WBM MODEL
Portable Plate Edge Milling Machine

MADE IN CHINA
High Efficeiency & Energy Saving

WENBACH

WBM.60VJ

MANUAL OPERATION

DON'T OPERATE THE MACHINE BEFORE READING THE MANUAL!

CE sira CERTIFICATION ISO 9001:2008

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1. Disclaimer

- ✧ We'll not responsible for any loss cause by working on the others out of its design performance.
- ✧ Must read the manual operation before operating, we'll not bear the loss if any Unreasonable operation.
- ✧ Don’t let the machine work morn than 2 hours continuously in full load, its working time is 8 hours one day (reduce the time to 4 hours one day at 30 ℃.)
- ✧ Please use the accessories supplied by our company, Without the consent of our company, all the loss
- ✧ cause by unauthorized demolition and replace the accessories not belong to ours , we will not responsible for it

2. Preface

Thank you for choosing our "Wenbach GmbH" machine, Hope it helps you on improving efficiency and saving more cost. WBM Series plate beveling machine mainly for plate edge beveling on weld preparation.

For your benefit, Please read this operation manual and related instructions & symbols carefully before machine operation. We will not take the responsibility while defective machine or physical Injury caused by any operation under required. If you have any questions or problems on our machine or files, Please do not hesitate to contact us at "Contact@Wenbach.Com".

- ➢ We have the right to the final interpretation of this information, We will not give further notice with any alteration.
- ➢ We have the copyright for this file, Please do not copy or amend without our approval.

Thank You !

3. Service

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4. Overview

4.1 Introduction

This machine process plate automatically with high efficiency; completely cold cutting, non-oxidation on the surface; for the milling cutter, The radiance come to Ra3.2-6.3 the finish on the surface is satisfy with the requirement in welding industry; easily operate and non-pollution.

4.2 Applications

Can be used for fine grain steel, aluminum, chromium, iron and steel products, copper and aluminum processing. Can be processed into a "k", "v", "u" or "y"-shaped bevel.

4.3 Technical Parameters:

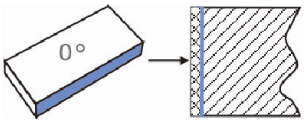
Motor voltage：AC415V 50HZ	Total power：3400W
Cutting power：3000W	Feed power：400W
Cutting speed：0～1500mm/min（Adjustable）	Bevel Angle ：0°~ 90 º
Single feed rate：15mm-20mm（Like Q235 ）	bevel plate thickness: 8~60mm
Work table height: 700~760mm	Cutter blade: Φ63mm
Plate length：Min.200mm	Cutter blade: 5/6
Clamping plate width：≥100mm (No processing side)	Net weight ：225kg

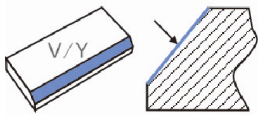
4.3 Machine picture

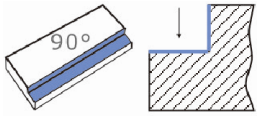
0°milling

Bevel State

90 °milling

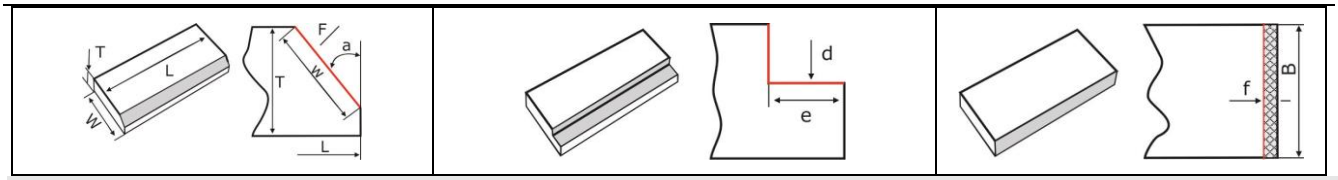






4.4 Choose model Models Option

Product Type WBM		100VJ	80X	60VJ	60V	80V
Plate Size	L（mm）	>300				
	W（mm）	>100				
	T（mm）	8~100	6～80	6～60		6～80
Working Capacity	Bevel angle a（°）	0～-90	0～60	0～90	0～60	0～60
	Bevel width W（mm）	0～100	0～70	0～56	0～45	0～70
	d（mm）	0~20	0～15	0～15	无 No	0～15
	e（mm）	0~100	无 No	0～45	无 No	无 No
	f（mm）	0~30	0～15	0～15	无 No	0～15
	0° B mm	100	60	56	无 No	60
Single Bevel Width (mm)		30	15			20



5. Safety & Warning

5.1 Safety instructions

	**DANGER** Improper operation could cause danger or even death!
	**WARNING** Improper operation could cause danger or serious injury!
	**CAUTION** Improper operation could cause moderate damage and property loss!

5.2 Safty ware and protective equipment

Pls do check your wares before operation;Labour suit should be fit and comfortable and long-sleeved clothes suggested

Sandals, high heels, loose shoelaces, and smooth soles are all dangerous

Pls do ware helmet during operation and ware protective glasses and ware gloves to protect your hands during operation

 **CAUTION**

5.3 Protective Device

Please DO NOT remove the protective cover on equipment.

Machine can not be modified without permission.

 **WARNING**

5.4 Operation Cautions

- ✧ Before operation, Please ensure the safe site around. operate machine at 0~40℃.
- ✧ Before operation, Please do not touch rotation parts of machine by hands.
- ✧ After operation, Please do cut off the power and reset machine.
- ✧ Inflammable and explosive articles shall not be placed around the machine.

5.5 Safety Cautions

 **DANGER**	✧ We have the final right to interpret and modify all relevant information of this machine! ✧ Do check whether any damages on plug, wire, and machine before use every time!
 **WARNING**	✧ DO NOT move the machine by power cord ！ ✧ Please use trip circuit breaker to protect machine when out door operation! ✧ Please let only skilled person for machine inspection and maintenance!
 **CAUTION**	✧ Please do stop machine and wear gloves for iron cleaning to avoid any hurts by hot sharp iron pin. ✧ Please place the power cord on machine or behind, do not put it on sharp objects.

5.6 Security identification parsing:

	**Beware of burns** After plate beveling, The Iron pins and Inserts are in hot and sharp, please do not touch by hands. ;
	**Electric Shock Risk** It happens on the electric box, Means request professional electrician for inspection and pay attention on the electric shock risk..
	**Hoisting Prompt** During hoisting,Please DO NOT stand under machine to avoid any casualties.
	**Watch Your Hands** It marks on the plate feeding side, means dangerous for hands and please keep distance with machine.

Be careful of prick on hands

It markets on the plate feeding side,means dangerous for prick on hands, please do not touch the iron pins or plate by hands after beveling.

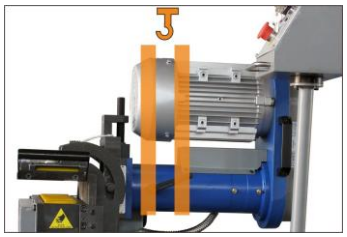
6. Machine Inspection

6.1 Hoisting

Step 1：cut off the steel strip of the fixed machine.

Step 2: The machine is hoisted slowly based on its hoisting position and the height should not rise more 10cm while hanging up, Except crossing obstacles.

NOTE : Please use good quality hoisting belt and available lifting weight should be＞500KGS.

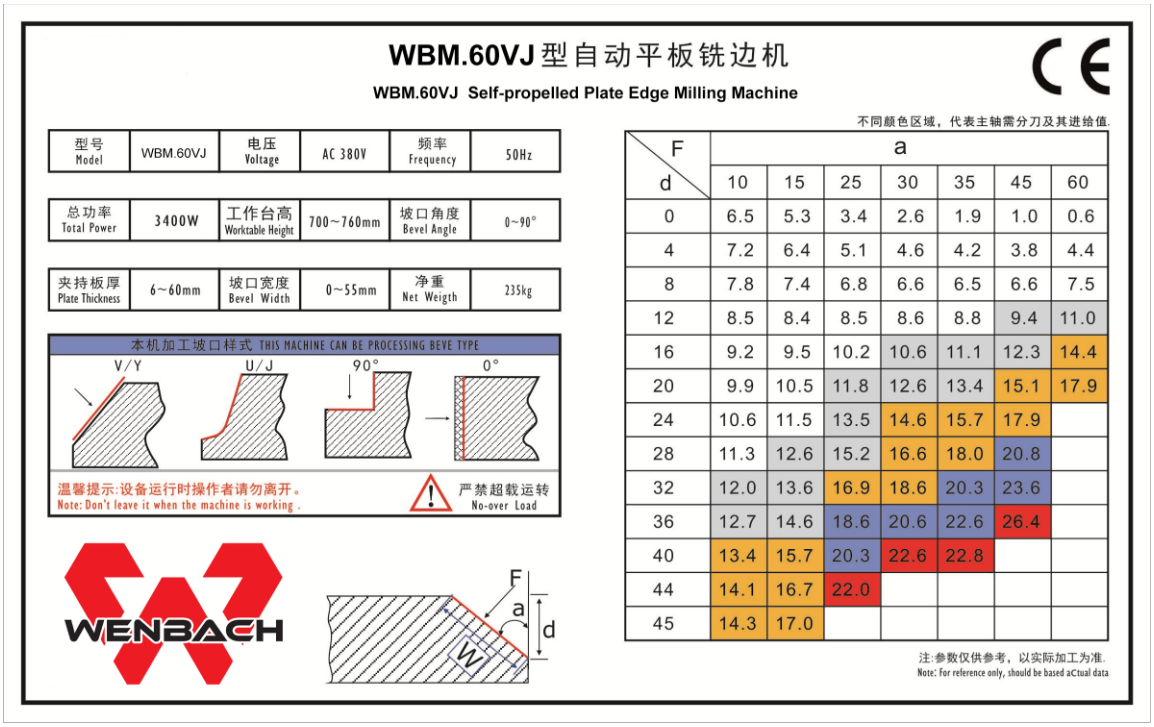


6.2 Wheel Installation :

Someone must support the machine while installing the wheels after the machine is hoisted 200-250mm from the ground.

NOTE : Please do not touch the lifting device while lifting and keep hoisting safety for machine stable to ensure person safety.。

6.3 Check: Detailed Parameters On The Nameplate



WBM.60VJ型自动平板铣边机

WBM.60VJ Self-propelled Plate Edge Milling Machine

CE

型号 Model	WBM.60VJ	电压 Voltage	AC 380V	频率 Frequency	50Hz
总功率 Total Power	3400W	工作台高 Worktable Height	700~760mm	坡口角度 Bevel Angle	0~90°
夹持板厚 Plate Thickness	6~60mm	坡口宽度 Bevel Width	0~55mm	净重 Net Weigth	235kg

本机加工坡口样式 THIS MACHINE CAN BE PROCESSING BEVE TYPE

V/Y U/J 90° 0°

温馨提示:设备运行时操作者请勿离开。 Note: Don't leave it when the machine is working .

严禁超载运转 No-over Load

WENBACH

F a d W

不同颜色区域，代表主轴需分刀及其进给值.

F / d	a 10	15	25	30	35	45	60
0	6.5	5.3	3.4	2.6	1.9	1.0	0.6
4	7.2	6.4	5.1	4.6	4.2	3.8	4.4
8	7.8	7.4	6.8	6.6	6.5	6.6	7.5
12	8.5	8.4	8.5	8.6	8.8	9.4	11.0
16	9.2	9.5	10.2	10.6	11.1	12.3	14.4
20	9.9	10.5	11.8	12.6	13.4	15.1	17.9
24	10.6	11.5	13.5	14.6	15.7	17.9	
28	11.3	12.6	15.2	16.6	18.0	20.8	
32	12.0	13.6	16.9	18.6	20.3	23.6	
36	12.7	14.6	18.6	20.6	22.6	26.4	
40	13.4	15.7	20.3	22.6	22.8		
44	14.1	16.7	22.0				
45	14.3	17.0					

注:参数仅供参考，以实际加工为准.
Note: For reference only, should be based aCtual data

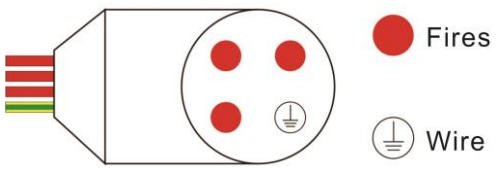
7. Installation & Diagram

CE Standard

External ground wire diameter size should follow requirement (Copper wire)

Phase wire diameter S（mm²）	Ground wire diameterSd（mm²）
S≤16	S
16＜S≤35	16
S＞35	S/2

7.1 Electrical installation



WIRE INSTALLATION

- For safety, This machine is using 3 fire wire and 1 ground wire (Null line will affect the inverter)
- Electric wire size should be diameter 1.5mm² for 3 phase.

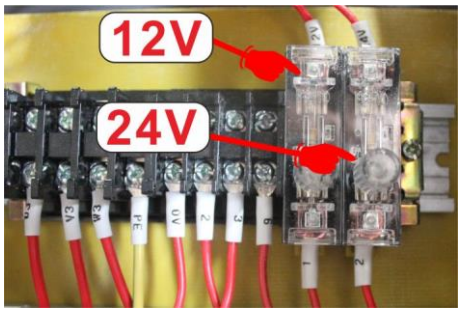
Power AC380V 50HZ，electric connection should follow local rules。

CUTTER ROTATION

Check the direction of the rotation of the tool, if the rotation is not correct, it can change the variable steering by changing the position of any two fire lines.

SPINDLE MOTOR WITHOUT ROTATION

After electricity, the spindle motor does not turn, open the electric box and press the reset button. (this operation is also applicable to troubleshooting the motor after overloading.)



DIAGITAL DISPLAY TABLE WITHOUT DATA

This phenomenon appears after electricity, check whether the 12V fuse is burned or not, otherwise please contact with our factory.

Note: this operation is limited to troubleshooting.

No electricity in an electrical box

There is no electricity in the electric box after electricity, and check whether the 24V fuse is fusing.

Note: this operation is limited to troubleshooting.

7.2 Electrical symbols

QF：Power switch

SB1：Emergency stop

SB2：Power switch

B：transformer

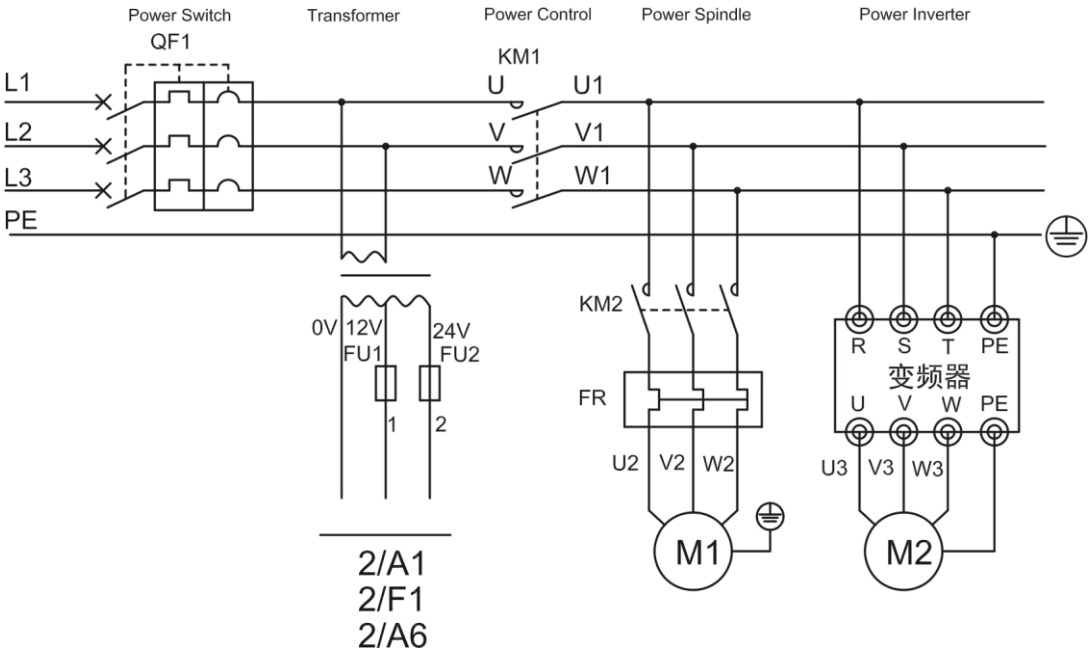
KM：AC

FU：Fuse

VFD:Frequency converter

HF：Tachometer

7.3 .Electric Box Diagram: Converter and digital parameters already settled, Please do not change anyhow to avoid any equipment troubles.



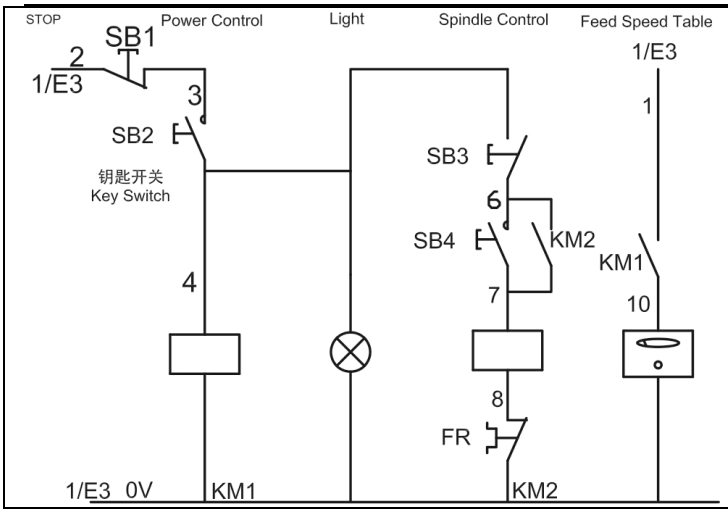
7.4 Control Box Diagram

7.4 The protection measures

1) Electrical connection and protection should Consistent with local regulations.

2) Connect the air plug (the attachment with the machine) with one end of cable, the another end connect with the power supply.

3) Dangerous in the humid environment.

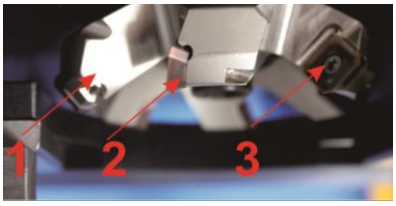


4) According to direction on the machine to feed plate, process work piece after cutter rotate.

7.5 Cutter installation and dismantlement

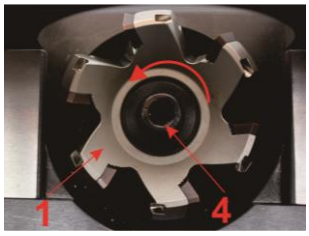
Before operation, pls cut off power.

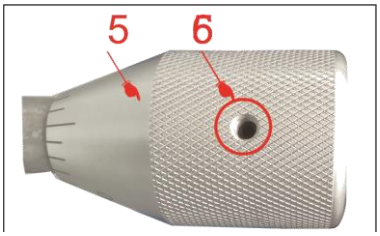
Advise to clean the crap by air gun, and then wear the gloves to operate the cutter.



Change cutter

1. Adjust to require angle (“1”cutter head; “2” cutter; “3” screw)
2. Used the “T15” bolt driver to take off screw “3”.





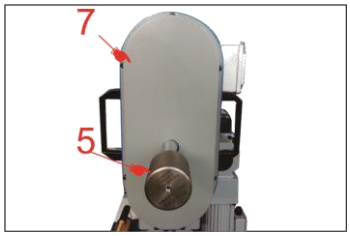
Install of bele

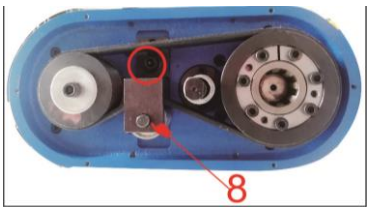
1.Take out in “5” parts screw“6” [Total 2]

2. Rotation hand wheel and take out it.

Change cutter head

1. Adjust the cutter head to require angle.
2. According to arrow shows rotary screw “4”, can be take off the cutter head.





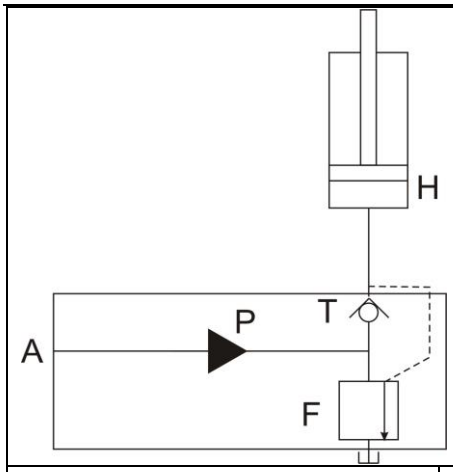
Install of bele

3.Take out cover pliece“7”

Install of bele

4. Afater take out “8”, install of belt

8. Hydraulic schematic diagram



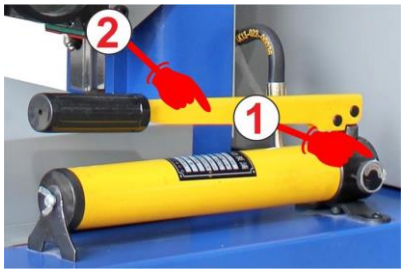
8.1 Hydraulic schematic diagram

A: inlet T: one-way valve H: hydraulic cylinder

P: hydraulic oil P: overflow valve

A, P, T and F are manual pump units

- ◆ When the hydraulic oil is less through the "oil hole A", to fill the hydraulic oil;
- ◆ The oil - "one-way valve T" exit, the raw material used to wrap a nozzle tip to seal.
- ◆ The equipment long time does not apply, the slow release of the "relief valve" F "makes the hydraulic cylinder H to a minimum state;
- ◆ Troubleshooting details: troubleshooting page.



8.2 Use of handle pump:

- ✧ Clockwise rotation [1] to the working state of the overflow valve.
- ✧ In [2] repeatedly press the handle device will be lifting, this process is not easy to handle the high thickness pressing wheel [over].
- ✧ All equipment is not used, anticlockwise to slow [1] overflow valve, the equipment to a minimum.

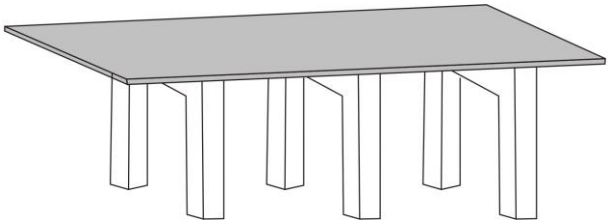
Note: do not use brute force to avoid damage to the hydraulic pump.

9. Bevel preparation

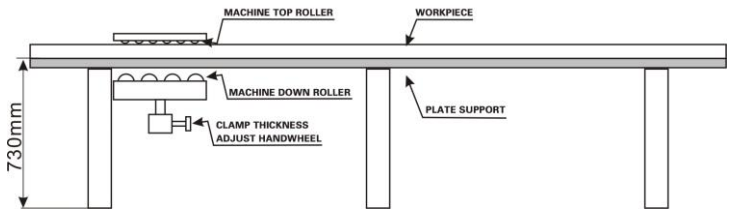
The hardness of machined Parts cut by oxygen increases after high temperature heating. This factor needs to be fully considered when setting groove process parameters.

9.1Steel plate placement & Plate cleaning:

1）make a simple plate support as below picture.(Picture for reference only)



2）We suggest to set height at 730mm, Set table height refer to your plate thickness, Max height at 765mm.



3） Put the metal plate on support showed as below, make the beveling edge about 200-250mm.

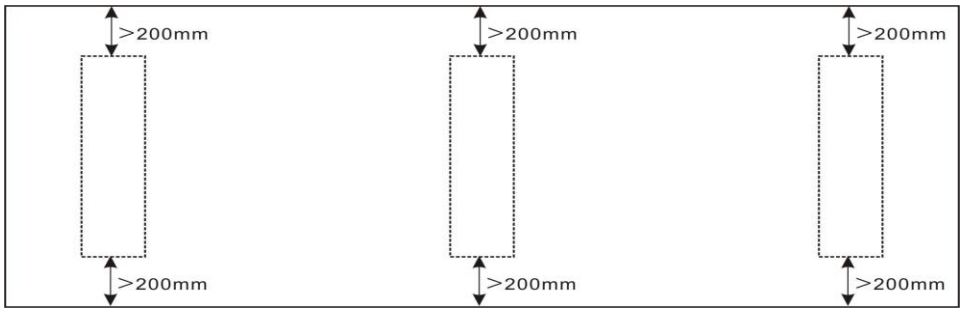
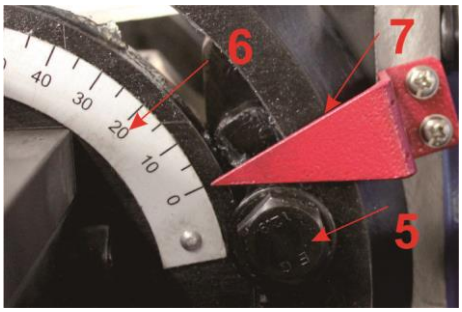
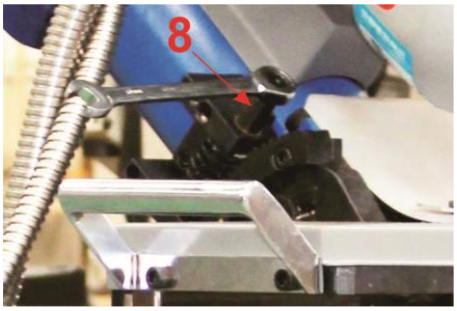
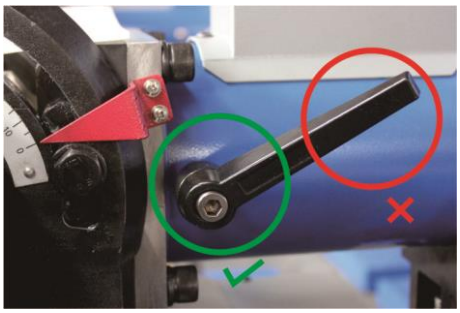
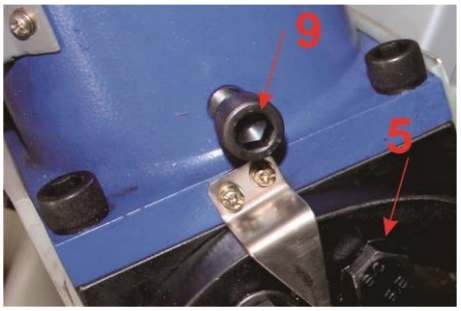
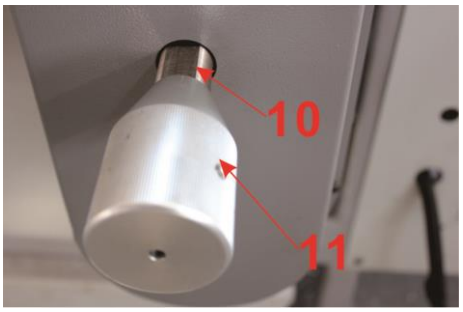


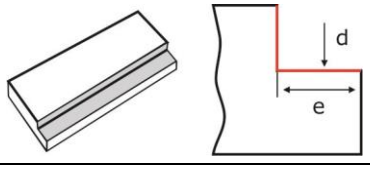
Plate cleaning:

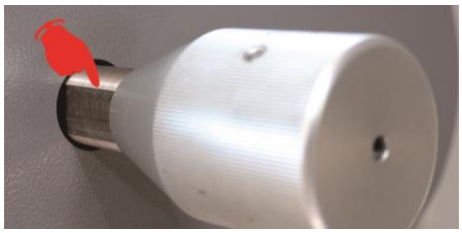
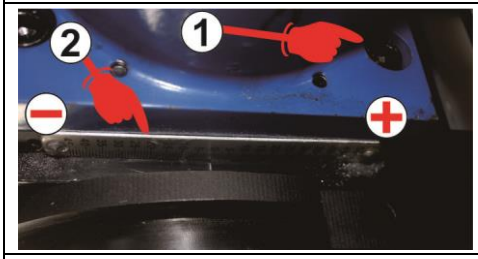
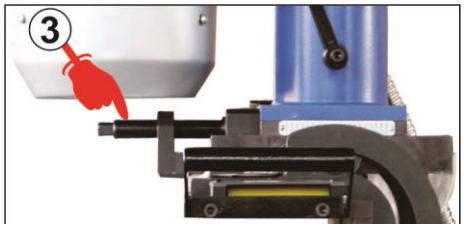
- ✧ No welding slag on the bevel surface.
- ✧ Welding slag and bur will affect the cutter tools and reduce machine service life.

9.2bevel angle adjustment:

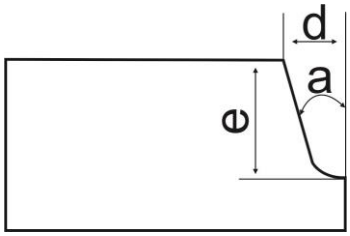
	***Adjust to bevel angle*** 1. Loosen to screw “5” (“6” angle size; “7” angle arrow)
	***Adjust to bevel angle*** 2. Used to wrench rotary the worm “8”. Adjust to require angle, then lock screw “5”.
	*Note: the type of lock wrench used, hand should be placed in the green circle position, do not put in the red circle, so that the wrench is damaged.*
	***Adjust to bevel depth*** 1. Loosen to screw “9”.
	***Adjust to bevel depth*** 2. According to “feed reference table” rotary handle “11”, and look at the size “10”, then lock screw “9”.

9.3flat panel processing setting:

FEED DEPTH【d】 1. adjust the angle of the bevel to 90 °(see 9.3) Note: this step is also suitable for 0 degree elevation milling.	

	***FEED DEPTH【d】*** 2. adjust the hand wheel feed 1~3mm (stainless steel in 1~1.5mm), feed hand wheel calibration value to: 19 is d=0 (for reference only, the actual processing parameters are accurate).
	***FEED WIDTH【e】*** 3. bolts to unlock the main shaft and the four bolts fixed by the lateral adjustment board [1]
	***FEED WIDTH【e】*** 4. rotating bolts [3], the scale [2] moves towards the "-" direction [e], and the "+" becomes larger. When the scale line "-" is directed at 40 e=0 (for reference only, the actual processing parameters are accurate.)

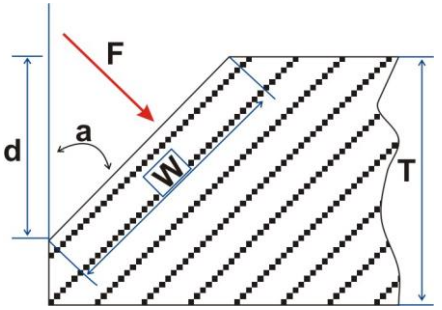
9.4**Processing bevel of "u":**

	1. to the angle of the bevel a required for U type (see 9.3 angle adjustment of the slope) 2. adjustment width [e] (see 9.4 items) 3. adjusting feed depth [D] (see 9.3 terms) Note: when the U groove is processed, the cutter head is higher than the lower plane of the workpiece to be processed. The U root depth of single feed is controlled in 2~5mm

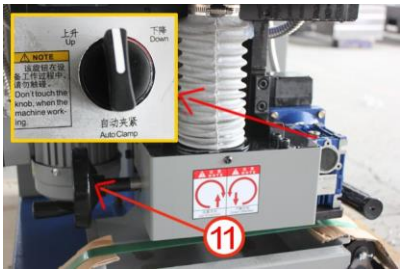
a bevel angle																			
d F	0	5	10	15	20	25	30	35	37.5	40	45	50	55	60	65	70	75	80	85	90
0	25.0																			21.5
4	Single feed is 1~4mm,second feed do not adjust spindle.	24.1	23.5	22.8	22.4	22.0	21.6	21.4	21.3	21.3	21.2	21.3	21.6	21.8	22.1	22.7	23.3	23.9	24.7	Single feed is 1~4mm
6		24.3	23.8	23.4	23.1	22.8	22.6	22.5	22.6	22.6	22.6	22.8	23.2	23.5	23.9	24.5	25.2	25.9	30.7	
8		24.5	24.2	23.9	23.7	23.7	23.6	23.7	23.8	23.8	24.1	24.3	24.9	25.2	25.8	26.4	27.1	31.8	38.6	
10		24.7	24.5	24.4	24.4	24.5	24.6	24.8	25.0	25.1	25.5	25.9	26.5	27.0	27.6	28.3	32.9	35.8		
12		24.8	24.9	24.9	25.1	25.4	25.6	26.0	26.2	26.4	26.9	27.4	28.1	28.7	29.4	30.2	36.8	43.6		
14		25.0	25.2	25.4	25.8	26.2	26.6	27.1	27.4	27.7	28.3	28.9	29.8	30.4	31.2	35.8	40.7			
16		25.2	25.6	25.9	26.5	27.1	27.6	28.3	28.6	29.0	29.7	30.5	31.4	32.2	33.0	39.6				
18		25.4	25.9	26.5	27.2	27.9	28.6	29.4	29.9	30.3	31.1	32.0	33.0	33.9	38.4	43.3				
20		25.5	26.3	27.0	27.8	28.8	29.6	30.6	31.1	31.6	32.5	33.5	34.7	35.6	42.1					
22		25.7	26.6	27.5	28.5	29.6	30.6	31.7	32.3	32.8	34.0	35.1	36.3	40.8						
24		25.9	27.0	28.0	29.2	30.4	31.6	32.9	33.5	34.1	35.4	36.6	38.0	44.3						
26		26.1	27.3	28.5	29.9	31.3	32.6	34.0	34.7	35.4	36.8	38.1	39.6							
28		26.2	27.7	29.0	30.6	32.1	33.6	35.2	35.9	36.7	38.2	39.6	44.5							
30		26.4	28.0	29.6	31.3	33.0	34.6	36.3	37.2	38.0	39.6	41.2								
32		26.6	28.4	30.1	31.9	33.8	35.6	37.5	38.4	39.3	41.0	42.7								
34		26.8	28.7	31.8	32.6	34.7	36.6	38.6	39.6	40.6	42.4									
36		26.9	29.1	31.1	33.3	35.5	37.6	39.7	40.8	41.8	43.9									
38		27.1	29.4	31.6	34.0	36.4	38.6	40.9	42.0	43.1										
40		27.3	29.7	32.2	34.7	37.2	39.6	42.0	43.3	44.4										
42		27.5	30.1	32.7	35.4	38.0	40.6	43.2	44.5											
44		27.6	30.4	33.2	36.0	38.9	41.6	44.3	45.7											
W MAX.		44	44	46	45	48	52	52	53	53	53	55	50	45	40	35	35	30	34	30

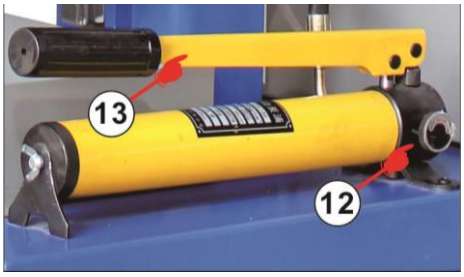
d：bevel depth、a：bevel angle、

F：Spindle handle date



9.5 Adjust the clamping thickness and height：





Clamp Thickness Adjustment

Rotate control box switch can be clamping the plate.

Rotate hand wheel“11” to clamp the work piece

Adjust the height:

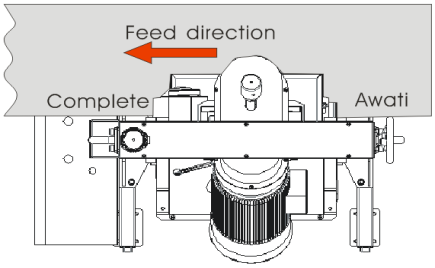
1. lift: clockwise rotation bolt "12", repeatedly press the handle "13".
2. reduction: reverse clockwise rotation bolt "12", turn to the required height after the clockwise rotation to the cut-off position.

9.6Adjust the speed:

Adjust the feed speed:

Rotation “5”.

Note: in the cutting process, the feed speed and the spindle speed can be adjusted properly on the control panel.



9.7 **Route：F**f the ground is not flat, please lay on plate on ground.

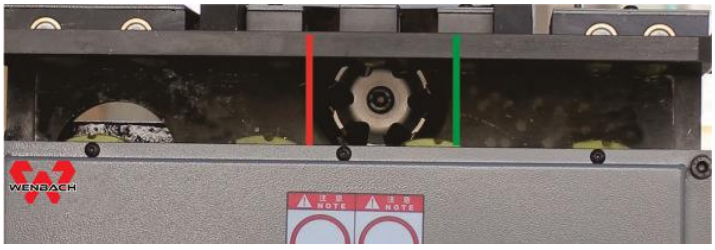
Note: be sure to confirm the rotation direction of cutter and the feeding direction consistent with regulations, the blade cannot contact plate.

When equipment is processed, it is processed along the arrow direction.

10. Basic operation

10.1 Feed speed table (the below parameter just for reference, please take the actual operation as standard)

No more than the red line of the work piece head is placed in the red line to the green line area as the "low speed area"; the end of the green line (more than a work piece cutter) after "speed"; "to complete the area close to the red line at the end of the work piece"

Material	thick	start	Speed up	complete
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	

10.2 Machine Parts Introduction

“1”-Feed Speedometer: Showing current cutting speed,

“2”-Feeding Speed Table: Showing current feeding speed

“3”-Spindle Switch: switch for cutting spindle

“4”-Speed Control Knob:cutting spindle speed adjustment, range from 750-1500r/min(Subject to actual testing)

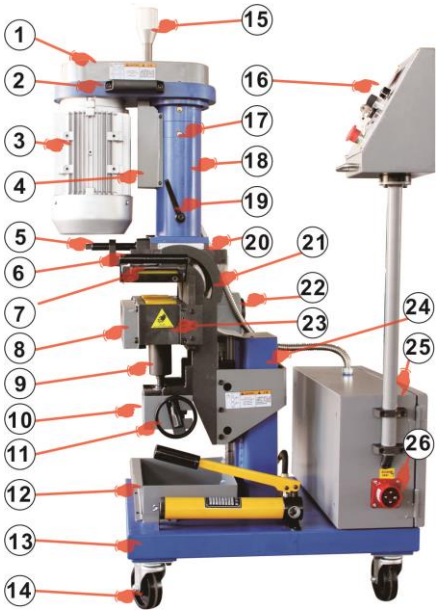
“5”-Positive & Negative Rotation Knob:Adjust the feeding direction

“6”-Speed Control Knob:feeding speed adjustment, range from 0-1500mm/min

“7”-Indicator:Lights up while machine powered(White Light)

“8” Safety Lock: For lock the use of machine. Key should be kept by operator or warehouse manager.

“9” Emergency Stop: Immediately press “Emergency Stop” while an emergency occurs and the power will be completely cut off.

“1” Belt shell “3” Motor of spindle “5” Screw: get bigger bevel width “7” pressure roller “9”Screw：Clamp plate “11”Handle：Clamp plate “13” Basic “15” Handle: Adjust of bevel depth “17” Lubricating nozzle “19”Lock screw：Locking the spindle feed “21”angle plate :adjust to bevel angle “23” Lower pressure mechanism “25”electric box “26”Plug	“2” Handle “4” Feed shell “6” Handle “8” Gear box: Feed power system “10”Gear-box “12” Chip tank “14” Walk wheel “16”control box “18”Cutter spindle “20”Adjust plate：get bigger bevel width “22”Gear motor：feed walk power “24” Column	

10.3 Basic operation

Small plate bevel..... In processing can move the small plate, in accordance with the fifth in the method of adjusting to the desired: bevel angle, bevel depth, feed rate, bevel began operations.

Large plate bevel..... In the bevel gauge plate. These plates need placed in stent assisted and then transferred to the equipment required: bevel angle, bevel depth, feed rate, bevel assignment can be completed.

10.4 Operation steps：

1) Working Piece Location……Workpiece should be stick along with the feeding limit block and Plate leading end should keep distance 10-15mm with cutter head;
2) Working Piece Clamping……Please refer to operation 9;
3) Start to milling……Power On, Turn on Spindle 5-10 seconds to stable rotation speed and feeding speed.

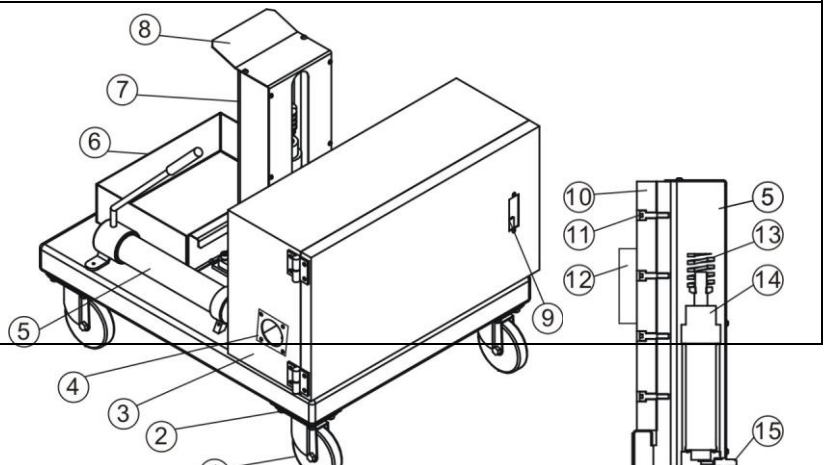
After Beveling

Close the feed, close the spindle, and loosen the clamping wheel.

Make feeding speed back to "0"

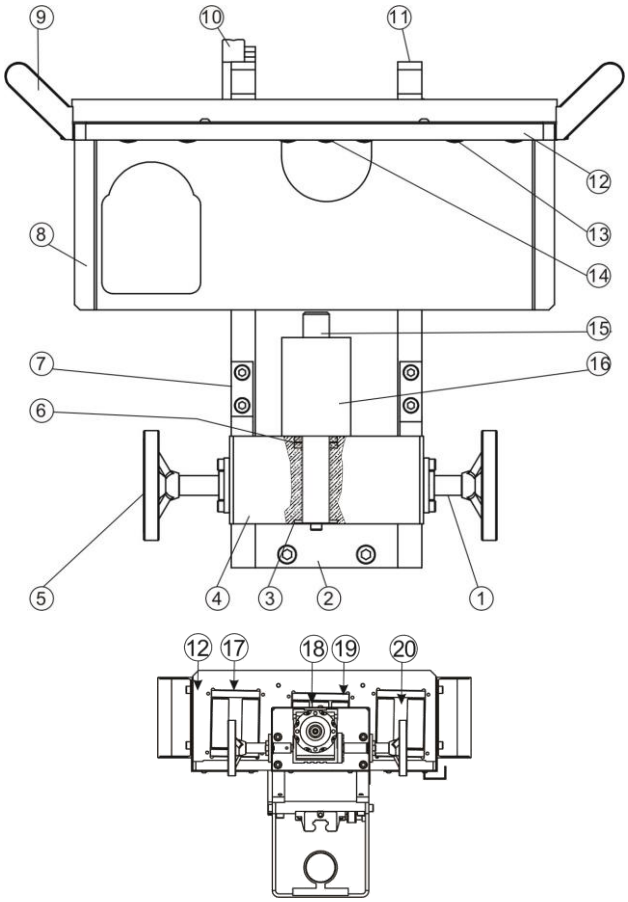
11. Assembly parts

Assembly drawing 1:：

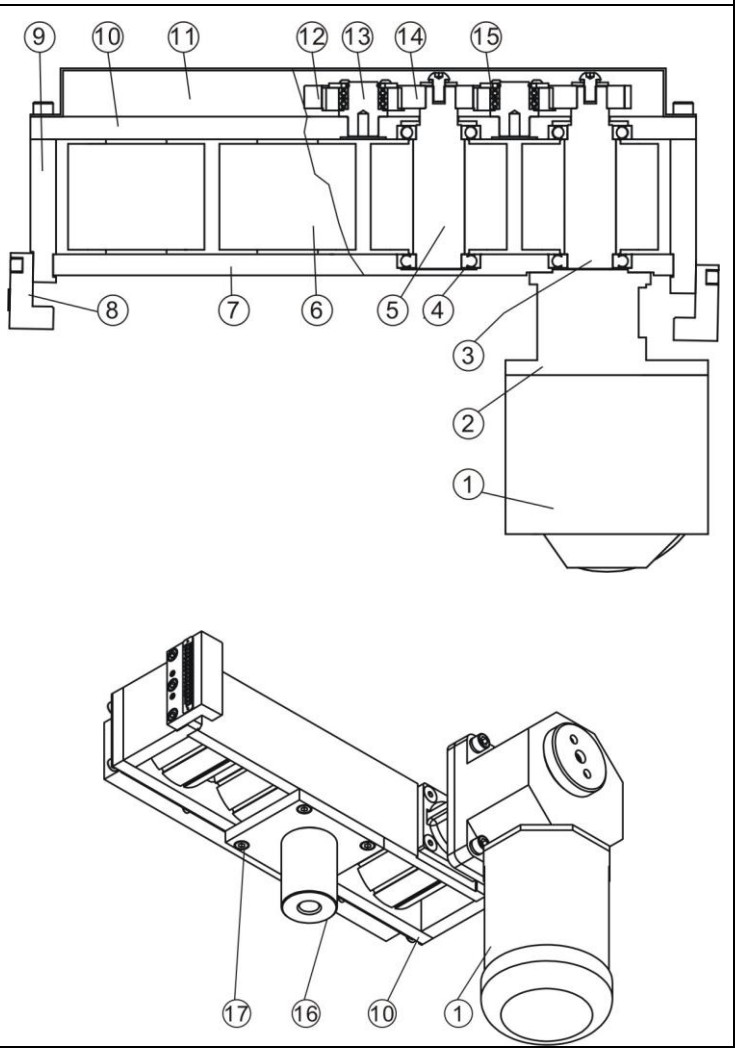
No.	Name	Order no.	qty	picture
1	universal wheel	60VJ01-001	4	
2	Bolt	60VJ01-002	16	
3	Electrical Cabinet	60VJ01-003	1	
4	Plug	60VJ01-004	1	
5	Manual pump	60VJ01-005	1	
6	Chip trough	60VJ01-006	1	
7	Supporting	60VJ01-007	1	

	frame work			
8	Cover	60VJ01-008	1	
9	Cabinet lock	60VJ01-009	1	
10	Sliding rail	60VJ01-010	1	
11	Bolt	60VJ01-011	4	
12	sliding block	60VJ01-012	2	
13	Spring	60VJ01-013	1	
14	Hydraulic cylinder	60VJ01-014	1	
15	Hydraulic hose	60VJ01-015	1	

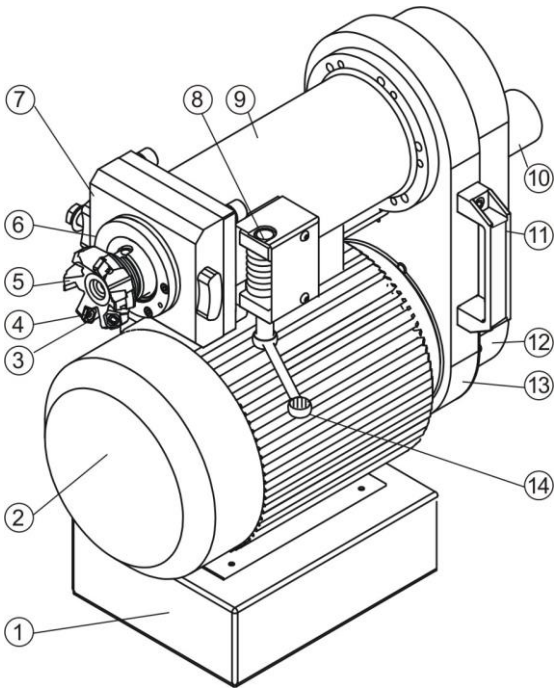
装配体二：

No.	Name	Order no.	qty	picture
1	socket	60VJ02-001	2	
2	Connecting plate	60VJ02-002	1	
3	Spacer	60VJ02-003	1	
4	Reducer	60VJ02-004	1	
5	Hand wheel	60VJ02-005	2	
6	Bearing	60VJ02-006	1	
7	Connecting plate	60VJ02-007	1	
8	Guide plate	60VJ02-008	1	
9	Handle	60VJ02-009	2	
10	Angle board	60VJ02-010	1	
11	Angle board	60VJ02-011	1	
12	Upper pressure plate	60VJ02-012	1	
13	Upper pressure roller	60VJ02-013	4	
14	Short pressure roller	60VJ02-014	3	
15	Screw	60VJ02-015	1	
16	Screw nut	60VJ02-016	1	
17	Long pressure roller support	60VJ02-017	4	
18	Short pressure roller cover	60VJ02-018	1	
19	Short pressure roller support	60VJ02-019	2	
20	Long pressure roller cover	60VJ02-020	2	

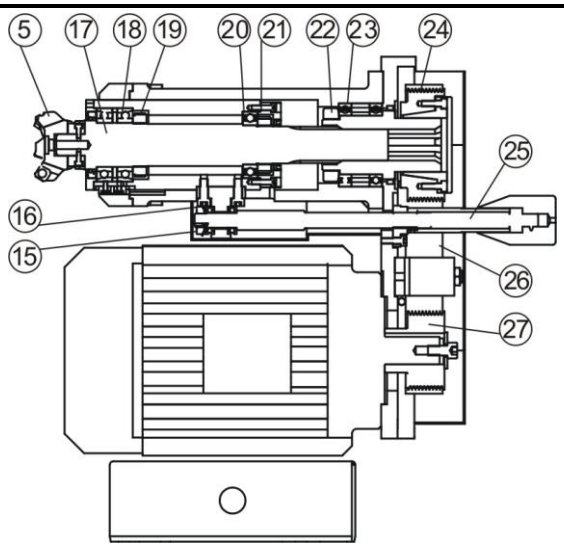
装配体三：

No.	Name	Order no.	qty	picture
1	Reducer	60VJ03-001	1	
2	Flange	60VJ03-002	1	
3	Spindle	60VJ03-003	1	
4	Bearing	60VJ03-004	8	
5	Driving shaft	60VJ03-005	3	
6	rubber wheel	60VJ03-006	4	
7	Backing plate	60VJ03-007	1	
8	Sliding block	60VJ03-008	2	
9	Connecting plate	60VJ03-009	2	
10	Gear plate	60VJ03-010	1	
11	Housing	60VJ03-011	1	
12	driven gear	60VJ03-012	3	
13	driven Shaft	60VJ03-013	3	
14	Driving gear	60VJ03-014	4	
15	Bearing	60VJ03-015	6	
16	Raising nut	60VJ03-016	1	
17	Bolt	60VJ03-017	4	

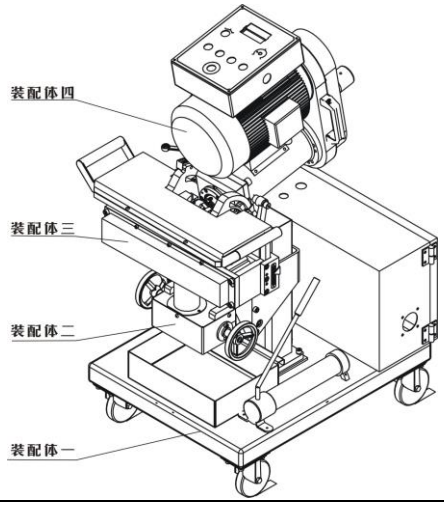
装配体：四

No.	Name	Order no.	qty	picture
1	Control box	60VJ04-001	1	
2	Electric motor	60VJ04-002	1	
3	screws	60VJ04-003	6	
4	Inserts	60VJ04-004	6	
5	Cutter	60VJ04-005	1	
6	Spindle sleeve	60VJ04-006	4	
7	Rotator	60VJ04-007	1	
8	Bolt	60VJ04-008	1	
9	Spindle housing	60VJ04-009	1	
10	Feel handle	60VJ04-010	1	
11	Handle	60VJ04-011	3	
12	Cover	60VJ04-012	3	
13	Fix plate	60VJ04-013	4	
14	Ratchet spanner	60VJ04-014	1	

15	Screw nut	60VJ04-015	1
16	Bearing	60VJ04-016	2
17	Spindle	60VJ04-017	1
18	Bearing	60VJ04-018	1
19	Block nut	60VJ04-019	1
20	Bearing	60VJ04-020	1
21	block nut	60VJ04-021	1
22	block nut	60VJ04-022	1
23	Bearing	60VJ04-023	2
24	Belt pulley	60VJ04-024	1
25	Feed screw	60VJ04-025	1
26	Belt	60VJ04-026	1
27	Belt pulley	60VJ04-027	1



WBM.60VJ型铣边机总装配体



12. lubrication Feed gear box for life maintenance free type

Item	Lubrication method	cycle
complete machine	Spray anti-corrosion oil, remove iron pin, and a dustproof cover, straight in a dry place	3 months or a long time not to use
Compaction guide rail	The use of compressed air cleaning iron pin	After each walk
	Filling the guide rail oil or lubricating oil	3-6 months
Lifting screw (compression)	The use of compressed air cleaning iron pin	After each walk
	Filling the guide rail oil or lubricating oil	3-6 months
Around the machine	Use a broom to clean up in time, so as to avoid excessive accumulation of equipment.	Clean up according to the actual situation
Reducer	Filling gear oil	Lifelong maintenance free
Control box,	Cover dustproof and rainproof cover	Long time no use(include electric box)
Cutter	Camaged the cutter and screw	See eighth items
Cutter screw	If it's broken in the tray, please use the drill out	See eighth items

13. Common trouble repair and maintenance

NO.	fault	Maintenance and repair
1	Energized equipment, no reaction	Check whether there is electricity line
2	Have electricity, the machine is stop	Check whether the "emergency stop" button is pressed, or the control box breaker trip
3	Feed gear has abnormal sound	Fill the gear oil, the general gear will not be broken
4	Pressing wheel can't be compressed	Wetter an iron pin ont the wheel or plate
5	Steel plate is ejected	Look at the feed direction is consistent with the provisions of the equipment
6	Processing of steel plate, blade break	The tool is with the machined parts without rotation
7	Begins milling, the blade is broken	Reduce the feed depth
8	Electrical control	Communicate with manufacturers in a timely manner
9	culty falling	Carefully check whether the motor is connected to the chip collector.
10	Difficulties in rotation	Check whether the locking bolt is removed.
11	Filling the hydraulic oil / hydraulic pump can not lift. Long time use, the hydraulic cylinder in the lifting of the state too long, hot summer will cause the lack of hydraulic oil, so when the hydraulic pump can not be lifted when the hydraulic oil is sufficient to check. Methods: hydraulic pumpremove tail upward, unscrewing the bolts red circle, and then add the hydraulic oil can。	

Be careful

- ✧ According to the different processing materials, feed depth, cutting speed and other factors, it is recommended to change the direction of the blade in a timely manner and the fixed screw.
- ✧ General 30-100 meters to replace a blade angle, blade to avoid damage;
- ✧ Generally 30-100 meters to replace a blade fixed screw, long time to use the screw to reduce the intensity, there is a risk of breakage, screw once the damage is difficult to be removed;

14. Packing list

NO.	Name	Type	Qty	Unit	Remark
1	Milling machine	WBM.60VJ	1	set	
2	Cutter	S300	2	set	A set installed the cutter head
3	Screw	M3.5*8	12	PCS	Containing a set of knife set
4	Six angle wrench		1	set	
5	Ratchet wrench		1	Pcs	
6	Plum blossom wrench	19-19	1	Pcs	
7	Wrench	T15	1	Pcs	
8	Plug	4075	1	set	
9	Tool kit	4111	1	Pcs	
10	Travel wheel	5001	4	Pcs	
11	Screw	M8*16	16	Pcs	
12	packing box	Wooden box	1	Pcs	
13	Operation manual		1	Pcs	

15. List of vulnerable parts: the specific replacement period is determined according to the usage

No.	Order No.	Name	Icon	remarks
1	60V04-004	Cutter ACP300		See the operation manual for the replacement cycle

2	60V04-003	Blade screw M3.5*8		
3	60V04-005	63-22-6T		Press the cutter
5	60VJ005	Top roller (long wheel)		According to the use of the situation
	60VJ006	Top roller (short wheel)		
6	60VJ007	Lower pressure wheel		According to the use of the situation
7	16006Z	Bearing (standard parts)	According to the use of the situation	
8	PK750	Belt	Motor to spindle	
9	60type	copper bush		
10	0-60	Protection cover	At the clamp screw site	