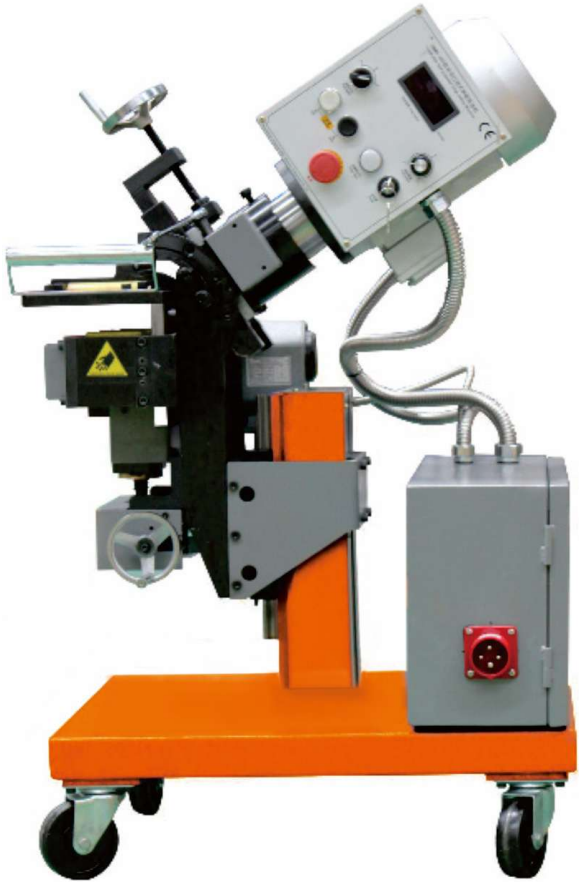
Automatic Plate Beveling Machine

GL-860L

Operation Manual



Don’t operate machine before reading the manual!

SHENZHEN KEDES MACHERY &EQUIPMENT CO.,LTD.

Catalog

Disclaimer of liability

- ✧ 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.

Preface:

Thank you for using KEDES product, we expect our products provides enormous convenience for your business.

- ➢ Our company own the final explanation for the product details, any changes without prior notice.
- ➢ Our company own the copyright,copy, modify are not allowed for any unit or individual without without permission, no unit or individual may not copy, modify,
- ➢ This information of the picture, text and data is for reference only, because the product is constantly updated in kind will be changed, the specific parameters to the actual product

Thanks!

1. Summary

1.1Introduction

GL-860 type automatic milling machine, 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.

1.2Field of application

- ✧ 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。

1.3Machine Parameters

Motor Voltage：AC380V 60HZ	Total Power：3400W
Cutting Power：3000W	Feed Power：400W
Cutting Speed：0～1500r/min（Adjustable）	Bevel Angle ：10° ~ 60 °
Max Feed Rate：15-20mm	Plate Thickness：8-60mm(1-8mm thickness can be customized)
Min Plate Length：200mm	Cutter Blade：5 piece
Min Plate Width：≥100mm	Net Weight：220kg

1.4Machine Diagram

2.Safety And Warning

2.1Safety Instruction

Read operation instruction carefully before installation, use and maintenance, especially the part of electrical and rotation exist potential dangerous.

The machine use 380V power supply, Please make the manual as a guide before installation, wiring, start, run or any adjustment; The electrical wiring installation and maintenance personnel must possess the qualifications.

2.2Safety Caution

- ✧ The final interpretation and modify right is reserved by KEDES
- ✧ We do not take any responsibility in the case of changing spare parts!
- ✧ We do not take any responsibility for illegal operation!
- ✧ Can not dismantle the machine without consent.

- ✧ Cut off the power when repair the machine!
- ✧ Check the socket, wire and machine before use!
- ✧ Keep the machine dry, not operating in humid environment!
- ✧ Please use the interrupter to protect the machine outdoors!

- ✧ Prohibit wearing gloves while operat the machine.
- ✧ Put on protective goggles, ear plugs!
- ✧ Cut off power and put on gloves when cleaning the iron dust!
- ✧ Plug in socket in switch-off state, and pull out power wire after use!
- ✧ Non-electrician license workers can not do electric install and maintenance.

- ✧ Do not use the power cable to move the machine!
- ✧ Put the power cord behind the machine, not sharp objects!
- ✧ Inspect and maintain by professional person!
- ✧ Operator shall not leave the scene!

Reject the machine when you find packing broken and obtain deliveryman signature for insurance claim.

Our factory will help you to get missing and broken parts when the machines broken.

3.Equipment Acceptance

3.1Installation

First： Remove the wooden box

Second: Cut off the steel strip of the fixed machine。

Third:according to the lifting position for lifting, lifting to slowly increase; the wheels, from the ground 200-250mm equipment can be suspended; moving height should not exceed 100mm, except during obstacle crossing.

Note: the lifting points can be used for lifting equipment, lifting should rise slowly. Please use the equipment in the process of lifting, lifting belt intact, lifting weight lifting equipment should be more than 500kg.

3.2 Installation Of Walking Wheel

Equipment lifting up, namely from the ground 200-250mm both can be installed walking wheel, operators pay attention to safety, there must be people to stabilize the equipment, walking wheels are installed in the work can be carried out。

Note: do not touch the lifting device while lifting, the equipment must be stable, to prevent any damage for workers.

4.Installation

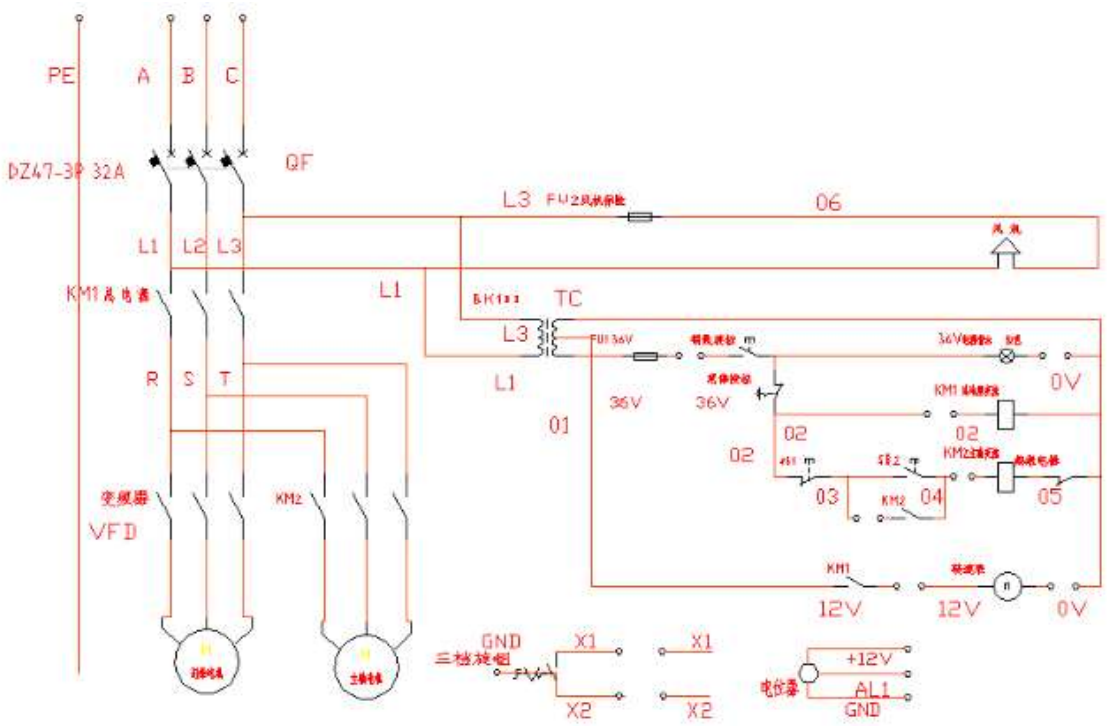
External ground wire diameter size should follow requirement (Copper wire)	
Phase wire diameter S（mm^2）	Ground wire diameter Sd（mm^2）
S≤16	S
16＜S≤35	16
S＞35	S/2

4.1 Electric Installation

1）Electrical symbol description

QF：Power switch	SB1：Emergency stop	KM：AC	VFD：Frequency converter
B：transformer	SB2：Power switch	FU：Fuse	HF：Tachometer

2)Electric principle diagram

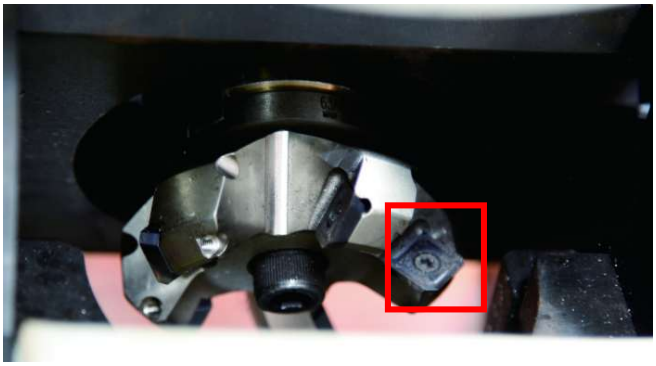


4.2The protection measures

1)Electrical connection and protection should Consistent with local regulations.
2) Please verify power supply equipment, our machine is AC 380V.
3) Connect the air plug (the attachment with the machine) with one end of cable， the another end connect with the power supply.
4) Dangerous in the humid environment.
5) According to direction on the machine to feed plate, process work piece after cutter rotate.

4.3 Tool Installation And Removal

1） Cut off the power supply;
2) loosen the angle adjusting bolt, let the bevel angle to the minimum;
3) lossen"Screwt", rotary "handle" to facilitate the removal of the blade position, then tighten the bolt indent";
4) using "special spanner”to replace the tool ;
5) locking all the bolts after replace the tool.

	
Tool Blade In The Red Frame	Special Tool

Installation and disassemble of the cutting tool , please take care of the sharp edge and high temperature, they will make the damage for your hands. Please clean up the Scrap by pneumatic gun and wear the protection gloves before replacing the tool.

5. Preparation

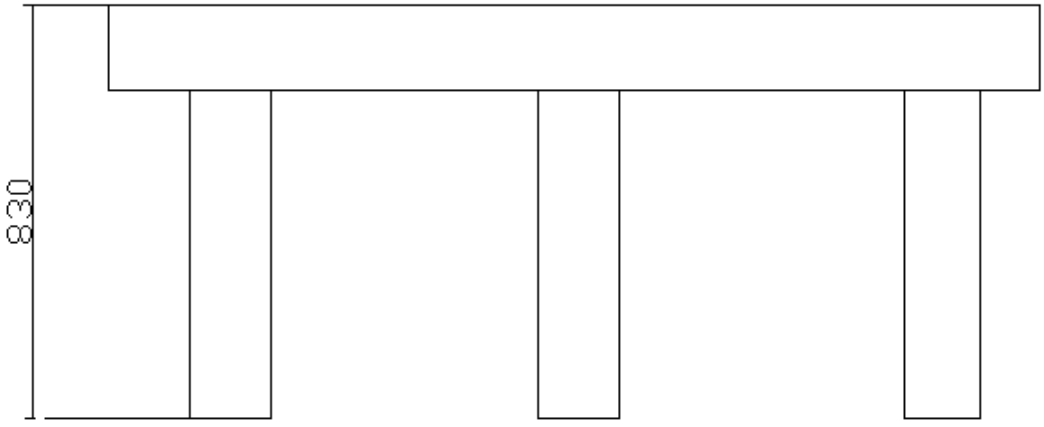
Set single bevel depth based on different materials.
Any operating beyond the scope of machine performance will cause the damage of turbo, cutter and spindle.
During the oxygen cutting, one thing should take account in the setting of parameters: The hardness of the plate edge will be improved after high temperature.

5.1Steel Plate Placement

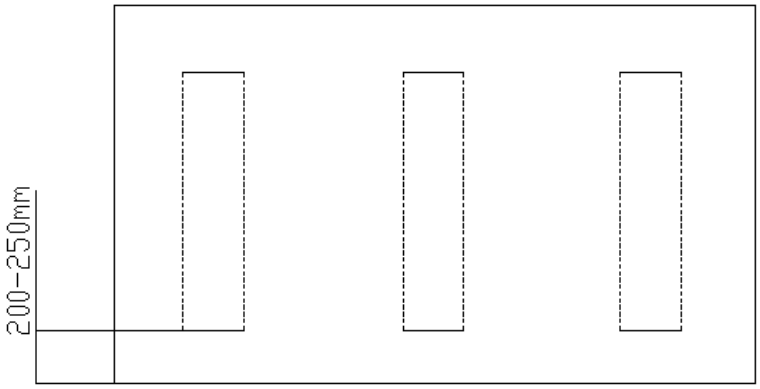
1）If the plate is light and small,please put the plate on the machine,and operate directly.

2）Large Pipe

First:When processing large plate, you can refer to the following picture to do a simple support to support the sheet needs processed.



Second:Put the plate needs processed on the table, keep 200-250mm the Plate edge and support stand.



5.2 Steel Plate Cleaning

1) No welding sa on the bevel surface.

2) Welding slag and bur will affect the cutter tools and reduce machine service life.

5.3Adjust Of Thickness&Bevel Depth

1) Plate thickness adjustment: Rotate the "clamping hand wheel" and stop rotating when the workpiece is clamped by the support wheel and the pressure wheel.

2) Groove depth adjustment: The milling depth can be adjusted according to the table below (the same table is printed on the machine nameplate).

Step 1: Loosen the "locking bolt";

Step 2: According to the feed depth adjustment table below, use the "ratchet wrench" to adjust the groove angle to the required scale. When processing 0 degrees and 90 degrees, the 1mm scale represents the actual feed depth;

Step 3: Tighten the "locking bolt"

Note: When processing the groove, align the ±45mm scale line on the plate with 0 degrees

90 degree milling, get a larger slope width

a. Loosen the 4 motor "fixing bolts"

b. Adjust according to the "width scale plate" instructions (when processing the angle groove, you can adjust this step to get a wider slope width.

c. Lock the motor "fixing bolt:

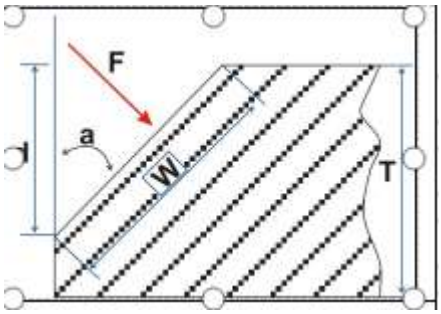
Note: Before feeding, make sure that the rotation direction of the cutter head is consistent with the specified direction, and the blade cannot contact the steel plate.

0-90 degree spindle feed reference table (F: handwheel parameter)

d: processing depth, T: clamping plate thickness,

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

Different colors represent areas that need to be fed in batches. When processing 90 degrees, the feed depth is 0-2mm each time



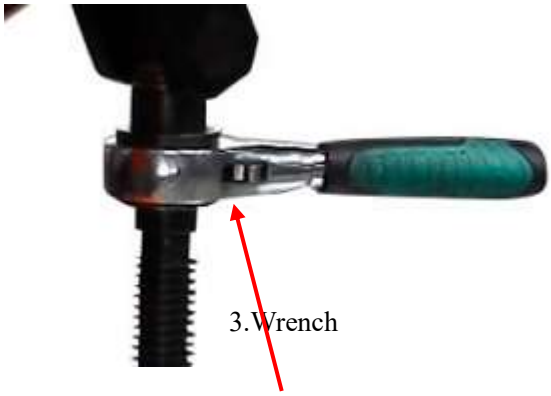
F / d	a														
	0	5	10	15	20	25	30	37.5	40	45	50	60	70	80	90
0	0	7.7	6.5	5.3	4.3	3.4	2.6	1.6	1.4	1	0.7	0.6	1	2	0
4	0	8.4	7.8	7.4	7	6.8	6.6	6.5	6.5	6.6	6.8	7.5	8.5	9.9	4.5
6	0	8.6	8.2	7.9	7.7	7.6	7.6	7.7	7.8	8	8.4	9.2	10.4	11.8	6.5
8	0	8.7	8.5	8.4	8.4	8.5	8.6	8.9	9.1	9.4	9.9	11	12.3		
10	5	8.9	8.9	9	9.1	9.3	9.6	10.2	10.4	10.9	11.4	12.7	14.2		
12	7	9.1	9.2	9.5	9.8	10.2	10.6	11.4	11.7	12.3	13	14.4	16		
14	9	9.3	9.6	10	10.5	11	11.6	12.6	13	13.7	14.5	16.2			
16	11	9.4	9.9	10.5	11.1	11.8	12.6	13.8	14.2	15.1	16	17.9			
18	13	9.6	10.3	11	11.8	12.7	13.6	15	15.5	16.5	17.6	19.6			
20	15	9.8	10.6	11.5	12.5	13.5	14.6	16.2	16.8	17.9	19.1	21.4			
22	17	10	11	12.1	13.2	14.4	15.6	17.5	18.1	19.3	20.6				
24	19	10.1	11.3	12.6	13.9	15.2	16.6	18.7	19.4	20.8	22.1				
26	21	10.3	11.7	13.1	14.6	16.1	17.6	19.9	20.7	22.2	23.7				
28	19	10.5	12	13.6	15.2	16.9	18.6	21.1	21.9	23.6	25.2				
30	21	10.7	12.4	14.1	15.9	17.8	19.6	22.3	23.2	25	26.7				
32		10.8	12.7	14.6	16.6	18.6	20.6	23.5	24.5	26.4	28.3				
34		11	13.1	5.3	17.3	19.4	21.6	24.8	25.8	27.8					
36		11.2	13.4	15.7	18	20.3	22.6	26	27.1	29.2					
38		11.4	13.8	16.2	18.7	21.1	23.6	27.2	28.4	30.7					

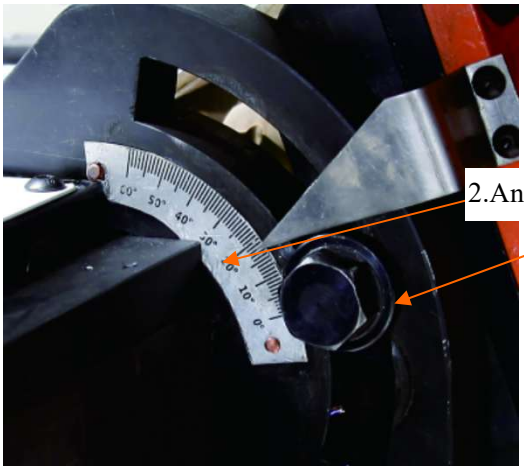
5.4Bevel Angle Adjustment

1、Loosen the “screw”

2、According to the " angle size", used "Wrench" adjusting the machine bevel angle;

3、To the required angle after tightening the locking screw.



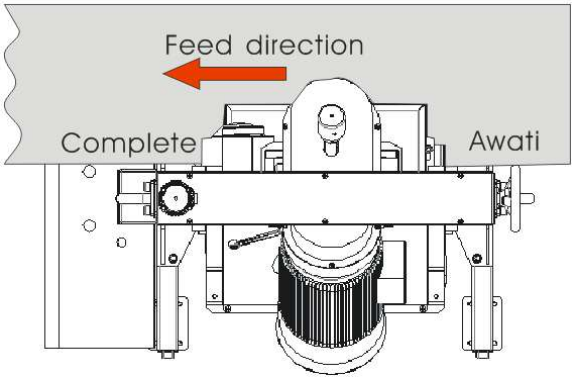


5.5Height Adjustment Of Equipment

Rotate turbine handle wheel to adjust the height

5.6 Speed Adjustment

- ✧ The spindle speed cutting is not adjustable;
- ✧ The purpose of this equipment feeding speed can be adjusted according to the material and cutting depth on the control panel, the control panel is equipped with a feed speed meter, can display the first to speed.



5.7 Route

Clean the the travel route, if the ground is not flat, please laid 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.

6. Basis Operation

- ✧ Do not work more than 4 hours continuously.
- ✧ Temperature of gear box grows fast after work fro some time, but boiling grease benefit to abstract heat to a heat balance situation.
- ✧ If over loaded, the thermal element in electric box will start and cut off power supply. Reset thermal element when it cold enough, otherwise the machine will be stopped again.

6.1 Part of the machine instructions

"1" :Motor on: cutting spindle starts to rotate button.

"2" :Automatic clamping button: automatic clamping tightness (additional configuration required)

"3": Feed speed meter: display the current processing speed

"4": Speed control knob: feed speed 0-1500mm/min stepless speed regulation, there is a forward and reverse button, please press the stop button when shutting down

"5" Emergency: Control the power supply.

"6" Power light: On when the device is powered on (red)

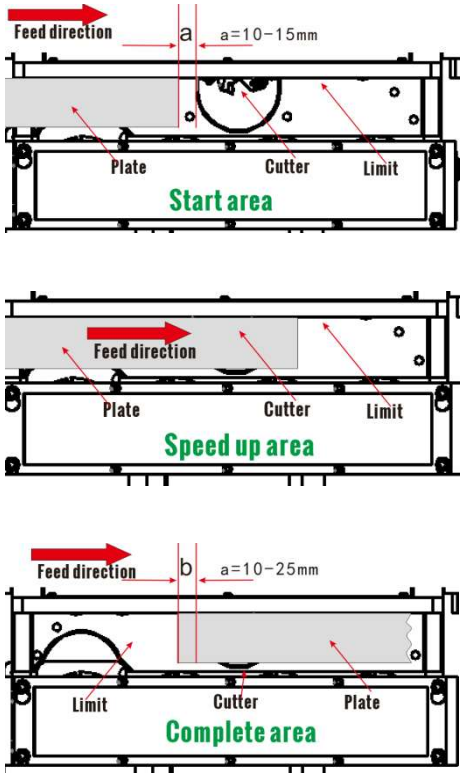
1:control box
2:Motor
3:Handrail
4:Feed wheel
5:Gear
6:Walking Motor
7:Wheel
8:Iron dust case
9:Machine base
10:Walking wheel
11:Feed handle wheel
12:Pull handle
13:Cutting tool head
14:Ratchet wrench
15:Electric box
16:Aviation plug
17:Wheel

6.2 Feed speed table(the below parameter just for reference, the enlarger beveling surface shall reduce the milling speed, please take the actual operation as standard)

start area --- the head located a
Speed up area--- touch with Wearable pieces
Complete area --- the end located b

Slowly change the speed (mm/min)thick: mm

Material	thick	start	Speed up	complete
Q235	3-6	150-250	300-800	300-500
	>6	150-250	300-800	300-800
45#	3-6	150-250	300-800	300-800
	>6	150-250	300-700	300-700
16Mn	3-6	150-250	300-800	300-500
	>6	150-250	300-700	300-700
AL	3-8	150-250	300-1000	300-800
	>8	200-300	300-1000	300-1000
306	3-8	150-250	300-800	300-500
	>8	150-250	300-800	300-800
316L	3-8	150-250	300-800	300-500
	>8	150-250	300-800	300-800



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.

Operation steps：

1) Knife wheel steering……All devices are needed to confirm the cutter turning；
2) Put the workpiece 1……The side with the feed end close to the limit block
3) Put the workpiece 2……Keep the 10-15mm distance between workpiece and cutter tip (as shown above the "initial zone" for clamping state)；
4) Put the workpiece 3……The workpiece is pressed (according to fifth in operation)；
5) Start milling……First open the main 10-15 seconds after the spindle speed is stable, the switch speed required by the feed speed。
6) Finish milling……Turn off the feed, close the main shaft, loosen the pressing wheel, and leave the equipment out of the processing zone。

Do not have electricity when clamping
The workpiece side must be close to the limit block, and to ensure that the end of the distance between the blade and the cutter head;
Please open the feed button, will feed speed to 0
After processing, please feed speed to 0.

7. Lubrication And Cleaning

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

8. 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	Whetter 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	Check if the tool is in contact with the machined parts without rotation
7	Begins milling, the blade is broken	Reduce the feed depth
8	Electrical control part of failure or other reasons	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.

- ✧ 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;

9. Packing List

NO	Name	Type	QTY	Unit	Remark
1	Beveling Machine	GL-860L	1	Set	
2	Cutter Head	Φ63	1	Pc	On the cutting spindle
3	Cutter		2	Set	A set installed the cutter head
4	Contro Box		1	Set	
5	Electric Box		1	Set	
6	Six Angle Wrench		1	Set	
7	Ratchet Wrench		1	Pc	
8	Wrench		1	Pc	
9	Wrench	T15	1	Pc	
10	Plug	4075	1	Set	
11	Tool Kit	4111	1	Pc	
12	Travel Wheel	5001	4	Pc	
13	Screw	M8*16	16	Pc	
14	Packing Case	Wooden Case	1	Pc	
15	Operation Manual		1	Pc	

PART10 ORDING INFORMATION

ORDERING OR MORE INFORMATION

To place an order or get more detailed information:

Tel:86-0755-82598826

Web:www. zgpkj.com

ORDERING REPLACEMENT PARTS

Please refer to parts lists provided in manual.Advise us part number and description of replacement parts to help expedite order and ensure proper parts are being ordered.

Or take photo for replacement parts,send email to us.

REPAIR INFORMATION

Please call Shenzhen KEDES Mechanical Technology Co.,Ltd to returning any equipment for repair. We will advise you of shipping and handling. Please enclose with machine to be repaired your name ,address, phone number and a brief description of problem or work to be done or estimated.

All repair work done at our plant will be estimated and the customer advised of cost and time required to complete repair.

POSTAL ADDRESS

Shenzhen Kedes Mechanical Technology Co.,Ltd

Add:Hehe science Park,Datang Road,Fucheng street ,Longhua District, Shenzhen ,China

Postal Code:518110

Tel: 19166278852

Web:www.kedesmachine.com

Email: contact@kedesmachine.com

Tel/Whatsapp/Wechat: 86 19166278852

SHENZHEN KEDES MACHERY &EQUIPMENT CO.,LTD.

Building B, Zhongshun Industrial Park No. 434 Fuqian Road, Fucheng Street, Longhua District Shenzhen, China

WARRANTY CARD

Company name	

Address			
Contact person		**Phone number**	
Model No.			
Series No.		**Production date**	
Warranty period	**12 months (Electric motor 3 months)**		

Inspector:

Company seal:

Warranty Rules:

1. Warranty period start from the date shipped on board, 12 month free warranty.

2. Over warranty period, spare parts charge at cost price.

3. Within warranty period, the following conditions are not included in guarantee:

a) Improper operations not following the operation manual

b) Damage by self-maintain

c) Damage by force majeure or transport

d) Can not present this certificate