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600 600 0900

CENTRO DE MECANIZADO ALTA PRECISION

STERK NEWAY VM1160S

Diseñado para mecanizado de alta precisión, sus características tecnológicas y construcción avanzadas brindan un rendimiento superior en cualquier tipo de entorno de fabricación.



The above picture may not be
an exact representation of the product

Especificaciones técnicas sujetas a alteraciones sin previo aviso.

DN SOLUTIONS

RETOS
VARNSDORF

ZMM
BULGARIA **HIDROGARNE**



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SPECIFICATIONS:

● CAPACITY

X axis travel	1000mm
Y axis travel	600mm
Z axis travel	600mm

● GUIDE WAY

X guide way span	349mm
Y guide way span	750mm
Z guide way span	420mm

● MOTION

X axis rapid travel	36m/min
Y axis rapid travel	36m/min
Z axis rapid travel	36m/min
Cutting speed	15000mm/min

● WORK TABLE

Table length	1200mm
Table width	600mm
Table surface to floor :	970mm
Table Max loading weight	750kg
T slot	5X18X100mm

● MAIN SPINDLE

Spindle nose to table	150-750mm
Spindle center to Z axis	650mm
Spindle type	BT40
Spindle speed	8000rpm
Spindle motor	11/7.5kw

● AUTOMATIC TOOL MAGAZINE

Number of tools	24
Tool shank	BT40
Max tool Dia/length /weight	dia80mm/300mm/8kg
Tools change time	1.8sec

● GENERAL

Foot print (LxWxH):	4200x2690x3120mm
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PESO TOTAL EQUIPO

7000 KG

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- **UTILITY:**

Power required
Voltage required – Fanuc
Compressed air pressure
Compressed air consumption

35 kVA/40A
380 Volts /50Hz / 3 Phase
0.6~0.8 Mpa
280 L/min

- **HYDRAULIC SYSTEM:**

Tank capacity
Pump motor power
Discharge pressure

60L (232.5 gal)
1.5Kw
5MPa

- **LUBRICATION SYSTEM:**

Tank capacity
Pump motor power
Discharge pressure
Distributor type

4L
0.035Kw
2.5MPa
Metering

- **FLOOD COOLANT SYSTEM:**

Tank capacity
Pump motor power
Filtration
Max. Pressure
Max. Flow rate
Pump type

300L
0.55kw
20 mesh
0.15 MPa
33 L/min
Immersion type

- **PACKING SIZE**

Packing type
Packing size

steel plate
2890X2300X2530mm



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➤ Standard configuration

- FANUC 0i MF 5 Plus CNC system, 11/7.5KW spindle motor
- 3 axis roller linear guide way
- 8000rpm belt drive spindle, BT40
- 24 tools arm type tools magazine
- Heat exchanger of electrical cabinet
- Machine body washing system
- Auto oil lubrication system
- Tri-color light
- Air gun + water gun
- Lighting lamp
- Full enclosure splash guard
- Telescopic covers (3 axis)
- Standard accessories (refer to packing list)
- Technical documents (refer to packing list)
- Basal installation kit (refer to packing list)
- Sea-worthy package

Opciones a incluir a precio extra (consultar)

- 1 Aire acondicionado para armario eléctrico
- 2 Pistola de agua lavado por refrigerante
- 3 Mesa giratoria de 4.º eje de 250 mm + contrapunto manual
- 4 AICC 2, vista frontal de 200 bloques



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Construction:

- **BED, COLUMN AND SADDLE:**

The bed is a rigid, one piece casting made from fine grain Meehanite cast iron with heavy ribbing to help prevent vibration and deformation during heavy cutting. Extra wide spacing of the roller guide ways provide for excellent support of the saddle, regardless of the load distribution on the table. The table is fully supported by the saddle in all positions with no overhang. The rigid box type column casting is heavily ribbed to help prevent twisting or distortion as well as helping to dampen vibration during high speed or heavy machining.



Inverse-Y column

it has an Inverse-Y column structure, large rectangular section design, unique internal reinforcement structure, better deflection resistance, torsion resistance, and ultra-high rigidity, all connected with a strong bed to meet the rigidity requirements of strong cutting.

The bed has high rigidity and suitable for heavy-cutting bases. It adopts high-strength gray cast iron with shock-absorbing capacity, and finite element analysis to ensure stability and reliability.

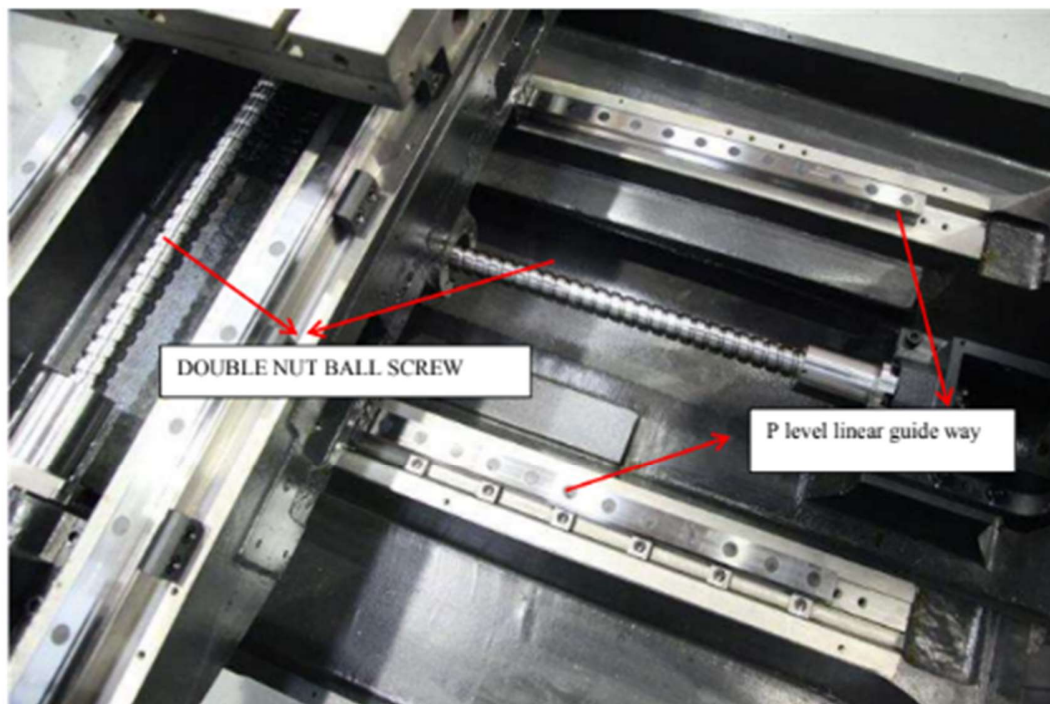


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● BALL SCREW AND GUIDEWAYS:

All axes are of linear guide type for higher stiffness, accuracy, and surface finish than more common Ball Bearing Guide types. They are both heavy duty (X - 35 mm \ 1.378" Y - 45 mm \ 1.772", Z - 45 mm \ 1.772") and widely spaced (X - 384 mm \ 15.118", Y - 760 mm \ 29.921", Z - 410 mm \ 16.141").



DOUBLE NUT BALL SCREW

P level linear guide way

C3 V300=0.008mm



C3 level high speed silence ball screw with heat inhibiting function feature.
Screw diameter* pitch:
40*16/40*12/40*10,
Double nut ball screw.



C3
level



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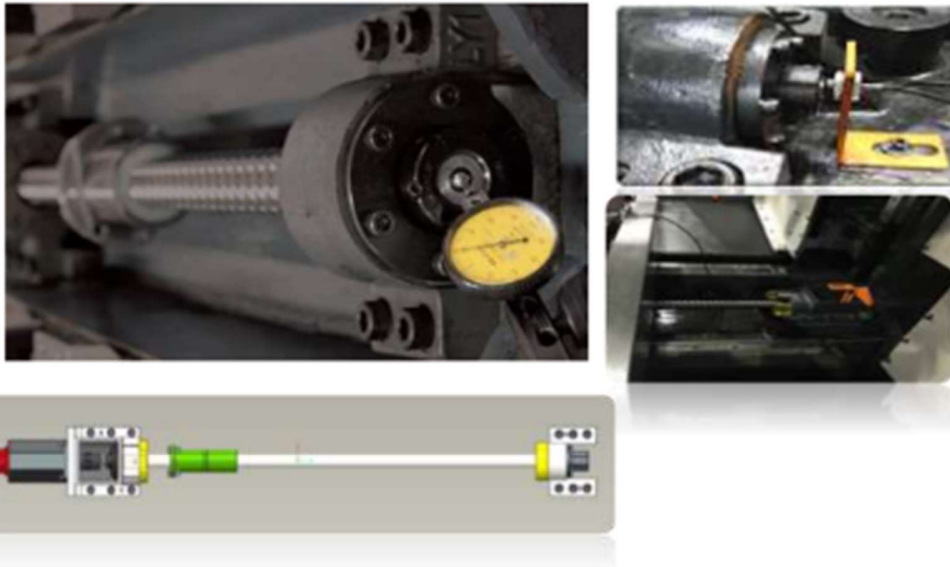
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The ball screw adopts the pre-load process, which effectively reduces the back lash in the ball screw and helps reduce the heat transfer and friction. This improves the accuracy and strengthens the rigidity and heat deformation resistance.

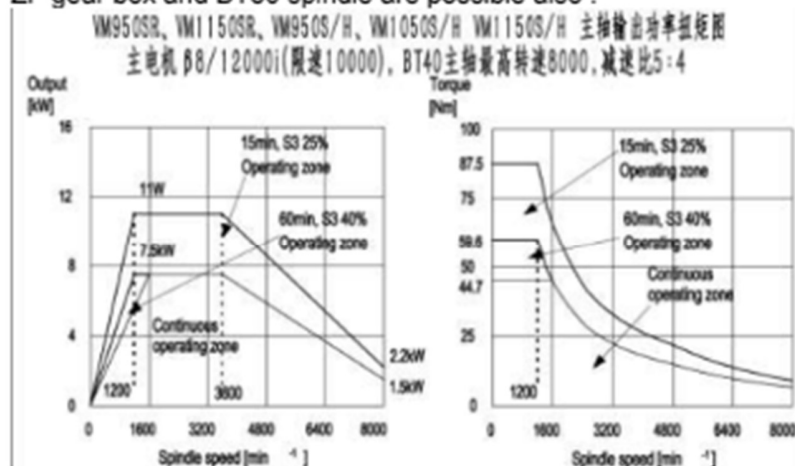


● SPINDLE and spindle Motor

The spindle is a true cartridge type unit supported by high precision ceramic ball bearings that offers minimized noise, vibration and thermal growth. The powerful 8000 rpm, 7.5/11Kw .can extend to 15/11KW .

BT40 , belt drive spindle is standard . BT40 10,000 rpm and direct spindle 12000 is possible on the machine.

ZF gear box and BT50 spindle are possible also .



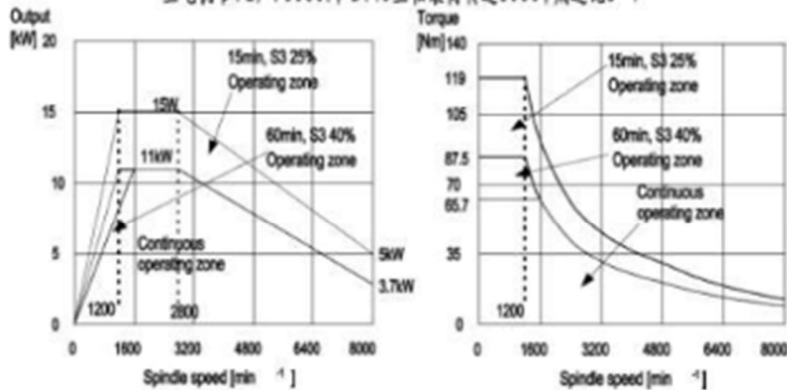


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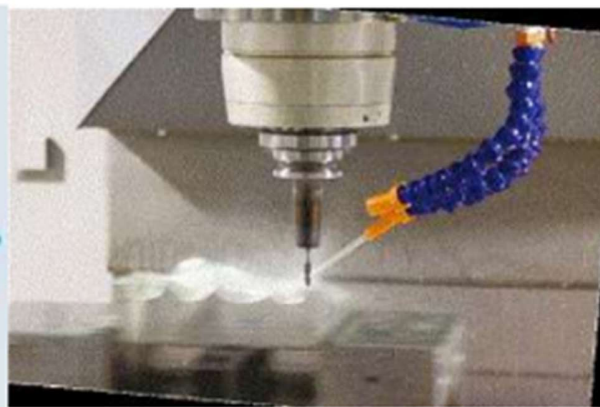


15/11kw spindle motor:

主电机 $\beta 12/10000i$, BT40主轴最高转速8000, 减速比5:4



- Spindle air blow and air curtain design constantly protect spindle. 2 coolant tube and 1 air tube are standard on the machine .

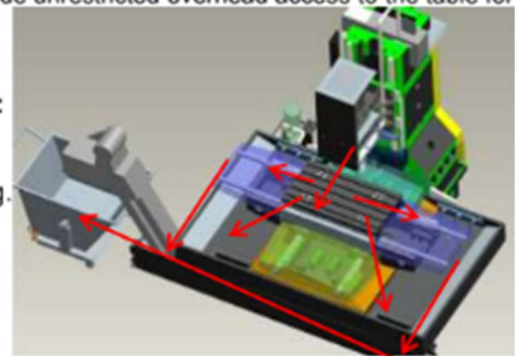


● FULLY ENCLOSED GUARDING:

The fully enclosed guarding is made of heavy gauge sheet metal designed to contain both chips and coolant. The dual, large sliding doors open to 1,260 mm (49") and provide unrestricted overhead access to the table for ease of lifting heavy fixtures or work pieces.

● CHIP DISPOSAL AND FLOOD COOLANT SYSTEM:

Automatic chain type conveyor with high pressure water gun to clean chips and reduce machine temperature rising. This System reduce much more heat distortion and increase machine accuracy life.





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● LUBRICATION:

Automatic oil pump provides lubrication to the guide ways and ball screws which precisely controls the volume of oil to these critical components. A low-level alarm reminds operator before machine stop. The grease type lubrication is an optional, which is thought by some to be more environmentally friendly.



● TOOL MAGAZINE

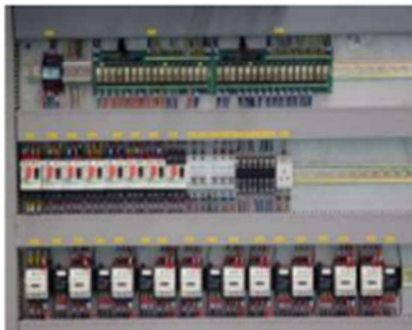


24 tools BT40 arm type tools magazine, rigidity to holder heavy tools, cam system to change tools. Stable quality. The machine has undergone thousands of tool change tests before leaving the factory to ensure smooth and reliable tool change. 48 hours trouble free test to guarantee stoppage rate below 0.5%. Manufacturer design 'one panel recover function' to solve 97% tools magazine common problems.

● Other details

Well-organized and easy maintenance of electrical cabinet

Organized pneumatic system and lubrication system, 4th axis connection for easy repairing and maintenance.





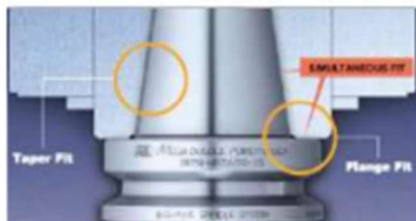
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OPTIONS DETAILS:

● Big Plus Spindle System by Big Daishowa LTD:

The Big Plus spindle system and tooling surpasses all other spindle concepts due to simultaneous taper and flange contact between the machine spindle and tool holder as well as complete interchangeability with existing machines and tools. Upon mounting the tool holder into the machine spindle, contact occurs prior to clamping. Due to the retention force, the taper of the tool holder expands the machine spindle in its elastic range. The tool is pulled further in until the tool flange touches the spindle face for maximum rigidity.



● 20 bar (230 psi) THROUGH SPINDLE COOLANT SYSTEM (TSC):

A dedicated positive displacement pump delivers the coolant directly to the tool tip. The immediate benefit is more aggressive feeds and speeds can be maintained throughout the cutting process. There is also no need to stop and adjust coolant nozzles which increases both in cut time and operator safety. Protecting the spindle and the vital rotary union from contamination is a Cyclone filter with a 10 micron filter element that does not require the use of bags helping to reduce maintenance cost. The 380 liter (100 gallon) tank stores an ample supply of coolant and is isolated from the machine bed to help prevent heat transfer.

Coolant through spindle is optional on this machine . 20 bar and 30 bar are popular options . high pressure 50 bar and 70 bar are possible also .



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- Renishaw work piece measure devices and Renishaw Tool -setter



- Linear scales



Rotary table



- Spindle oil cooler (included)



Angle milling head :



Spindle oil cooler



Angle head

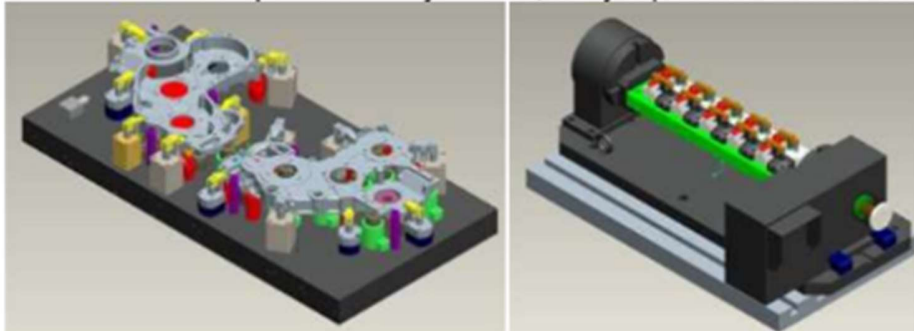


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● SPECIAL FIXTURE DESIGN

Professional team to provide turnkey solution, many experience on fixture design for different product.



● SYSTEM CONTROLLER :

1. FANUC

			● Standard ○ Optional X N/A		
No.	Item		Spec.	0i-MF Plus	
				Type 1	Type 5
1	Controlled axis	Controlled axes		5	5
2		Additional controlled axes		7	6
3		Least command increment	0.001 mm / 0.0001"	●	●
4		Least input increment	0.001 mm / 0.0001"	●	●
5		Interpolation type pitch error compensation		●	●
6	Interpolation & Feed Function	2nd reference point return	G30	●	●
7		3rd / 4th reference return		●	●
8		Inverse time feed		●	X
9		Cylindrical interpolation	G07.1	●	○
10		Bell-type acceleration/deceleration before look ahead interpolation		●	●
11		Automatic corner override	G62	●	●
12		Automatic corner deceleration		●	●
13		Manual handle feed	Max. 3unit	●	●
14		Handle interruption		●	●
15		Manual handle retrace		●	●
16		Nano smoothing	AI contour control II is required.	○	X
17		AICC I	40 BLOCK	X	●
18		AICC II	200 BLOCK	●	X



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19		AICC II(Preview block number increase)	400 BLOCK(Special hardware and AI contour control II)	○	X
20	Spindle & M code Function	M- code function		●	●
21		Retraction for rigid tapping		●	●
22		Rigid tapping	G84, G74	●	●
23	Tool Function	Number of tool offsets	400	400 ea	400 ea
24		Tool nose radius compensation	G40, G41, G42	●	●
25		Tool length compensation	G43, G44, G49	●	●
26		Tool life management		●	●
27		Tool offset	G45 - G48	●	●
28	Programming & Editing Function	Custom macro		●	●
29		Macro executor		●	●
30		Extended part program editing		●	●
31		Part program storage	2MB(5120m)	●	●
32		Inch/metric conversion	G20 / G21	●	●
33		Number of Registerable programs	400 ea	400 ea	400 ea
34		Number of Registerable programs	1000 ea	○	○
35		Optional block skip	9 BLOCK	●	○
36		Optional stop	M01	●	●
37		Program file name	32 characters	●	●
38		Sequence number	N 8-digit	N8 digit	N8 digit
39		Playback function		●	●
40		Addition of workpiece coordinate system	G54.1 P1 - 48 (48 pairs)	48 pairs	48 pairs
41		Addition of workpiece coordinate system	G54.1 P1 - 300 (300 pairs)	○	○
42	OTHER FUNCTIONS (Operation, setting & Display, etc)	Embedded Ethernet		●	●
43		Graphic display	Tool path drawing	●	●
44		Loadmeter display		●	●
45		Memory card interface		●	●
46		USB memory interface	Only Data Read & Write	●	●
47		Operation history display		●	●
48		DNC operation with memory card		●	●
49		Optional angle chamfering / corner R		●	●
50		Run hour and part number display		●	●
51		High speed skip function		●	●

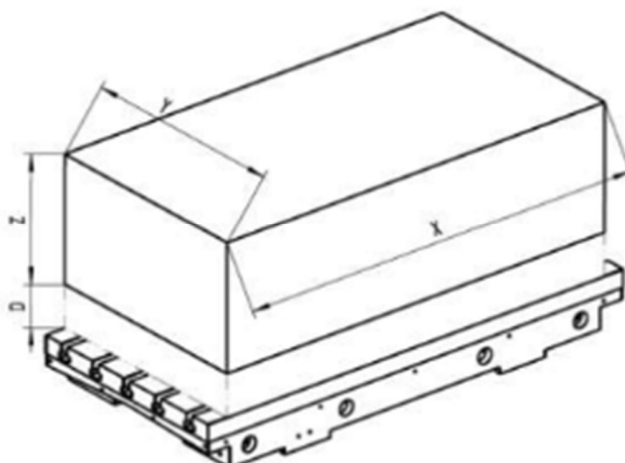


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52	Polar coordinate command	G15 / G16	•	•
53	Programmable mirror image	G50.1 / G51.1	•	•
54	Scaling	G50, G51	•	•
55	Single direction positioning	G60	•	•
56	Pattern data input		•	○
57	Jerk control	AI contour control II is required.	○	X
58	Fast Data server with 1 GB PCMCIA card		○	○
59	Fast Ethernet		○	○
60	3-dimensional coordinate conversion		○	X
61	Figure copying	G72.1, G72.2	○	○
62	Machining time stamp function		○	○
63	Manual Guide I with 10.4" Color TFT		○	○
64	Dynamic graphic display (with 10.4" screen)		•	•

WORK RANGE:



	X	Y	Z	D
VM1160	1000	600	600	150



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NOTA:

- ☐ El precio y las especificaciones están sujetos a cambios sin previo aviso.
- ☐ Las imágenes y gráficos son representativos y pueden no corresponder a la máquina real.
- ☐ Todos los valores especificados corresponden a condiciones de suministro eléctrico estándar (380 V/50 Hz).
- ☐ Las dimensiones y el peso de la máquina varían según las especificaciones opcionales.
- ☐ Consulte el plano de diseño y cimentación para la instalación.
- ☐ Todos los valores especificados de presión, caudal de refrigerante, lubricación y bomba hidráulica se indican en la salida de la bomba.
- ☐ Consulte las hojas de especificaciones por separado para conocer las especificaciones, funciones y opciones del controlador.
- ☐ Temperatura ambiente disponible: 10 °C a 40 °C; temperatura ambiente óptima: 15 °C a 25 °C. La temperatura no debe superar los ± 2 °C/24 h. Cuando la temperatura ambiente es de 20 °C, la humedad debe estar entre el 40 % y el 75 %. ☐ Recomendación de refrigerante: El fluido de corte soluble en agua o aceitoso es adecuado para el sistema de refrigeración. Nota: El fluido de corte usado no se puede desechar involuntariamente. Debe desecharse para evitar la contaminación ambiental.
- ☐ Lea el manual de funcionamiento mecánico y eléctrico y siga todas las instrucciones de seguridad antes de utilizar la máquina.
- ☐ Un año de garantía de control y repuestos para la máquina estándar.
- ☐ Para más detalles, consulte el manual de la máquina.
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