

4-Sided Planer & Moulder Operation Manual

PI-6L-AI

For Spares and Service contact:



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FOREWORD

PART 1.

Specifications:

Congratulations! You have owned this high precision, super strong machine structure's "4-side planer". We believe that as long as you may normally operate and do periodically maintenance, the function of this machine will satisfy you and last long, low break down, ease of operation design and safety etc. Factors taken into consideration make it superior to the other wood planers, therefore, before you operate this machine, please read this manual carefully so as to reinforce and increase the productivity.

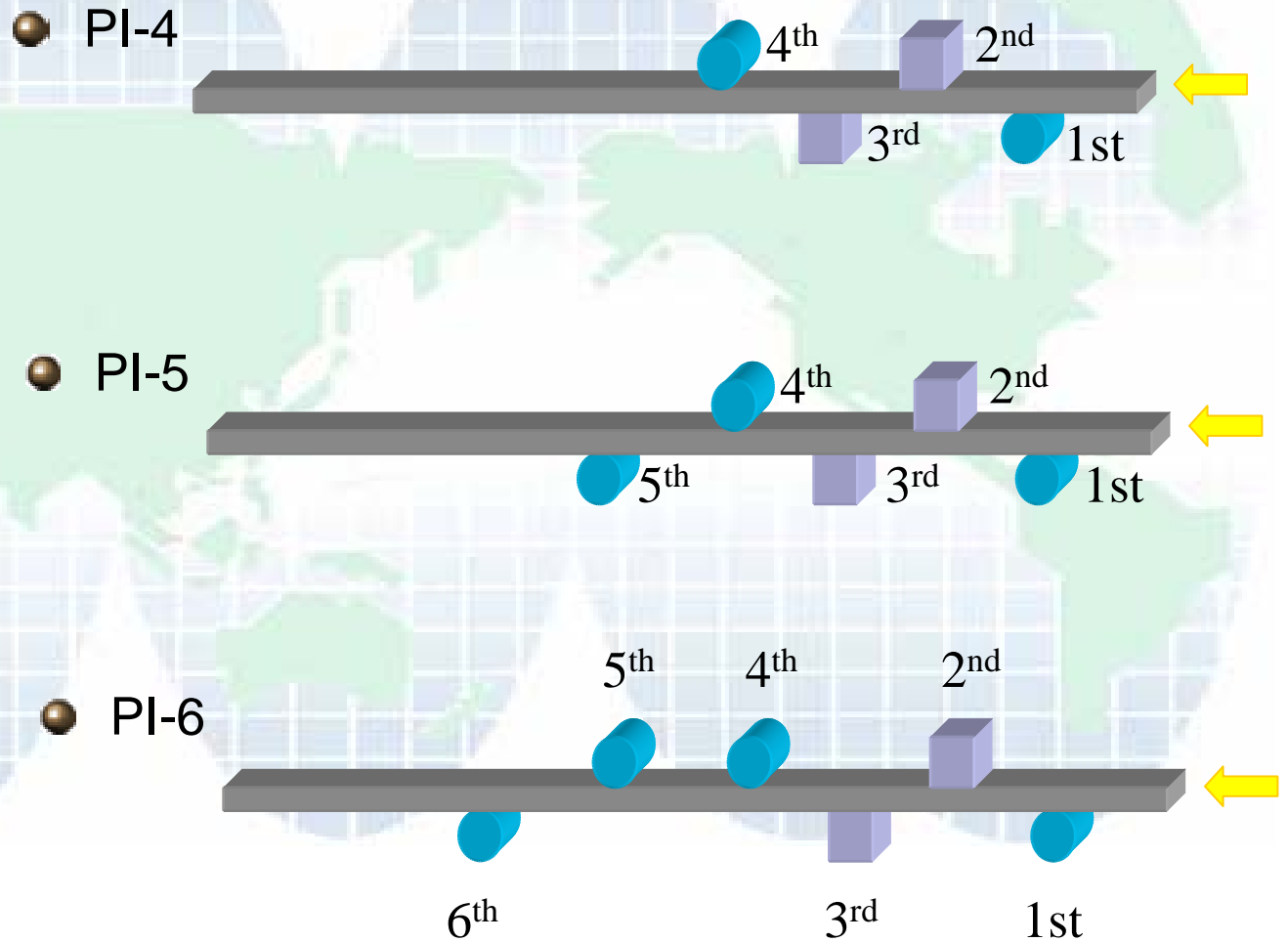
MODEL	UNIT	PI-4/PI-5/PI-6
Max.(Min.) Working Width	mm in	230(25) 8(1)
Max.(Min.) Working Thickness	mm in	125 6
Min. Working Length	mm	200
1st / 2nd Spindle Horsepow	HP	7.5
3,4,5,6 Spindle Horsepower	HP	10
Feed Driver	HP	5 7.5(PI-6)
Elevation	HP	1
Spindle Dia.	mm	40
Spindle Cutting speed	RPM	6200(50HZ) 7200(60HZ)
Feeding Speed	m/min	6-28M/min
Planer's Dia. For 1st spindle	mm	100~160
Planer's Dia. For 2nd and 3rd spindle	mm	110~180 110~200



Sequence of the Spindle

Sequence of the spindle:

- Upper horizontal spindle
- Lower horizontal spindle
- Right mill spindle
- Left mill spindle





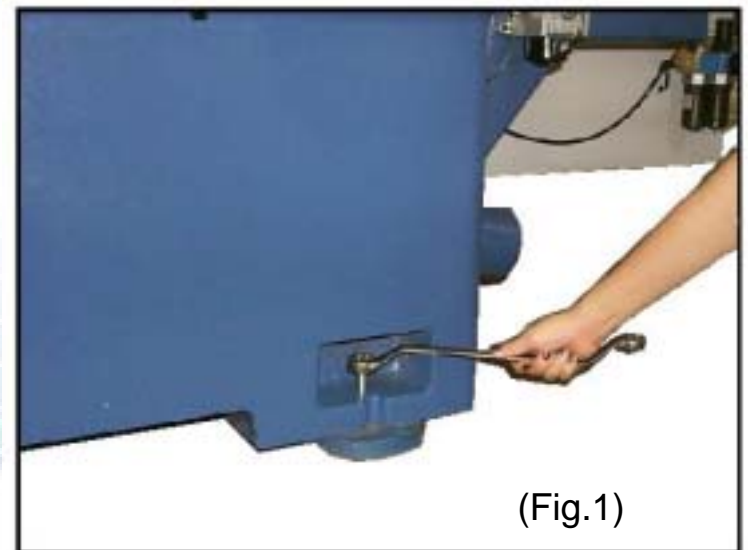
Features of this machine

1.	The cutting cycle speed of each spindle is 6200m/min. under such high speeds cutting condition, any mixed wood can be planed into fine, smooth and precise piece.	
2.	Each working table surface is covered by heat treated steel plate of ball die casting iron (FC30). The surface has been ground.	
3.	Each uses Nickel Chrome Molybdenum alloy steel (SNCM8), after annealing treatment to hardness, which upgrade the tenacity of the spindle, and to go along with the high speed precise bearing requirement for high speed revolution which is sturdy and stable and the function is excellent.	
4.	a	There are 12 pieces of rollers and 2 pieces of auxiliary roller above, feed roller those and addition assist a extra make short wood be planed more smooth-going. There are still 12 pieces of rollers and 2 pieces of auxiliary roller under, the first down roller and up roller in the vertical line with same step to feed wood go ahead, it can avoid feeding stop.
	b	The 1st blade has an edge blade, the rough material, rough planning may trim the straightness of the wood.
	c	The 2nd, 3 rd , 4 th , and 5th spindle may elevate 30mm vertically, it may add 2 knife heads to plane different shapes. It may adjust different planning blade to plane, which save the trouble and time on changing the blade head.
	d	The material press board on the 3 rd and 5 th cutter head is curved and expandable which may avoid the blade heads to collide each other due to different wood width.
	e	The front pistons of the 6th and 7th spindles are curved type which may avoid the blade heads to collide each other due to different wood thickness; further to divide into 3 sections to enable the blade to adjust according to the high/low position. Planer head thickness is 230mm, and the diameter is 125mm.
	f	The front pressure shoe of the 6th and 7th spindles are of die type which totally divide into 3 sections; the material press board may adjust the shape of the pressing material board, further to save the trouble of changing the blade.



PART 2.

1. When you unpack the machine, please tear off the canvas covered on the machine, then use the cleansing oil to clean up the anti-rust oil coating on the machine.
2. Please check if the specification of this machine model comply with your requirement.
3. After the machine has been put down, please use the level to correct the table surface level, when adjusting, please refer to the illustration (Fig.1); use the open wrench to fix the nut in counter clockwise direction, then use the same open wrench to adjust the bolt, the clockwise direction to make it higher and the counter clockwise direction to make it lower; after adjustment, use the fixed nut to fix.



4. Please check if each cutting blade is turning smoothly, " no tool or material " allowed to be put at any place.



Main Control Panel I

- ❖ Before input the power, please check if the power is in accordance with the required voltage of the motor before connecting the power, and make sure each switch is at "OFF" position before input the power.

Explanation for Main Control Panel	
Item NO.	Description.
Working light.	Turn on or turn off the working light on the top of the cover inside.
Power source switch.	Press down this button, if the light is on that means the power source has been input.
Emergency switch.	If abnormal condition was detected during the operation, press this button then the machine will be at stop condition.
Start switch.	The light buttons on the control panel are indicating the start button from the first spindle to the last spindle respectively.
Stop switch.	The bark buttons on the control panel are indicating the stop button from the first spindle to the last spindle respectively.
A switch.	Press down this button to raise the feed beam assemble and to stop after release it.
B switch.	Press down this button to fell the feed beam assemble and to stop after release it.

❖ Detailed drawing is on next page.



Main Control Panel II

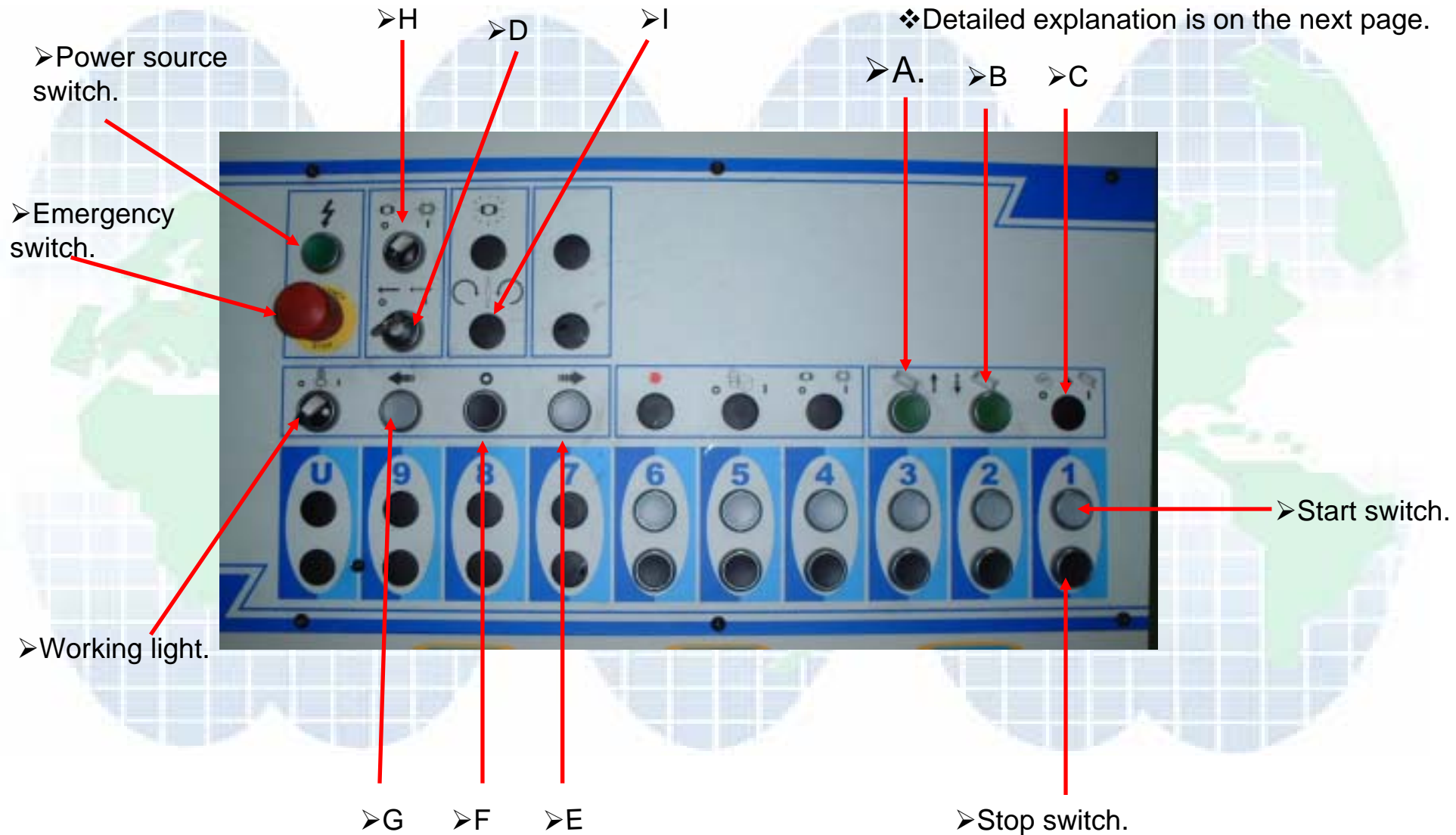
Explanation for Main Control Panel

Item NO.	Description.
C switch. "Synchronize"	"I"-if we make the top spindle up, the limit switch on the top spindle will touch the feed beam assemble. This moment the feed beam assemble will also raise with the top spindle.(Moveing together) "O"-if we make the top spindle up, the limit switch on th
D switch.	"I"-the work-piece will be run by smooth. "O"-the work-piece will be run by little movement.
E switch.	Press down the "E" switch to make the wood pressing roller to turn in counter clockwise direction. (I.e. to bring the working pieces move backward.)
F switch.	If wish to stop, press down the "F" switch to stop.
G switch.	Press down the "G" switch to make the wood pressing roller to turn in clockwise direction. (I.e. to bring the working pieces move forward.)
H switch.	"I"-turn to right on this switch. All the electric power will be released.(No any power in this machine.)--For safety.(You can change the cutter-head this moment.)

❖Detailed drawing is on next page.



Main Control Panel III



❖ Detailed explanation is on the next



Sub Control Panel

Item NO.	Description.
A switch.	Press down this button to raise the feed beam assemble and to stop after release it.
B switch.	Press down this button to fell the feed beam assemble and to stop after release it.
E switch.	Press down the "E" switch to make the wood pressing roller to turn in counter clockwise direction. (I.e. to bring the working pieces move backward.)
F switch.	If wish to stop, press down the "F" switch to stop.
G switch.	Press down the "G" switch to make the wood pressing roller to turn in clockwise direction. (I.e. to bring the working pieces move forward.)





Feed Speed Adjustment

4. When starting the power source, the normal revolution direction of the spindle shall be:

The lower and the left spindle shall turn in clockwise direction, while the upper and the right spindle shall turn in counter clockwise direction; if the direction does not match, please turn off the power source first, then switch the position of the two wires.

5. If the electricity distribution has any problem, it requires a qualified electrician to repair or do wiring to ensure the safety. (The electric diagram is on the cover of the electric box.)

6. This machine uses variable speed motor, the processing speed is 6~28m/min. Please refer to Fig.2 adjusting roller for adjustment. The clockwise direction for faster operation, while the counter clockwise direction for slower operation to get the desired speed. (Do not adjust when the motor is not started!)



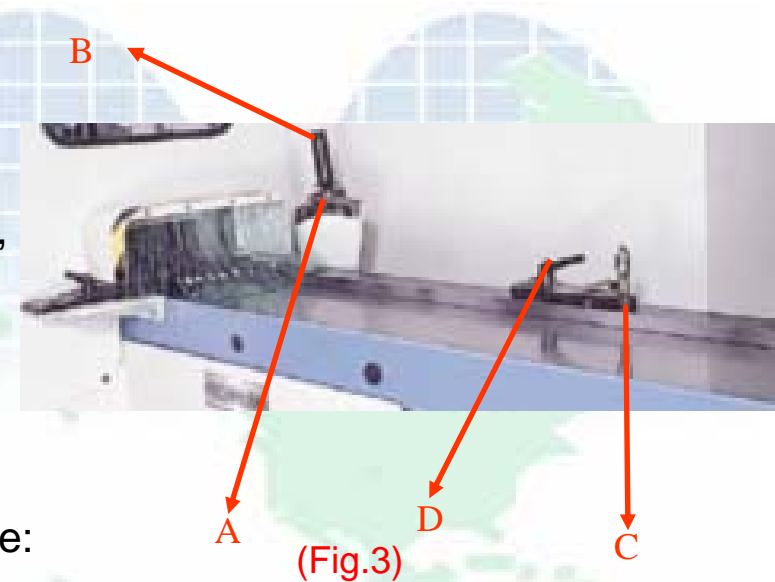
(Fig.2)



In-feed Table Adjustment I

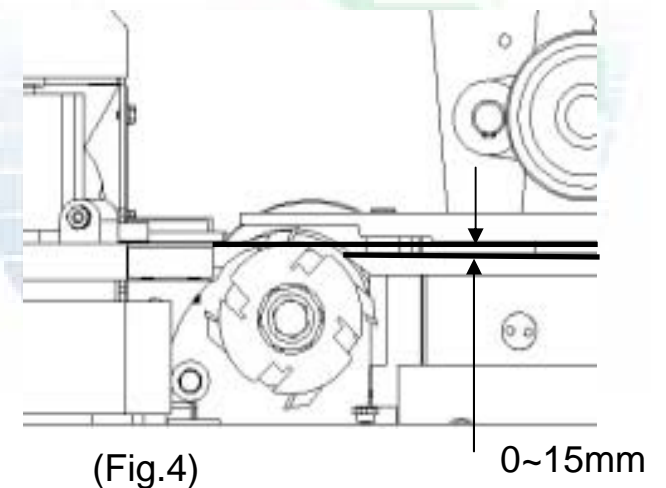
❖ 1. The adjustment of the front table: (Fig.3)

Grip the handle of the "A" with the arm and adjust upwardly, the front table will ascend, while adjust downwardly will descend. The purpose is to adjust cutting amount of the bottom of the wood to be planed, as shown on (Fig.4), the higher the bottom, the lesser the cutting amount. If the adjustment is done, please use the handle of the "B" to lock up to prevent from loosening.



❖ 2. The adjustment of the leaning fence on the front table:

Grip the handle of the "C" and to pull or push inwardly or outwardly; to pull inwardly, then the edge trimming amount will be less. The purpose is to trim the angle of the wooden material, the users may make a proper adjustment according to the different degree on the curve of the wood material. Use the handle of the "D" to fix and turn clockwise direction.

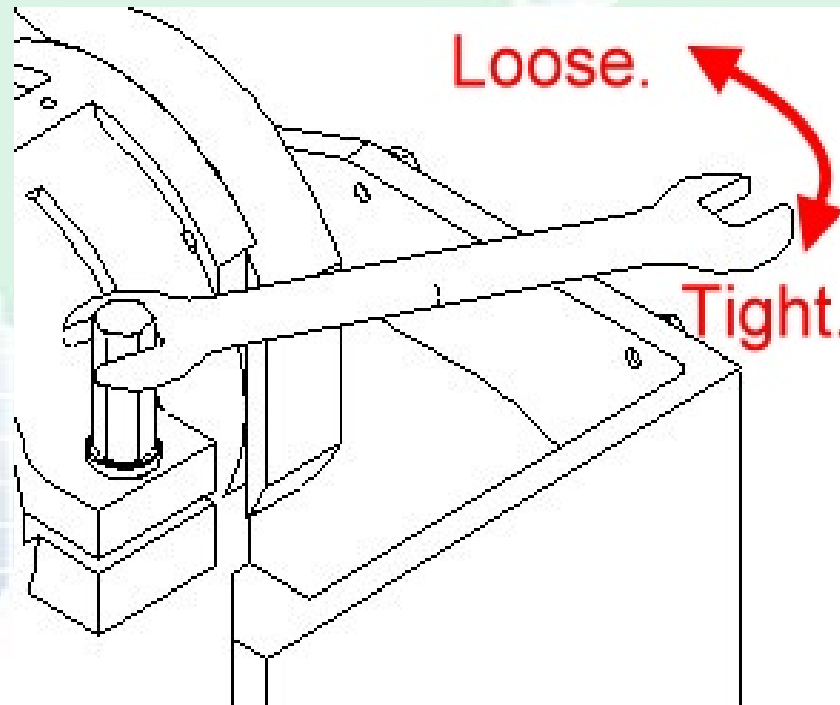


(Fig.4) 0~15mm
Difference between two points



Warning

Please pay attention on moving the 1st spindle forward or back.
Before you want to move the spindle forward or back.
Please loose the nut before you move it.(see attached)



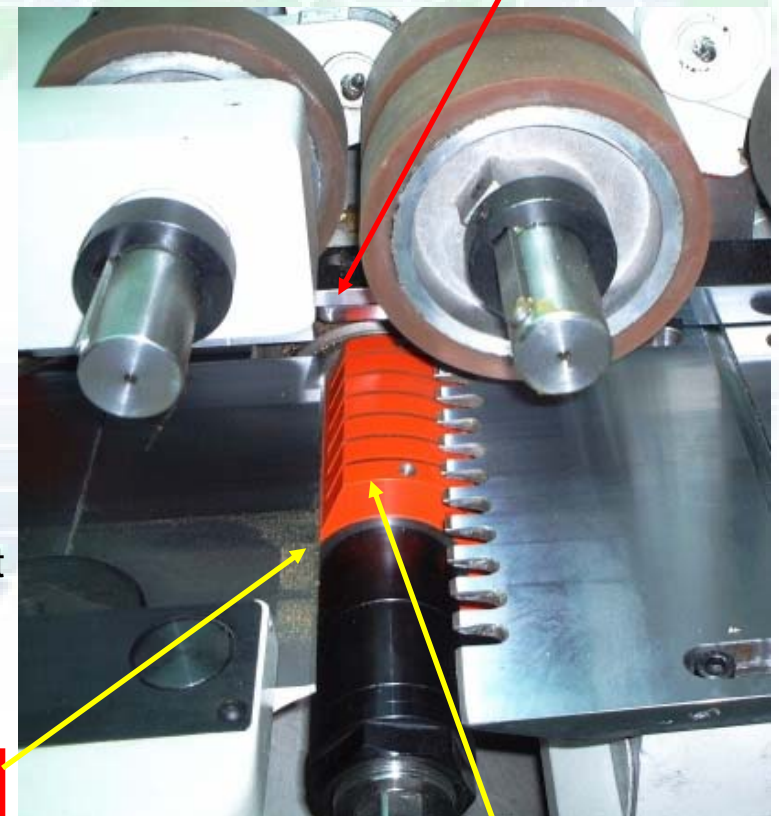


First Bottom Spindle I

- ❖ The position of the first blade: (Fig.5)
 - Adjust the cutter-head: as illustrated on the diagram. There are edge trimming blade and planing tool two different kinds.
 - Edge trimming blade is to plane the side line of wood and to get straight line.
 - Planing blade is for trimming the bottom of the wood and to flat surface.

Knack 1: The "A" back of the edge trimming tool shall be parallel with the leaning board.

- ❖ Way for adjustment of spindle in and out:
To loose the fixed bolt of the spindle barrel from the back of the first blade, then adjust the in/out bolt "B", when bolt "B" turns clockwise direction for "in-feed", while turn counter clockwise direction for "retreat"; it may put the ruler at the extruded ruler back and the "A" of the edge trimming tool to contact lightly, upon adjustment, be sure to fix the spindle bolt at the rear side.



D-Flat Table.

E-The edge of the knife.



First Bottom Spindle II

Knack 2: The cutter-head's edge "E" shall be parallel with the flat table "D".

❖ Way of adjustment:

The back of the ruler extended from the flat board on the horizontal direction only need to contact the planer "E" lightly, then the adjustment is done; the planer may adjust the up/down by turning from "F", for downward adjustment turn the planer in clockwise direction.

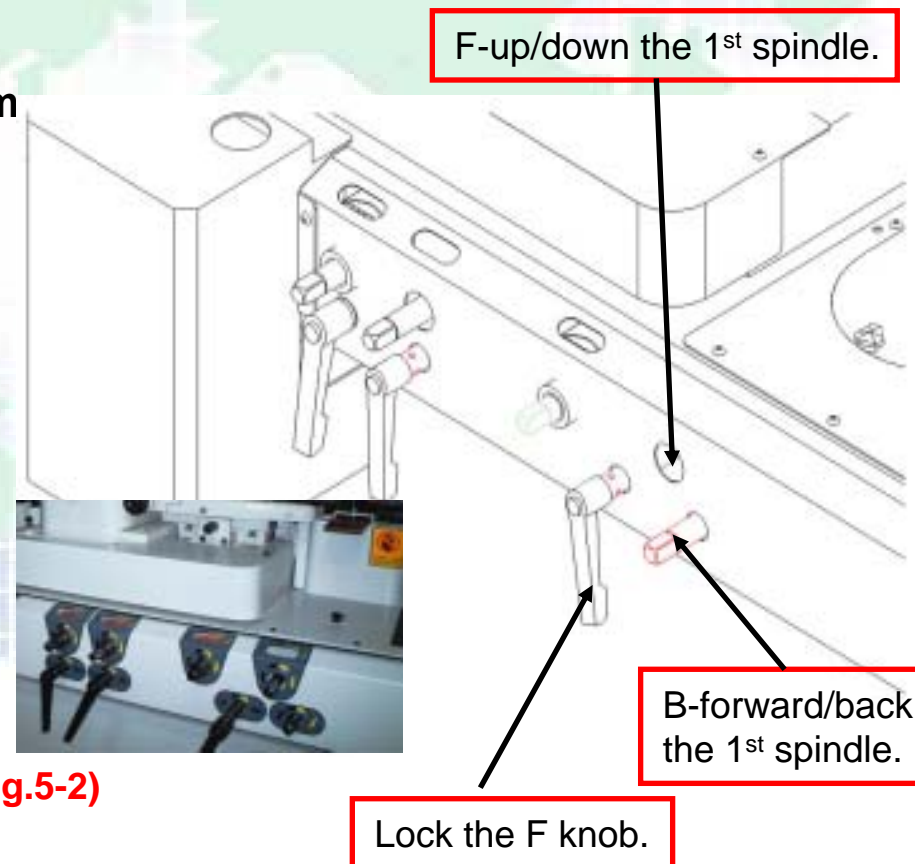
b. Specification:

The 1st bottom horizontal plan width is 230mm and the cutter-head diameter is 125mm.

The profile cutter-head is from 100-110mm

c. Cautions:

If above mentioned adjustment is no good will affect the planning quality; if the planer head is above the flat board "D", then the thickness of the end bottom of each wood will become uneven (more wasting material), this is the same for the side tool.



(Fig.5-2)



Auxiliary Feed Component

- ❖ The adjustment of the auxiliary pressing roller: (Fig.auxiliary feed)
Auxiliary pressing roller is for fixing the work-piece when the work-piece goes through the 2nd spindle. Almost you don't move it. Unless you want to change the 2nd spindle cutter-head.
- ❖ The steps for changing the cutter-head are as follows:
 - 1.Loose bolt "A",then grip "C" knob up like photo 2 then change the cutter-head.
 - 2.After changing it, please put "C" down, then lock "A".
- ❖ Knob "B" is for in/out adjustment of the auxiliary pressing roller.

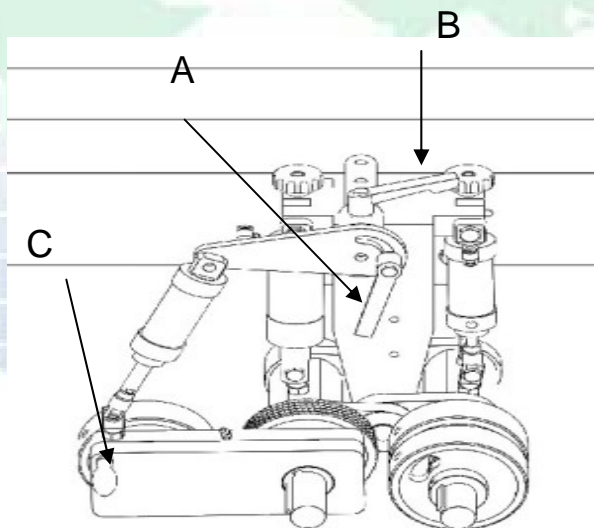


Fig.auxiliary feed.

Photo 1



Photo 2



First Fence Side Spindle I

❖ The second blade:

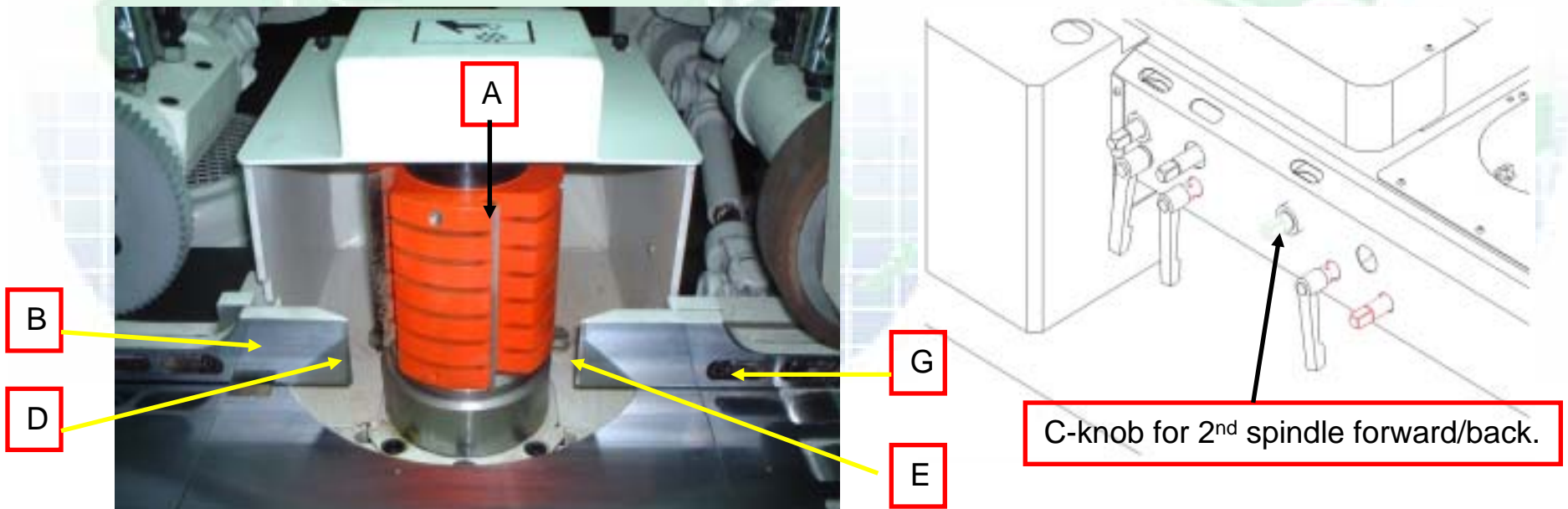
a. Adjustment of the tool head: (Fig.6)

Knack: The planer head's edge "A" shall be parallel with the rear leaning board "D".

❖ Way of adjustment:

(1) The back of the ruler leans to the rear leaning board "B", use the hand to turn the tool head on the back of the ruler, adjust knob "C" for forward or backward until the planer "A" contacts the ruler back lightly then the adjustment is done.

(2) Bolt "C" is for adjusting the tool shaft forward or backward, to turn clockwise direction for forward, while the reverse direction for backward. It is enclosed with a stop watch counter for reference. (The degree of precision for the stop watch is 0.1mm)





First Fence Side Spindle II

b. Adjustment of the leaning board:

Knack: The point end of the leaning board "D", the best is when "E" is closes to planer's edge "A".

❖ Way of adjustment:

For adjustment of the front leaning board, loose the two bolts "G", adjust to the left will closer to the tool head, while to adjust to the right will farer to the tool head. The adjustment of the rear leaning board, loose the bolts at "F", to adjust to the left will closer to the tool head, while to adjust to the right will farer to the tool head. The user may adjust according to the actual needs, upon completing adjustment, make sure to screw tight "G" and "F" bolts.



F

G



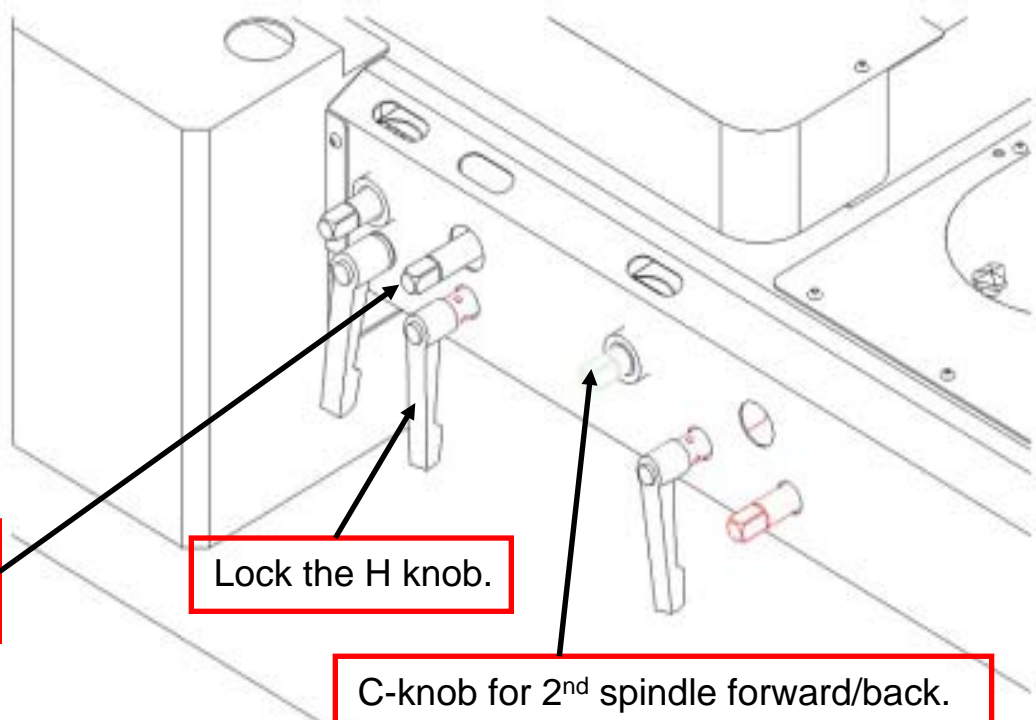
First Fence Side Spindle III

c. The adjustment of the tool head on up & down direction:

If the size of the up/down needs to be adjusted when planning, it may turn bolt "H" to improve.
(Counter clockwise for upward, while clockwise for downward.)

d. Specification:

**The 2nd vertical spindle plan thickness is 125mm, and the cutter-head diameter is 125mm.
The profile cutter-head is from 110-180mm**



H knob for adjusting the up/ down for 2nd spindle.

Lock the H knob.

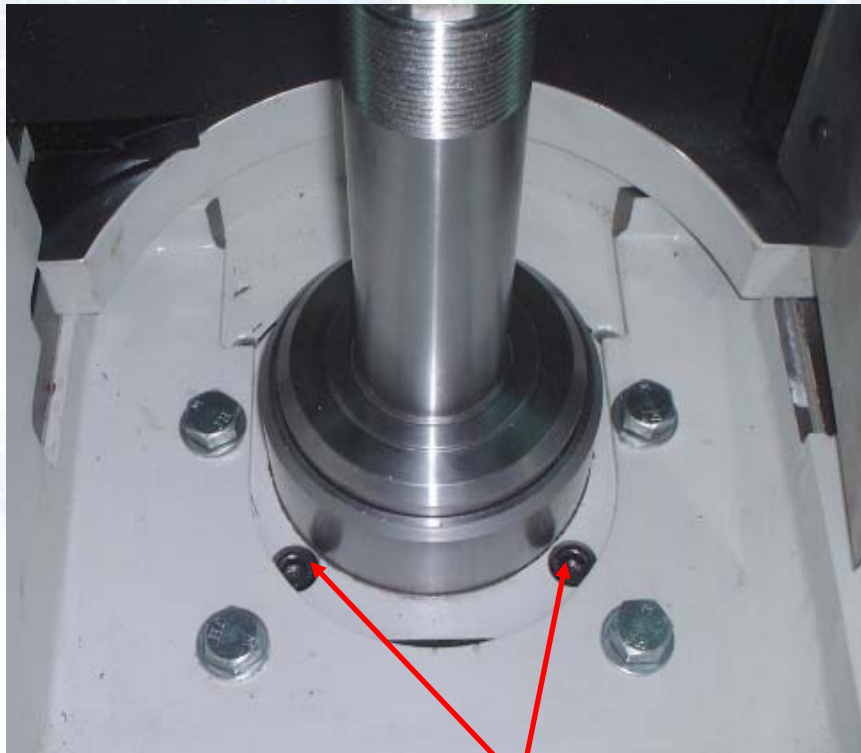
C-knob for 2nd spindle forward/back.



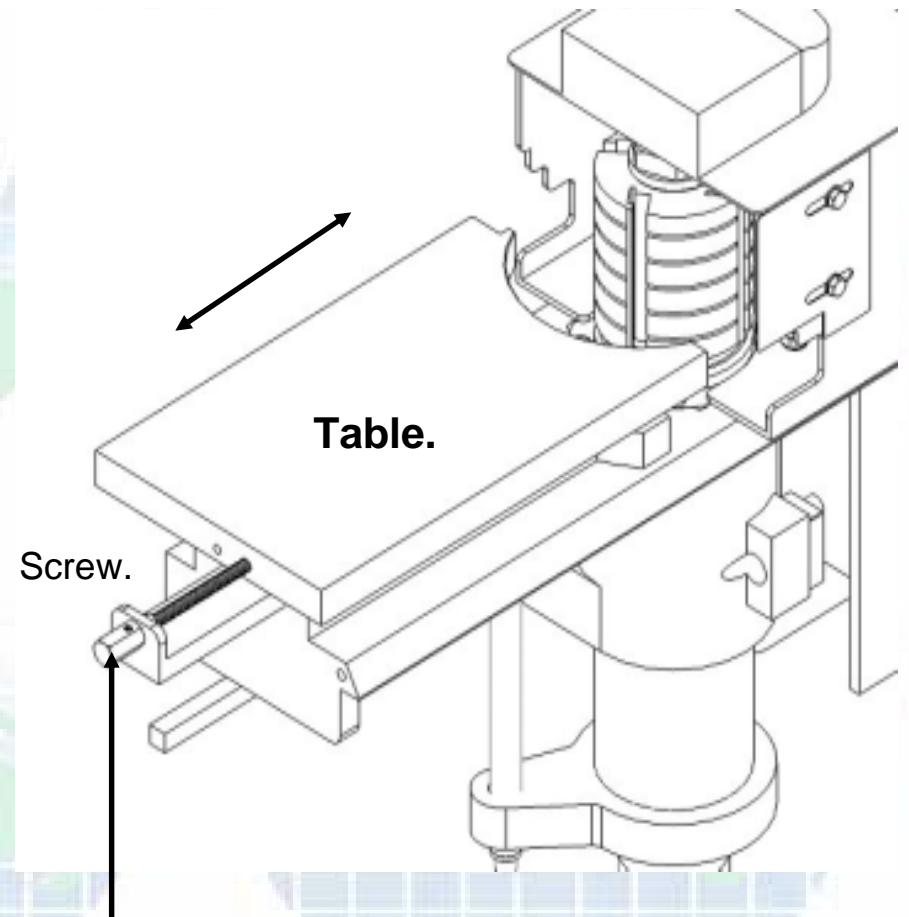
First Fence Side Spindle IV

❖ Please pay attention on the table and spindle:

Spindle must be vertical with the table. If not, please adjust the screw on the level ring.



screw



Screw--Roll this screw to make the table forward or backward.

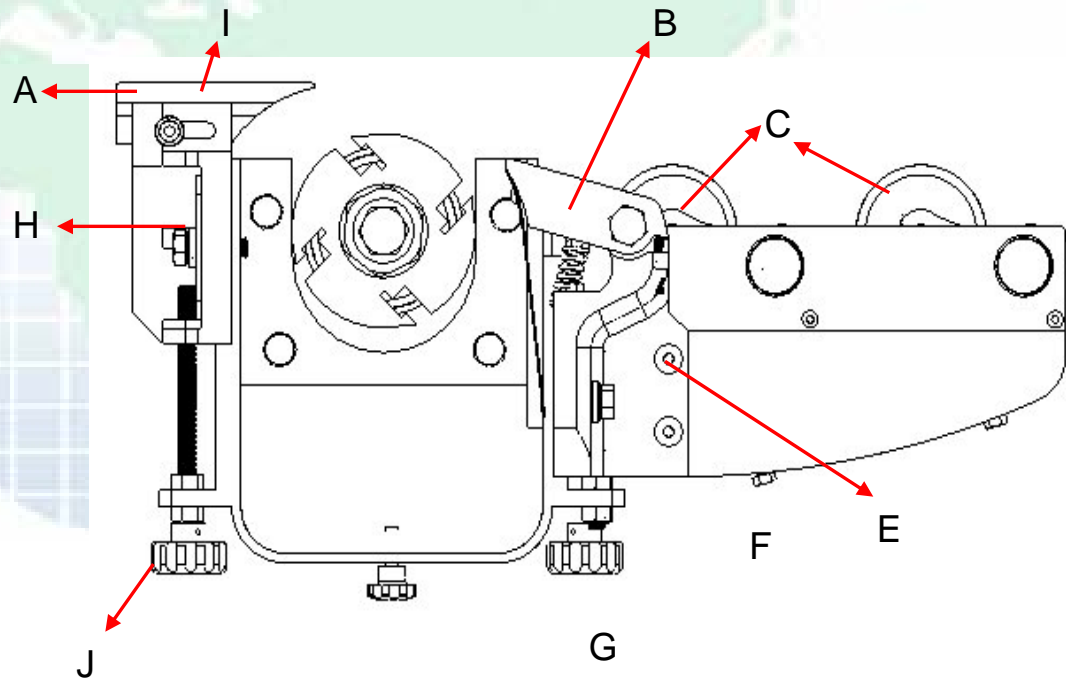


First Near Side Spindle I

❖ The position of the third blade: (Fig.8)

a.Knack:

- (1) For pressing roller "C", the allowance on pressing the wood is better between 3~5mm.
- (2) For movable leaning board "B", the allowance on pressing the wood is better between 3~5mm.
- (3) The flat surface "I" of the leaning board "A" shall contact the wood surface that has been planed lightly.
- (4) Please refer to the method on the 2nd blade for the adjustment of the tool head.



(Fig.8)



First Near Side Spindle II

b. Adjustment of the leaning board:

- (1) The leaning board "A" may adjust to the best pressing condition according to the tool head size, the user first loose bolt "H", then move the leaning board to the right, it is closer to the tool head and edge, (the near distance is best for 5mm), while to the left, it will go against the tool edge. After adjustment, the screw "H" shall screw up. Use screw "J" for in/out adjustment.
- (2) The movable leaning board "B" is on curved movement. Bolt "F" control the pressing adjustment, to turn clockwise for tighten up, while counter clockwise direction to loose, which is the same as the pressing roller "C" adjustment; while the in/out of the pressing roller "C" may be controlled by bolt "E".
- (3) The movable leaning board "B" and pressing roller are fixed into one unit by bolt "E", the adjustment of the whole unit is controlled by bolt "G". The winding inlet head itself is a little slide which may adjust forward or backward, then adjust until the best condition obtained according to the size of the tool head.

c. Special features:

The movable leaning board "B" is of curved revolution, when planing uneven thickness wood material, it may prevent the planer being damaged.



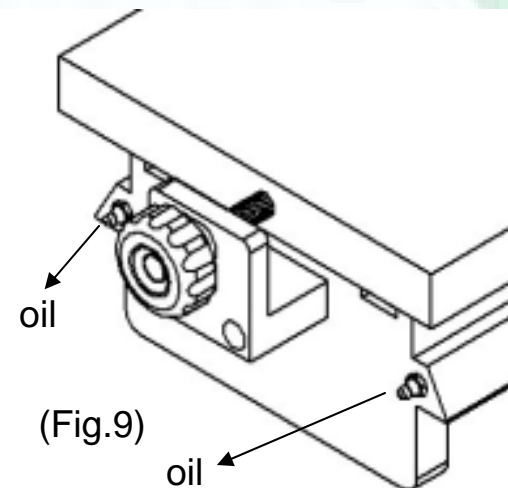
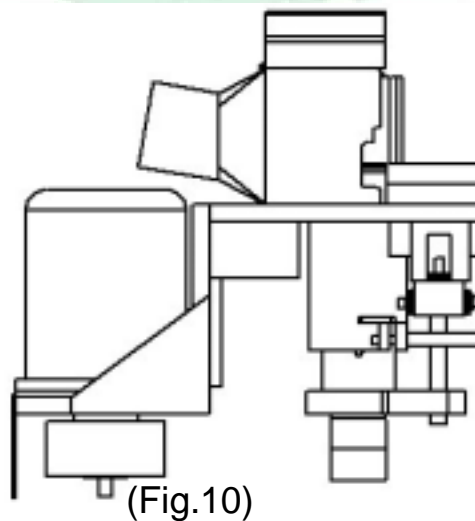
First Near Side Spindle III

d.Specification:

**The 2nd vertical spindle plan thickness is 125mm, and the cutter-head diameter is 125mm.
The profile cutter-head is from 110-180mm**

e.Cautions:

- (1) To add the leaning board "A", movable leaning board "B", and left pressing roller "C", for the pressure that totally put on the wood material, the operator shall make appropriate adjustment according to the actual situation, if the pressure is too much will cause un-smooth in-feeding of the material.
- (2) The 2nd and 3rd blade, when tool head is adjusting up/down, (the distance over 10mm) must turn the tool head as the same time as illustrate Fig.9, otherwise, it will break the belt as illustrate Fig.10. (The operator must be very careful on this regard.)





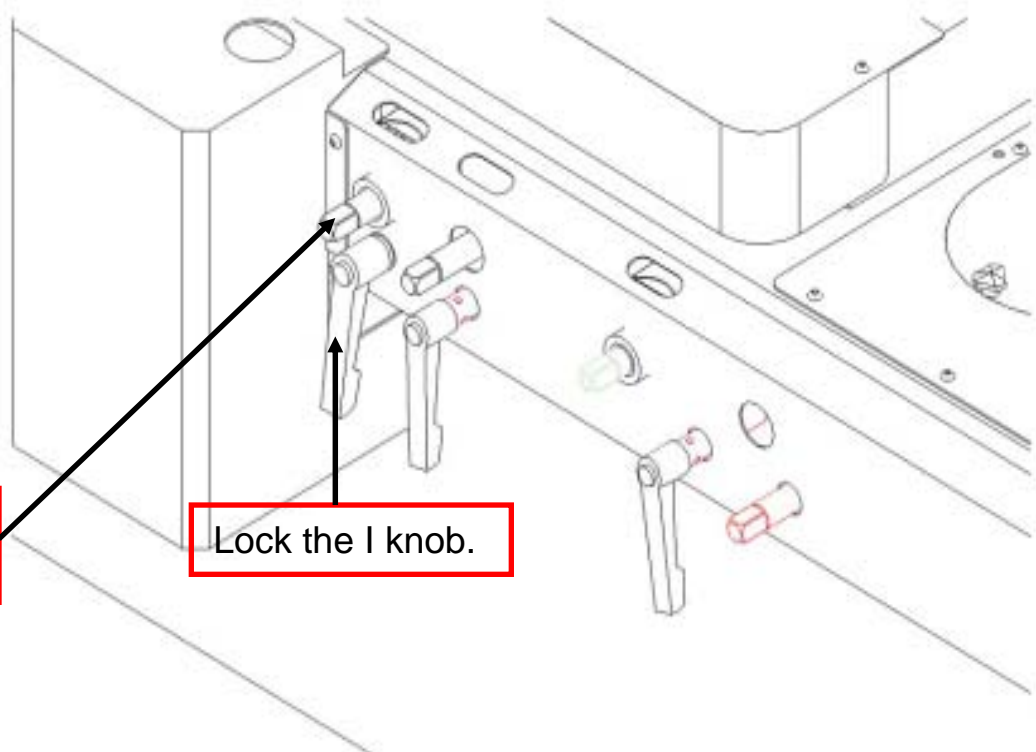
First Near Side Spindle IV

f. The adjustment of the tool head on up & down direction:

If the size of the up/down needs to be adjusted when planning, it may turn bolt "I" to improve.
(Counter clockwise for upward, while clockwise for downward.)

d. Specification:

**The 3rd vertical spindle plan thickness is 125mm, and the cutter-head diameter is 125mm.
The profile cutter-head is from 110-180mm**



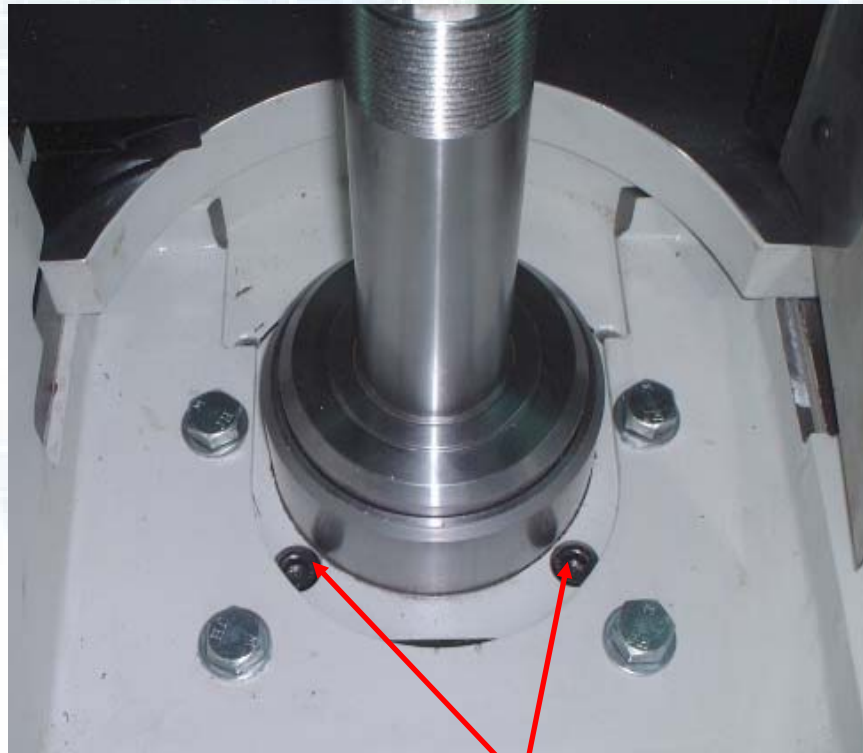
I knob for adjusting the up/ down for 3rd spindle.

Lock the I knob.



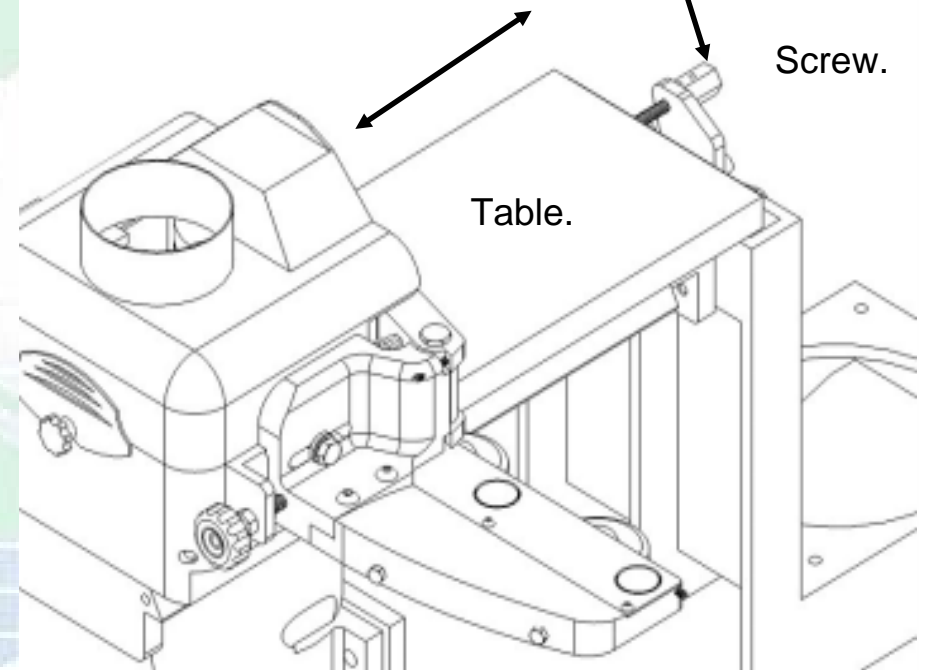
First Near Side Spindle V

❖ Please pay attention on the table and spindle:
Spindle must be vertical with the table. If not,
please adjust the screw on the level ring.



screw

Screw--Roll this screw to make
the table forward or backward.



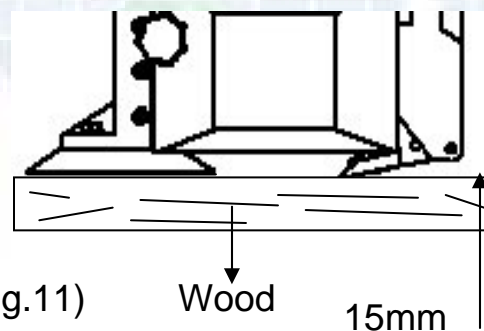
Screw.

Table.



First Top Spindle I

- ❖ The position of the top blade:
 - a. Adjustment of the tool head:
Knack: The rear pressing board's bottom shall contact lightly or be parallel with the tool edge "A". The front pressing board's bottom shall be lower than that of the tool edge "A" for 1~2mm.
- ❖ Way of adjustment: Put one wood material which has been planed flat at the planer's bottom, and take the flat board above as standard base (Fig.11.)
 - (1) Raise the front and rear pressing boards, then adjust the tool head to downward direction, the tool edge and wood only need to contact lightly.
 - (2) The up/down adjustment of the rear pressing board is controlled by bolt "B" at Fig.12, the clockwise direction is to turn downward, while the counter clockwise direction is to turn upward; then adjust the distance between the rear pressing board and the tool edge "A" based in the size of the tool head, this may be controlled by bolt "C", usually 5mm is the best.

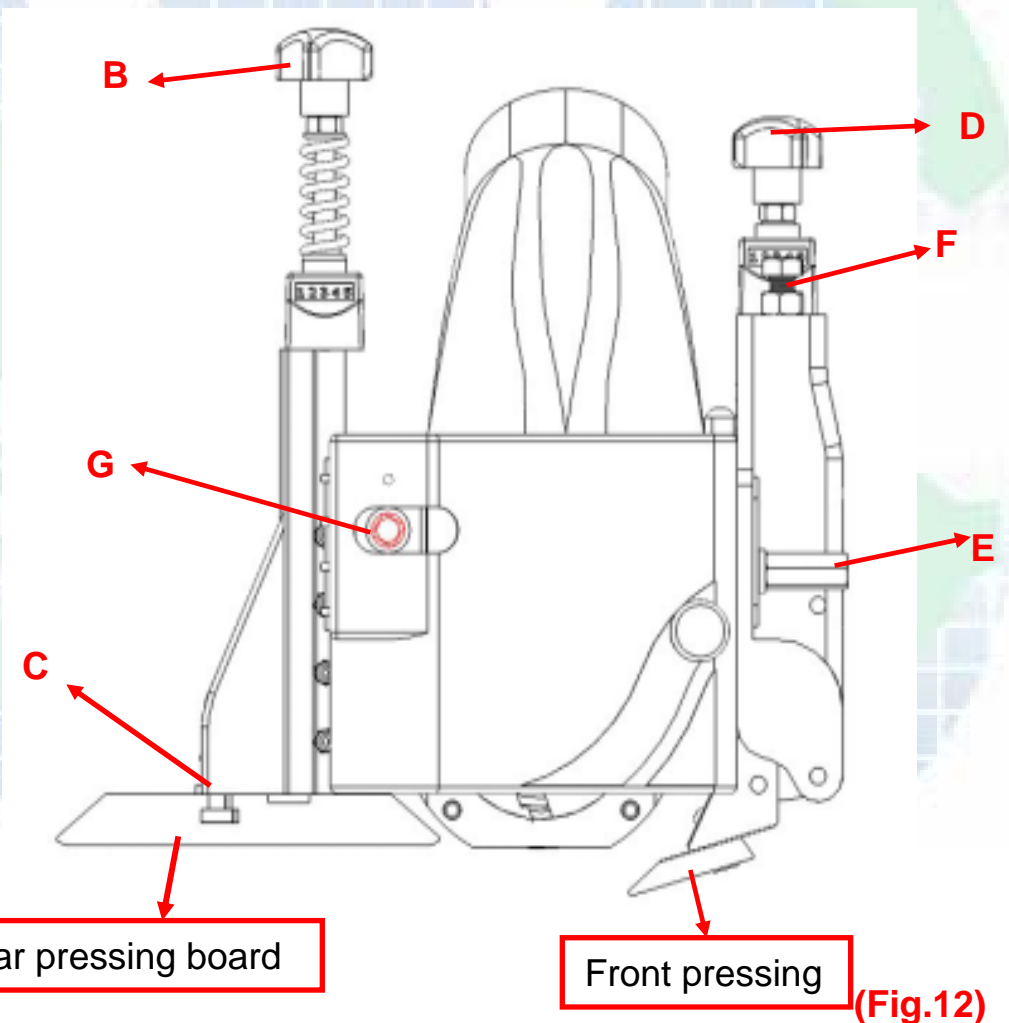


(Fig.11)



First Top Spindle II

(3) The height of the front pressing board may be controlled by bolt "D", the clockwise direction is to turn downward, while the counter clockwise direction is to turn upward. When the front pressing board contacts the wood board lightly, do not forget to turn the bolt "D" clockwise for 1/2 circle, then fix with bolt "E".



(Fig.12)

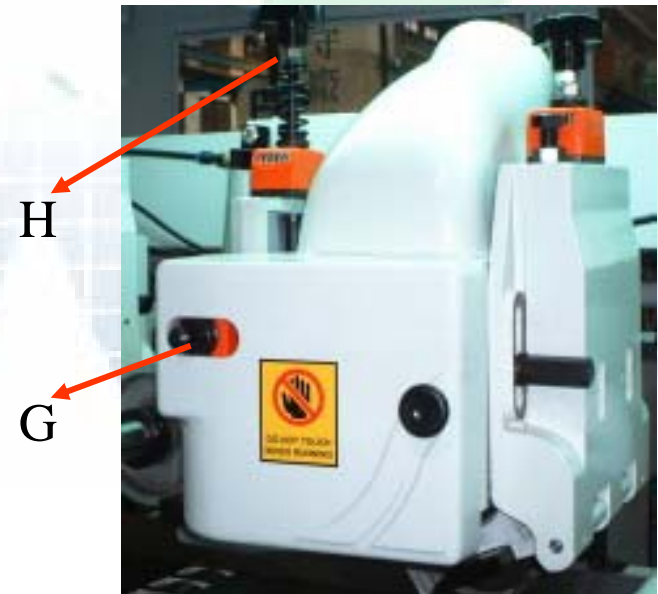


First Top Spindle III

- (4) The pressure of the front pressing board is adjusted by bolt "F", the clockwise direction is larger, while the counter clockwise direction for smaller. The pressure of the rear pressing board is adjusted by screw nut "H". (As shown on Fig.12)
- (5) The forward/backward of the tool is controlled by bolt "G", the clockwise direction is forward, while the counter clockwise direction for backward. Do not forget to loose the bolt that fix the spindle base before making adjustment.

d. Specification:

**The top horizontal spindle plan thickness is 230mm, and the cutter-head diameter is 125mm.
The profile cutter-head is from 110-180mm**



(Fig.13)



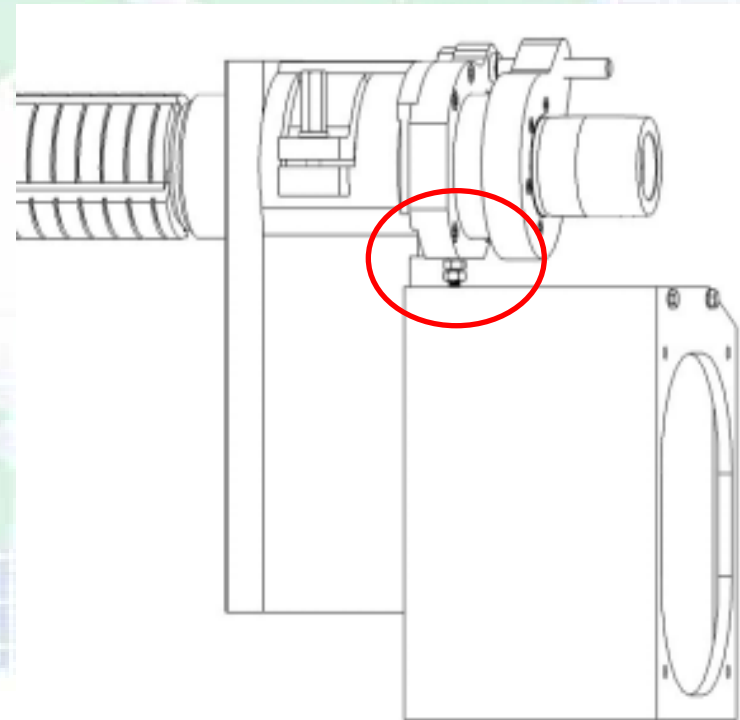
First Top Spindle IV

c.Cautions:

To get flat and smooth feeding effect, the pressure adjustment of the front and rear pressing board must be proper, otherwise it will cause inconsistent planing, the surface of the working piece will show defective lines. Too low of the pressure will also cause the end of the working piece un-flat, which is the so called "wasting of material".

❖Note:

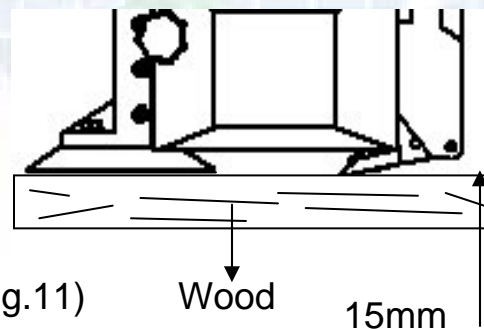
Please pay attention the horizontal spindle must be parallel with the table. If not, please adjust the screw that circled.





Second Top Spindle I

- ❖ The position of the top blade:
 - a. Adjustment of the tool head:
Knack: The rear pressing board's bottom shall contact lightly or be parallel with the tool edge "A". The front pressing board's bottom shall be lower than that of the tool edge "A" for 1~2mm.
- ❖ Way of adjustment: Put one wood material which has been planed flat at the planer's bottom, and take the flat board above as standard base (Fig.11.)
 - (1) Raise the front and rear pressing boards, then adjust the tool head to downward direction, the tool edge and wood only need to contact lightly.
 - (2) The up/down adjustment of the rear pressing board is controlled by bolt "B" at Fig.12, the clockwise direction is to turn downward, while the counter clockwise direction is to turn upward; then adjust the distance between the rear pressing board and the tool edge "A" based in the size of the tool head, this may be controlled by bolt "C", usually 5mm is the best.

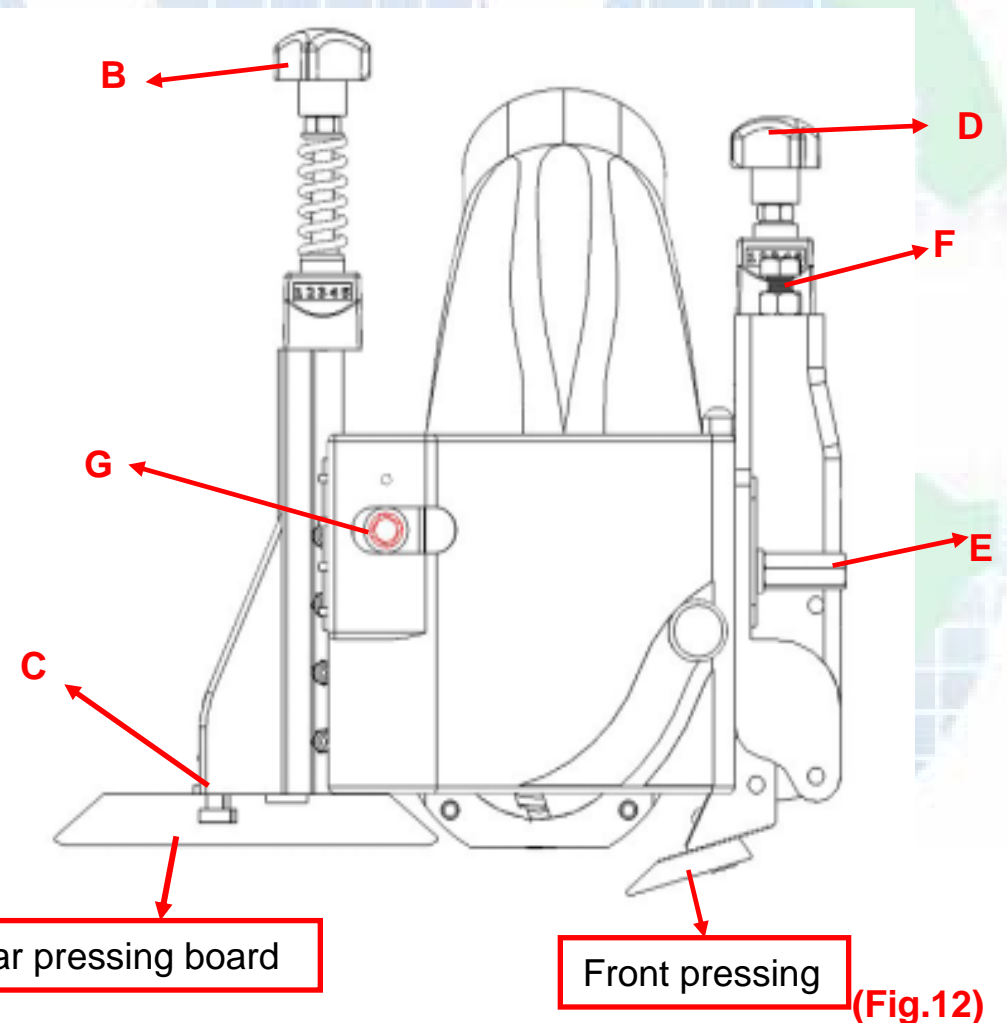


(Fig.11)



Second Top Spindle II

(3) The height of the front pressing board may be controlled by bolt "D", the clockwise direction is to turn downward, while the counter clockwise direction is to turn upward. When the front pressing board contacts the wood board lightly, do not forget to turn the bolt "D" clockwise for 1/2 circle, then fix with bolt "E".



(Fig.12)

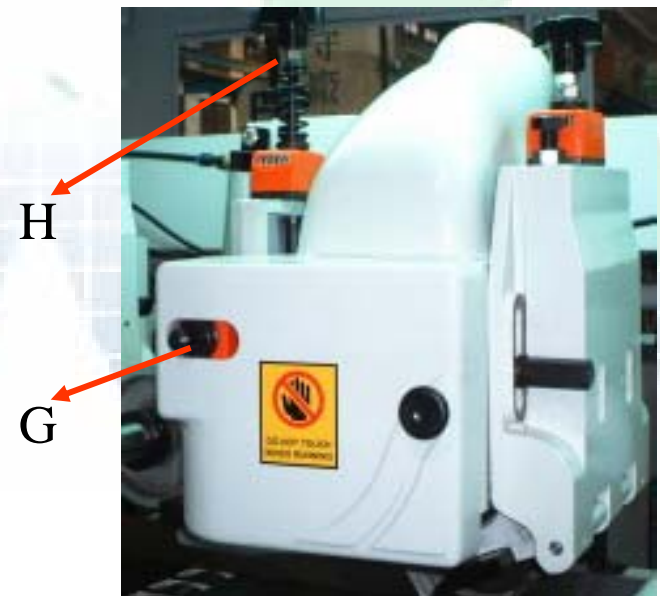


Second Top Spindle III

- (4) The pressure of the front pressing board is adjusted by bolt "F", the clockwise direction is larger, while the counter clockwise direction for smaller. The pressure of the rear pressing board is adjusted by screw nut "H". (As shown on Fig.12)
- (5) The forward/backward of the tool is controlled by bolt "G", the clockwise direction is forward, while the counter clockwise direction for backward. Do not forget to loose the bolt that fix the spindle base before making adjustment.

d. Specification:

**The top horizontal spindle plan thickness is 230mm, and the cutter-head diameter is 125mm.
The profile cutter-head is from 110-180mm**



(Fig.13)



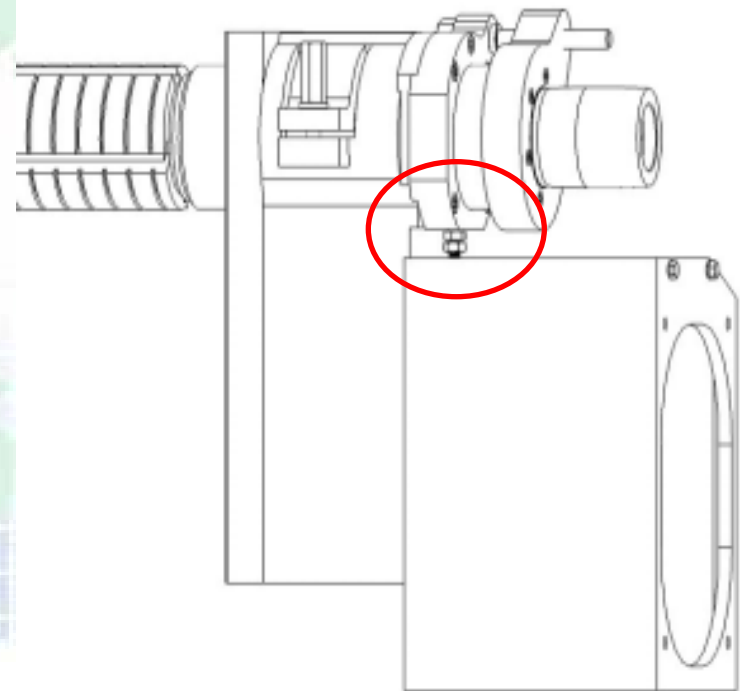
Second Top Spindle IV

c.Cautions:

To get flat and smooth feeding effect, the pressure adjustment of the front and rear pressing board must be proper, otherwise it will cause inconsistent planing, the surface of the working piece will show defective lines. Too low of the pressure will also cause the end of the working piece un-flat, which is the so called "wasting of material".

❖Note:

Please pay attention the horizontal spindle must be parallel with the table. If not, please adjust the screw that circled.



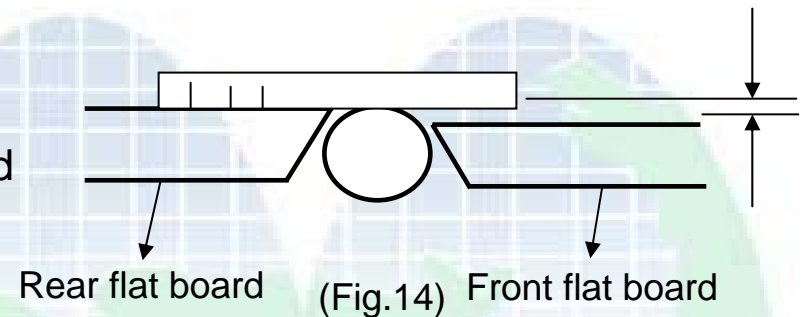


Tail Bottom Spindle I

❖ The position of the bottom blade:

a. Adjustment of the tool head:

Knack: Tool edge "A" must be parallel with the surface of the rear flat board, while the surface of the front and back flat boards shall have a level difference between two points. (Fig.14)

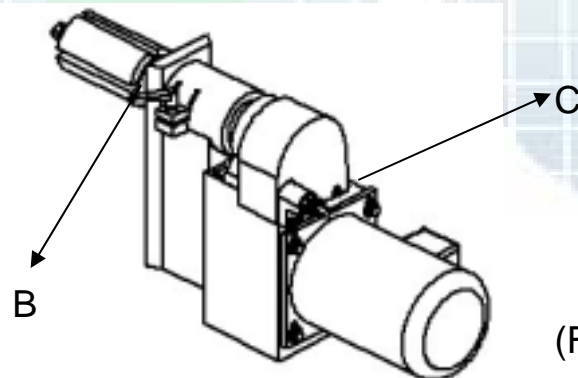


❖ Way of adjustment:

(1) Use the ruler back which is extended from pressing the rear flat board and contact the tool head's edge "A" lightly.

(2) The up/down adjustment of the rear flat board is controlled by bolt "A", the clockwise direction is to turn downward, while the counter clockwise direction is to turn upward. From the extended line resulted from step (1) may judge the difference with the front flat board.

(3) The forward/backward adjustment of the planer is illustrated on Fig.15, loose the bolt that locks up the spindle and turn the bolt "C" as illustrated on Fig.15, the clockwise direction is forward.



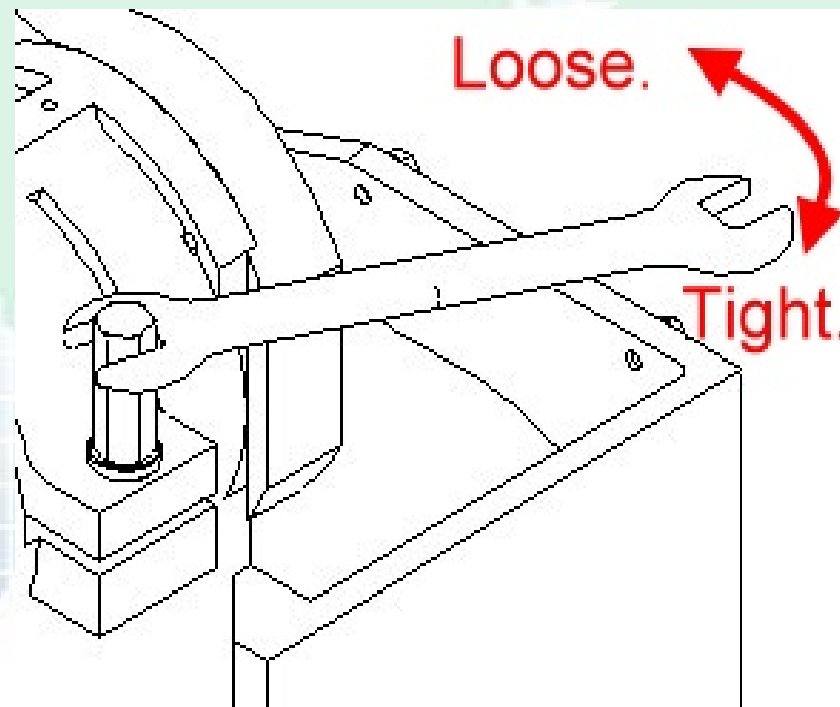
(Fig.15)



Warning

Please pay attention on moving the horizontal spindle forward or back. Before you want to move the spindle forward or back.

Please loose the nut before you move it.(see attached)





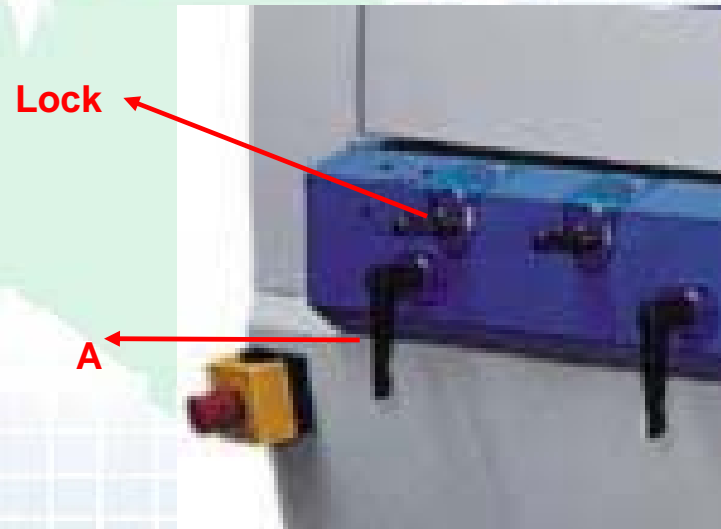
Tail Bottom Spindle II

b. Special features:

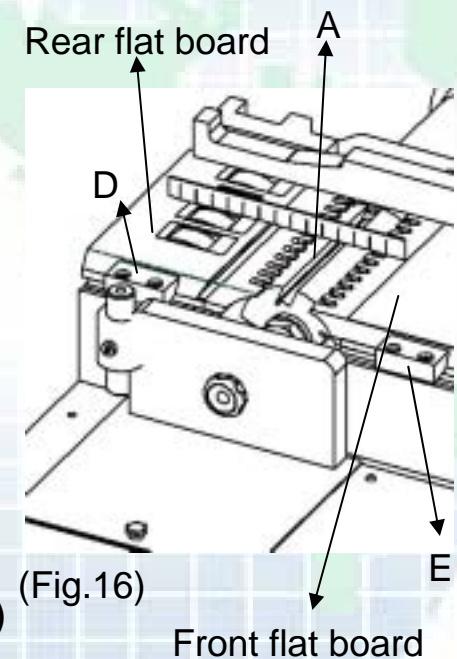
It may add many disc saws for slicing or slotting purpose. (Fig.17)

Ways of adjustment:

(1) As Fig.16 illustrated, to take down pressing board "D", "E" first, then the front and rear flat boards to install wood board or electric wood board.



(Fig.17)



(Fig.16)

(2) Lower the spindle and install the disc saw, then lift up and cut the wood board into the desired height, then the job is done. (Fig.17)

c. Specification:

The button horizontal spindle plan thickness is 230mm, and the cutter-head diameter is 125mm.



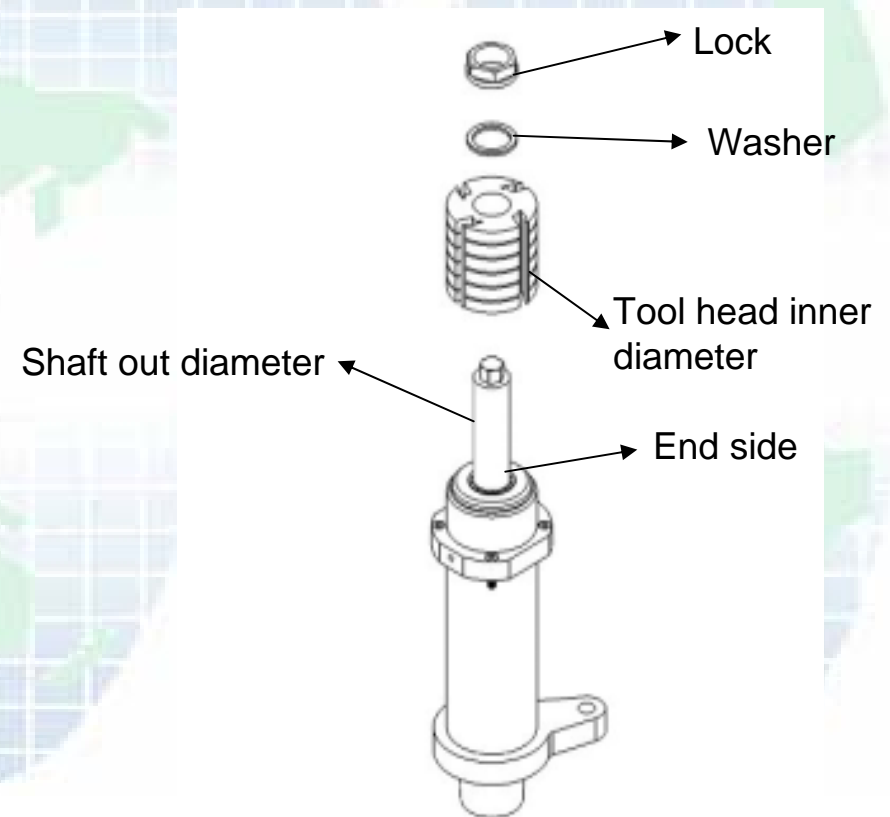
Cutter-head Installation

❖ To install blade at each spindle:

Knack: The out diameter B of each spindle, spindle surface A, and cutter-head inner diameter C, all need to keep clean and add grease before installing, the screw nuts which fixed the cutter-head must have a washer to prevent the cutter-head and screw nuts being eroded with each other. (As show on Fig. 18)

❖ Way of adjustment:

(1) the 1,3,5 blades are turning and cutting in clockwise direction, the screw nut is fixed when turning counter clockwise direction, while is loosen when turning clockwise direction.
(2) the 2,4 blades are turning and cutting in counter clockwise direction, the screw nut is loosen when turning counter clockwise direction, while is tightened when turning clockwise direction.



(Fig.18)



Feed Roller and Adjustment I

10. Adjustment of the pressing feeding roller and air pressure:

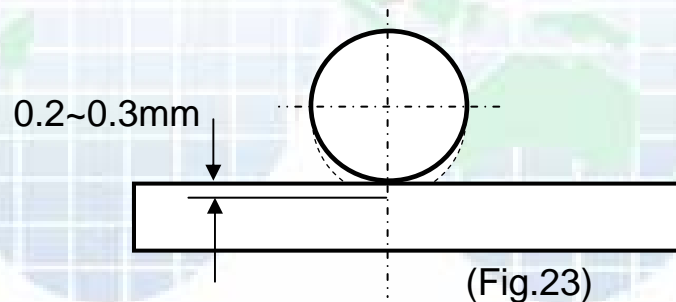
(1) the feeding roller divides into:

- * Upper pressing roller is of casting steel, plastic and steel roller 3 kinds.
- * Bottom press roller is of casting steel.

(2) The adjustment of the upper pressing roller is controlled by the screw nut A as show on Fig. 21. The clockwise direction will lift the press roller, while counter clockwise direction to lower down.

(3) Within 210 mm of the spindle center, the operator may loose up the screw B to switch the front and back screw, then adjust the pressing roller to the most suitable position and fixed.

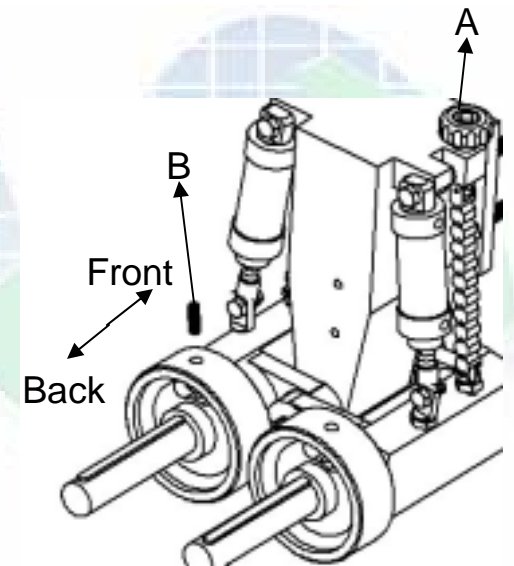
(4) When planing different thickness wood, the pressing roller illustrated on Fig. 22. May be properly allocated. For wide wood, the pressing roller may be taken off and fixed by bolt B. The thickness of the pressing roller is 25 mm for 2 pieces, 50 mm for 1 piece for your free selection.



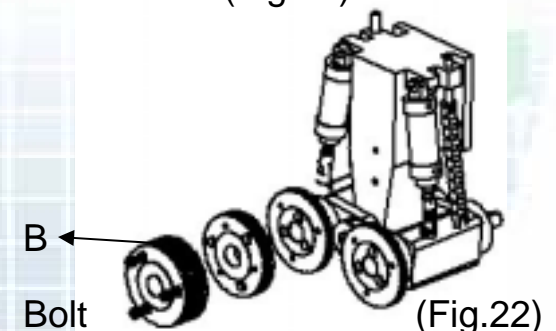
(Fig.23)

(5) The feeding roller between the 4th and 5th blade may be made of plastic of casting steel, depending on the need of the operator.

(6) The upper pressing roller and the working pieces shall keep at least 3 mm allowance as show on Fig.23.



(Fig.21)



(Fig.22)

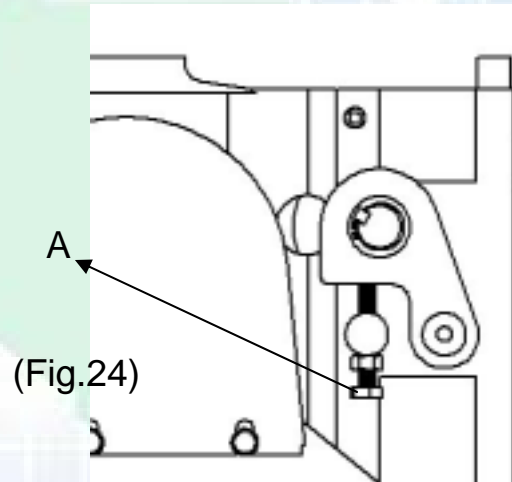


Feed Roller and Adjustment II

(7) The bottom feeding rollers equipped in the machine, all have the driving function, the out diameter is 100 mm.

The adjustment as Fig. 24.

Bolt A is to control the minimum height of the roller, usually it iceboats for the pressing roller to be higher than the flat table for 0.2 mm.



(Fig.24)

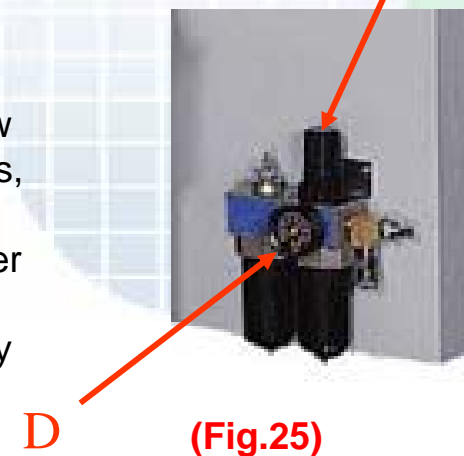


(8) The adjustment of the air pressure for all of cylinders:

a. As Fig. 25, noise D is the inlet of the compressed air, Turn the screw button A to control the air pressure of the upper and bottom feed rollers, usually they are adjusted to keep the pressure at 45 lbs.

b. Turn the screw button B to control the air pressure of the first 2 upper feed rollers, usually that are adjusted to keep the pressure at 20 lbs.

c. The adjustment for the screw button A & B, Turn the screw button by clockwise direction to decreasing the air pressure than check up the pressure as counter as you setting.





Side Fence Adjustment

11. Auxiliary guiding board:(Fig.26)

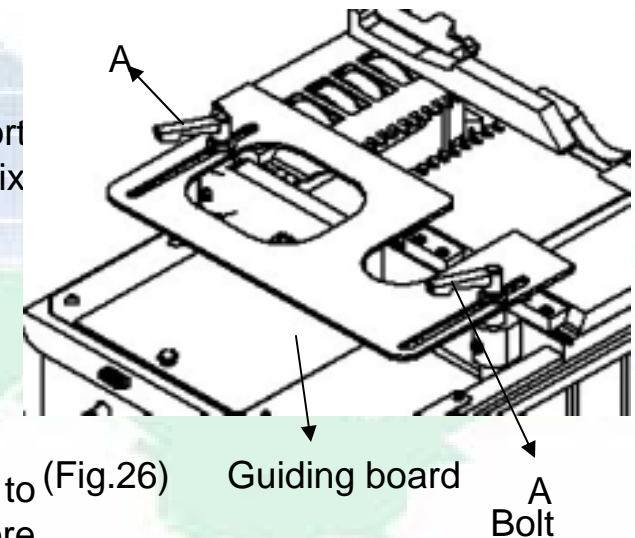
(1) After the 3rd spindle complete planing, the width is fixed, in order to prevent the winding of the wood on the process of feeding (especially short wood), it shall use an auxiliary guiding board to touch the wood lightly to fix the travel of the wood.

(2) The adjustment for the auxiliary board, Loosen bolt A and feed the board edge to touch the wood, then fasten the bolt A to fixed.

Cautions:

a. the guiding board shall avoid too much pressure on the wood edge, otherwise it will stock the wood.

b. When pulling in the guiding board, pay attention to the guiding board to see if it contacts the tool head at same time. (thin material shall be more cautions, such as thickness under 7 mm or a slot at the tool head)



(Fig.26)



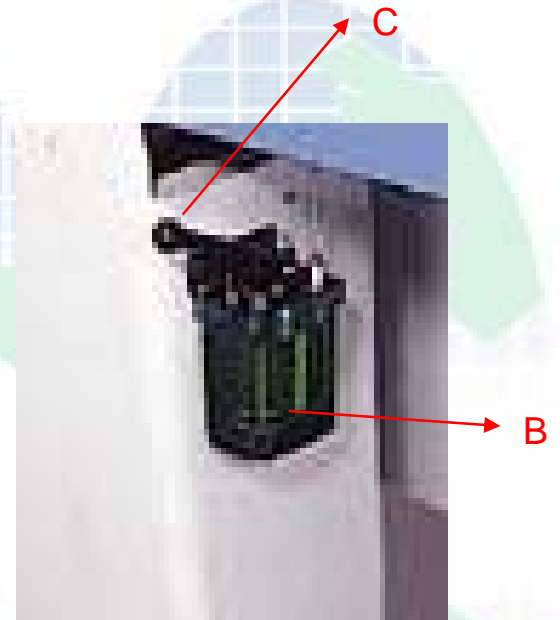
Bed Lubrication

❖ Oil filling equipment:

For the wet wood working & planing or profiling the wet wood would cause damage and generate a friction resistance against the flat table, in order to overcome such shortcoming. In front of the front press roller of the 3rd spindle of this machine equipped with a inlet hole A for filling lubricant, through the press rod C of the oil filter B, to press down to let the oil to flow into the flat table and help the lubrication and prevent from clogging.

❖ You can use the oil filling material as following, when the box (figure:D) will dry:

Brand	Description
Mobil	D.T.E oil Light
Shell	Turbo oil T32
Exxon	Teresso 32
Kuper	Waxilit P71F
Gulf	Harmony 32





Usage and Installation of Worm Reducer

SELECTION OF LUBRICANT OIL

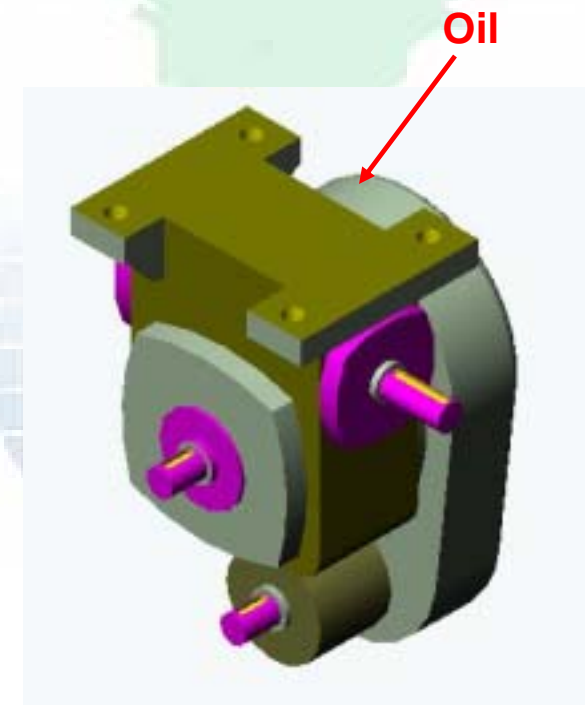
Proper viscosity of lubricant is contributive to ease the friction of worm gears, so the speed reducer can fully apply its function in the case of high load or impactload.

NOTICES :

1. gear reducers use Kuo-Kuang Brand engine oil HD-320.
2. After Initial 100 hours of usage, the interior of the reducing gear should be cleaned up and refill new oil. And then, after every 2500 hours of usage replace new oil again.
3. Please contact with our company if the gear reducer will be used in special conditions, such as high speed, high temperature, low speed, heavy load, and forced lubrication and so on.
4. Insufficient lubricant oil may lead to the rapid wears of worm gear and low efficiency.
5. Excessive of lubricant oil may lead to oil leakage.
6. Please fill in adequate lubricant oil to above half of the oil gauge. (See oil gauge)

Selection of LUBRICANT OIL

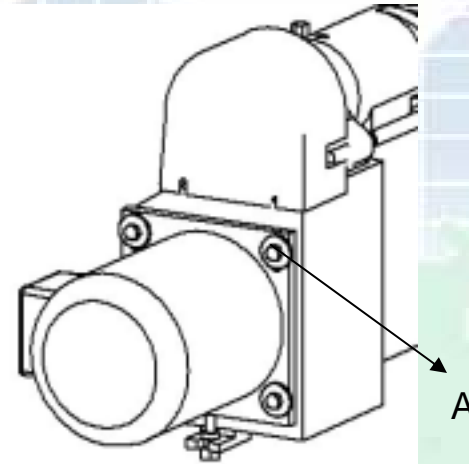
荷重 (LOAD)	周圍溫度 Ambient Temperature	中國石油 KUO-KUANG BRAND	SHELL OIL	MOBIL OIL	ISO VG
普通荷重 COMMON LOAD	- 30°C ~ 5°C	國光牌極壓機油 HD-150	OMALA OIL 150	MOBIL GEAR 629	ISO VG EP 150
	5°C ~ 40°C	國光牌極壓機油 HD-220	OMALA OIL 220	MOBIL GEAR 630	ISO VG EP 220
	40°C ~ 65°C	國光牌極壓機油 HD-320	OMALA OIL 320	MOBIL GEAR 632	ISO VG EP 320
超荷重 HEAVY LOAD	- 30°C ~ 5°C	國光牌極壓機油 HD-220	OMALA OIL 220	MOBIL GEAR 630	ISO VG EP 220
	5°C ~ 40°C	國光牌極壓機油 HD-320	OMALA OIL 320	MOBIL GEAR 632	ISO VG EP 320
	40°C ~ 65°C	國光牌極壓機油 HD-460	OMALA OIL 460	MOBIL GEAR 634	ISO VG EP 460



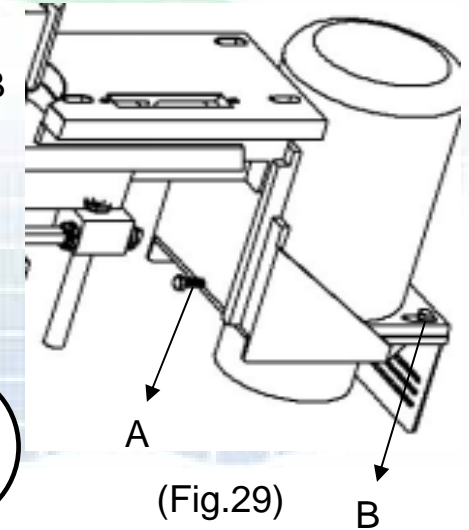


Belt Tension

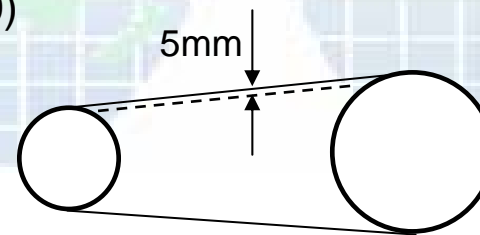
- ❖ The motor transfer belt
- 1) The belt replacement of horizontal spindle, Loosen the screw nut A that fix the motor, then move the motor to the high position. The belt would be loosen and easier to replace it (Fig. 28).
To adjust the tightness for the belt. Loosen the screw nut A at first(Fig.28). The belt will automatic adjust its tightness by the motor's weight, then fasten the screw nut A.
- (3) The belt replacement for the vertical spindle, loosen the screw nut A and B (Fig. 29). Then push the motor base forward to loosen the belt to replace it.
- (4) Press down the belt to testing the belt's tightness after replaced a new belt. The allowance shall be in 5 mm of range.(Fig.30)



(Fig.28)



(Fig.29)



(Fig.30)



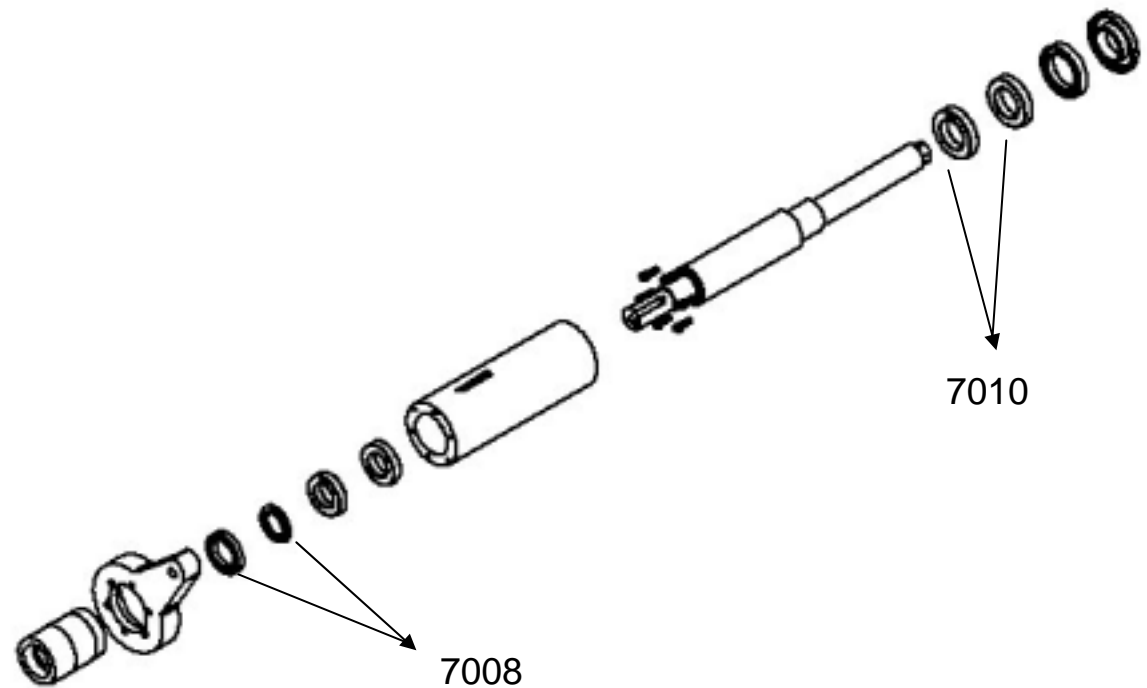
Main Spindle Maintenance

14. Protection cover and dust collecting tube:

- (1) The protection cover to prevent the eliminate sound, anti-dust, safety operation.
- (2) The dust hood outlet diameter is 5 inch, please use the suitable dust tube to use.

15. The replacement for the spindle bearing

See the (Fig. 31), to take out the main shaft. You should take off the belt pulley from the spindle set at first. Use the wrench to take the shaft ring, then take out the shaft and bearing. Replace a new bearing and restore it on reverse order as above instructed. It is necessary to clean all the parts inside the spindle housing. The lubricant of the bearing shall be use high revolutionary grease.



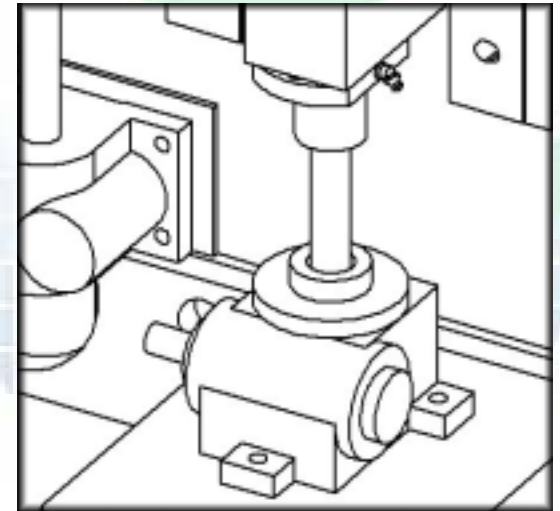
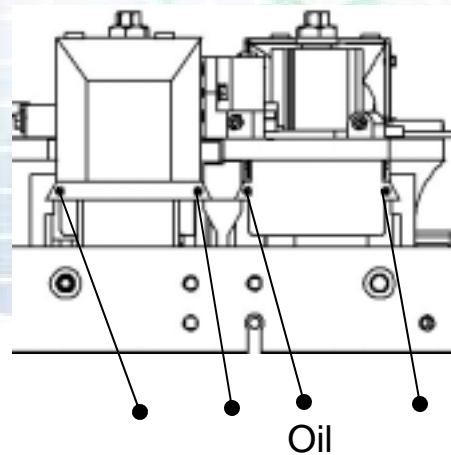
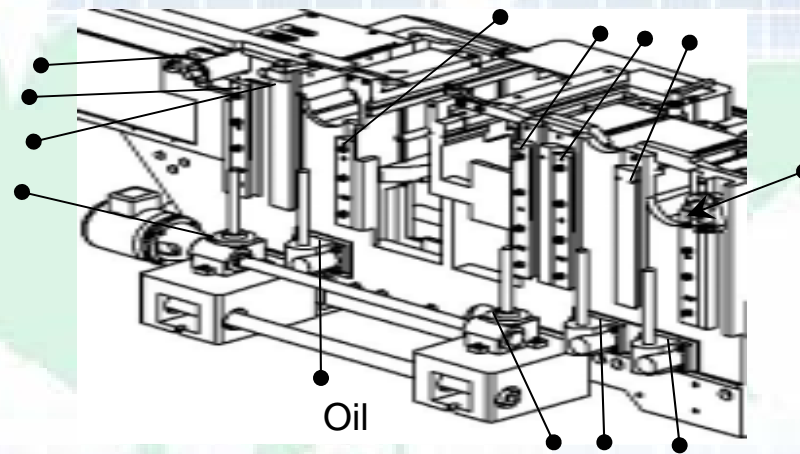
(Fig.31)



Guiding, Slide, Seeding Screw

16. Maintenance:

- (1) Main shaft: the spindle is maintenance free design.
- (2) Slide block: as the following figure illustrated, there are grease filling noise. It needs to add a little lubricant but you don't pump too many grease into it.





Electrical Maintenance

17. Electrical maintenance:

The major reason for breakdown:

- (1) If the control button didn't have any response, please check up the over switch. You should turn of and re-open again, try by each switch to figure out the problem.
* According to the design of the electrical circuit, the motor stops will cause all the power off.
- (2) Sometimes, the wood dust would be a reason to cause the switch or button didn't work. Please keep the machine clean.
- (3) If there is a significant damaged, ask a electrical engineer to help, don't let the layman disassemble the machine freely.

18. The oil of the box speed change(Part No.36,48,49 in 757S122)

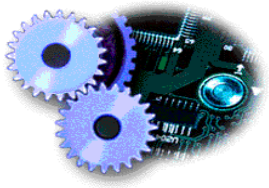
Should be changed every 6 months.

The oil material should be used as following:

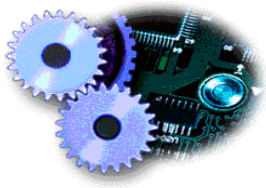
Brand	Description
Mobil	D.T.E oil Light
Shell	Turbo oil T32
Exxon	Teresso 32
Gulf	Harmony 32

19. Conclusion:

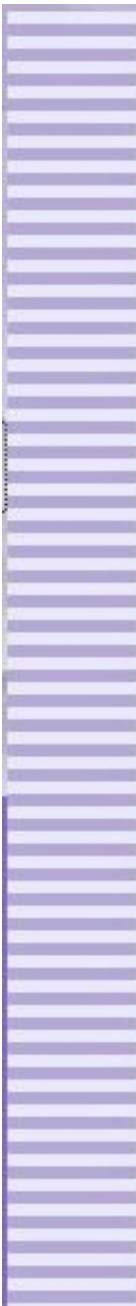
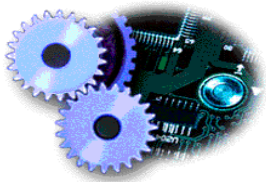
We have been manufacturing the woodworking machinery for more than 30 years, along with the guidance and improvement, provided that actual design to find out the defectives to make the excellent products which will help your job much more easier and quickly. If more advanced technical service is required, please contact out agent at your territory, we would be appreciate to provide much satisfied service and information. Your comments any time is also welcomed. Finally, wish you have a prosperous year.



Electrical Drawings
for
S/NO.: 04A0613

A world map in shades of green and blue, overlaid on a light blue grid background, serving as the backdrop for the title text.

Spare Parts List
for
S/NO.: 04A0613



BELT LIST
for
04A0613