DMM-2070L Bevelling Machine Operation Manual

Professional service provider of beveling equipment
Shenzhen KEDES Machinery & Equipent Co. Ltd

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Disclaimer

◇Before use, you must read the "Operation Manual" of the machine. If you operate it in violation of regulations, our factory will not bear any losses;

You must use the equipment parts provided by our factory. If you replace the non-factory parts without consent (due to the deviation of the accuracy, material, heat treatment, etc. of the non-factory parts, there is a risk of damage to the matching parts) or disassemble the machine, our factory will not bear any responsibility;

◇The machine is an 8-hour working system (shortened to 4 hours when the ambient temperature is above 30℃);

◇When fully loaded, continuous operation cannot exceed 2 hours. The factory does not bear any responsibility for damage caused by overloading the machine;

◇The machine cannot be used for operations beyond its own design capabilities, otherwise the factory will not bear any losses caused by this;

◇Please keep this "Operation Manual" properly so that you can replace the corresponding parts later. If lost, it will not be reissued.

Preface

First of all, thank you for choosing our company's products. We hope that our products will bring you more convenience. DMM series beveling machines are mainly used for beveling operations before steel plate welding. The beveling processed by the equipment is convenient for fusion welding, thereby improving the welding strength.

1.Overview

1.1Introduction to this machine

This product is a groove machine that can move automatically and the workpiece can move automatically. Groove surface: no oxidation, smoothness reaches Ra3.2-6.3, no pollution, simple operation. No need to deburr, fully in line with the requirements of the welding industry.

1.2Application areas

◇ Can be used for processing steel, ferrochrome, fine-grained steel, aluminum products, copper and aluminum alloys.

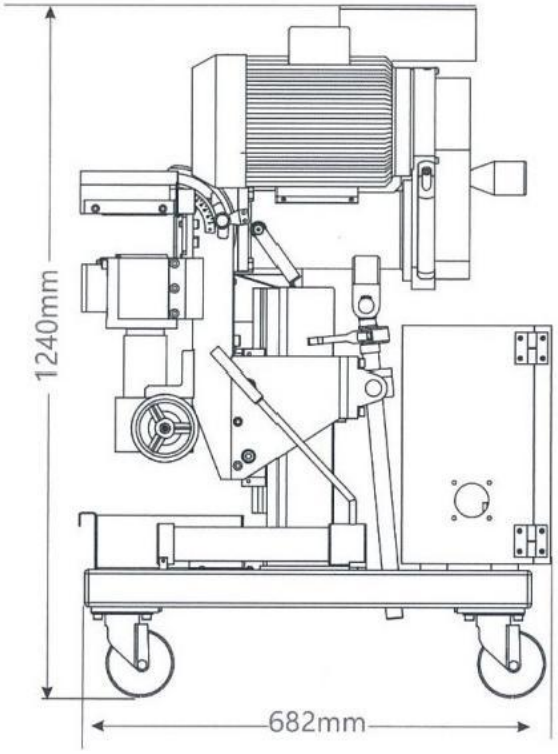
◇ Can process "K", "V", "X" or "Y" type grooves.

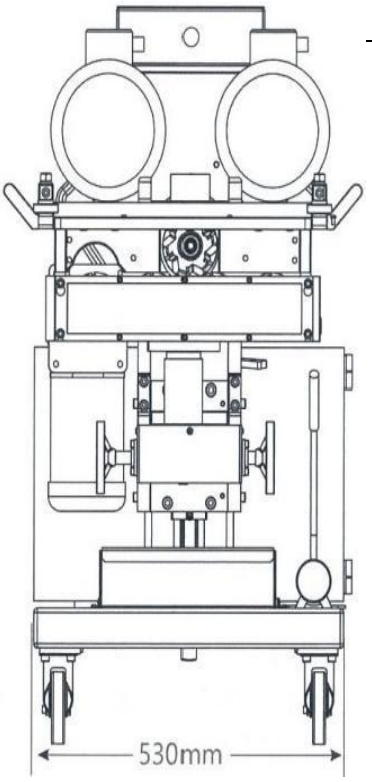
◇ Can be used for groove operations in engineering machinery, steel structures, pressure vessels, shipyards, and aerospace industries.

1.3 Machine parameters

Motor voltage: AC380V50Hz	Total Power: 6000W
Cutting power: 2*3000W	Feed power: 400W
Cutting speed: 0～1500mm/min(Any adjustment)	Steel plate groove angle: 0° ~60° (arbitrary adjustment)
Single groove width: 15~20mm (taking Q235 as an example)	Groove thickness: 8~80mm (other thickness can be customized)
Slope width: 0-70mm	Knife disc blade: 6 pieces
Minimum clamping plate width: ≥300mm	Machine r

1.4 Machine Diagram





2. Safety and Warnings

2.12. Safety Instructions

	Electrical and rotating parts have the potential to cause serious personal injury or property damage. This machine is powered by 380 volts. Please use this manual as a guide to identify the various parts of the beveling machine before installation, wiring, starting, operation or making any adjustments. Electrical wiring installation and maintenance personnel must have the qualifications required by regulations to ensure that life and property are not harmed or lost.
	Danger Improper use may cause danger and result in death!
	Danger Improper use may cause danger and result in death!
	Caution If used improperly, it may cause moderate damage or emotional and financial loss!

2.2 Wearing of safety clothing and protective gear

Notice

◇ Please check your clothing before working;

◇ Work clothes should be fitted and comfortable, and long-sleeved work clothes should be worn;

◇ Sandals, high heels, laces that come off, and smooth soles are all dangerous;

◇ Please wear a safety helmet when working;

◇ Please wear protective glasses when working;

◇ Please wear leather gloves.

2.3 Removal of protective devices is prohibited

◇ Do not remove the protective cover on the device.

◇ Do not modify the device without permission.

2.4 Precautions for operation and termination

◇ Before operating the machine, confirm the safety of the surroundings before operating.

◇ When the machine is running, do not touch any rotating parts of the machine with your hands.

◇ After the machine finishes working, cut off the power supply immediately and return all parts to their original positions.

◇ Do not place flammable and explosive items around the machine.

◇ Please keep the machine dry and use it in an environment of 0-40℃. Do not use the machine in a humid environment!

2.5 Safety precautions

 danger	◇ Please disconnect the power supply before maintenance. Electrical and rotating parts have the potential to cause serious personal injury or property damage. ◇ Before each use, please check whether the socket, wires and machine have signs of damage! ◇ Before installation, wiring, startup, operation or any operation, please use this manual as a guide to identify the various parts of the equipment.
 warn	◇ Do not move the machine by the power cord! ◇ If you use the machine outdoors, please use a tripped circuit breaker to protect the machine! ◇ Electrical wiring installation and maintenance personnel must have the qualifications required by laws and regulations to ensure that life and property are not harmed or lost.

 注意	◇ When cleaning iron filings, you must stop the machine and wear gloves to avoid being hurt by high temperature and sharp iron filings! ◇ Please always place the power cord behind the machine body and do not place the power cord on sharp objects!

2.6 Security Identity Resolution

	Beware of burns After processing the steel plate, the iron filings and blades are at high temperature, so do not touch them with your hands;
	**Danger of electric shock** **This symbol often appears on electrical boxes, indicating that a professional electrician is needed to repair it. Be aware of the risk of electric shock.**
	Hoisting Tips: Do not stand under the machine during hoisting to avoid casualties.
	Beware of pinching your fingers This sign often appears at the feeding end, indicating the risk of pinching your fingers. Keep a distance of 10 cm from the rotating parts.
	Beware of piercing your hands This sign often appears at the discharge end, indicating that there is a risk of piercing your hands. The bevel edge and iron filings should not be touched directly by hand.

3. Equipment acceptance

3.1 Hoisting

	Step 1: Adjust the angle of the equipment to 0 degrees (see item 9); Step 2: Lift according to the lifting position, and lift slowly during lifting; the height should not exceed 100mm when moving in the air, except when crossing obstacles. Step 3: The packaging box is not recyclable, so just dispose of it properly. Note: Please use a good lifting belt for lifting, and the lifting weight of the lifting equipment should be >500kg. If the equipment is damaged due to damaged packaging, please refuse to sign for it and obtain the signature of the delivery person, which will facilitate your future insurance claims. Our factory will help you get replacements for missing or damaged parts in a timely manner.

3.2安装行走轮

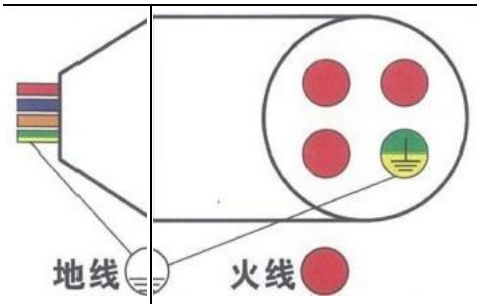
	After the equipment is hoisted 200-250mm from the ground, install the running wheels. Someone must hold the equipment steady before installing the running wheels. Note: Do not touch the lifting device during this process. The equipment must be stable to avoid injury to the installer.

3.3 Count the goods: After receiving the goods, please count the items according to the packing list in the operation manual. If you have any questions, please contact our after-sales service.

4. Installation and schematic diagram

CE certification grounding wire regulations	The diameter of the external grounding wire must be selected according to regulations (copper wire)	
	Phase line diameter S(mm²)	Ground wire diameter Sd(mm²)
	S≤16	S
	16<S≤35	16
	S>35	S/2

4.1 Electrical Installation

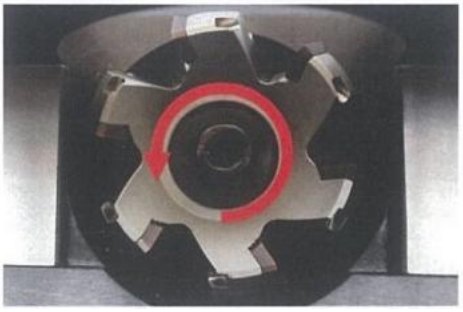


Install the power cord

◇ To ensure the normal operation of the inverter, this machine adopts the "three live and one ground" power connection method (the neutral line will cause damage to the inverter).

◇ The power cord specification is a three-phase cable greater than 2.5mm².

The voltage is AC380V50Hz, and the electrical connection and protection should be carried out in accordance with local regulations.

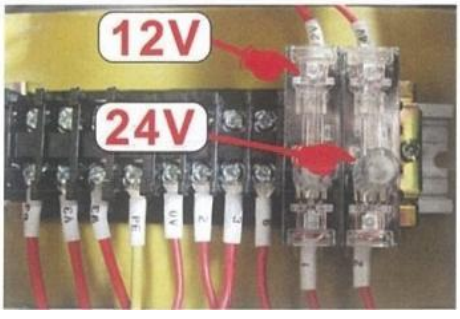


Cutter rotation

Check the direction of the cutter rotation. If the rotation direction is incorrect, you can change the direction by swapping the positions of any two live wires.

The spindle motor does not rotate.

If the spindle motor does not rotate after power is turned on, open the electrical box and press the reset button. (This operation is also suitable for troubleshooting the motor not rotating after overload tripping)



Digital display has no data

This phenomenon occurs after power is turned on. Check whether the [12V fuse] is blown. Otherwise, please contact our factory.

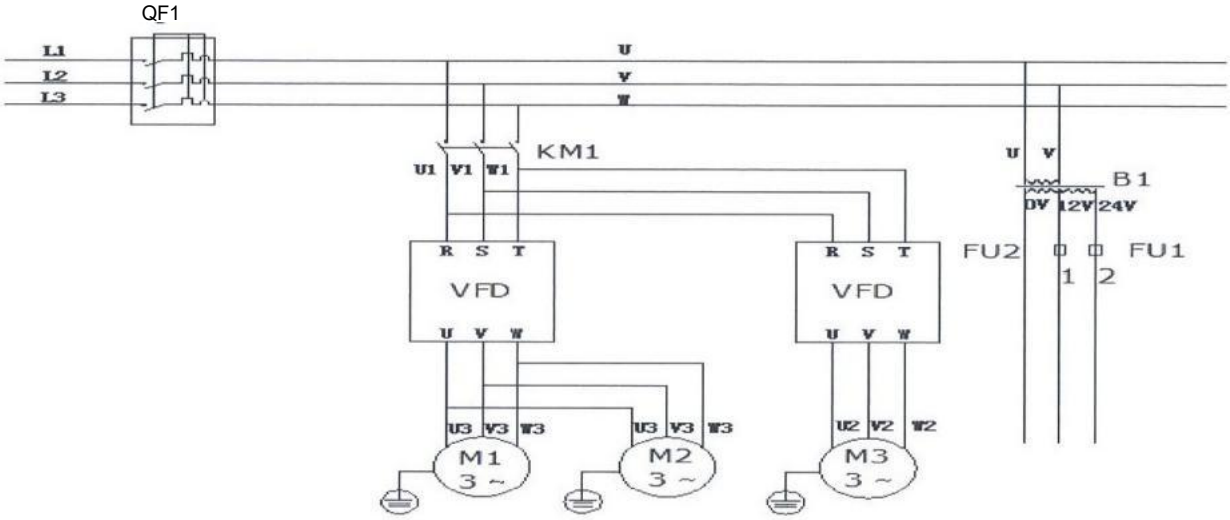
No electricity in the electrical box

There is no electricity in the electrical box after power is turned on. Check whether the [24V fuse] is blown.

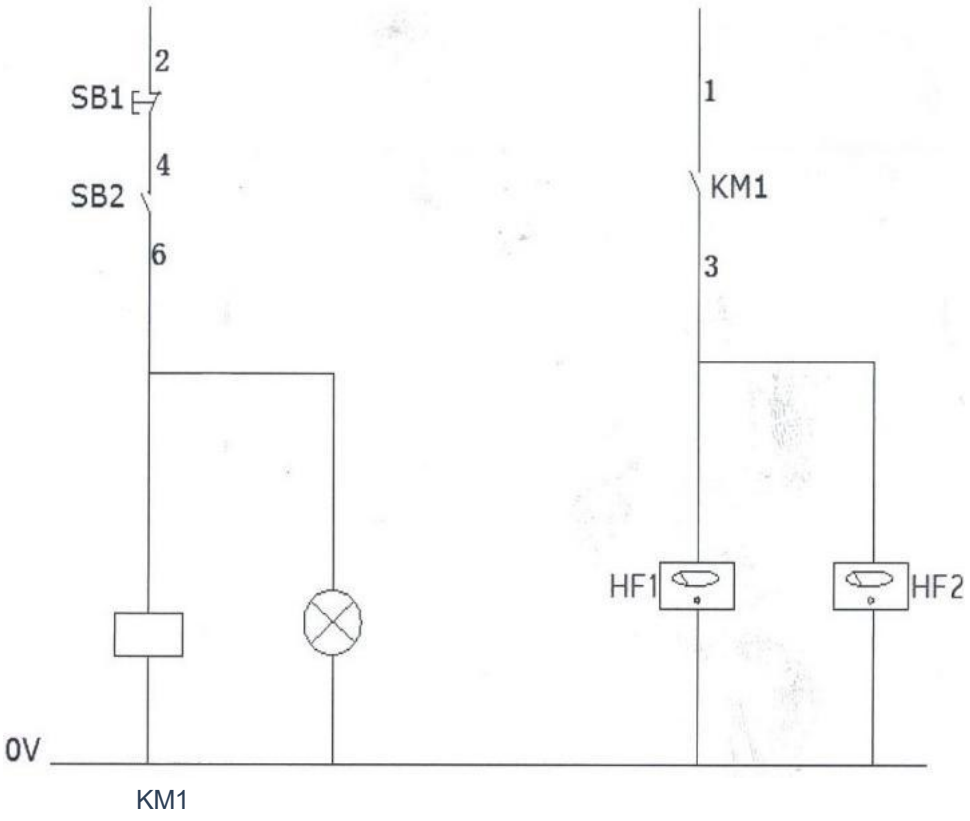
Note: This operation is limited to when the troubleshooting cannot solve the problem.

4.2 Electrical Symbols
QF: Power switch
B: Transformer
SB1: Emergency stop
SB2: Power switch
KM: AC contactor
FU: Fuse
VFD: Frequency converter
HF: Tachometer

4.3 Schematic diagram of electrical box: The inverter and digital meter have been parameterized. Please do not change the parameters without authorization to avoid damage to the equipment.



4.4 Control box schematic diagram



4.5 General protection measures

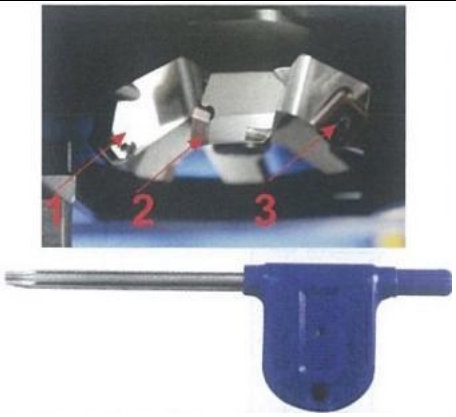
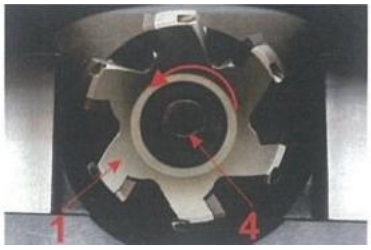
1) Electrical connection and protection should be carried out in accordance with local regulations;

2) Connect one end of the cable to the aviation plug (random accessory) and the other end to the power supply;

3) Do not use in a humid environment to avoid danger.

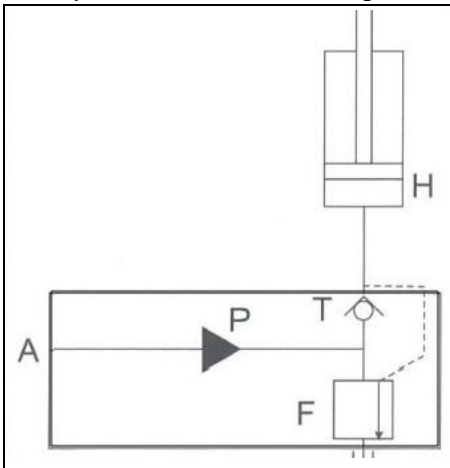
4) Feed according to the arrow instructions, and the tool can only touch the workpiece after it rotates.

4.6 Tool installation and removal

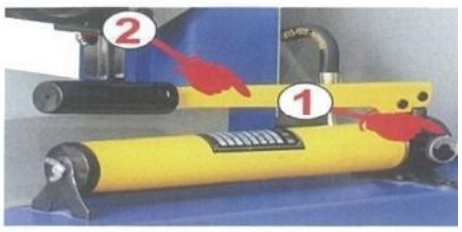
	Before replacing the cutter disc/blade, the power must be turned off. When removing and installing the cutter, please pay attention to the sharp blade and hot chips to avoid scratches and burns on the hands. It is recommended to blow away the chips with an air gun before replacement, and then wear protective gloves。
	Replacing the blade 1. Adjust the blade disc to a suitable angle for blade replacement (in the right picture: "1" blade disc, "2" blade, "3" screw). 2. Use the "T15" screwdriver provided with the machine to remove screw "3" to replace the blade.
	Replace the blade 1. Adjust the blade to an appropriate angle and use a wooden stick to hold the blade "1" to prevent it from rotating. 2. Use the hexagon socket to rotate the screw "4" in the direction indicated by the arrow to remove the screw, and the blade can be removed (If it cannot be removed, you can lightly tap the blade with a wooden stick and then remove it by hand)

5.Hydraulic schematic diagram

5.1 Hydraulic schematic diagram

	A: Oil inlet hole T: Check valve H: Hydraulic cylinder P: Hydraulic oil F: Overflow valve A, P, T, F are manual pump units ◆ When the hydraulic oil is low, you can add hydraulic oil through the "oil filling hole A"; ◆ When the outlet of the "check valve T" leaks oil, you can use raw tape to rewrap the oil outlet nozzle to achieve sealing. ◆ If the equipment is not used for a long time, slowly loosen the "overflow valve F" to reduce the "hydraulic cylinder H" to the lowest state; For details of the fault, please see: Troubleshooting page.

5.2 Use of hydraulic system

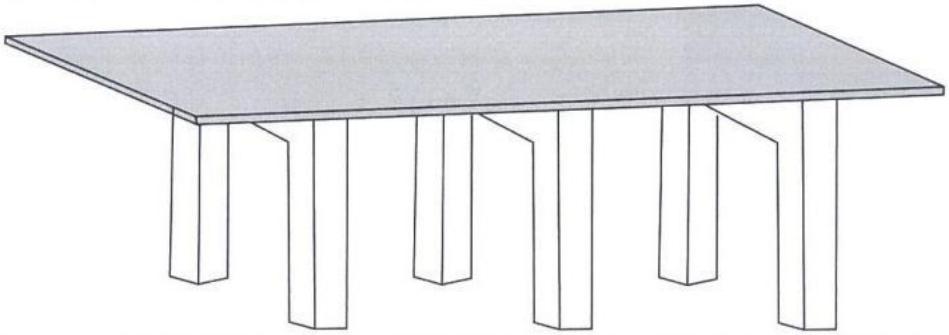
	◇ Rotate the overflow valve ① clockwise to the working state. ◇ Press the handle ② repeatedly to lift the equipment. During this process, the highest position of the handle should not exceed the thickness clamping handwheel. ◇ If the equipment is not in use, rotate the overflow valve ① counterclockwise slowly to lower the equipment to the lowest position. Note: Do not use brute force to avoid damage to the hydraulic pump.

6. Bevel preparation

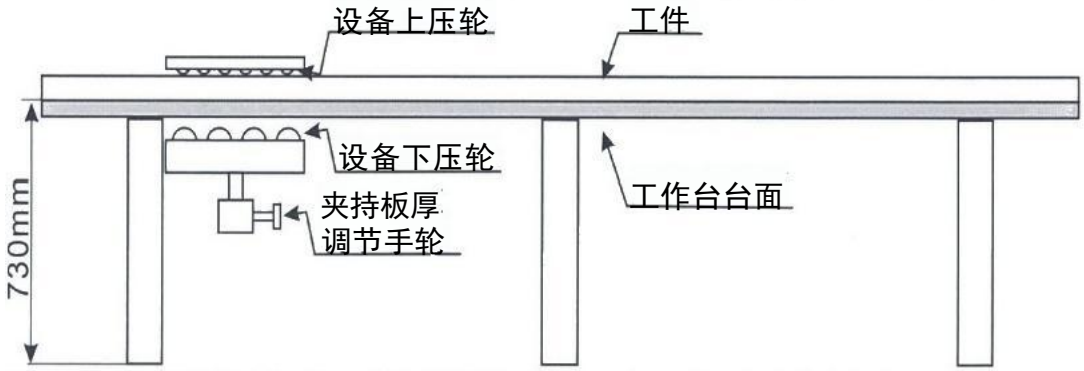
⚠	The groove depth of one pass is strictly set according to the different workpiece materials. Any operation beyond the performance range of the machine will cause risks such as blade damage, spindle breakage, spindle lock, and equipment damage. ☆ The hardness of the workpiece cut by oxygen increases after high temperature heating. This factor needs to be fully considered when setting the groove process parameters.

6.1 Large workpiece placement

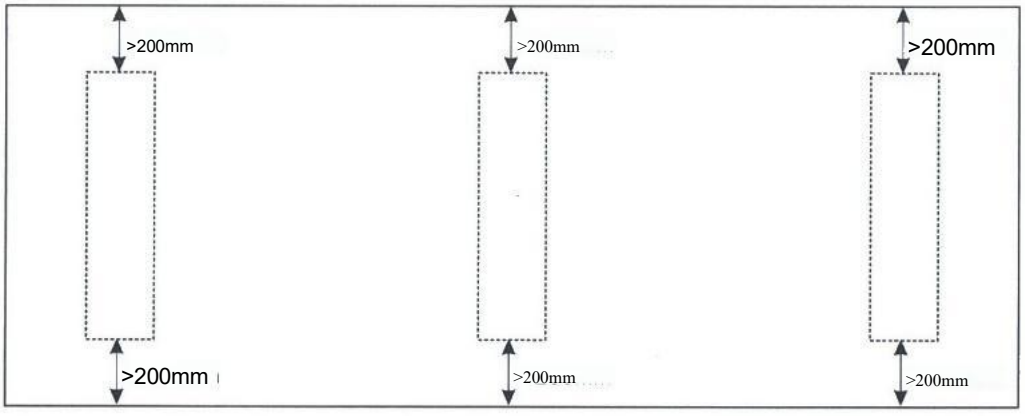
1) You can make a simple bracket according to the following figure (this figure is for reference only and can be made according to actual conditions).



2) The bracket height is 20mm. The recommended height of the inner plate is 730mm. The workbench height should be set appropriately according to the plate thickness. The highest table top is: 765mm.



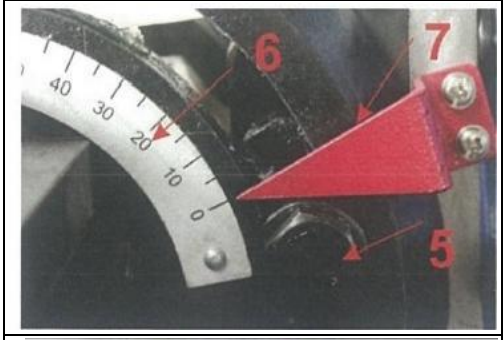
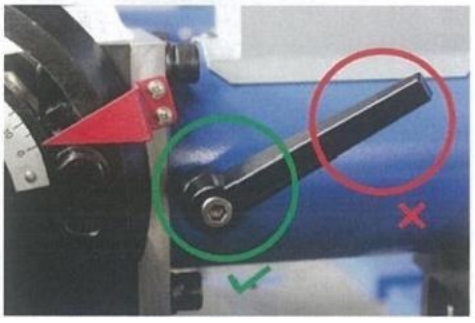
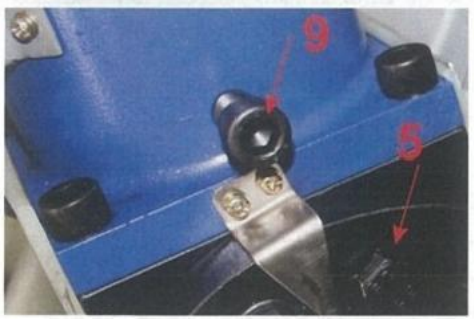
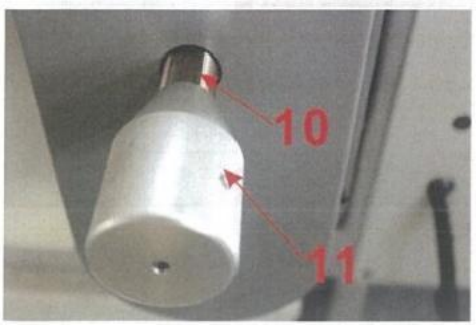
3) Place the workpiece. Place the steel plate to be processed on the platform as shown in the figure below, and keep the processing edge 200-250mm away from the support frame.



6.2 Plate cleaning

1) There should be no welding bumps or weld scars on the surface that needs to be grooved;
2) Burrs and welding bumps will affect the service life of tools and machines.

6.3 Bevel angle and depth adjustment

	Bevel angle adjustment 1. Loosen bolt "5" ("6" angle ruler, "7" angle indicator arrow in the figure).
	Bevel angle adjustment 2. Rotate the ratchet wrench "8" to the desired angle and tighten the bolt "5". Note: Turning "b" on the [ratchet wrench] can change the angle rotation direction. 
	Note: For models using a locking wrench, place your hand in the green circle to operate, and never in the red circle to avoid damaging the wrench.
	Bevel depth adjustment 1. Loosen bolt "9".
	Groove depth adjustment 2. Rotate the hand wheel "11" and adjust to the corresponding scale shown on the dial "10" according to the required groove size. Note: The parameter table is for reference only and is subject to actual processing.

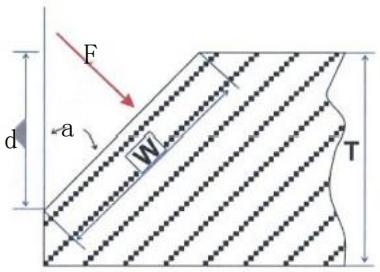
DMM-2070L spindle feed reference table (F: handwheel parameters) d: processing depth, T: clamping plate thickness,

w: groove width, a: groove angle, F: spindle feed

Note: 1. This parameter table is for reference only and is subject to actual processing.

2. Different colors represent the maximum feed amount for multiple feeds.

3. The feed amount for a single feed can be appropriately increased or decreased according to the material.

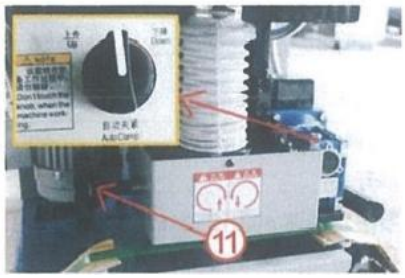
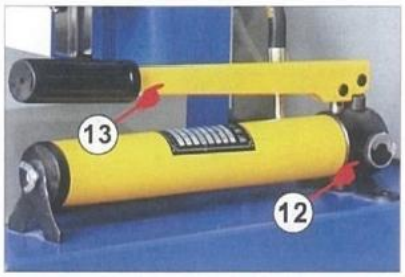


F / d	a 0	5	10	15	20	25	30	35	40	45	50	55	60
0	13	11.1	9.4	7.8	6.3	4.9	3.7	2.7	1.9	1.3	0.8	0.5	0.4
4		11.5	10.1	8.8	7.6	6.6	5.7	5	4.5	4.1	3.9	3.8	3.9
6		11.7	10.4	9.3	8.3	7.5	6.7	6.2	5.8	5.5	5.4	5.4	5.6
8		11.8	10.8	9.8	9	8.3	7.7	7.3	7	6.9	6.9	7.1	7.4
10		12	11.1	10.3	9.7	9.1	8.7	8.5	8.3	8.3	8.5	8.7	9.1
12		12.2	11.5	10.9	10.4	10	9.7	9.6	9.6	9.7	10	10.3	10.8
14		12.4	11.8	11.4	11	10.8	10.7	10.8	10.9	11.1	11.5	12	12.6
16		12.5	12.2	11.9	11.7	11.7	11.7	11.9	12.2	12.6	13	13.6	14.3
18		12.7	12.5	12.4	12.4	12.5	12.7	13.1	13.5	14	14.6	15.3	16
20		12.9	12.9	12.9	13.1	13.4	13.7	14.2	14.8	15.4	16.1	16.9	17.8
22		13	13.2	13.4	13.8	14.2	14.7	15.3	16	16.8	17.6	18.5	19.5
24		13.2	13.5	14	14.5	15.1	15.7	16.5	17.3	18.2	19.2	20.2	21.2
26		13.4	13.9	14.5	15.2	15.9	16.7	17.6	18.6	19.6	20.7	21.8	23
28		13.6	14.2	15	15.8	16.8	17.7	18.8	19.9	21	22.2	23.5	
30		13.7	14.6	15.5	16.5	17.6	18.7	19.9	21.2	22.5	23.8	25.1	
32		13.9	14.9	16	17.2	18.4	19.7	21.1	22.5	23.9	25.3	26.7	
34		14.1	15.3	16.5	17.9	19.3	20.7	22.2	23.8	25.3	26.8		
36		14.3	15.6	17.1	18.6	20.1	21.7	23.4	25	26.7	28.4		
38		14.4	16	17.6	19.3	21	22.7	24.5	26.3	28.1	29.9		
40		14.6	16.3	18.1	19.9	21.8	23.7	25.7	27.6	29.5			
42		14.8	16.7	18.6	20.6	22.7	24.7	26.8	28.9	30.9			
44		15	17	19.1	21.3	23.5	25.7	28	30.2	32.4			
46		15.1	17.4	19.7	22	24.4	26.7	29.1	31.5	33.8			
48		15.3	17.7	20.2	22.7	25.2	27.7	30.3	32.8				
50		15.5	18.1	20.7	23.4	26.1	28.7	31.4	34				
52		15.7	18.4	21.2	24	26.9	29.7	32.6	35.3				
54		15.8	18.8	21.7	24.7	27.7							
56		16	19.1	22.2	25.4	28.6							

每次加工深度≤3mm 第二次加工切勿调节主轴

58		16.2	19.5	22.8								
60		16.4	19.8									

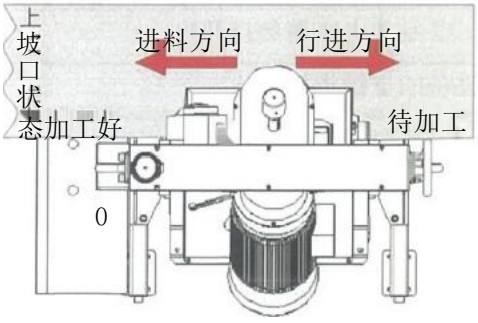
6.4 Clamping plate thickness and equipment height adjustment

	Adjustment of clamping plate thickness 1. Turn the "automatic clamping" knob on the control panel to clamp or release the workpiece. 2. When the automatic clamping fails to clamp, the handwheel "①" can be used as auxiliary clamping compensation. Note: Do not turn the "automatic clamping" knob when the equipment is working. The customer will be responsible for any damage caused. When you hear the sound prompt, you must immediately release the "automatic clamping" knob to avoid fatigue damage to the equipment.
	Equipment height adjustment 1. Lifting: Turn bolt "⑫" clockwise and press handle "⑬" repeatedly. 2. Lowering: Turn bolt "⑫" counterclockwise, adjust to the required height, and then turn clockwise to the stop position.

6.5 Speed Control

	Spindle speed control, feed speed control ‘④” is the spindle speed control knob “⑥” is the feed speed control knob Note: During the cutting process, the feed speed and spindle speed can be adjusted appropriately on the control panel for different materials.

6.6 Travel route

	1. If the ground is uneven, lay a steel plate for walking. 2. Feed in the correct feeding direction. Note: Before feeding, make sure that the rotation direction of the cutter disc is consistent with the specified direction, and the blade cannot contact the steel plate.

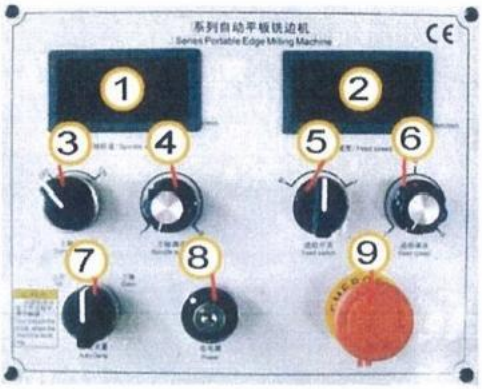
	 When the equipment processes the plate, the equipment moves in the direction of the arrow.

7. Basic Operation

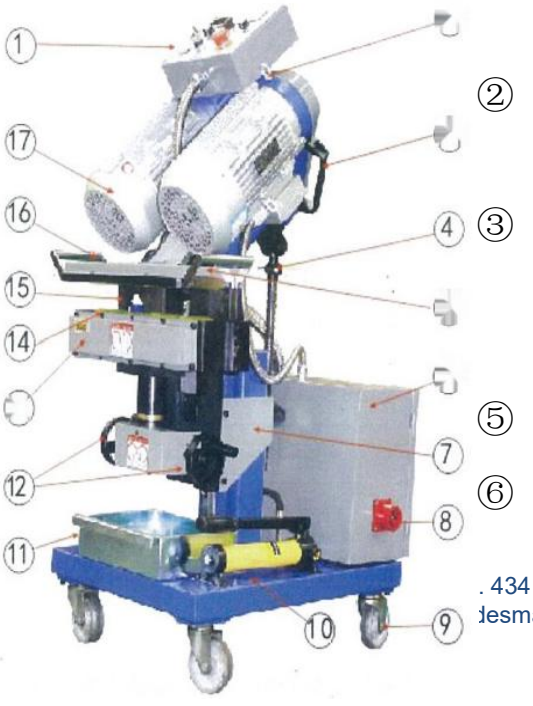
	If the equipment is overloaded during machine operation, the thermistor in the electrical switch box will start due to the increase in current value, and the power will be automatically cut off. After the power is cut off, it is necessary to wait for the thermistor to cool down and reset before restarting. If the cooling is not sufficient, it will automatically stop again after working for a certain distance.

7.1 Description of each part of the machine

1) control Panel

①【Spindle speed meter】: Displays the speed of the cutting spindle.	
②【Feed speed meter】: Displays the current feed speed.	
③【Spindle switch】: Cutting spindle switch.	
④【Spindle speed knob】: Cutting spindle speed 500-1050r/min (subject to actual conditions)。	
⑤【Feed knob】: can change the feed direction.	
⑥【Speed knob】: Feed speed adjustment, speed range: 0-1500mm/min。	
⑦【Automatic clamping knob】: Controls the clamping or release of the workpiece.	
⑧【Power lock】: The key is kept properly by the operator and the warehouse.	
⑨【Emergency Stop】: In case of emergency, quickly press the emergency stop button to completely cut off the power.	

2) Complete Machine



①【Control box】: The control box is equipped with a control panel.
②【Lifting ring】: used for lifting equipment.
③【Handle】: A handle that facilitates pushing the equipment.
④【Ratchet wrench】: used to adjust the angle.
⑤【Handle】: Same function as "3".
⑥【Electrical box】: Non-professionals are not allowed to open it.
⑦【Stand】: The supporting mechanism of the equipment
⑧【Power socket】: Aviation plug AC380V.

13	⑨【Travel wheels】: used for the travel of equipment.
	⑩【Hydraulic pump】: Used to adjust the height of the equipment.
	①【Chip collecting groove】: used to collect iron chips in the cutting process.
	⑫【Clamping hand wheel】: used to clamp the workpiece, the automatic clamping motor is located here
	⑬【Gear set】: Feed power transmission.
	④【Lower pressure wheel】: used to support and clamp the workpiece.
	⑮【Limiting block】: wear-resistant block, the vertical edge of the workpiece is close to the limit block at the feed end
	⑯【Upper pressure wheel】: The upper row of pressure wheels that clamp the workpiece.
	⑦【Motor】: cutting power source.

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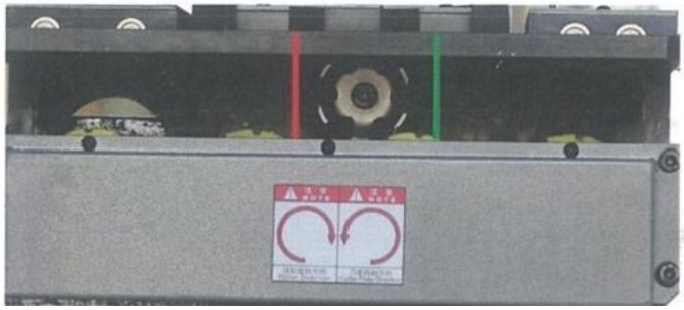
7.2Speed setting reference table (the parameters in the table below are for reference only. The larger the processing groove, the lower the speed. The specific parameters are subject to actual operation)

The workpiece head cannot exceed the red line when placed. The area from the red line to the green line is the "slow speed area"; after the end of the workpiece exceeds the green line (passes the cutter disc), it is the "speed-up area"; when the end of the workpiece approaches the red line, it is the "finish area"

Material	Low speed	Speed up area	Finishing area
Q235	150-250	300-800	300-500
45#	150-250	300-700	300-500
16Mn	150-250	300-600	300-500
AL	150-250	300-1000	300-800
306	150-200	200-500	200-300
316L	150-250	200-400	200-300



7.3 Basic Operations

Small plate beveling·····Adjust to the required beveling angle, depth, adjustable cutting speed, feed speed, and then you can start beveling.

Large plate beveling·····When beveling large-sized steel plates, these plates need to be placed on the auxiliary support, and then adjust the equipment to the required: beveling angle, beveling depth, adjustable feed speed, cutting speed, and then you can complete the beveling operation.

7.4 Operation steps

1) Place the workpiece ····· The side of the workpiece is close to the limit block at the feed end, and the front end is kept 10-15mm away from the cutter head;

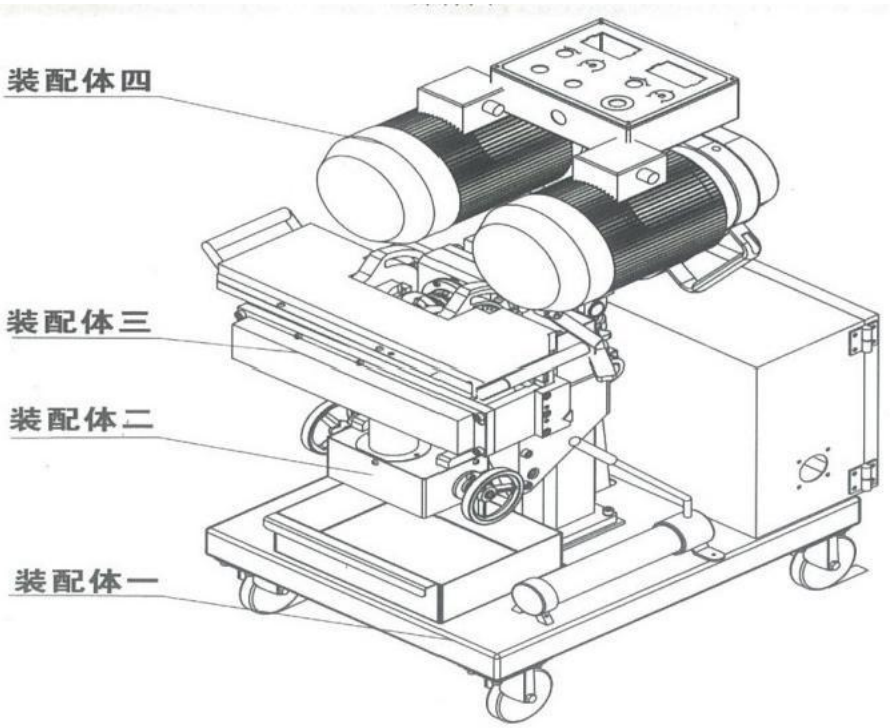
2) Clamp the workpiece ····· See operation 6;

3) Start milling ····· Turn on the power, turn on the spindle for 5 seconds, and then stabilize the spindle speed, feed, and adjust the feed speed.

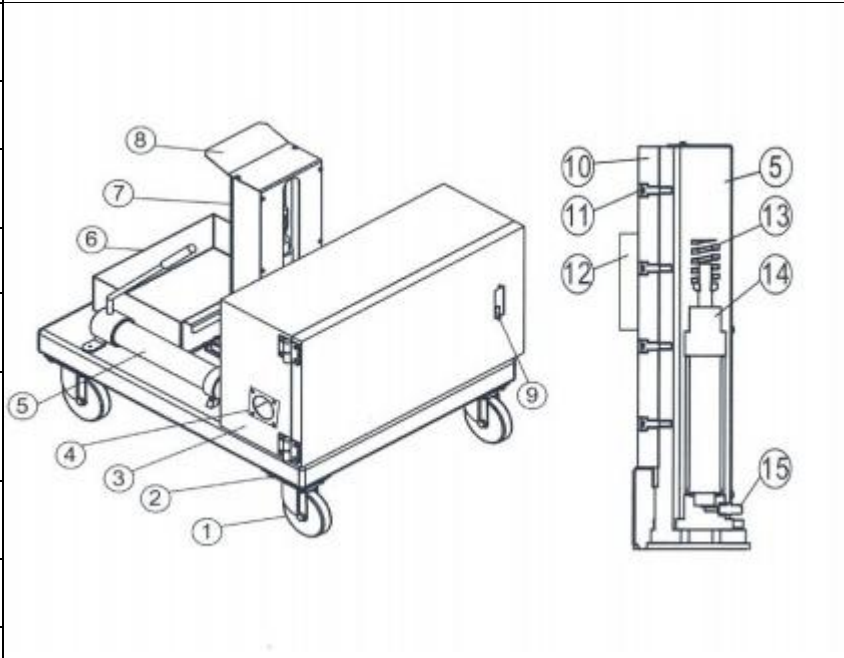
Beveling work is completed

Turn off the feed, turn off the spindle, loosen the clamping wheel, and adjust the feed speed to "0".

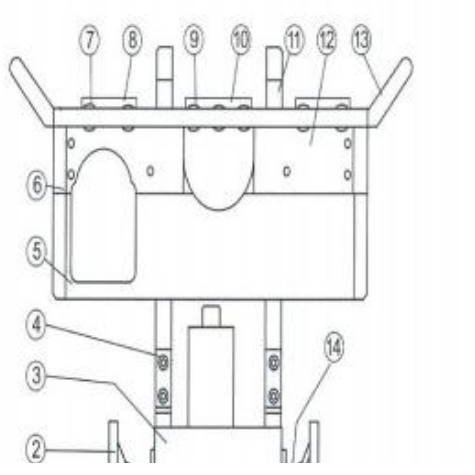
8.Components Diagram


装配体四
装配体三
装配体二
装配体一

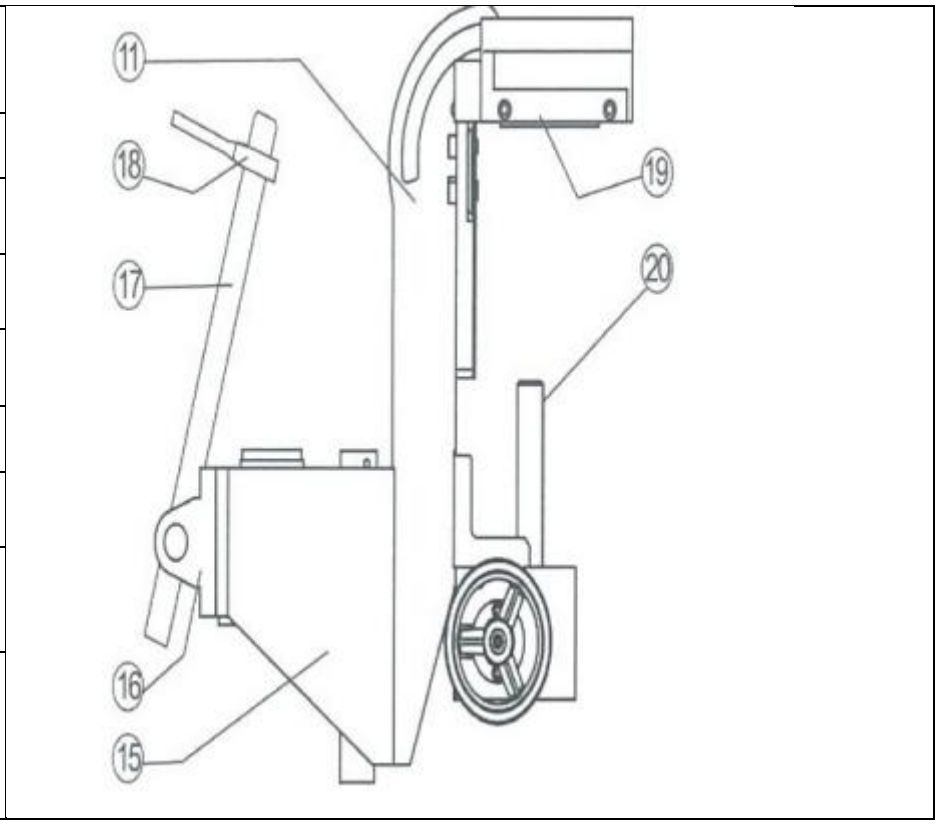
Assembly 1

No.	name	quantity	Graphics
①	Universal wheel	4	
②	Bolt	16	
③	Electrical box	1	
④	Socket	1	
⑤	Hand pump	1	
⑥	Chip collection groove	1	
⑦	Bracket column	1	
⑧	Cover	1	
⑨	Cabinet door lock	1	
⑩	Slide rail	1	
①	Bolts	4	
⑫	Slide	2	
⑬	Spring	1	
⑭	Hydraulic cylinder	1	
⑮	Hydraulic oil pipe	1	

Assembly 2

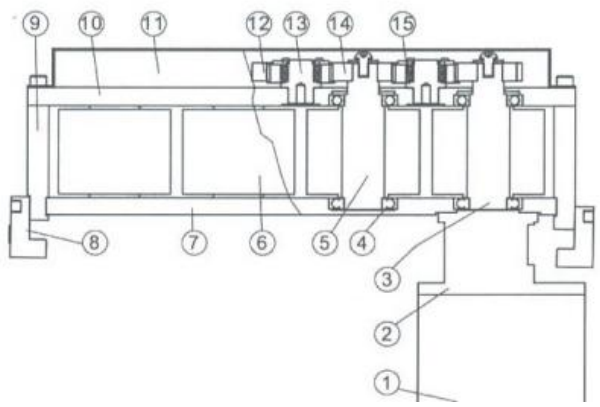
NO.	name	quantity	图示
①	Guide rail	1	
②	Handwheel	2	
③	Reducer	1	
④	Connecting plate	2	
⑤	Fixed plate	1	
⑥	Wear block	1	

⑦	Long pressure wheel	4
⑧	Fixed bracket	4
⑨	Short pressure wheel	3
⑩	Fixer	2
⑪	Angle plate	1
⑫	Wear-resistant block	1
⑬	Handle	2
⑭	Handwheel shaft	2
⑮	Connecting plate	1
⑯	Connecting block	2
⑰	Screw	1
⑱	Ratchet wrench	1
19	Upper pressure plate	1
20	Screw	1



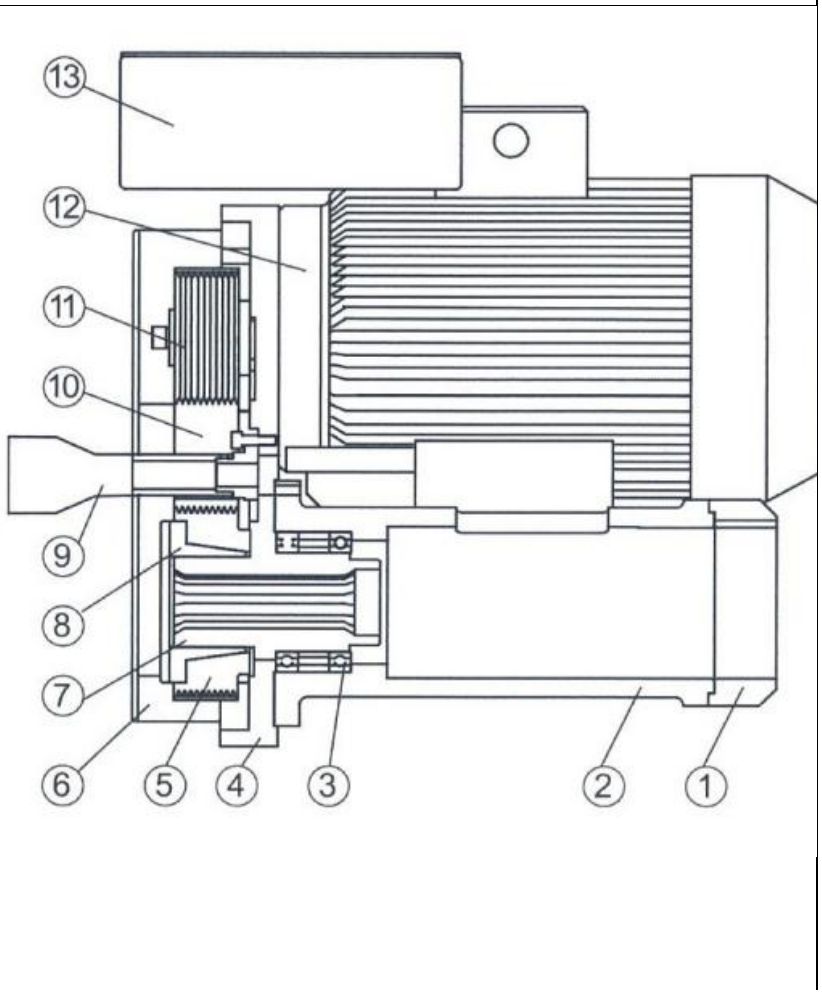
Assembly three

NO.	name	quantity
①	Reducer	1
②	flange	1
③	spindle	1
④	bearing	8
⑤	driving shaft	3
⑥	rubber wheel	4
⑦	back plate	1

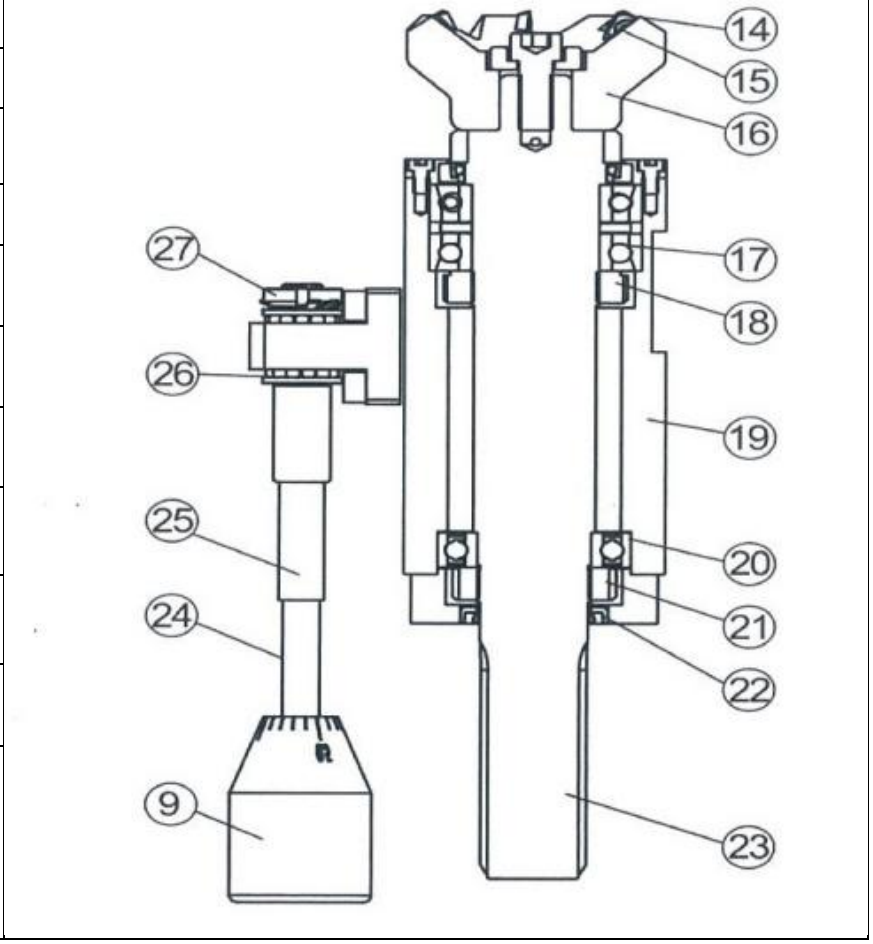


	slider	2
⑨	connecting plate	2
⑩	gear plate	1
11	cover	1
⑫	driven gear	3
⑬	driven shaft	3
⑭	driving gear	4
⑮	bearing	6
16	heightening nut	1
17	bolt	4

Assembly 4

No.	name	quantity	
①	Rotating body	1	
②	Spindle housing	1	
③	Bearing	1	
④	Fixed plate	1	
⑤	Pulley	1	
⑥	Cover	4	
⑦	Spline sleeve	1	
⑧	Tensioner	1	
⑨	Feed handwheel	1	
⑩	Belt	1	
①	Pulley	2	
⑫	Motor	2	
⑬	Control box	1	
⑭	Screw	6	

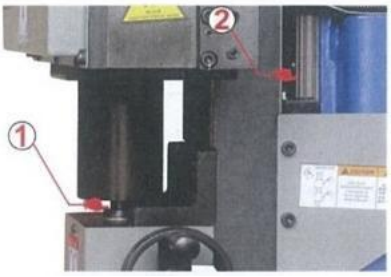
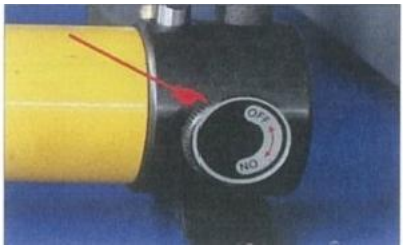
⑮	Blade	6
⑯	Cutter	1
⑰	Bearing	2
⑱	Stop nut	1
⑲	Spindle sleeve	1
⑳	Bearing	1
21	Stop nut	1
22	Seal ring	1
23	Spindle	1
24	Scale sleeve	1
25	Feed screw	1
26	Bearing	2
27	Stop nut	1



9. Lubrication and maintenance

Lubrication location	Lubrication method	cycle
Complete machine	Spray anti-corrosion oil, clean iron filings, add dust cover, and place in a dry place	3 months or long term non-use
Machine surroundings	Use a broom to clean up in time to avoid excessive accumulation affecting the operation of the equipment	Clean according to actual situation
Reducer Control box/electrical box	Use compressed air to clean up iron filings	When iron filings are found
	Add gear oil	Lifetime maintenance-free
Blade	Add dust and rain cover	Long term non-use
Blade screw	Replace the blade and screws in time if damage is found	See item 4
Spindle	If it is broken in the cutter head, use a bench drill to remove it	See item 4
Complete	Inject lubricating oil (not grease) into the oil	Lubricate every 3 months

machine	inlet on the side of the spindle	

	Add lubricating oil and clean iron chips [① Screw] Adjust the thickness, clean iron chips, and spray anti-corrosion oil once a month; [② Guide rail] Clean iron chips every day, and do not spray lubricating oil for a long time. Note: Anti-corrosion oil can use [WD40]
	Fill lubricating oil and clean iron chips [③Angle hole] Before adjusting the angle, clean the iron chips and spray anti-corrosion oil once a month; [④Guide rail] Clean the iron chips every day and spray anti-corrosion oil once a month; [⑤Oil inlet nozzle] Lubricate once every 3 months.
	Hydraulic system pressure relief After work every day, or when the equipment is not used for a long time, please turn the relief valve knob to relieve the pressure of the hydraulic system and reduce the load.

10. Common faults and troubleshooting

No.	Fault		exclude
1	The device does not respond when it is powered	No power	Check if the circuit has electricity
		Broken wire, poor contact	Confirm if the circuit is broken or the contact is poor
2	The circuit has power, but the device still does not respond	Emergency stop not lifted	Turn the [Emergency Stop] button
		Power lock not on	Move the key on the control panel
3	Wrong direction	Spindle direction wrong	Change the live wire sequence
		Feed motor direction wrong	Turn the [Forward/Reverse] knob on the control panel
4	Abnormal sound	Motor abnormal noise	Power supply missing
		Gear abnormal noise	Add gear lubricant, gear is damaged
5	The spindle does not rotate	Overload	Turn off the power and press the reset button of the "circuit breaker" (see item 4)
		Loosening lock nut	Tighten the locking nut (caused by overload)
		Damage to the inner bearing of the spindle	Replace the bearing

6	The clamping wheel cannot clamp the workpiece tightly.		Check whether there are iron filings attached to the pressing wheel or steel plate.
7	The workpiece is ejected or deviates.		. Check whether the feeding direction is consistent with the equipment regulations.
8	During processing, sparks are severe	overload	Reduce the groove depth/speed, and add appropriate coolant to stainless steel
		Blade wear	Replacement blade
9	The workpiece blade is broken when being processed		The tool is already in contact with the workpiece when it is not rotating
10	Thin plates cannot be processed		Consult the manufacturer after-sales
11	The blade breaks after milling starts		Reduce feed rate
12	The feed wheel does not rotate		Feed gear damage
13	Workpiece slippage	Insufficient friction coefficient	Increase the friction of the feed wheel and add force to the conveying device.
		Feed speed does not match	Reduce feed rate
14	Failure of electrical control part or other reasons		Communicate with manufacturers in a timely manner
15	Difficulty in rotating		Check whether the locking bolt is loose and whether there is iron filings deposited in the rotating hole.
16	Hydraulic cylinder cannot lift		Tap the hand pump head gently with a wooden stick.
			Unscrew the top screw and clean out the impurities;
			Open the rear cover and add hydraulic oil.
	Hydraulic joint oil leakage		Rewind the raw tape seal

	Note ◇ Change the blade direction and fixing screws in time according to the processing material, feed depth, cutting speed and other factors. ◇ It is recommended to change the blade angle every 30-100 meters to avoid damaging the blade; ◇ It is recommended to change the blade screw every 30-100 meters, as the strength is reduced and there is a risk of breaking. Note: If the screw is broken, the professional fitter (drilling) may remove it depending on the situation. In severe cases, the cutter disc may not be used normally.

11.Packing List

No.	project	Model	Quality	unit	Remark
1	Edge milling machine	DMM-2070L	1	set	With knife disc
2	Blade	2070L dedicated	2	set	With knife disc
3	Blade screw	M3.5*8	2	set	With knife disc
4	Hexagon wrench		1	set	
5	Wrench	19	1	piece	Used for angle adjustment
6	Blade wrench	T15	1	piece	Replacement blade
7	Industrial plug	4075	1	set	Import (socket on the electrical box)
8	Tool box	4111	1	piece	
9	Universal wheel	5001	4	piece	Travel wheel
10	Screw	M8*16	16	piece	Fixed universal wheel
11	Coolant bottle	Add coolant	1	piece	Pay attention to the anti-corrosion of the whole machine after use
12	Oil bottle	Add diluted lubricant	1	piece	Spindle and guide rail
13	Operation manual		1	piece	
14	Certificate of conformity		1	piece	

12. Wearing parts list

No.	Quantity of sets	name	Graphics	Remark
1	6	Blade PDER-G		For replacement cycle, refer to the operating manual.
2	6	Blade screw M3.5*8		
3	1	Cutter disc		The bolt is broken and cannot be removed and needs to be replaced
4	4	Upper pressure wheel (long)		Replace according to usage
	3	Upper pressure wheel (short)		
5	4	Lower pressure wheel		Replace according to usage
6	8	Bearing (standard part)		
7	1	Belt		Replace according to usage
8	14	Copper sleeve		Replace according to usage

9	1	High temperature resistant protective cover		Pressing screw

Note: The blade and blade screw are common consumable parts, and the others are stocked according to usage.

If the unmarked parts are damaged, please order according to the assembly drawing in item 8.