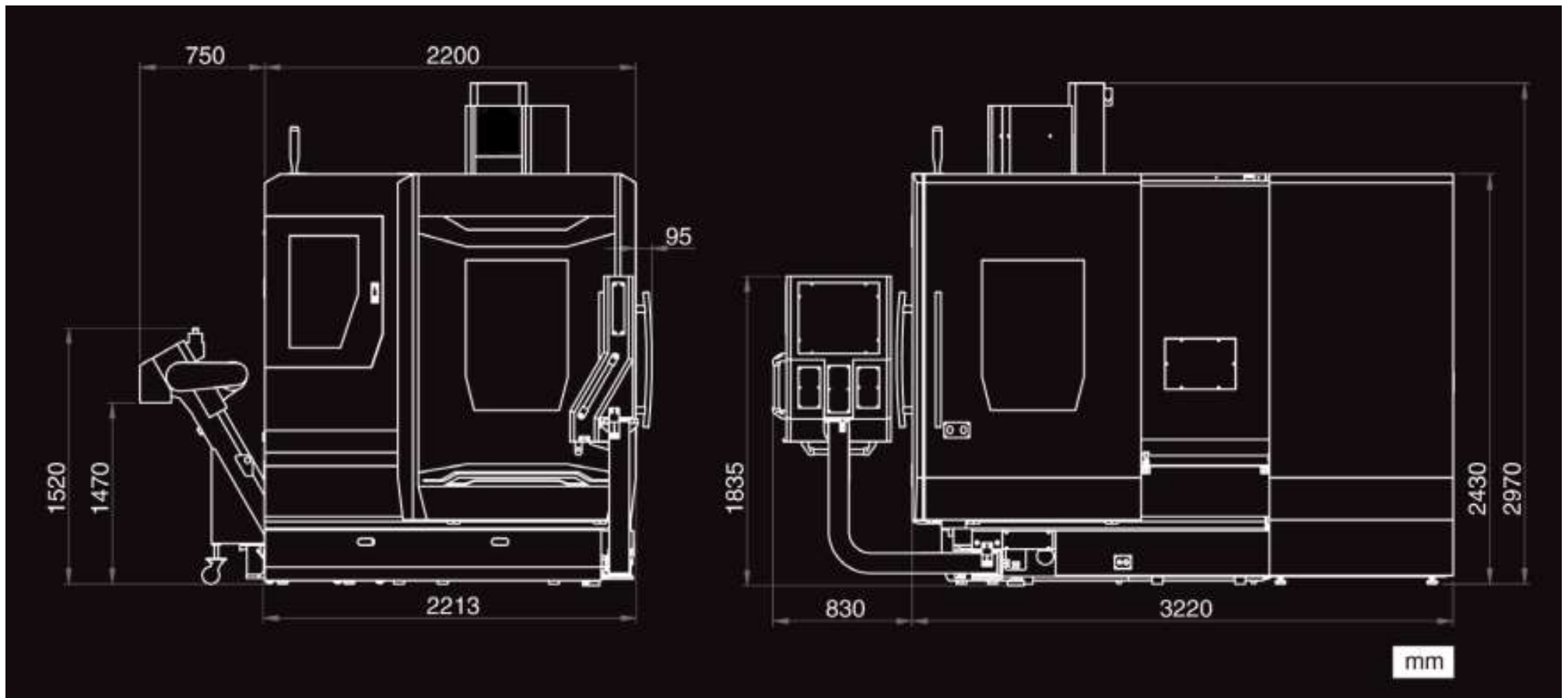
Cutting Area



Interfere Area



Machine Dimension





Thank You for Your Attention!

