

# QUOTATION

## Vertical Machining Center V1160L



V1160L is for part processing, heavy cutting, it has better vibration absorption, lower thermal expansion coefficient, and lower thermal conductivity coefficient. Saddle, table, and headstock apply German steel welding technology, it can help get higher rigidity, reduce moving parts weight, decrease movement inertia, as well as improve machine response speed and movement precision. It adopts a cross sliding table moving structure, and the guide rail adopts a linear rolling guide. It is mainly used for processing various small and medium-sized complex parts. It is a very important key equipment in general machinery, mold, aviation, auto parts energy, transportation, and other industries.

### Quotation terms

Quotation date	November, 04th., 2024
Model	<b>V1160L Belt BT40-10000rpm, FANUC 0i-MF Type 3</b>
Quotation No.	<b>DDZYT2024110401</b>
Price Terms	<b>EXW SIEGEN</b>
Payment Terms	30% deposit, 70% before delivery
Validity	15 days after quotation

## MACHINE TECHNICAL SPECIFICATIONS

<b>. TRAVEL</b>	
1. X-axis travel	1100mm
2. Y-axis travel	610mm
3. Z-axis travel	610mm
4. spindle nose to table surface	150-760mm
<b>. SPINDLE</b>	
1. Spindle Power	11/18.5 kw
2. Spindle Torque	52.5/118N.m
3. Spindle taper	BT40
4. Spindle speed	10000rpm
5. Drive type	<b>Belt type</b>
<b>. FEED</b>	
1. X/Y/Z-axis rapid feed speed	32/32/24 m/min
<b>. TABLE</b>	
1. Size	1200*600 mm
2. T-Slot (size * quantity * space)	18×5×100 mm
3. Max load	1000 Kg
<b>. ISO ACCURACY</b>	
1. Positioning	X/Y/Z 0.008mm
2. Repeatability	X/Y/Z 0.005mm
<b>. ATC</b>	
1. Type	Disk type ATC BT40-24T
2. Maximum tool size(full/unfull/length)	Φ78/Φ150/ 300mm
3. Maximum tool weight	8 kg
<b>. OTHERS</b>	
1. Air Pressure	0.65Mpa
2. Power Capacity	20kVA
3. Weight	7000Kg
4. Floor Space (L *W *H)	2900*2800*3200mm

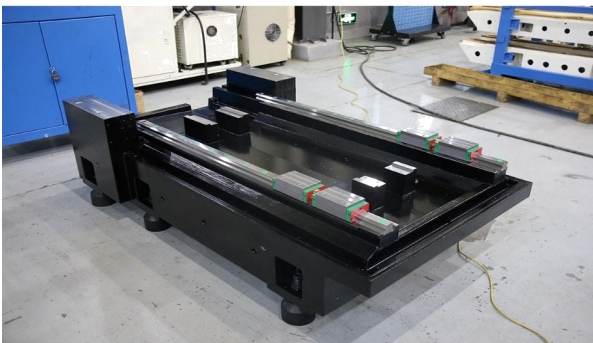
## STANDARD CONFIGURATION

1. CNC controller	13. Front end and right side lightening
2. Roller linear guideway for 3 axes	14. Whole machine cover
3. Ball screw for 3 axes	15. Workpiece water cooling
4. Spindle taper air blow	16. Workpiece air cooling
5. Spindle air curtain dust-free	17. Disk type ATC BT40-24T
6. Spindle ring spray	18. Heat exchanger for electrical cabinet
7. Flexible cover of guideway	19. Ball screw pre-stretch
8. Tri-color alarm light	20. Sizing block and adjust bolts
9. Auto lubrication system	21. Handed pulse generator
10. Air gun	22. Double pump flushing device
11. Water gun	23. Attached operation and maintenance manual
12. Electrical cabinet lighting	24. 2G CF card

## OPTIONAL CONFIGURATION

- |                                   |               |
|-----------------------------------|---------------|
| 1. FANUC 0i-MF PLUS (TYPE 3)      | $\beta$ motor |
| 2. Chain chip conveyor            |               |
| 3. Both sides screw chip conveyor |               |
| 4. Oil cooler                     |               |
| 5. Reversed 4th. axis interface   |               |
| 6. CTS                            | 20 BAR        |
| 7. Manual Guide I                 |               |
| 8. Belt type spindle              | BT40 10000rpm |
| 9. Auto power-off                 |               |
| 10. Worktable quenching           |               |

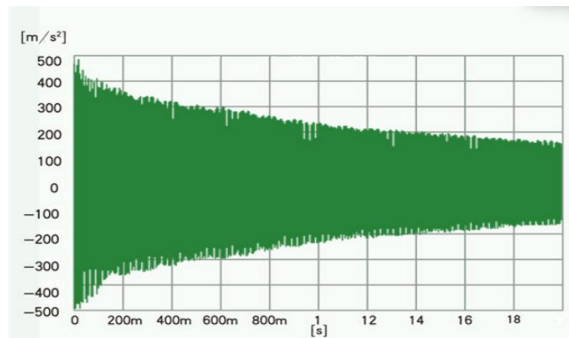
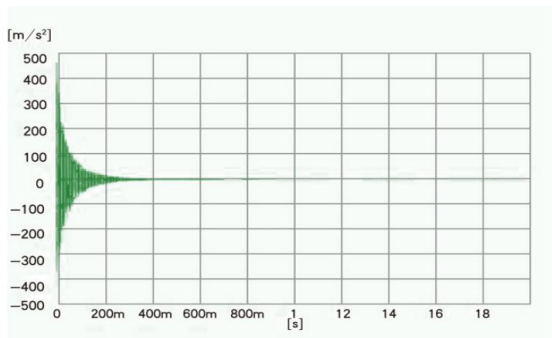
## Machine Advantages



### •Mineral Casting base and Column

#### Strong vibration absorption:

The vibration absorption of mineral materials is 10 times that of cast iron. Under large dynamic loads, the overall accuracy and stability of the machine tool are guaranteed, the surface processing quality of the workpiece is increased by 20%, and the service life of the tool is increased by 10%.



#### Excellent thermal stability:

The heat conduction is 1/20 of cast iron, and the specific heat capacity is 2.1 times than cast iron. It has excellent thermal stability, which effectively controls the deformation of the machine tool due to temperature changes and ensures the stability of the accuracy of the machine tool processing.

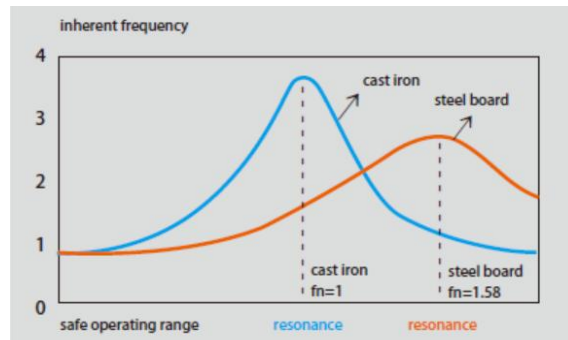
Responsible molding ability and integration ability;

Anti-corrosion;

Environmental protection and energy saving;

High precision.

•Steel plate welding moving parts

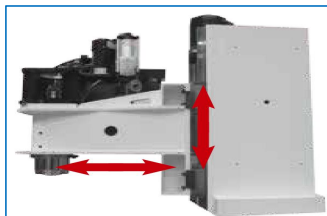


The moving parts, saddles, working table and headstock are welded by high strength low-alloy steel, the material elasticity modulus is around 1.4times of iron casting, so the overall rigidity can be improved by 30%.

The section shape of the welded parts uses high performance, high stiffness, fully enclosed hollow thin wall, double wall and honeycomb structure.

Compared with cast iron materials, the quality is reduced by 20%-30%, the natural frequency is well improved, the possibility of resonance during cutting is reduced, and the cutting stability and machining accuracy are improved.

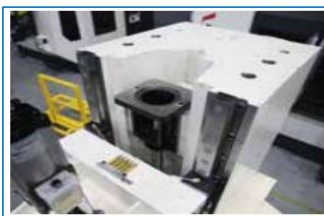
•Structural design advantages:



Reduce the overhang of the spindle, increase the rigidity of the spindle box, and ensure the rigidity of the machine tool for re-cutting;

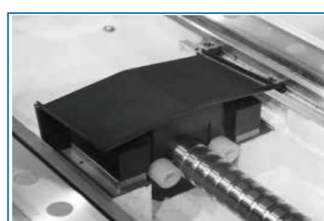
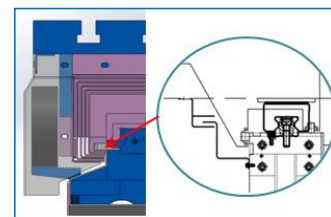
Increase the span of the Z-axis guide rail and increase the distance between the sliders at the same time

Vertical installation of tool magazine  
The column does not bear lateral bending force  
Tool magazine support is uniformly stressed and not easily deformed  
Ensure the stability of tool change



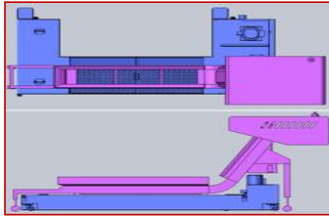
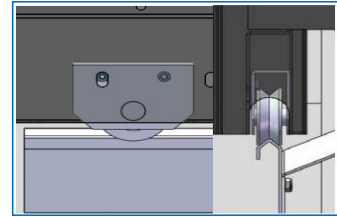
Z-axis has no counterweight design, effectively reducing the vibration caused by Z-axis commutation

Internal protection double-lap side return type structure design;  
Prevent chip leakage and water leakage, effectively protect the inside of the fuselage, and keep the machine running smoothly



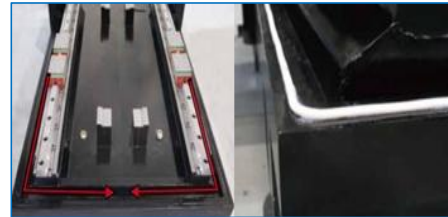
Bearing seat secondary protection design  
Protect the transmission system and prevent pollution

Anti-chip and anti-derailment structure for front door rollers  
Facilitate follow-up cleaning work and reduce maintenance costs



The latest chip removal system design has added a leak-proof and chip-proof design to improve the efficiency of automatic chip removal. The cleaning of waste chips can be done from every 3 days to now by 2 weeks.

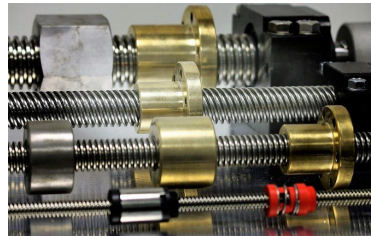
The design of water diversion groove and sealing groove of the bed prevents water leakage and chip leakage of the bed and keeps the working environment clean



### Other Standrads Machine Parts



Control Panel



3-axis screw preload nut



3-axis linear guideway



3-axis ball screw



3 axis Telescopic Covers



Working LED light & Workpiece cooling system





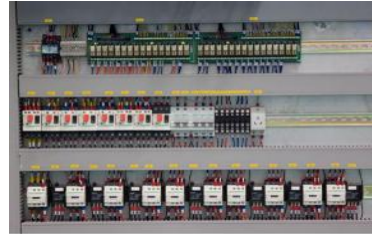
Lubrication system



Tool magazine



Air & water cooling for workpiece



Electric control cabinet



Air Gun



Water pump

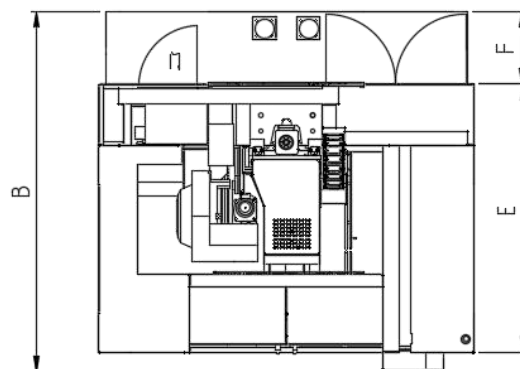
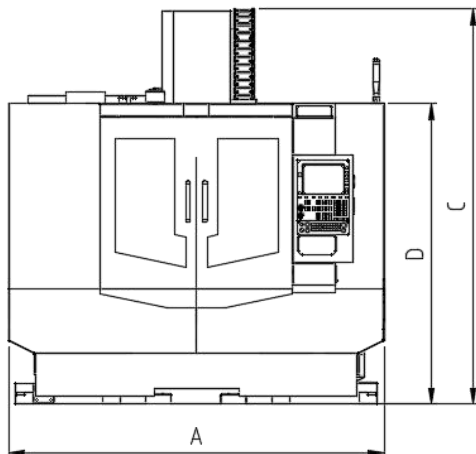


Handheld pulse generator

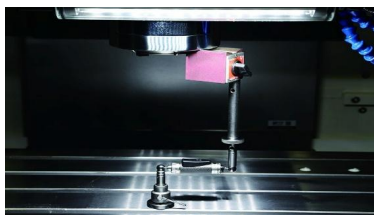


3-axis coupler

### Machine Diagram



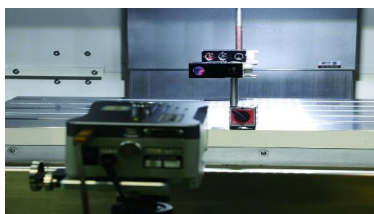
## Machine Precision Control



Ballbar round detection



Dynamic Balancing Machine



British RENISHAW laser interferometer



German ZEISS three-coordinate measuring instrument



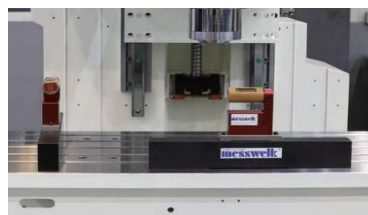
Germany WADRICH milling machine \* 2 sets



Kurashiki Boring and Milling Machine



Swiss DIXI Jig Boring Machine



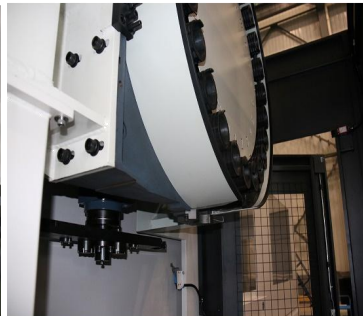
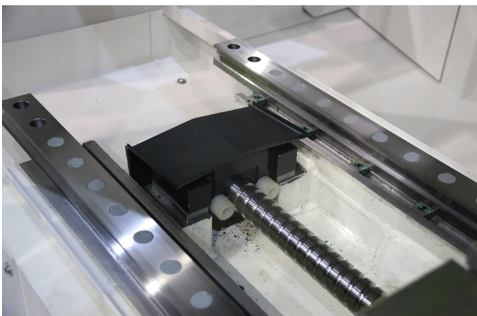
Electric leveling

## Note

1. Price and specifications are subject to change without prior notice;
2. Pictures and graphics are representative and may not be from the actual machine;
3. All specified values are given at standard electric power conditions (380V/50Hz);
4. Machine dimension and weight are changed according to optional specification;
5. Please refer to lay-out and foundation drawing in relation to installation;
6. All specified values of pressure, flow rate of coolant, lubrication and hydraulic pump are given at pump outlet;
7. Refer to the separated spec.sheets in relation to specification, function and option on controller;
8. Available environment temperature: 10 °C to 40 °C; best environment temperature 15 °C to 25 °C, temperature shall not exceed  $\pm 2$  °C /
9. Coolant recommendation: water-soluble cutting fluid or oily cutting fluid is suitable for the cooling system. Note: the used cutting fluid
10. Read the mechanical and electric operation manual, and follow all the safety instructions before using the machine;
11. One year control and spare part warranty for standard machine;
12. Turn-key is available for all the inquiries. Please inquire DEED application department for the turn-key proposal if needed;
13. For more details, please refer to the machine manual;
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## Machine Show





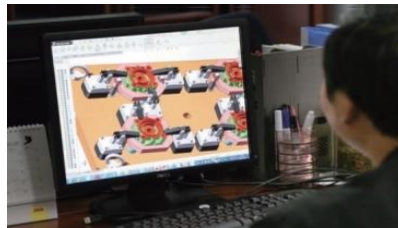
### Samples



### Package for Delivery



## Services



## About Deed Company

Shandong DEED Precision Machine Tool Co., Ltd. was established in 2007, located in Yanzhou District, Jining City, Shandong Province, with a registered capital of 220 million yuan, covers an area of 200 acres, and has more than 600 employees. It is the governing unit of China Machine Tool Industry Association and the key enterprises of Shandong high-end equipment manufacturing. The company is committed to the development and manufacture of high-end CNC machine tools. The main products include high-speed vertical machining center, large-scale gantry machining center, high-precision five-axis linkage machining center and CNC milling and boring machine. The products are widely used in aerospace, military, marine vessels, automobile manufacturing, rail transportation, wind power equipment, electronic molds and other industry users at home and abroad.





With the successful transformation and upgrading of the company's machine tool, the company's product competitiveness has been continuously enhanced. In the domestic and foreign markets, it has directly competed with imported machine tool brands in Japan and South Korea, sales orders continue to grow, and the downstream user groups have gradually shifted from small and medium-sized private and state-owned manufacturing enterprises to large central enterprises, state-owned enterprises, private enterprises and military enterprises. The company has 6 sales regions including overseas regions (Germany, Hungary, Portugal, Turkey, India, Belarus, etc.), North China, East China, South China, Central China and Southwest China. The order customers are mainly from automobile manufacturing and military industry, shipbuilding, rail transit and other industries, a number of large-scale bench-marking industry users have been developed. The branding and scale effects of enterprises have gradually emerged.



The company vigorously implements the "going out, introducing" development strategy, and has reached a comprehensive strategic cooperation with Germany's well-known CNC machine tool manufacturer Rottler, and has a R&D center Hipreed in Germany. The two sides share technical resources, jointly research and develop, and manufacture world-leading multi-axis linkage high-end precision CNC machine tools to jointly build high-end machine tool brands and open up global markets, and comprehensively promote international operations. Through continuous technology import and joint R&D and manufacturing, the company has deeply digested and absorbed the German high-end machine tool design concept, construction technology and the manufacturing process of key parts, components and the whole machine. The comprehensive technical level has been greatly improved and the market influence has expanded rapidly. The positioning accuracy and repeatability accuracy of the high-precision three-axis and five-axis linkage machining center products developed by the company are higher than the national standard of precision machine tools by more than 30%. The overall quality indicators and technical indicators of the products have reached the domestic leading and international advanced level. It has won the "Chun Yan Award", the highest award in China's CNC machine tool industry, and its product precision and stability have reached the leading level in the industry.



