OPERATION MANUAL

DOUBLE END TENONER

WINTER RMD 6025A

WARNING!

The operator must thoroughly read this manual before operation.
Keep this manual for future reference.

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H.WINTER HOLZTECHNIK

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1. Safety

1.1 General rules of safety

① Do not operate the machine before reading earnestly throught and fully understand the operation manual. The person who operates the machine must be very familiar with the adjusting contents, adjusting procedures and safety rules.

② To make proficient with specialized trainning before operating.

③ Please pay attention to the warning symbols on the machine and abide by the rules.

④ To avoid wrapping in working, workers should have their hair and sleeves bound. No loose coat, gloves and jewelry allowed while working.

⑤ **Unrelated person is not allowed to stay around the running machines.**

⑥ Do not stand in front of the infeed and outfeed directions to avoid unexpected injury from the rebound and spring of workpieces.

⑦ **Do not raise the feeding device while processing the logs, or else the workpieces might be loosened and do harm to human and machine.**

⑧ Do not take away any of the protected covers while processing.

⑨ Do not clean the chips while the machine is running, for fear that dangers might cause.

⑩ Hands are not allowed to touch the feeding belts, tooth parts of chain wheels or feeding part between feeding belt and pressure belt while running, checking or cleaning the machine.

⑪ Do not stand between the two feeding belts while narrowing them.

⑫ **Daily check of the safety devices before machine starts is necessary, to eliminate hidden troubles.**

⑬ Please make sure that the power is off and the machine is completely stopped befor adjusting, matain the machine and installed cutter blocks.

⑭ The maintenance and maintain of machine tools shall be done termly by qualified personnels, and the work of power system can only be done by qualified electricians.

⑮ **Protected gloves are needed while installing or changing cutter blocks to prevent harming from sharp edge of knives.**

⑯ Safeguards for eyes and ears are needed while working. (Noises of machine tool is no higher than 85dB)

⑰ Ensure the neatness and roominess of working locality. Any of the impediments would be effected on operation, and hidden troubles lurking.

⑱ Top and bottom, left and right spindles cannot be exchanged or wrongly installed, otherwise cutter blocks might fly off from spindles while running at high velocity, serious aftereffects would follow.

⑲ Termly check the wear and tear of electrical cables to dispose troubles in time if any.

⑳ **Power must be off while romoving and checking the electricity**

○,21 the circuit breaker provided by end user for this machine shall have a RCD with minimum setting, which can not affect normal operation. ensure that guards and other safety devices necessary for machine operation are in position, in good working order and properly maintained

○,22 Test 2 (Fault loop impedance verification and suitability of the associated overcurrent protective device) according to clause 18.2.2 of EN 60204-1:2006 shall be performed after the final installation.

Safety device of machine tool

In order to make sure the safety for both operator and equipment,there are some saftety device for the machine tool

○,1 Linkage safety protective doors

When open the switch of the safety door,spindles will stop automatically and the cover can be open after 60 seconds.

DO NOT REMOVE the safety device、the limited switch of the cover and other switch in order to keep them effective and running in normal condition.

When Open the cover to chek the device (at this moment the machine stop running and cannot start), operator must confirm that the selective swith turns to “test” position. DO NOT change the condition randomly.

○,2 Limit switch for avoiding over thickness,over width and over length.

The working thickness is over the setting range will touch the limit switch of the head of pressure belt. When the working width is over the setting range ,then it will touch the limit switch of the cover to let the machine stop. There are two limit switches between the

max.and min.working length. When it reaches to the min. and max.working length,the machine will stop working. Do not remove the limit switch to make it runs effectively.

○,3 Emergency stop

It's necessary to contact and warn the people around Before starting the machine. When the machine shows malfunction, press either one emergency stop button to let the whole machine stop. When need to operate, reset the emergency stop button,then press the reset button to start the connector so that the machine can work again.

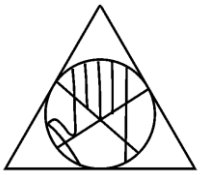
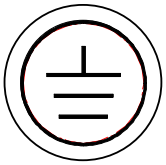
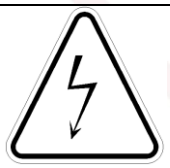
○,4 Safety line switch

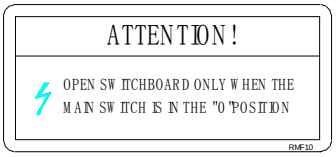
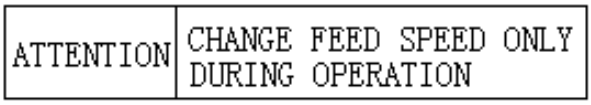
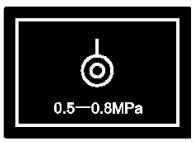
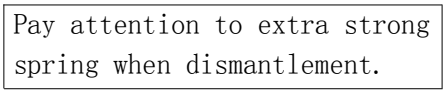
There are safety line switch on the outfeed and infeed side of the machine. When the machine is working,press the safety line switch to let the whole machine stop. When need to operate again, firstly reset the switch, then press the reset button to start the machine again.

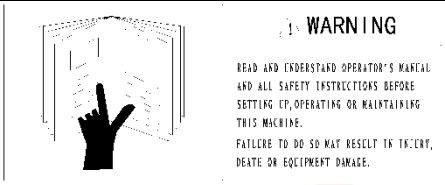
1.3 Warning symbols

Table 1

No.	Symbols	Meaning of Symbols
1		Cutter blocks rotating, watch out!
2		Safety protector Runners must wear ear protector.
3		Safety protector Runners must wear protective goggles.

4		Be careful of the electricity.
5		Keep safe Caution machanical injury.
6		Watch out while closing cover doors.
7		Keep safe Caution machanical injury.
8		Earthing
9		Electricity here! Cut off the power while repairing the machine.

No.	Symbols	Meaning of Symbols
10		Open switchboard only when the main switch is in the “0” position.
11		Feeding will work only after the spindle begin running. Press reset button to start the machine for the first time
12		Open the cover when the safety indicator is lighted
13		CE Label
14		Do not change the speed when the machine stop working
15		Air origin
16		Hook
17		Extra strong spring

18		Safety Instructions
19		Use operation manual and safety instruction when installing、operating or maintaining

1.4 Correct use of machine tool

① The processing range of workpieces only limit to the data of technical parameters. Do not use

if the data overruns.

② Do not process the timber with nail or concrete.

③ The user must abide by ***making saws and milling heads*** (EN847-1) to configure cutters and set the speed for the chief shaft. Cutters with oversized diameters would cause unwarrantable oscillation in high velocity which is not measure up with the safety requirment. To use oversized and overweighted cutters may not only damage the equipments but also cause serious injures to personnels. The cutters must be tested by balancing, the lopsided cutters will bring damage to the equipments by exquisite oscillation and noise.

④ When the width of the workpiece is wider than 200mm, the second cut-off saw should be set as a hogger (self-provided) so as to turn the unwanted timbers into dust in case of effecting milling cutters.

⑤ Check the locking state of cutter blocks before operating the machine. Let the machine run with nothing for at least 5 minutes to inspect running state, to get rid of obstructions in time.

⑥ Before feeding, the unused spindles shall be moved back to the position where cannot touch the workpieces.

⑦ Lay the timber onto the infeed table and push hardly to the guiding fence one by one.

⑧Only if custommer require , before leaving factory, the scoring saw and cut-off saw would be equipped according to the feeding direction, vertical milling saw would be equipped according to the anti-direction of feeding (indicate the rotation direction). If change rotation direction to process, must exchange the motors of saw spindles between left and right ,as well as milling spindles between left and right, if not, gland nuts will self-loosen , it will be very dangerous .

⑨ The cross section acreage of cables must tally with the requirement of chief current of the machine. Screw the tie-in of cables which is provided with the machine, other wires and lines must meet each other by number. The earthing wires must be ensured to be valid and credible. Make sure the power is off before opening the electric box.

⑩ Do not change speed when the machine is stopped, in case of causing damage to the machine.

⑾ Press emergency stop to examine and repair when trouble comes out.

⑿ Let the machine run with nothing to clean up the chips after processing

2. Operational requirements of machine tool

2.1 Environment required for machine tool

① Ambient temperature:5℃~40℃.

② Relative humidity: 30%~95%.

③ Height above sea level of machine use: max. 1000m.

④ Transportation and storage temperature: –25~55℃.

⑤ Do not use in the explosion situation

2.2 Power supply, Pneumatic power, Dust collecting and Lubrication

①Power supply

Three-phase alternating current, Frequency 50±1Hz, Voltage 380±10%V, total motor power 30.5kw.

②Dust collecting

Wind speed must be 30 – 34 m/s, ten dust-intakes of ID (Inner Diameter)Φ116mm. Wind costs about 9000m³/h 。

③Lubrication

Using all of high temperature lubrication above 120ºC, Ca-based Grease ZG-3 ,ZG-0, engine oil N46.

2.3 Sound inquiry

For a sound power level L_{WA} =76.3dB(measured value)

Associated uncertainty K=2dB

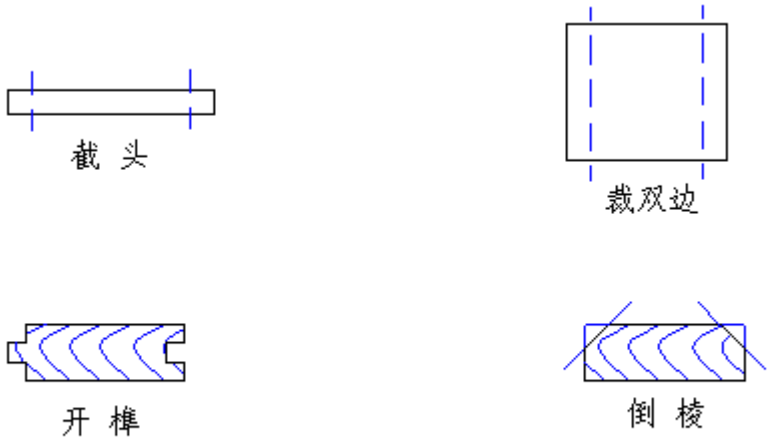
Measured in accordance with EN ISO 3744:1995

The figures quoted are emission levels and are not necessarily safe working levels.

Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of the work-force include the characteristics of the work room, the other sources of noise etc.i.e. the number of machines and other adjacent processes. Also the permissible exposure level can vary from country to country. This information, however, will enable the machine to make a better evaluation of the hazard and risk.

3. Main purpose and feature of machine tool

Combining the functions of sawing together with milling, this kind of machine fits most of purposes. It is specialized applying for multi-working, such as locating, fixing size by truncation , cutting, angle-truncate, tenoning and milling the plane and so on. This machine tool processes max. length of 3000mm and processes two sides of wood synchronously, also processes the wider sizes parts such as door or window frames, so these kinds of machine tool are favorable using in compound floor, door and window frames, real wood furniture and so on. Some examples please see (Figure 1)



（图1）

Main Feature：

（1） Feeding chain belt adopts high precision casting, the chain boards have precision supporting and guiding on the two sides and the vertical position. It can reduce the noise and wear, running smoothly and can keep precise synchronous after long time using. The feeding adopts stepless variable to feed which has strong suitability and increase the production efficiency.

（2） The working surface of feeding chain belt and “⊥”type pressure belt adopts good quality rubber material, which has high adhesion and reliable position located.

（3） The relative velocity between pressure belt and feeding chain belt can be adjusted by differential case. The speed of pressure belt can be faster or slower than the feeding speed so that it can insure the pressing power is enough no matter you use the front or rear position of the guides. This design can fit for processing different working size of timeber.

（4） Rotation speed of milling head 7500r/min，for special require will design according to the client inquiry， can be 6000 r/min。

（5） Each spindle has individual completely sliding board structure, it will interfere

when you use vertical,horizontal or rotation direction adjustment. It can adjust the status and position of spindle easily.

（6） The machine deploy sealed、silencer cover to prevent sawdust, reduce noice and improve the working place environment.

（7） Machine with light and nice structure。

4. Brief introduction of machine tool and main technical parameters

4.1 Brief introduction of machine tool

Components of this machine: lathe bed, scoring saw device, cut-off saw device, milling cutter device, feeding belt device, pressure belt device, main transmission device, active rack moving device, fixing fence, solid pole, gear case, cover, eletrical control and other assistant device, please see figure 2. The main configuration:

① Lathe bed: adopts rigid jointing, and 55 degrees of coattail guide for machining. The left side of lathe stand combines the fixed rack when the right side fixes the base of main transmission. Both sides of the stand have adjusting screws and supporting pads, which equals the supporting and levels the horizontal of the lathe bed

② Scoring saw device: The saw holder is installed onto the solid pole, it's builded to a double slide configuration by vertical slide, horizontal slide and rotator. Rotate the adjusting screw of corresponding slide to move the saw blade up or down, left or right and so as the angle adjusting. The saw blades can be installed directly onto the motor spindle when the inner diameter of the saw blade is ϕ25.4mm. For saw blades with inner diameter of ϕ40mm, some additional rings are required. And for shortest workpieces (250mm), not only the additional rings but also some special clamping nuts are required.

③ Cut-off saw device: Same as scoring saw divice but the motor spindle can be installed at one time with grooving saw and cut-of saw by adding some rings in the middle.

④ Milling cutter device: The cutter holder is installed onto the solid pole, it's configured to be a double slide configuration. Relative to the workpieces, the milling cutter can also be moved up or down, left or right and so as the angle adjusting.

⑤ Feeding belt device: Adopts double chain belt for synchronous continuous feeding. The active chain wheel drives chain belt on the guide rail while feeding. On each square of the chain belt there is wearable supporting composing the datum plane. Also there is a spring fence on every four squares of the chian belt, these spring fences of both chain belts can be set to synchronization to be an oriented-fence of workpieces. When the spring fence is needless, press and rotate it so as to hide tit under the supporting board.

⑥ Pressure belt device: This device is composed of case, driving and passive belt wheels, T-type pressure belt and groups of pressure wheels. The pressure belt is installed onto the coattail of the solid pole, and the position of height can be adjusted.

⑦ Main transmission device: Motor and gear case drives the main transmission shaft to run the two feeding belts synchronously.

⑧ Widen device: Motor and gear case drives the screw to move the active rack for width setting.

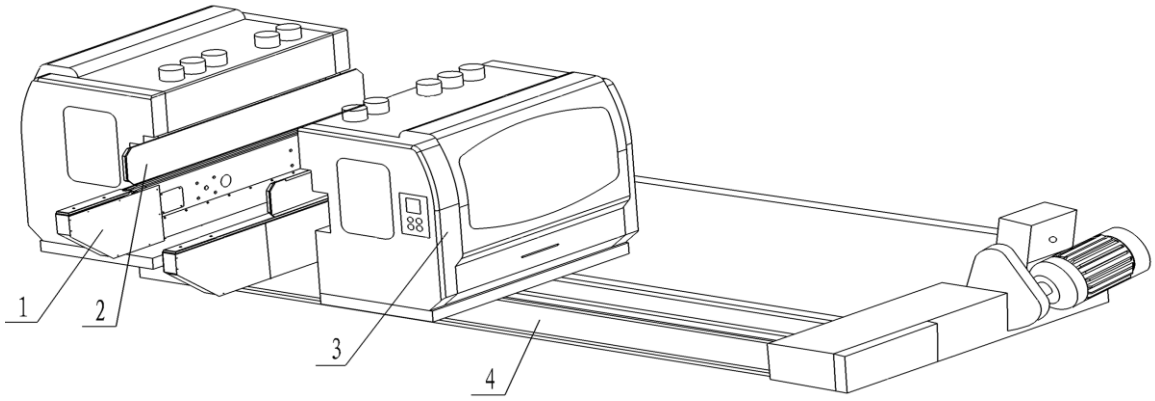
⑨ Difference speed case: made up by gear pair, gear shifter device and friction clutch .there are different speed between pressure belts and feeding belts by turn the difference speed case to different gears。

a Friction clutch completely loosen (or put the bar to the middle vertical position,but this is only recommend when you release the running or pressure belt temporary), the pressure belt doesn't have power, stay in the completely passive status.

b Friction clutch completely pressing or moderate pressing. Both can get the speed faster (2.5～3%) (put the bar to the inside location) or slower (2.5～3%) (put the bar outside location)than the chain board.

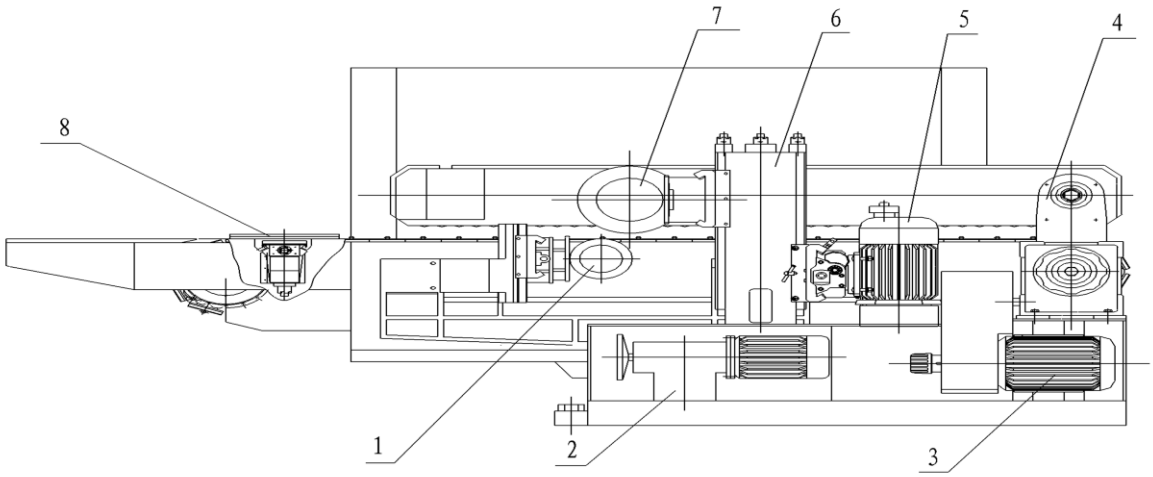
When the friction clutch completely pressing without any sliding,when it is unloading, the speed of pressure belt is completely decided by the design speed itself. It depends on the spin degree between pressure belt and pulley.

When the friction clutch moderate pressing,there's some sliding exist. At this moment,there's not any relative movement between pressure belt and the timber. But there's some forward power pushing the timber go forward or backward in order to make the timber always close to the fence.



1 — 送料带装置　2 — 压紧带装置　3 — 外罩　4 — 床身

（去掉外罩）



1—切槽锯装置　2　活动机架移动装置　3—主传动装置　4—差速箱
5—立铣刀装置　6—立柱　7—切断锯装置　8—定位挡板

（Figure 2）

4.2 Main technical parameters

Table 2

Item			Unit	Technical parameters		
				RMD6030	RMD6025	RMD6020
Size of workpieces		length	mm	min=250	min=250	min=250
		thickness		max=3000	max=2500	max=2000
Size of workpieces		length	mm	min=5 max=85		
Tool size	Scoring saw	Outter diameter	mm	ϕ160～ϕ180		
		aperture	mm	min=ϕ25.4 max=ϕ40(adding pad)		
	Cut-off saw	Outter diameter	mm	ϕ250～ϕ300		
		aperture	mm	min=ϕ25.4 max=ϕ40		
	Thickness of sawblade		mm	1.4～3		
	Scoring saw	Rotate speed	mm	ϕ140～ϕ160		
		Motor power	mm	ϕ40		
		Max cutter length	mm	95		
		Max weight of cutter	kg	10		
Tools	Scoring saw	Rotate speed	r/min	2900		
		Motor power	kW(HP)	2×2.2(3HP)		
		Effective removal capacity horizontally	mm	120		
		Effective removal capacity vertically	mm	85		

		Effective rotating	degree	±90º	
	Cut-off saw	Rotate speed	r/min	2900	
		Motor power	kW(HP)	2×5.5(7.5HP)	
		Effective removal capacity horizontally	mm	120	
		Effective removal capacity vertically	mm	85	
		Effective rotating	degree	±90º	
	Milling cutter	Rotate speed	r/min	7500 (6000)	
		Motor power	kW(HP)	2×5.5(10HP)	
		Effective removal capacity horizontally	mm	120	
		Effective removal capacity vertically	mm	85	
		Effective rotating	degree	0 º～90º	
Feeding belt		Feeding speed	m/min	Stepeless	5.5~17.3
				Inverter	5~20（Optional）
		Motor power	kW(HP)	3(4HP)	
Pressure belt speed empty trunning (adjustable, two kinds)		Faster than feeding belt	%	2.5~3.0(fast)	
		Slower than feeding belt	%	2.5~3.0(slow)	
Moving part		Speed	m/min	1.4(may micro-adjus)	
		Motor power	kW(HP)	1.1(1.5HP)	

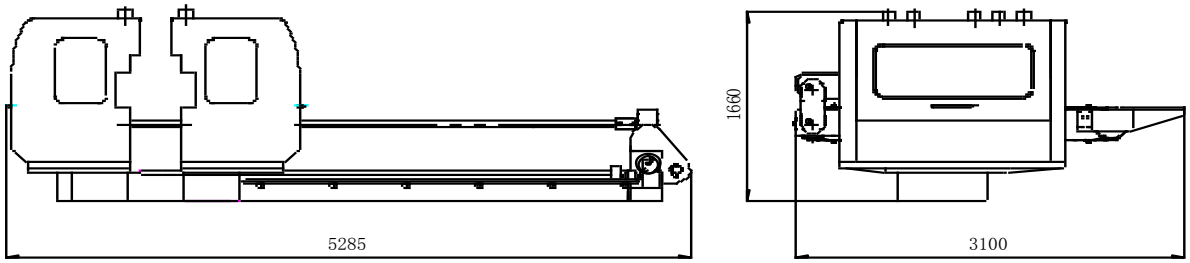
Total power	kW	30.5
ID&OD of dust pipe	mm	ϕ116/ϕ120

Note: The user must abide by making saws and milling heads(EN847-1) to configure cutters and set the speed for the chief shaft. When an overweight cutter block with oversized diameter operating at high speed is adopted, unallowable vibration will be caused, which is not in accordance with the safety requirements.

5. Overall size of machine tool

Overall size of machine Please see （Figure 3）

RMD6030



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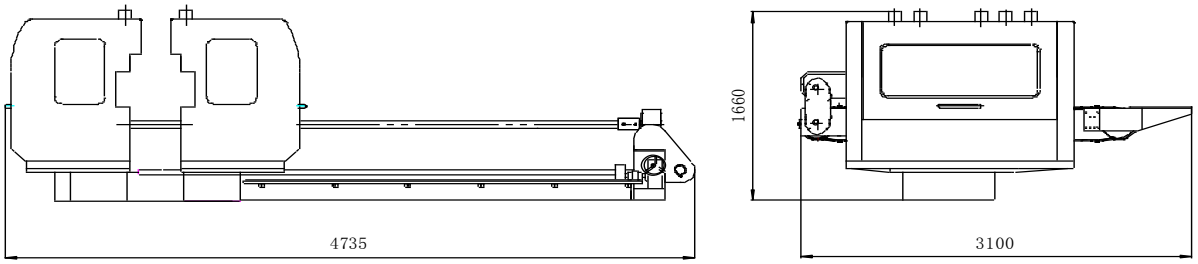

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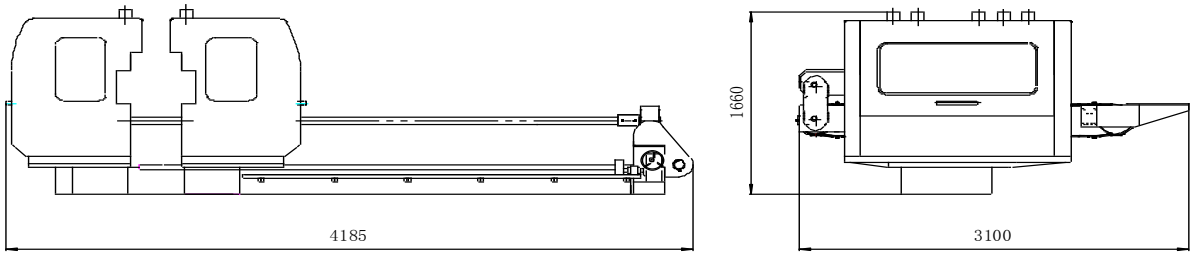


（Figure 3）

6. Packing,Portage and installation of machine tool

6.1 Packing and Portage of machine tool

① In transportation the machine must be disassembled as the ASSEMBLING DIAGRAM (figure 7)and use the placsic film to pack up,then put into the container for shipping. After the transportaion, the machine should be assembled according to the ASSEMBLING DIAGRAM.

② For big size of spare parts such as feeding chain belt, must follow the instruction and use professional hook tape to move. Use the tape to support two side of the chain belt to insure the parts won't slip off.

③ Please use special hook which is accompanied with the machine for the portage of machine. Move the active rack to an appropriate position and keep balance before lifting the entire machine, be careful of overturn. Please see (Figure 4）

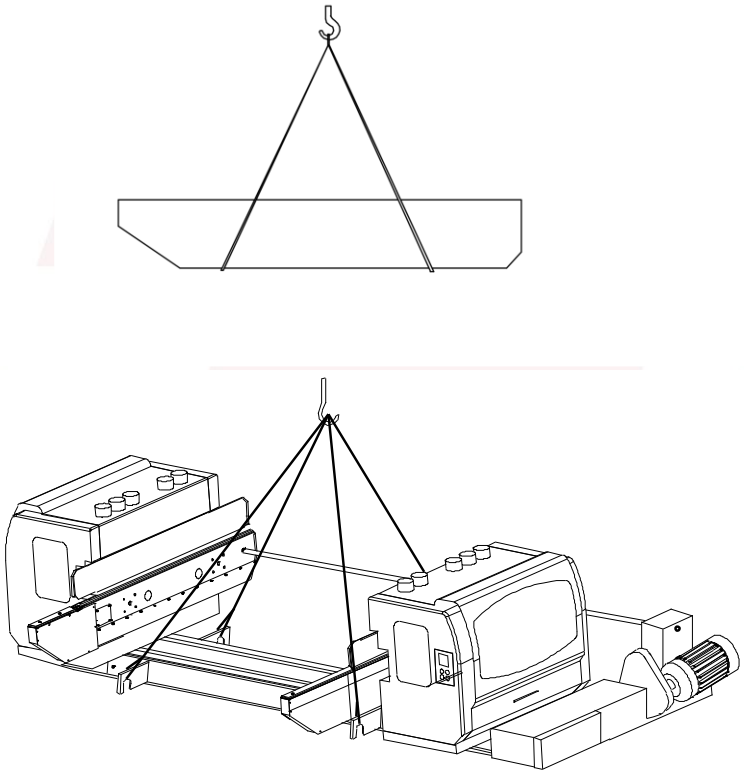


Figure 4

6.2 Disposal of machine tool

① The minimum distance from the infeed and outfeed end of the machine to the roadblock or the building must be enough to meet the space needed for processing the max size of workpieces. Please see （Figure 5）

② Do some protection of the cable from electric box to machine base. Be wary of trip over. According to the installation, you can set a steel board with “ ⎿⎾ ” symbol and paint with black and yellow (The color of guard). (Client self-provided)

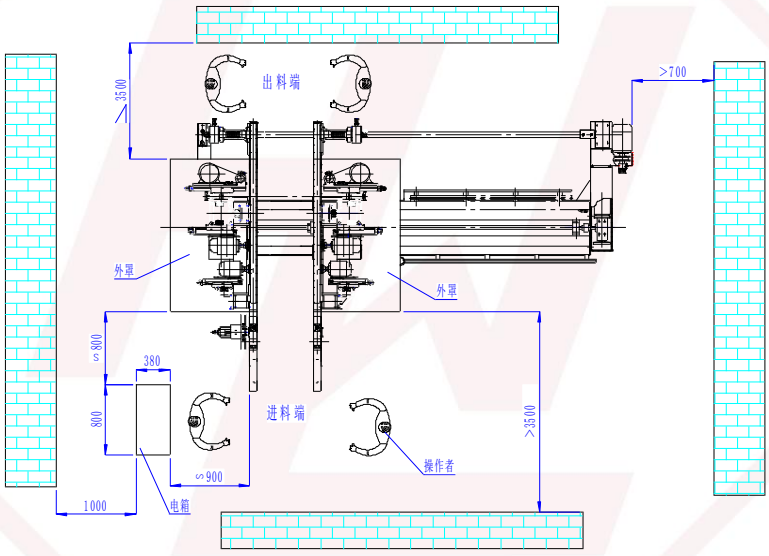


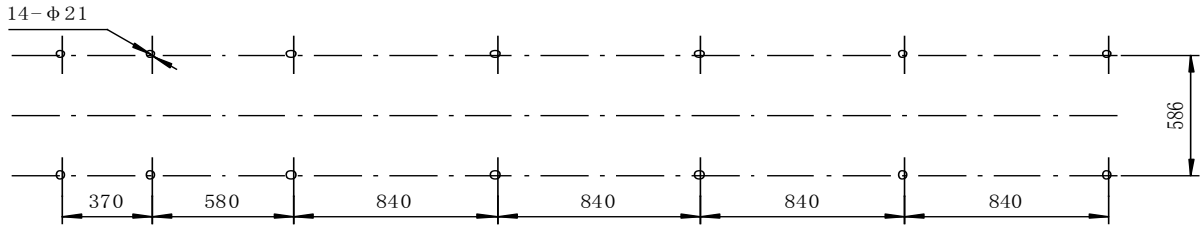
Figure 5

6.3 Installation of machine tool

6.3.1 Disposal figures of base-bolt

This machine does not need the base-bolts for installation and fixing generally. If it is demanded, installation dimension of base-bolts please see （Figure 6）

RMD6030



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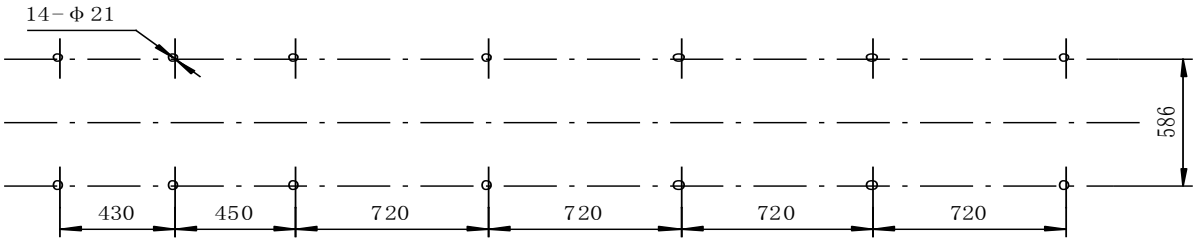

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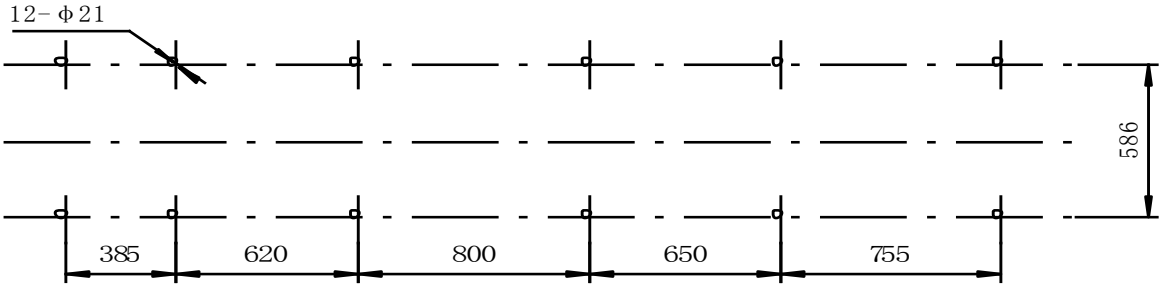


（Figure 6）

6.3.2 Parts installation of machine tool

Assemble spare parts disassembled in transportational process by (Figure 7) , assembling process as following :

① Unload the bolts which fix the outer panel 2 on left& right feeding belt 1 , from the feeding belts.

② Installe left & right feeding belts 1 on left & right surporting beams 13 .
Attention : tighten bolts after set up the first locating pins(Brush lubricating oil when set up locating pins),restore feeding belts to the original situs, ensure the two feeding belts parallel , in the same height and be perpendicular to track surface of machine tool.

③ Disassemble bearing block 7 and gear in the equational box before set up equational box 4 , then set up equational box 4 in linked bush 10 of feeding belts , set up the gear disassembled in the original situs, be attention to direction, do not set up in anti-direction. Inject enough lubricating grease to equational box before set up cover of equational box .

④ Move-off worm-gear box 5 ,penetrate trasmission shaft 6 (Clean trasmission shaft and feeding belt ,and inject a little bit of lubricating oil before be penetrated), set up bearing block 7 and gland bush 8.

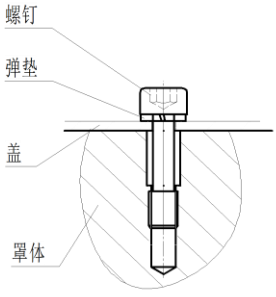
⑤ Set up worm-gear box 5 in the original situs, Tighten the fixed bolt after check the situs to be right.

⑥ According to priority , set up outer side board 2 , inner side board 3 , cover 9, feeding surport 11 , cover board 12 , funnel 14 , striker plate device 15 . when set up feeding surport, ensure the two surports on the same level surface and lower 0.5mm than feeding belt surface.

⑦ Set up manual oil pump in original situs on cover of feeding section, and link oil pipes .

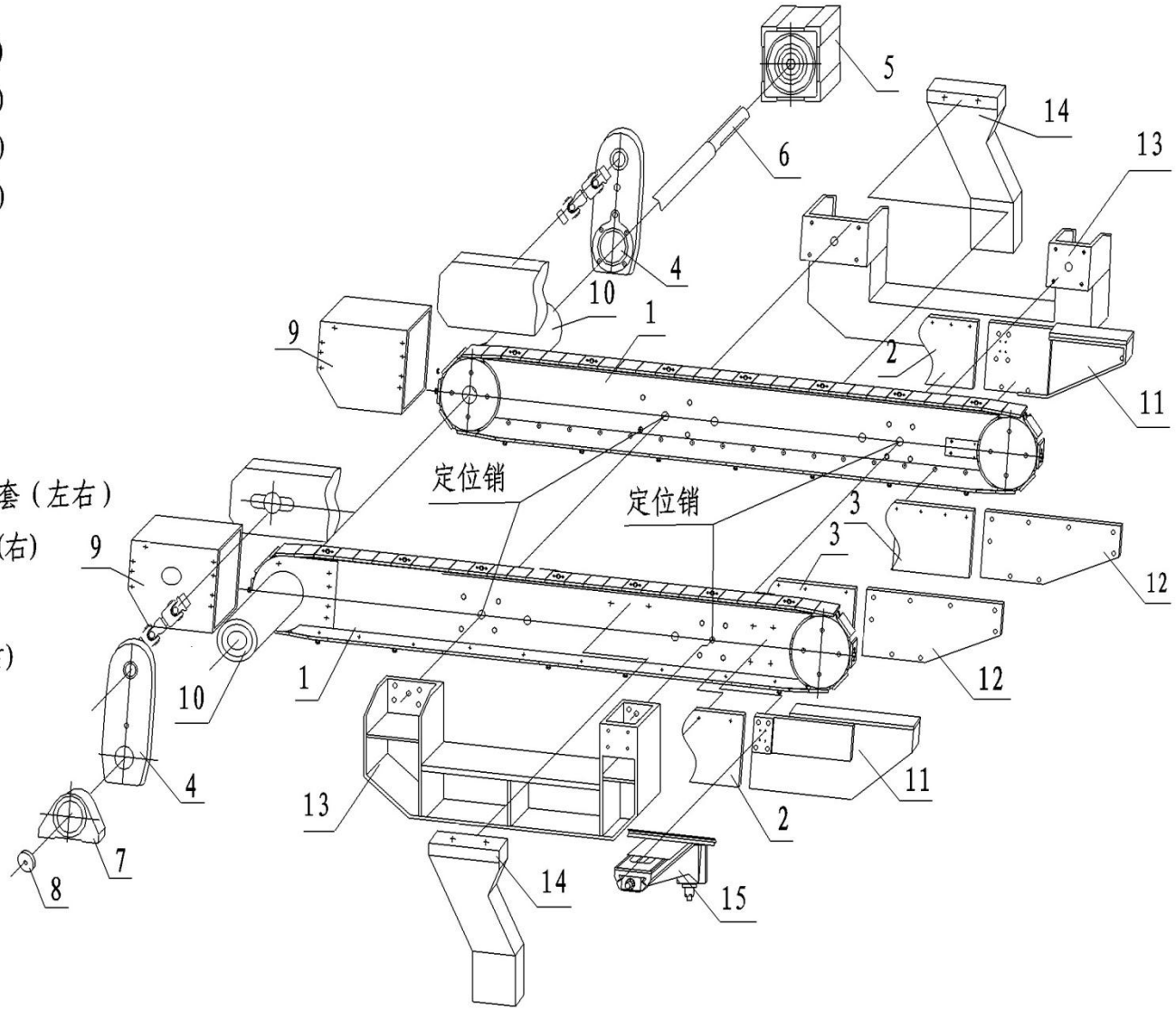
⑧ Fixable method of Pressure belt,belt cover as follow

When Use hexagon wrench to remove the nuts,loosen the nuts clockwise. When remove the cover,nuts and the cover is still connecting



压料带罩安装方式

1—送料带(左)(右)
2—外侧板(左)(右)
3—内侧板(左)(右)
4—差速箱(左)(右)
5—蜗轮箱
6—传动轴
7—轴承座
8—压盖
9—护罩(左)(右)
10　送料带连接轴套(左右)
11—进料支架(左)(右)
12—盖板(左)(右)
13—支承梁(左)(右)
14—漏斗(左)(右)
15—挡料板装置

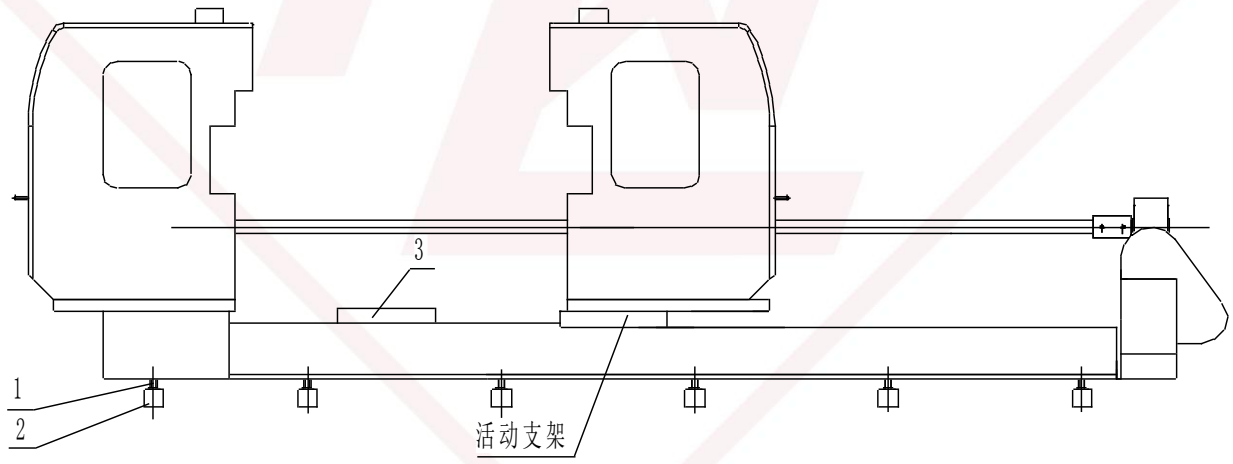


(图7)　拆装图

6.3.3 Leveling the machine tool

Please see(Figure 8) for levelling the machine tool.

① Place pad 2 under adhusting screw 1
② Move the active rack to the middle of lathe bed
③ Place a gradienter3 on the forepart of one side of guide rail
④ Adjust the lengthways level of one side of the lathe bed via screw1
⑤ Place gradienter3 onto the forepart of the other side of guide rail to adjust lengthways level of the other side in a same way.
⑥ To adjust the lengthways level of the second half part of the lathe bed in a same way
⑦ Move the active rack to its maximum width
⑧ Readjust the lengthways level
⑨ Place a standard board of 40mm onto the two guide rails then place the gradienter.
⑩ To adjust the horizontal level from three parts in length



(Figure 8)

7. Machine tool adjustment

7.1 Cutter block installation

Notes while installing cutter blocks:

① The blades should be in a same cutting circle while installing the blades. **Especially ensure that the nips of blades must be firmly installed and check each locknut carefully. Or else it would be very dangerous if the blades fly out.**

② Do not beat to lock or Loosen the locknut 5 while installing cutter blocks, for fear that damage of spindle and locknut would occur.

7.1.1 Installation of vertical milling cutters

Installation of vertical milling cutters olease see (Figure 9)

① Loose and remove lock nut 5 with spindle wrench 6, and take out locking washer 4 and cutter ring 3.

② Clean and oil the outter diameter of spindle 1, inner hole of cutter 2 and cutter ring 3, then install cutter 2 and cutter ring 3 onto the spindle.

③ Install locking washer 4 and lock nut 5, then lock the lock nut 5 with spindle wrench 5.

The usage of wrench for spindle nut:

Lock the spindle by small wrench 8 then rotate big wrench 7 to lock or loosen locknut 5. Please see (Figure 9)

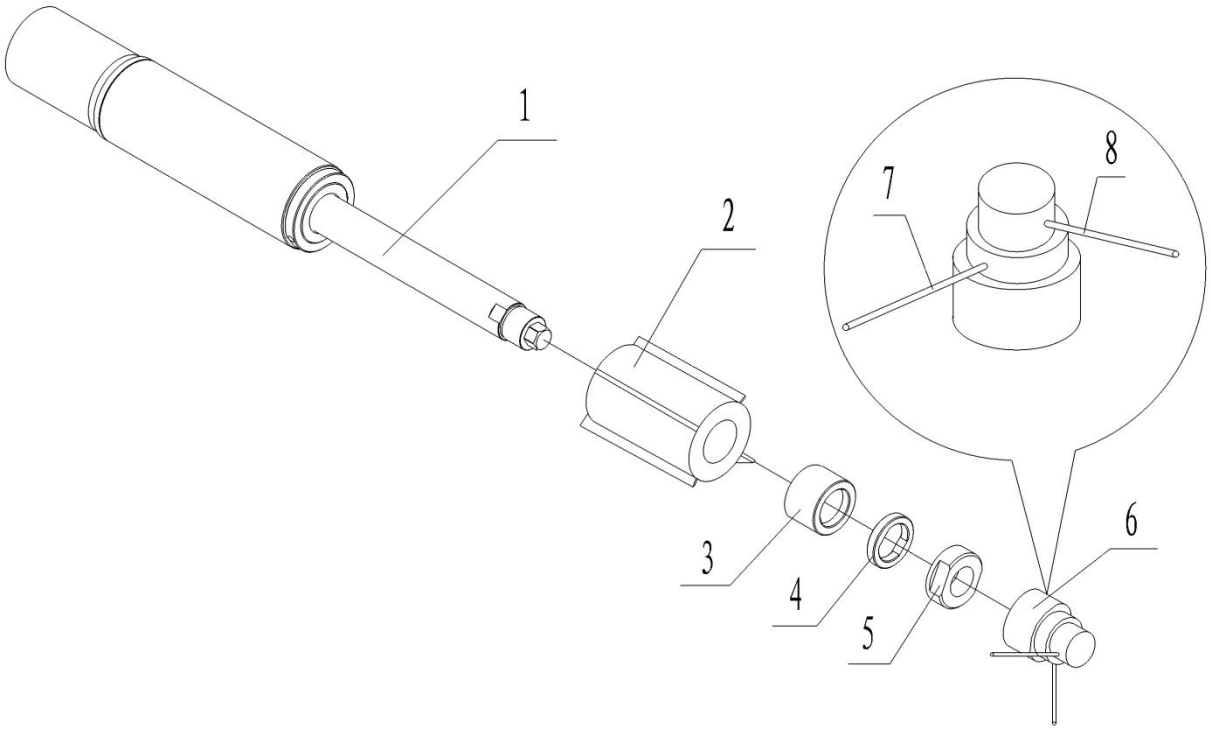
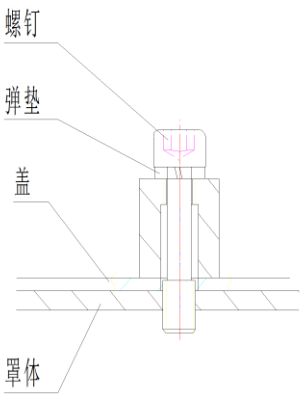


Figure 9

Instruction for removing The cover of milling head

See the picture on the right side for the fixable Way of the cover. When remove the cover, use the Hexagon wrench to loose the nuts. When the nut Is removed out from the cover system, the nut and The cover is still connected



刀罩盖安装方式

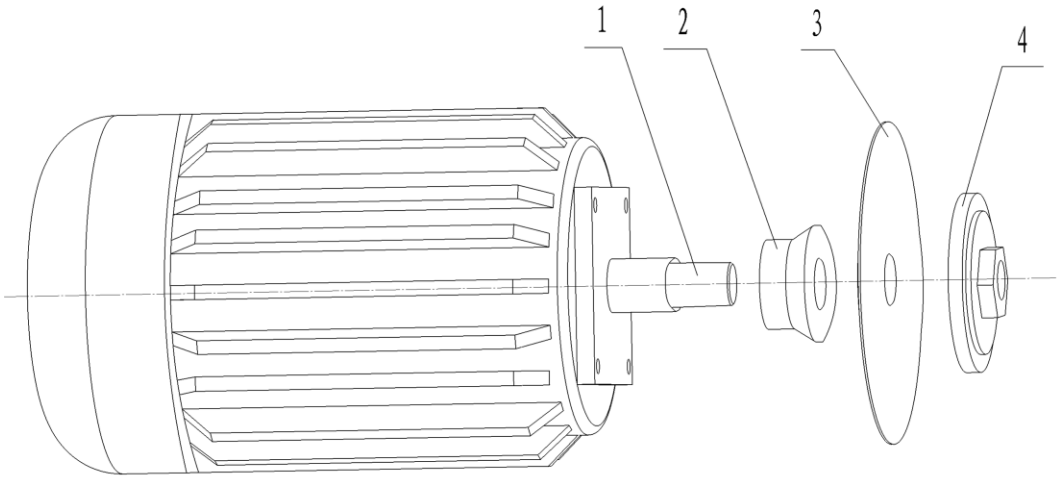
7.1.2 Installation of scoring saw

Installation of scoring saw please see (Figure 10)

① Loose and remove the lock nut 4 on the spindle, and take out the cutter holder 2.

② Clean and oil the outter diameter of spindle 1, inner hole of cutter 2, then install cutter holder 2 and scoring saw 3 onto the spindle.

③ Install and lock up the lock nut 4.



（Figure 10）

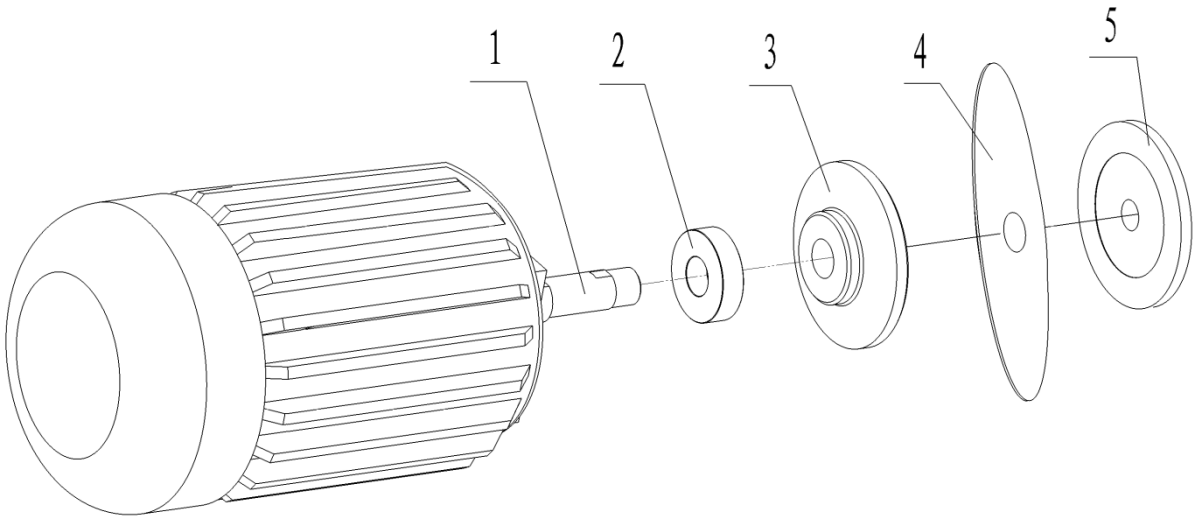
7.1.3 Installation of cut-off saw

Installation of cut-off saw please see (Figure 11)

④ Loose and remove the lock nut 5 on the spindle, and take out the cutter pad 2 and cutter holder 3.

⑤ Clean and oil the outter diameter of spindle 1, inner hole of cutter pad 2 and cutter holder 3, then install cutter pad 2, cutter holder 3 and cut-off saw 4 onto the spindle.

⑥ Install and lock up the lock nut 4.



（Figure 11）

7.2 Adjustment of digital indicator

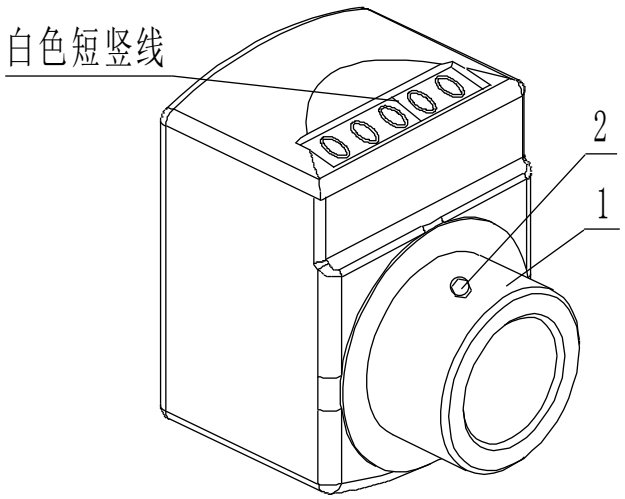
Steps of adjustment: see （Figure 12）

① Loosen the locknut 2 on the adjust ring 1 of digital indicator.

② Rotate the adjust ring 1 to the value in need. (Attention: The last rotate direction of digital indicator must be the same as the rotate direction of spindle.)

③ Lock the locknut 2.

④ The 1st number after the radix point line (white short upright line) changes “1” indicates the adjustable quantity is 0.1mm.



（Figure 12）

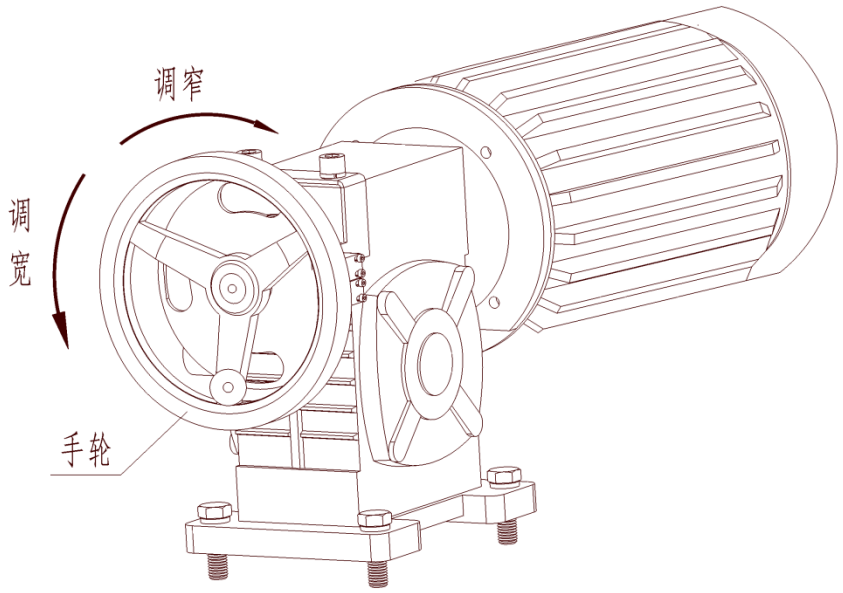
7.3 Position adjustment of moving part

7.3.1 Position adjustment of moving part-electrically

Position adjustment of moving part-electrically please see（13.4 Adjustment of working width）

7.3.2 Position adjustment of moving part-manually

Rotate the hand wheel clockwise, the active rack will move to the left, the distance between the two feeding belts would become narrower. Do it contrary and the distance would become wider. Please see (Figure 13).



（Figure 13）

7.4 Spindle Adjustment

Adjust saws and milling cutters according to below sequence:

① Adjust the tilting angle of spindle before adjusting the spindle elevation and horizontal movement.

② Start the spindles separately after adjustment, make sure that there are seconds spaces between the start of each spindle.

7.4.1 Adjustment of scoring saw

The tilting angle, the elevation and horizontal movement of scoring saw can be adjusted, the adjusting steps: please see (Figure 14)

Elevation of spindle:

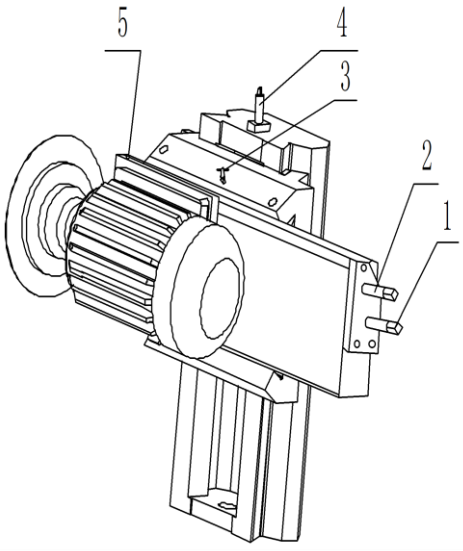
Loosen compacted bolt of coattail pad of the slide, rotate screw 4 with special tool and lift the spindle to the space in need, then lock up the compacted bolt. The efficient upright moving capacity of the spindle is 85mm

Horizontal movement of spindle:

Loosen compacted bolt 3 of coattail pad of the slide, rotate screw 1 with special tool and move the spindle to the space in need, then lock up the compacted bolt3 . The efficient level moving capacity of the spindle is 120mm.

Tilting angle adjustment of spindle:

Loosen compacted bolt 5 of worm wheel on the slide, rotate worm 2 with special tool and rotate the spindle to the position in need, then lock up the compacted bolt 5. The efficient angle of the spindle is ±90°.



(Figure 14)

Use manual of jumping saw (optional)

1. The setting of controlling component

1.1When in the position of “OFF” on the control panel for jumping saw, the jumping function is unavailable,the scoring saw is in horizontal condition. When in the position of “ON”,the jumping function is available.

1.2 There’s a sensor on the left side of the conveyor belt, it’s to control the jumping position of left and right scoring saw. This position can be adjusted by manual

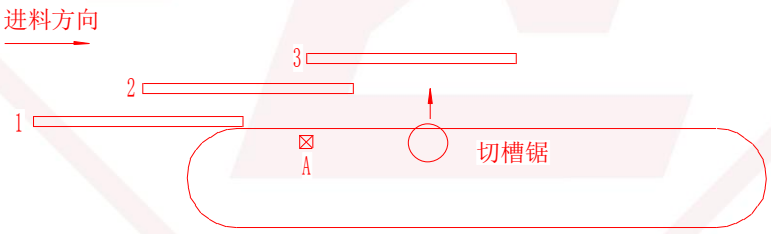
2. Control Principle of jumping saw

2.1 Turn the switch to the position of “ON” for jumping function

2.2 The jumping function of left scoring saw can be used only after the left scoring saw and feeding belt are started working. Otherwise it will be the horizontal scoring saw without jumping.

2.3 The jumping function of right scoring saw can be used only after the right scoring saw and feeding belt are started working. Otherwise it will be the horizontal scoring saw without jumping.

2.4 Motion principle and order see below:



Position of timber	Sensor A	cylinder	Motion of scoring saw
1	no induction	No jumping	Horizontal
2	induction	No jumping	Horizontal
3	No induction	jumping	Jumping scoring

Note:

1. When you need to adjust the position of sensor for jumping saw by manual, the whole machine must be stopped
2. The jumping time has already been set up before the machine leaves the factory. Usually no need to adjust any more.
3.

7.4.2 **Adjustment of cut-off saw**

The tilting angle, the elevation and horizontal movement of cut-off saw can be adjusted, the adjusting steps: please see(Figure 15)

Elevation of spindle:

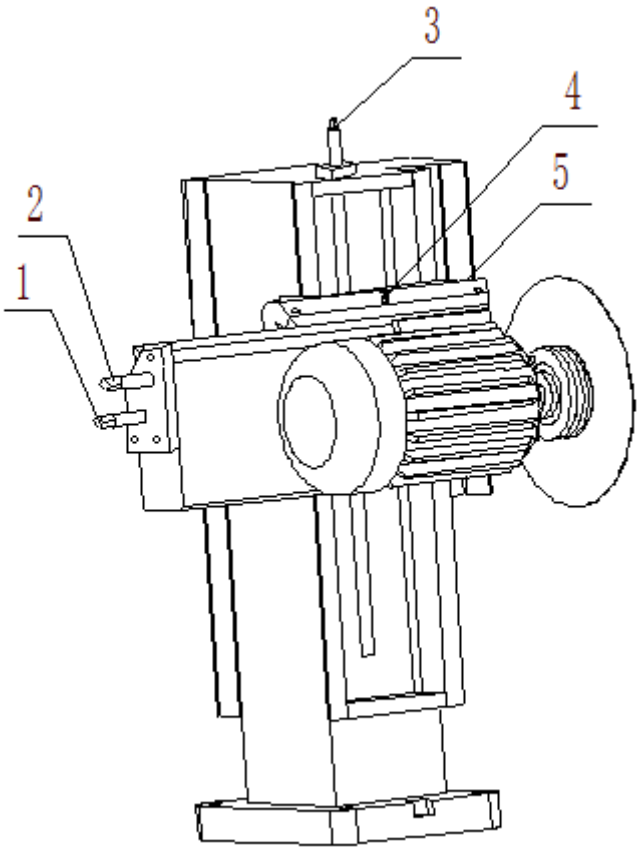
Loosen compacted bolt of coattail pad of the slide, rotate screw 3 with special tool and lift the spindle to the space in need, then lock up the compacted bolt. The efficient upright moving capacity of the spindle is 85mm.

Horizontal movement of spindle:

Loosen compacted bolt 4 of coattail pad of the slide, rotate screw 1 with special tool and move the spindle to the space in need, then lock up the compacted bolt 4 . The efficient level moving capacity of the spindle is 120mm.

Tilting angle adjustment of spindle:

Loosen compacted bolt 5 of worm wheel on the slide, rotate worm 2 with special tool and rotate the spindle to the position in need, then lock up the compacted bolt 5. The efficient angle of the spindle is ±90°.



（Figure 15）

7.4.3 Adjustment of milling cutter

The tilting angle, the elevation and horizontal movement of milling cutter can be adjusted, the adjusting steps: please see(Figure 16)

Elevation of spindle:

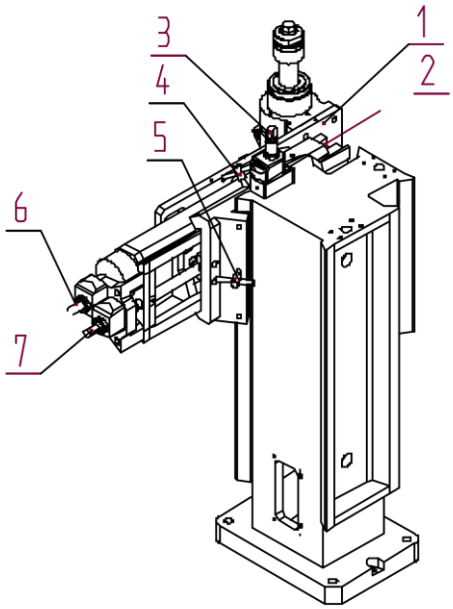
Loosen compacted bolt 5 of coattail pad of the slide, rotate screw 3 with special tool and lift the spindle to the space in need, then lock up the compacted bolt 5. The efficient upright moving capacity of the spindle is 85mm.

Horizontal movement of spindle:

Loosen compacted bolt 4 of coattail pad of the slide, rotate screw 7 with special tool and move the spindle to the space in need, then lock up the compacted bolt 4 . The efficient level moving capacity of the spindle is 120mm.

Tilting angle adjustment of spindle:

Loosen bolt 2, rotate worm 6 with special tool and rotate the fixed board of motor, when the spindle is on the position in need, lock up the bolt 2. The efficient angle of the spindle is from 0º to 90º.



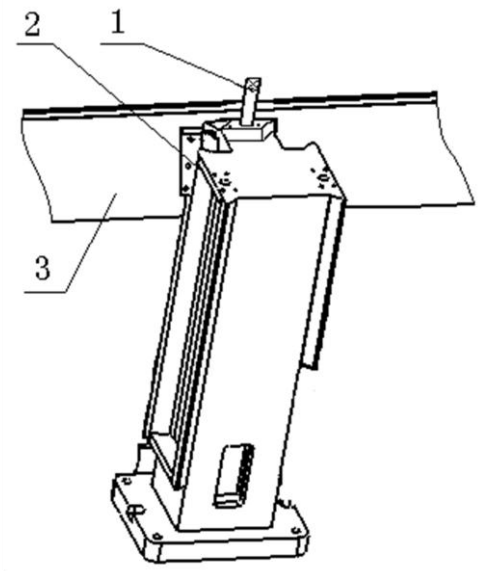
（Figure 16）

7.5 Adjustment of deflector device

Installation of Striker plate device should guarantee that the surface of striker plate is perpendicular to positioning face of spring pumper pin in chain board,and guarantee the end of working pieces don't touch cover when it is feeding. At other end of working piece, when the lengh extended feeding belt exceeds the space left by the outer cover， the machine will stop feeding while working piece touches the lengh limited switch in the feed opening of right cover, in this case, it only jog to feed back.

7.6 Height adjustment of pressure belt

To see figure 17 for height adjustment of pressure belt. Put working piece on feeding belt , loosen locking screw 2 of vertical planker of pressure belt,and adjustment screw mandrel 1 to fall pressure belt 3 to press against timber with mod pressing power, lock locking screw 2 of planker, jog to feed back. When belt stops running,check the heigh of limited switch in front-end of belt cover by pushing in the same thickness timber to see if it is fit, require the switch point is just slightly higher than top surface of sample timber .



（Figure 17）

7.7 Adjustment on shifting difference speed device

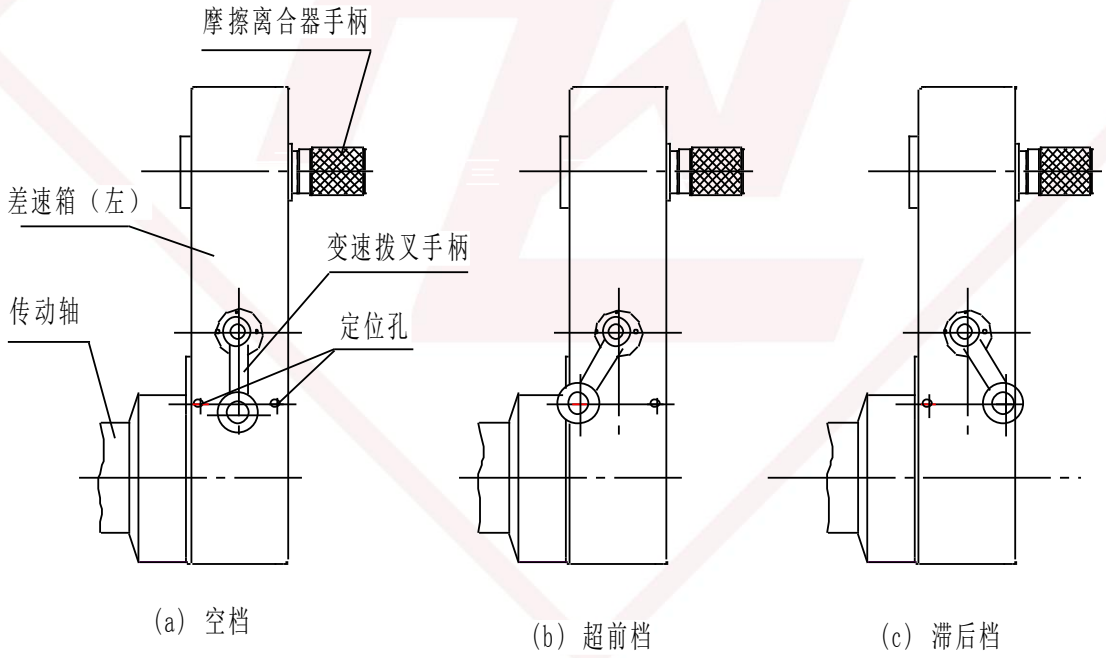
Friction clutch completely loosen (gear shifter handle is put to the middle vertical position , to see figure 18 (a), only recommend to be used in loosening temporarily pressure belt transmission), there are no movitive power for pressure belt, so it completely is in passive situs.

Put gear shift into gear： to see （Figure 18）

① Neutral position：put gear shifter handle to (a) neutral position in figure 18 .

② Advance position : put gear shifter handle to (b) advance position in figure 18 , and put pin into positioning hole.

③ Lag position：put gear shifter handle to (c) lag position in figure 18, and put pin into positioning hole.



（Figure 18）

7.8 Slow and fast adjustment on the pressure belt

④ According to specification & size of working pieces, determine use front side or back side of chain belt spring pumper pin (guiding rule) to feed . If position by front side of guiding rule , select lag position of pressure belt, put gear shifter handle to (c) lag position in figure 18, until pin insert into positioning hole. If position by back side of guiding rule, put gear shifter handle to (b) advance position in figure 18 , until pin insert into positioning hole.

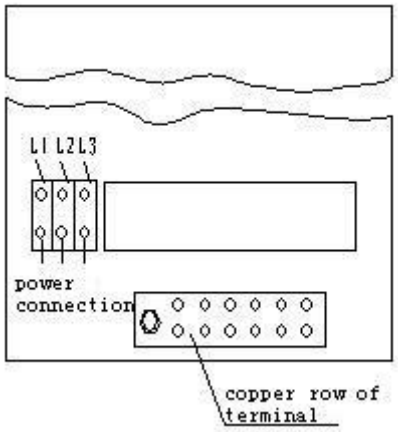
8. Test run of machine tool

8.1 Electric test run of machine tool

① Check the insulated resistance of electric equipment before the 1st electrify. This can only be done by qualified electrician.

② According to the power on the brand and the attached technical requirement of electric principle, select correspond cross-sectional area (16 $mm^{2)}$ of three-phase four-conductor cable.

③ Power supply cable goes throught from Pg29 of the bottom of electric box. Let cables L1, L2, L3 meet the homonymous terminals on the left in the electric box. Protected earthing will meet the bottom-left terminals of the electric box. Please see (Figure 19)



（Figure 19）

④ Check whether the switches of power supply controlled, branched breaker are in the position of closing. Check whether the limit switches, emmergency stops, protected cover switches are in the normal position. Shut the door of electric box and close the main switch QF0 of power supply, the power indicator of control pannel lights.

⑤ Inspect if the rotate directions of spindle and feeding wheels are right, otherwise exchange any two of the three cables. **This operation can only be carried out by qualified electrician.**

8.2 Dust-collection

The wind speed should be 30-34m/s to collect all the dust. For less dusts, the wind speed can be reduced.

8.3 Test run

Start the machine after the steps of 8.1～8.2 are finished, start the machine, feed 20×90×(800～900) or 20×500×(600～800) wood-blank in, measure its dimension after processing and further check digits indicated on all the digital indictators so as to adjust the position of each spindle.

9. Lubrication and maintenance

9.1 Lubrication of machine tool

table 3

No.	Lubricated Part(s)	Lubricant	Lubricating times	**Gas methods**
1	Chain belt spindle	machine oil N46	Twice a week	Oil gun
2	Pin roll of pressure wheel	machine oil N46	Twice a week	Oil gun
3	Fixed board of vertical shaft	machine oil N46	Once a week	Oil gun
4	Fixed board of each planker screw	machine oil N46	Once a week	Oil gun
5	Worm and gear section of planker	Ca-based grease ZG-3	Once a week	Oil gun
6	Rack swallow board	Machine oil N46	Twice a week	Oil gun
7	Equational box	Ca-based gease ZG-3		inject
8	Speed reducer of Mobilizable rack	Worm & gear oil L-CKE320	First time to change gease when 500h after running, 1 time per two years later	Change gease
9	Equational box for main transmission	Worm & gear oil L-CKE320	First time to change gease when 500h after running, 1 time per two years later	Change gease
10	Main trasmission shaft	Machine oil N46	Every shift	To smear

11	Bearing in the milling cutter	High speed lubrication gease with resisting high temperature 120ºC and more	Every 3～6months	Change gease

Data for lubricants：

1. Lubricating oil

	Movement viscosity mm^2/s	Opening ℃ not lower than	Solidifying ℃ not higher than
N46 mechanical oil	41.4~50.6	180	-10
N460 burden gear oil	414~506	200	-8

2.Greese

	Drop point ℃	Taper $^1/_{10mm}$
ZG-3	≮90	220~250

9.2 Maintenance and maintain of macine tool

9.2.1 Main point of maintenance

The maintenance of machine tool must be checked termly to ensure the normal work of machine tool. The main point of maintenance please see (Table 4)

Table 4

No.	Maintained point	Checked period (hour)	Work of inspection and maintenance
1	Belt	Once a shift	Inspection
2	Emergency~stop buttons	80	Function inspection
3	All switches	80	Function inspection
4	Safety lock	80	Function inspection
5	Brake system	80	Function inspection

9.2.2 Daily maintenance

① There are lubrication points in every chain spindle, must insist on gasing to keep locomotor flexibility of chain link.

② Regularly add enough lubricating oil and gease to every lubricating points in table 3 .

③ When rubber belt on the chain plate drops off, firstly clean and degrease the joint surface, then splice it with adhesive “LuoTai 495” , grind rubber belt after spliced firmly to refresh its planeness .

④ The tightness of vertical milling unit plate belt should be proper, the pressure belt should have elastance after adjusted , with tensor controled in 0.6%~0.8% .

⑤ Check if the CAVEX seeps,and oil level . it should be injected oil when oil level is under oil immersion lens .

⑥ Regularly check the power towing hawser and cable if them are weared , if so ,it should be maintainced in time .

⑦ Occationaly check emergency stop button if they work .

⑧ Regularly check electric components if they are damaged and creepage.

10. General troubles and trouble-shooting methods

10.1 Troubles and trouble-shooting methods

Table 5

No.	Troubles	Possible causes	Trouble-shooting method
1	chain belt do not run placidly	① Check if there are sundries or wooden chipers silting up the slide rail. ② check if the spring flange of bearing has loosed.	① Clean up the sundries 。 ② change the spring frange。
2	The two chain belts do not run **Synchronously**	Check if the regulation bolts of the regulation plate loose。	Adjust the regulation plate to make the two chain belts run synchronously 。
3	fiducial slide—spring pin can not bound	① check if it is stucked by sundries. ② check if the surface of pins has rust。	① clean up the sundries 。 ② clean off the rust.and grease some lubricating oil。
4	When the spindle rotate, it cause tremor and off-normal voice.	① check if the cutter balances. ② check if the bearing runs well 。	① test the cutter to balance。 ② change the bearing.

10.2 Trouble shooting methods of stucking workpiece and cutters

Since workpiece has some flaw itself and the shaft of cutter will not be sharp after long time using. These factor will lead the workpiece or the cutters stucked and doesn't work. In case this problem happen, follow the below operating steps:

a Operator must press the emergency button at once to stop the cutter and feeding chain belt running.

b Open the cover after the cutter stop completely, use the wrench to adjust the thread pole of the pressure belt (see figure 17). Lift the pressure belt a little higher so that the pressure belt doesn't touch the workpiece completely.

c Wear grooves, use wooden bars to kick out the wood dust on the cutter (be careful of hand hurting). Then take out the workpiece from the pressure belt.

d Adjust the machine according to 7.6 pressure belt height setting to resume the production.

10.3 Troubles and trouble-shooting methods of electric power

Table 6

No.	Troubles	Possible causes	Trouble-shooting method
1	Machine can not be started	① No power supplied ② "Emergency stop" button has been pressed down ③ Air-switch of the motor is cut off ④ Limit switch at feed entrance is pressed down or connect badly ⑤ The cover is opened	① Check the voltage ② Restore the "Emergency stop" button ③ Check if there is overload short circuit ④ Reset or change limit switch ⑤ Close the cover.
2	The motor for cutter-shaft can not be started or continuous feed can not be operated	① Selection swith（SA2）selected to run or not ② Selection switch（SA1）selected to main or sub	① Check SA2 ② Check SA1

11. List of generally replaced standard parts

11.1Bearings

Table 7

Name	Model	Assembled part
thrust ball bearing	51104	Bar of vertical staff
Deep slot bearing with dust cover	6205-Z	Gear box
Deep slot bearing with hermetically sealed cover	6206-2RS	Drived wheel of pressure belt
Deep slot bearing with hermetically sealed cover	6306-2RS	Driven wheel of pressure belt
angular contact ball bearing	7007C	Staff of movable rack
Deep slot bearing with dust cover	6009-2Z	Vertical milling cutter shaft
Deep slot bearing with hermetically sealed cover	6207-2RS	Vertical milling cutter shaft
Deep slot bearing with hermetically sealed cover	6212-2RS	Driven wheel of feeding belt
Deep slot bearing with dust cover	6218-2Z	Linked-shaft of feeding belt
Deep slot bearing with dust cover	6220-2Z	Linked-shaft of feeding belt
Deep slot bearing with dust cover	6004-RS	Wheel for jacking slack

Bearing with base	UCFL206	Staff of movable rack
self-aligning ball bearing	2211	Passive part of transmission shaft

11.2 Belt:

Table 8

Spindle speed	**Motor power of Vertical milling cutter**	**Frequency**	**Specification (inner girth×width×thickness) (㎜)**	**Quantity (pc/set)**	**Remark**
7500r/min	4kW	50 HZ	3×50×1060	2	
7500r/min	5.5kW、7.5kW	50 HZ	3×63×1145	2	
		60 HZ	3×63×1160	2	

note：vertical milling saw drived by high-speed and toroid jinlun multiple belt.

11.3 Clutch friction pad

The friction sheet which is used to drive torque in gear-box is asbestos friction sheet.

Φ70, δ=5(≮4), JC24~66, 4 pcs for each set.

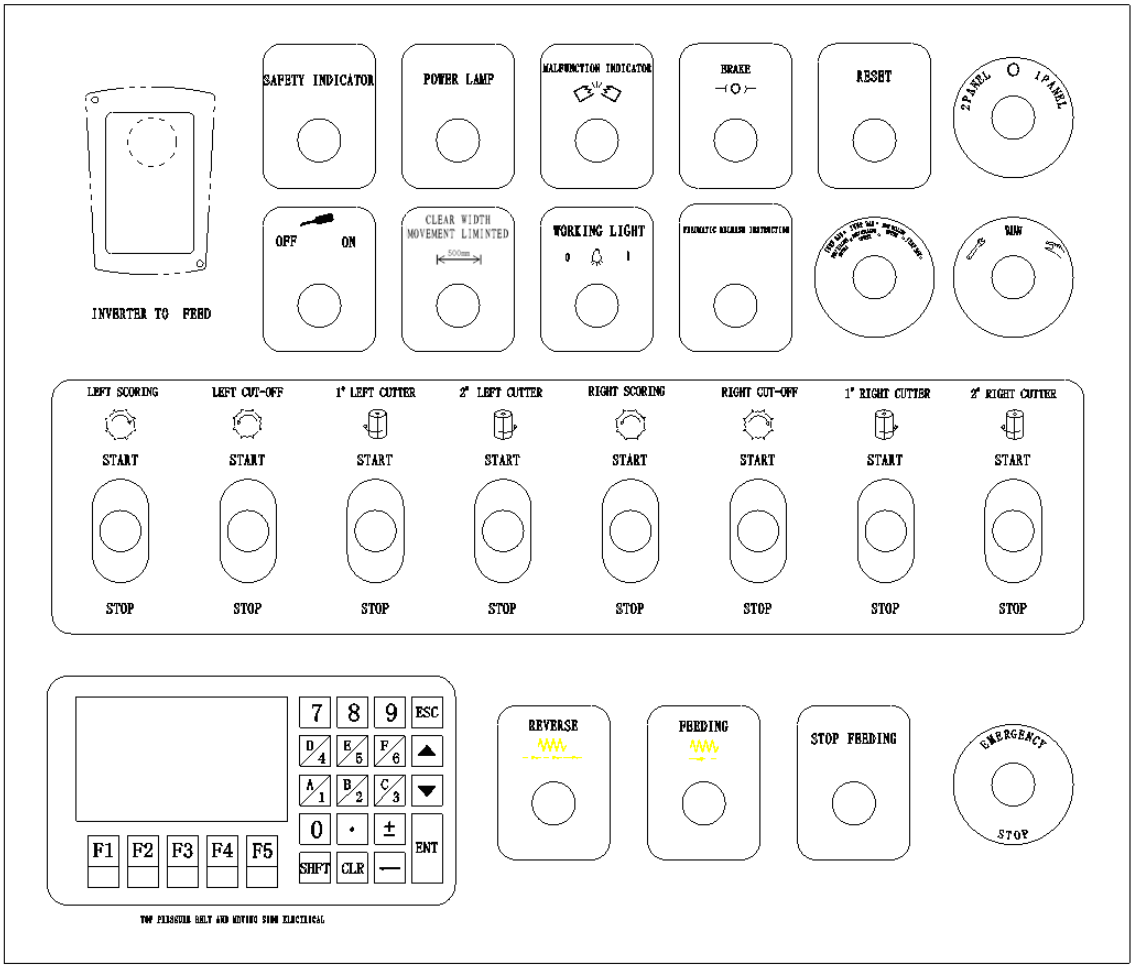
11.4 Electric parts

Name	Function	Q'ty	Install place
Limit switch	XCE-145, 5A 250VAC	5	board of infeed side,moveable part
Limit switch	XCE-154, 5A 250VAC	2	Infeed side of cover
Fuse	**1A**	1	Electic box
Fuse	**2A**	6	Electic box
Fuse	4A	1	Electic box
Fuse	6A	1	Electic box

12. Function introductions of control panel

12.1 Function introduction of main control panel

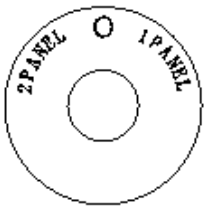
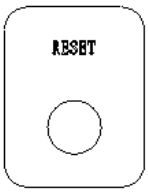
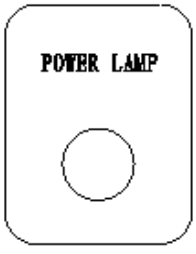
Control Panel:

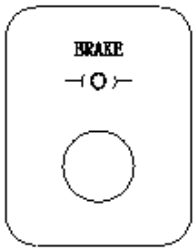
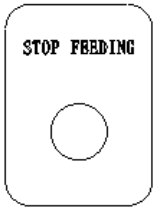
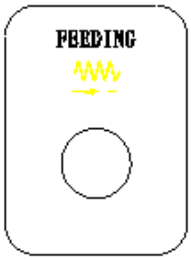


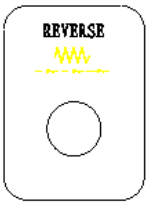
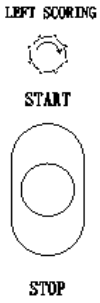
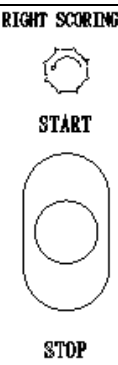
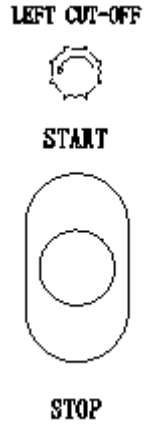
(Figure 20)

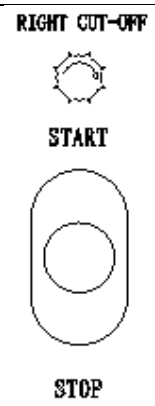
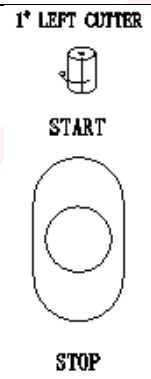
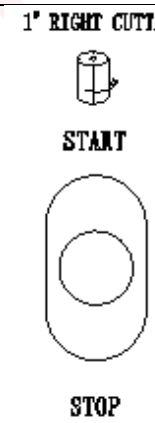
12.2 Introductions of switch function on the main control panel

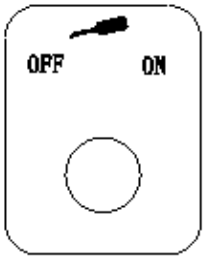
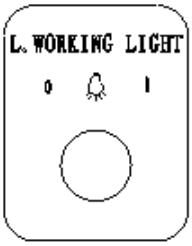
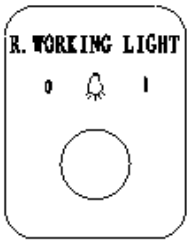
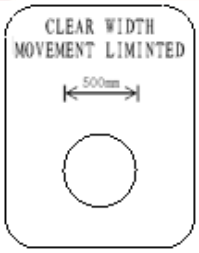
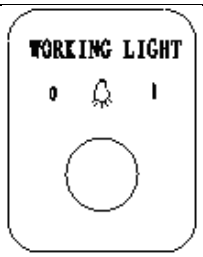
Table 9

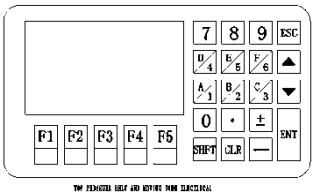
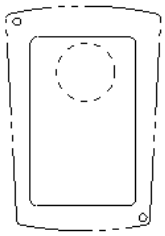
No.	Switch indicator	Switch name	Switch function
1		Selection of main control panel and sub-control panel	Switch to the “panel2” and operates by the main control panel. Switch to the “panel1” contrarily and operates by the sub-control panel.
2		Selection of test and run	Switch to “run”, the equipment will be stand by for running ; Switch to“ ”, the equipment will be stand by for testing ; Switch to “ ”, the equipment will be stand by for manul adjusting
3		Emergency stop button	Press this button to stop working when any accident or abnormal state occurs.
4		Reset button	Press this button for all kinds of operation. When press emergency stop button, this light is off,then you cannot make any operation
5		Power indicator	Joint master switch,while light is on, power is put through.

No.	Switch indicator	Switch name	Switch function
6		Malfunction indicatior	when any of the motors is overloaded or circuit shorts and the working would be stopped.
7		Brake indicator	this light will on when using feeding brake or width adjusting brake
8		Safety indicator	Press emergency stop button, after 46 seconds, this light is on, then you can open the cover for all kinds operation
9		Stop feeding button	Press this button and stop the feeding.
10		Start-up feeding button	Press this button and feeds continiously or by jogging.

No.	Switch indicator	Switch name	Switch function
11		Jogging reverse	Press the button for jogging reverse
12		Left scoring saw starts Left scoring saw stops	Press START or STOP buttons to start or stop the left scoring saw.
13		Right scoring saw starts Right scoring saw stops	Press START or STOP buttons to start or stop the right scoring saw.
14		Left cut-off saw starts Left cut-off saw stops	Press START or STOP buttons to start or stop the left cut-off saw.

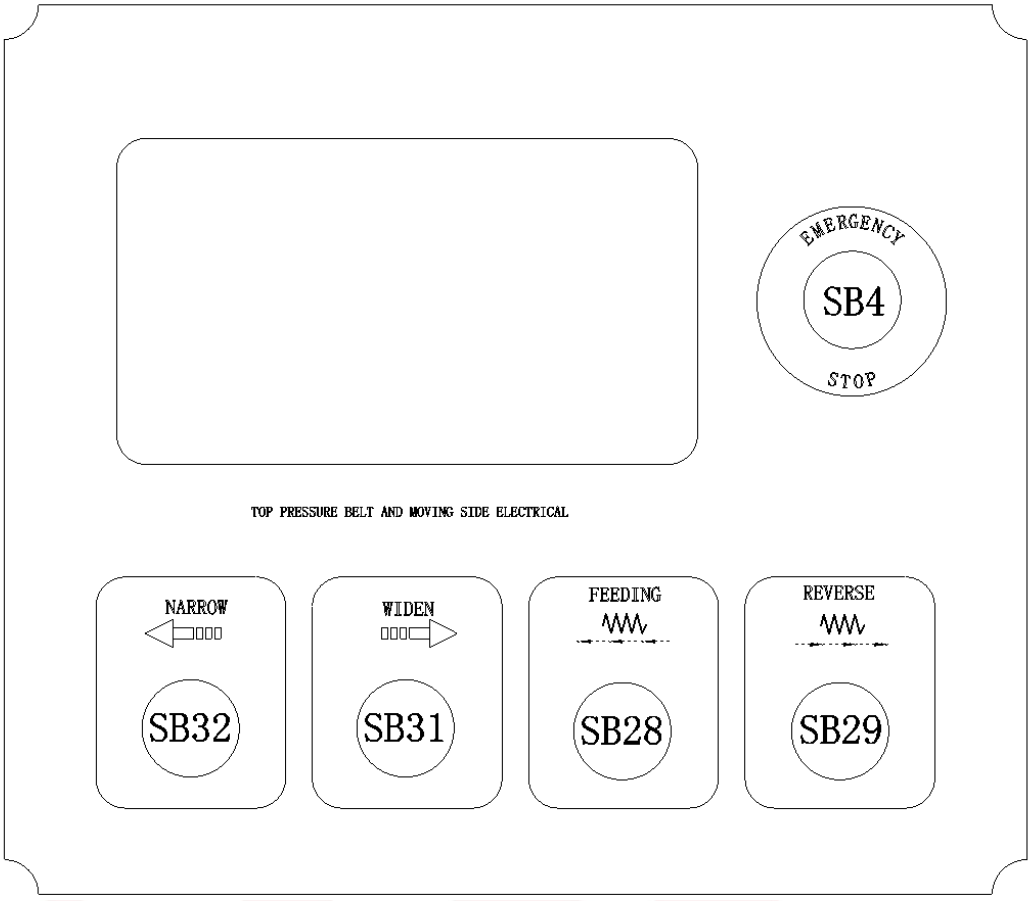
No.	Switch indicator	Switch name	Switch function
15		Right cut-off saw starts Right cut-off saw stops	Press START or STOP buttons to start or stop the right cut-off saw.
16		Left milling cutter starts Left milling cutter stops	Press START or STOP buttons to start or stop the left milling cutter.
17		Right milling cutter starts Right milling cutter stops	Press START or STOP buttons to start or stop the right milling cutter.

No.	Switch indicator	Switch name	Switch function
18		auto lubrication selective switch	Turn to position “ON”, electric oil pump is working. Turn to “OFF”,electric oil pump stop working
19		Left working light switch	Turn to “1”, the light on. Turn to “0”,the light off
20		Right working light switch	Turn to “1”, the light on. Turn to “0”,the light off
21		Clear width movement limited	When width reach to 500mm from the limited position, press this button for width adjustment. When the position is near 500mm, firstly press this button for width auto adjustment
22		Working light selection	Turn to :1”,the working light on. Turn to “0”,the light off

23		Text displayer	See 15 <<user manual of text display>>
24		VF control panel	Set and show the parameter of feeding motor to adjust the right feeding speed.

Note : the rotation direction of cutters takes “see from pivot bracket” as standard

12.3 Function introduction of multi-control box



（Figure 21）

12.4 Switch function introduction of multi-control box

Table 10

No.	Switch indicator	Switch name	Switch function
1		Feeding button	Press this button and feeds by touching.
2		Touch reversing button	Press this button to reverse the workpiece by touching.
3		Jogging narrow button	Press this butter to nerrow the width by jogging
4		Jogging widen button	Press this butter to widen the width by jogging
5		Emergency stop button	Press this button to stop working when any accident or abnormal state occurs.

13. Electrical control principle

13.1 Turn on the machine

Check before start up the machine if the limit switches and emergency buttons are under normal statu. Make sure the breakers are closed and shut off the door of electric box, rotate the main breaker to “1”, the power indicator lights stands for the machine is ready to run.

Attention : ① The main control panel and multi-control panel cannot work at the same time.

② The machine and electric control box must be earth unfailingly, and opens electric door only when the power is off. (Repair by professional is an exception)

13.2 Selection of test and run

There is selection switch SA2 of “test” and “run” on the control panel see (Figure 23),While turnning the switch to the “test” and opens the safety hood, the spindles cannot run but feeding, reverse or widen and narrowing by touching.

Turn the switch to “RUN” with spindles running (when there is spindle unused, at least left and right cut-off saws must be running) for continuous feeding. If the cover is opened, each spindle and feeding would be stopped

（Figure 23）

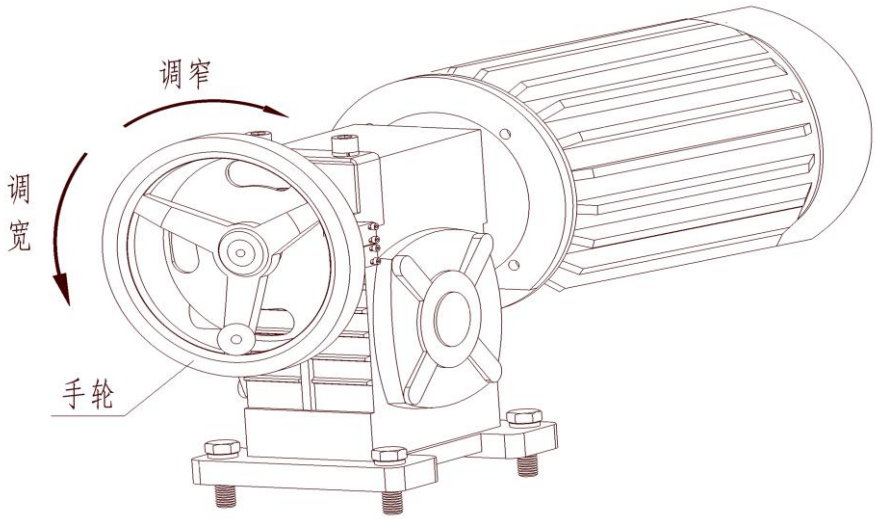
13.3 Selection of main panel and multi-control box

Selection switch SA1 possesses “sub” and “main”. Turn to “sub”and operates by the multi-control box. Turn to “main” and operates by the main panel. Please see (Figure 24).

13.4 Adjustment of working width

There’s a limit swith on the positon of 500mm. When the width move to the position within 500mm, you need to press the clear width movement limited button for width adjusting. When the position is near 500mm, firstly press the clear width movement limited button in order to make the auto-width adjustment (auto width adjustment please see 15).

Leave some safety distance at the max working length or min working length, there’s a protective switch at this distance. When adjust working width to the protective switch, the width setting stop moving. Then it needs manual setting on the micro-wheel of the gear box to reach the limit position. See figure 24.



（Figure 24）

According to the length requests of workpieces, there are two waus adjusting the working width:

① Press Touch narrow or widen button on the control panel or multi-control box (please see (Figure 25)) to achieve the narrow and widen.

（Figure 25）

② Close the cover, turn swich SA1 to “1SPANEL”, set the working width by the text displayer on the control panel :please see (Figure 26)

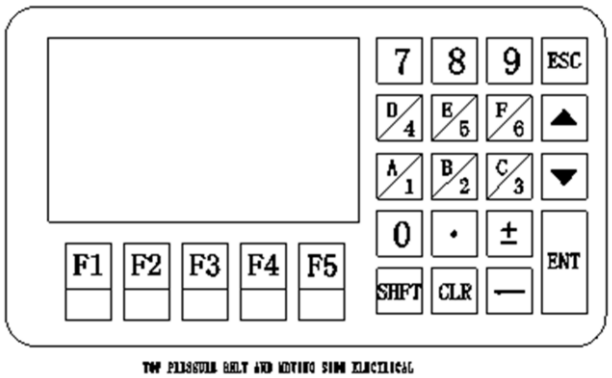


Figure 26

Note:

① No feeding or reversing can be operated while narrowing or widening.

② No narrowing or windening can be operated while feeding or reversing.

The relative capability and detailed operation please see the user manul “text dispaly” attached with this operation manual.

13.5 Control of feeding device

The feeding device is composed of touch feeding, reverse and continious feeding. Please see (Figure 27).

Shut the safety cover, under the “run” situation, press the “feeding” and feeding continiously. Press “stop feeding” and the feeding will be stopped.

Under the “test” situation, press the “feeding” on the main panel and feeding by touching. Press “reverse” and reverse by touching.

NOTE: ① Infeed and backfeed cannot run at the same time.

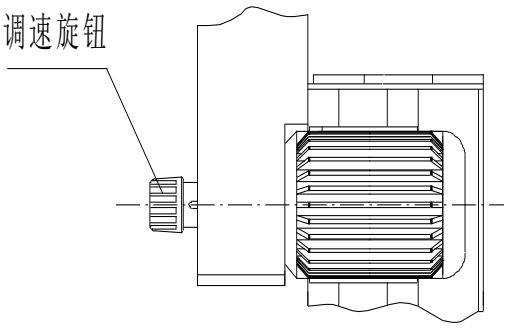
② Under “run” situation, feeding continiously only after the spindle runs (at least run the left and right cut-off saw).

③ When stop the operation, 1st stop the feeding, then the spindles.

Press any of the emergency stop button or corresponding stop buttons to stop feeding when there is emergency.

Figure 27

13.6 Control of feeding speed

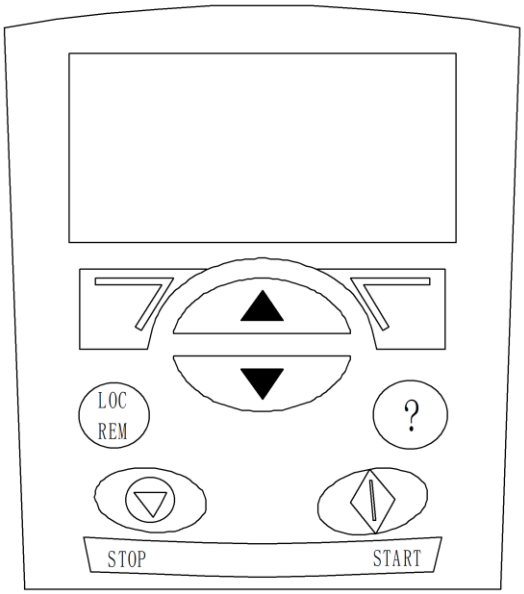


（Figure 28）

13.7 Speed adjustment of inverter (optional)

Inverter changes feeding speed by changing the frequency value of inverter. Operation of inverter : After the power is connected, press 7 until “parameter mode” shows. Here the middle of the screen will display “current value” of frequency, electricity and speed from top to bottom. The top right corner will display the “fixed value” of frequency. Press ▲ or ▼ to increase or decrease the frequency of inverter. (Attention: The “current value” would be 0 when the feeding motors stop and even changes the “fixed value”. Start the feeding motors and the “current value” would be the same as the “fixed value”.) please see (Figure 29).

Please see the manual attached with the machine for detail operations of inverter.



（Figure 29）

13.8 Start and stop of spindle

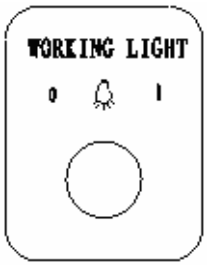
Press each start button of saw and milling cutters on the main control panel, the corresponding indicators light on and the spindles will start in sequence. Press stop buttons and the lights off. For manual start please space out for seconds.

Attention:

① Before operating the machine, adjust unused spindles depart from its working position.
② Continue feeding will be worked only after the spindle begin to work
③ Please stop the feeding before stopping the spindles.

13.9 Control of working lamp

There's a switch button to control the light inside the two sides cover. Turn to " | "the light on. Turn to "0"the light off. (see figure 30)



（Figure 30）

13.10 Open the cover

When the machine is working,the cover cannot be open. If you need to open the cover, must firstly press the emergency stop button. After 50 seconds the light is on then you can open the cover. At this time, all the spindle and continue feeding stops working, also cannot adjust the working width. If you need to restart the operation, close the cover and press the reset button.

13.11 Normal stop and emergency stop

Normal stop: Press "stop feeding" to stop the feeding device, then stop each spindle and the machine stops.

Emergency stop: Press any of the three emergency stop buttons (one is on the main control panel another is on the multi-control box in front of the machine, the third one is on the 2 hole control box at the outfeed), and the machine stops. Chain belt stops, each spindle stops and unable to start, also unable to feed or widen and narrow. To operate these functions, please restore the emergency stop button.

13.12 Limit control and place limit control

① The machine will stop feeding when the working thickness of the workpiece is overftepped the fixed arrange by touching the limit switch on the infeed deflector in front of the pressure belt.

② The adjusted position of the block fence must ensure that the infeed workpiece do not meet the cover. If it did meet, the limit switch there will stop the machine, only touch back feed can be operated.

③ There are 2 limit switches for the min and max working length. The machine will stop widening if any of these 2 limit switches is touched.

13.13 Action instructions

Table 11

		Main control panel operation						**Multi-control box operation**		
		Spindle runs	Continuous feeding	Feeding stops	Touch infeed	Touch backfeed	Widen narrow	Touch infeed	Touch backfeed	Widen narrow
Cover opened	Test	×	×	×	√	√	√	√	√	√
	Run	×	×	×	×	×	×	×	×	×
Cover closed	Test	√	×	×	√	√	√	√	√	√
	Run	√	√	√	×	√	√	×	√	√

Note: ”√” stands for run,”×” stands for stop。

Attention：CHANGE SPEED ONLY DURING OPERATION.

14. Function and installed location of limit switches

Table 12

NO.	Function	Quantity	Location
SQ6、SQ7	Limit of infeed	2	On the infeed deflector
SQ8	Length limit of infeed	1	Infeed of right cover
SQ4	Max. limit of working length	1	Moving part
SQ5	Min. limit of working length	1	Moving part
SQ51、SQ52	The spindles and continous feeding stop with the cover opened	2	By the gemel side of left and right safety covers

15:Operation manual for text display

15.1. Summary of the text display

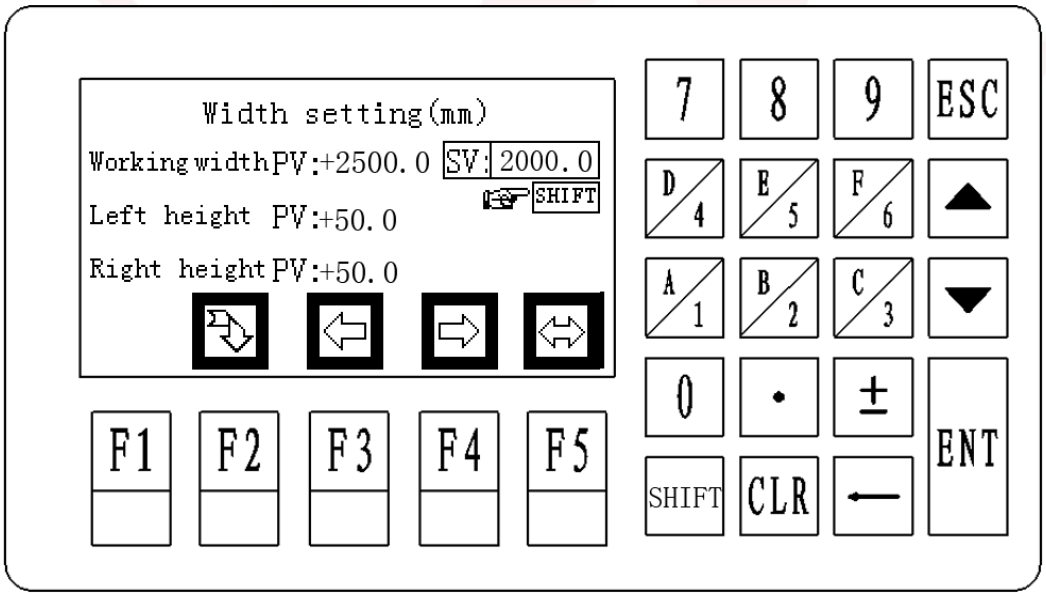
15.1.1 The operation includes ：1.working width adjustment ; 2.height of left pressure belt adjustment (optional) ; 3、height of right pressure belt adjustment (optional) ; 4、current value setting

15.1.2 The data setting panel will show up automatically when you set the data. The max and min data in the panel is the limit data.After finish setting,press【ENT】to go back to the previous interface.

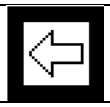
15.1.3 In the setting page of height and width,press 【F5】to start the auto setting function,the PLC system will begin setting according to the preset data automatically. When the setting data is “0”or is the current data,the auto setting function won’t work. When the auto setting function start,the motor doesn’t rotate or miss the signal of the motor, the PLC system will stop auto setting automatically.

15.2.Working width setting

15.2.1 Working width setting page ：

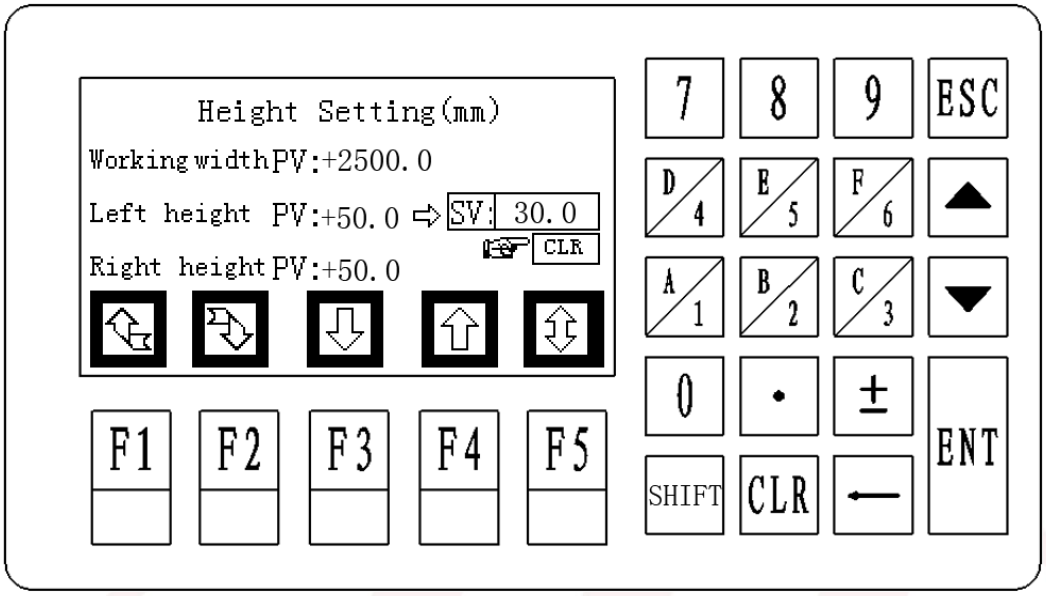


15.2.2 Function instruction of each key on the page of “working width setting”:

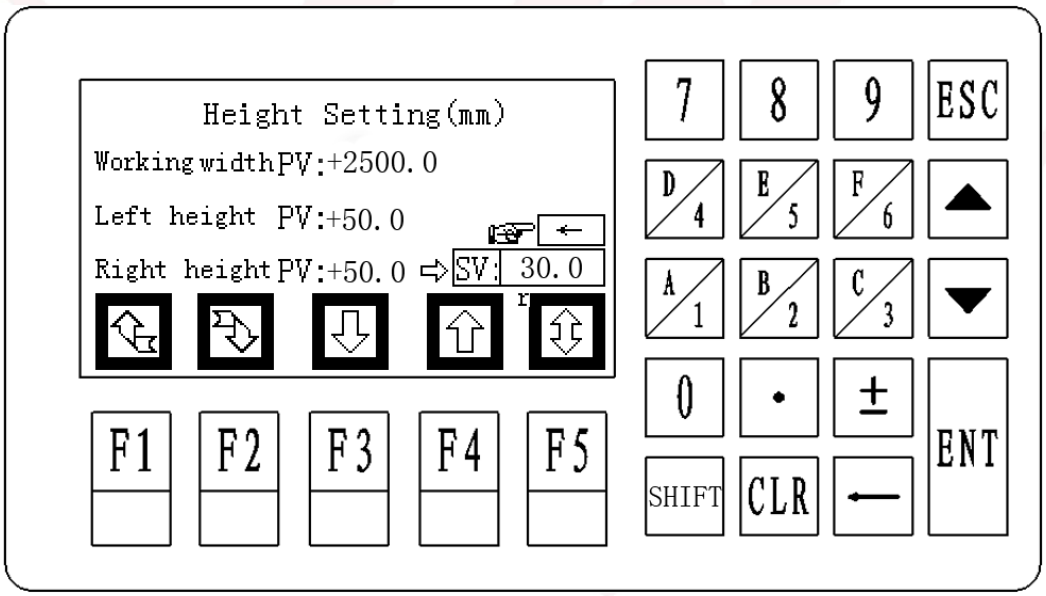
No	Icon	Key	Function	Operation manual
1		【F2】	Next page	Turn to next page.Press this key to enter the height of pressure belt setting page (optional) or enter the current data setting page
2		【F3】	Jogging narrow	Jogging narrow setting of working width
3		【F4】	Jogging width	Jogging width setting of working width
4		【F5】	Auto setting of working width	Auto setting according to the pre-set data.The arrow icon turn in black color when it is adjusting.When finish setting,the arrow icon become white.This setting will stop when you press the key during this setting procedure. When the distance is 500mm from max.or min.working width, press this key continue to begin the auto precision setting.Release this button,the auto setting function will stop. When in the position within 500mm, Need to press the clear width movement limited button so that you can use the auto width setting function.
5		【SHIFT】	Set the value of auto setting width	Press the key to go into the data setting page. After setting the data,press “ENT”to go back to “width setting” page

15.3. Height setting of pressure belt(optional)

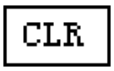
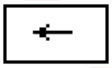
15.3.1 Height setting of left pressure belt page



15.3.2 Height setting of right pressure belt page

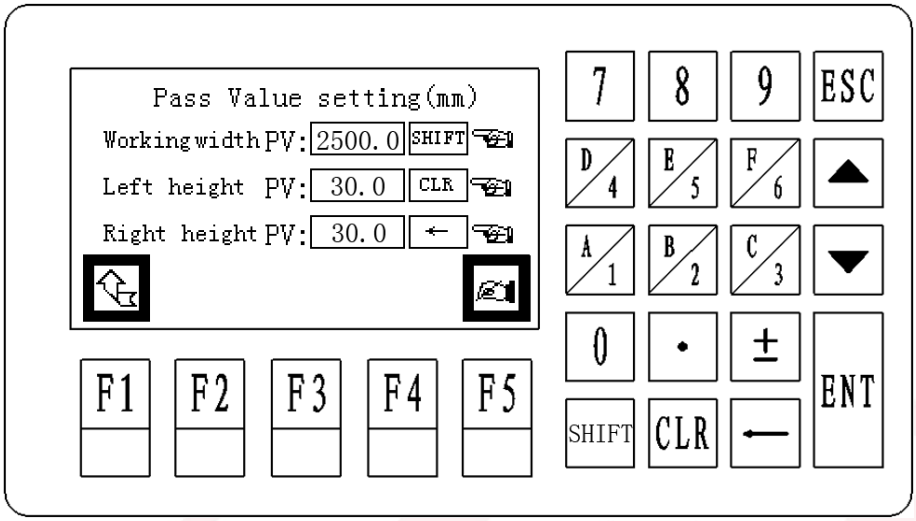


15.3.3 Function instruction of each key on the page of “height setting” :

No	Icon	Key	Function	Operation manual
1		【F1】	Previous page	Back to the previous page for another page setting
2		【F2】	Next page	Go to the next page for another page setting
3		【F3】	Jogging down	Pressure belt jogging down
4		【F4】	Jogging up	Pressure belt jogging up
5		【F5】	Auto setting of working height	Auto height setting according to the pre-set data.The arrow icon turns black color when is setting. After setting it will turn back in white color. This setting will stop when you press the key during this setting procedure.
6		【CLR】	Auto Seting the value of height for left pressure belt	Press the key to go into the data setting page. After setting the data,press “ENT”to go back to “height setting” page
7		【←】	Auto Setting the value of height for right pressure belt	

15.4. Current value setting

15.4.1 current value setting page:



15.4.2 Function instruction of each key on the page of current value setting page ：

No	Icon	Key	Function	Operation manual
1		【F1】	Previous page	Page up,back to the previous page。
2		【F5】	Save data	Save the current data.it won't save when the data is zero,it only save the data which is not zero
3	SHIFT	【SHIFT】	Current width data setting	Press the key to go into the data setting page. After setting the data,press "ENT"to go back to "Current value setting" page
4	CLR	【CLR】	Current height data setting of left pressure belt	
5	←	【←】	Current height data setting of right pressure belt	

Our company will keep the right for amendment. The above information is for referrence. Please subject to the machine