



**WITH YOU
SUCCESS TOGETHER**



VUX SERIES
4/5 Axis Vertical Machining Center



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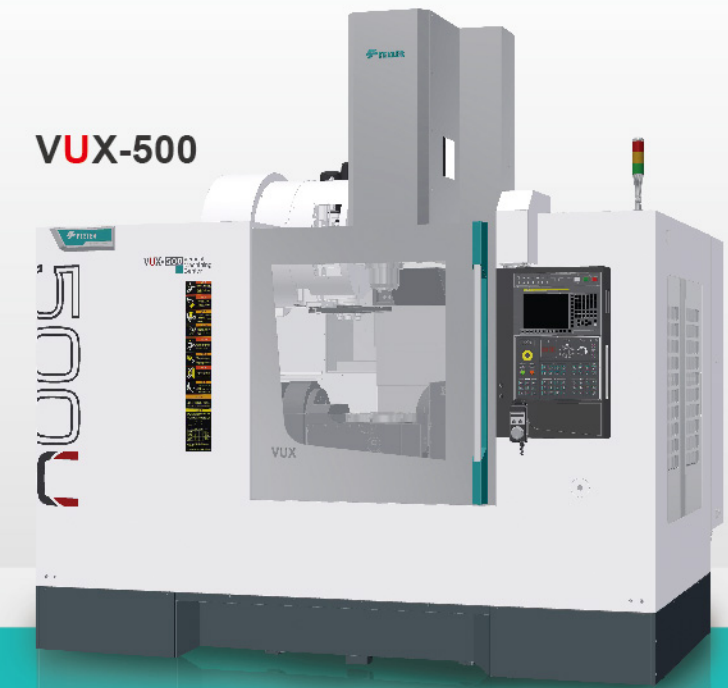
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High Speed & High Quality 4/5 Axis Machining Center



With the diversified demands of customer machining and application, multi-axis machine tool will gradually replace the three-axis machine tool. It has always been FEELER's core value to think from the customer's point of view and provide higher added value.

Therefore, FEELER launched the new generation VUX series of 4/5-axis vertical machining centers, which can be used for machining special angles and complex multi-curved workpieces where the original three-axis axis cannot be machined.



▶ **Workpiece clamping positioning at one time**

Shorten processing time, one-step machining, and reduce repetitive positioning time.

▶ **Machining the undercut area**

Reducing the usage of forming tool, Improve complex surface machining applications.

▶ **Processing deep hole mold**

Reduce tool wear and special fixture costs.

▶ **Reduce tool length**

Improve cutting tool rigidity and life and workpiece can get better surface roughness.

▶ **Suitable for**

Aerospace, Automotive, Energy, Precision mold and other industries.



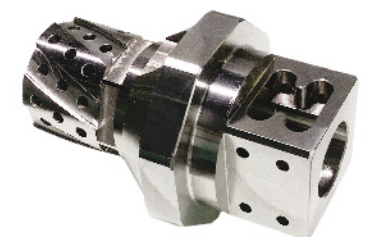
Brake Caliper



Aerospace



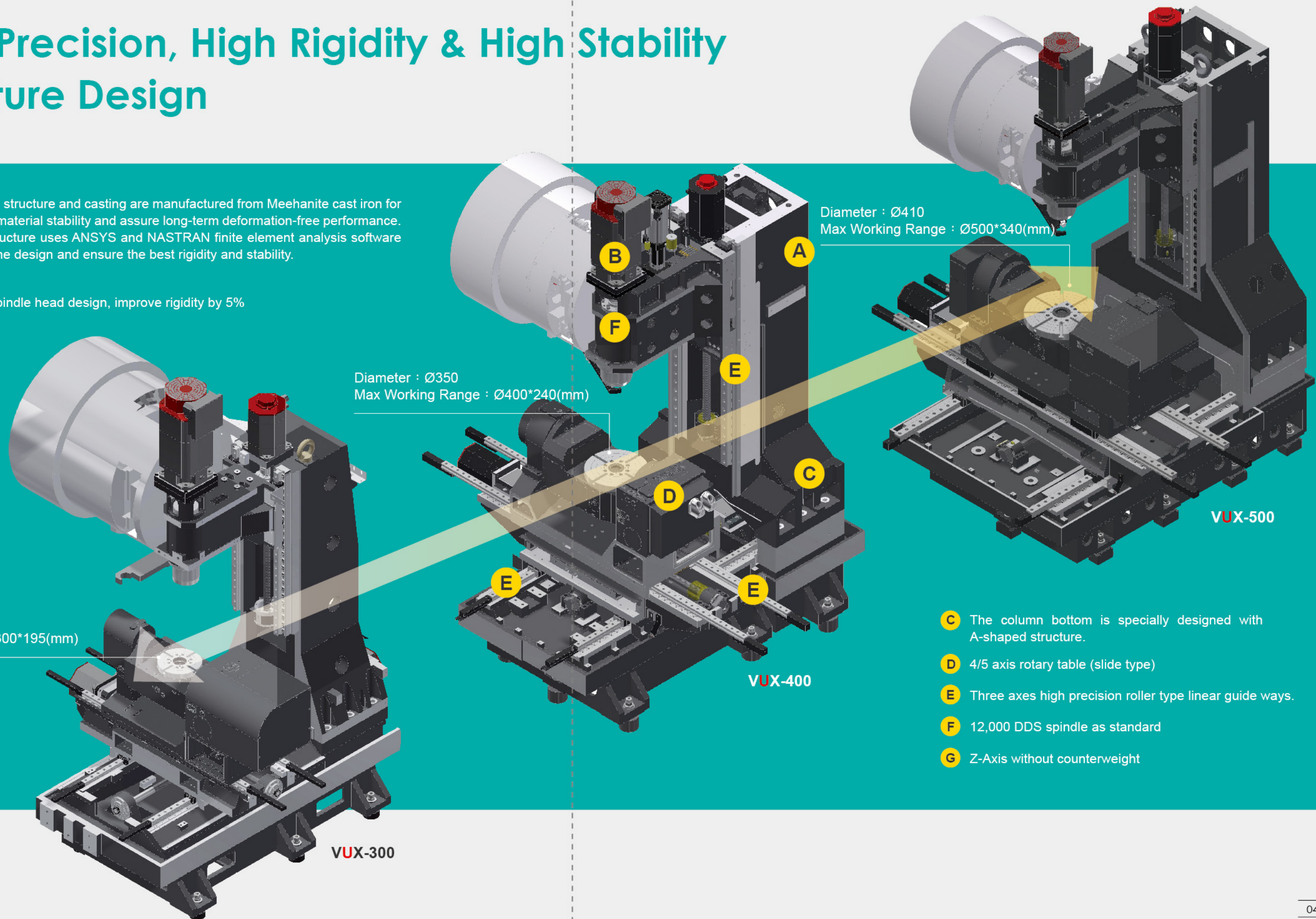
Head Light Die



Complex & Multi-Surface Parts

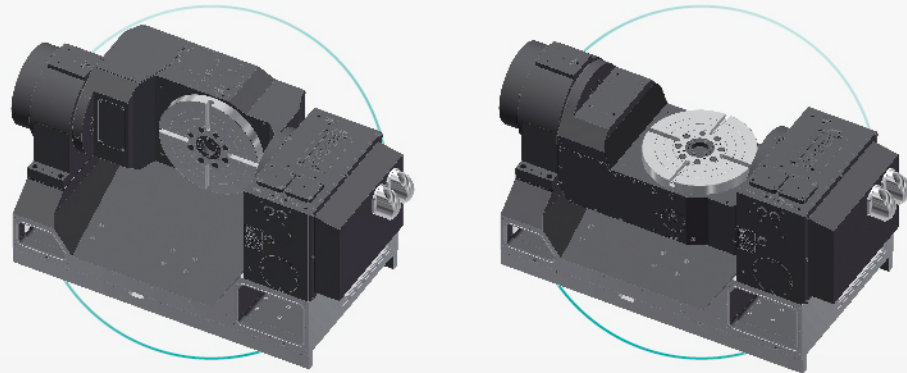
High Precision, High Rigidity & High Stability Structure Design

- A** The machine structure and casting are manufactured from Meehanite cast iron for outstanding material stability and assure long-term deformation-free performance. The main structure uses ANSYS and NASTRAN finite element analysis software to optimize the design and ensure the best rigidity and stability.
- B** One-piece spindle head design, improve rigidity by 5%



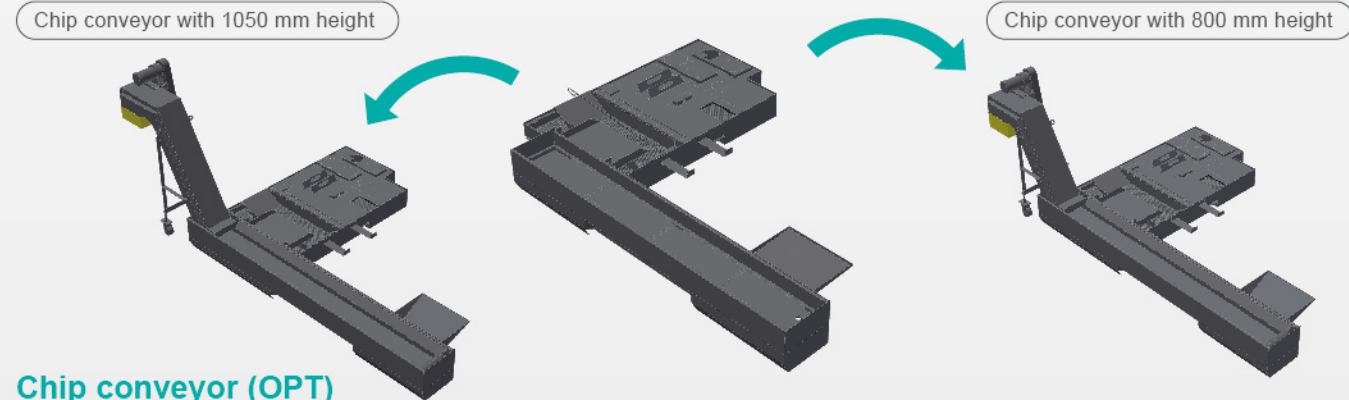
- C** The column bottom is specially designed with A-shaped structure.
- D** 4/5 axis rotary table (slide type)
- E** Three axes high precision roller type linear guide ways.
- F** 12,000 DDS spindle as standard
- G** Z-Axis without counterweight

Machine Features



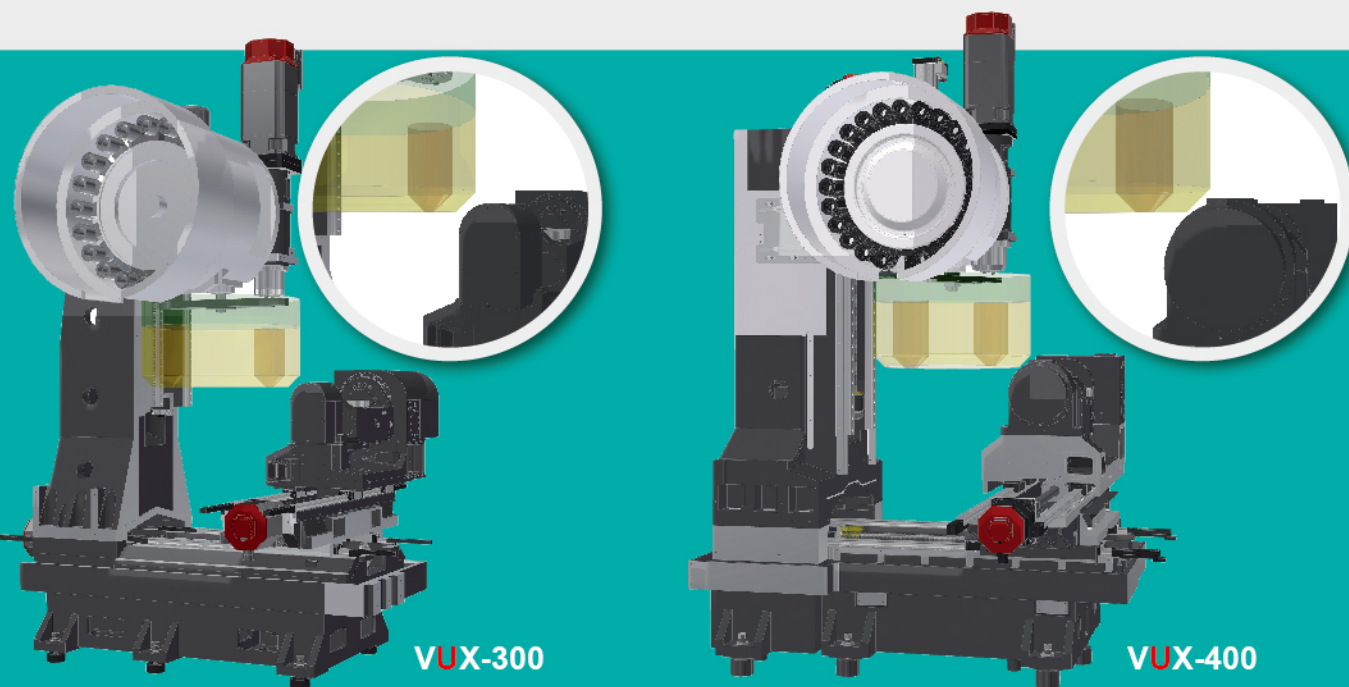
4/5 Axis Rotary Table

The 4/5-axis rotary table specially designed for one-time loading and unloading and multi-sided machining of complex parts.

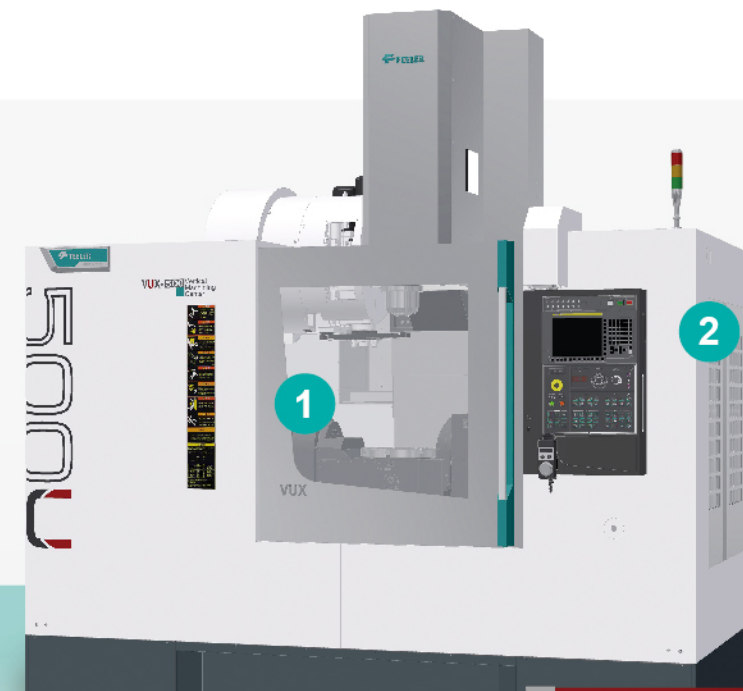


Chip conveyor (OPT)

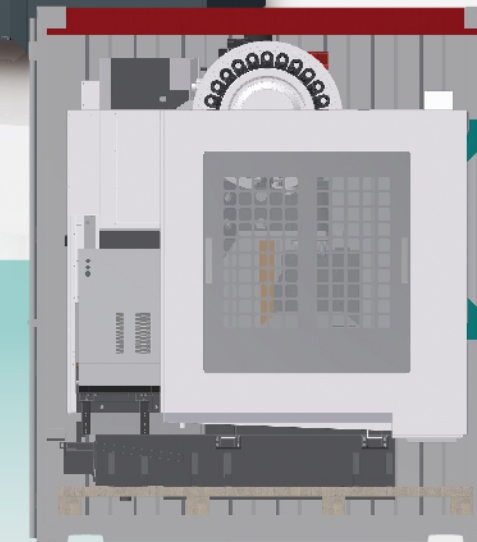
Easy to clean the chips.



- Tool change at home position
- VUX-300 / 400 Increase the chamfer (C50) on the front side of the tool holder to avoid tool change interference.



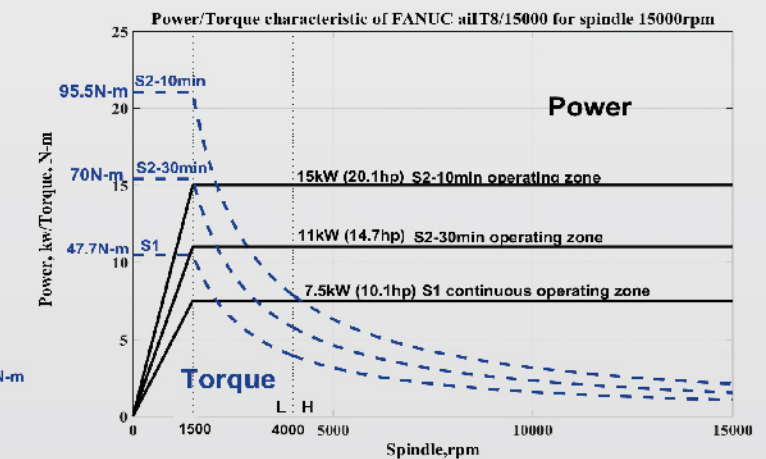
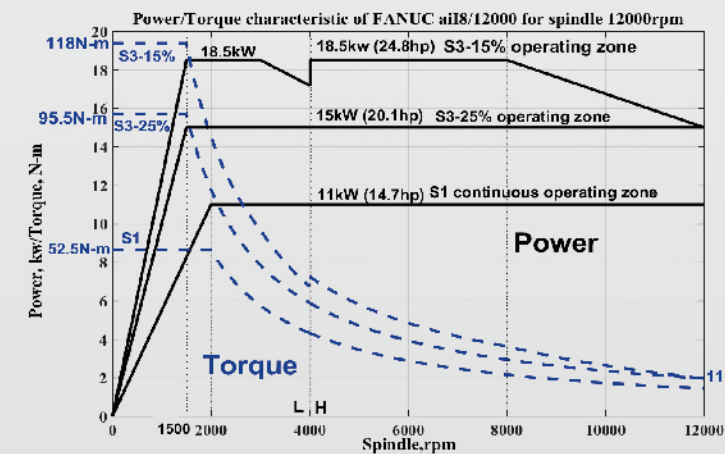
- 1 Large streamlined window front door, convenient for customers to view the machining process.
- 2 Double side windows design for easy maintenance and repair.



Fit to Container

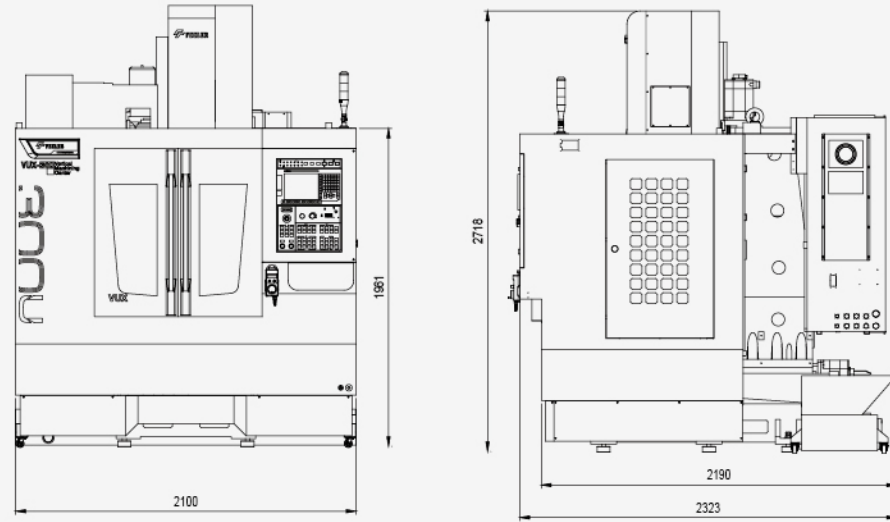
VUX-300/400 with 24T Can be packed into a container without disassembling the tool magazine, reducing the accuracy error of reassembling the tool magazine.

Spindle Torque/Motor Drawing

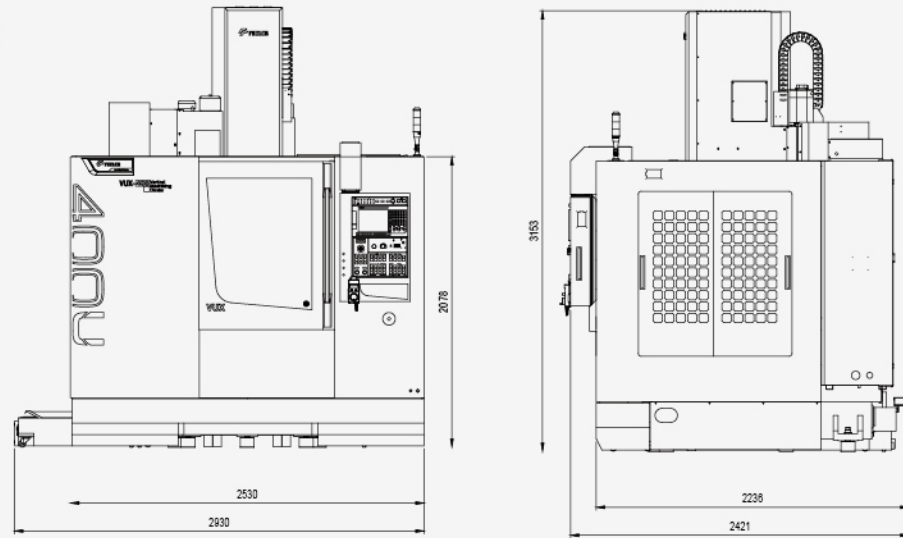


Machine Layout

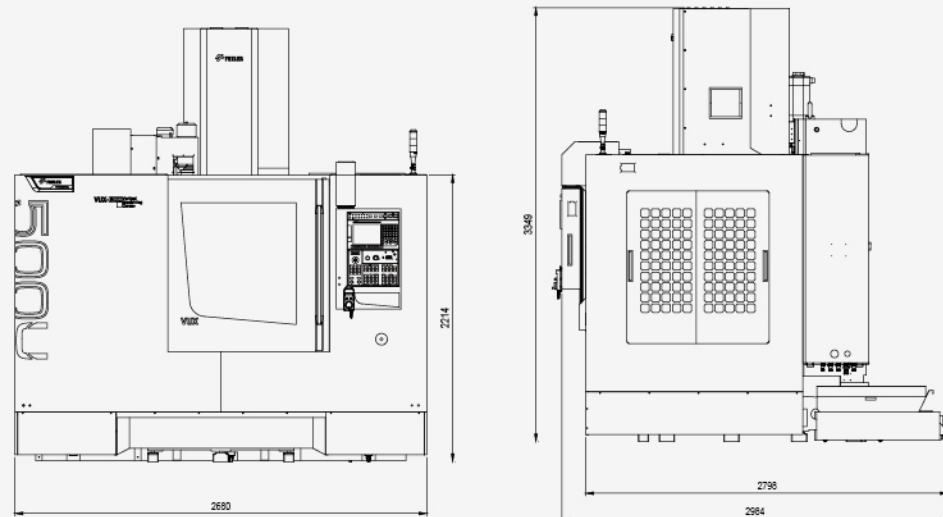
◆ VUX-300



◆ VUX-400

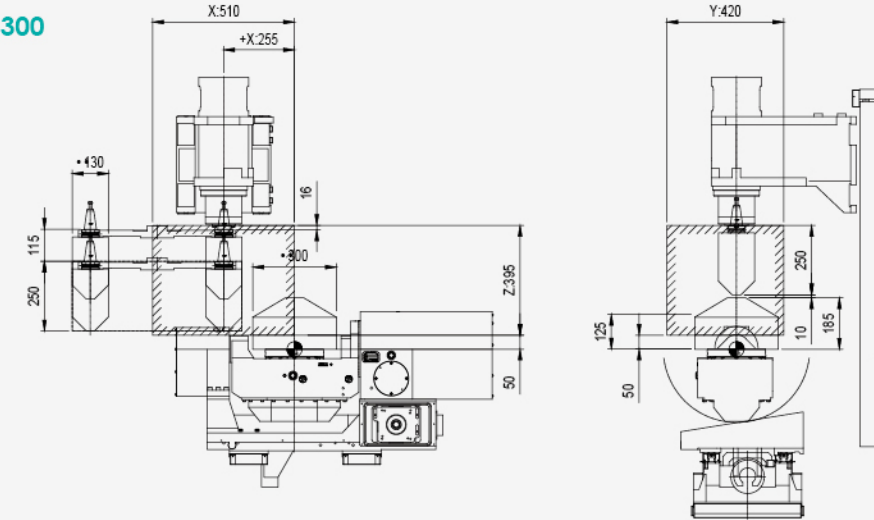


◆ VUX-500

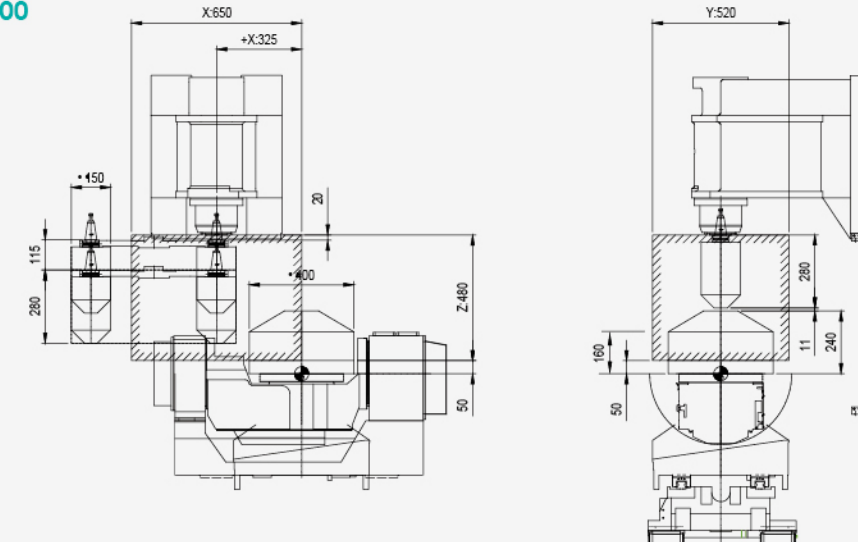


Working Table Dimensions

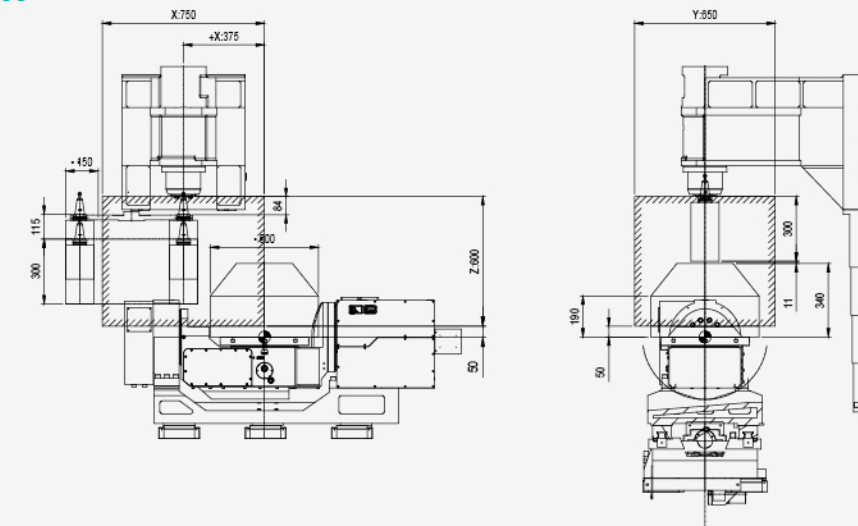
◆ VUX-300



◆ VUX-400



◆ VUX-500



MACHINE SPECIFICATIONS

MODEL	unit	VUX-300	VUX-400	VUX-500	
TRAVEL					
X-axis travel	mm	510	650	750	
Y-axis travel	mm	420	520	650	
Z-axis travel	mm	395	480	600	
A(B)-Axis rotation angle	degree	+30° ~ -120°	+30° ~ -120°	+30° ~ -120°	
C-Axis rotation angle	degree	0°~360°	0°~360°	0°~360°	
Spindle nose to table surface	mm	50~445	50~530	50~585	
Table surface to floor	mm	1115	1190	1255	
TABLE					
Table dimensions	mm	Ø210	Ø350	Ø410	
T-slots	mm	12H7	12H7	14H7	
Max. table load	kg	100/70 (H/V)	200/100 (H/V)	200/150 (H/V)	
Working Torque	A(B) axis(Tilting Axis)	N-m	400	750	1600
	C axis(Rotary Axis)	N-m	600	1500	2000
Max. rotation speed	A(B) axis(Tilting Axis)	min ⁻¹	22.2	16.6	11.1
	C axis(Rotary Axis)	min ⁻¹	33.3	25	16.6
Max. diameter of workpiece	mm	Ø300x185	Ø400x240	Ø500x340	
SPINDLE					
Spindle speed	min ⁻¹	Direct-drive type 12000	Direct-drive type 12000	Direct-drive type 12000	
Spindle taper	-	7/24 Taper NO.40	7/24 Taper NO.40	7/24 Taper NO.40	
Spindle power	Kw	7.5/11	7.5/11	7.5/11	
FEED RATE					
X-axis rapid traverse	m/min	36	36	36	
Y-axis rapid traverse	m/min	36	36	36	
Z-axis rapid traverse	m/min	32	30	24	
ATC					
Tool changer	-	Arm type	Arm type	Arm type	
No. of Tools	-	20	24	24	
Pull stud	-	P-40T (45°)	P-40T (45°)	P-40T (45°)	
Max. Tool weight	Kg	7	8	8	
Max. Tool length	mm	250	280	300	
Max. Tool diameter	mm	Ø80	Ø80	Ø80	
Max. Tool diameter (No adjacent tool)	mm	Ø130	Ø150	Ø150	
OTHER					
Floor Space	mm	2100x2323	2390x2421	2680x2984	
Machine Weight	Kg	3000	5400	7000	
Max. Machine Height	mm	2718	3153	3349	
Power Capacity	KVA	30	30	30	
Air Source	bar	6~8	6~8	6~8	

* Specifications are subject to change without prior notice.

MACHINE ACCESSORIES

NO	Features	VUX-300	VUX-400	VUX-500
1	Control	●	●	●
2	3-axis pro-tensioned ballscrew	●	●	●
3	Automatic lubrication system	●	●	●
4	Direct-drive spindle	●	●	●
5	CTS & Filtering System	○	○	○
6	Spindle oil cooler	●	●	●
7	Air Blast	●	●	●
8	Spindle air sealing	●	●	●
9	Nos.ATC	●	N/A	N/A
10	Linear scale on X/Y/Z-axis	○	○	○
11	Angle Encoders on 4/5-axis	○	○	○
12	Air condition	○	○	○
13	Dust-tight electrical cabinet	●	●	●
14	Hydraulic unit	○	○	○
15	Air Blow (M Code)	●	●	●
16	Air Blast	●	●	●
17	Flush	●	●	●
18	Ethernet interface	●	●	●
19	Levelling bolts & plates	●	●	●
20	Chip conveyor	○	○	○
21	Chip Cart	○	○	○
22	Flushing	○	○	○
23	Top roof	○	○	○
24	CE	○	○	○
25	Coolant gun	●	●	●
26	LED Working light	●	●	●
27	3-color signal light	●	●	●
28	Wireless Workpiece Measurement	○	○	○
29	Laser Tool Length Measurement	○	○	○
30	Automatic door	○	○	○
31	Water-oil separator system	N/A	●	●
32	Water-oil separator	○	○	○
33	Calibration of Rotary Axes	○	○	○
34	Calibration sphere	○	○	○
35	Lifting interface	●	●	●
36	Operation & Maintenance manual	●	●	●

● Standard ○ Optional × N/A