Henrik WINTER HOLZTECHNIK GmbH

WINTER Rectangular Tenoner YRT-115

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H.WINTER HOLZTECHNIK

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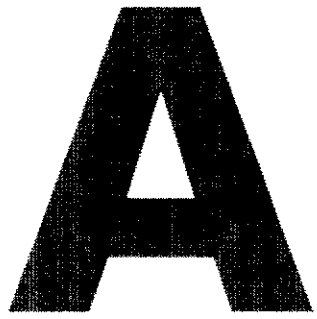
YRT-115 PARTS LIST



GENERAL INFORMATION
SAFETY RULES

PREFACE

We appreciate very much for your purchase of the YRT-115 Rectangular Tenoner. This machine is designed and engineered for producing various rectangular tenons such as straight tenons, miter tenons, cylindrical tenons, dovetailed tenons and T-tenons etc,

This operation manual describes the machine operation instruction, safety rules and maintenance instructions. The operator must read this manual careful and understand all safety precautions to avoid damage on the machine and the operator.

WARRANTY

This rectangular tenoner carries one year of warranty from the date of purchase. During the warranty period, if the machine operation is failed due to a defect material or workmanship, your local distributor or the machine manufacturer will repair or replace the defected parts. However the defected parts should be sent back immediately to your local distributor or the machine manufacturer for inspection. This warranty does not cover any damage caused by misuse abnormal operation or normal material wear.

MACHINE SPECIFICATIONS
YRT-115

Spindle speed	6000 R.P.M.
Maximum tenon width	115+2R mm
Minimum tenon depth	
with standard tool	10°„45 mm
with special tools	6°„90 mm
TABLE TILT	
upward	0°„15°
downward	0°„30°
Side	0°„20°
Spindle motor	5HP
Cutter cycle motor	1HP
Net weight	1100 kgs
Gross weight	1200 kgs
Machine size	1760x1150x1320 mm
Packing size	1840x1210x1530 mm

APPLICATION

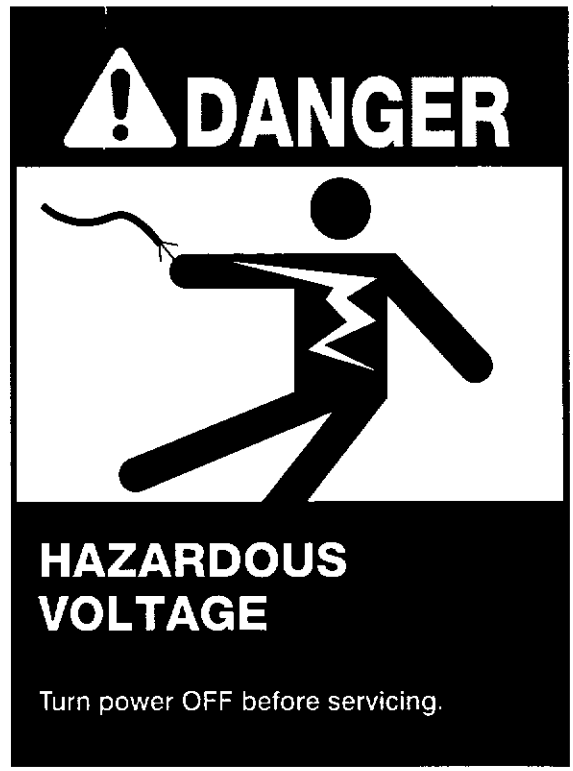
The YRT-115 Rectangular Tenoner is designed for producing various rectangular tenons at end of wood, such as straight tenon, miter tenon, cylindrical tenon, dovetailed tenon and "T" tenon.

The machine provide cutting capacity of 100mm maximum tenon width, 50mm maximum tenon depth, and 25mm maximum tenon thickness. The YRT-115 is constructed of right and left table for efficient operation. When the workpiece on one table is performing cutting, the operator may clamp workpiece on another table ready for next cutting operation.

It is requested to perform cutting within the rated machine capacity. Any other application which the machine is not designed for will be considered out of its normal application range.

CRUSH HAZARD

Keep hands away from under clamp.



HAZARDOUS VOLTAGE

Turn power OFF before servicing.

ROTATING CUTTER

Keep hands away from the rotating cutter. Turn power OFF before servicing

FLYING CHIPS

Wear approved eye protection when operating this machine

WORKING PRESSURE
5 KG/CM^2

Do not operate the machine in case pressure is lower than 5kg/cm^2

GENERAL SAFETY RULES FOR WOODWORKING MACHINERY

⚠ WARNING

Do not attempt to operate until you have read thoroughly and understood completely all instructions, rules etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Keep this operation manual and review frequently for continuous safe operations.

1. Know your machine. For your own safety, read the owner's manual carefully. Learn its applications and limitations, as well as specific potential hazards
pertinent to this machine.

2. Make sure the machines are properly grounded. If the tool electrical plug has three prongs. It should be used with a three-hole electrical socket. If a three-prong to two-prong adapter is used, the adapter plug must be properly grouped. Do not remove or otherwise disable the third plug.

3. Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning, make sure it is properly reattached before using the tool again.

4. Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.

5. Keep work area clean. Cluttered areas and workbenches increases the likelihood of an accident.

6. Do not use in dangerous environments. Do not use machines in damp or wet locations, or expose them to rain. Keep work area well illuminated.

7. Keep children away. All visitors should be kept at a safe distance from work area.

GENERAL SAFETY RULES FOR WOODWORKING MACHINERY

8. Make workshop childproof. With padlocks, master switches, or by removing starter keys.

9. Do not force the machine. It will do the job better and be safer at the rate for which it was designed.

10. Use the right tools. Do not force the machine or attachments to do a job for which they were not designed. Contact the manufacturer or distributor if there is any question about the tool's suitability for a particular job.

11. Wear proper apparel. Avoid loose clothing, gloves, neckties, rings, bracelets, or jewelry which could be caught in moving parts. Nonstop footwear is recommended. Wear protective hair covering to contain long hair.

12. Always use safety glasses, Also use face or dust mask if operation is impact resistant lenses. They are not safety glasses.

13. Secure work.

14. Keep proper footing and balance at all times.

15. Maintain machine in top conditions. Keep machine clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. Disconnect machine from power source. Before servicing and when changing accessories, or when mounting and remounting motor.

17. Avoid accidental starting. Make sure switch is in the "off" position before plugging in power cord.

18. Use recommended accessories. Consult the owner's manual for recommended accessories.

GENERAL SAFETY RULES FOR WOODWORKING MACHINERY

19. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to make sure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other condition that may affect its operation. Guards or other parts that are damaged should be properly repaired or replaced.

20. Never leave machine running unattended. Turn power off. Do not leave the machine until it comes to a complete stop.

21. Do not use any machine while under the effects of drags, alcohol, or any medication.

22. Always wear a face or dust mask it operates a lot of saw dust and/or wood chips. Always operate the machine in a well ventilated area and provide for proper dust removal. Use a wood dust collection system whenever possible.

ADDITIONAL SAFETY RULES FOR RECTANGULAR TENONER

1. Remove all servicing tool kits before servicing the machine.

2. Keep cutter sharp at all times.

3. Never clean or remove chips while the machine is running.

4. Learn the cutter application and limitation as well as the specific potential hazards peculiar to it.

5. The rectangular tenoner is designed for cutting wood material only. Do not apply this machine for cutting other materials.

6. Never leave machine running unattended. Turn power off and wait until the machine comes to a complete stop before you leave.

7. Do not wear gloves or loose clothing.

8. When the machine is working, don't bend over to check the cutting condition.

9. Tighten the cutter securely.

SAFETY

The machine can cause serious injury unless certain precautions are carefully observed. Some important safety rules are listed below. Study and remember them.

1. You must not attempt to operate a machine until you have received instructions from your instructor.

2. Before operating the machine, be sure you know how to stop it quickly. It is just as important to know how to stop a machine as to start it.

3. Do not lean against or rest your hands on the moving table. This careless habit may cut you your fingers some day.

4. Keep your fingers and hands away from all moving cutters. There is never any reason to place your fingers near a turning cutter. Stop the machine first.

5. Never wear long sleeves or a sweater while working on the machine. Always wear safety glasses to protect your eyes.

6. It is dangerous to use cutters, wrenches and other tools which do not fit the machine properly.

7. When using large wrenches, be sure to brace yourself. If the wrench slips or the nut loosens suddenly, you can be injured.

8. It is very dangerous to use rags, cotton waste, or a cleaning brash near a moving cutter.

SAFETY

9. Never attempt to set up work, make adjustments, or try to measure work while the cutter is turning. Stop the machine first.

10. When removing cutters, always hold a rag or cloth over the cutter to prevent being cut.

11. Do not attempt to lift heavy attachments alone. Get help. When placing heavy attachments on the table first lower the table as far as it wice go.

12. Never permit another person to start or stop a machine for you.

13. When mounting the arbor support keep your fingers away form the bearing hole.

NOTICE FOR MACHINE NOISE

The figures quoted are emission levels and are not necessarily safe working levels and are not necessarily safe working levels. Whilst there is a correlation between emission levels 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 workpiece include the duration of exposure, the characteristics of the workroom and the other sources of noise (i,e,the number of other adjacent machines).

Also, the permissible exposure levels can vary from country to country. The information, however, will enable the machine user to make a better evaluation of the hazard and the risk.

If the environmental noise level exceeds the permissible value, the customer is requested to adopt additional noise control measures.

NOISE LEVEL TEST DATAS:

_____ dB (A)...Machine in idle running.
_____ dB (A)...Machine in operating.

B

INSTALLATION

UNPACKING THE MACHINE

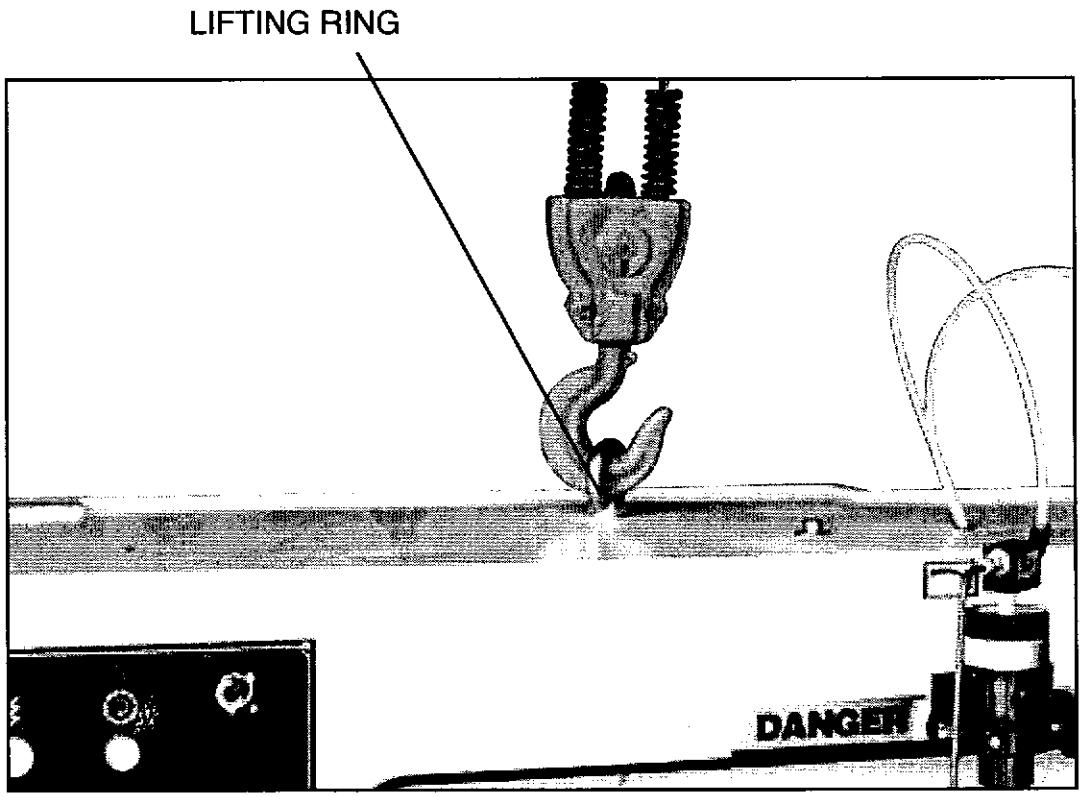
1. The rectangular tenoner is shipped in one wooden crate.

2. Unpack the machine carefully. Check if the machine conforms to your order.

3. Ensure that all items are present. If any items are missing or damaged, please contact your local distributor or the machine manufacturer immediately.

LIFTING THE MACHINE

A lifting ring is provided on the top of the machine. Use a proper capacity of electric hoist to lift the machine. The net weight of the machine is 1100kgs, and gross weight is 1200kgs.



WARNING

Make sure the machine is well balanced while in lifting.

SAFETY RULES FOR MACHINE LIFTING

1. Make sure the machine is well balanced while in lifting.

2. The machine is lifted by a fork lifter or steel wire.

3. Use enough capacity of forklifter to raise or move the machine.

4. Make sure the forks of a forklifter protrudes over the bottom of the machine.

5. Do not raise the machine too high as this may result in poor stability of the machine.

6. It is suggested to ask another person to help guiding the way when using a forklifter to move the machine.

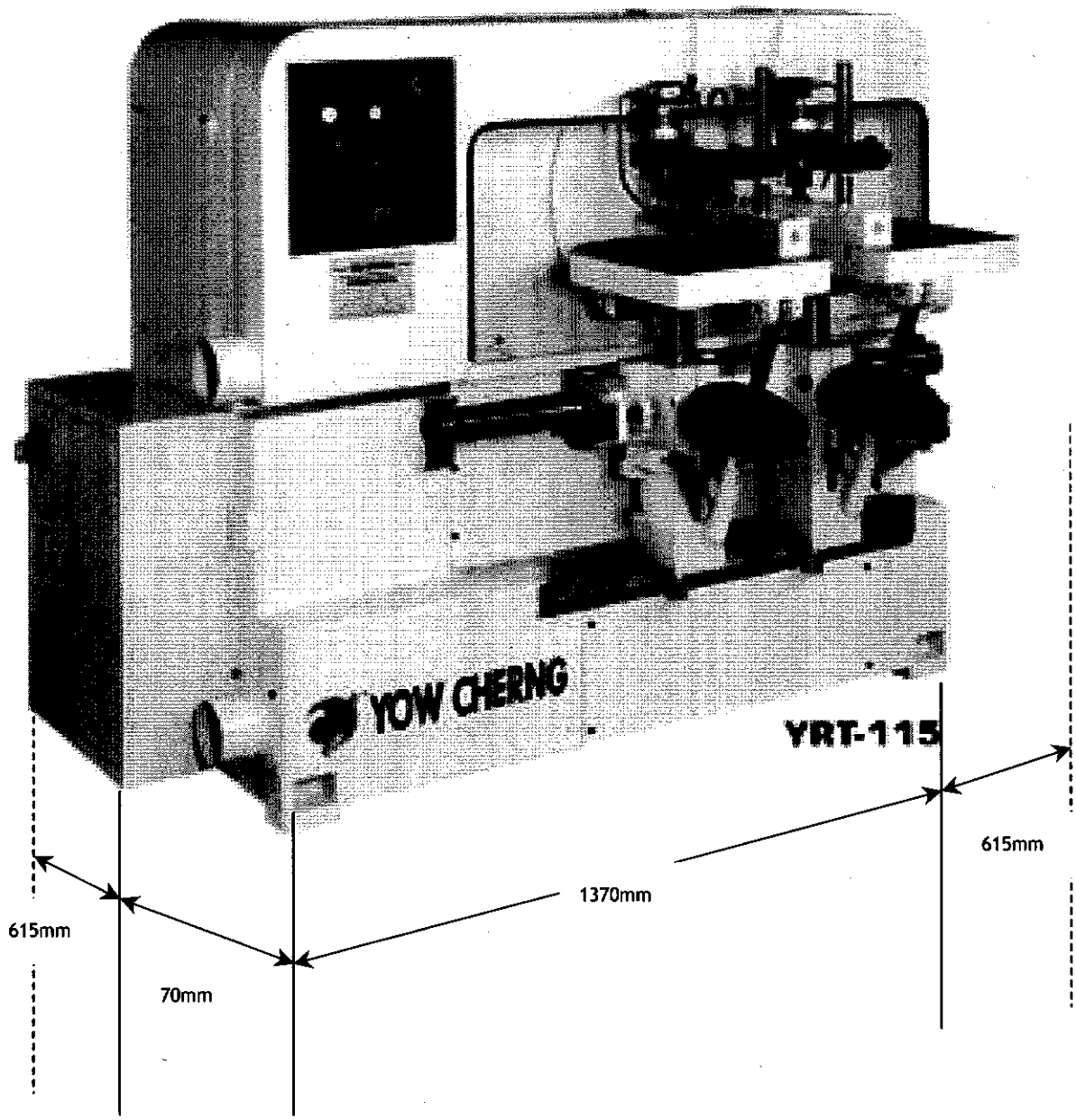
CLEANING THE MACHINE

Remove the rust preventative oil from the machine. Use a soft cloth moistened with kerosene to remove the rust preventative oil. Do not use gasoline or lacquer thinner for this purpose.

MACHINE INSTALLATION

The machine does not require to bolt down into the concrete, however a plain concrete floor is requested. The installation location should have enough space around the machine for convenient handling of the workpiece.
There are four steel pads are supplied with the machine.

MACHINE INSTALLATION DIMENSIONS



MACHINE INSTALLATION LOCATION

Install this rectangular tenon in a proper working site. Do not install it to outdoor where exposed to direct sun shine or rain. The environment conditions required are shown as below:

1. Ambient temperature: 0-45°c

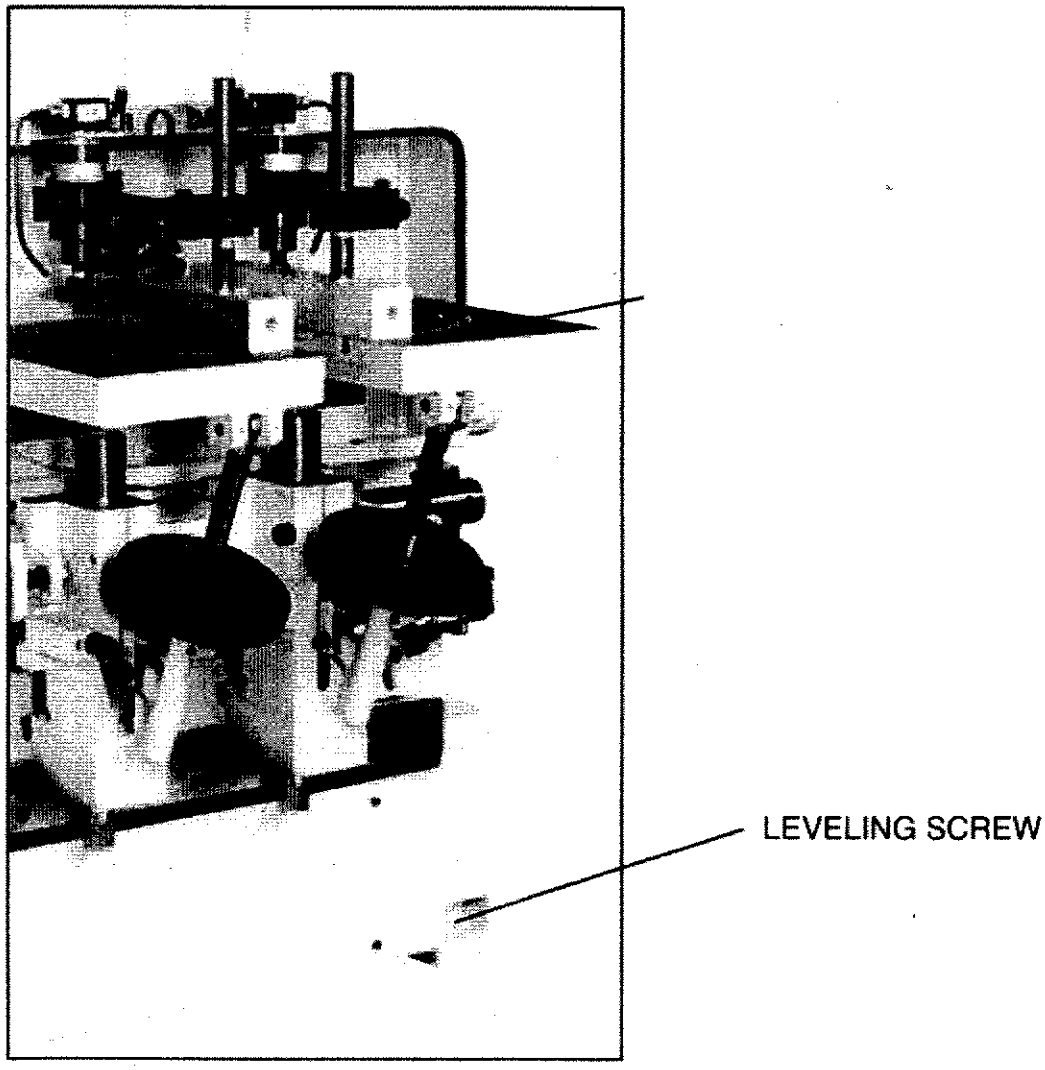
2. Environment humidity: 10-90%R.H

ADJUSTING MACHINE LEVELING

After the machine has been installed on the desired working site, it is necessary to perform machine leveling adjustment. This may ensure normal cutting accuracy. To do this follow the instructions shown below:

There are four leveling screws in the toolbox supplied with the machine. Turn the leveling screws until a proper leveling is obtained.

When the leveling adjustment is accomplished, tighten the but on each leveling screw to fix the leveling.



INPUT POWER

Excessive voltage drop can be caused by insufficient capacity of the factory power source which may affect the function of the electrical control system. The machine should be connected to an independent power source at the factory.

1. INPUT POWER SOURCE CAPACITY: 65.3KVA

2. CURRENT CAPACITY:

VOLT	AMP
220V	171A
380V	99A
440V	80A

3. POWER WIRE SIZE: 8mm^2

CONNECT POWER WIRES

1. Before connecting the machine to your factory power source, be absolutely sure the voltage of your power source complies with the machine voltage. The electrical information for the machine, such as voltage, Hz prewired before shipment is indicated on the electric instruction label, attached on the machine.

2. Connect the power wires to the R,S,T, connection points, located inside the electric control box.

3. The machine must be properly grounded to prevent possible damage from electric shock (The grounding wire is connected to the terminal "G").

4. The power wire connection job must be performed by a qualified electric technician.

⚠ WARNING

The machine must be properly grounded, failure to do so may result in electric shock.

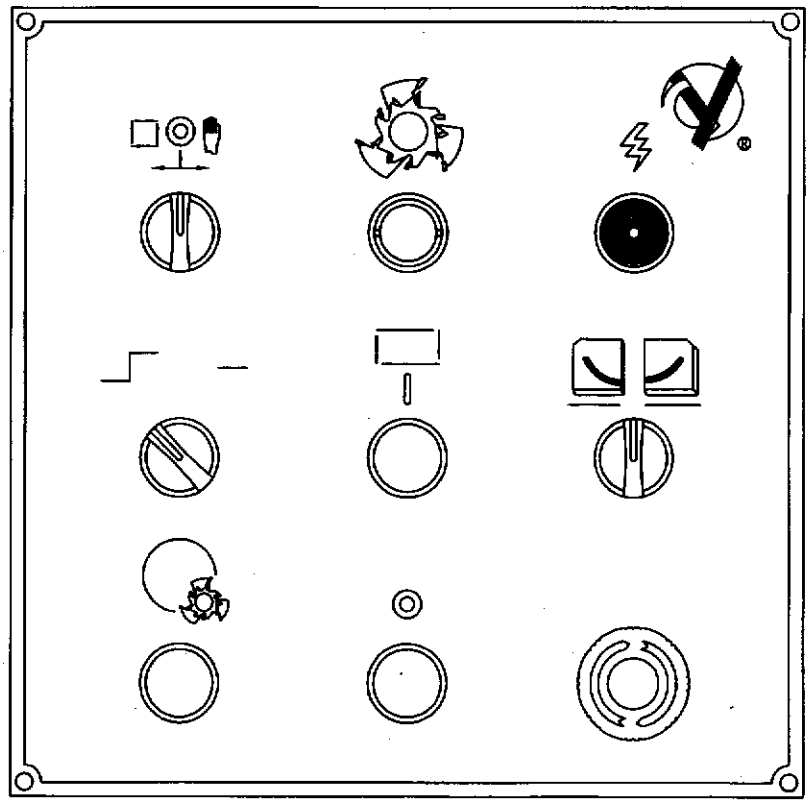
CHECK POWER WIRES CONNECTION

One the power wires have been connected, it is necessary to check if the power wires are connected to the correct points, according to following procedures:

1. Press the CUTTER TRAVEL SWITCH (4) on the control panel. At this time chock to see if the cutter moves to the direction as the arrowhead indication.

2. If it does, then your power wires are connected to the correct points. Otherwise, you need to change any two of the power wires to obtain the correct cutter travel direction.

3. The CUTTER TRAVEL SWITCH (4) is effective when the MANUAL/AUTO selection switch(2) has been set at MANUAL position.



CONNECT DUST SUCTION HOSE

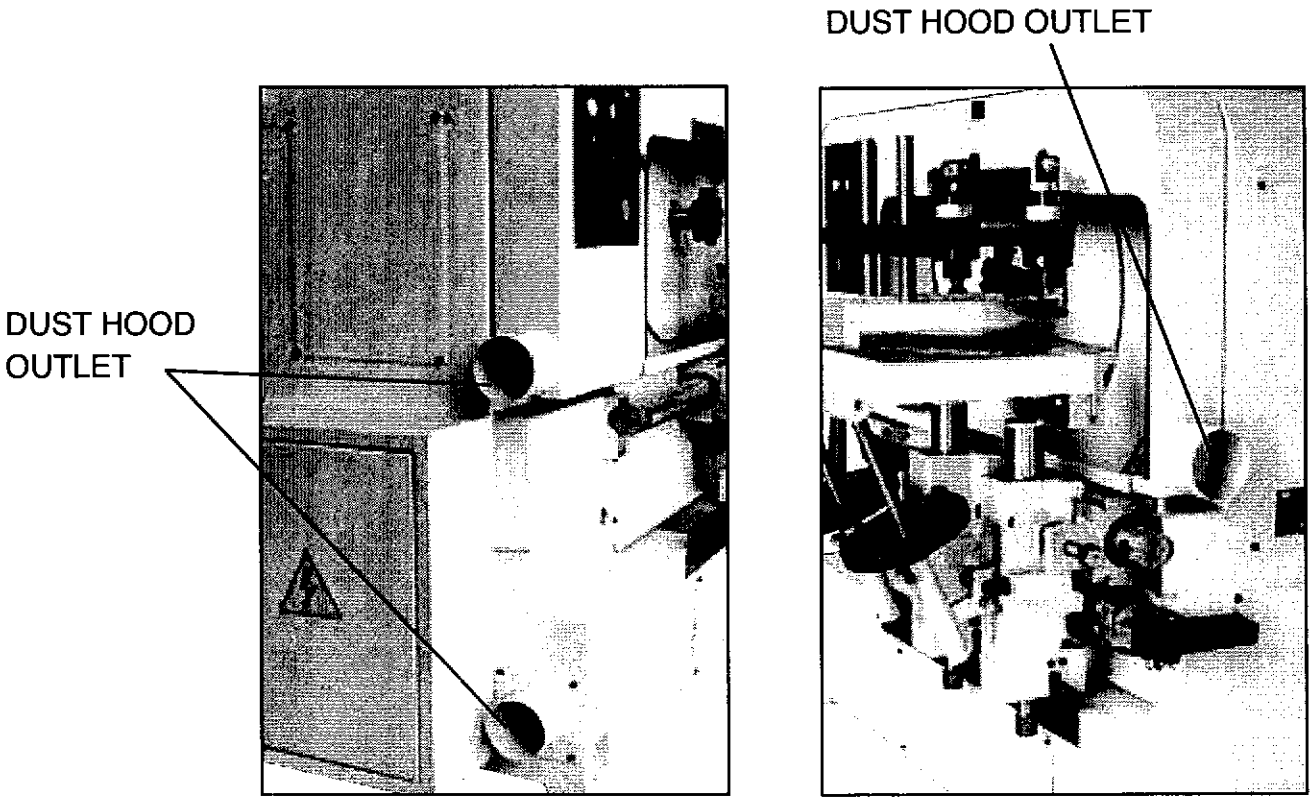
The machine is equipped with two dust hood outlets at left side and one at right side, which should be connected to a dust collector with a proper diameter of flexible hose. The dust hood outlet diameter is 4".

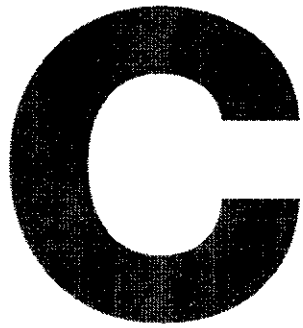
The required air flow speed at the end of flexible hose is 30-34 m/sec.

The required air volume for this machine is 1220-1390m³ (43,000-49,000 cuft) per hour.

⚠ CAUTION

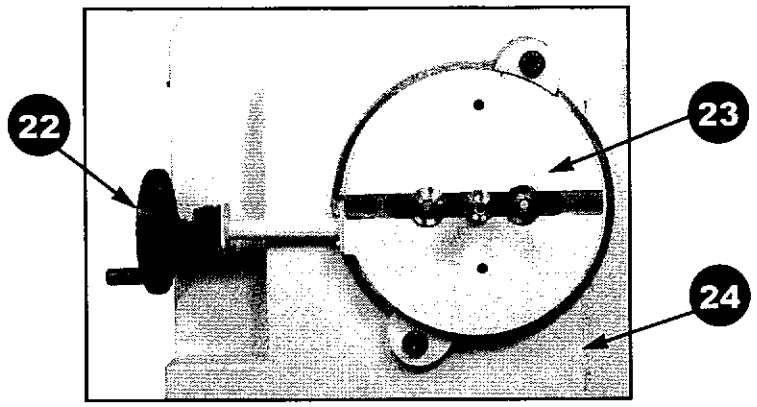
Make sure the dust collector is operating before starting cutting operation.

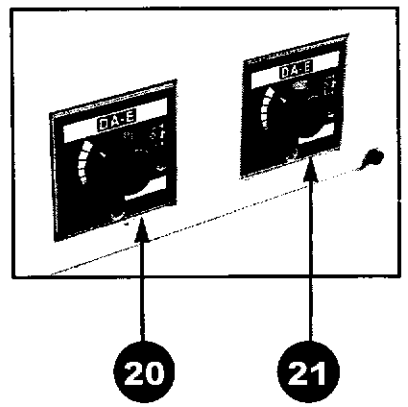


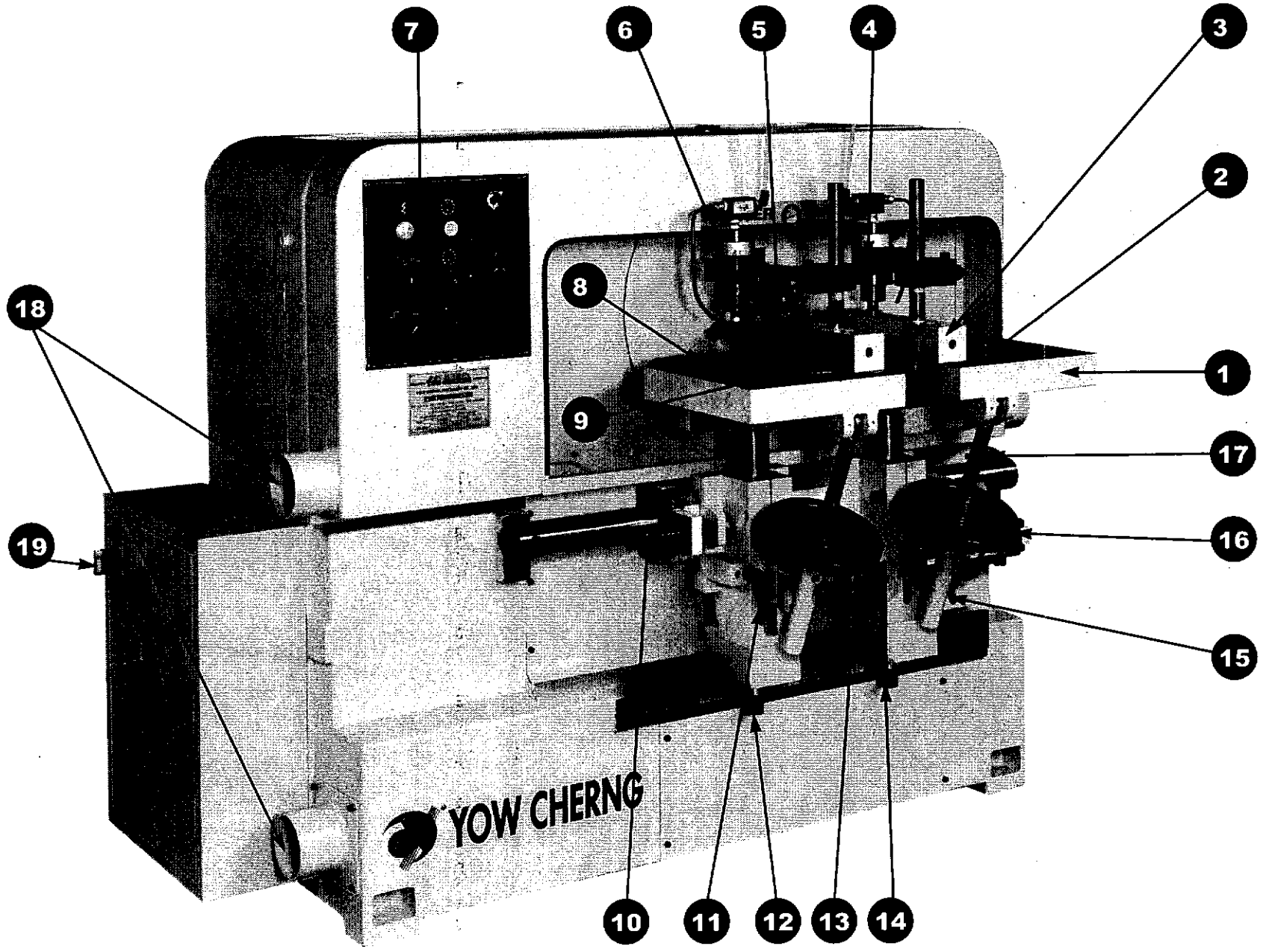


OPERATION

LEGEND OF THE MACHINE







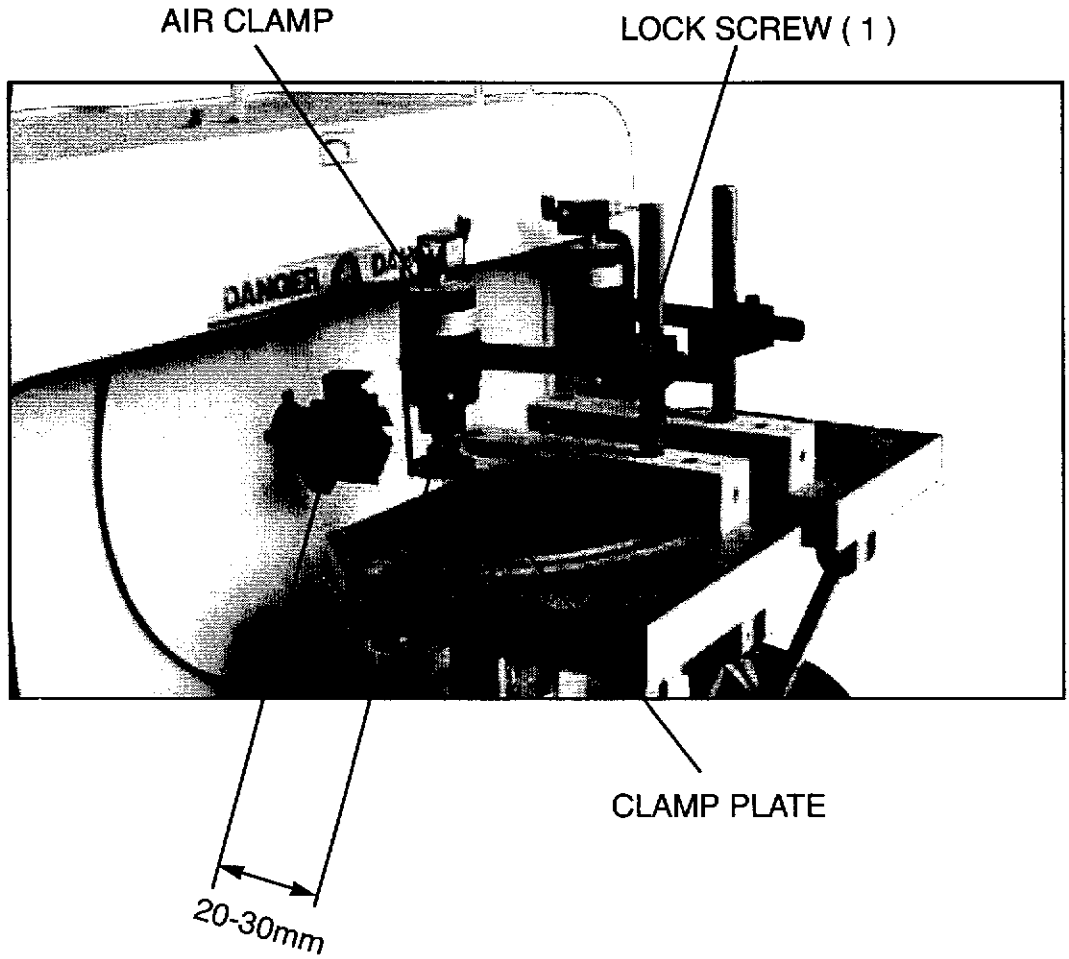
1. Right table
2. Beveling indication scale
3. Right fence
4. Right air clamp
5. Cutter
6. Left air clamp
7. Control panel
8. Left table
9. Beveling indication scale
10. Table position adjustment screw (Right/left direction)
11. Table vertical position fix lever
12. Lift table vertical position adjustment screw.
13. Left table elevation handwheel
14. Right table vertical position adjustment screw
15. Table vertical position fix lever
16. Right table elevation handwheel
17. Table vertical position adjustment scale.
18. Dust hood outlet
19. Power switch (ON/OFF)
20. Left table cutting speed regulator
21. Right table cutting speed regulator
22. Tenon length adjustment handwheel
23. Tenon direction change disk
24. Filter/regulator/lubricator combination unit

CLAMPING WORKPIECE

The workpiece is clamped on the table by air clamp which can be adjusted in height position. To do this, loosen the screw, then move the entire air clamp manually depending on the thickness of workpiece.

The morkpiece should be clamped near to the cutter, but care should be taben to avoid contact with the cutter when travelling.

Keep the cutter away from the clamp at least 20-30 mm.



BEVEL CUTTING

When performing bevel cutting is required, do as following procedures.

1. Turn off power source.

2. Loosen the two screws that tighten the fence.

3. Set the fence to the desired bevel angle.

4. A graduated scale is provided on the table to indicate the fence setting degree.

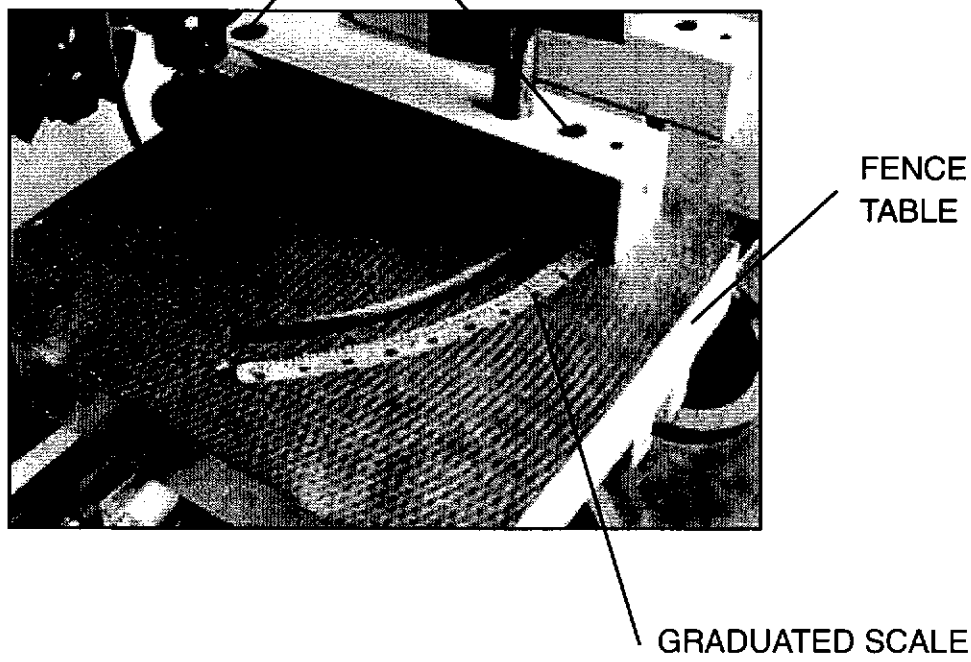


TABLE MOVEMENT SPEED CONTROL

1. The right and left table speed automatically changes, during its entire stroke, for smooth contact against the workpiece, This may minimize cutting mark due to an instant bumping force.

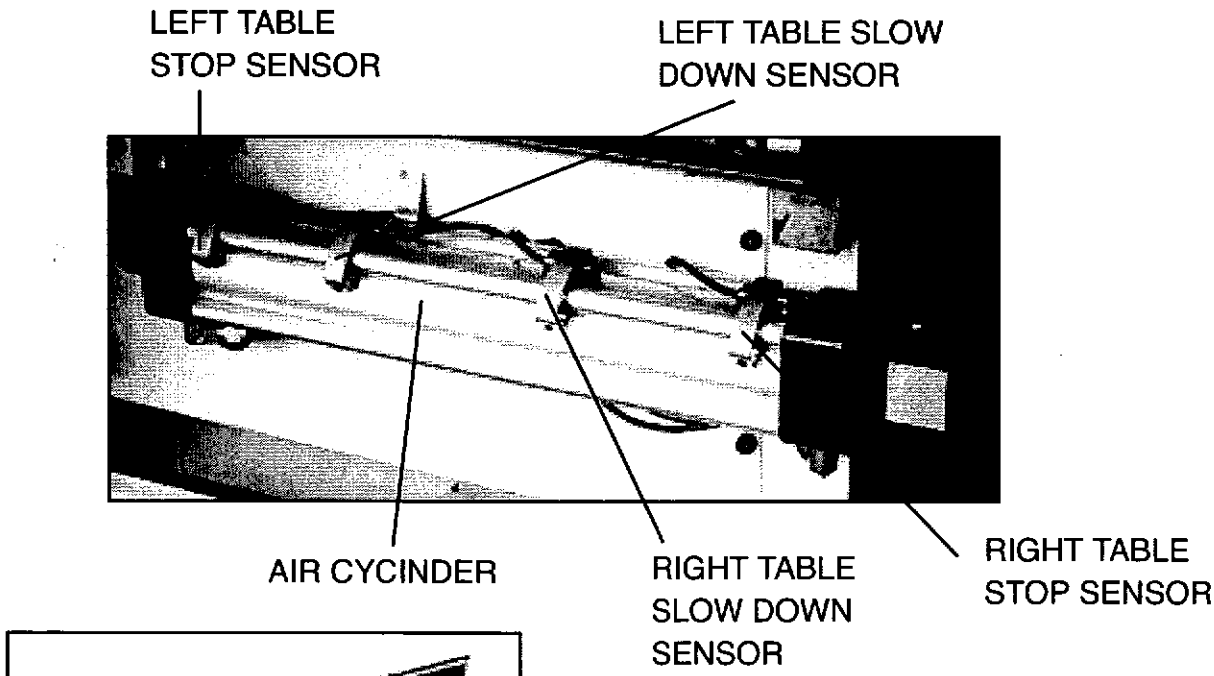
2. There are two speed control proximity switches provided on the table drive cylinder to control the table speed.

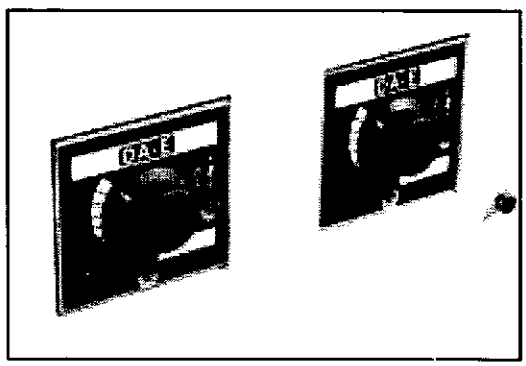
3. When the table is moving and actuates the sensor, its speed will slow down.

4. When the end proximity switch is sensed, the table stops immediately.

5. The positions of the speed control proximity switches have been factory adjusted before shipment. Basically they require no further adjustment.

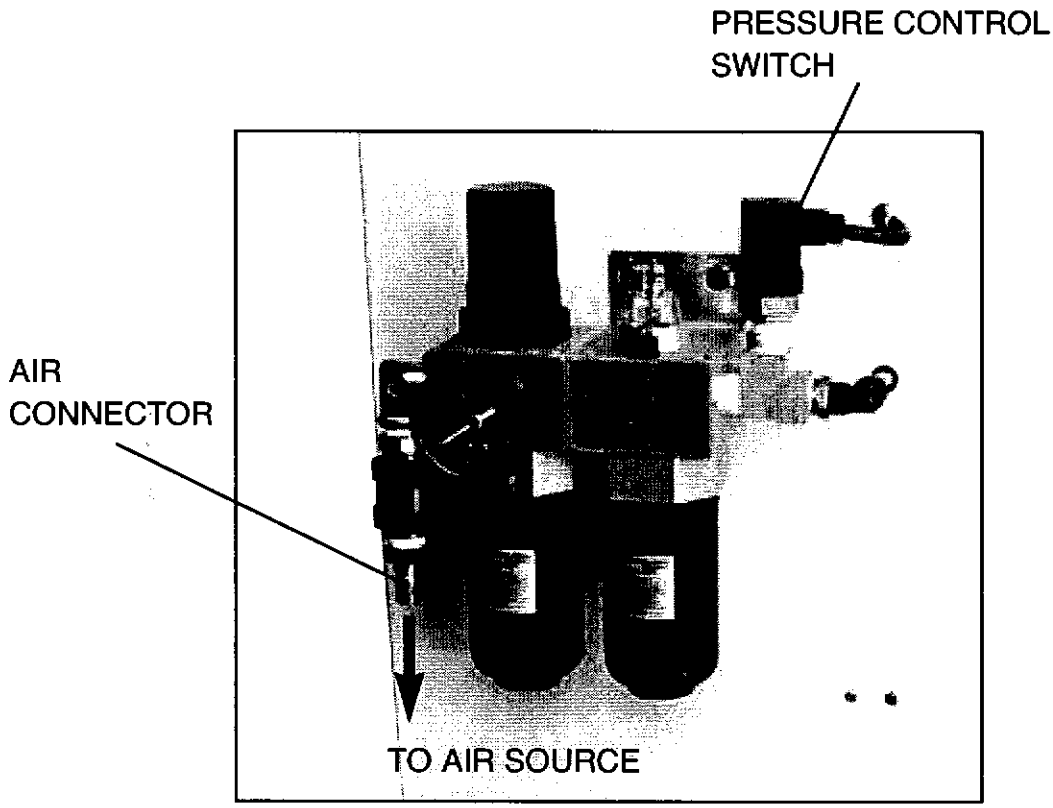
6. If you need to adjust the position of the speed control proximity switch, loosen the lock screw, then move the proximity switch to your desired position.





FILTER/REGULATOR/LUBRICATOR UNIT (F.R.L)

The filter/regulator/lubricator combination unit is provided at the right side of the machine which is used for connecting to the air source. The air connector size is 3/8". Use a 3/8" flexible air hose to connect the air connector to the air source.



FILTER/REGULATOR/LUBRICATOR/UNIT

FILTER/REGULATOR/LUBRICATOR UNIT (F.R.L)

1. SETTING AIR PRESSURE:

This machine requires a 5 kg/cm2 working air pressure. Set the air pressure by turning the pressure regulation knob. Pull it up before setting pressure. Push it down after pressure has been set.

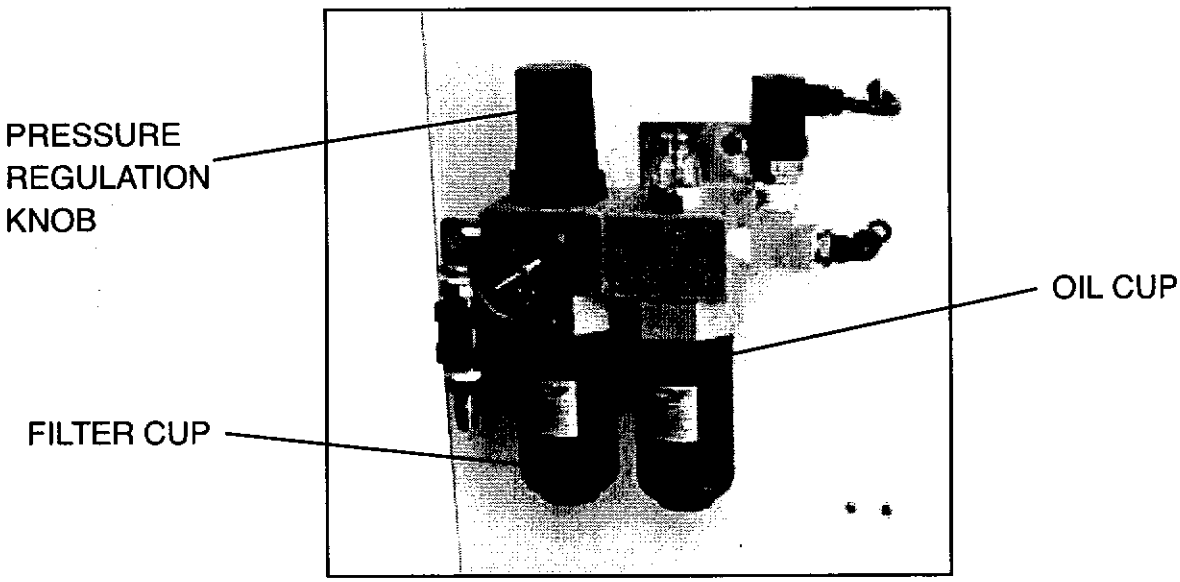
NOTE: The machine is equipped with a pressure switch for safety protection. When the air pressure not yet reach 5kg/cm2 the machine can't start.

2. LUBRICATOR CUP

Fill the oil into the lubricator cup up to 80% of the full cup capacity, which may ensure air circuit get proper lubrication effect.

3. FILTER CUP:

The moisture contained in the air will condense and collect in the filter cup. The water needs to be released when the water level reaches to a certain level.



CAUTION

Make sure the air pressure reaches to 5kg/cm^2 before operating the machine.

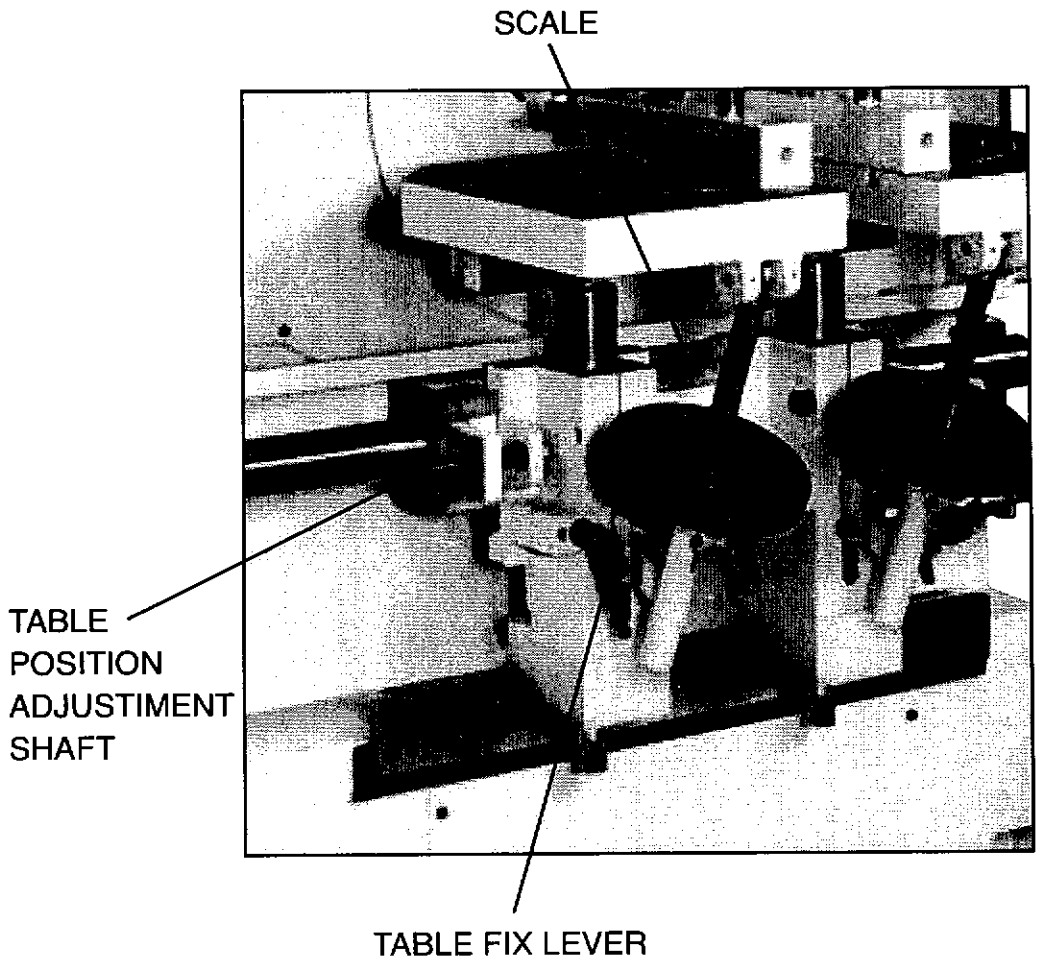
ADJUSTING TABLE POSITION IN RIGHT/LEFT DIRECTION

1. Both right and left table can be adjusted in rightward or leftward direction.

2. To adjust table position, turn the table position adjustment shaft by using a supplied box wrench.

3. Loosen the table fix lever (red) before turning the table position adjustment shaft. Tighten it securely after adjustment.

4. A graduated scale is provided for indicating adjustment.



REPLACING THE CUTTER

⚠ WARNING

The cutter is very sharp. Care should be taken when performing cutter replacement.

1. Disconnect the machine from power source to prevent accidental starting.

2. Move the right and left table to their extreme end positions to facilitate cutter replacement job.

3. Set the cutter at its top position on its feed stroke by pressing the cutter traverse switch (4).

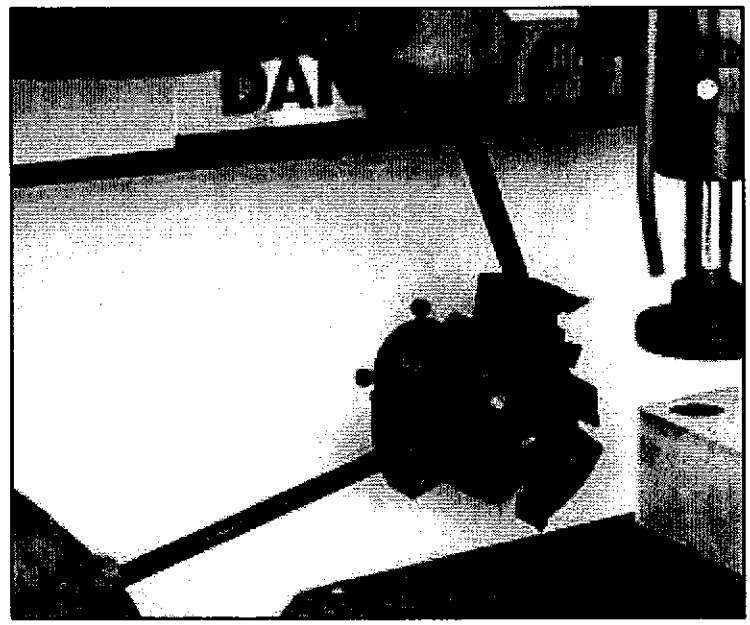
4. Lock the cutter in position by using the supplied fix rod. Insert it into the fix hole on the cutter.

5. Loosen the cutter lock screw by using a hexagonal wrench.

6. Now you can remove the cutter, lock screw and washer.

7. Clean the cutter bore and the spindle before mounting a new cutter.

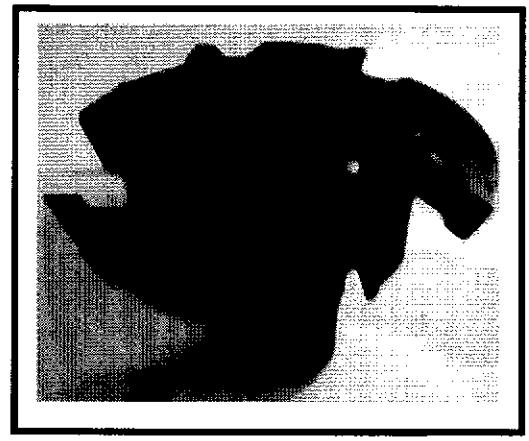
8. After the cutter has been mounted, reverse above procedures to return the machine to its original condition.



CUTTER SPECIFICATIONS

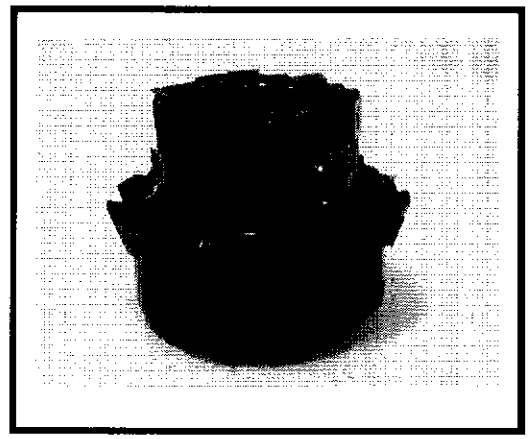
The machine is standardly furnished with a solid tungsten carbide tipped (TCT) cutter. When requested a throw-away type cutter is available.

WELDED CUTTERHEAD (STANDARD)



1. Suitable for medium hardness wood materials.
2. Production rate 12pcs per minute.
3. Tearing may occur when applying for high hardness wood materials.
4. Sharpening frequency is 6-7 days of operation.

24T HELICAL CUTTERHEAD (OPTIONAL)



1. Excellent for all soft and hard wood materials.
2. 360°cutting.
3. Fine chips.
4. No tearing.
5. Forced chip removing to eliminate repeated cutting.
6. Low noise, long service life, insert life up to 120 days.
7. 5 years warranty.

SAFETY RULES FOR THE CUTTER

1. The cutter used on this machine should comply with prEN847-1.

2. The operator should follow the instructions of cutter for safe use and adjustment.

3. Do not exceed the allowable maximum speed of the cutter.

4. Make sure the cutter is locked securely.

TILTING THE TABLE IN UPWARD DOWNWARD DIRECTION

The table can be tilted 0-15° upward, and 0-30° downward. To tilt the table for producing bevel tenon, do as following procedures.

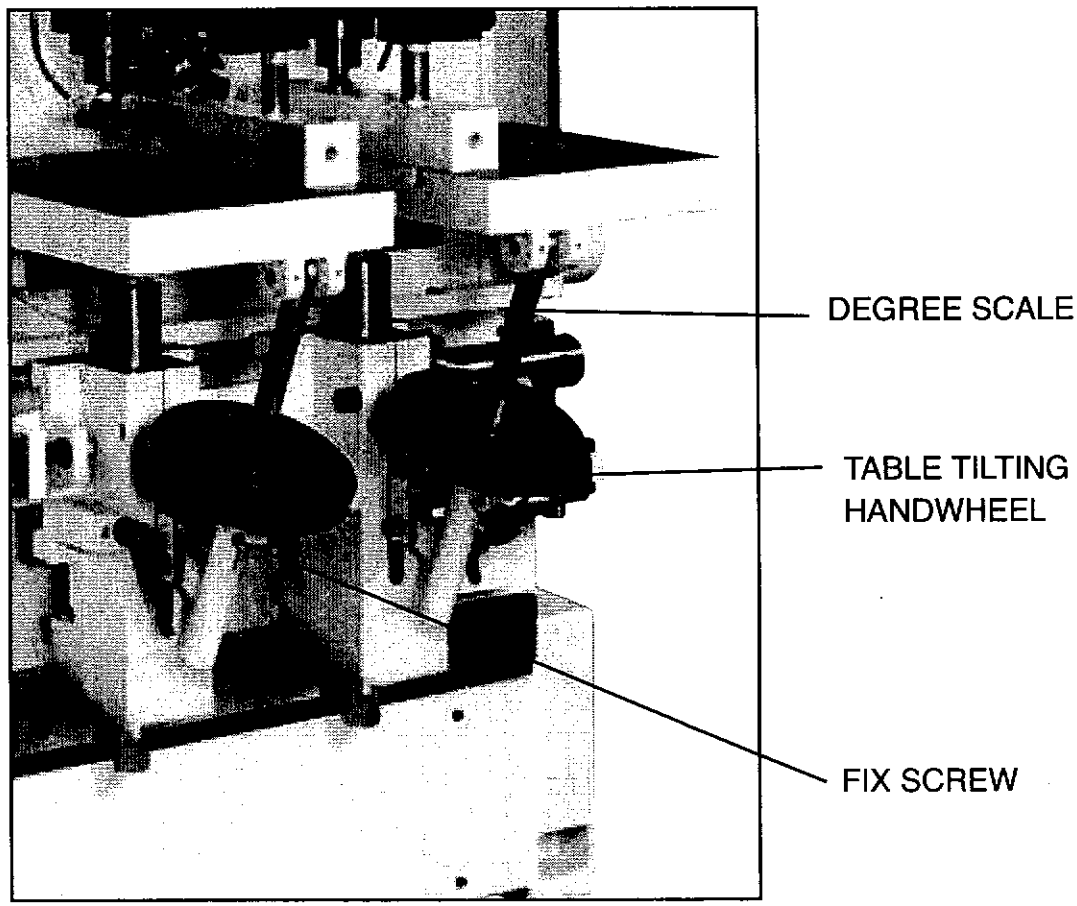
1. Loosen the fix screw located on the stable support bracket.

2. Turn the table tilting handwheel manually to the desired angle.

3. Tighten the fix screw after table tilting has been accomplished.

4. The tilting degree can be read on the graduated scale attached on the table support shaft.

5. When the table is tilted for beveling tenon, remember to adjust the air clamp angle for clamping the workpiece securely.



RAISING OR LOWERING TABLE

1. To raise or lower the table, turn the table elevation shaft by using a supplied box wrench.

2. Loosen the two clamp screws at both sides before raising or lowering the table. Tighten it securely after table position has been properly adjusted.

3. A graduated scale is attached on the table support shaft to indicate the table position adjustment

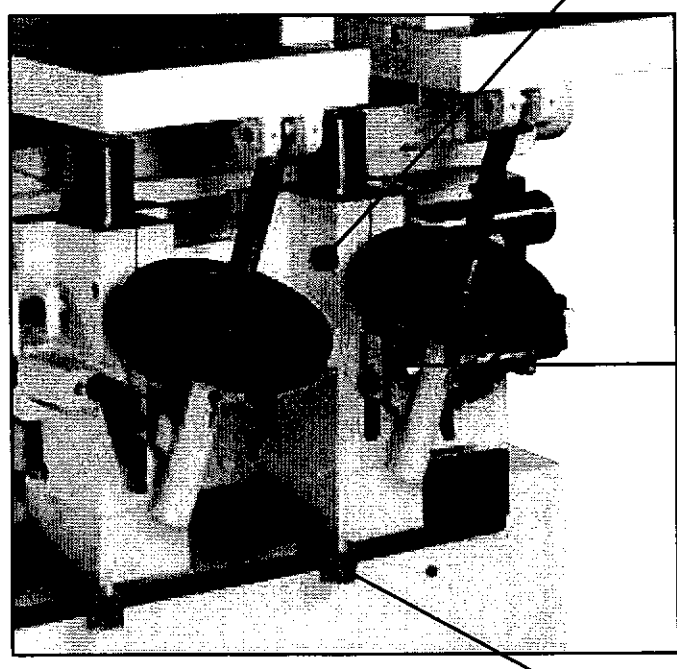


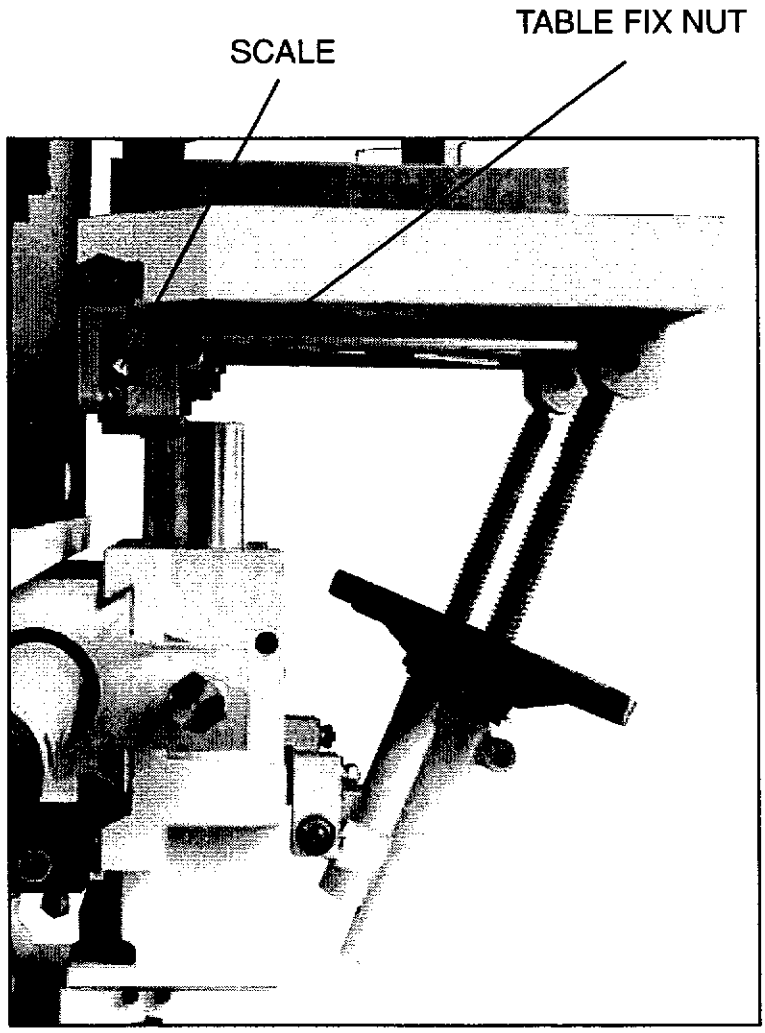
TABLE TILTING ADJUSTMENT IN RIGHT/LEFT DIRECTION

1. The table can be tilted in right and left direction for cutting bevel tenon.

2. The tilting degree is 20°.

3. To tilt the table, loosen the two nuts that tighten the table. Then set the table at the desired degree.

4. A graduated scale is attached to indicate the set angle.



CHANGE TENON DIRECTION

This rectangular tenoner can produce three directions of tenon-horizontal, vertical and 45° at the end face of the workpiece. To change tension direction, do as following procedures.

1. Disconnect the machine from power source.

2. Tenon direction change is made by turning the disk located at back side of the machine.

3. **SLIGHTLY** loosen the two screws that tighten the disk using a hexagonal wrench.

   NOTE: Do not loosen the two screws completely. This will prevent the disk dropping down.

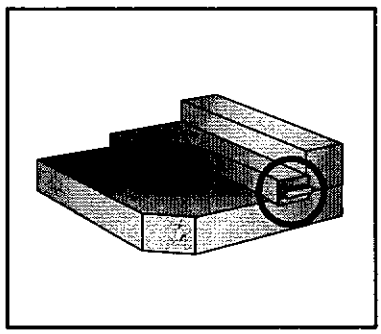
4. Manually turn the disk to your desired direction of tenon.

5. A graduated scale, attached on the circumference of the disk, is used for indicating the tenon direction.

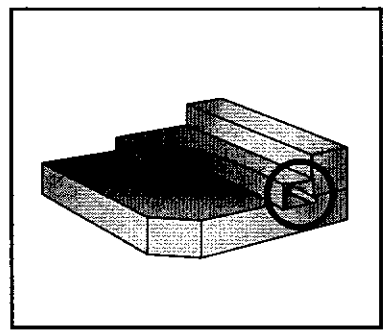
CHANGE TENON DIRECTION

6. The 0° means a horizontal tenon, while the 90° means a vertical tenon.

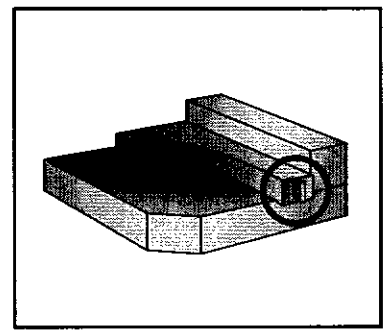
7. After tenon direction has been properly set, tighten the two disk lock screws securely.



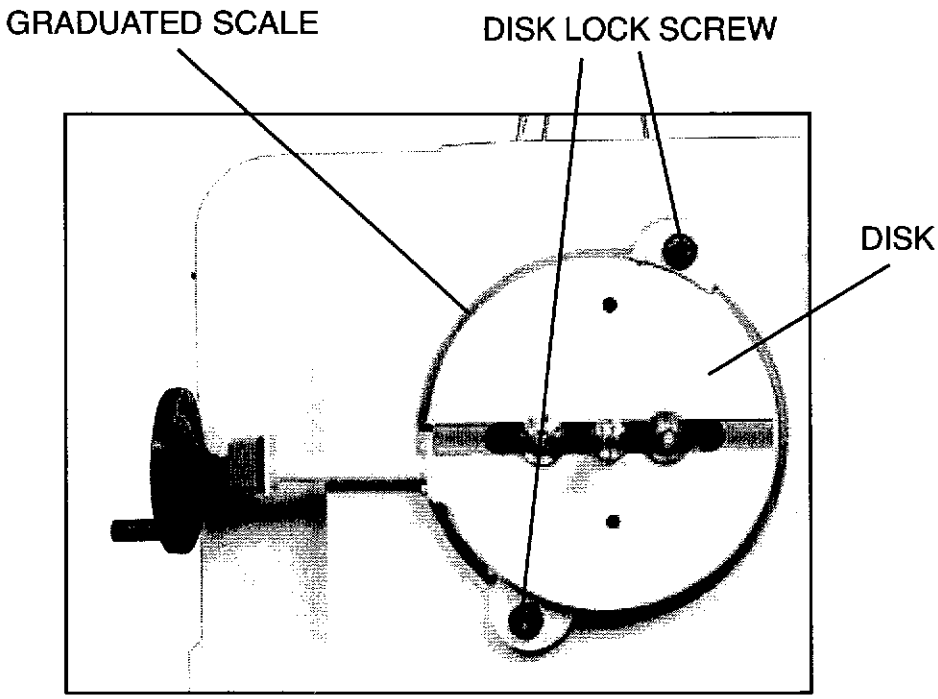
HORIZONTAL



45° TENON



VERTICAL TENON



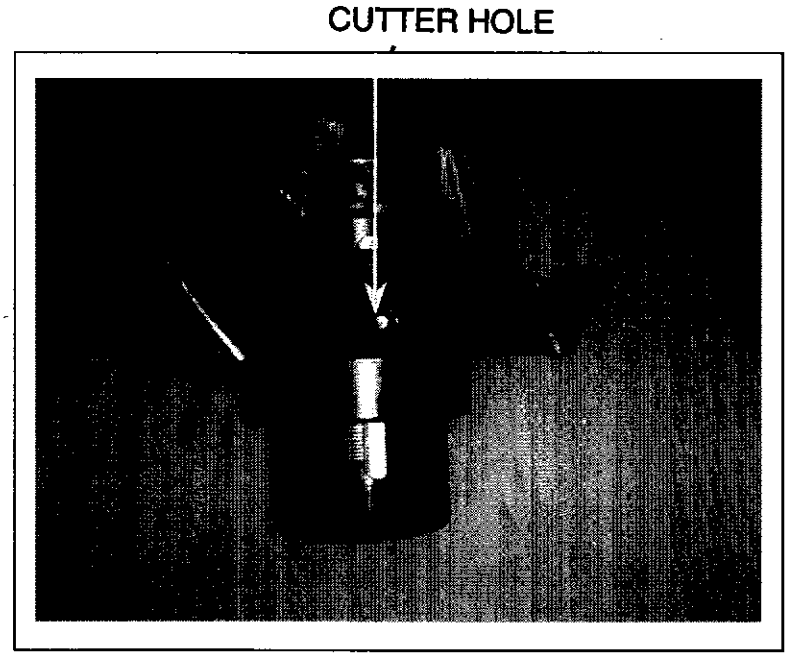
ADJUSTING TENON DEPTH

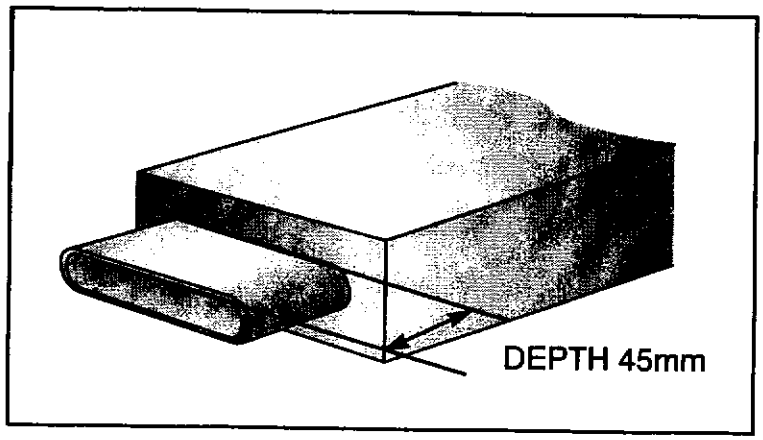
1. The tenon depth can be varied by adjusting the knife position on the cutter.

2. Disconnect the machine from power source before performing knife position adjustment.

3. Use a hexagonal wrench to loosen the knife lock screw, located inside the hole on the cutter.

4. The maximum tenon depth adjustment is 45mm.





ADJUSTING TENON LENGTH

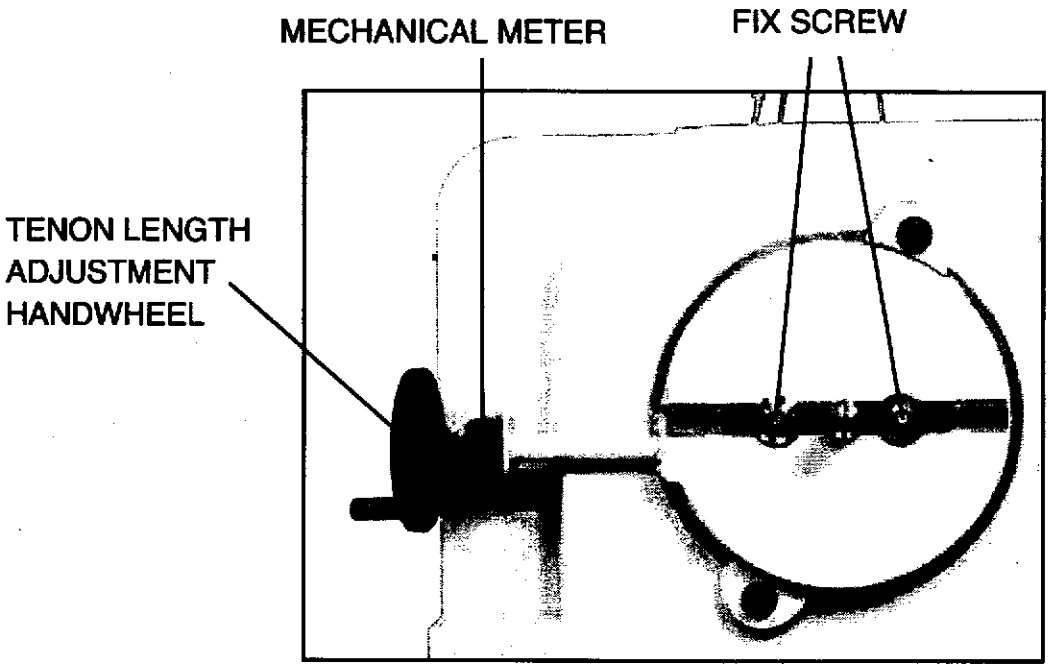
1. Tenon length is conveniently adjusted by turning the length adjustment handwheel located at back left side of the machine.

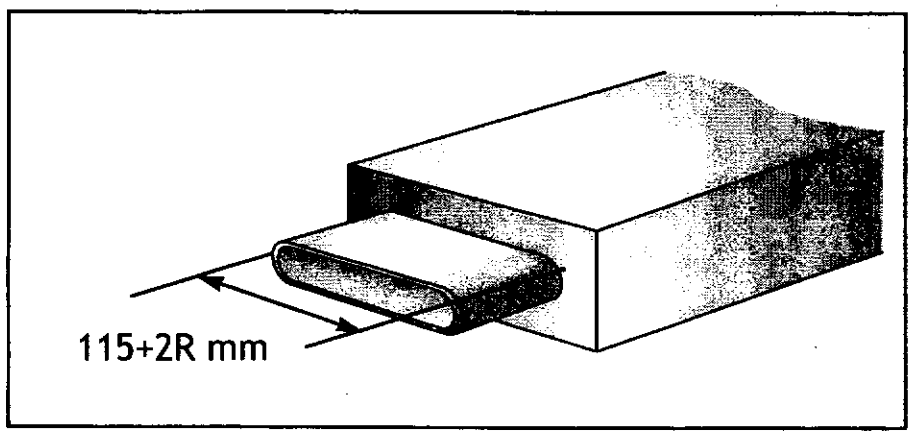
2. Turn the handwheel clockwisely for decreasing the tenon length. Turn counter clockwisely for increasing tenon length.

3. Loosen the two length fix screws before turning the handwheel. Tighten them securely after length adjustment has been accomplished.

4. **A mechanical meter is provided on the handwheel shaft to indicate the tenon length adjustment.**
   The maximum tenon length that the machine can produce is 115+2R mm

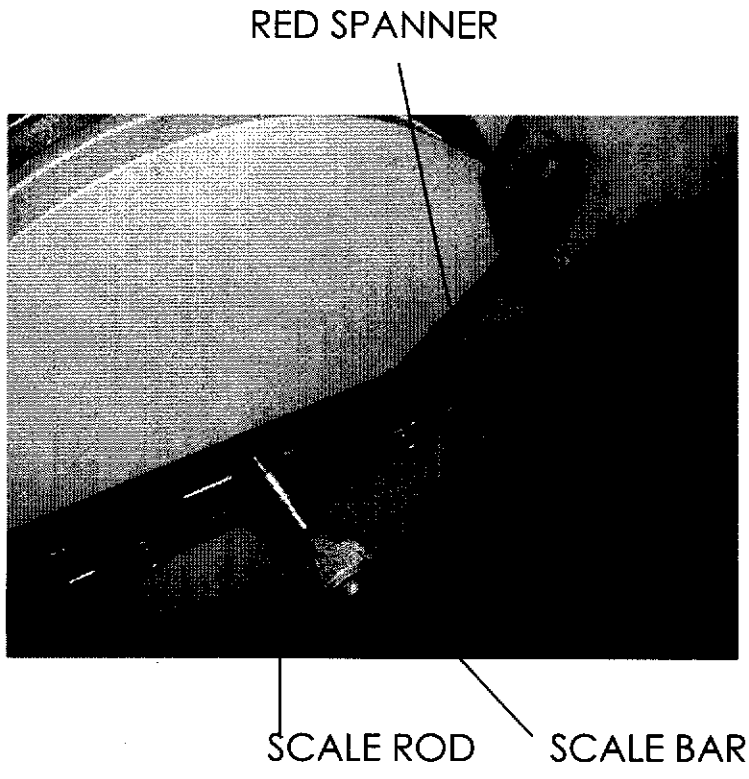
5. The tenon length indicated on the mechanical meter is cutter center distance between both ends.

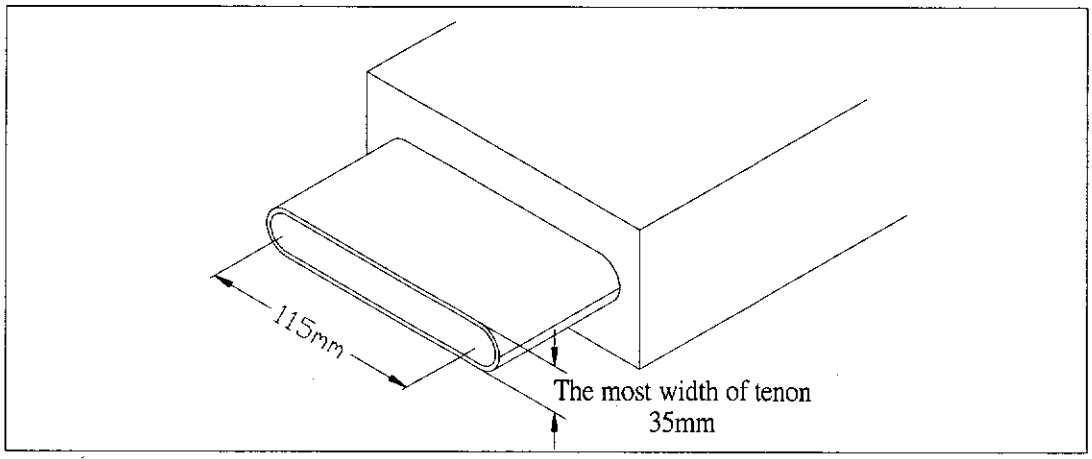




ADJUSTING WIDTH OF TENON

1. IF you want to adjust the width of tenon, please turn scale rod。The scale rod sets on middle of back machine
2. You could add the width of tenon by turning the scale rod clockwise.you could decrease the width of tenon by turning the scale rod anti-clockwise.
3. The scale rod attached a scale barrel indiecated the adjustment of tenon. The most width of tenon is 35mm





TO STOP THE MACHINE

1. STOP SWITCH (1)

When the machine is operating, press this switch, all motions stop immediately. This switch is usuall applied when you need to stop the machine.

2. STOP SWITCH (2)

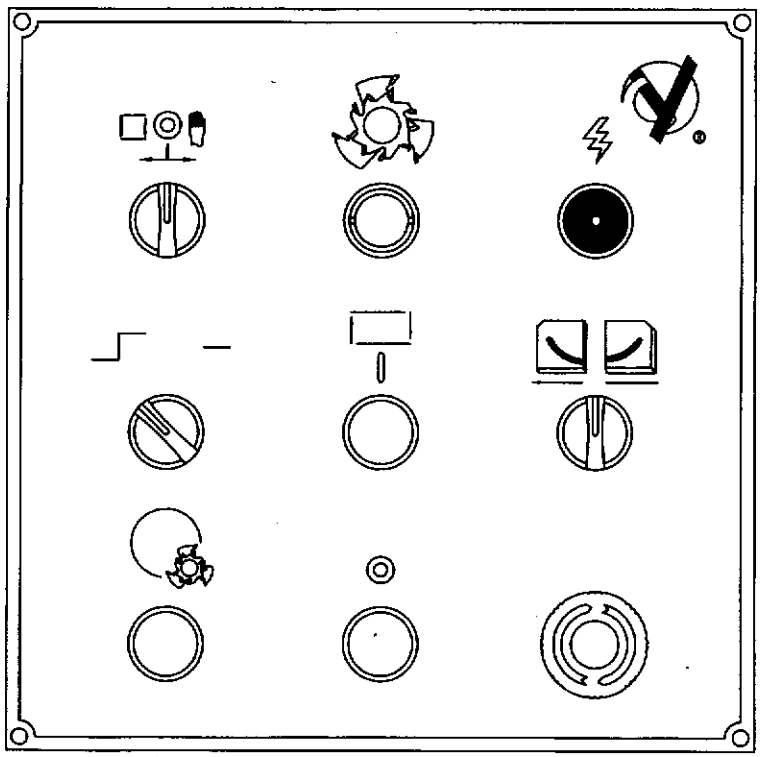
When setting this switch at neutral position, all motions stop immediately.

3. EMERGENCY STOP SWITCH (3)

An emergency stop switch is provided on the control panel used for stopping the machine motions.

In case any abnormal motion occurs during operation, simply press the emergency stop switch, then all motions will stop immediately.

When the emergency stop switch is pressed, it will be locked in place. Don't forget to release the emergency stop switch by turning it clockwisely before restarting the machine.



IDENTIFICATION BEFORE OPERATION

1. Check if the cutter is tightened securely.

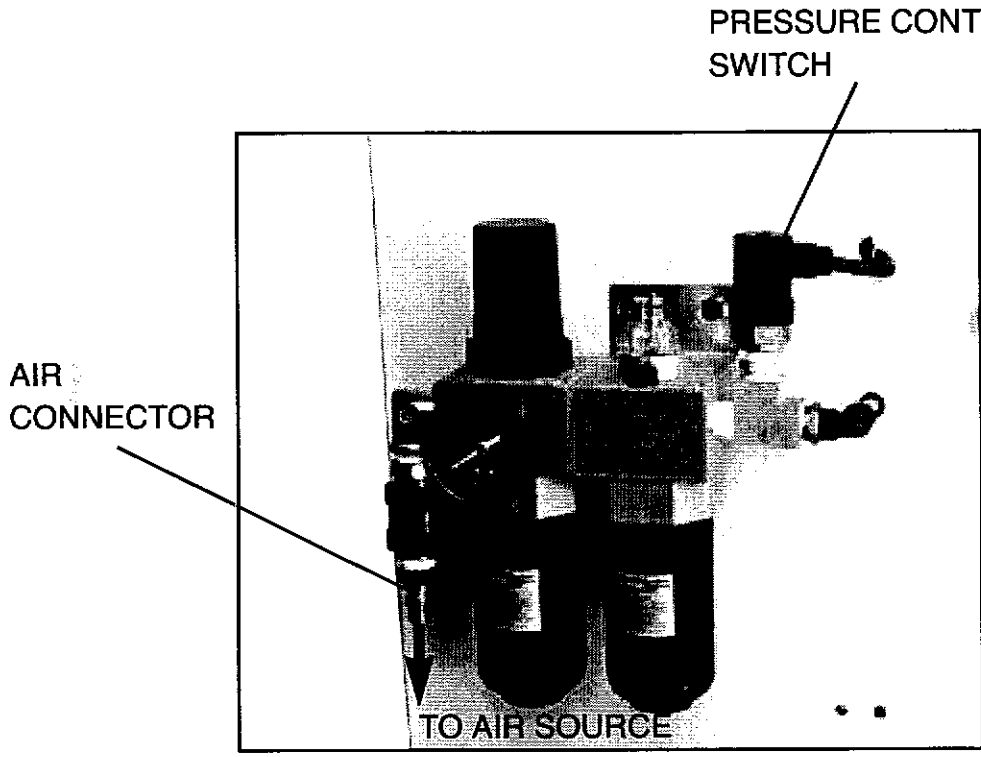
2. Check if the working pressure reaches to 5kg/cm^2

3. Check if the cutter moves to the correct direction.

4. Check if the cutter rotates to the correct direction.

MANUAL OPERATION PROCEDURES

1. Turn on air switch. Set air pressure by turning the pressure regulator knob. Wait until the pressure reaches to 5 kg/cm².



FILTER/REGULATOR LUBRICATOR UNIT

2. Turn on power switch.

3. Set the MANUAL/AUTO selection switch at MANUAL mode.

4. Place the workpiece to be cut on the right table.

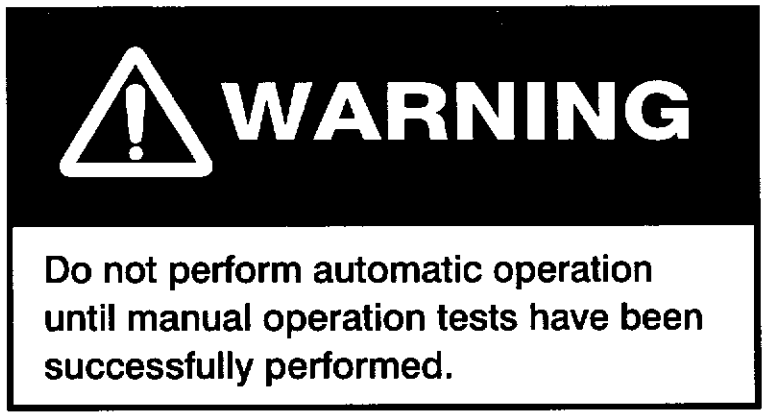
5. Adjust table position.

6.Adjust tenon depth, width and length.

7. Press the clamping switch to clamp the workpiece.

8. Press the cutter start switch. The machine will perform one cycle of motion then stops automatically.

AUTOMATIC OPERATION PROCEDURES



1. Make sure all motions are tested in manual mode before performing automatic operation.

2. Set the MANUAL/AUTO selection switch (2) at AUTO position.

3. Press the switch (5) to start cutter running.

4. Press the AUTO switch (6), then the machine will perform automatic operation.

ADJUSTING BELT TENSION

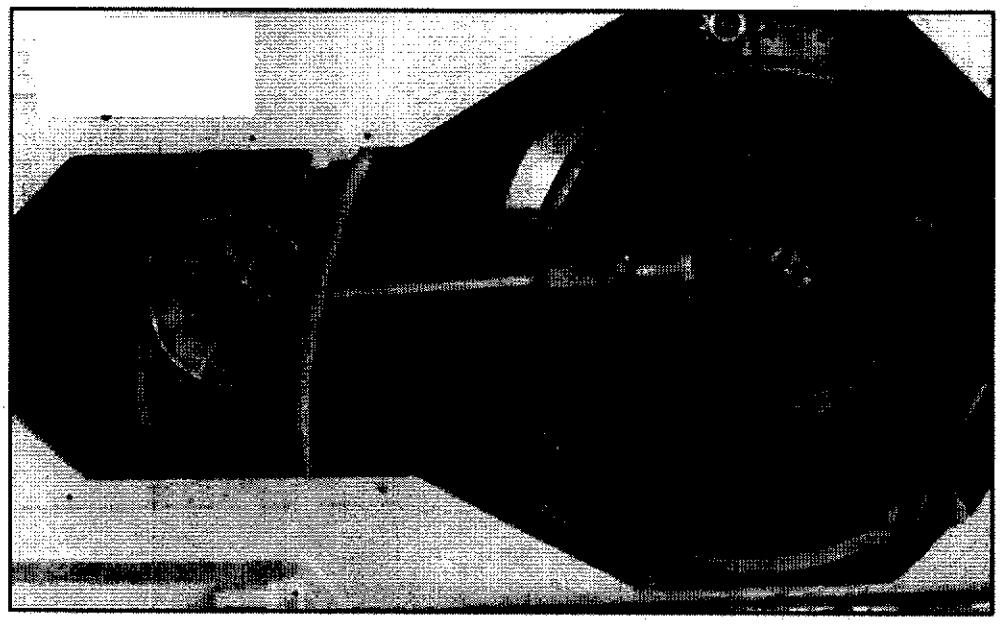
After the machine has been operated for a long time, the belt tension may loosen gradually. Therefore it is necessary to check the belt tension periodically. Adjust belt tension, if necessary, according to following procedures:

1. Disconnect the machine from the power source.

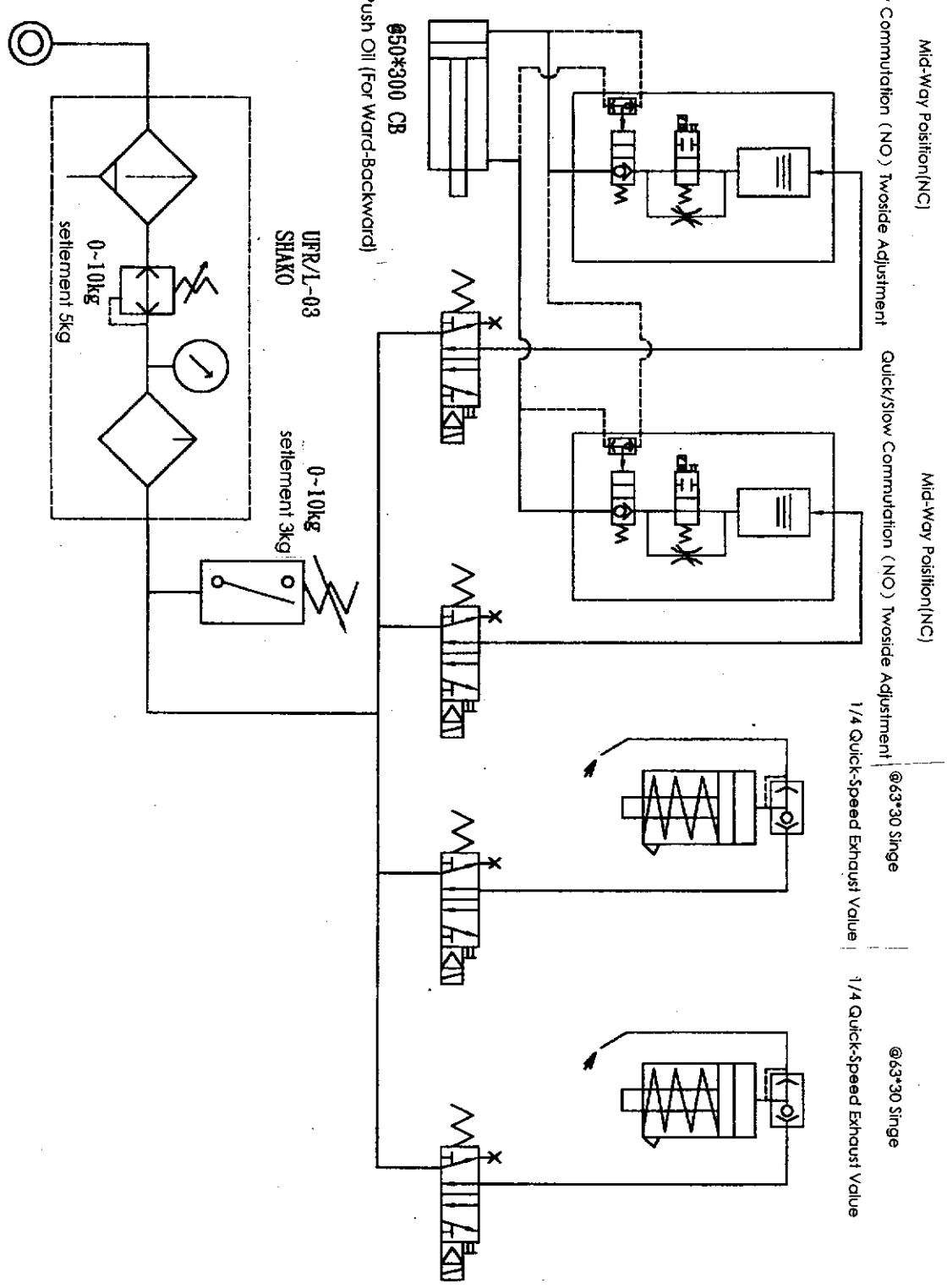
2. Open the back cover.

3. Loosen the lock nut. Turn the belt tension adjustment nut until a proper tension is obtained.

4. After the belt tension adjustment has been made, reverse above procedures to return the machine in normal condition.



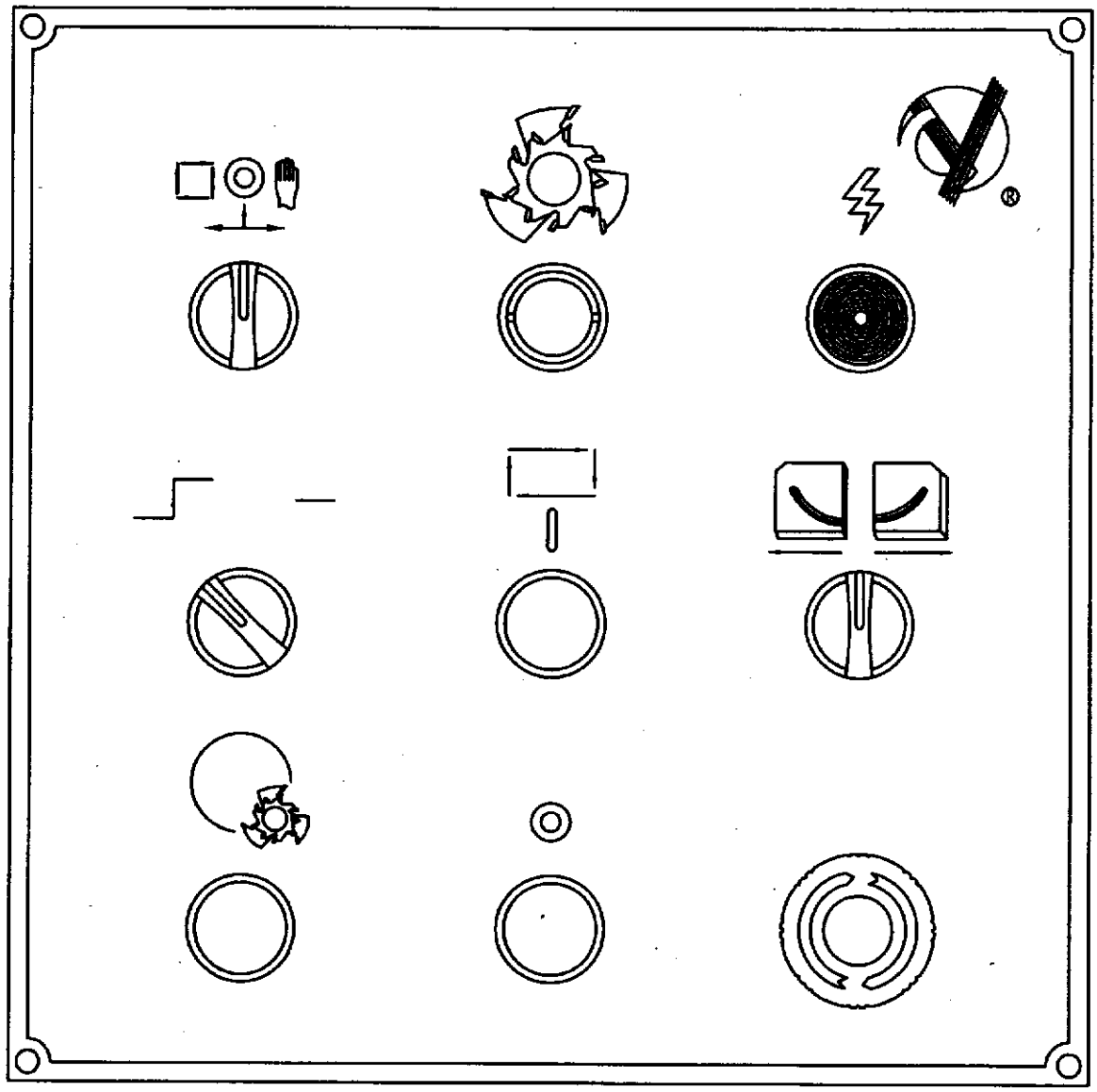
AIR CIRCUIT DIAGRAM



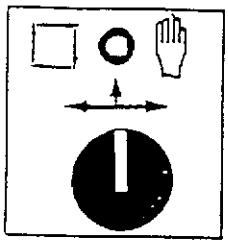
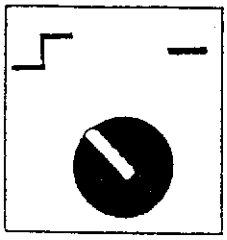
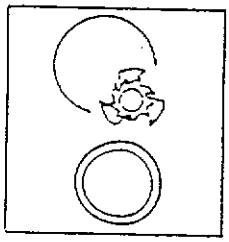
D

ELECTRIC CONTROL SYSTEM

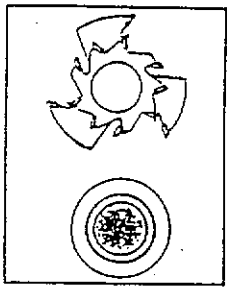
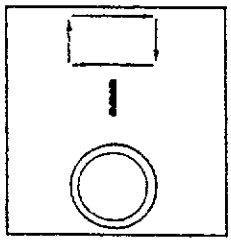
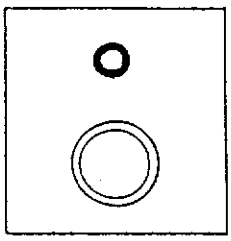
CONTROL PANEL



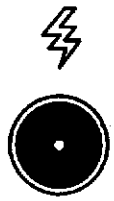
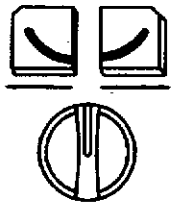
CONTROL PANEL INSTRUCTIONS

SWITCH FIGURE	DESCRIPTION	FUNCTION
1 	MANUAL/AUTO MODE SELECTION SWITCH	1.Turing this switch to left position for manual operation mode. 2.Turning this switch to right position for automatic operation mode. 3.When turning this switch to middle position, any motion can't be started
2 	1-1/2AND 1 CYCLE SELECTION SWITCH	1.When setting this switch at left position the cutter travels 1 1/2 cycle then stops. 2. When setting this switch at right position, the cuter travels 1 cycle then stops.
3 	CUTTER TRAVEL SWITCH	1.When this switch is pressed the cutter travels a cycle only without rotation. 2.This switch is normally applied to check if the power wires wiring is correct or not during machine installation. 3.NOTE: This switch is effective only the MANUAL/AUTO selection switch (1) has been set at MANUAL mode.

CONTROL PANEL INSTRUCTIONS

SWITCH FIGURE	DESCRIPTION	FUNCTION
4 	CUTTER STSRT SWITCH	1.When the MANUAL/ AUTO selection switch (1) has been set at AUTO position, press this CUTTER START SWITCH to start cutter running. 2.This switch is applied for Normal production. 3.This switch is effective only at AUTOMATIC mode. 4.To stop cutter running press the STOP SWITCH(8).
5 	CONTINUOUS CYCLE START	1.When this switch is pressed the machine performs continuous automatic cycles. 2.This switch is effective only when the MANUAL/AUTO selection switch has been set at AUTO position.
6 	STOP SWITCH	1.When this switch is pressed, all the performance will be stopped immediately.

CONTROL PANEL INSTRUCTIONS

SWITCH FIDURE	DESCRIPTION	FUCTION
 7	POWER INDICATION LAMP	When the master switch located at left side of control panel box, is turned on, this power indication lamp lights on. This means machine now is under powered.
 8	TABLE MOVEMENT SWTICH (MANUAL MODEL)	Under manual mode, this table movement switch controls the leftward and rightward movement of working tables.
 9	EMERGENCY STOP SWITCH	1. When this switch is pressed all motions stop immediately. 2. Before restarting the machine release, this emergency stop switch by turning it rightward.

SAFETY RULES FOR ELECTRICAL CONTROL SYSTEM

1. All electrical/ electronic trouble shooting and repair should be made only by a personnel who is properly trained and have adequate knowledge.

2. Do not alter or by pass protective interlocks.

3. Take extra precautions in some areas to prevent yourself form accidental grounding.

4. When performing trouble shooting, make sure the power source has been disconnected.

5. Do not open the electric control panel unless it needs to check the electric components.

6. Before applying power to any equipment it must be established without a doubt, that all persons are clear.

7. Do not alter the electrical circuits unless authorized to do so by the machine manufacturer.

8. When replacing electrical components, make sure they conform to the manufacturer`s specifications, including proper color coding.

9. All covers on junction box must be closed before leaving any job.

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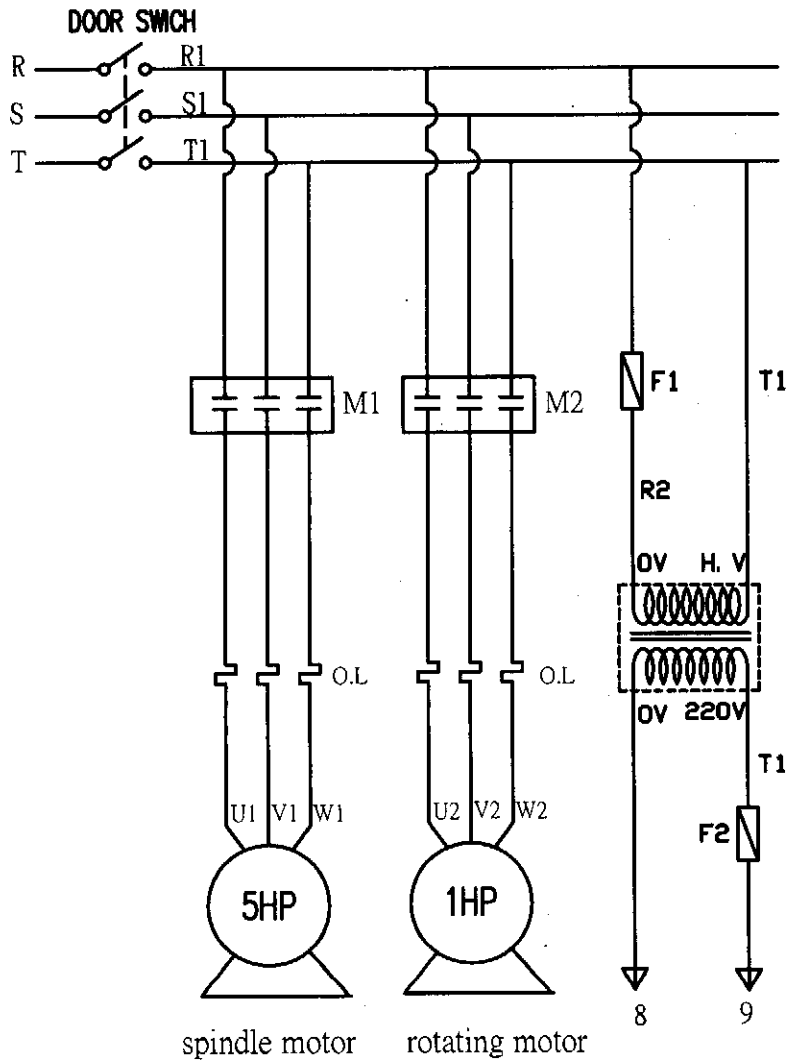
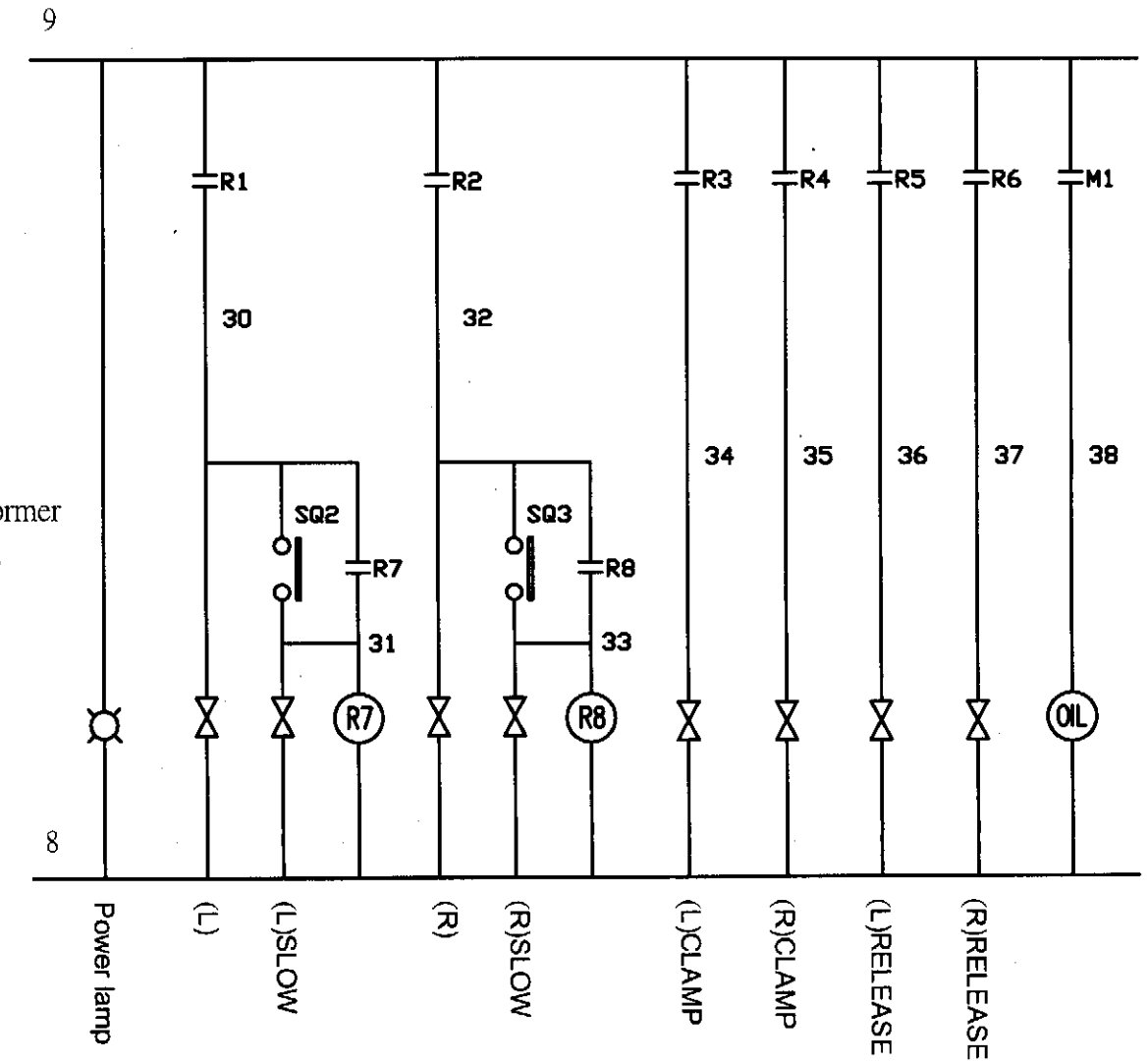
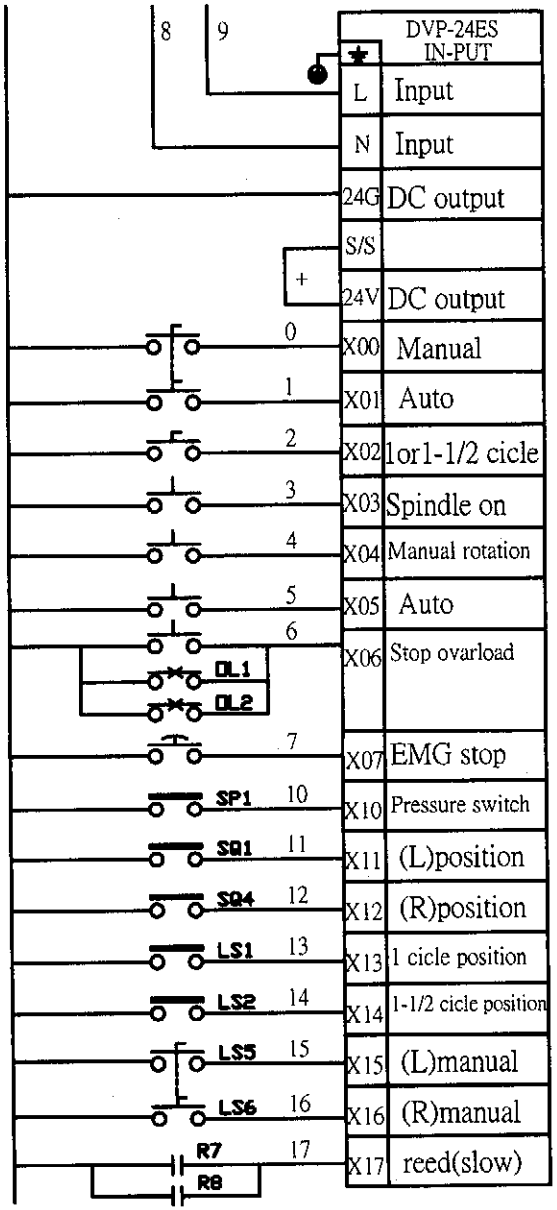
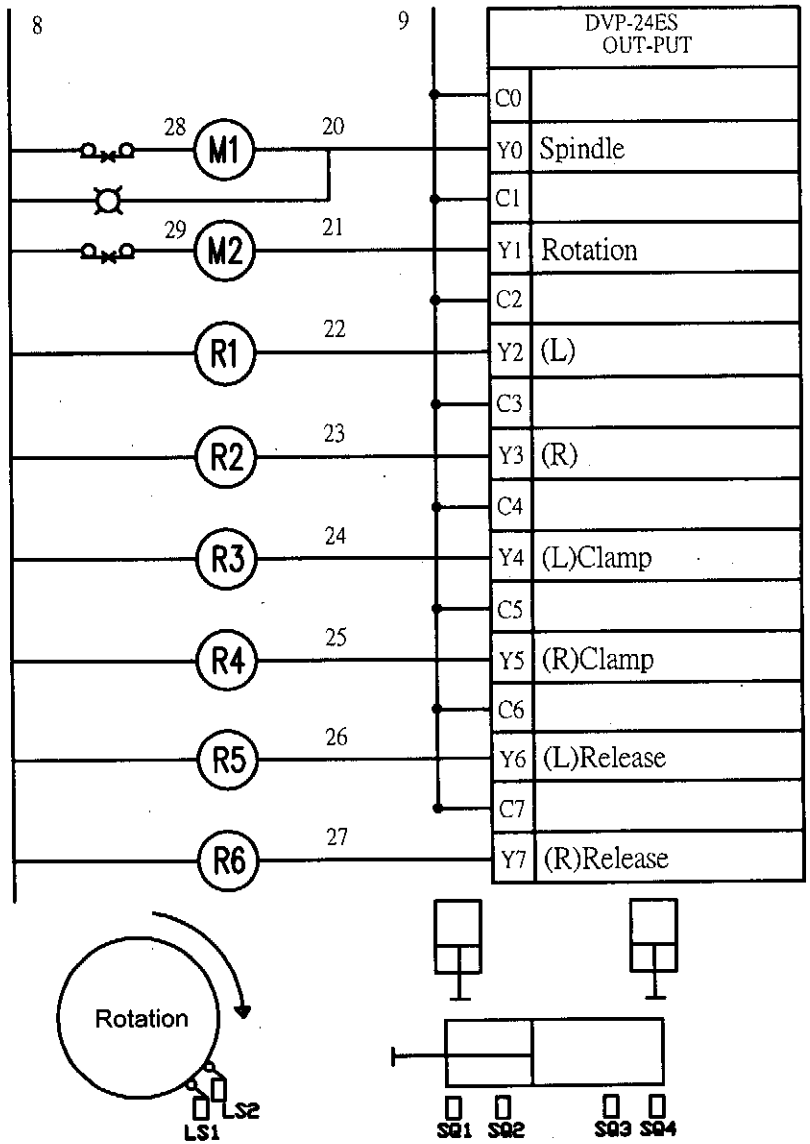

DOOR SWICH
R
S
T
R1
S1
T1
M1
M2
F1
T1
R2
0V H. V
transformer
250VA
0V 220V
T1
F2
O.L
O.L
U1 V1 W1
U2 V2 W2
5HP
1HP
8
9
spindle motor
rotating motor


9
R1
R2
R3
R4
R5
R6
M1
30
32
34
35
36
37
38
SQ2
SQ3
R7
R8
31
33
R7
R8
OIL
8
Power lamp
(L)
(L)SLOW
(R)
(R)SLOW
(L)CLAMP
(R)CLAMP
(L)RELEASE
(R)RELEASE

YRT-115


8
9
DVP-24ES
IN-PUT
L Input
N Input
24G DC output
S/S
+
24V DC output
0 X00 Manual
1 X01 Auto
2 X02 1or1-1/2 cicle
3 X03 Spindle on
4 X04 Manual rotation
5 X05 Auto
6 X06 Stop ovarload
OL1
OL2
7 X07 EMG stop
SP1 10 X10 Pressure switch
SQ1 11 X11 (L)position
SQ4 12 X12 (R)position
LS1 13 X13 1 cicle position
LS2 14 X14 1-1/2 cicle position
LS5 15 X15 (L)manual
LS6 16 X16 (R)manual
R7 17 X17 reed(slow)
R8


8
9
DVP-24ES
OUT-PUT
28 M1 20
29 M2 21
R1 22
R2 23
R3 24
R4 25
R5 26
R6 27
C0
Y0 Spindle
C1
Y1 Rotation
C2
Y2 (L)
C3
Y3 (R)
C4
Y4 (L)Clamp
C5
Y5 (R)Clamp
C6
Y6 (L)Release
C7
Y7 (R)Release
Rotation
LS2
LS1
SQ1 SQ2 SQ3 SQ4

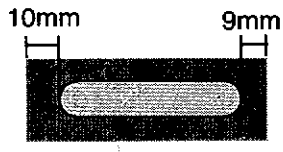
E

MAINTANANCE

MAINTENANCE

The rectangular tenoner will operate in good condition if a proper maintenance is made. Clean wood chips, dust, dirt or debris everyday when job is finished. Do not allow chips to accumulate inside of the machine. Keep cutter sharp at all times.

TROUBLE SHOOTING
FINISHED PRODUCT TROUBLE

TROUBLE	PROBABLE CAUSES	CORRECTION
1. Inconsistant thickness on two tables 	Cutter not positioned at its higest point.	Adjust cutter position adjustmentpiece, located on disk.
2. Product overcut 	Cutter not positioned at its higest point.	Adjust cutter position adjustmentpiece, located on disk.
3. Product not ched 	Improper buffering adjustment.	Adjust buffering cylinder.
4. Tenon position off set 	Improper buffering adjustment.	Adjust buffering cylinder.
5. Table positioned but disk does not run	1. Magnetic spring switch not positioned properl. 2. Magnetic spring switch damaged.	1. Adjust its position. 2. Check and replace.

TROUBLE SHOOTING
ELECTRIC AND CONTROL TROUBLE

TROUBLE	PROBABLE CAUSES	CORRECTION
Machine can't start	1. Insufficient air pressure. 2. Power source failure. 3. Master power switch not turned on.	1. Check air pressure. 2. Inspect power source. 3. Turn it on.
Motor can't start	1. Emergency stop switch locked. 2. Thermal relay tripped. 3. Switch burnt out. 4. Power wires loosened or damaged. 5. Fuse burn out	1. Reset it. 2. Reset it. 3. Reset it. 4. Tighten or replace them. 5. Replace it.
Motor can't run at full speed	1. Power voltage too low. 2. Motor damaged. 3.Two phase running. 4.Incorrect power wiring. 5.Overload cutting.	1. Test voltage. 2. Check and repair it. 3. Check fuse and wires. 4. Replace with the correct size power wiring. 5.Reduce cutting load.
Motor overheating	1. Motor is dirty. 2. Motor damaged.	1. Clean it. 2. Check and repair motor.

TROUBLE SHOOTING
CUTTER TROUBLE

TROUBLE	PROBABLE CAUSES	CORRECTION
Burning mark on product	Cutter dulled	Sharpen it.
Product surface not smooth	Cutter dulled	Sharpen it.
Cutter rumbling	Poor cutter balance	Check cutter balance.

ORDERING REPLACEMENT PARTS

The replacement parts may be ordered from your local distributor or the machine manufacturer. If the parts you need are not available form your local distributor your order will be faxed to the machine manufacturer for expedited handling.

When ordering the replacement parts, always provides the following information:

- The model number and serial number of the machine.

- The desired parts numbers, see parts lists shown in this manual.

- The parts name

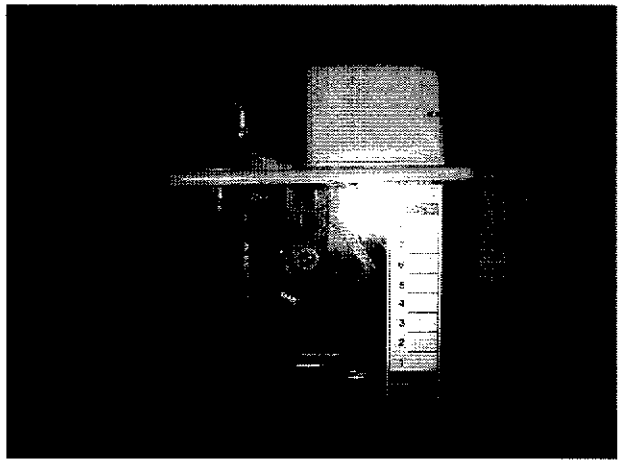
- Your desired quantity of the parts.

AUTO LUBRICATOR

The machine is equipped with auto lubricator , located at right side

Of the machine frame. It delivers oil to disk slideways.

It is important to periodically check oil auto in the oil box.



OPERATION INSTRUCTIONS FOR AUTO LUBRICATOR

1.Oil supply quantity is 3~6 cc per shot ◦

2.Check oil amount in the container periodically . when oil level lowers red warning line , fill correct and clean oil into the container immediately ◦

3.Oil container capacity is 600 cc ◦

4.Oil pressure is 3.5Kg/c m^2 in average ◦

LUBRICATION

To maintain the best performance and extend life of the machine, a periodical lubrication for this machine is very important. Use recommanded lubricant only. Below gives the lubrication points and frequency.

1. LUBRICATOR:

Recommanded lubrication oil is #68.
The lubricator is mounted at right side of the machine. It supplies oil to disk slideways.

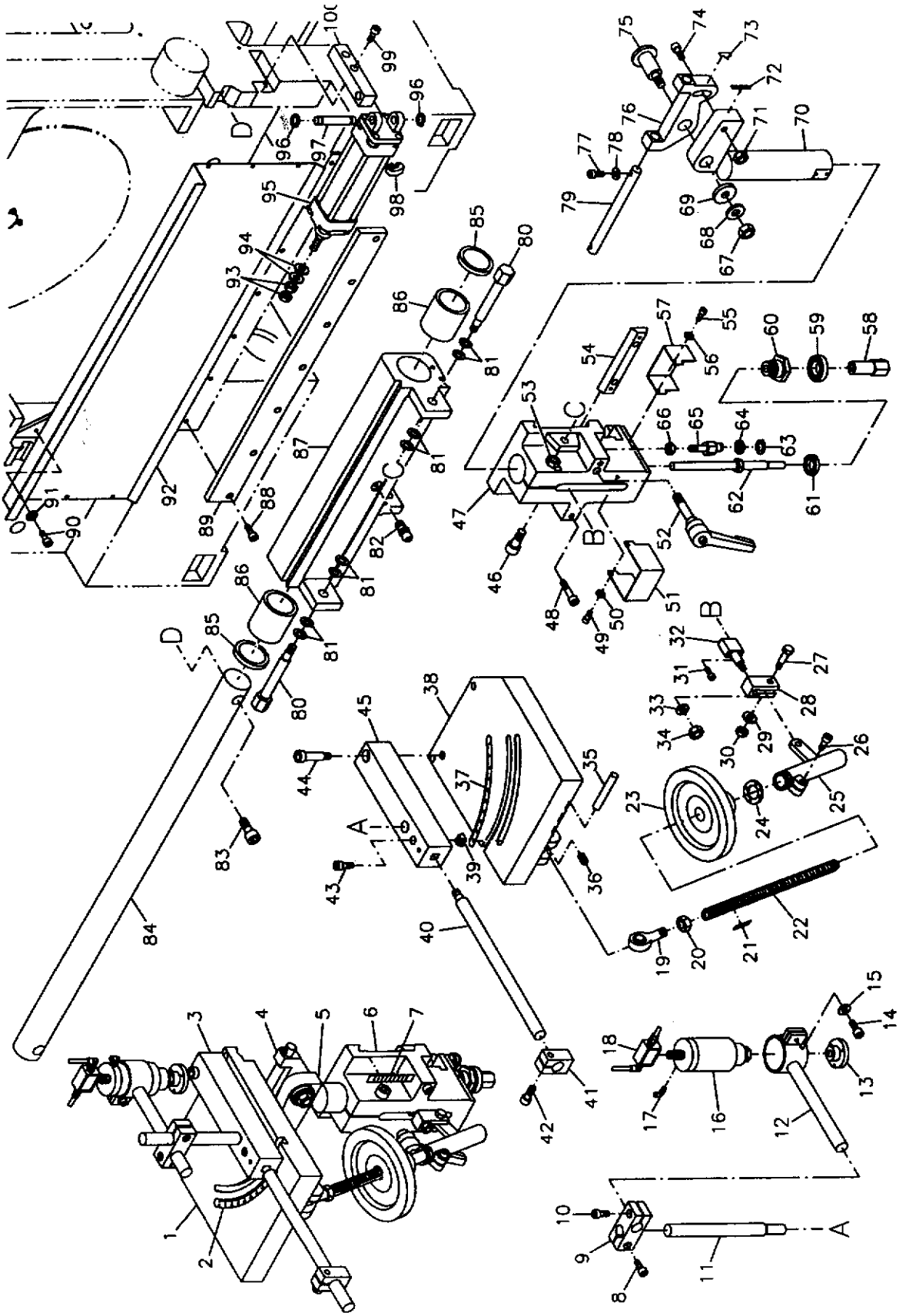
2. LUBRICATION FREQUENCY

LUBRICATION POINTS	ERCOMMANDED OIL	FREQUENCY
Table elevation shaft	Grease	Once per week.
Table movement shaft	Oil #68	Once per 15 days.

F

PARTS LIST

YRT-115-A



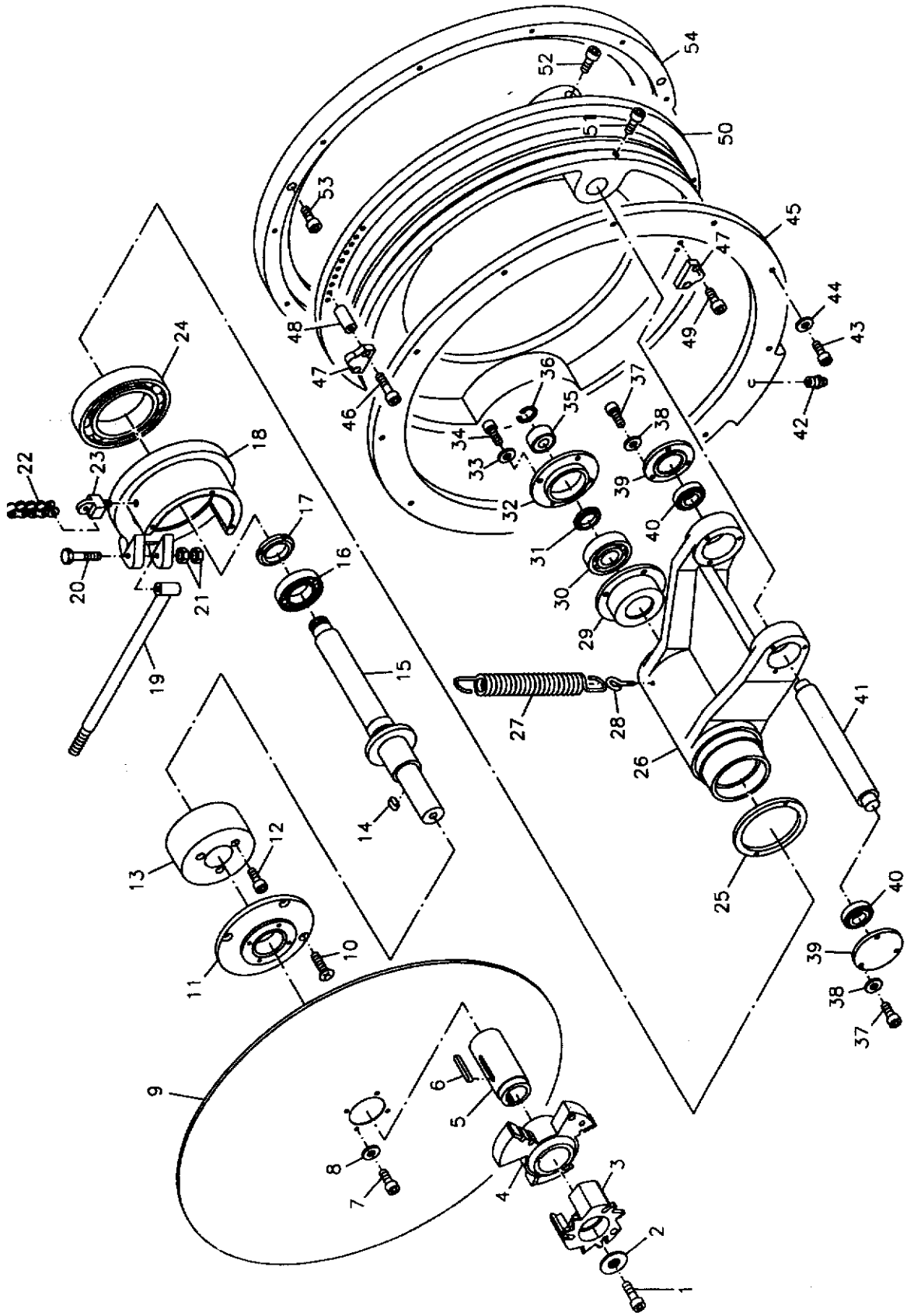
YRT-115-A PARTS LIST

1. Left table	34. Nut 10mm
2. Graduated scale	35. Round rod 12mm
3. Aluminum fence (left)	36. Headless socket screw
4. Left table support	37. Degree scale
5. Elevation shaft (left)	38. Table (right)
6. Table elevation slide	39. T-nut 10mm
7. Scale	40. Shaft
8. Hexagonal socket head screw	41. Stopper
9. Square steel block	42. Hexagonal head screw 8x35mm
10. Hexagonal socket head screw 12x45mm	43. Hexagonal head screw 8x60mm
	44. Screw M12x62mm
11. Shaft	45. Aluminum fence (right)
12. Air cylinder holder	46. Hexagonal head screw16x75mm
13. Clamp plate	47. Table elevation slide (right)
14. Hexagonal socket head screw 8x20mm	48. Hexagonal head screw 6x50mm
	49. Hexagonal head screw 6x10mm
15. Washer 8mm	50. Washer 6mm
16. Air cylimder MASL Ø63x30	51. Steel guard
17. Blowing bronze tube 6x280L	52. Handle M14x109mm
18. Quick air exhaust valve QE-02	53. Nut 16mm
19. Connection rod bearing POS12	54. Pin
20. Nut 12mm	55. Hexagonal head screw 6x15mm
21. Scale	56. Washer 6mm
22. Screw	57. Steel guard
23. Handwheel	58. Hexagonal head screw
24. Steel ring	59. Ball bearing NSK 6230zz
25. Screw bushing	60. Nut
26. Hexagonal socket head screw 8x30mm	61. Washer
	62. Screw shaft
27. Screw M10x1.5x44mm	63. S17 "C" snap ring
28. Square steel piece	64. Ball bearing NSK 6203zz
29.Washer 10mm	65. Bearing support shaft
30. Nut 10mm	66. Nut 16mm
31. Hexagonal socket head screw 6x35mm	67. Nut 16mm
	68. Washer 16mml
32. Thread holder	69. Washer
33. Washer 10mm	70. Elevation shaft (right)

YRT-115-A PARTS LIST

71. Nut 12mm	
72. Scale	
73. Pointer	
74. Screw 12x40mm	
75. Shaft	
76. Table support (right)	
77. Hexagonsal head screw 8x40mm	
78. Washer 8mm	
79. Round shaft	
80. Hexagonal head screw M14x2.0	
81. Washer	
82. Grease nipple	
83. Hexagonal head screw 16x90mm	
84. Shaft	
85. P-32 oil seal	
86. Self-lubrication bearing	
87. Slide	
88. Hexagonal head screw 8x15mm	
89. Steel plate	
90. Hexagonal head screw 6x15mm	
91. Washer 6mm	
92. Dust hood	
93. Nut 16mm	
94. Washer	
95. Air cylinder IC50B300CB	
96. S12 "C" snap ring	

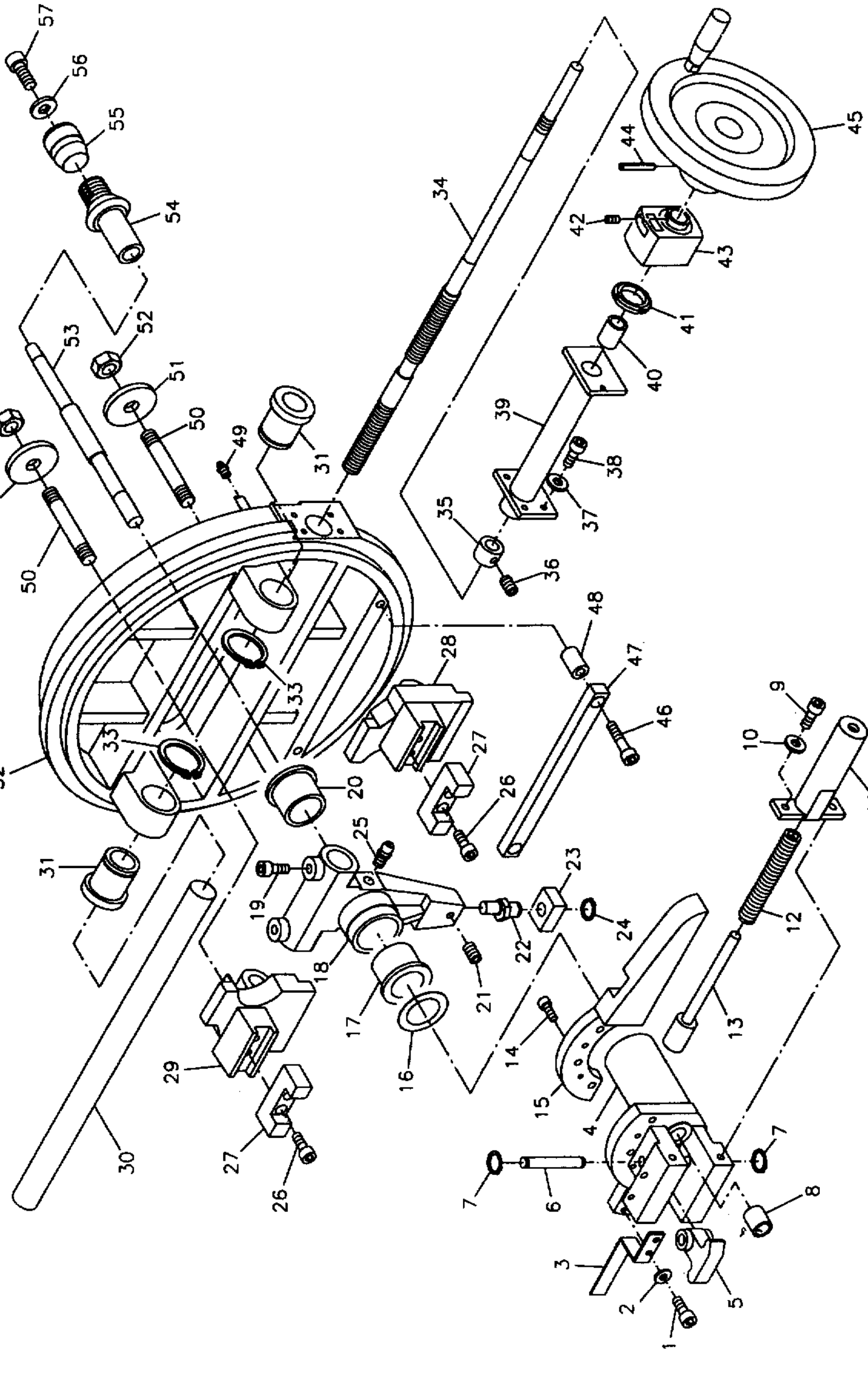
YRT-115-B



YRT-115-B PARTS LIST

1. Hexagonal head screw 10x25mm, left thread	37. Hexagonal head screw 6x15mm
2. Cutter arbor washer	38. Washer 6mm
3. Cutter	39. Cutter arbor cap
4. Cutter	40. Taper roller bearing HR30204J
5. Cutter	41. Shaft
6. Key	42. Oil tube connector
7. Hexagonsl head screw 5x10mm	43. Hexagonal head screw 6x25mm
8. Washer 5mm	44. Washer 6mm
9. Guard plate	45. Bronze collar
10. Hexagonal head screw 6x15mm	46. Hexagonal head screw 6x45mm
11. Cutter arbor guard	47. Sensor holder
12. Hexagonal head screw 6x20mm	48. Collar
13. Pulley	49. Hexagonal head screw 6x15mm
14. Key 8mm	50. Disk
15. Cutter arbor	51. Socket headlexx screw 10x20mm
16. Ball bearing NSK 6207zz	52. 10x20mm
17. Slotted head nut M35x1.5	53. Hexagonal head screw 6x25mm
18. Belt support	54. Disk seat
19. Pulley support shaft	
20. Hexagonal head screw 6x70mm	
21. Nut 6mm	
22. Chain 3/8"x465mm	
23. Chain screw	
24. Ball bearing SKF 16018	
25. Screw collar	
26. Cutter arbor bracket	
27. Spring Ø16x2	
28.Spring hook	
29. Arbor bearing cap	
30. Ball bearing NSK 6305zz	
31. Slotted head nut M25x1.5	
32.Cutter arbor cap	
33. Washer 6mm	
34. Hexagonal head screw 6x30mm	
35. Needle bearing THK NAST15zz	
36. S15 "C" snap ring	

YRT-115-C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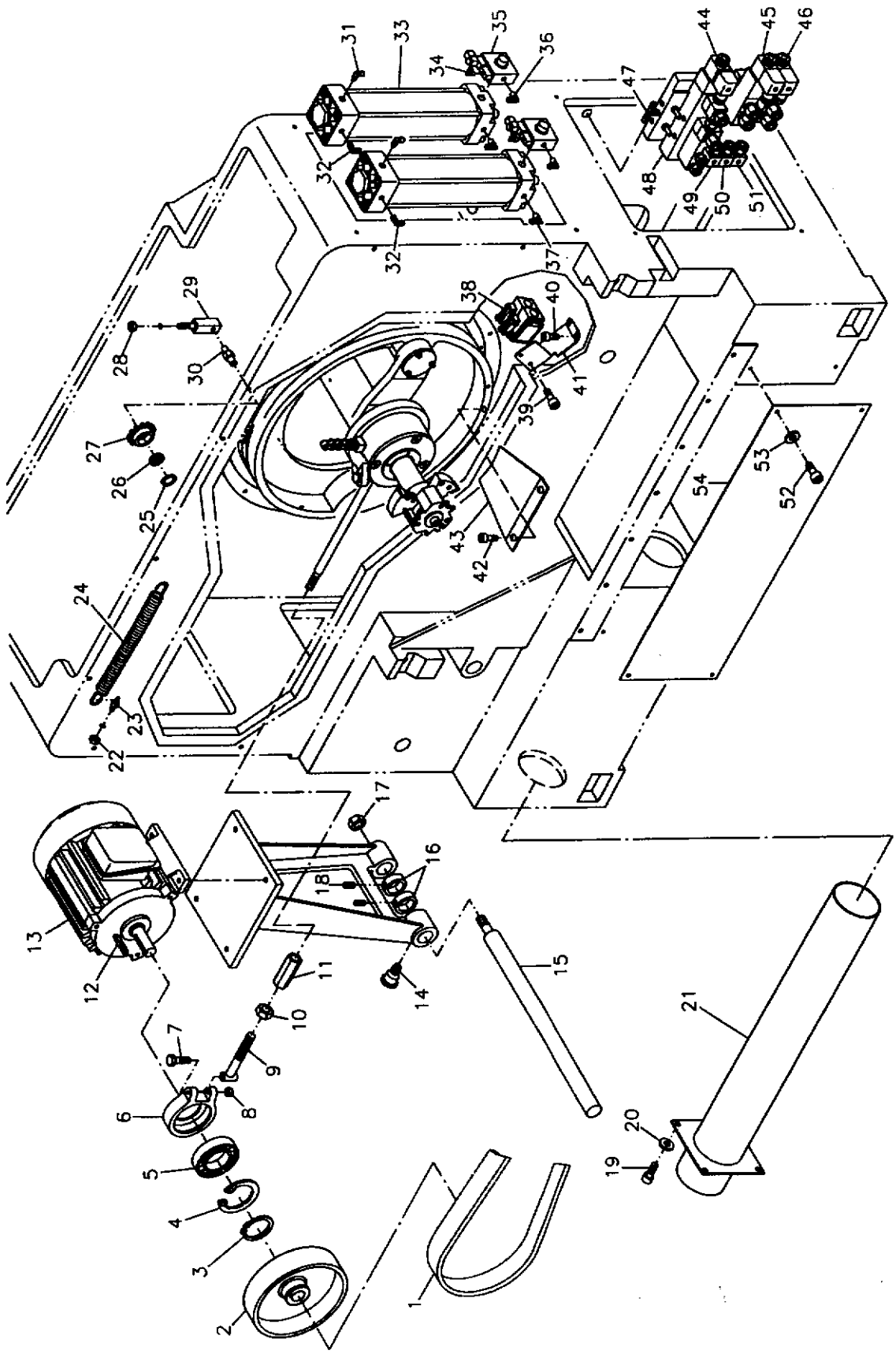
YRT-115-C PARTS LIST

1. Hexagonal head screw 6x20mm	38. Screw 6x15mm
2. Washer 6mm	39. Meter support rod
3. Angle plate	40. Bronze bushing
4. Swivel bracket	41. Nut 16x2.0
5. Arbor upper holder	42. Hexagonal socket head screw
6. Shaft	43. Mechanical meter
7. S12 "C" snap ring	44. Pin
8. Bronze bushing	45. Handwheel
9. Hexagonal head screw 8x25mm	46. Hexagonal head screw 12x45mm
10. Screw 8mm	47. Square plate
11. Spring bushing	48. Collar
12. Spring Ø22xØ144	49. Grease nipple
13. Upper shaft	50. Screw
14. Screw 8x25mm	51. Washer
15. Mold circular plate	52. Nut M16x2.0
16. Washer	53. Screw shaft
17. Bronze bushing	54. Scale rod
18. Mold swivel base	55. Scale barrel
19. Screw 10x20mm	56. Washer 6mm
20. Bronze bushing	57. Hexagonal head screw 6x20mm
21. Socket headless screw	
22. Eccentric screw shaft	
23. Bronze piece	
24. S14 "C" snap ring	
25. Grease nipple	
26. 8x25mm	
27. Mold	
28.Mold bracket (ringht)	
29. Mold bracket (left)	
30. Bearing steel shaft	
31. Bronze bushing	
32. Disk collar	
33. S30 "C" snap ring	
34. Screw shaft	
35. Bronze collar	
36. Socket headless screw 8x10mm	
37. Washer 6mm	

YRT-115-D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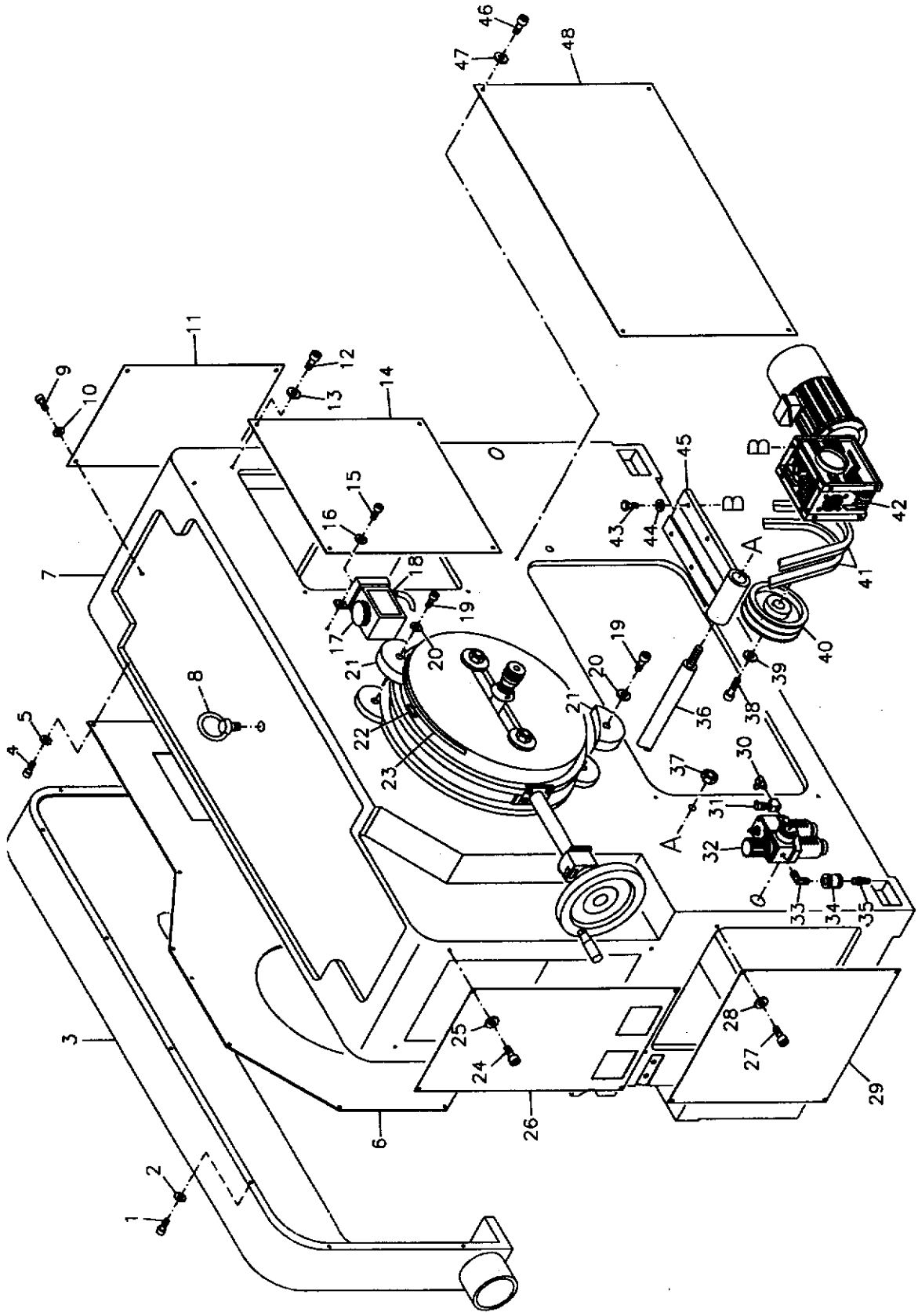
YRT-115-D PARTS LIST

1. 40x1630 belt	35. High/low speed valve
2. Pulley	36. Bronze quick connector 3/8x12mmx90°
3. S50 "C" snap ring	
4. R80 "C" snap ring	37. Bronze quick connector 1/4x5/16x90°
5. NSK 6010zz ball bearing	
6. Drive collar	38. Micro-switch
7. Hexagonal head screw 6x50mm	39. Hexagonal head screw 5x60mm
8. Nut 6mm	40. Hexagonal head screw 6x15mm
9. Pulley support shaft	41. Sensor holder
10. Nut M6	42. Hexagonal head screw 6x15mm
11. Nut	43. Dust guard piece
12. Key	44. Solenoid valve 4V210-08-A220V
13. Motor, E100 5HP 2P 523	45. Solenoid valve 4V210-08-A220V
14. Grease nipple	46. Solenoid valve 4V210-08-A220V
15. Shaft	47. Solenoid valve 4V210-08-A220V
16. Collar	48. Quick connector SPB402
17. Nut	49. Quick connector SPX802
18. Hexagonsl socket head screw 6x10mm	50. Quick connector SPY402
	51. Quick connector SPC402
19. Hexagonal head screw 6x15mm	52. Hexagonal head screw 6x15mm
20. Washer 6mm	53. Washer 6mm
21. Dust chute	54. Dust guard piece
22. Nut 1/2"	
23. Spring hook	
24. Spring	
25. S12 "C" circlip	
26. SKF 6001zz bearing	
27. Chain wheel	
28. Nut M10x1.5	
29. Square block	
30. Hexagonal head screw	
31. Quick connector with filter SPL 803F	
32. Bronze quick connector 1/4x5/16x90°	
33. Air/hydraulic transformed cylinder	
34. Quick connector SPL 4M5	

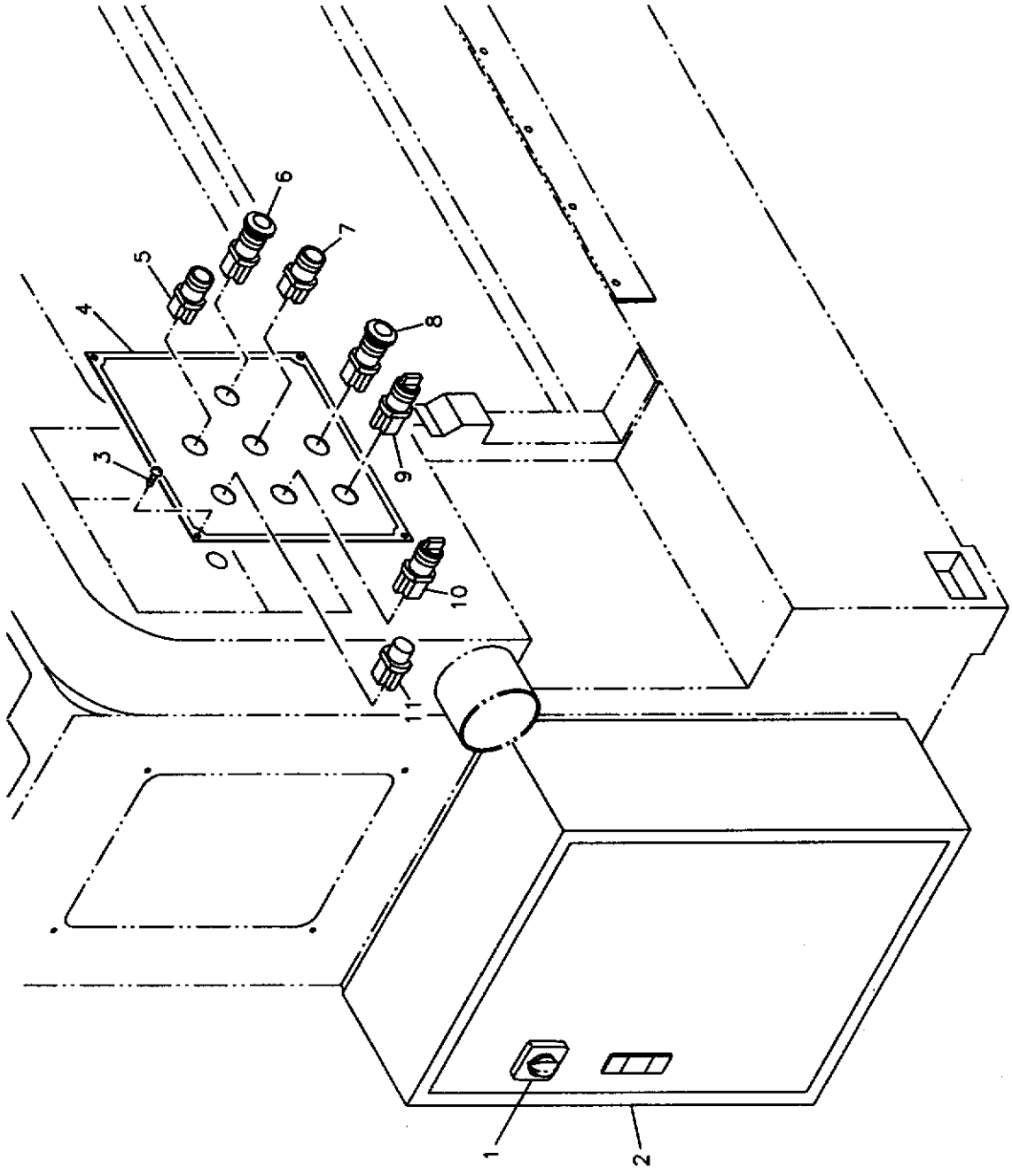
YRT-115-E



YRT-115-E PARTS LIST

1. Hexagonal head screw 6x15mm	38. Hexagonal head screw 8x15mm
2. Washer 6mm	39. Washer 8mm
3. Dust guard	40. Pulley
4. Hexagonal head screw 6x15mm	41. V-belt B82
5. Washer 6mm	42. Speed reduction motor
6. Dust guard	43. Hexagonal head screw 8x25mm
7. Machine frame	44. Washer 8mm
8. Lifting ring	45. Motor base
9. Hexagonal head screw 6x15mm	46. Hexagonal head screw 6x15mm
10. Washer 6mm	47. Washer 6mm
11. Steel plate	48. Steel plate
12. Hexagonal head screw 6x15mm	
13. Washer 6mm	
14. Steel plate	
15. Hexagonal head screw 6x15mm	
16. Washer 6mm	
17. Hand lubricator EA-8	
18. Oil tube	
19. Hexagonal head screw 16x65mm	
20. NJK 2903 Thrust bearing	
21. Disk fix plate	
22. Pointer	
23. Scale	
24. Hexagonal head screw 6x15mm	
25. Washer 6mm	
26. Steel plate	
27. Hexagonal head screw 6x15mm	
28. Washer 6mm	
29. Steel plate	
30. Quick connector SP2803	
31. Pressure switch PMM10A-14K	
32. Filter/regulator/lubricator UFR/L-03	
33. Bronze elbow 3/8PT	
34. Slide valve	
35. Quick connector 3/8 PT	
36. Shaft	
37. Nut M16 1/4x5/16x90°	

YRT-115-F



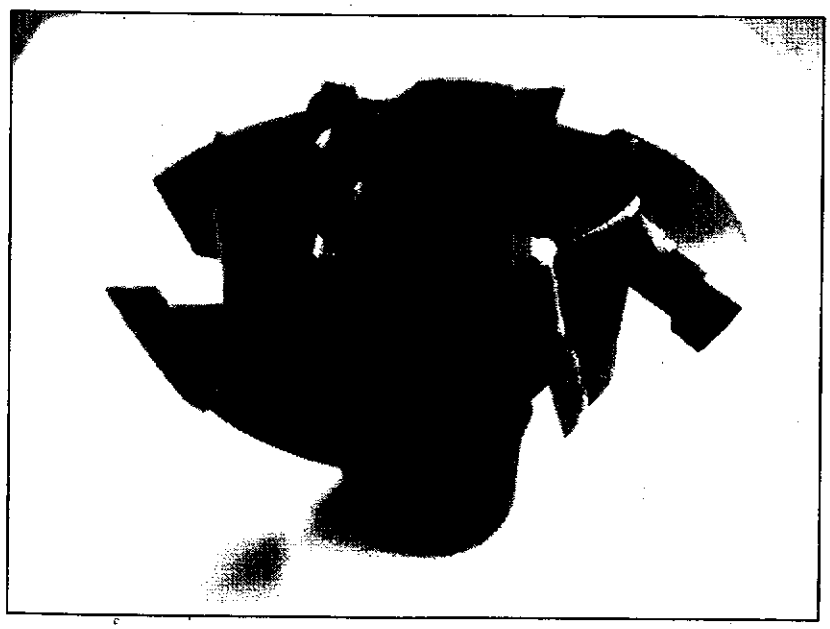
YRT-115-F PARTS LIST

1. Door switch, OT25E3	
2. Control box	
3. Screw	
4. Control panel	
5. PB, TE, ZB5-AW33+AW601	
6. PB, TE, ZA2-BS54+BZ101	
7. PB, TE, ZB5-AA3+AZ101	
8. PB, TE, ZB5-AA+BZ102	
9. PB, TE, ZB5-AA5+AZ101	
10. CS, TE, ZB5-AD2+AZ101	
11. CS,TE, ZB5-AD5+AZ103	
12. PL, TE, ZB7-EV61	

WELDED T.C.T. CUTTERHEAD

(STANDARD)

PANTENTED



CUTTERHEAD STRUCTURE

DESCRIPTION

1. Suitable for medium hardness wood materials.
2. Production rate 12pcs per minute.
3. Tearing may occur when applying for high hardness wood materials.
4. Sharpening frequency is 6-7 days of operation.

24T HELICAL CUTTERHEAD

(OPTIONAL)

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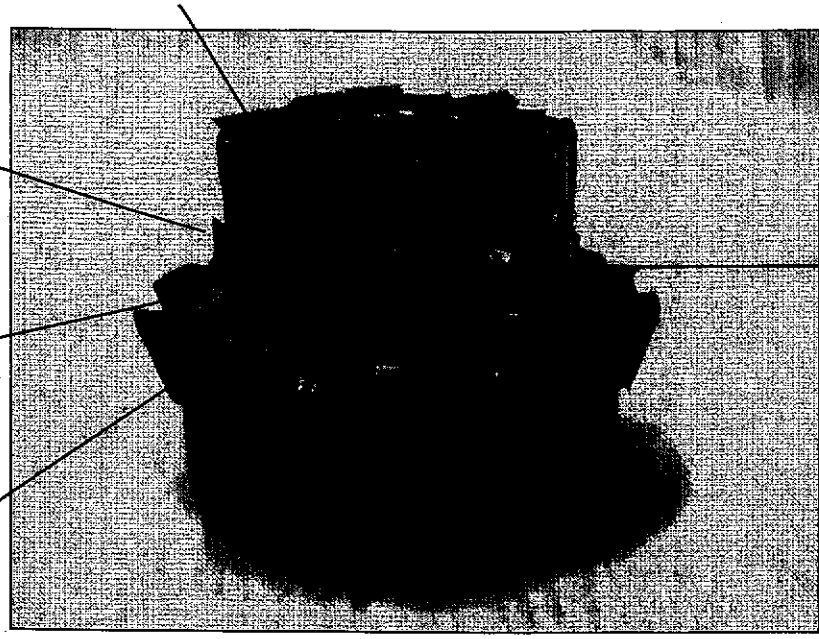


CUTTERHEAD STRUCTURE

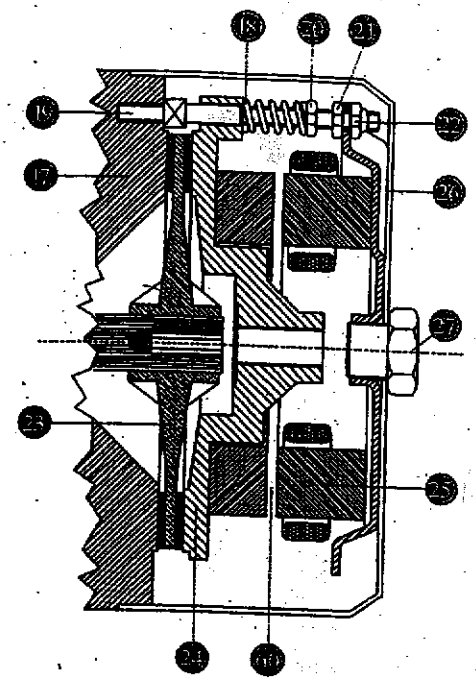
DESCRIPTION

1. Excellent for all soft and hard wood materials.
2. 360°cutting.
3. Fine chips.
4. No tearing.
5. Forced chip removing to eliminate repeated cutting.
6. Low noise, long service life, insert life up to 120 days.
7. 5 years warranty.

BA-CF brake group

Air gap adjustment

The air gap (60) i.e. the distance between the 2 magnetics cores, brake coil (25) and brake moving element (24), must be 2-4 tenths of a millimeter. It is unadvisable to exceed 0,6÷0,7 mm for A.C. brake and 0,5 mm for D.C. brake, in order to avoid vibrations of the brake moving element and, probably, the burning of the brake coil. It is advisable to check periodically the air gap, because by the wear of the brake disc linings, it tends to increase. In order to set the air gap back to the required value, operate on the nut (21) to obtain the brake coil's forward displacement towards the brake moving element. When this operation has been settled, the locknut (22) should be tightened.



Braking torque adjustment

The braking torque is proportional to the springs (18) compression, which can be varied operating on locknut (20). The compression of the three springs must be as even as possible. If the brake coil (25) isn't able to call the brake moving element (24) back with a quick stroke and keep it attracted without vibrations, verify the exact air gap adjustment and, if this inconvenience still persists, loosen the locknut (20) of two threads and try it again until desired functioning is obtained.

CAUTION: THE BRAKE GROUP MUST ADJUST ONCE EVERY YEAR