



**WITH YOU
SUCCESS TOGETHER**



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VUX SERIES

4/5 Axis Vertical Machining Center

High Speed & High Quality 4/5 Axis Machining Center

VUX-300(T)



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.

VUX-400



VUX-500



► **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.



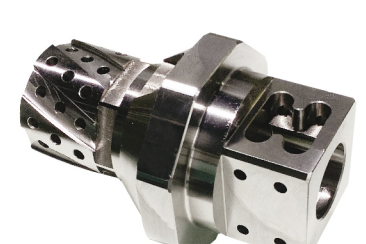
Brake Caliper



Aerospace



Head Light Die



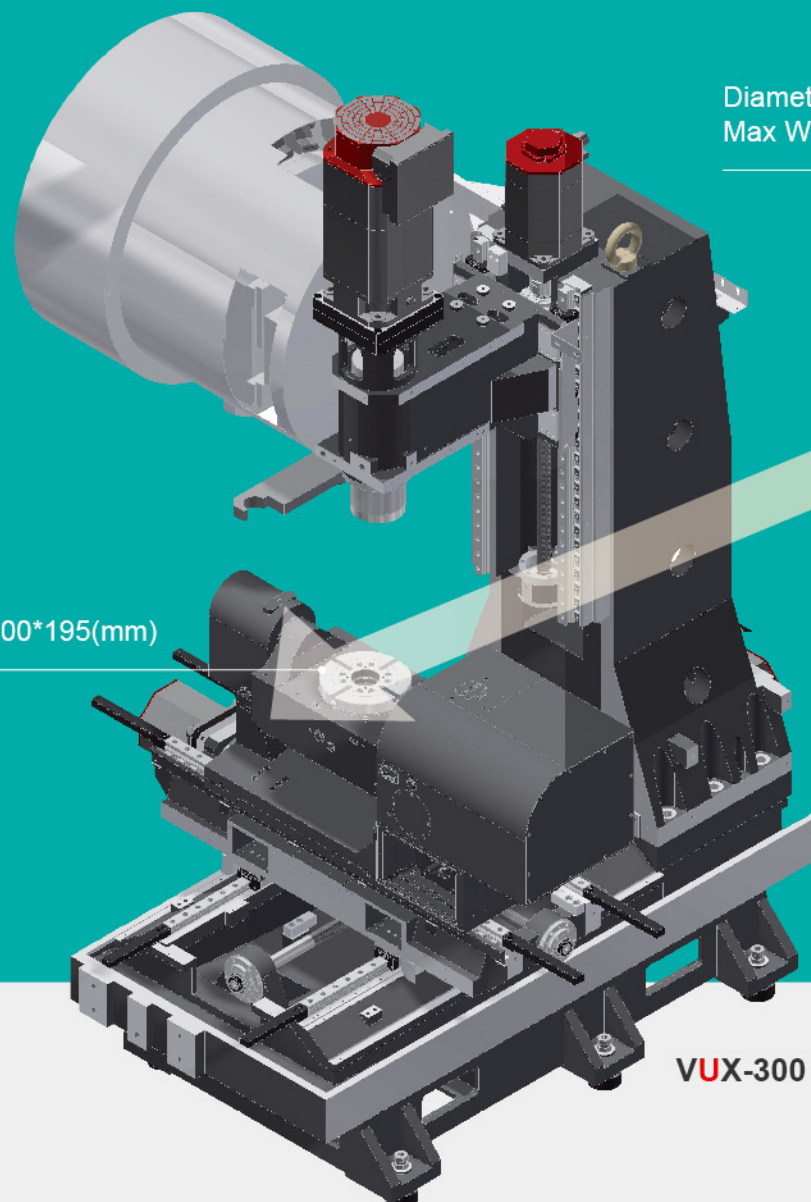
Complex & Multi-Surface Parts

High Precision, High Rigidity & High Stability Structure Design

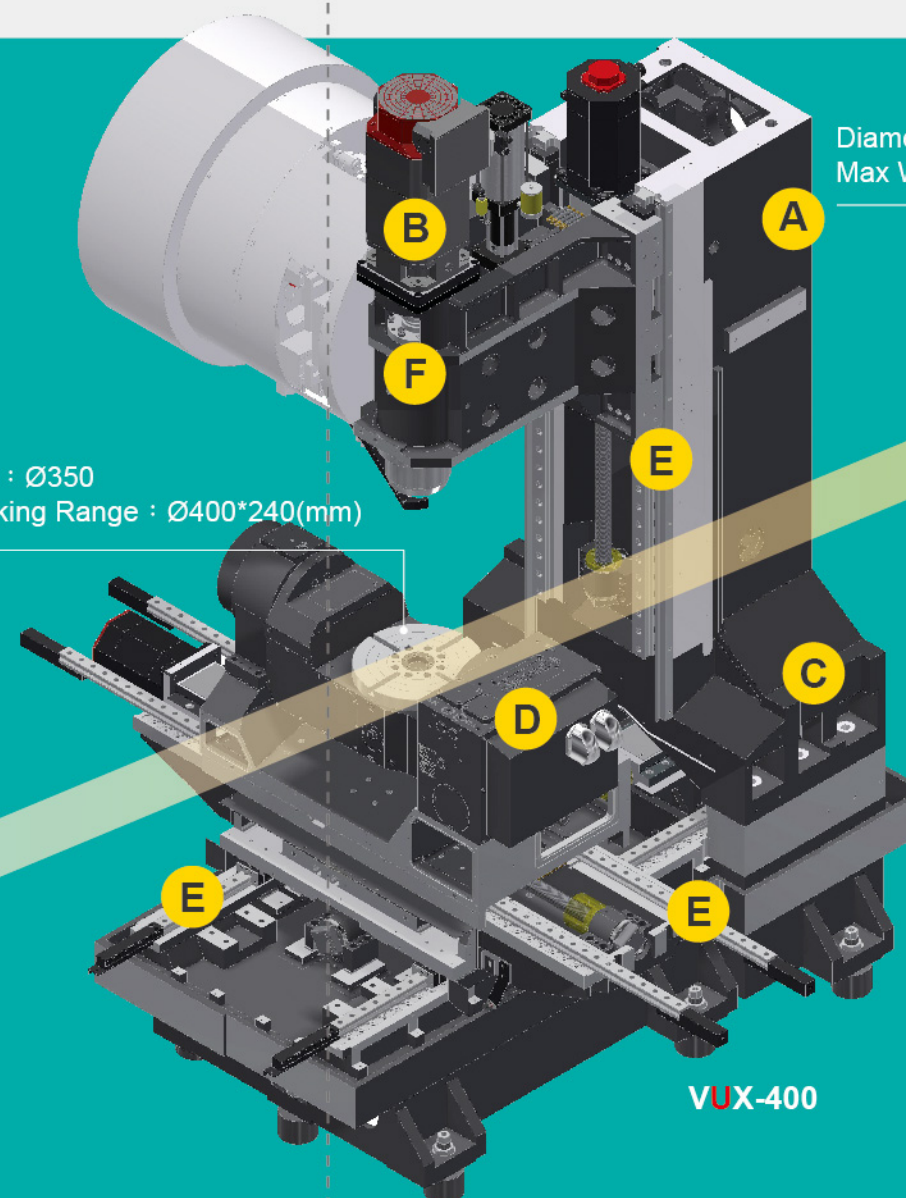
A The machine structure and casting are manufactured from Meehanite cast iron for outstanding material stability and assure long-term deformation-free performance. The main structure uses ANSYS and NASTRAN finite element analysis software to optimize the design and ensure the best rigidity and stability.

B One-piece spindle head design, improve rigidity by 5%

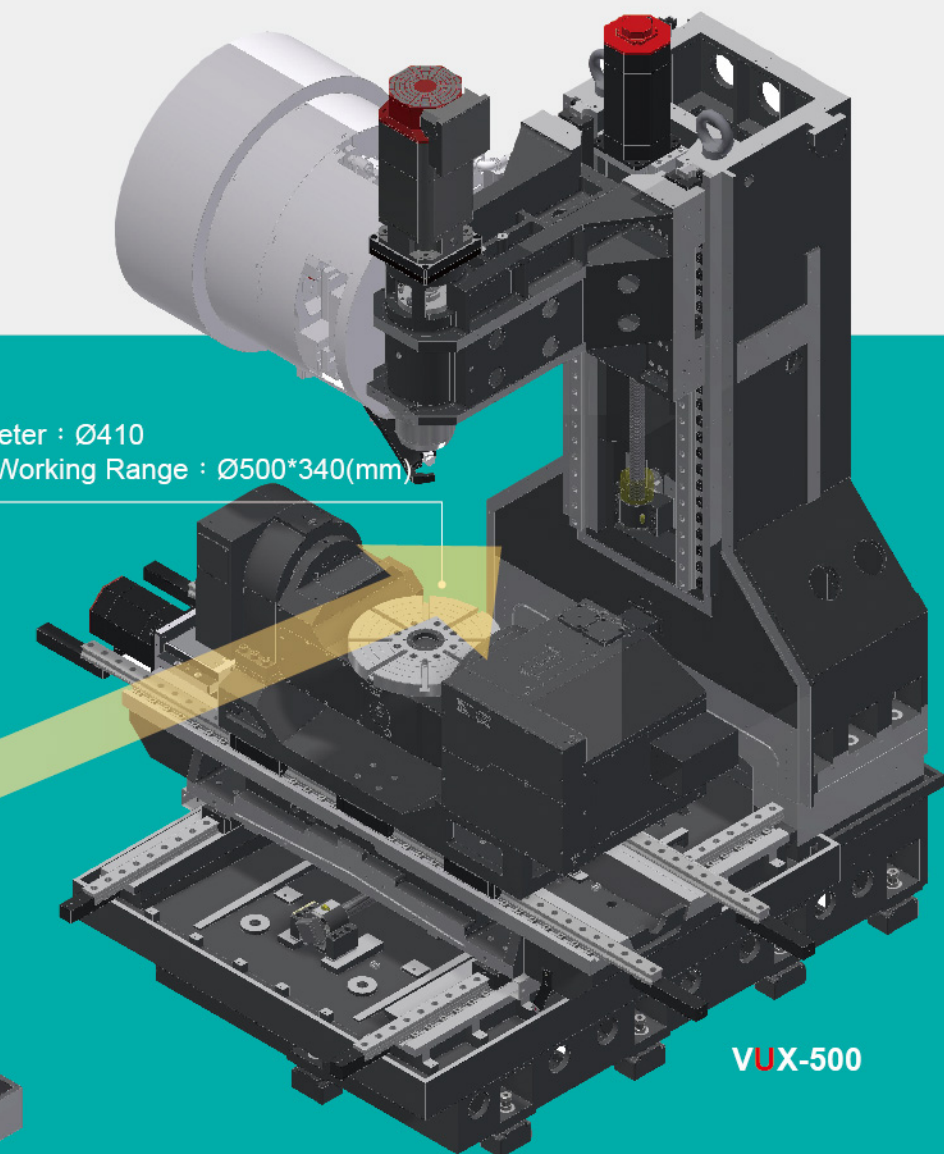
Diameter : Ø210
Max Working Range : Ø300*195(mm)



Diameter : Ø350
Max Working Range : Ø400*240(mm)

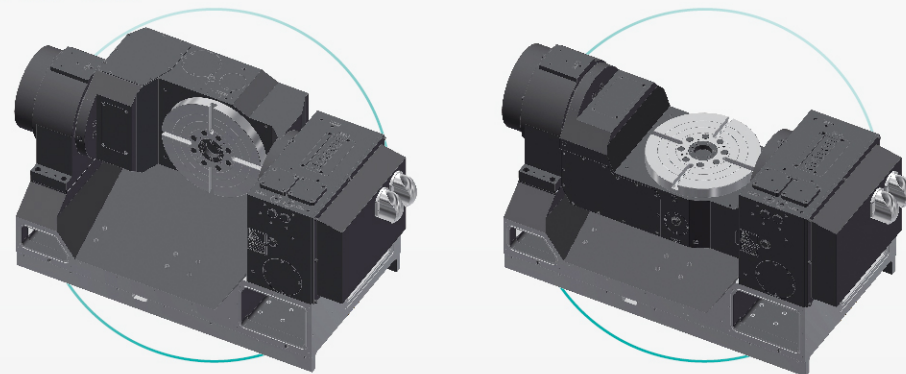


Diameter : Ø410
Max Working Range : Ø500*340(mm)



- 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

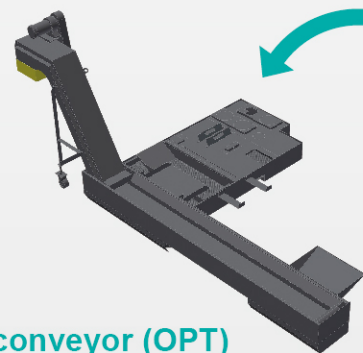
Machine Features



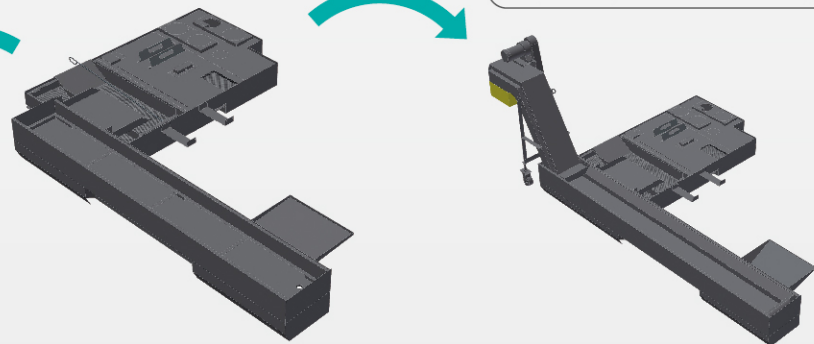
4/5 Axis Rotary Table

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

Chip conveyor with 1050 mm height

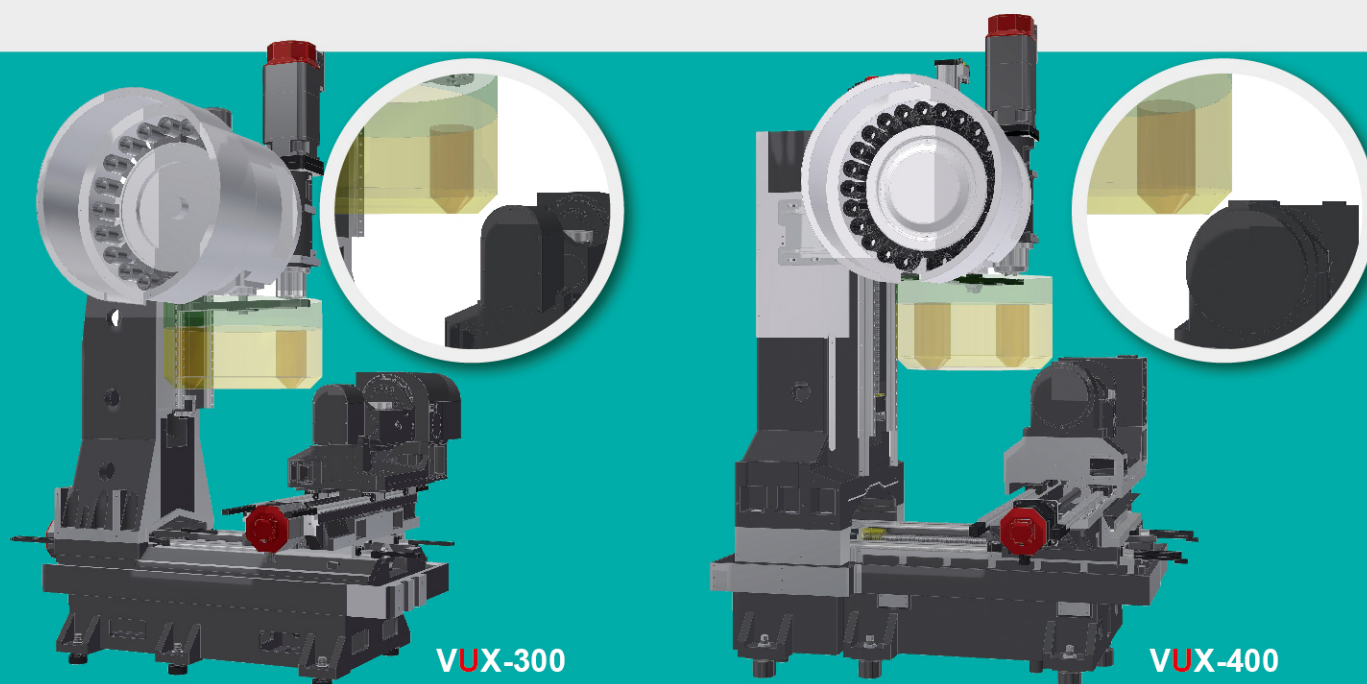


Chip conveyor with 800 mm height



Chip conveyor (OPT)

Easy to clean the chips.



VUX-300

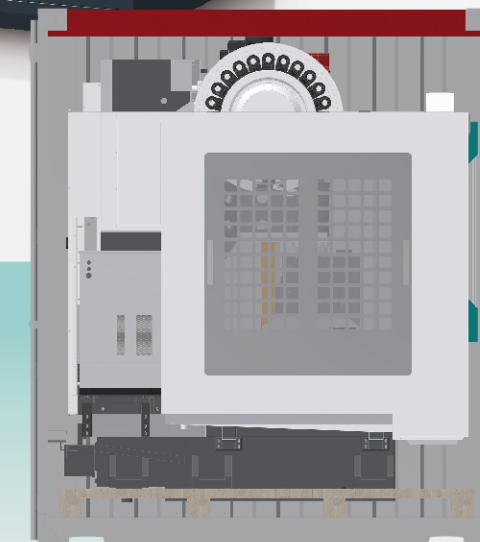
VUX-400

- 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.

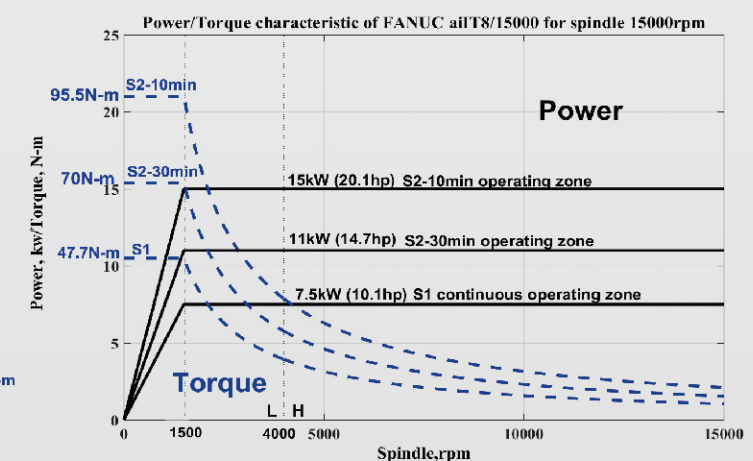
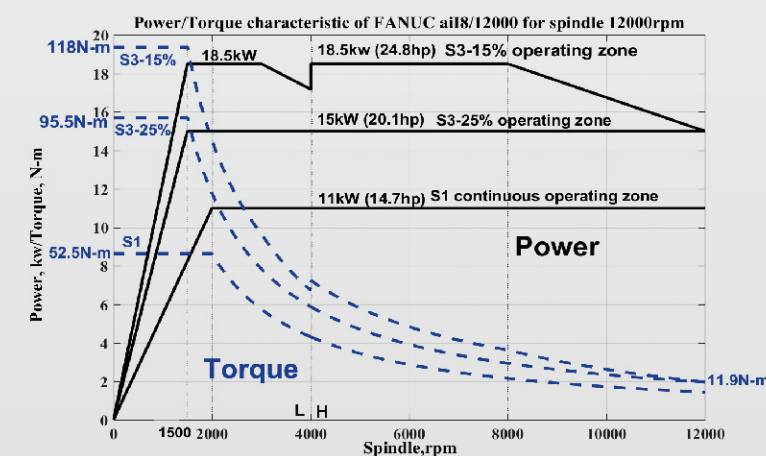
2 Double side windows design for easy maintenance and repair.



Fit to Container

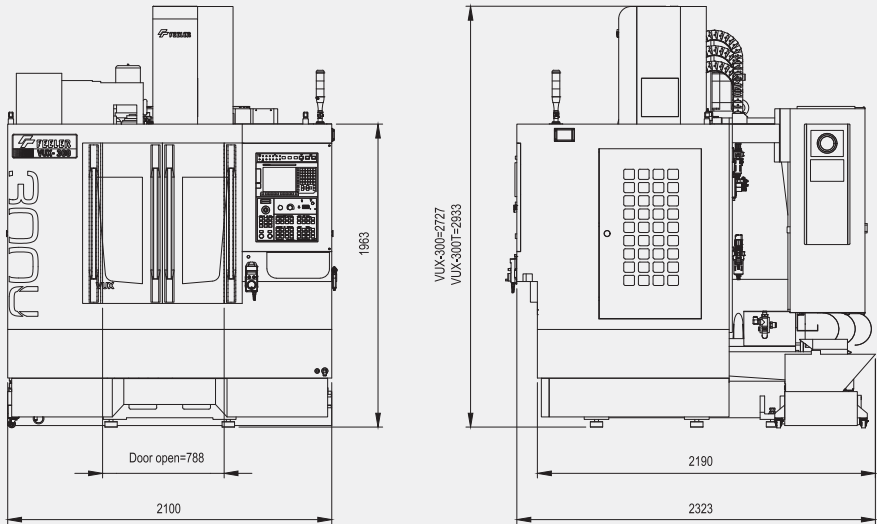
VUX-300/400 with 24T Can be packed into a container without disassembling the tool magazine, reducing the accuracy error of reassembling the tool magazine.

Spindle Torque/Motor Drawing

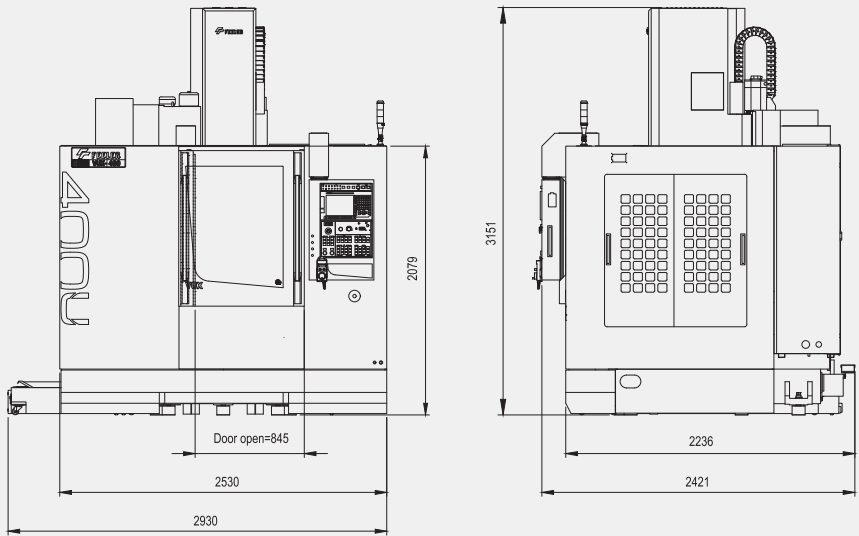


Machine Layout

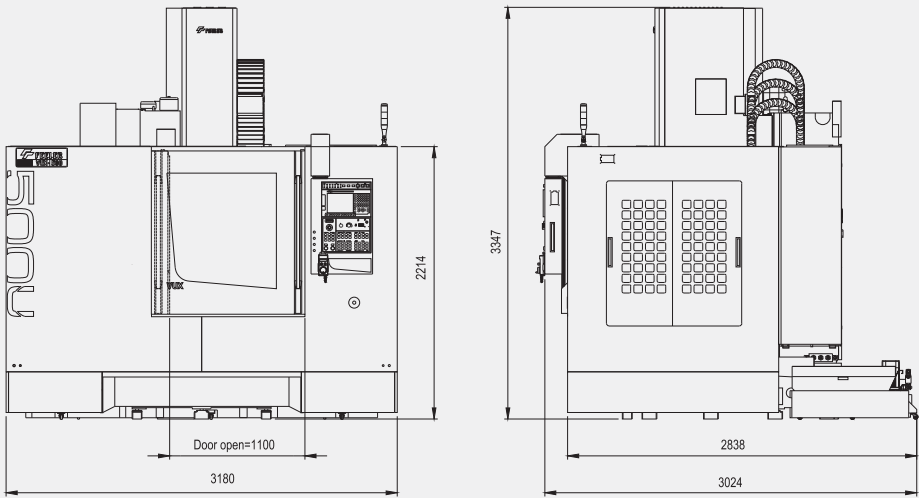
◆ VUX-300(T)



◆ VUX-400

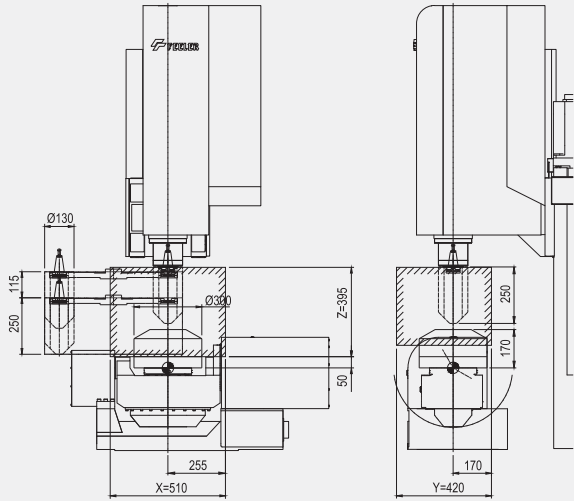


◆ VUX-500

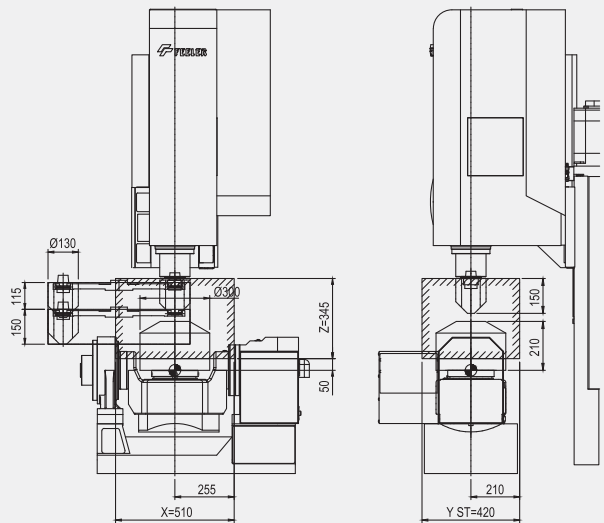


Working Table Dimensions

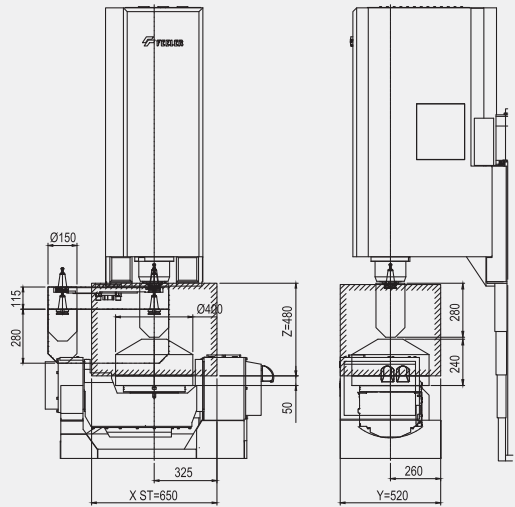
◆ VUX-300



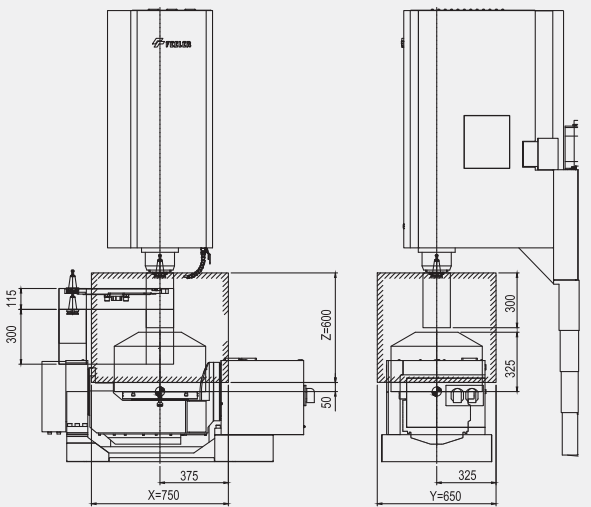
◆ VUX-300T



◆ VUX-400



◆ VUX-500





MACHINE SPECIFICATIONS

MODEL		unit	VUX-300	VUX-300T	VUX-400	VUX-500
TRAVEL						
X-axis travel		mm	510	510	650	750
Y-axis travel		mm	420	420	520	650
Z-axis travel		mm	395	345	480	600
A(B)-Axis rotation angle		degree	+30° ~ -120°	-30° ~ +120°	+30° ~ -120°	+30° ~ -120°
C-Axis rotation angle		degree	0°~360°	0°~360°	0°~360°	0°~360°
Spindle nose to table surface		mm	50~445	50 ~ 395	50~530	50~585
Table surface to floor		mm	1120	1170	1190	1255
TABLE						
Table dimensions		mm	Ø210	Ø200	Ø350	Ø410
T-slots		mm	12H7	12H7	12H7	14H7
Max. table load		kg	100/70 (H/V)	75/75 (H/V)	200/100 (H/V)	200/150 (H/V)
Working Torque	A(B) axis(Tilting Axis)	N-m	260	35	550	780
	C axis(Rotary Axis)	N-m	260	150	550	780
Max. rotation speed	A(B) axis(Tilting Axis)	min ⁻¹	22.2	16.6	25	11.1
	C axis(Rotary Axis)	min ⁻¹	33.3	1200	25	16.6
Max. diameter of workpiece		mm	Ø300x170	Ø300x210	Ø400x240	Ø500x325
SPINDLE						
Spindle speed		min ⁻¹	Direct-drive type 12000	Direct-drive type 12000	Direct-drive type 12000	Direct-drive type 12000
Spindle taper		-	7/24 Taper NO.40	HSK-A63	7/24 Taper NO.40	7/24 Taper NO.40
Spindle power		Kw	11/18.5	11/18.5	11/18.5	11/18.5
FEED RATE						
X-axis rapid traverse		m/min	36	36	36	36
Y-axis rapid traverse		m/min	36	36	36	36
Z-axis rapid traverse		m/min	32	32	30	24
ATC						
Tool changer		-	Arm type	Arm type	Arm type	Arm type
No. of Tools		-	20	20	24	24
Pull stud		-	P-40T (45°)	-	P-40T (45°)	P-40T (45°)
Max. Tool weight		Kg	7	7	8	8
Max. Tool length		mm	250	150	280	300
Max. Tool diameter		mm	Ø80	Ø80	Ø80	Ø80
Max. Tool diameter (No adjacent tool)		mm	Ø130	Ø130	Ø150	Ø150
OTHER						
Floor Space		mm	2100x2323	2100x2323	2930×2421	3180x3024
Machine Weight		Kg	3000	3000	5400	7000
Max. Machine Height		mm	2727	2933	3151	3347
Power Capacity		KVA	30	30	30	30
Air Source		bar	6~8	6~8	6~8	6~8

* Specifications are subject to change without prior notice.

MACHIINE ACCESSORIES

NO	Features	VUX-300(T)	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 ligh	●	●	●
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