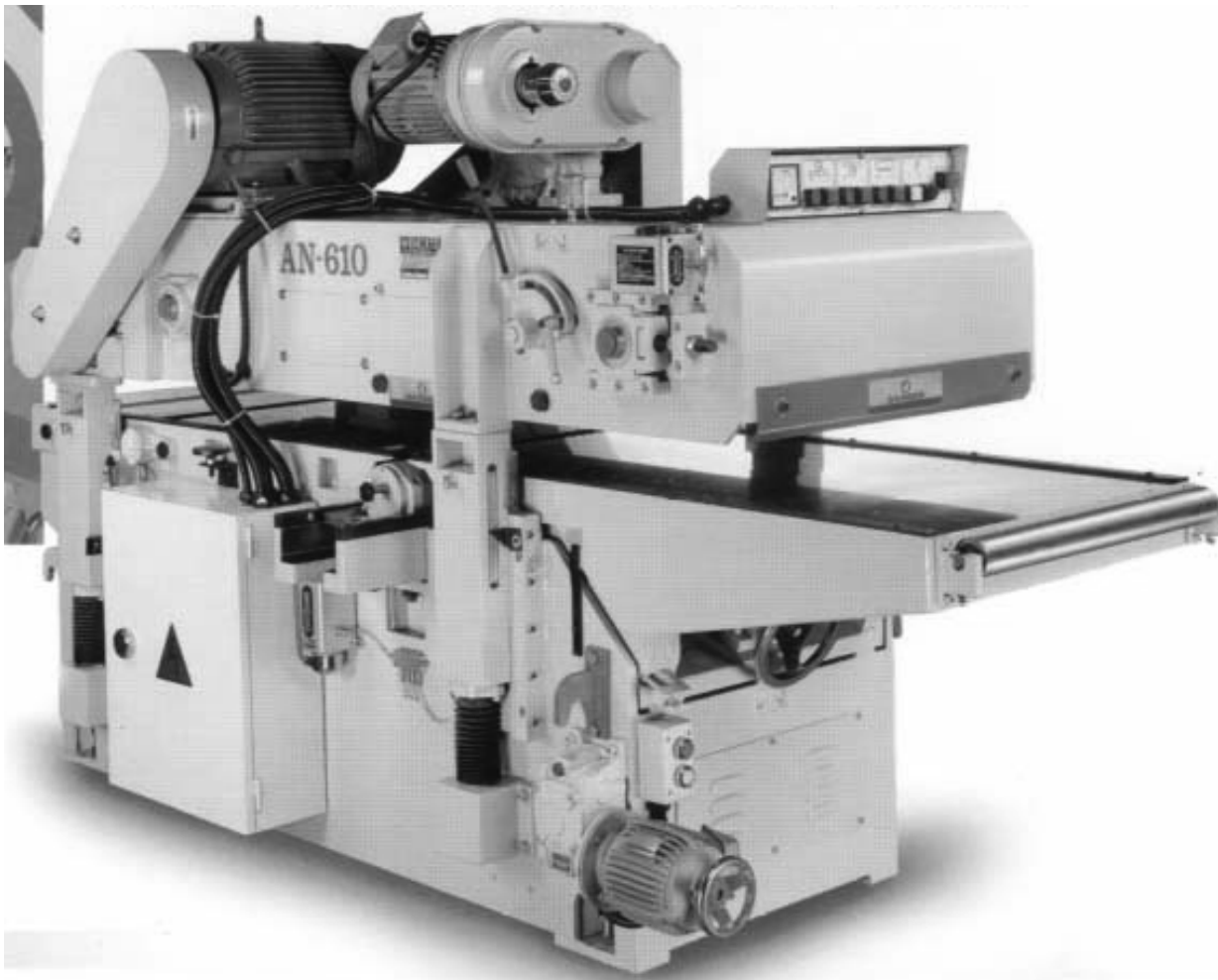


Model. AN-610D DOUBLE PLANER

MAINTENANCE INSTRUCTIONS



SAFETY FIRST!

This manual has been prepared for operators of the planer. It's purpose, aside from machine operation, is to promote safety through the use of accepted operating practices. Read the safety and operating instructions thoroughly before operating the machine.

PLANER SAFETY INSTRUCTIONS

1. **Read, all these instructions before operating the planer.** Know the limitation and hazards associated with this planer, A safety rules decal is on each machine to serve as a reminder of basic safety practice.
2. **Grounding of the planer:** make certain that the machine frame is electrically grounded and that a grounding lead is included in the incoming electrical service, in cases where a cord and used, make certain that the grounding lug connects to a suitable ground. Follow the grounding procedure indicated by the national electric code.
3. **Work area clean :** keep the floor around the machine clean and free of scrap material, sawdust, oil or grease to minimize the danger of tripping or slipping. Be sure table is free of all scrap, foreign material and tools before starting a cut.
4. **Dress properly:** before operating the machine, remove, tie, watch and other jewelry and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Protective type footwear should wear and hearing protectors should be used where noise exceeds the level of exposure allowed in section OSHA regulations. Do not wear gloves.
5. **Wear safely goggles:** wear a proved safety shield, goggles, or glasses to protect eyes when operating the planer.
6. **Hand safety:** keep hands outside the machine. Never reach under the guards to try to clear stock that stops feeding. Do not clear chips and sawdust with hand; use a brush. Notice caution decal at rear of the machine. Do not have any part of the hands any part of the hands under that part of the board that is over the table when starting a cut; the infeed roll will engage the board and force it down against the table causing a pinching action.
7. **Don't overreach:** keep proper footing and balance at all times.
8. **Guards:** keep the machine guards in place at all time when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards on completion of the maintenance task before using the planer. Do not operate the machine with the guards off.

9. **Keep children away:** Do not let on lookers contact or power lead. All onlookers should be kept away from work area.
10. **Operator position:** stand to the left side out of line with the table and make sure no one else is standing in line with the table.
11. **Maintain tool in top condition:** keep tools sharp and clean for safe and best performance. Dull tools increase noise levels and can cause kickbacks and glazed surfaces. Broken tool or tools that are not securely locked in the cutterhead can be thrown out of the planer causing sever or fatal injury as well as severe damage to the machine. Do not use knives that have been reground to less 3/4”(19mm) height on standard cutterhead
12. **Cutterhead rotation:** be sure cutterhead rotates under power in a counterclockwise direction when viewed from the main drive motor side.
13. **Machine adjustments:** make all machine adjustments with power off except feed rate
14. **Use the right Machine for the job:** Do not make any cuts requiring more power than available on the machine. Each machine has a caution decal on the front panel indicating the maximum depth of cut and the maximum difference in board thickness allowed when multiple board surfacing when it is equipped to do that operation. Do not attempt to feed two boards side by side on any machine not equipped with a sectionalized infeed roll and chipbreaker.
15. **Material condition:** Do not planer boards with loose knots or with nails or any foreign material on this surface. Knife impact on these objects can cause the knives to be pulled out and cause them to shatter against the chipbreaker or pressure bar. Twisted, warped, or in wind stock should first be jointed on one surface before attempting to plane a parallel surface stock flaws cannot be removed by use of a planer alone.
16. **Stacked boards:** Do not feed stacked board through a planer; a kickback can occur causing sever or fatal injury.
17. **Short stock:** do not attempt to plane boards shorter than 10”(250mm) in length without butting aboard of equal thickness behind it to help it through the planer. Be sure the last board of a butted sequence is 250mm long or longer.
18. **Stock stop feeding:** if the board being planed stops feeding, disengage or turn the feed off and turn the power off. Wait until the cutterhead comes to a complete stop before lowering the table to remove the board. Never lower the table with the power on and the stock still in the machine.

19. **Avoid accidental starting:** Be sure switch is turned off when connecting power to the plane.
20. **Stay alert:** Watch what you doing. Use common sense. Do not operate planer when you are tired.
21. **Job completion:** If the operator leaved the machine area for any reason, the planer should be turned “off” and the cutterhead should come to a complete stop before his departure. In addition. If thee operation is complete, he should clean the planer and the work area. Never clean the planer with power “on” and never use, the hand to clear sawdust and debris; use a brush.
22. **Disconnect machine:** when not in use, before servicing and changing accessories such as blades, knife.

Save these instructions

Listed below is a table of horsepower and cutterhead r.p.m. For planer. Do not equip your planer with motor of higher horsepower nor run the cutterhead in excess of the r.p.m. Indicated in the table. Doing so voids the warranty and the planer holds itself harmless from any injury that may result.

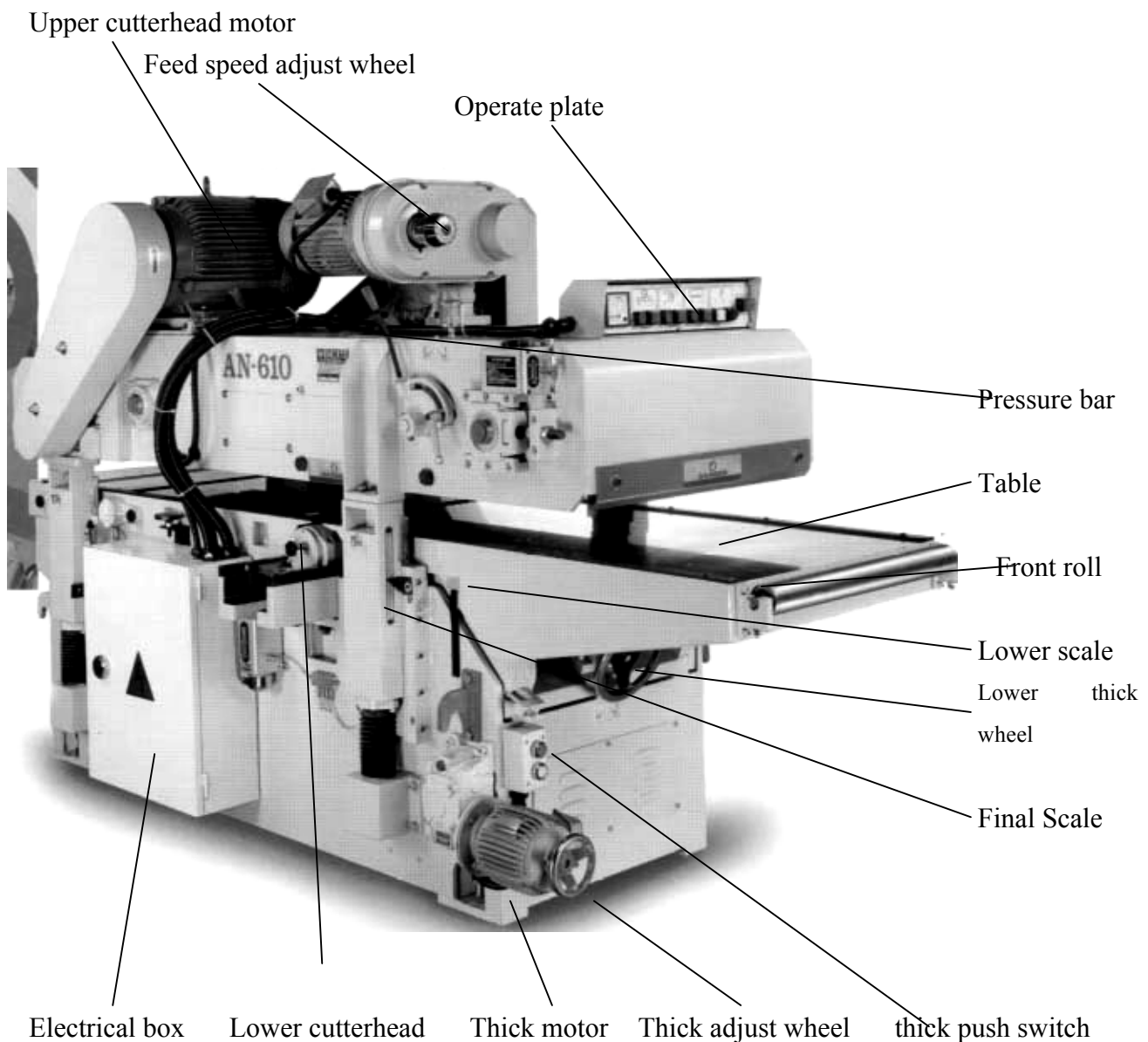
MODEL: An-20”/24” PLANER CAPACITIES

SPECIFICATION	Model 610
Table area	680*2600
Cutterhead diameter	124mm
Cutting circle	126mm
Max. cutterhead R.P.M	4000r.p.m.
Dir dr. cutterhead m.p.s.	26.4 m/sec
Belted drive cutterhead m.p.s	19 m/sec
Knife size(4 pcs)	6.0*38*610
Infeed roll diameter	100mm
Outfeed roll diameter	100mm
Bed roll diameter	100mm
Feed m.p.m.	7-16m/mim
Max depth of cut single board	12mm
Stock range thickness	3-170mm
Widest planeable butted stock	610mm
Shortest planeable stock not butted	200mm
Heavy work	15Hp/10Hp
Approximate WT domestic	3300kgs

Machine installation

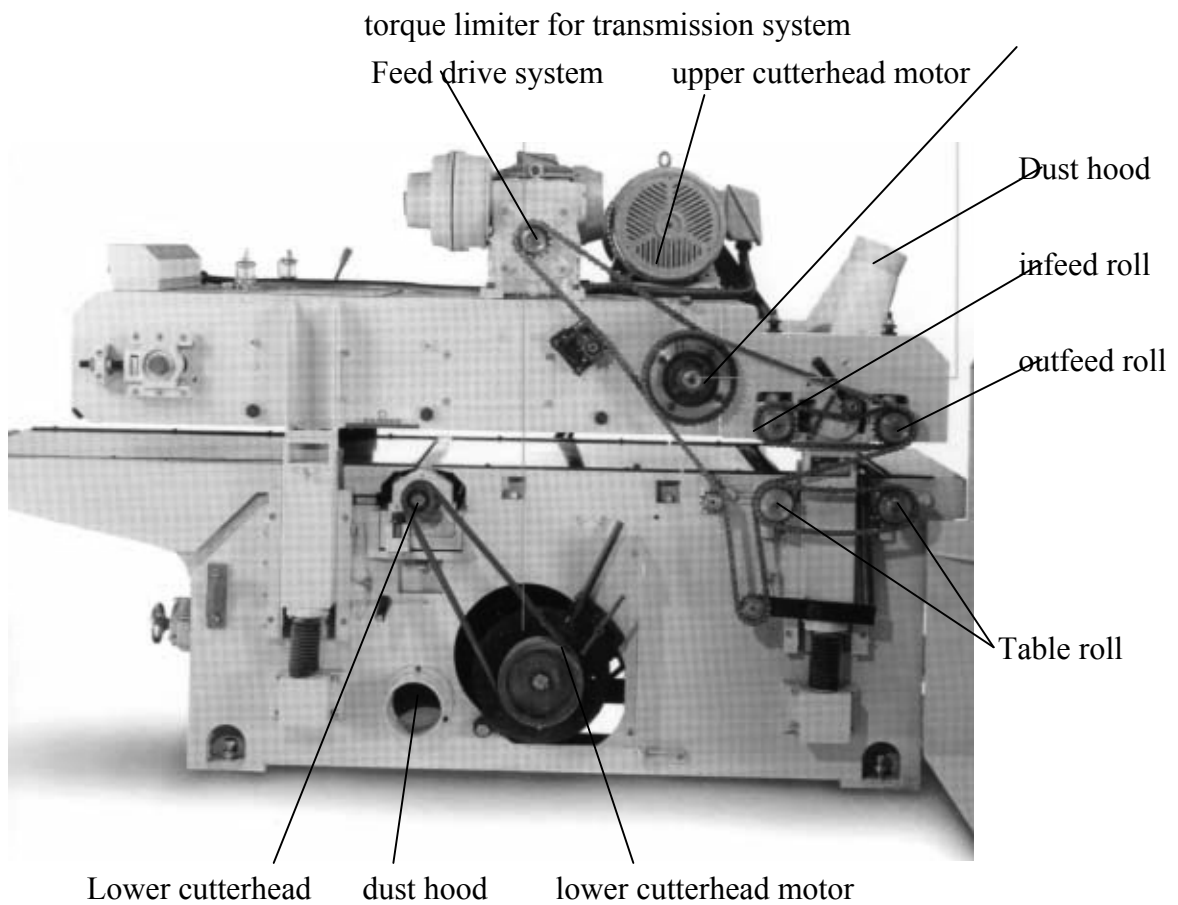
Receiving:

Uncrate machine and check for shipping damage. Report any damage to the carrier and your distributor immediately. If accessories were ordered with the machine, these will be in a separate container and should be checked for completeness and damage. Notify the carrier and your distributor immediately if any items are missing or damaged. Clean protective coating from all areas and lubricate parts as indicated in this manual.



Installation:

Mount machine on a solid foundation, preferably a concrete floor, and lag machine to the floor through the holes provided in the base. The machine area should be clean, dry well ventilated, and well lighted. Since planer can create noise problems, the site selection should be one which minimizes reverberant sound from walls, ceilings and other equipment. Electrical should be installed so that they are protected from damage and exposure. Be sure to properly ground the machine frame.



Exhaust system:

When an exhaust system is used, be sure it is of sufficient size to provide volume of 36 cubic meter/min. If exhaust system is not user, the user is cautioned against the health hazard.

Inspection:

Before putting power on the machine, check that all screws are tight, that all mechanical functions work freely and that the cutterhead turns freely without knife contact with the chipbreaker or pressure bar. Periodic or regular inspections are required to insure that the machine is in proper adjustment, that all screws are tight, that belts are in good condition, that dust has not accumulated in the the electrical enclosures, and that there are no loose or worn electrical connections.

Before operating:

Check the motor and switch wiring diagram for proper voltage connection before applying power to the machine. Turn the main drive motor on momentarily to check for proper direction of rotation. Correct as required. Cuttrhead should rotate counterclockwise when viewed from the sheave or motor side. The infeed roll should turn clockwise when from the motor side planer. Run the machine without cutting for a short period of time to check that all power function are operating properly. Be sure to read and understand the operating instruction manual using the planer.

Lubrication:

The table roll, infeed roll and outfeed roll are mounted on sealed ball bearing and require no lubrication. The following lubrication chart indicates the lubrication points, frequency, and recommended lubrication.

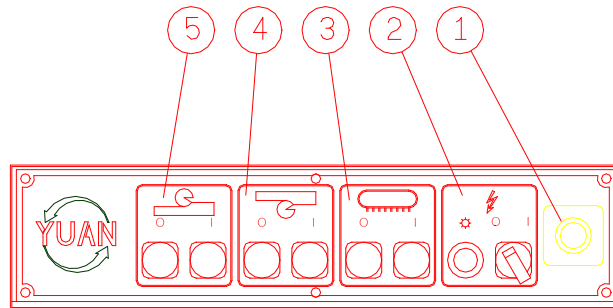
Cutterhead houseing	Daily	High speed Grease
slider ways	Weekly	SAE32
feed chain	Weekly	SAE32
Fd. Drive gears	Weekly	SAE32

OPERATE & MACHINE ADJUSTMENTS

Operate plate:

1. Emergency stop: when push the button , power off and the button be lock.

Rotate the button that to reset with clockwise.



2.Power switch: when be rotate for “1” ,power on and lamp be light . When lamp is unlighted, the power is unload or emergency button be push.

3.Feed drive switch: ”1” is start “0” is stop. When upper & lower cutterhead doesn’t motion, the feed motion should not start.

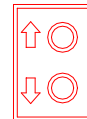
4.Lower cutterhead switch: ”1” is start “0” is stop.

5.Upper cutterhead switch: ”1” is start “0” is stop. Lower & upper cutterhead should not start at the same time. must has 5-10 second between the both..

6.Final thick switch: ”□”be thick, ”□” be thin. *Please clean*

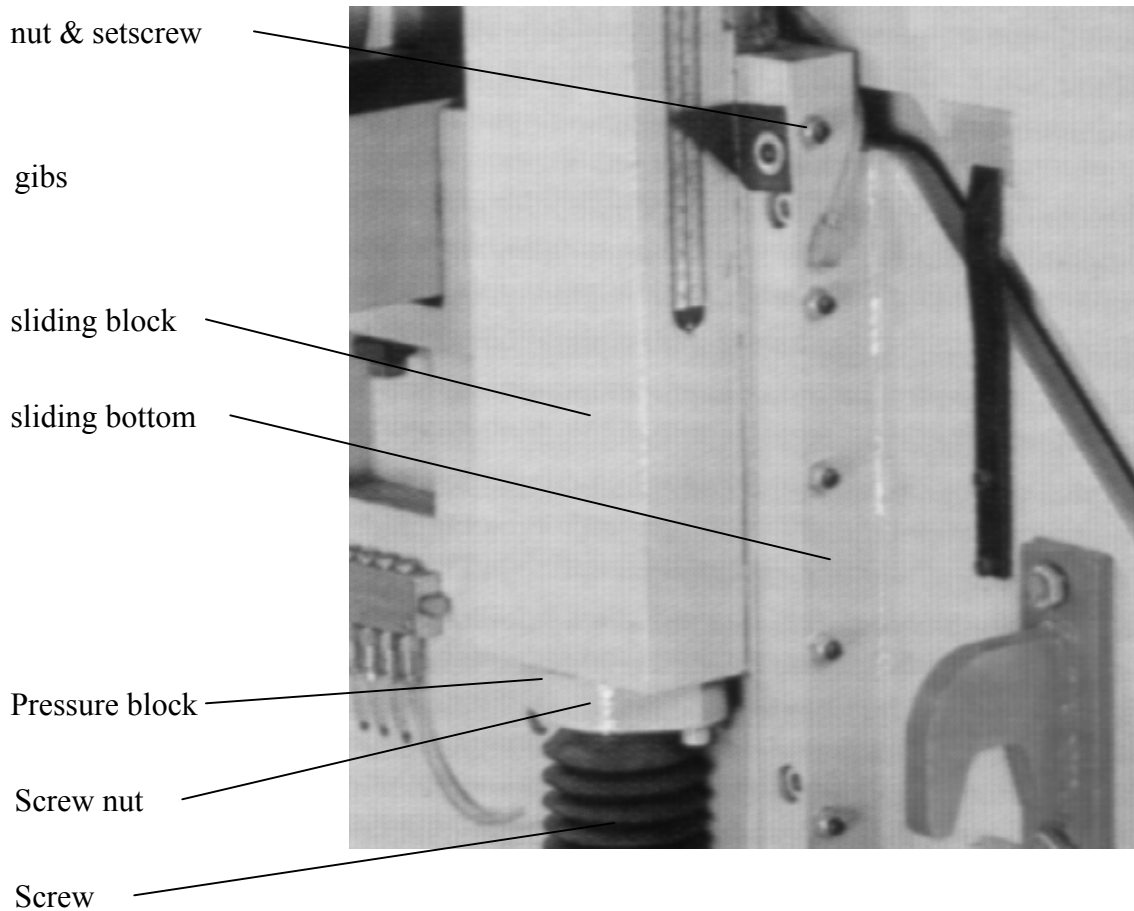
the table when Operate the button.

Operate the buttons to make certain thick by the final scale.



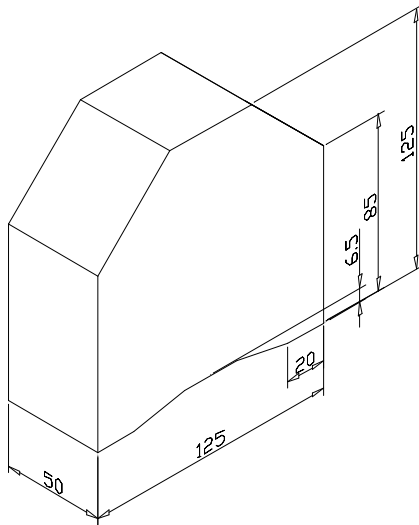
Slider:

The slider is raised and lowered by four screws supported on thrust bearing and is guided by machine surface on the side panels. The fit-up to prevent the table from rocking is controlled by two gibs in front. These gibs should be adjusted individually using the gib screws provided, so that the ways are lightly contacting on all four surfaces. The gibs should be tight enough to prevent rocking or movement of the table when planer is in operation.



To do accurate planing, the slider must be parallel with the cutterhead. Lack of parallelism results in a taper over the width of the board. Check with straddle-type knife gage to insure knives have the same protrusion from the cutterhead arc end to end that each knife is the same. Maximum deviation

allowed for good planning is 0.02mm. If deviation exceeds 0.02mm, see section on installing cutterhead knives or section on jointing and riding knives before leveling the table.



Place 125*125mm gage block and shop scale to be used as a feeler gage or bed and table roll gage at the extreme right hand side of the table, rotating head so the knives clear the gage surface. Raise the table with the table raising handwheel until the scale on top of the block just touches the cutterhead. Move the block to the extreme left side of the table. Using the block, find the low point of the cutterhead are without moving the table height. Note whether the reading is less than or greater than left side, if greater on the left side, the left side of the table must be lower; if less, the left side of table must be raised. With the indicator or gage block under left side that must be raised or lower, loosen the lockscrew locking the threaded flange nut from rotation in the table on the side to be raised, lower. Rotate the nut using a rod in the flange holes and adjust height of the left side. Relock the flange nut lockscrew in the table. Another method that can be used if the table is free is to loosen the lockscrew on the high side of the table and then rotating the table handwheel clockwise raising the opposite side until it is level. Relock the flange nut lockscrew in the table.

Table rolls:

Two table roll are provided on the planer to help reduce the friction of the stock on the table as it feeds through the machine.

To adjust the bed roll setting. If using a bed and feed roll gage, zero the indicator to the table. Place the over the extreme right side If the table roll and find the high point of the roll arc. The standard setting is 0.5mm. If the reading is greater or less than this reading, loosen the nut ,and adjust the hex head jackscrew to position the roll the 0.5mm setting. Repeat the process on the left side and than recheck the right side. Relock the nuts.

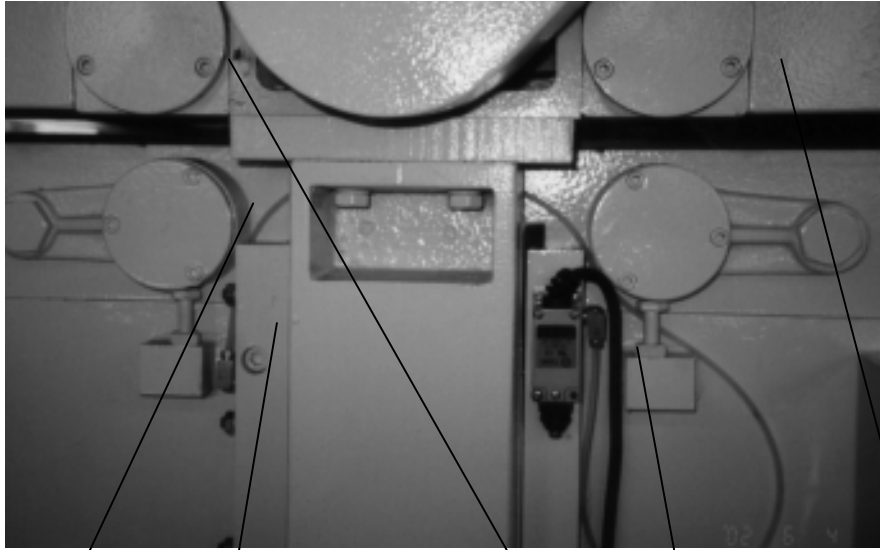


Table rolls

Table roll set screw

outfeed roll

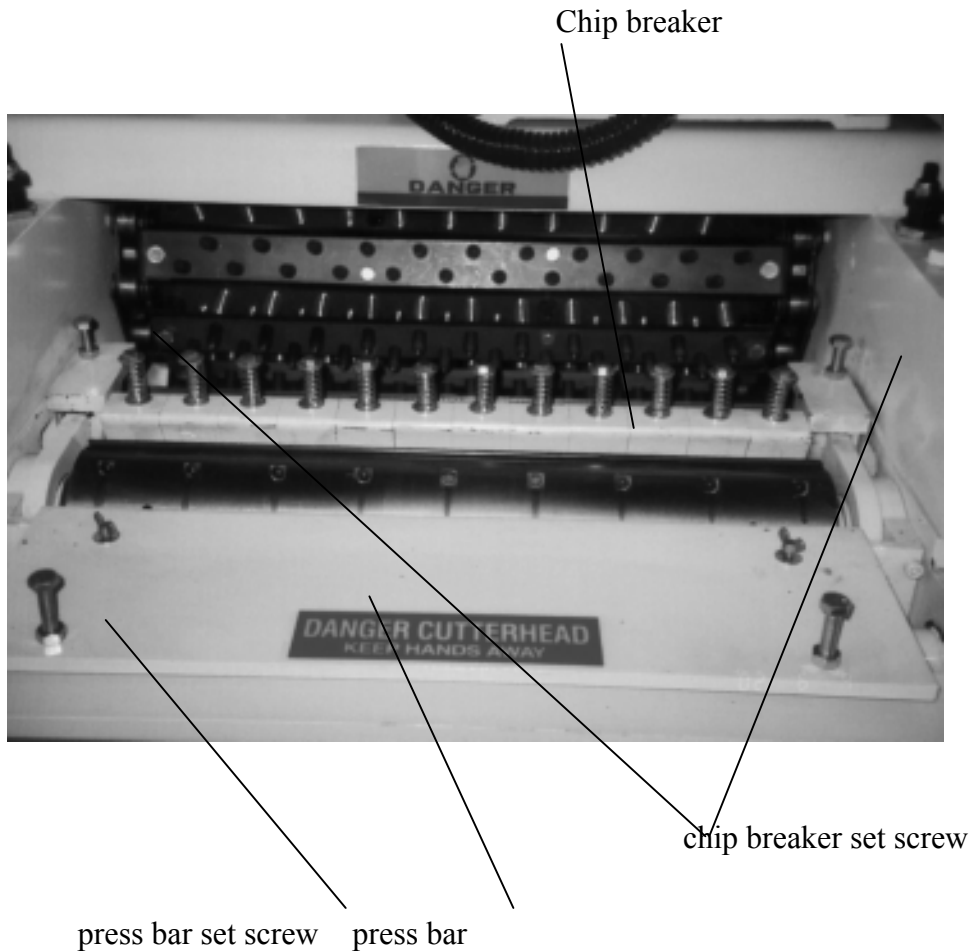
limiter

infeed roll

Infeed roll:

The function of the infeed roll is to feed the material into the machine. It is a corrugated roll and when sectionalized is made up of one inch wide sections with 6mm movement in each section to accommodate multiple board surfacing. In addition, the whole assembly is rubber loaded to accommodate the full 6mm depth of cut. To provide proper drive, it should be set so that the bottom of its arc is 1.6mm on sectionalized type below the arc of the cutterhead knives. Using gage block or a short piece of finished 2*4 lumber notched to clear the table roll placed on edge under one knife of the cutterhead, raise the table with the table raising handwheel and rock the cutterhead back and forth until it just touches the gage block or 2*4. a shop sale of the proper thickness, 1.6mm can be used on top of gage block when touching off under the knives and then removed when setting the infeed roll to provide the correct step down, lower the table 1.6mm and move the 2*4 or gage block under the extreme right hand side of the infeed roll. If it will not go in the roll must be raised. If clearing, it must be lowered. Using the setscrews provided unlock the setacrew and adjust as required so that the roll just touches. Move the 2*4 to the extreme left side and adjust that side as required until the roll just touches the gage. Recheck the right side and then lock the setscrew with the jam nuts provided. The most accurate method of setting infeed roll with the bed and feed roll gage. Find the low point of the knife arc to the end of the page then set the infeed roll to 0.062 for sectionalized infeed roll below the zero point. It is important that that the setting on both sides of this

feed roll be close to the same height to help avoid skewing of the material as it is fed through the machine. Infeed roll pressure is controlled by springs and is adjusted by use of screws located on top of the side panels pressure should be slightly higher on the drive side to help avoid skewing of board as it feeds through, the adjusting screw will be approximately flush with the bottom of the countersink on the top side panels when properly adjusted.



Chip breaker:

The sectionalized chip breaker is constructed of 25.4mm wide spring-loaded sections mounted on a bar. Each section has approximately 6mm independent yield. The function of the chip breaker is to help avoid splintering out of the wood, to break chip into small pieces, to help avoid board bounce on thinner boards, to direct the flow of chip out of the machine, and to permit multiple board surfacing up to 6mm difference in thickness.

The chip breaker in its free position should be 0.8mm below the cutting arc of the knives: the same as the infeed roller. Using the same method as indicated for the infeed roller, adjust the chip

breaker free position using 2*4 gage block and shop scale of the proper thickness and adjusting screws in the pivot arm at each end. It is important that each end be close to the same height to help avoid skewing of the material as it is fed through the machine. Since the chip breaker adjusting screws contact the bearing house for the infeed roll, its adjustment should be made after the infeed roll and if the infeed roll setting is altered, the chip breaker must be readjusted.

Caution: a chip breaker set too low may prevent stock from feeding into the machine.

Outfeed roll:

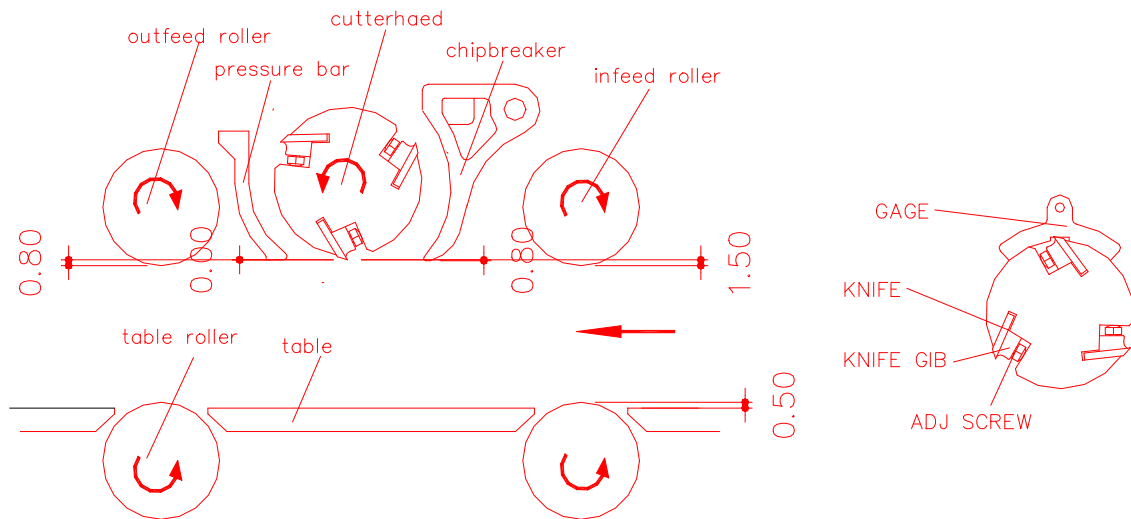
The outfeed roll is smooth and of one-piece construction to help avoid marring the finished surface of the material being cut. Its function is to continue to feed the material through the machine after it leaves the infeed roll. The correct free position setting is .8mm below the arc of the cutterhead knives. Using the gage block or a finished 2*4 on edge with 0.8mm shop scale on top under the cutterhead, raise the table and rock the cutterhead to establish the low point of the knife arc. Remove the scale and position the gage or 2*4 under the right side of the outfeed roll. Raise or lower its right hand bearing support with the setscrews provided to a light drag fit. Move the gage or 2*4 under the left hand end and adjust in the same way. The most accurate method of setting the outfeed roll is with the bed and feed roll gage. Zero the gage to the low point of the cutterhead arc and set each end of the outfeed roll to 0.8mm below the zero on both sides. Lock the setscrew with the jam nuts provided. Outfeed roll press is controlled by springs and is adjusted by use of screws by use of screws located on top of side panels. The top of the adjusting screw will be approximately flush with the bottom of the countersink on the top of the side panels when properly adjusted. Care must be observed in marking this adjustment. So that slightly more pressure is exerted on the driving side. Unbalanced pressure can result in skewing of the board as it feeds through.

Pressure bar:

Most planning problems can be related to improper setting of the pressure bar. Its function are to hold the material down after it pass under the cutterhead and throughout the remainder of the cut. Its basic setting is to be in line with the arc of the cutterhead knives. If it is too high, a shallow clip will occur in from each end of the board. If it is too low, stock will not feed through.

With a bed and feed roll gage or a gage block and a 0.8mm thick 150mm scale as a feeler placed under the cutterhead, raise the table with its elevating handwheel to determine the low point of the arc of a cutterhead knife. Move the gage or gage block and scale under the low point of the extreme

right hand side of the table and adjust that end of the pressure bar with the jackscrews provided to be in line side and adjust that side to be in line with the low point of the knife arc. Recheck the right side; check the full width of the pressure bar. If the center is slightly low, adjust both sides the same amount to bring the low point into line. Using the bed and feed roll gage set the full length of the pressure bar to be 0.02mm above the arc of the cutterhead. This initial setup is starting point and final adjustment may have to be made during a test cut.



Test cutting:

Using a piece of semi-finished stock, set up for a 1.5mm deep cut with the quick-set adjustment zero. Start the machine, and standing to the left-head side begin feed the stock into the machine

Straight knife installation:

Knife installation on a planer can be a difficult and exacting process. If the knives are not to be jointed and ground, end-to-end and knife-to-knife relationship must be held within 0.03mm for accurate and smooth planing. To help avoid cutterhead distortion in changing out a set of knives, remove and replace the knife in one slot before change the next knife. *The measure is 3.00mm between point of knife and cutterhead edge.*



1. Clean all dust, chip, pitch and accumulated foreign matter from a cutterhead slot and off of its gib.
2. Working with one slot, With the knife and gib against each other and the beveled surface of

the knife on the knife spring and the concave shaped surface of the gib up, insert into the slot. The back edge of the knife bevel should be slightly below the outside diameter of the cutterhead

3. Press the knife with knife gage Lightly tighten two outside and center gib screws.
4. Repeat the preceding method on successive knives making sure that the height from knife to knife is the same within 0.03mm. Loosen gib screw to establish the high point of the knife. To touch the knife gage.
5. After all knife have been installed, recheck all gib screw to be sure they are tight, loose gib screws can result in knife being thrown out of the cutterhead causing severe damage to the machine and possible serious or fatal injury to the operator or bystanders.

Note: If all knives have been removed, a new set must be installed without locking the gibs until all knives and gibs are in and the gib screws lightly snugged down. The locking process should precede working from the center out on each knife and locking all gib screw once, repeat the same sequence until all screws are equally tight. Locking one knife in without the others in position can cause cutterhead distortion.

Removal of knives:

1. Loosen all gib screws in one slot.
2. Remove both knife, gib.
3. Repeat step 1 & 2 for the remaining knives

Helical cutterhead inserter installation:

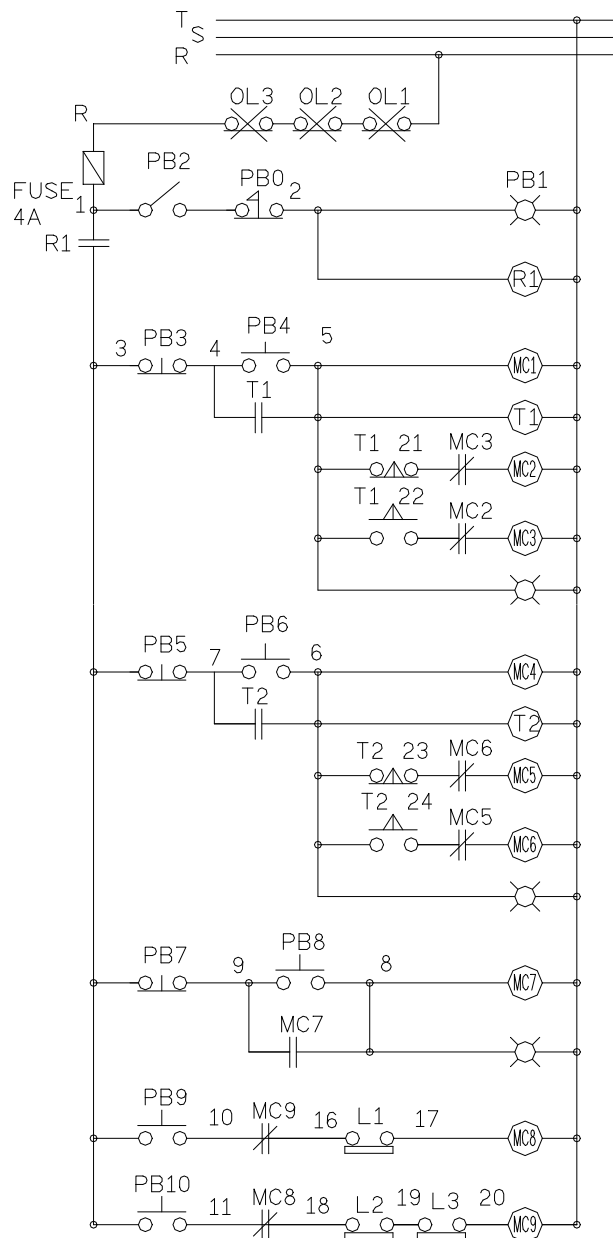
1. Check cutterhead inserter size 14*14*2.0 angle 30°
2. Clean cutterhead & inserter, set the inserter in position, apply oil on M6*1.0 screw
3. Adjust air pressure as 2kgs/cm² to pre –set the inserter.
4. When finish the pre-setting of inserter, adjust air tool pressure as 6kgs/cm² to tighten screws.
The torque is 55-58 kgf-cm
5. when don't able to remove screw/inserter, use the bar & screw drive, knock it slightly by a hammer ,turn counterclockwise to remove at the same time.

Contact electrical draw

Make certain that the electrical power volt accord with motor volt & motor contact method.

Check the motor direction is counterclockwise.

Grounding of the planer: make certain that the machine frame is electrically grounded and that a grounding lead is included in the incoming electrical service, in cases where a cord and used, make certain that the grounding lug connects to a suitable ground. Follow the grounding procedure indicated by the national electric code.



PART LIST

ITEM	DESCRIITION	QTY
1	Thrust bearing 5105	8
2	Bevel gear 24t	4
3	Rack of raising screw	4
4	raising screw Left.	2
5	Hex hd. Cap.M10*40	8
6	M10 washer	8
7	Pressure nut block	4
8	Raising nut Lelt	2
9	Bevel gear 14t	4
10	Bearing 6005	4
11	Ring R-52	4
12	Chain pulley #50/20t	2
13	Raising Shaft	2
14	Key 7*25	2
15	Slider block L.H.	2
16	Gib	4
17	Slider L.H.	2
18	Raising nut R	2
19	Slider R.H	2
20	Slide block R.H.	2
21	Chain pulley #50 /15	1
22	Worm-gear mechanism	1
23	Raising Motor 1/2Hp 4ph	1
24	Chain pulley #50 /15t	1
25	Hand wheel	1
26	Chain pulley rock	1
30	House of table roller	4
31	Table roller	2
32	Shaft of Table roller	2
33	Lower cutterhead motor	1
34	support of motor”	1
35	Bar of motor rack	1
36	Pulley of 8”1/4	1
37	Key 8*20	1

ITEM	DESCRIITION	QTY
39	cover of house	2
40	Chain pulley #50/20t	1
41	Chain pulley #50/20t	1
42	Cover of house	2
43	cover of bearing house	2
44	Cap hd cap. M10*30	4
45	Cutterhead	1
46	Hex hd cap M20*80	1
47	Nut M20	1
48	Support of cuuterhead house	1
49	Slide block	2
50	Cover of house	1
51	Nut M40*1.5	1
52	Bearing 6308	2
53	Bearing bridge	1
54	Race	2
55	Cover of housing	1
56	Pulley 3”	2
57	Nut M35*1.5	2
58	Hex hd cap M10*80	4
59	Nut M20	2
60	Hex hd cap M10*80	1
61	Hex hd cap M20*1.5	1
62	Lower body	1
63	Hex hd cap M10*60	4
64	Hex hd cap M20*1.5	8
65	Rear plate	1
66	Rear table	1
67	Front plate	1
68	Front table	1
69	Slide block of table	1
70	Gib, front table	1
71	Nut block	1
72	Screw. front table	1

TEM	DESCRIITION	QTY
74	Thrust block	1
75	Thrust bearing 2905	2
76	Hand wheel	1
80	Cover of house	1
81	Bearing 6208	2
82	House of bearing	1
83	Chip breaker hanger.	2
84	Pressure bar hanger	2
85	Upper cutterhead	1
86	Pressure bar	1
87	House of bearing	1
88	Cover of house	1
89	Chip breaker	12
90	Bracket, for chip breaker, L.H.	1
91	Plate of chip breaker.	1
92	Screw bolt,	12
93	Spring, for chip breaker	12
94	Bracket, for chip breaker, R.H	1
95	Plate of cutterhead house	1
96	Cover for house	2
97	Ring S-35.	2
98	Bearing 6007	6
99	house	2
100	Outfeed roller	1
101	Cover	2
102	Chain pulley #50/20t	1
103	Cap M12"	4
104	Screw bolt	2
105	Spring for roller	4
106	Cap nut m24*1.5	4
107	Cap bolt M4*1.5	4
108	Nut,M12	8
109	Bracket Nut, L.H.	1
110	Infeed Roller block	12

ITEM	DESCRIITION	QTY
112	Spring for infeed roller block	72
113	Spring block	72
114	Bracket nut,R.H.	1
115	Chain pulley #50/20t.	1
116	Gib for knife	2sets
117	Straight knif	2sets
118	Cap screw M6*30	16
130	Cam plate	1
131	Cam drum	4
132	Chain slider L.H	1
133	Housing-bearing	2
134	Housing-bearing rack	4
135	Pull block	1
136	Key 10*8*40	4
137	Cap nut M20r	2
138	Chain pulley #2100/12t	4
139	Chain shaft	1
140	Cam shaft	2
141	Chain slider R.H	1
142	Lower plate of pawl	52
143	ring	104
144	pawl	1144
145	Spring of pawl	1144
146	ring	52
147	Chain pulley #50/15T	2
148	Cam shaft	1
149	upper plate of pawl	52
151	Chain #2100/52t	2
152	Housing bearing	2
153	Motor support	1
154	Chain support	2
155	Key 7*7*30	6
156	Chain shaft	1
157	Upper body	1

ITEM	DESCRIITION	QTY
159	Motor 15Hp 4ph	1
160	Torque drive body	2
161	Disk lining	1
162	ring	1
163	Chain pulley #60/37t	1
164	Chain ring	1

165	Chain pulley #50/46t	1
166	Pressure disk	1
167	Disk string	1
168	Supply disk	1
169	Pressure nut	1