

OPERATION INSTRUCTION WINTER Doppelendprofiler Industry

series 8025H



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INTRODUCTION

Thank you very much for selecting our machines. This manual will give you a detailed instruction of operation, maintenance and safe working. Please keep this manual carefully. Before operating, operators must read this manual carefully to ensure safety.

If you meet any problem during operation or of this machine itself, please contact local distributors or contact us directly. You will get the fastest and sincerest service. If you have any good suggestions on this machine or have different points in this instruction book, please directly inform us. We will give our attention to them and give you sincere appreciations.

NOTE: STATEMENTS AND DIAGRAMS IN THIS BOOK ARE FOR ILLUSTRATION ONLY. WE RESERVE THE RIGHTS TO MAKE FURTHER IMPROVEMENTS ON TECHNOLOGY, SPECIFICATIONS AND DIMENSIONS.

Symbol:



Danger----This symbol means there is a big danger. If don't notice this danger and adopt corresponding precautionary measure, it may cause serious injuries and deaths.

Warning— This symbol means there is a possible existence danger. If don't adopt corresponding precautionary measure, it may cause serious injuries and deaths.

Caution---- This symbol means there is a dangerous condition. It may cause bodily injuries., machine damage or products loss.

Notice---- This symbol means the announcements

which is connected with operation or using



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I. SAFETY PRECAUTIONS

Safety precautions describe some regulations to operate machine safely. Before operation, all parts of this manual must be fully understood.

1-1. GENERAL SAFETY REGULATIONS

Misoperation may lead to serious accidents and hazards to personnel. Users must follow the safety regulations below with extra attention.

To prevent accidents, read through this manual carefully before attempting installation, operation or maintenance. Ignoring this point may lead to hazards to personnel safety.

Note: This machine is not allowed to be used out of its functions. Never use this machine before fully understanding its functions and use.

Hazards may arise from misuse, abuse, operating by personnel without adequate knowledge or operating by untrained or irresponsible personnel. WINTER shall not be responsible for any accident and loss caused by disoperation, misuse or abuse. Users shall be responsible for these risks and losses.

This machine shall be operated or maintained only by authorized, trained and appointed personnel. These personnel must fully understand the possible hazards. Any personnel without good health or clear head are not allowed to operate this machine or stay near this machine.

Before operation, every authorized personnel must read through this manual carefully, fully understand all the contents and be responsible for safety. This shall be recognized with signature by all the personnel taking part in operation.

Responsibilities must be clearly assigned to operators for adjustment, changing tools, operation and maintenance. Operators are obligated to operate this machine under safe conditions.

Operators are responsible for reporting the damage and deformation that may affect the safety of the operation to the person in charge immediately.

While hoisting the machine, make sure the hoisting equipment's are capable of the weight of the machine.

Check the machine tools, screws and bolts after running for a long time, tighten up the screw when there is a loose to ensure the accuracy of the machine and the safety of both machine and personnel.

While stopping the machine, the tools, feeding rollers and the drive units will not stop immediately. Dangers may still exist during this period. When open the safety shied or safety hood, please be aware



of the rotating parts of this machine. Note! Never touch cutting tools, feeding rollers and their driving devices before they come to a complete stop.

2、 PRECAUTIONS ON DOUBLE-END TENONE

The machine can do double-end edging and tenoning. If you want the machine to do other uses, please consult to manufactory. The process material must be standard type timber or wood, the sizes must be in conformity with the required specifications and parameters of the machine.

Cutter、 feeding device and driving device has security risks from slow down running after stopping the machine to it stop completely, can't ignore it. Don't touch any running cutter、 feeding device and driving device.

Regularly inspect and clean all the safety instruction labels. Replace the labels that could not be read clearly from certain distance by new labels. Inspect all the safety devices every day and before starting machine operation.

All the safety devices being dismounted for installation, changing tools, repairing or maintenance must be kept in place again before starting the machine.

While performing maintenance, all the covers, hoods and shields are not allowed to be opened until the power is turned OFF and all the movable parts (cutting tools, feeding rollers etc.) come to a complete stop. Make sure the machine will not be started accidentally before doing any maintenance work. During maintenance work, post up a notice to inform the other personnel that maintenance work is being conducted or lock the main power switch for the prevention of accidental switching by them. Never dismount, change or damage any parts of the machine and safety devices without permission.

Apply only origin WINTER spare parts to the machine. We are not responsible for any loss or trouble caused by applying other spare parts or changing the machine without permission.

Long loose clothes, long hair, watches and jewelry may cause unexpected accidents (such as the clothes are hooked or the hair is involved in the rotating machine or the feeding wheel). Therefore, **operators mustn't wear loose clothes**, **put the hair in a cap and don't wear watches and jewelry**.



Keep the vicinity of the machine clean and tidy. Trash (like oil stain or wood pieces) and obstacles may affect the safety of operation. Operators must wear safety goggles, safety veil and earplugs. Keep hands from in-feed area.

Start the machine after the dust collecting unit is working. Please be aware of the diameter of dust collecting pipe and air velocity and amount necessary for efficient dust collection (please refer to the instruction figure).

Never lift the feeding device if there is any work piece inside the machine and the cutting tools are rotating. Otherwise, the work piece may be released and ejected out. And the upper pressing belt must keep enough pressure.

While the work piece is stuck during feeding, stop the feeding operation immediately. Before inspection, make sure the power is turned OFF and will not be started accidentally, and all the movable parts come to a complete stop.

Before leaving the machine, make sure the power is OFF and the machine will not start accidentally (by locking the main switch or posting up a notice).

The noise level of the machine is in conformity with the local regulations. If the noise level exceeds the regulation under some special conditions (such as special space, work pieces, cutters or spindle speed), the owner of this machine must provide auxiliary devices for noise control.



1.3 SAFETY RULES FOR TOOLS

① All cutting tools have sharp edges and may cause personnel hazards even under condition of rest. Be careful and always wear safety gloves while touching tools. Stay away from cutting tools while they are running.

② Notice the Min. permission clamping length of allowing regrinding planer (please follow the "cutter operation instruction" cutter manufacturing factory.

③ The tools must complete dynamic balance test, cutting edge must be sharp. Can't use the cutter with crack or defect, otherwise it will damage the machine. Users should use cutting tools of good quality or purchase from WINTER.

④ Install and change the cutter must follow the operation sequence.

⁽⁵⁾ Before start operation of the machine, check the spindles by rotating them with hand and make sure they could rotate freely.





1-4. SAFETY RULES FOR ELECTRICAL WORKS

Be aware of the following safety instructions while doing works in the control cabinet:

① Before touch any movable parts, make sure the main power is cut OFF and will not be started accidentally.

②Only qualified electricians are allowed to perform the maintenance of electric system.

③ The machine must connect earth wire, avoid leakage.

④ After re-installing or repairing electrical parts, all the safety devices (like the resistance of ground connection) should be tested again.

⑤ Signaling devices (limit switches) and other electrical parts should never be damaged or removed from the safety devices.

⁽⁶⁾ While opening the electrical cabinet, be aware that the internal terminators may have electric current and there is risk of electric shock. Before making sure the safety, never touch them.

NOTE:

The connection between the main switch and the power supply must be reliable.

Never use aluminum wires or cables.

BVR power cable is recommended. Use additional metal sleeve at the end of the cable and securely tighten it.

WINTER shall not be responsible for the damage of main switch caused by incorrect connection of power supply or the power cable not being connected reliably.



1-5. OTHER SAFETY RULES

① Be aware of the sharp parts at the in-feed and out-feed ends that may cause damage, such as: Tool teeth, anti-kickback fingers and feeding rollers. In addition, be aware of being involved into the machine when the machine hood has been open or the machine is on the INCHING-FEED mode.

② Remove the chips and dusts while cleaning the machine. Avoid scratched by shape parts or come into the machine.

③ Only the clamping device and the spacer rings provided with the machine should be applied. Never use spacer rings that have clearance with the spindle. Never use worn tools.

④ Addition in-feed work table for work-handing and wheel transport unit must be fit for this machine.

1-6. NOISE LEVEL

The noise emission of this machine is over 85 dB while processing work pieces. It is necessary for operators to wear ear protection plugs or caps. Also, please be aware the following statement:

'These figures quoted are emission levels and are not necessary 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 workforce 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 user of the machine to make a better evaluation of the hazard and risk.'

Before starting operation of the machine, all involved personnel must read through this manual and fully understand this manual. The supervisor shall be responsible for this.



1-7. SAFETY INSTRUCTION LABELS

Safety labels are attached on the machine and device for safety instructions and drawing attention for particular risks. Carefully read these labels and follow the instructions described there. Always keep the labels clean.

Some typical labels are listed below. (Labels not listed here are some important as the labels listed below.)

Label	Explanation				
DANGER	• High voltage power supply here. Do not open.				
~	 Cut OFF the power supply for repairing and maintenance. 				
1	 Never touch any parts inside the cabinet with wet hand. 				
	 Failure to do this may cause seriously hurt or death. 				
DANGER	 Keep distance to rotating tools. 				
CAUTION	 Protect audition while operation. 				
CAUTION	 Wear goggles and face guard while operation 				
WARNING ROLLING Keep vigilantness	 Never touch rotating tools, feeding wheels/rollers and driving devices. 				
Â	Electric shock danger!				

Before operation, all personnel must read through and fully understand the operation manual, this shall be recognized with signature by all the personnel taking part in operation.



II. MAIN FEATUERS AND SPECIFICATIONS

2-1. Technical specifications

Working width	3000 mm
Working thickness	10-120 mm
Stop dog spacing	500 mm
Feed speed	6 – 36 m/min
Saw spindle speed	3000 rpm
Milling spindle speed	7500 rpm
Tool spec.	
Top saw blade spec.	Φ 200 – Φ 300 (Outside dia.) X Φ 30 (Bore) mm
Bottom saw blade spec.	Φ 160 – Φ 200 (Outside dia.) X Φ 30 (Bore) mm
Milling spindle diameter	Ф40 mm
Milling cutter spec.	Φ 108 – Φ 180 (Outside dia.) X Φ 40 (Bore) mm
2 nd saw spindle	5.5 Kw X2
1 st saw spindle	2.2 Kw X2
Jumping Milling spindle	5.5 Kw X2
Milling spindle	7.5 Kw X2
Feed motor	4 Kw (5.5HP)
Automatic width setting	0.75 Kw (1HP)
Pressing belt lifting motor	0.37Kw X2
Working voltage	AC380V /50Hz
Overall dimensions	535×428×182cm
Weight	6800 Kg

Because of the request of safety:

When operate the machine, the specification of the work piece must strictly observe the technical parameter of this operation instruction, strictly prohibit working exceed the specification. Otherwise if there is any machine and person safe accident, our company will assume no liability for these.



2-2. FEATUERS

QMX8030H double end edging tenoner adopts continuous chain feeding system and is the ideal equipment for wooden floor and composite floor industry. It is also widely used in solid wood furniture and panel furniture industry. Through working with the four-side moulder, automatic mass production could be realized.

- The machine is configured imported computer touch screen and PLC control system, which is for setting the thickness and width of pressing beam and right movable work-table, the operation is fast and convenient, thereby improving the working efficiency, realize the humanized operation.
- 2) This machine uses the frequency inverter for continuous feeding; the sawing and tenoning operation can be finished in one time which is high production efficiency.
- 3) Pressing work piece is done by High quality import compact rubber belt and Nylon rollers, easy adjustment and maintenance.
- 4) The machine is compact in structure and flexible in operation.
- 5) Separate adjusting mechanism for each spindle, with numerical readouts and scales. Each spindle's tilt, forward and backward, lifting and descending have dedicated regulating mechanism, and they have the same shaking handle control, and have the digital display and scale display.
- 6) The first milling and the 1ST saw spindles are with jumping function. It effectively avoids "tear" "broken edge"
- 7) Precise straight-line guide rail ensures the best accuracy and reliability.
- 8) Emergency stop buttons are fixed in the front and rear end of the machine.
- 9) Complete safety hoods against chips and noise.
- 10) There is high-precision needle roller bearing inside the in-feed chain, enhance the rotation nimbleness of chain plate and connecting pin. Both sides are equipped with circular arc roller bearing and radial ball bearing. And track guide is worked by cylindrical guide rail. These increase the working precision of machine.
- 11) The lifting of upper pressing system on left side and right side is electric lifting, which can be linked moving or single moving. The adjustment is convenient and quick.



III. INSTALLATION AND TEST OF MACHINE

3-1. Hoisting the machine

3-1-1. Hoisting the machine

Before hoisting the machine, please pay attention to the marks on the package and use lifting equipment's of enough capability.

The machine must be handled by skilled personnel. Please refer to the Safety Precautions about handling the machine in this manual. The large weight of machine may cause the machine roll down while handling.

Hoisting machine with package

The strands or the arms of the fork shall be opened enough, because the center of gravity may not in the center of the wooden box.



3.1.2 Hoisting with hook

In order to transport machine conveniently, some parts must be removed to package alone. While hoisting machine without package, first move the packages of chain plate units and other accessory away, then take off the joint screw nuts between machine and the under pan of package.

Fix the primary strands to the machine, and add one auxiliary strand to the machine to keep the balance. Hoist the machine carefully and slowly. Keep the balance of the machine by adjusting the length of the strands. Keep the machine hung horizontally and make sure it will not tilt down.





3.2 Installation

3.2.1、Installation site

Please consult your local WINTER representative for installation site selection. Note: Please refer to Safety Precautions for suggestions on the ambient of the machine.



Discharge area – outfeed area Operating area - operation area Main control cabinet – main control cabinet Power supply line - incoming line



3.2.2 Foundation

For this machine is large size, a base must be applied if the foundation ground is not strong enough. Please see the foundation plot below.

Note: please consult your local WINTER representative for advice.



If the foundation ground is strong enough to bear the weight of machine, the base couldn't to be applied. But user must fix the machine according to the position of plot.

3.2.3 Safety regulations for installation of electric system

A. Cable connection

(1) The capacity, rate and specifications of the cable being used shall be equal to or higher than those regulated in this manual.

(2) The connection shall not be close to the switchboard of these devices having strong disturbance, such as electric welding machine and high frequency quenching device.

(3) The cable connection shall be performed by qualified technicians.

B. Connection of the earth cable

The earth resistance must be below 100Ω . The section area of the earth cable must be over $16mm^2$. The manufacturer suggests the user to connect each machine to the earth separately.

C. Requirements on the operation conditions:

- (1) Electric system: 3 PH, AC 380V ±5%, 50Hz ±2Hz
- (2) Ambient temperature: $0^{\circ}C \sim 45^{\circ}C$
- (3) Ambient humidity: Below 90% and no condensation
- (4) Ambient air condition: No abnormal dust, salinity, acidic or active gas.



- (5) Avoid direct light and heat radiation
- (6) No vibration

3.2.4. The steps to assemble the taken-down machine parts

In order to transport machine conveniently, some parts must be removed to package alone. But after machine installation, these parts must be installed and adjusted again. The steps as the following:

1) Installation for right and left chain plate beam

Install right and left chain plate beam to right and left fixed chain plate beam, please note to aim at the hole of fixed pin and bolts.



For more information please visit http://www.winter-holztechnik.de



2) Installation for right and left chain plate unit

Install right and left chain plate units on two sides guide rails separately. When installation, first fold the interface, infix the locating pin to the half of link joint hole to avoid needle roller bearing fall off, throw into the chain plate pin until to the end, at last lock the two lock screw.



Please note the direction of the chain plate unit, check the number, and keep the position of the right and left chain plate pins same. Make sure that the chain plate with the small dust brush is on line with the notch of the feed driving wheel.



3) Left and right small dust brush Installation

In order to clean the surface of chain plate, you should install the dust brush under the left and right guide rail; In order to clean the round and plain guide rail, you should install the dust brush in the two sides of hole chain plate;





For more information please visit http://www.winter-holztechnik.de



除尘刷 – dust brush 小除尘刷 – small dust brush

4) Installation for right and left chain plate hood

There is special hexagon ring spanner for user to install the chain hood to guide rail.







5) Installation for side fence unit Install side fence unit to left guide rail unit.





6) Installation for feeding motor (when the machine is packed in the wooden box, the feeding motor must be removed)

The feeding motor is installed on the feeding speed reducer. Note: when you do installation, please pay attention to the motor control cable, and to ensure that the key has been installed on the motor shaft.



传动电机-motor for transmission system

7) Installation for middle auxiliary supporting unit

When the wood piece is too long, the middle part will drop to effect working precision. For avoiding this, you could install the middle auxiliary supporting unit to machine. First, loose the adjusting screws of the movable block in the bottom of the unit. After it orbits on the main guide rail, then move the unit to the proper position, tighten the adjusting screw at the end.







3.3、Clean

Take off the package and remove the anti-rust oil from the metal parts. Never use flammable dissolvent. Never dismount any part from the machine.

3.4、 Level adjustment

3.4.1 Installation and initial adjustment

After equipping the anchor screws to machine, place the machine on the foundation bed by aiming to the reserved holes for anchor screw. Then adjust the level of the machine initially. (Vertical and horizontal, right and left) After the initial adjustment, pour the anchor screws. After the concrete solidify, you can do precise adjustment.

3.4.2、 Precise adjustment

After the initial adjustment, must to do precise adjustment. The method is: use the spacers as supporting points and turn the adjusting bolts to level the surface of the guide rail. Place a plane plate crossing on upper surface of the guide rail and place the level indicator on the plate. Inspect the levelness and adjust the levelness to be 0.05 mm (inspect five different points lengthwise and widthwise respectively). Then tighten the lock nuts of the adjusting bolts firmly.











After precise adjustment, must pour concrete to fill the bottom of the machine, insuring the foundation base support the machine even. It's way to avoid machine distortion and to



keep the working precision.

3.4.3 Regular check

When the machine normally run half year, it's time to check and adjust the adjusting screws and tighten them to insure machine precision.

After these installation and level adjustment, it's time to operation.

3.5、 Electric connect

This machine adopts 3-phase 380V, 50Hz alternating current. Customer should prepare 4 copper core wire to connect the electrical source and earth wire to electrical box. Note: the earth wire should connect credibility.

Electric connect should be operated by specialty electrician worker who are familiar with location electro-regulation.

Wrong electric connect may cause the electro-equipment short circuit and make strong damage to electric parts.

Check and confirm the power grounding device, protect the operator to avoid electric shock hazard.

Use the wiring which is fit for international electrical equipment safety specification to connect with the electric source. Electric source inlet wire adopts copper wire which the min. diameter of section is ≥25mm².

Retrofitting one rated capacity 100A air switch between main air source and this machine. When don't use this machine or maintain, cut the source form there.

3.6 **NEUMATIC CONNECTION**

Connect the compressed air pipe with pneumatic device (air source treatment combined triplet), the max. air source pressure is 8kgf/cm², the diameter of inlet air pipe is 8mm. Compressed air only can be the dry filter lubricate and compress air.



For more information please visit http://www.winter-holztechnik.de



吸尘气源接口--Air supply connection1 for dust absorption 机床主气源接口-- air supply connection1 for machine

 Water drain port
 • Oil filler port

3.7 CONNECTION OF THE DUST COLLECTION

Use dust collection tube to connect dust collector and dust collection system, the diameter of dust collector is Φ 120mm.

Dust collection system must produce a 30~35m/sec (560~780 Pascal power pressure) in single dust discharge outlet pipe, and the list negative pressure.

Diameter of outlet	Air need	quantity
pipe	The max.	The min.
200mm	3400m ³ /h	3900m ³ /h
	1500Pa 30m/s	2000Pa 35m/s
150mm	1900m ³ /h	2050m ³ /h
	1500Pa 30m/s	2000Pa 35m/s
140mm	1680m ³ /h	1920m ³ /h
	1500Pa 30m/s	2000Pa 35m/s
120mm	1250m ³ /h	1400m ³ /h
	1500Pa 30m/s	2000Pa 35m/s
100mm	550m ³ /h	680m ³ /h
	1500Pa 30m/s	2000Pa 35m/s

When the sweeps are few, propriety reduces dust collection wind speed. Tube must be nonflammable material pipeline.

Dust collection electric connection.

The electric connection of dust collection must be done by specialty electrician of dust collector manufacturer.



3.8、 STARTING TEST

When the machine is first powered up, you must first check if the power supply incoming line sequence is correct (see Section 7, the computer controller operation).

Warning: if the machine is not working properly, it is necessary to turn off the power supply before correct the incoming line.

4.MACHINE FIGURE AND MAIN OPERATION PART

Before operate this machine, first must be familiar with the structure of the machine, and know the function of every operation handle and button, composition of operation device and installation position.

4.1、 Adjustment diagram





- 1. Rear mingling spindle horizontal locking handle
- 2. Rear mingling spindle elevation locking handle
- 3. Rear mingling spindle elevation adjusting handle
- 4. Jump cutter spindle elevation adjusting handle
- 5. 2nd saw elevation adjusting handle
- 6. press rubber belt height adjusting hand wheel
- 7. 1st saw elevation adjusting handle
- 8. 1st saw horizontal adjusting handle
- 9. 1st saw horizontal locking handle
- 10.1st saw limit adjusting bolt
- 11.2nd saw horizontal locking handle
- 12.2nd saw horizontal adjusting handle
- 13.2nd saw elevation locking handle
- 14. Jumping cutter horizontal locking handle
- 15. Jumping cutter bias adjusting handle
- 16. Jumping cutter horizontal adjusting handle
- 17. Milling spindle horizontal locking handle
- 18. Milling spindle bias adjusting handle



4.2、 Operation button panel





7~10	Left and right milling rotation knob	Turn the knob to the left side, the milling spindle rotate clockwise (See it from the cutter's upper side); Turn the knob to the right side, the milling spindle rotate anticlockwise (See it from the cutter's upper side);
		cutter's direction
11	Human-computer interface	See the 7 th Section: COMPUTERIZED CONTROL SYSTEM

4.3, Emergency Stop Button

On the left and right side of the machine, there are the Emergency Stop Buttons





V. ADJUSTMENT METHOD

5-1. Cutter

5-1-1 Safety precautions

Warning: Because the cutter is very shape, when install and exchange, please be careful, for ensuring safety, exchange the cutter in the condition of turning off the electrical source.

- 1) The tools must be in conformity with the required specifications and the Safety Precautions.
- 2) Operation must be performed according to the instruction of the manufacturer of tools.
- 3) Before installing or changing tools, clean the plane of action of tools and spindles. Apply oil to the rings, safety rings and spindle nuts to prevent them from corrosion.
- 4) <u>Safety rings must be used. Tighten the spindle nut and make sure it will not loosen</u> <u>during operation. Otherwise, serious hazards may be caused.</u>
- 5) Before starting the spindle, rotate it by hand to check its idle condition.
- 6) Only after the dust collection devices are connected and all the safety devices are in place, the spindle fitted with tools could be started.
- 7) Operators shall wear protection gloves to protect hand from cut by the tools.
- 8) The installing and dismounting procedures must be strictly exercised.

5-1-2 Installation of tools

1) Installation of lanning tools

Determine the quantity and thickness of rings 3.

Clean the plane of action of tools and spindles. Apply oil to the rings, safety rings and spindle nuts to prevent them from corrosion.

Install the tool 2, ring 3, safety ring 4 and spindle nut 5 in turn. Tighten the spindle nut 5 by special double head wrench 1 and make sure it could not loosen by itself.

Rotate the spindle by hand and make sure it runs freely.

To dismount the tool, the above procedures shall be performed in inverted sequence.

Note: The safety ring must fit into the slot of the spindle for at least 3 mm, so that the tool could be tightened axially and will not be over distorted.





5.1.2 installation of tools.

a) , installation of plane cutter (the following picture on the left) Determine the quantity and thickness of rings 3.

Clean the plane of action of tools and spindles. Apply oil to the rings, safety rings and spindle nuts to prevent them from corrosion.

Install the tool 2, ring 3, safety ring 4 and spindle nut 5 in turn. Tighten the spindle nut 5 by special double head wrench 1 and make sure it could not loosen by itself. Rotate the spindle by hand and make sure it runs freely.

To dismount the tool, the above procedures shall be performed in inverted sequence.

NOTE: The safety collar must snap into the flattened side of the arbor and have a depth of at least 3 mm to allow the tool to be axially secured and unduly distorted on the shaft. (Pictured right) Note: The safety ring must fit into the slot of the spindle for at least 3 mm, so that the tool could be tightened axially and will not be over distorted.





b) 、 Installation of saw blades

Clean the cutting surface of the tool and the cutter shaft and the pressure plate. Clean the plane of action



Sawing sleeve 3, tighten the screw 2 will be fixed to the saw shaft sleeve on the motor (factory has been adjusted well), then in turn installed on the saw blade 4, blade spacer 5, Need to fashion on the saw blade 6, saw blade pressure plate 7, compression screw 8. Install these in turn: expanding sleev1, saw blade flange 3, tightening screws2-fix the saw blade flange3 on the motor shaft (be set well before delivery), then place the saw blade4, saw blade spacer5, saw blade6 (if need) Pressure plate 7, Compression screw 8.

1, use the hex wrench to tighten the compression screw 8, so that it cannot automatically release. Use special spanner lock the expanding sleeve1, tighten the compression screws8 with allen wrench, make sure they cann't loose by themselves.

Rotate the arbor by hand to check whether the idling of the arbor is flexible. Check if the spindle run freely in idle by rotating it with hand.

The axial adjustment of the tool axis is used for further precise positioning during machine commissioning. Use the knife shaft axial adjusting device for further accurate positioning, when machine is debugged.

Note: pay attention to the installation of saw tooth serrated direction.

When using the saw blade, must be in strict accordance with safety requirements to increase the safety protection device.

Note: While installing the saw blades, make sure the direction of the saw teeth is in accordance with the rotating direction of the spindle.

When use saw blade, must use a safety protection device in strict accordance with the safety requirements.



5.2 machine commissioning

Familiar with the machine control system, methods of operation and tool installation method, the machine can be further debugging.

Open the machine guard and set the operating mode to "Manual" mode from the operator panel (see Section 7 "Computer Controller Operating Instructions"). Perform adjustment only after operators have been familiar with the control system, operation and installation of tools. Open the safety cover and turn the mode switch to HAND mode (Please refer to XII Computer controller instructions for details).

5.2.1 Adjustment of feeding drive device

The feed drive means is a transmission which drives the upper presser belt by means of a long drive shaft so that the movement of the upper binder tape can be in three different states. The feed drive mechanism is a changing-speed device. The pressing belt of the top pressing unit is driven by long shaft, and the unit has three for option. A) Lead: the speed of the belt material on the relative speed of the chain plate feeding faster. The shift lever 5 is in the pulled-out state.

b) Hysteresis: The speed of the upper binder tape is slower relative to the feed rate of the chain plate. The shift lever 5 is in the pushed-in state.

c) Passive: the belt material with no power, is a passive compression state. The shift lever 5 is in the neutral position

1) Pull ahead: Pull out the Speed shift handler to make the speed of the top pressing belt faster than the feed chain. Gear lever 5 is in the condition of pulling out.

2) Lag: Push the handler in to make the speed of the top pressing belt lower than the feed chain. Gear lever 5 is in the condition of pushing-in.

3) Passivity: While the handler is on the Zero position, the top pressing belt rests. Gear lever 5 is in the condition of meso-position.

Note: Never move the Speed shift handler while the machine is running. The right and left handlers must be the same position. 5 1 2

1、Cardanic joint
2、Feed table
3、Reducer shell
4、Reducer cover
5、Gear lever



5.2.2 Top pressing unit

a vertical adjustment

The upper tape height can be adjusted manually or manually (see Section 7 "Computer Controller Operating Instructions"). According to the thickness of wood piece, the height of red pressing belt can be adjusted by "Hand" or "Auto" (Please refer to XII Computer controller instructions for details).

b、Synchronous adjustment

To ensure processing accuracy, you must make the left and right upper binder tape running at the same speed. The adjusting method is that the fastening screw 1 is loosened and the adjusting nut 2 is rotated to move the movable sheave 3 to change the contact position of the upper pressure-sensitive adhesive tape 4 with the sheave so as to change the linear speed of the upper pressure- After adjusting the left and right, tighten the locking screw 1 again. For guaranteeing working precision, the linear speed of the right and left pressing belts must be the same. The adjustment steps: release the lock screw1, and turn the adjusting screw nut 2 to make the pressing wheel 3 move, then the contact position between pressing belt 4 and pressing wheel will be changed, thus the linear speed of pressing belt 4 is changed. After the left and right belts are adjusted as the same, tighten the lock screw 1.



Adjustment of pressing force

In order to ensure the processing precision, must make the left and the right upper pressure material tape the compression force basically is consistent, maintains the quite friction force. The adjustment method is to loosen the lock nut 2, turn the adjustment bolt 1, change the compression spring 3 compression, thereby changing the pressure roller on the pressure of the adhesive tape pressing force. After adjustment, tighten the lock nut 2 again. For guaranteeing



working precision, the pressure of the right and left pressing belts must be the same and could cause quite friction. The adjusting steps: release the lock screw nut 2, turn the adjusting bolt 1 to change the height of spring, then the pressure from pressing wheels to top pressing belt is changed. After the heights of springs are adjusted as the same, tighten the lock screw nut 2.



5.2.3 Adjustment of feed positioning blocks

According to the width of workpiece and process requirement, the stop dogs have two positioning types: Before work pieces and Behind work pieces. Please refer to the diagram below:



When changing the positioning mode or when used, if not meet the accuracy requirements, you



must re-adjust the location of the feed positioning block to ensure that the positioning of the reference edge and feed direction perpendicular. This machine has been debugged after passing the workpiece positioning method. The stop dogs were adjusted well in behind the work piece type before leaving factory. If necessary, users can reset the stop dogs. When you need to change the direction of stop dogs, please ensure that the positioning reference edge is vertical to feeding direction.

Adjustment: Place a standard 600 X 600 plate 3 on the chain plates 2 and make it firmly contact the stop dogs 4(the following picture on the left). Run a test machining. Then check whether the width and the diagonal line of the plate 3 fit the requirements. If not, adjust the length of the positioning screw of the stop dogs 4 and run test machining again, until the tested plate 3 fits the requirements. Then taking the side edge of the plate 3 as the reference line, adjust the side fence 6 to coincide with the side edge of the plate 3. Then lock the side fence firmly. Move the chain plates and taking the side fence 6 as the reference make the side edge of the plate 3 contact the side fence firmly and adjust other stop dogs 1 to be in line with the edge of plate 3.



Note: While the positioning type of the stop dogs is before the work piece, the linear speed of the top pressing belt shall be higher than the speed of the chain plates. While the positioning type of the stop dogs is behind the work piece, the linear speed of the pressing belt shall be lower than the speed of the chain plates. Thus the work piece is able to contact the stop dogs tightly and ensure the working accuracy.

5.2.4 Sawing unit adjustment

- Saw divided into slot saws and saws. The blade can be up and down, advance and retreat direction adjustment. Up and down, advance and retreat from the set of digital display. There are two types of saws: grooving saw and cutting saw. Each saw spindle can be adjusted upwards / downwards and forwards / backwards, etc., with digital display.
- The slot saw is equipped with a skip function. The amount of expansion and contraction of the air cylinder can be controlled by adjusting the height of the limit bolt. The upper and lower surfaces of the proximity switches SQC and SQD are spaced apart



from the lower end surface of the feed positioning block by about 2 mm. The grooving saws can jump cut. The stretch out and draw back degree of grooving saw's cylinder can be controlled by adjusting the height of the stop bolt. The distance is about 2mm apart between the top end face of the mounting plates(blue) of approach switch SQC and SQD, and the end face of stop blocks.

- Note: a. if the distance is shorter, the approach switches may be damaged by stop blocks while feeding. If longer, the position of stop blocks can't be detected.
 - b. Use point moving feeding function to verify the rationality of this gap.





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检测开关二







Jump cutter A model: (used to jump cut timber tail end)

- (1). after choose jump cutter A model, start the motors of left and right grooving saws and feeding motor;
- (2). while feeding, after stop block leaves approach switch SQC (SOC light from on to off), the left and right grooving saws will jump up.
- (3) when stop block approaches to switch SQD (SQD light from off to on), the left and right grooving saws will be back. Thus a jump cut action cycle is over.

Jump cutter B model:(usually used to jump cut timber head and tail end)

- (1). after choose jump cutter B model, start the motors of left and right grooving saws and feeding motor;
- (2). while feeding, after stop block leaves switch SQC (SQC from on to off), the left and right grooving saws will be back.
- (3). When stop block approaches to switch SOD (SQD from off to on), the left and right grooving saws will jump up. Thus a jump cut action cycle is over.

Adjust the initial height of the jump knife mechanism, the cylinder expansion and contraction, the cylinder speed control joints, so that the jump knife action and feeding speed and wood thickness to match. Move the proximity switches SQC and SQD back and forth to make the jump position meet the requirements. Attention to adjust to be careful to avoid collision with the workpiece and the knife body! Cause an accident! Adjust the initial height of Jump cut system, cylinder expansion degree, the speed adjustment joint of cylinder to make the jump cut action match the feeding speed and the thickness of the wood. If the jump cut position is not good, move the positions of approach Switch SQC and SQD, until meet the requirements. While adjusting, must be carefully, in case the workpiece collides with jump cutter mechanism to cause accident.

Warning: 1, "feeding positioning block" according to the situation with the pop-up in the whole week the chain must maintain uniform spacing, otherwise it will cause jump knife action timing



is not correct! Remember!

2, manually adjust the SQC and SQD before and after the location, it must be in the track to stop running can be carried out. Must adjust manually the positions of the SQC and SQD in the condition that the feeding chains stop.**5.2.5**, Adjustment of milling spindle

The milling unit is can be adjusted up/down, forward/backward and tilted. There are numerical readouts for the up/downwards and forwards/backwards adjustment and scales for the tilting adjustment. Milling shaft diameter is 40 mm, can do climb cutting or cutting against feed. Before start machine to work, user must select the rotating direction of milling spindle and install the cutters with the corresponding direction and lock cutters well.

The front milling cutter can jump cut. The stretch out and draw back degree of milling cutter's cylinder can be controlled by adjusting the height of the stop bolt. The distance is about 2mm apart between the top end face of the mounting plates(blue) of approach switch SQC and SQD, and the end face of stop blocks.

- **Note**: a. if the distance is shorter, the approach switches may be damaged by stop blocks while feeding. If longer, the position of stop blocks can't be detected.
 - b. Use point moving feeding function to verify the rationality of this gap.





Jump cutter milling instructions:

(1). after select the jump cut function of the milling cutters, start the left and right front milling motors and feeding motor;

(2). while feeding, when stop block leaves SQE (SQE from on to off), the left and right front milling cutters will jump to working position to work;

(3). when stop block arrives at SQF (SQF from off too on), the left and right front milling cutters will be back. Thus a jump milling action cycle is over.

Adjust the initial height of Jump cut institutions, cylinder expansion degree, the speed adjustment joint of cylinder to make the jump cut action match the feeding speed and the thickness of the wood. If the jump cut position is not good, move the positions of approach switch SQC and SQD, until meet the requirements. while adjusting, must be carefully, in case the workpiece collides with jump cutter mechanism to cause accident.

Warning: 1, "feed positioning block" into and out of the situation in the whole week the chain must maintain uniform spacing, otherwise it will cause jump knife action timing is not correct! Remember!

2, Must adjust manually the positions of the SQC and SQD in the condition that the feeding chains stop.

5.2.6, the adjustment of the baffle plate assembly

The main purpose is to ensure that the workpiece in a certain length, to ensure that both ends of the processing allowance, retaining block material can be loosened screw 1 for lifting adjustment, rotation advance and retreat screw 2 can be used to adjust the advance and retreat, digital counter Who work.





Description of baffle swing function

For the convenience of users processing large board, the machine can choose to use side-foot swing function.

First of all, enter the "Settings" screen, select from the screen, "side by foot swing function on";

When the front end of the workpiece is pressed to the "SQA Ruler Swing Detection Switch 1", the "Side Ruler" will move backwards. When the back part of the workpiece leaves the "SQB by foot sway detection switch two "," side by foot "will return to the original position, easy to the next workpiece feeding. Adjust the front and rear positions of the SQA and SQB switches to suit the width of the workpiece.



5.2.7, the width of the machine width adjustment

When the length of the workpiece is changed, the machine tool should be adjusted in the width direction. The adjustment method is done automatically by the electronic control system. For details, please refer to section 7 "Computer controller operating instructions". The width must be adjusted according to the length of the workpiece. The adjustment is controlled by electric system. (Please refer to XIIComputer controller instructions for details)

Note: The slight deviation can be adjusted with the fine adjustment hand wheel of the drive motor shaft end. Note: the correction of the small deviation can be adjusted by the inching hand wheel in the end of the spindle of the driving motor.





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5.3. On the operation of the machine instructions

1). The working width of this machine is 280 – 2500 mm. The working length shall not be over 1,250 mm while only sawing is performed. The working length shall not be over 500 mm while milling is performed.

2). Generally, if the working length is below 200 mm, Positioning behind the work piece is recommended. If the working length is over 200 mm, Positioning before the work piece is recommended. For manual load, Positioning before the work piece is able to be recommended for working length below 200 mm.

3). If the working length is over 1,250 mm, the stop dogs shall be positioned before the work piece (Positioning before the work piece) and users must add a carriage at the outfeed end of the machine, which shall be level with the chain plate surface, in case that the work pieces roll over.

4). While the working length is between 900mm – 1,250 mm, only positioning before the work piece can be adopted. And there might be a length which is not straight, due to the loss of function of the stop dogs. In this case, please adjust the linear speed of the pressing belt. To make adjustment, first machining a work piece and check its straightness of the edge. There will be a convex edge and a concave edge. Then slow down the linear speed of the pressing belt on the side of the convex edge for a small extent. Repeat the above steps until the finished straightness cannot be ensured after machining

6) . While doing milling work, the allowance at the two ends of the work piece shall not be over 80 mm if the working length is below 350mm. The allowance shall not be over 10 mm if the working length is over 350 mm. Otherwise, the work piece might collide with the hood of the milling spindle. While only doing sawing work, users can move the milling spindles away from the work table. In this case, the allowance is able to increase accordingly. But it still cannot exceed 80 mm.

7). Please apply quality saw blades to this machine. Otherwise, the sawing accuracy will be seriously affected.



6、 electrical control system

6.1 Electrical control instructions

6.1.1 Nower supply connection

This machine uses three-phase 380V, 50Hz AC power supply. Users in the use of machine tools, the application of four cross-sections is greater than or equal to 25mm2 multi-strand copper wire power access, and pay attention to the reliable connection of the ground protection line. This machine requires the user to install the rated current of 100A air switch on the power supply inlet side. When the machine is not used and for electrical maintenance, thus cutting off the machine power. The machine adopts 3 phase 50Hz / 380V AC system. Users should prepare four multi-strand copper core cables of section area ≥ 25 mm2 to connect the power source. Make sure the ground wire is connected reliably. Users must add an air switch of 100A capacity to the inlet of the power source, by which to cut OFF the power for rest or maintenance.

The machine is equipped with imported computer touch screen and PLC combined control system, which is used to control the thickness of the binder and the width of the right movable table. The control is accurate, the operation is convenient and fast. The machine is configured with imported computer touch screen and PLC control system, which is accurate, easy and fast to do thickness and width operation.

To ensure easy and safe use of the operator, the machine has an emergency stop button before and after; this manual with electrical schematics, user-friendly operation and maintenance. To ensure the safety of operators, Emergency stop buttons are fixed at the front end and rear end of the machine. The ELECTRIC DIAGRAM is attached to this manual.6.1.2、Electrical control Operating Instructions (see page 18) the operating instructions of electrical system

(1), close the electrical box door, turn on the external power supply of the machine, turn on the key switch SA0 (operation button on the panel 1), reset the emergency stop button SB1 (operation button panel 5) and SB2,3,4, 5 (located on the left and right side panels of the machine), and the power indicator HL1 (on the electrical panel button 2) is illuminated.), Reset emergency stop buttons SB1 (on the button panel), and SB2 / 3/4/5 (on the rear left fixed safety hood).

(2), other electrical functions see the seventh part of the computer controller operating instructions. Other appliances function refers to XII Computer controller instructions for details)6.1.3, Interlock protection

(1) $\$ Breaker QF1~QF92 are for overload protection of corresponding motors. QS is for total overload protection of power source.



(2). Limit switch SQ1 is used for opening and closing of left main cover; switch SQ2 is used for opening and closing of right main cover; switch SQ3 is for over-thickness protection on the left infeed entrance; SQ4 is for over-thickness protection on the right infeed entrance; SQ5 is for over-width protection on the right infeed entrance; SQ6 is for limiting maximally the width position of right working table; SQ7 is for limiting minimally the width position of right table; SQ8 is for limiting the rise of the left top pressing belt; SQ9 is for limiting the falling of the left top pressing belt; SQ10 is for limiting the rise of the right top pressing belt; SQ11 is for limiting the falling of the right top pressing belt;

Switch SQC and SQD are for detecting the jump cut move of grooving saw; refer to section 5.2.4 for detail.

Switch SQE and SQF are for detecting the jump cut move of front milling cutters; refer to section 5.2.5 for detail.

Switch SQA and SQB are for swing detection of side guiding rule; the swing function of side guiding rule refer to 5.2.6 for detail.

The following precaution must be exercised with extra care in electric operation:

1)

All the electric work must be performed by skilled electric technicians;

2. If mechanical or electrical failure occurs, start the machine again only after the cause is found and the failure is eliminated.

③. The electric parameters have been properly set before delivery. Never change the parameters without consulting your WINTER representative.

④. Check the connecting point of the electric system periodically, at least once three months.

⑤. Check the temperature of the motor regularly while the motor is running and eliminate any possible trouble.













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侧靠尺摆动 <u>================</u>		saa sab sat s	X12 X13 X1	X12 X13 X15	P64EH00R3 (PR0	75 Y6 Y7 C2	Y5 Y6 Y7 2				42 KA3 KA4	主轴启停 所锯 左前铣 左后铣 右	右护着门开来:SO: 右进举题间限在开关:SO: 右进举题原限在开关:L- 后动意愿限在开关。 上压影带上升限(右上压料带上升限。 一: 一: 一: 一: 一: 一: 一: 一: 一: 一: 一: 一: 一:
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6.3、List of electrical components

	Code	specification	name	Quant ity
1	QS	NSC100B3100 rated current of 100A	breaker	1
2	QF1,5	MMS-32S+LX11 4~6A	breaker	2
3	QF2, 3, 6, 7	MMS-32S+LX11 9~13A	breaker	4
4	QF4, 8	MMS-32S+LX11 11~17A	breaker	2
5	QF9	MMS-32S+LX11 6~10A	breaker	1
6	QFA	MMS-32S+LX11 1.6~2.5A	breaker	1
7	QFB, C	MMS-32S+LX11 1~1.6A	breaker	2
8	KM1,5	LC1-E1210M5N AC220V	AC contactor	2
9	KM2,6	LC1-E1810M5N AC220V	AC contactor	2
10	KM31~42,71~82	LC1-E2510M5N AC220V	AC contactor	8
11	KMA1~C2	LC1-E0901M5N AC220V	AC contactor	6
12	ATV	ATV303HU40N4	Frequency converter	1
13	TC	JBK3-400VA 380/220V	transformer	1
14	QC1	DZ47-63-1P C3A 1	breaker	1
15	QC2	DZ47-63-1P C4A 1	breaker	1
16	QC3	DZ47-63-1P C1A 1	breaker	1
17	SAO	LA38-10Y2/203 With key	Key switch	1
18	SB1	LA38-01Mxs/203 Rotate the reset mushroom button	emergency button	1
19	SB2, 3, 4, 5	XB2-BS542C Red mushroom head	emergency button	4
20	SA1	LA38-10X2/203 Black short handle	Knob	1
21	HL21, 22	F7118 + lamp AC220V, 18W	Waterproof fluorescent lamps	2
22	HLO	AD11-22/41-7GZ AC220V red	Indicator light	1
23	HL1	AD11-22/41-7GZ AC220V white	Indicator light	1
24	YV1A∼3B, 4	4V210-08 AC220V 1/4PT	The electromagn etic valve	7
25		TPC1062KX-VH3	touch screen	1
26	PLC	DVP48EH00R2	Program controller	1



27	SQA, B	XCKN2118P20C	Limit switch	2
28	S0C∼F	LE18SF05DN0 DC24V Line length of 6	Proximity	4
20	DQC I	meters	switch	Т
29	SQ1, 2	ZXM-703	Limit switch	2
30	SQ5	ZXM-704	Limit switch	1
31	SQ3, 4, 6~11	ZXM-702	Limit switch	8
20	VD	WY = 112.4.7KQ Big hat	Potentiomet	1
32	V IX	WA-112 4. /K 52 Dig Hat	er	Ţ
33	$KA0 \sim 8 A \sim D A1 \sim C2$	MV2NI + mounting soat AC220V	Intermediat	10
00	$\mathbf{A}\mathbf{D}^{-1}\mathbf{O}, \mathbf{A}^{-1}\mathbf{D}, \mathbf{A}\mathbf{D}^{-1}\mathbf{O}\mathbf{Z}$	MIZNJ - mounting Seat ACZZOV	e relay	19

7. Computer controller instructions

1、 characteristic

- TFT true color liquid crystal display (LCD);
- MM/INCH unit switch directly to meet different requirements;
- 50 sets memory of finish size to choose, read, deposit, delete, and other functions;
- The pressing height and machining width, mobile adjustment, fast and accurate.
- The machine motion picture, full display, alarm record function;
- The system automatically testing machine movement, abnormal information notice.
- **2** Size control precision: ± 0.5 mm

3、Use notice

- For indoor use only and don't make machine abnormally vibrate
- Do not use where explosion danger, such as existence of flammable gas, steam or severe dust.
- Don't use in the temperature changing a lot or humidity environment, which may lead to produce condensate inside the equipment, and thus lead to equipment damage.
- Do not use sharp objects (such as nails, metal tools, etc.) to touch human-machine interface surface, so as to avoid damage on the surface of a man-machine interface.
- If fuse blows out, must replace the same size 1A fuse, cannot arbitrarily increase the capacity.

4、 operating notice

 Before operation, must stop machine; Remove foreign bodies in machine tool table first, don't have any workpiece in machining area; before adjust the left/right pressing beam by hand or auto, must loosen the lift-fall lock handles (Each side 2 pieces) to pressing beam. Refer to the following picture (Counterclockwise to loosen, clockwise to lock). After the adjustment is in place, then lock again to start working.





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- Because of the asynchrony of the electric lifting of pressure mechanism, if the pressing height of the two sides is deviated, user can adjust the "inching hand wheel" by hand to make the two sides heights return to accordance.
- In the process of mobile adjustment, must absolutely forbid a collision between the structures.
- Non-professional workers do not do any action or changes, lest cause the size is not correct, and danger happens.

5. Instructions for operating

(1): connect the external power supply, Spin the power switch key, Loosen the emergency stop button(located on button panel, and front and back wallboard, a total of five); then Human-machine interface screen lights up, show the following page "F1 Home" screen:



At this moment, press icon of "Chinese-English switch" to switch to the corresponding text display;



press icon "F2 set", "F3 RUN", "F4 ADJUST", "F5 DATA", "F6 WARN", "F7 PARA." to convert to the corresponding text display.

Note: "parameters" screen has been set up before machine tool is delivered, usually do not adjust or change at random.

(2): Check the line phase sequence is correct, before the machine tool powers up first. Under the "F1 Home", press"F4 Set" icon to switch to adjusting operation panel, display the following screen:



press "left pressing belt jog down" button in the figure above while viewing if the left pressing beam is down; if not, correct the line phase sequence. ()

Warning: if the machine doesn't run normally, must power off to change the phase sequence.

(3), after confirm correct phase sequence, on the "F1 Home" page press "F2 Set" icon into "F2 Set" screen, display the following picture:



For more information please visit http://www.winter-holztechnik.de





According to the needs of processing, the user first chooses the working spindle. Click once in the corresponding spindle area, the main spindle marked " \checkmark " behind is selected; Click again to cancel the selected.

Warning: the main spindle which you don't use must be removed, or it may cause a collision while the machine is working.

When blowing sawdust function is open, solenoid valve for blowing dust will open automatically at the feeding time, and blow the bearing in the chain plate to remove the sawdust adhered to the bearing outer circle.

The left and right pressing belts can move independently or jointly. The default for both sides is independent movement.

Jump cut function of scoring saw and front milling cutter can also be selected to meet the need of processing. The details about jump function refer to section 5.2.4/5.2.5.

According to the user's habits, the user can choose to use "mm" or "inch" unit.

"Working Data" initial value setting of the left/right thickness and width, should be carried out according to the actual machining dimension. Don't change temporarily here.

In millimeter system, skip function is not selected, all the spindles are selected, the left and right pressure belt with independent movement, blow the sawdust function off, side by foot swing function is off, the interface shown below. Under selection of unit MM, jumping function is not selected, all the spindles are selected, the left and right pressing belts movement is independent, cleaning chips function is off and fence swing function is off; display picture is the



following:

	Working Axises Sel	lection:		L&R up-pre	ssing belts moving:	
The main spindle	Left Scoring Saw \checkmark	Left Scoring Saw √ Right Scoring Saw		Alone √	With	
which you don't	Left Hogging Saw √ Right Hogging Saw √		Jumping Fuction Selection:			
removed,or it may	Left Front Cutter √	Right Front Cutte	er v	Front Cutter	Scoring Saw	
when the machine	Left Rear Cutter √	Right Rear Cutte	r√	15021	Mo	
is working.	Unit Selection:			1000		
	mm √	inch		-	monses 1	
	Cleaning Chips Function: OFF					
	Fence Swing Function	on OFF		15021	hower >	
			Ur	nit:MM	Working Data	
	A A A		Left T	hickness	20.0	
A NACK		r	ight 1	Thickness	20:0	
	De		v	Vidth	1000.0	

(4) After presetting, press "F3" to switch to "F3 Run" screen, after the preliminary set, press "F3 Run" icon into itself screen, on this screen is the layout of the spindles and feeding start-stop buttons; Functional specifications are shown below:



"Manual" mode or "Auto" mode and close the right and left side of the observation door

guard, press the "spindle start and stop button" to start the corresponding spindle motor, then press the "spindle start and stop button" Shut the left and right main covers under "manual" or "auto" mode, then pressing "spindle start-stop button" can start the corresponding spindle motor respectively; press again, stop. Press the "Jog feed button" to achieve the jog feed; release the feed to stop; put the " "Mode select switch" at the side of the "manual" position, and start the selected spindle motor, then pressing "inching feed button" can inching feed; release, inching-feed stop.

Turn the "Mode Selector Switch" to the "Automatic" position on the upper side and close the left and right observation door covers. After starting all the spindle motors, press the "Continuous Feed Start / Stop" button to feed continuously; Button on the right side of the panel "feed speed knob", so that the feed speed increases or decreases. Put "mode select switch" at the side of the "auto" position while shutting the left and right main covers, and start all the spindle motors, then pressing the "continuous feed start-stop button" can realize continuous feed; in the process of feeding, rotate "Feed speed control knob" on the right side of the button panel, the feeding speed increase/decrease.

Pressing the "Reset button" deactivates all powered motors. Press the "reset button", all have launched motors stop running.

(5), install the knife. Load cutters.

Turn off the total power supply of the machine, open the observation door guard on the left and right side of the machine, and install the spindle tools. Refer to Chapter 6, Tool Contents. When installing a knife, observe the specific requirements for the installation of the tool in Section 5.1. Cut off the machine power and open the left and right main covers, then install the cutters on the spindles that will running.

Note: 1, do not participate in the operation of the spindle unit must be removed from the processing area! So as not to work collision! NOTE: the main spindle which you do not use must be removed, or it may cause a collision while the machine is working.

2, the initial position of the beating tool to take full account of the selected jump knife function after the amount of movement!

⁽⁶⁾, on the numeric keypad function description Function description about digital keyboard When you click numeric-set display area on the screen, digital keyboard pops up, its keying function is stated below: Press the numeric keypad to set the display area,

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(7), initially determine the current processing data. Determine the current preliminary processing data

A. For the "processing data" of the left pressing belt, the actual value of the lower edge of the left pressing belt is about 37.0mm. The new value "35.5" is entered in the "Machining data" section. The method is shown in the following figure.

5							_	Monores Mo
1	2	3	4	5	4.	<-	ОК	A Contraction >
6	7	8	9	0	-	CE	Cancel	rking Data
d'		-	1			right ini Wic	ickness	25.0 1500.0

First click on the "Machining data" value setting display area of the left pressing belt, and then the cursor blinks and the numeric keypad is popped up. Enter "3", "5", ".", "5" Press "OK" to write the new value to the computer, as shown below.

单位:毫米	加工数据
左压料带	35.5
右压料带	20.0
加工宽度	1000.0

Similarly determine the right pressing belt "processing data" initial setting value of 32.0.

B, to determine the width of the processing of "processing data" value. The distance between the left and right saws is measured with a tape measure, and the new value "1200.0" is entered in the value setting area. The method is the same as described above. Enter the new value of the "F2 Settings" screen as shown below.

	参加加工的主轴	选定:	左右压料带运动	左右压料带运动:			
	左槽锯 √	右槽锯 √	独立运动 √	联合运动			
没有选定的主轴	左断锯 √	左斬锯 √ 右断锯 √					
帝要从加工区域 移除,以免工作	左前铣 √	右前铣 √	前铣	槽锯			
时发生碰撞!	左后铣 √	右后铣 √	15021	模式			
	加工单位选择:		1 cm	(12 0 12 1 A			
	毫米 √	英寸		Morrison V			
	吹木屑功能 关		1000	Lama H B:			
	侧靠尺摆动功能	¥	12031	A Constant X			
			单位: 毫米	加工数据			
	- A		左压料带	96.5°			
* NER			右压料带	SP210			
			加工宽度	1200.0			

⁽⁸⁾, according to the size of the workpiece rough adjustment of the pressure of the beam and the right mobile station work position. Press the "F4" key to switch the screen to the "Adjustment Operation" screen.

It can be seen that the basic information displayed in the above figure corresponds to the "F2 setting" screen.

The functions of each key in the "Adjustment Operation" screen are shown below.

□ Press the left and right pressing beam "Jog up and down" icon to achieve the left and right pressure material beam up or down. At the same time, the value display setting area changes to display the current value.

□ Press the "Zoom in and zoom out" button to narrow or widen the right mobile stage. At the same time, the value display setting area changes to display the current value.

 \Box You can use the automatic operation of the screen function keys to make the organization automatically run to set the location.

If the current value of the "Machining data" for the left beam is displayed as "35.5" and the workpiece thickness for this machining is 25 mm, it is necessary to electrically adjust the binder to a new position with a display value of "25.0". First press the "Set" button on the left binder beam keypad, the "Set" font will be displayed in bright color, then enter the new value "25.0" to be reached in the value display setting area, then press the "Start" button. When the motor starts running, the value display area back to "35.5" start down, until an action automatically stops. The operation steps are as follows:

Step 1: Press the "SET" button first

Step 2: Release the "SET" button and then in the value of the set display area click, the pop-up numeric keypad, while setting the value of the display area Cursor flashing

Step 3: Use the numeric keypad to enter the new value to be reached 25.0, enter the value after the press "OK" to confirm

Step 4: Press the "start" button, the motor starts running, the value display area back to "35.5" start down, until an action automatically stops. (See above)

Note: Press "stop" key in the input or start, the motor will stop running immediately, and the display will return to rest state.

Refer to the above principle to adjust the right binder and the right table to the appropriate working position. If the workpiece after processing the width of 1500.0mm, adjust the location of the screen after the display is as follows:

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(9), the binder and the right moving table adjustment in place, start the spindle motor, according to the normal operation of the processing of the sample workpiece. Measure the thickness and width size. If it does not match the current value, return to the "F2 SETTING" screen and recalibrate the set value. If the thickness of the sample is 25.0mm and the width is 1495.0mm, the "Initial Setting" screen after correcting the set value will show as follows:

2015-01-26				09:25:06
	参加加工的主轴	选定:	左右压料带	运动:
	左椿锯 √	右槽锯 √	独立运动い	/ 联合运动
没有选定的主轴	左断锯 √	右断锯 √	跳刀功能选:	ž:
帝要从加工区域 移除,以免工作	左前铣 √	右前铣 √	前铁	槽锯
时友生碰撞!	左后铣 √	右后铣 √	17.021	₩ 模式
	加工单位选择:		(ne	
	毫米 √	英寸	-	Manyasar V
	吹木屑功能 关			B:
	侧靠尺摆动功能	¥	15021	A however X
		P	单位: 毫米	加工数据
	A A		左压料带	2(5).0
			右压料带	25,0
			加工宽度	1455.0
F1 主页 F2 设	定 F3 运行	F4 调整	F5 数据 F6	报警 F7 参数

(10), now the size of the calibration is complete, return to the "F4 adjustment" screen, the use of jog or automatic button to re-reach the processing width of 1500.0mm, try to cut the workpiece size to meet the requirements. On the "F3 Run" screen the following machining parameters are displayed:

At the bottom right of the current screen, the current feed speed, current unit, current machining data, etc. are displayed for user's convenience. As shown in FIG.

Note: After the processing position adjustment is normal, before the start of the batch processing, manually lock the "clamping beam handle (2 pieces on the left and right side)" to prevent the position change. Before the next adjustment binder beam, you need to unlock the first.

(11), parameter storage.

Corresponding to the current position of this qualified workpiece processing parameters, the user can store them to facilitate the next processing of the same workpiece when called (up to 50 groups can be stored). First, the screen switches to the "F5 Data" screen, the screen displays as follows:

IV EX YV HI	左压料带	右压料带	加工宽度	序号: 1	
加工数据	0.0	0.0	0.0		
				-	
				-	
当前数据	左压料带	右压料带	加丁宽度		

The "F5 data" screen under the "preset data" under the parameter item is the current group number corresponding to the memory group data, "current data" under the parameter item for the current machining data.

If you want to store the current machining data in the memory area with the group number of "3", press the key to increment or decrement the key to display the current group number as "3". Then press the "Save" button, the current parameters are automatically stored in the memory Group 3 in the data area.

For a number of parameters stored in the memory area, you can use the "data list" button to view. The data list screen is displayed as follows:

毫米	左带加工厚度	右带加工厚度	加工宽度
序号	加工数据	加工数据	加工数据
1	0	0	0
2	0	0	Ũ
3	25	25	1500
4	Ō	0	0
5	0	0	0
6	0	0	.0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0

(12), "F5 data" on-screen "data clear" button to clear the memory area of the parameters of the group of data, press the group after all the parameters cleared to 0 value.

(13), download the operating parameters group. When the user wants to process the same kind of workpiece which has stored data, first switch the screen to the "F5 data" screen and press the "DATA LIST" key to display the "Machining data list" screen. Use the up and down arrow keys to view the serial number of the group of parameters, and then return to the "F5 data" screen, press the increase or decrease key, the same number, the parameters appear in the "default data" parameter area, the screen will automatically switch to the "F4 adjustment" screen, and then automatically control the pressure of the beam and the right side of the mobile station to reach the processing position.

Note: The parameter of download operation cannot be 0 value.

6, subsidiary functions

When the system detects every abnormal stop message, the system will pop up the corresponding alarm prompt in the current screen. The user can switch the screen to the "F6 alarm" screen, so that the current alarm information can be consulted so as to eliminate the trouble in time. The alarm information list of the local login is as follows:

	Alarm message	Troubleshooting	
1	The left observation door is open!	Close the left viewport or set the mode to "Manual"	
2	Right Watch Door is open!	Close the right viewport or set the mode to "Manual"	

3	Left feeding thick limit!	Raise the position of the left press cross beam
4	Extremely thick right feed limit!	Raise the position of the right press cross beam
5	Upper left pressure belt down limit!	Raise the position of the left press cross beam
6	Upper right pressure belt down limit!	Raise the position of the right press cross beam
7	Belt Decrease Value Soft Limit!	Raise the position of the binder Recalibrate the initial setting of the binder thickness
8	Left upper belt up limit!	Reduce the position of the right pressure beam
9	Upper right pressure belt rising limit!	Reduce the position of the right pressure beam
10	Belt with rising soft limit!	Reduce the position of the binder Recalibrate the initial setting of the binder thickness
11	The right feed width limit!	The active station is widened
12	Narrow limit of the active platform!	The active station is widened
10	The active stage narrows the	The active station is widened or
13	numerical soft limit!	Recalibrate the initial machining width
14	Wide range of mobile station limit!	The active stage is narrowed
15	The active station widens the numerical soft limit!	The active stage is narrowed or Recalibrate the initial machining width
16	Emergency stop or spindle overload alarm!	Reset all emergency stop buttons; Check reset the motor protection circuit breaker
17	Low pressure! Check the air	Air supply pressure must be "0.2MPa

⁽²⁾, when due to abnormal malfunction led to the machine is not working properly, the user can switch to the "F7 parameter" screen to repair. The system first asks the user for a password. The password is "7365". Enter the correct password and press "Enter" to confirm, the "F7 parameter" screen appears. As shown below.

甲位: 電木	上口压杆市	加工见反
数值倍数	8	32
脉冲系数	1	3
单位:英寸	左右压料带	加工宽度
数值倍数	254	1016
脉冲系数	125	375

Press the "Data reset" key in the "F7 parameter" screen and return to the "F2 setting" screen.

The following values on the "F7 Parameters" screen are set at the factory and cannot be changed by the user:

The numerical value of the processing width is 32, and the pulse coefficient is 3, the numerical value of the processing width is 8, the pulse coefficient is 1, the numerical value of the processing width is 32, and the pulse coefficient is 3,

The numerical multiple of the machining thickness is "254", the "pulse coefficient" is "125", the "machining factor" is "1016", and the "pulse coefficient" is "375".

8、Maintenance

Before do the maintenance to the machine, please close the electric source switch of the machine, must follow the below instruction, avoid the machine hurt you.

8.1、Clean

Performing maintenance periodically is the necessary method to keep the working accuracy and service life of the machine. After every class working, clean saw dust and sundries of machine every part, wipe the surface of every rotation part, movement part and maneuverable part, make it keep gloss. Every class check the lubrication condition of every lubrication site, know the running condition of the machine, when find there is abnormal thing, stop the machine in time, let professional check and eliminate the trouble.

This machine also needs machinery and electrical equipment component terminal check and maintenance according the frequency degree of using and the request and quality condition of current maintenance.

8.2

 The two worm gear speed reducers used for feeding and big carriage running driven must be oil N220~N320 (environment temperature -30°C~40°C) to the oil centre point before using. After fist using 100 hours, clean the inner and change the new oil, in the furture change once every 2500 hours.

2) Lubricating grease of milling spindle (Import and advanced lubricating grease) Every 500 working hours, supply grease form the oiling port beside the two end of bearing block to the rolling bearing. Make the oil to be put to be bearing sufficient, notice, if the oil is put too much, it will make the rolling bearing warming, make the oil overflow.

This machine is suggested to use the follow lubrication grease:

Name	Function	Viscosity	Branch			
		cst@40 ℃	China oil	Mobil	ESSO	SHELL
Lubrication	Bearing	NLGI	Multiple-effect	Mobillux2	Estan	ALvania
grease		No.2	Lubrication		No.2	No.2
			grease			
			No.2			

3) Other lubrication part, please see the follow list (Note: all the lubrication site, can reduce to oil or leak to oil)

No	Lubricent position	Lubrication	Lubrication	Domork	
INO.	Lubricant position	grease kinds	cycle	Remark	
1	In-feed track bearing	Lithium base	250~300	Left and right	
		grease	working hours	two sides	
2	Feeding	Lithium base			
	transmission gear	grease			
	box				
3	Straight line guide	Lithium base		Oiling from	
	rail	grease		slider	
4	Top material press	Lithium base	Three months	Left and right	
	track elevation worm	grease		two sides	
	gear box				
5	Motor bearing	ZL-3	Oiling every working for 4000 hours		
		Lithium base	or at least once every year		
		grease			
6	Each advance and	Lithium base	Every class	Left and right	
	retreat、 elevate、	grease		two sides	
	rotate sliding surface				
7	Each advance and	Lithium base	Every week	Left and right	
	retreat、elevate、rotate	grease		two sides	
	driving nut、lead screw				

9、Trouble and trouble shooting

9.1 Machine trouble shooting

TROUBLE	CAUSE	MEASURES
The error of sawing surface equal width and diagonal is large.	 The horizontal error of machine is too large. Location nail is not adjusted well. The synchronism error of left and right top pressing belt is too large. The look-ahead and hysteresis error of left and right top pressing belt is too large. Location guiding rule is unevenness with feeding direction. 	 Adjust machine horizontal. Adjust location nail and fasten it. Check and adjust the synchronism of top material press. Check the look-ahead and hysteresis consistency of left and right top material press belt. Adjust parallel.
Sawing board is not straight.	 The pressing force of left and right top pressing belt is inconformity. The look-ahead and hysteresis error of left and right top pressing belt is too large. The synchronism error of left and right top pressing belt is too large. Top pressing belt is worn. The deflection of blade is too large. 	 Adjust the weight of left and right pressing material. Check the look-ahead and hysteresis consistency of left and right top material press belt. Put the left and right top material press belt together and check it. Change the abrading top material press belt. Check blade chuck and change the blade.
The up and down of sawing board is not abreast and have convex plate.	 The up and down blade is not adjusted abreast and saw line is misalignment. The hardness of board material quality is unevenness. 	 Adjust up and down blade, down blade is lineation, up blade is main blade. Adopt milling cutter to precision mill the sawing surface.
The tongue and groove of rabbet is unevenness.	 The table board of rabbet thickness fixing device is too low. The table board of rabbet thickness fixing device is not parallel to the guide rail. 	 Adjust thickness fixing device. Adjust parallel.
When sawing the material, material is blocked.	 Blade is too blunt. Don't use smash cutter to work. 	 Change or sharp the blade. Choose smash cutter, eliminate sawing side material.

|--|

9-2. Electrical fault diagnosis

Trouble	Cause	Measure
Can't start the machine.	a) There is no voltage on power line.b) The main switch is not turned on.	 a) Check the power line voltage. b) Close electrical equipment box door, turn on the main switch.
The power indicator light is not bright.	 a) There is no voltage on control line. b) The emergency switch or key switch is not turned on. c) The insurance of control return circuit is out of work. 	 a) The voltage of main line is too low or at least lack of one phase. b) Turn on switch. c) Change the insurance of control return circuit.
Can't start all the motor.	 a) The mode has been set "AUTO", at the same time, the machine hood has been open. b) The motor is overloading; the return circuit is broke. 	 a) Set the mode to "HAND" or close the machine hood. b) Confirm which spindle is over loading, after eliminate the machine trouble, then reset corresponding thermal relay.
Continuous feeding can't revolve.	 a) Safety limit switch in the side of in-feed do working. b) Machine hood doesn't close or travel switch is damaged. c) Have chosen "HAND" mode. 	 a) Check the limit switch, adjust the height of material press track or reduce the feeding thickness. b) Close the machine hood and check the limit switch. c) Choose "AUTO" mode and close the machine hood.
The counting of dimension setting controller is not exact.	 a) the gap between Induction block and approach switch is bigger than 1mm b) approach switch cannot work well c) approach switch is broken d) Locking nut which is in the left end of movement worktable driving lead screw become flexible, cause bit string after movement is over. 	 a) Re-adjust the gap between Induction block and approach switch. It cannot be bigger than 1mm. b) Adjust the approach switch relative angle, when the A light is lighting, the B light will be from lighting to destroying or from destroying to lighting c) change a new one d) Lock the locking nut again.

$\mathbf{1}_{\mathsf{v}} \text{ BEARINGS AND BELTS LIST}$

No.	Specification	Name	Install position	
1	51104	single direction thrust ball	Main spindle horizontal	
		bearing	forward & backward	
2	51204	single direction thrust ball	Main spindle horizontal	
		bearing	forward & backward	
3	51105	thrust ball bearing	Pressing lifting	
4	51206	thrust ball bearing	Driving lead screw	
5	6001-2RS	Deep groove ball bearing	Main spindle horizontal	
			forward & backward	
6	6205-2RS	Single row radial ball bearing	Transmission reducer; Pressing driven wheel	
7	6006-2RS	Single row radial ball bearing	Pressing driving wheel	
8	6206-2RS	Single row radial ball bearing	Driving lead screw	
9	6210-2RS	Single row radial ball bearing	Feeding diving long	
			spindle	
10	61917-2RS	Single row radial ball bearing	Transmission reducer	
11	6009-VV	Single row radial ball bearing	Milling group	
12	6208-VV	Single row radial ball bearing	Milling group	
13	55×1207×2	High speed plain belt	Rear milling group	
14	55×900×2	High speed plain belt	Jumping cutter milling	
			group	
15	LFR5002-16-2RS	Double row roller ball bearing	In-feed track	
16	6202-DDU	Deep groove ball bearing	In-feed track	
17	NIV 15/12 2DS	Without inner ring seal	In-feed track	
	INKI 3/12 -2KS	needle bearing		

11、 EASY DAMAGE SPARE PARTS

Chain plate with hole (aluminum)

Chain plate without hole (aluminum)

APPENDIX: ANCHOR SCREW DIAGRAM

Note: anchor screws are provided by user.

