

Operations Manual



www.cantekamerica.com



HP300PBX

TILTING BED HORIZONTAL RESAW

Please ensure you have your serial number available when contacting us for parts or service.

Cantek America Inc. | 1.888.982.2683 | **Parts:** sales@cantekamerica.com | **Service:** service@cantekamerica.com



WARNING

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine. Save this manual, refer to it often and use it to instruct other operators.

Failure to read, understand and follow the instructions in the manual may result in fire or serious personal injury.

The owner of this machine is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting tool integrity and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



WARNING

Some dust created by power sanding, sawing, and grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are :

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals : Work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Specifications

Model HP300PBX	TILTING BED HORIZONTAL RESAW
Max. Workpiece Size	300mm(W) x 300mm(H) (12"x12")
Conveyor Belt Size	285mm(W)x 5470mm(L)
Saw Wheel Diameter	28"
Saw Wheel Width	2"
Saw Blade Size	188" (L) x 2"(W)
Dust Hood Diameter	4" x 1
Main Specifications : Digital Readout Type	A11
In-feed Speed	0~37 M/m(0~12FPM)
Min. cutting Thickness	4mm
Blade Tension System	Hydraulic compensation system
Main Motor : Horsepower	30HP
Voltage / Phase / Cycle	Refer to ID label
Infeed Conveyor : Horsepower	3HP
Return Conveyor	Rollers
Elevation Motor : Horsepower	1/4HP
Construction : Base Construction	Steel
Saw Wheel	Steel
Conveyor Table	Steel
Conveyor Belt	Reinforced urethane
Saw Blade Guide	Steel
Machine Weight	1800kgs
Packing Type	Pallet
Packing Dimensions	2850mm(L) x 2270mm(W) x 2160mm(T)
Packing Weight	2000kgs
Country of Origin	Taiwan
Warranty	1 year

Features:

- Heavy-duty tubular steel frame
- 30HP main motor
- Motorized thickness(blade height)adjustment with digital position readout
- Hydraulic blade tension
- Precision saw guide system
- Pneumatic pressurized top hold down rollers on feed conveyor
- Blade lubrication system
- Smooth infeed system
- Manual tilting feed belt for angle cutting from 0-45°

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SECTION 1 : SAFETY



WARNING :

For Your Own Safety, Read Instruction Manual before Operating this Equipment

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



DANGER :

Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.



WARNING :

Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.



CAUTION :

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE :

This symbol is used to alert the user to useful information about proper operation of the equipment.



WARNING :

Safety Instructions for Machinery

1. Read the entire manual before starting machinery.
2. Keep guards in place and in working order.
3. Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
4. Keep work area clean and well lighted.
5. Do not use in dangerous environment. Do not use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
6. Keep children and visitors away. All children and visitors should be kept at a safe distance from work

area.

7. Make workshop child proof with padlocks, master switches, or by removing starter keys.
8. Do not force tool. It will do the job better and safer at the rate for which it was designed.
9. Use right tool. Do not force tool or attachment to do a job for which it was not designed.
10. Use proper grounded extension cord. Make sure your extension cord is in good condition.
11. Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
12. Always use ANSI approved safety glasses and wear NIOSH approved respirator when operating machinery that produces dust. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
13. Always use hearing protection when operating machinery.
14. Never operate machinery when tired or under the influence of drugs or alcohol.
12. Secure work. Use clamps or a vise to hold work when practical. It is safer than using your hand and frees both hands to operate tool.
13. Do not overreach. Keep proper footing and balance at all times. Be mentally alert at all times when running machinery.
14. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. Only allowed trained and properly supervised personnel to operate machinery.
16. Reduce the risk of unintentional starting. On machines with magnetic contact starting switches there is a risk of starting if the machine is bumped or jarred. Always disconnect from power source before adjusting or servicing. Make sure switch is in off position before reconnecting.
17. Many woodworking tools can “kickback” the workpiece toward the operator if not handled properly. Know what conditions can create “kickback” and know how to avoid them. Read the manual accompanying the machine thoroughly.
18. Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine 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 conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
19. Never leave tool running unattended. Turn power off. Do not leave tool until it comes to a complete stop.
20. Never leave when machine is running. Turn power off and allow all moving parts to come to a complete stop before leaving machine unattended.



WARNING :

Additional Safety Instructions for Bandsaws

1. Do not operate with dull or badly worn blades. Dull blades require more demand on the motor and are less likely to cut precisely. Inspect blades before each use.
2. Never position fingers or thumbs in line with the cut. Serious personal injury could occur.
3. Do not operate this bandsaw without wheel guards, pulley guards, and blade guards in place.
4. When replacing blades, make sure the teeth face toward the front of the saw.

5. Cuts should always be fully supported against the side of the conveyor table and by the pressure rollers.
6. Do not back workpiece away from the blade while the saw is running. If you need to back the work out, stop the bandsaw and wait for the blade to stop. Do not twist or put excessive stress on blade while backing work away.
7. Blade should be running at full speed before beginning a cut.
8. Always feed stock evenly and smoothly. Do not change conveyor speeds during a cut.
9. This machine is not designed to cut metal or other material except wood.
10. Do not manually stop or slow blade after turning the saw off. Allow it to come to a complete stop before you leave it unattended.
11. All inspections, adjustments, and maintenance must be done with the power off and the circuit breaker shut off. Wait for all moving parts to come to a complete stop.
12. Habits – good and bad – are hard to break. Develop good habits in your shop and safety will become second- nature to you.
13. If at any time you are experiencing difficulties performing the intended operation, stop using the bandsaw. Then contact our service department or ask a qualified expert how the operation should be performed.
14. Make sure blade is properly tensioned before operating machine.
15. Keep loose clothing and long hair away from moving conveyors!



WARNING :

Like all machines, there is danger associated with the Model HP300PBX. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this tool with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.



CAUTION :

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

SECTION 2 : CIRCUIT REQUIREMENTS



WARNING :

Serious personal injury could occur if you connect your machine to the power source before you have completed the setup process. Do not connect the machine to the power source until instructed to do so.

The Model HP300PBX is wired for 3-phase operation.

The Model HP300PBX has one 30 HP main motor, one 3HP conveyor motor, one 1/4 HP elevation motor and one 1HP blade tension motor.

Circuit Breaker Requirements

Install your bandsaw on a dedicated circuit to reduce the possibility of overloading the circuit and tripping the circuit breaker. However, if an unusual load does not exist, and the circuit breaker still trips, have the circuit inspected by a qualified electrician. Never use a larger circuit breaker than stated below, or you will increase the risk of fire.

Connection Type

Because of the high amperage draw from this machine, we recommend that you hardwire it directly to your circuit breaker and install a locking shut-off lever near the machine as a way to quickly disconnect the power.

Your factory Circuit Capacity

Always check to see if the wires in your circuit are capable of handling the amperage draw from your machine, as well as any other machines that could be operating on the same circuit. If you are unsure, consult a qualified electrician.

If the circuit breaker trips or the fuse blows regularly, your machine may be operating on a circuit that is close to its amperage draw capacity. However, if an unusual amperage draw does not exist and a power failure still occurs, refer to the troubleshooting section in this manual or contact a qualified electrician or our service department.



CAUTION :

Be sure that your particular electrical configuration complies with local and state codes. The best way to ensure compliance is to check with your local municipality or a licensed electrician.

SECTION 3 : GENERAL INFORMATION



WARNING :

If you do not read this entire manual before operating the machine, you will greatly increase your chances of serious personal injury. To protect yourself, read and understand this entire manual.

Commentary

We are proud to offer the Model HP300PBX Tilting Bed Horizontal Resaw. This band resaw is part of our growing family of fine woodworking machinery. When used according to the guidelines stated in this manual, you can expect years of trouble-free, enjoyable operation, and proof of our commitment to customer satisfaction.

We are also pleased to provide this manual. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our latest effort to produce the best documentation possible.

Most important, we stand behind our machines. We have excellent regional service departments at your disposal should the need arise. If you have any service questions or parts requests, please call or e-mail to us at the location listed below.

CANTEK AMERICA INC.

PMB #104, 1124 Fir Avenue

Blaine, Washington 98230

Tel: (604) 540-1430 Fax: (604) 540-1780

Website: www.cantekamerica.com

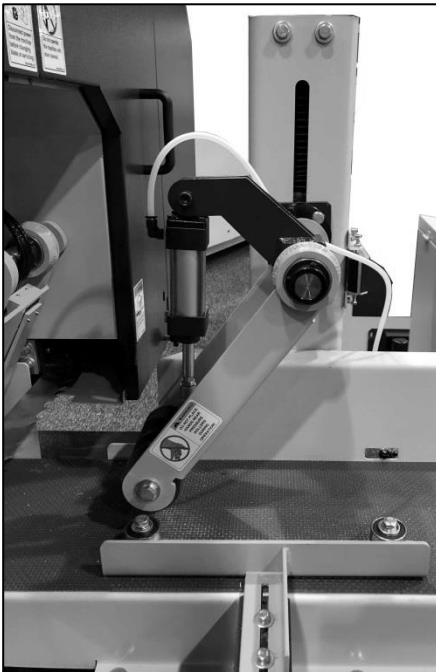
Email: sales@cantekamerica.com

SECTION 4 : MACHINE FEATURES

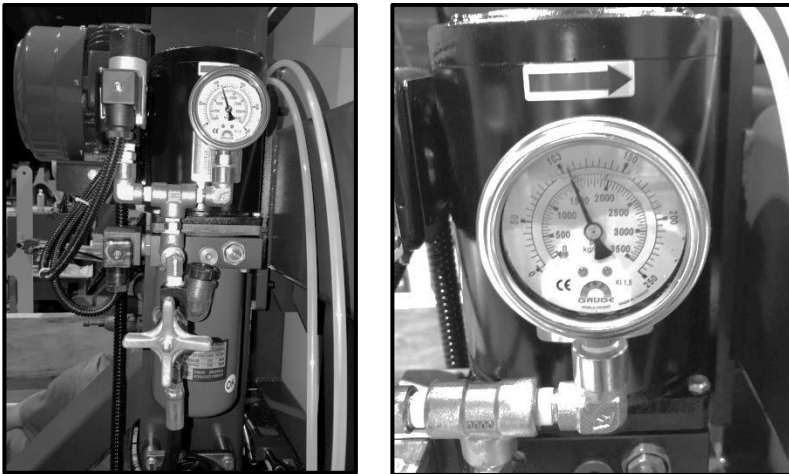
Main Features



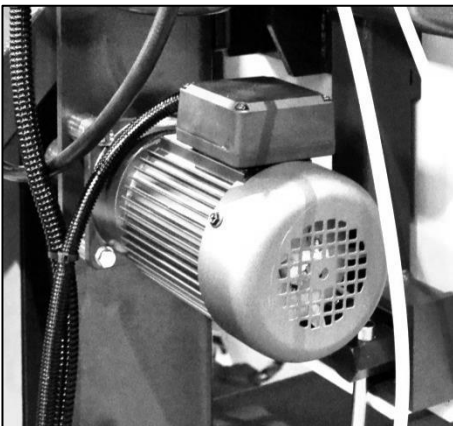
1. **Pneumatic Infeed and Outfeed Pressure Rollers** : Maintain downward pressure on the board to keep it sturdy while the blade cuts through it.



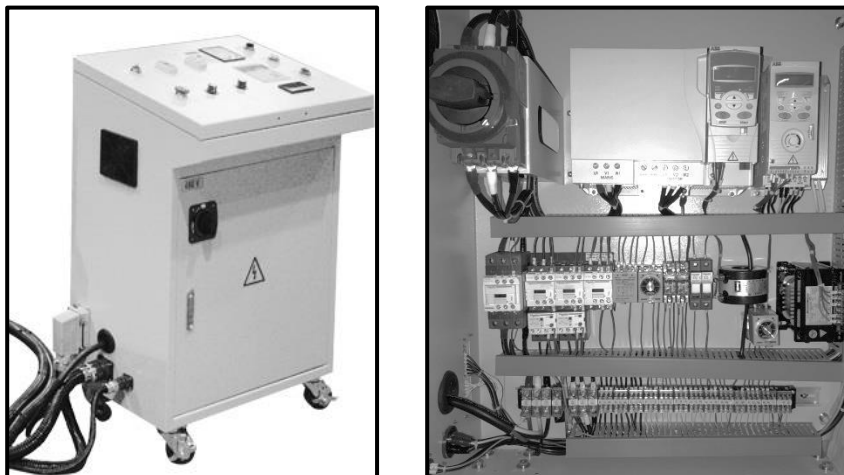
2. **Hydraulic Blade Tension System** : Provides a mechanical means for properly tightening the blade.



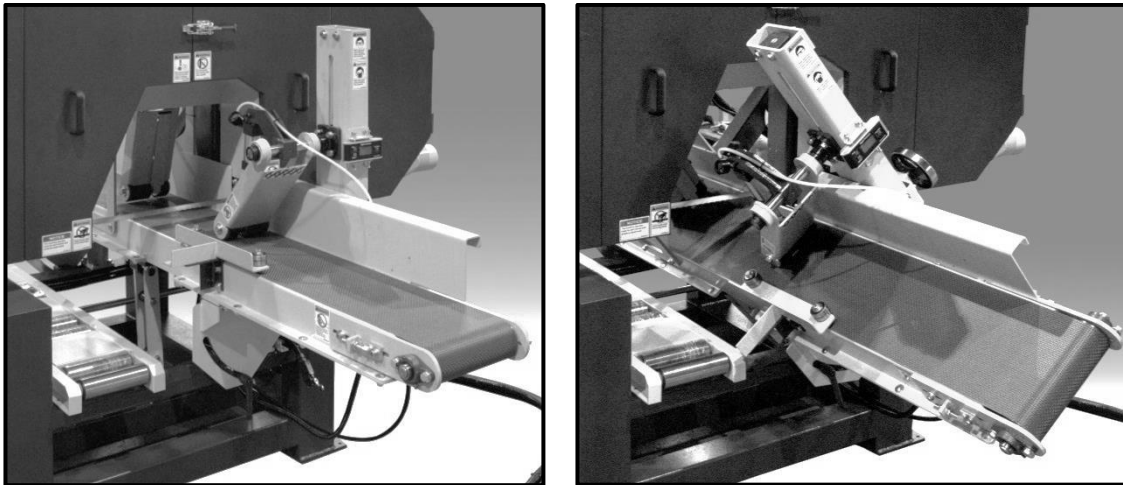
3. **Blade Elevation Motor** : Responsible for moving the head (the part of the saw that contains the wheels and blade) up or down as needed.



4. **Electrical Control Box** : Main area for wiring, rewiring, and changing the fuses. Should never be opened when the machine is connected to the power source!



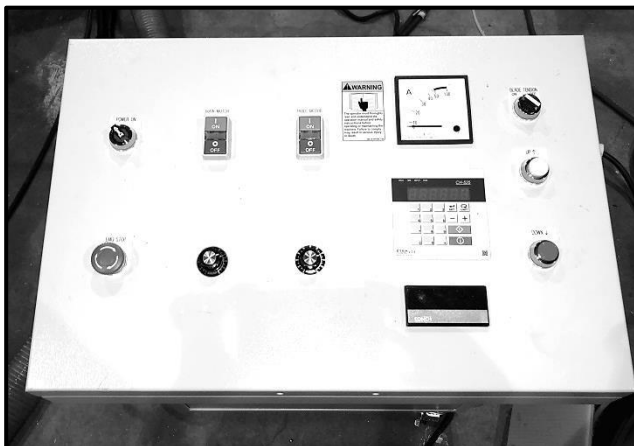
5. **Tilting Infeed Conveyor** : Moves the board through the bandsaw blade during cutting.



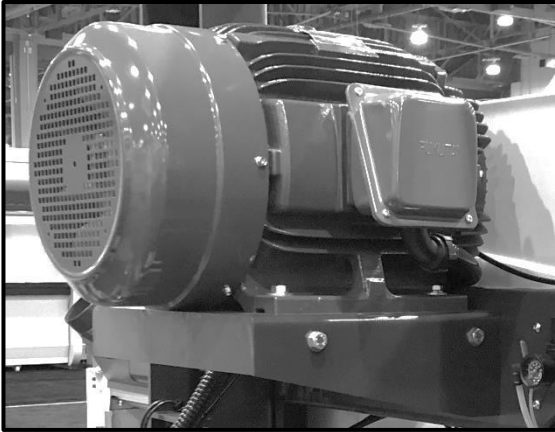
6. **4" Dust Port** : Allows the resaw to be connected to a dust collection system.



7. **Control Panel** : The part of the resaw where the operator can control the starting, stopping and speed of the main motor and conveyor motor, the various height changes, and the calibration of the blade height to the conveyor. The control panel also houses a load meter that allows the operator to monitor the load being placed on the resaw during operation.



8. **Main Motor** : Powers the saw wheels for blade movement and drives the hydraulic pump for conveyor movement.



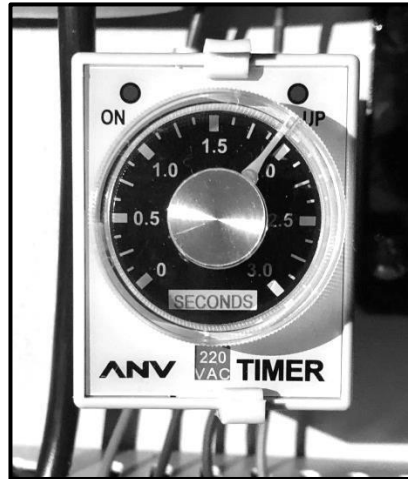
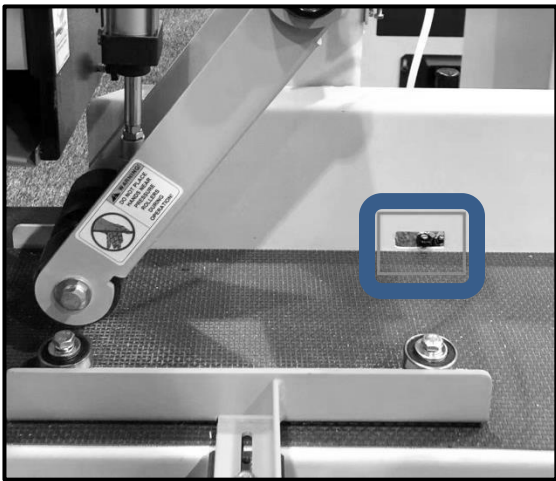
9. **Manual Tilting Conveyor System** : Tilts the infeed conveyor to desired angle, from 0 to 45°.



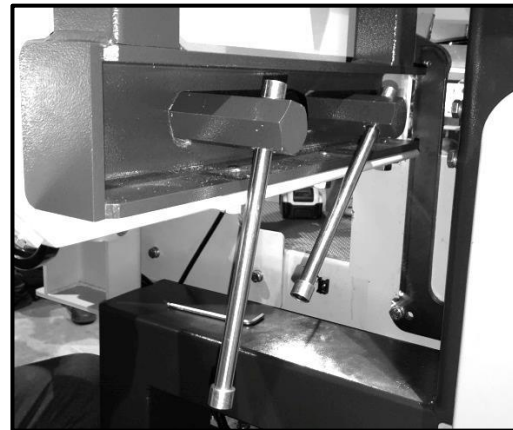
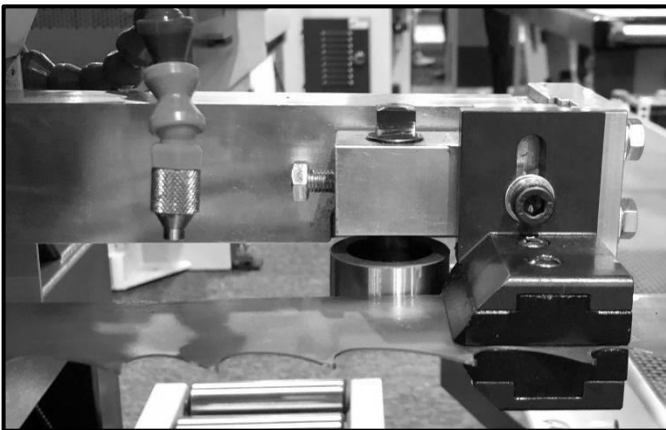
10. **Digital Angle Readout**: Detects and display infeed conveyor angle.



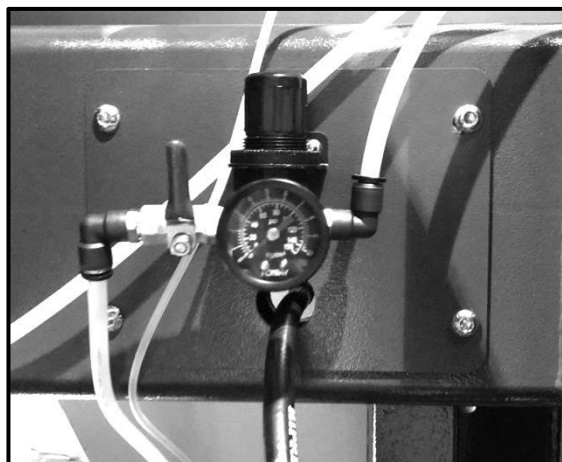
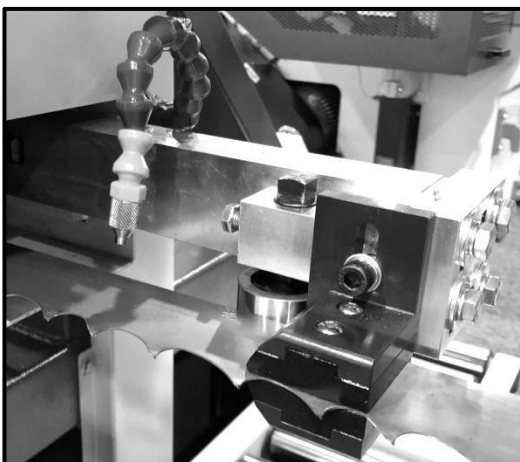
11. **Smooth Infeed System:** Detects workpiece on infeed conveyor with limit switch on guide-fence and slows down feed speed with a timer to lower impact on saw blade. Timer is located in the main control box and can be adjusted to slow down feed speed between 0 to 3 seconds.



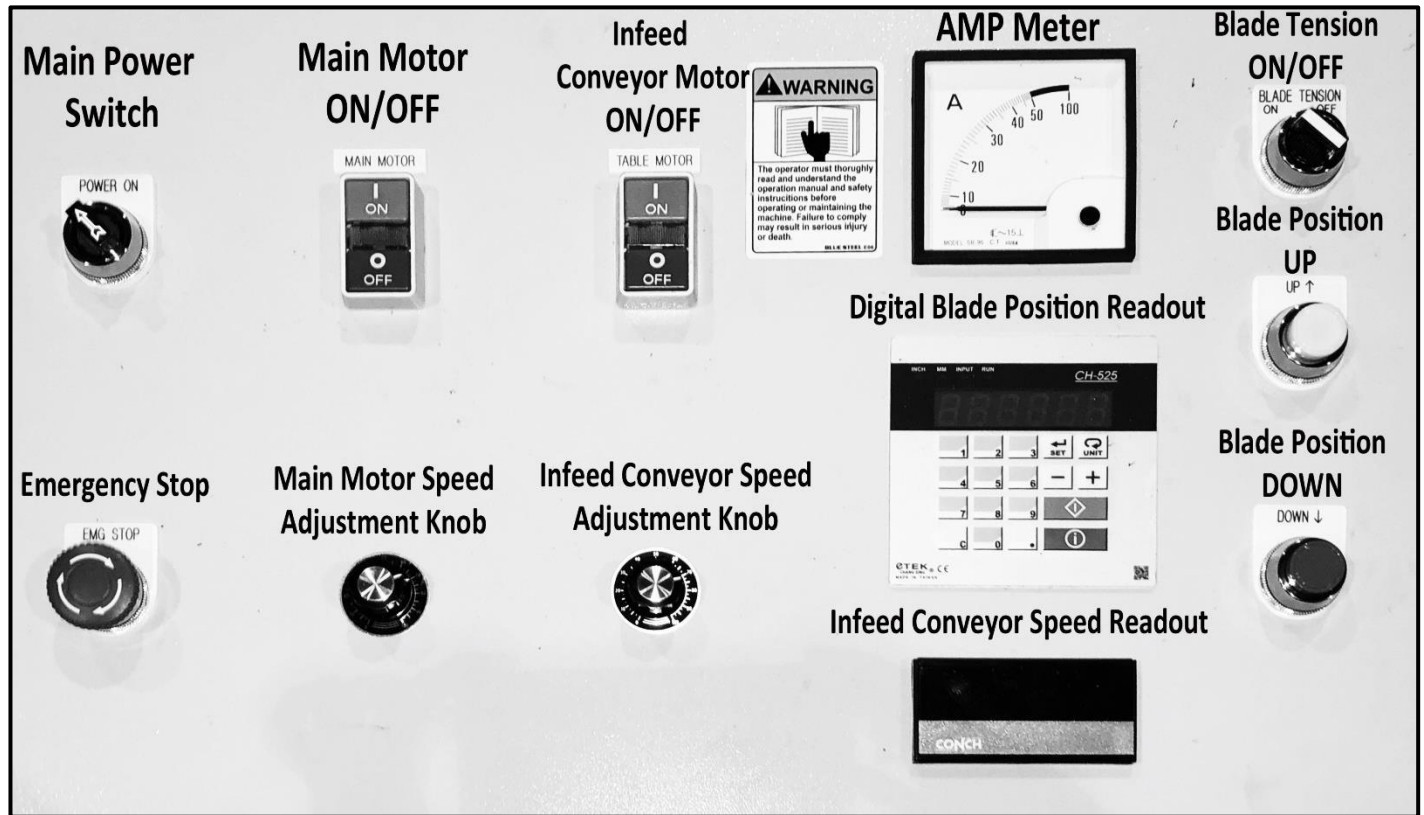
12. **Heavy Duty Blade Guides:** Top and bottom steel blade guides with adjustable arms.


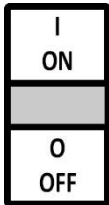


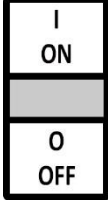

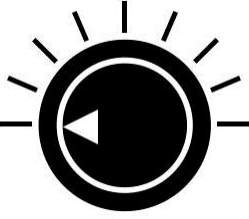
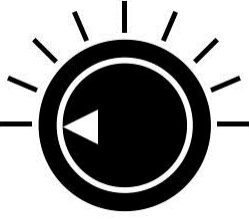
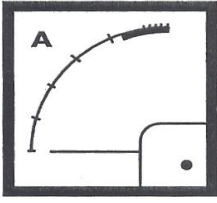
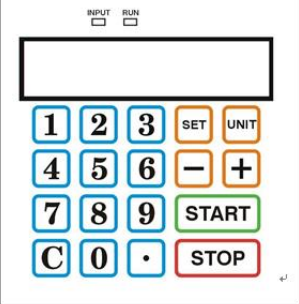
13. **Adjustable Blade Cooling/Lubricating System:** Lubricant/Coolant sprayer can be easily adjusted to desired angle with adjustable dispensing speed.







Control Panel Functions



	<p>MAIN POWER SWITCH Turn this switch for power on and the indication lamp lights on.</p>
	<p>MAIN MOTOR ON/OFF SWITCH Starts the main motor, which is responsible for the blade movement.</p>

 <p>The image shows a vertical rectangular switch with two positions. The top position is labeled 'I ON' and the bottom position is labeled 'O OFF'. A grey bar is currently in the 'ON' position.</p>	<p>INFEEED CONVEYOR MOTOR ON/OFF SWITCH Starts the infeed conveyor motor, which is responsible for the infeed conveyor movement.</p>
 <p>The image shows a circular emergency stop button with a black center and a white outer ring. Two white arrows on the ring point in opposite directions, indicating a stop function.</p>	<p>EMERGENCY STOP SWITCH Cuts power to the main motor and conveyor motor to stop the blade and infeed conveyor. (Caution – it takes approximately 30 seconds for the blade to come to a complete stop)</p>
 <p>The image shows a circular speed adjustment knob with a black outer ring and a white inner circle. A white arrow on the inner circle points to the left. There are several short black lines radiating from the outer edge of the knob.</p>	<p>MAIN MOTOR SPEED ADJUSTMENT KNOB This knob controls the frequency of power supplied to the main motor, which controls the rotation speed of the saw blade.</p>
 <p>The image shows a circular speed adjustment knob, identical in design to the main motor speed adjustment knob, with a white arrow pointing to the left.</p>	<p>INFEEED CONVEYOR SPEED ADJUSTMENT KNOB This knob controls the frequency of power supplied to the conveyor motor, which controls the infeed speed of the conveyor.</p>
 <p>The image shows an analog ammeter with a semi-circular scale. The needle is positioned near the right end of the scale. The letter 'A' is printed at the top left of the scale. A small black dot is visible at the bottom right of the meter's frame.</p>	<p>AMP. METER This meter indicates the load condition of the saw wheel drive motor. Once overload occurs, the thermal relay pin on the magnetic switch will trip, located in the control box.</p>
 <p>The image shows a digital keypad with a display screen at the top. Below the screen are several buttons: a row with '1', '2', '3', 'SET', and 'UNIT'; a row with '4', '5', '6', '-', and '+'; a row with '7', '8', '9', and 'START'; and a row with 'C', '0', '.', and 'STOP'. There are also 'INPUT' and 'RUN' indicators at the top left.</p>	<p>DIGITAL BLADE POSITION READOUT Keypads are used to input height values. The + and – keys manually jog the height up or down. For additional information, please refer to page</p>

	<p>INFEEED CONVEYOR SPEED READOUT Shows the current feed speed of the infeed conveyor.</p>
	<p>BLADE TENSION ON/OFF SWITCH Turn this switch to turn the blade tension system on or off.</p>
	<p>UP BUTTON Press this switch for raising the blade height/saw wheels.</p>
	<p>DOWN BUTTON Press this switch for lowering blade height/saw wheels</p>

DIGITAL BLADE POSITION READOUT

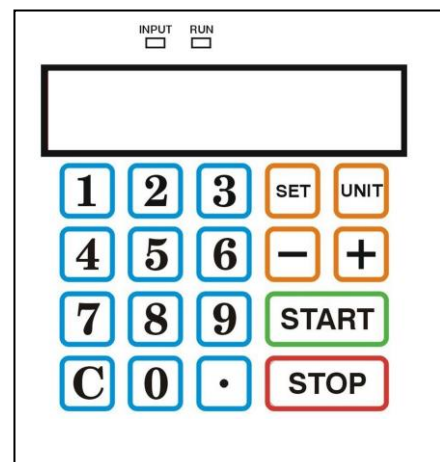
1.SPECIFICATIONS :

1. Power Input : AC (0V-110V-220V) 50/60HZ +20%.
2. Signal Input : Standard ENCODER A, B Phase Signal (DC12V)
3. The With Standing Pressure of The Out Put Panel of The Relay : AC (250V - 1A)
4. Safety Limit Switch: When using this control unit, the stroke safety limit switch must be adopted.
Please use NC , C , in the electromagnetism on-off return circuit to protect automatically. (Serious Warning) To make sure the safety of people and machinery operation, the safety limit switch must be equipped.
5. For reducing controller interference. Please separate signal wire and power wire.
6. Please add Varistor on AC load for reducing interference.
7. The electricians and operators have to pay their attention not to make any change personally on the above mentioned 6 points (without the agreement of out technicians) otherwise, the control unit possible to be ensure the safety of people, please caution.

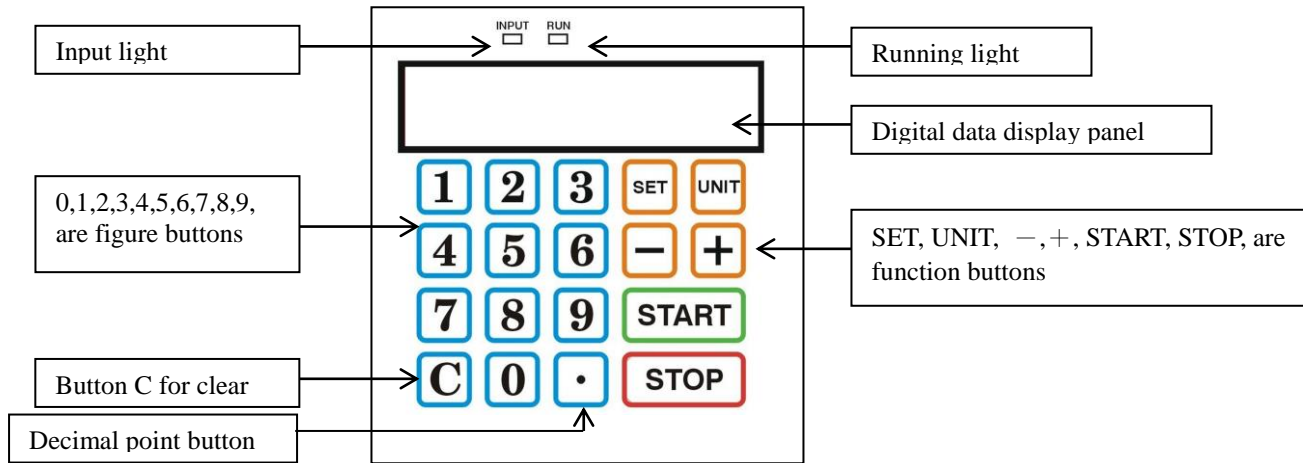
2. CHARACTERISTICS :

1. The Micro-Computer single chip is adopted in this controller.
The stability and safety can be assured under long time running.
2. Even though the power voltage is different or the drive construction is worn out day by day and the change of return circuit can effect the function of dimension clamping.
3. The Parameter of this control can be set.
4. The Magnification can be set.
5. This controller can display 3 different units of dimensions. MM and INCH.
6. Current Digit data can be set.
7. The figures under decimal point can be set separately.

Diagram 1



3. PANEL DISPLAY AND DESCRIPTION OF BUTTON FUNCTIONS



1. Figure button are from 0 to 9.
2. Button C is for clear.
3. Button . is for setting the digits at right side of Decimal point.
4. Button SET is for setting digit data.
5. Button UNIT is for transiting dimension units.
6. Button - is for manual operation to decrease the figure.
7. Button + is for manual operation to increase the figure.
8. Button START is to running.
9. Button STOP is to stop and stop all operations meanwhile.

4. DESCRIPTION OF RELAY FUNCTION

Relay R1:NO Junction	R1.R2 Collinear point	Relay R2:NO Junction	Relay R3:NO Junction	R3. R4 Collinear point	Relay R4:NO Junction	Relay R5:NO Junction	R5. R6 Collinear point	Relay R6:NO Junction	Relay R7:NO Junction	R7 Collinear point
12	13	14	15	16	17	18	19	20	21	22
NO	COM	NO	NO	COM	NO	NO	COM	NO	NO	COM
+		-	FAST		SLOW	RUN		END		BRAKE
	R1	R2		R3	R4		R5	R6		R7

DIAGRAM 3 :

1. R1 means dimension increasing.
2. R2 means dimension decreasing.
3. R3 means at high speed.
4. R4 means at low speed.
5. R5 means under running.
6. R6 means job finished.
7. R7 means braking.

PS. The numbers and function of the Relay will be changed when the machine model is different.

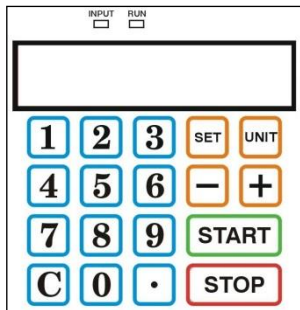
5. OPERATING INSTRUCTION FOR CORRECTING CURRENT DIMENSION

In accordance with the dimension of the actual material, press (SET) button and (0) will shown on the display. Use correct figures and press (0 to 9) buttons, then press button (SET) for 2 - 3 seconds.

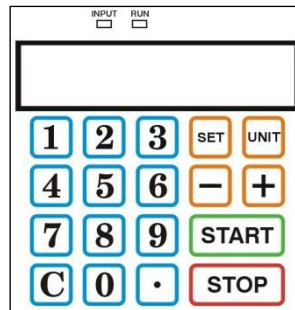
The display will start to flash and then stop flashing. Finally the figures input formerly will be shown and complete correcting dimension. If the time for pressing the button (SET) or input incorrect figures, that means the previous input is ineffective. Please operate again.

PS. When correcting data, the button (C), (.) (STOP) can be operated at the same time. Please refer to the diagram 4, 5, 6. If the current figure shown on the control unit is 200.0 and the correct one in 100.0, the steps to operate are as the following diagrams demonstrated.

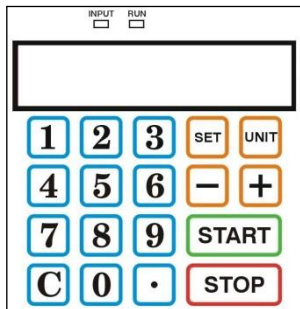
DIAGRAM 4 :



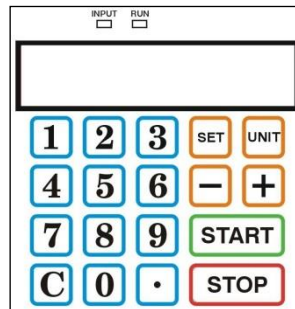
Current figure shown is 200.0



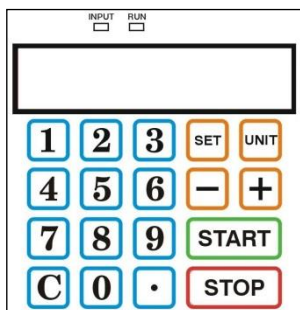
Step 3.
Press button (1) once.



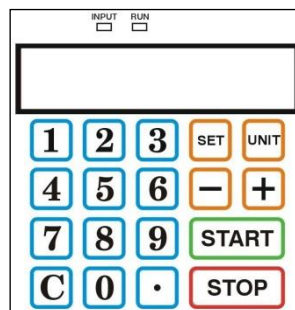
Step 1.
Press button (SET) once.



Step 4.
Press button (0) twice.



Step 2.
Take your finger away from the button (SET). 0 is shown on display.



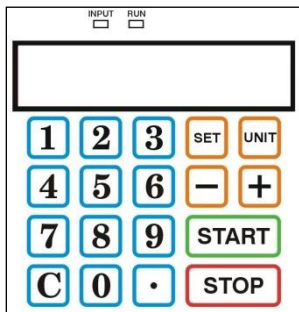
Step 5.
Press button (SET) for 2-3 seconds and take your finger away. The figure 100.0 is shown on the display. Now, the correcting existing dimension is completed.

6. DESCRIPTION OF CORRECTING 10th DIGIT

If the dimension of the actual material is 100.2, when changing, press button (SET) and (0) will show on the display. Use correct figures and press 100 and button (.). After the decimal point on the display start to flash, press button (2) and the press button (SET) for 2-3 seconds. The figure 100.2 will be shown on the display and input is completed. If the time for pressing the button (SET) or input incorrect figures, that means the previous input is ineffective. Please operate again.

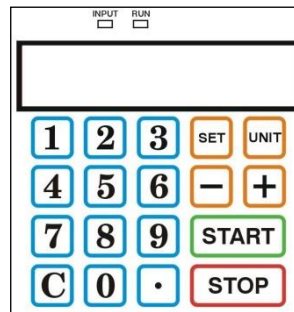
PS : The decimal point and the button (C),(.)&(STOP) can be operated at the same time. Please refer to the diagram 5 & 6. If the current figure shown on the figure to replace is 100.2 the steps to operate are as the following diagrams started.

DIAGRAM 5 :

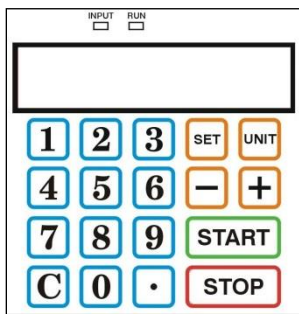


Current figure shown is 100.0

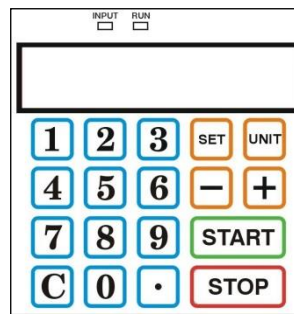
Step 1.
Press button (SET) once.



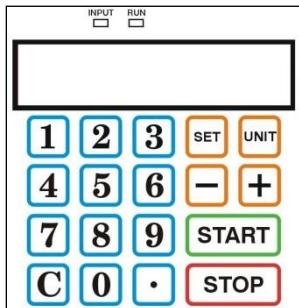
Step 2.
Release button (SET).
0 is shown on the display.



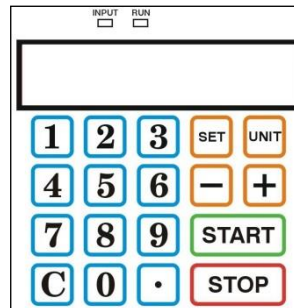
Step 3.
Press button (1) once.



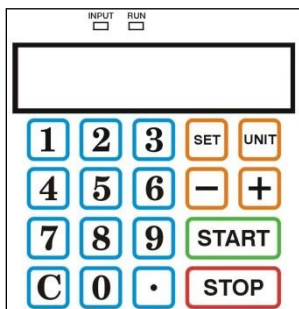
Step 4.
Press button (0) twice.



Step 5.
Press button (.)
And the decimal point will start to flash.



Step 6.
Press button (2).

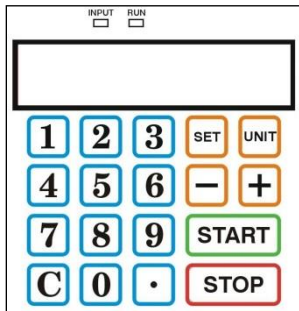


Step 7.
Press button (SET) for 2-3 seconds and take your finger away.
The figure 100.2 is shown on the display.

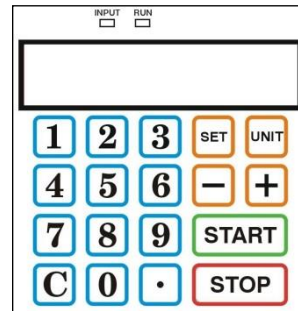
Now, the correcting existing dimension is completed.

PS.
Decimal point setting and correcting existing dimension can be operated at the same time.

DIAGRAM 6 :



PS. During the procedure of operation, didn't press button (C), the display is to be cleared and the figure 0 is shown on it



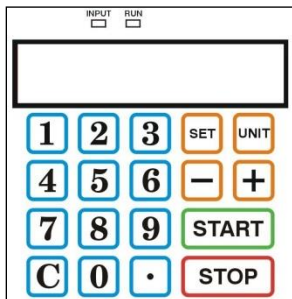
PS. If button (STOP) is pressed during the procedure of operating, all above operating steps will be stopped and return to the original condition.

7. DESCRIPTION OF MANUAL OPERATING (+),(-)

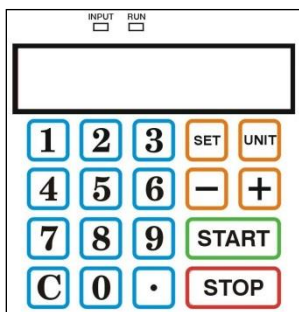
1. Press button (+), the figure shown on the display will increase automatically at highest speed.
2. Press button (-), the figure shown on the display will decrease automatically at highest speed.

PS. The speed of increasing or decreasing the figures depends on the speed of machine running.

DIAGRAM 7 :



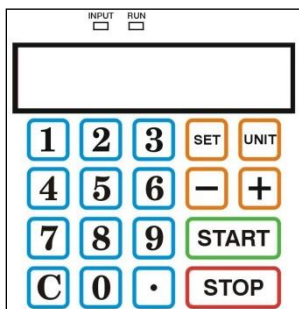
The current figure shown on the display is 100.0
Please refer to the following sketch for the change of pressing button (+) or (-).



After pressing button (+), the instruction light of INPUT and RUN will become illuminated at the same time.

Press button (+) and continue to press.

The figure shown on the display is increasing at the high speed.



After pressing button (-), the instruction lights of INPUT and RUN will become illuminated at the same time.

Press button (-) and continue to press.

The figure shown on the display is decreasing at the high speed.

8. DESCRIPTION OF AUTOMATIC START OPERATING

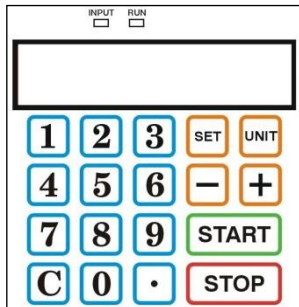
If the figure shown on this control unit is 100.0 and we need to increase it to 200.0 press button (SET). First the display will show 0. Then input the new figure we want to increase to and finally press button (START). Please note, to input the 10th digit, press button (.) Should be pressed prior to (START).

After inputting the 10th digit, press button (START) to completed it.

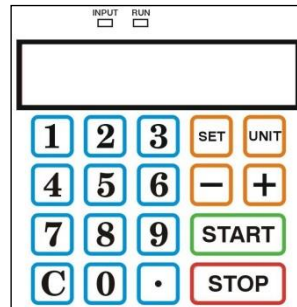
PS.

During operating of INPUT or START, if the button (STOP) is pressed, this control unit will stop running immediately and go back to the condition of repose.

DIAGRAM 8 :



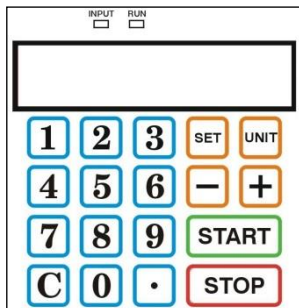
The current figure shown is 100.0



The instruction light to INPUT becomes illuminated after pressing button (SET).

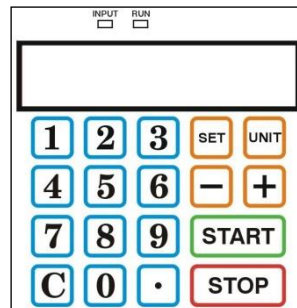
Step 1.

Press button (SET) once The display will show 0.



Step 2.

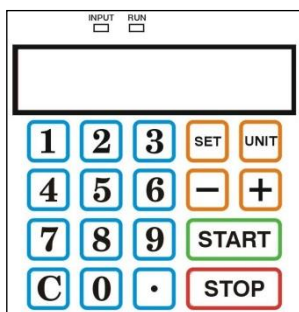
Press button (2) once, the display will show 2.



Press button (START), the instruction light of RUN becomes illuminated and the instruction light of INPUT.

Step 4.

Press button (START) again. This controller starts to run and the figure on the display changes back to 100.0 and start to increase.



Step 3.

Press button (0) twice, the display will show 200.

WARNING :

In order not to cause any danger by the wrong dimension of machinery operation, except electricians. It's prohibited to operate or make any change.

PS.

If it's necessary to input 10th digit. Please press button(.) prior to (START). After inputting the 10th digit, press button (START) to complete it. The procedure to input the decimal, please refer to step 5& 6 of Diagram 5.

9. DESCRIPTION OF PARAMETER CALCULATION AND SETTING

1. Parameter, in accordance with each signal of ENCODER, stands for actual dimension. To input suitable unit parameter, the dimension unit must be MM and not more than 0.1 MM.

2. The calculation is shown as the followings :

Exp : 10.0MM screw stick, use 200 P/R ENCODER $10/200=0.05\text{MM}$, the parameter input should be (500000).

Exp : 1INCH=6pitches, use 50 P/R ENCODER $25.4/6/50=0.08466666\text{MM}$, the parameter input should be (846666).

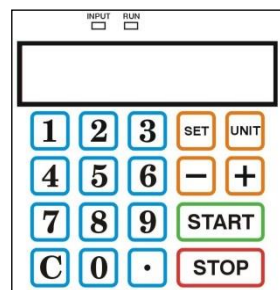
Exp : 6MM 1 pitch, use 60 P/R ENCODER $6/60=0.1\text{MM}$, the parameter input should be (000000).

3. Input the calculated parameter to this control unit the parameter can be set only one time when making assembly. The setting method is to turn off the power switch, then press button (SET) and turn on the power switch meanwhile. After the figure on the display starts to flash, the calculated parameter can be input at this time.

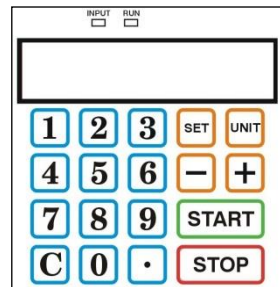
Exp : The parameter is 000000, press button (0) six times and then press the button (SET).

Please continues to press the button (SET) unit the display stops flashing.

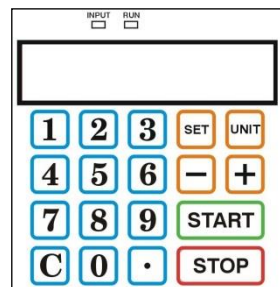
DIAGRAM 9:



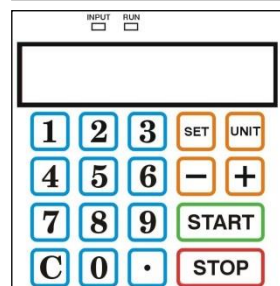
The display shows 100.0



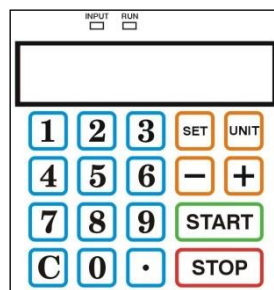
Step 2.
Press button (SET) and continue to press.



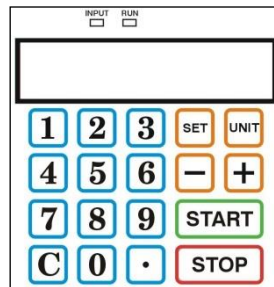
Step 3.
Turn on the power switch, the display starts to flash.



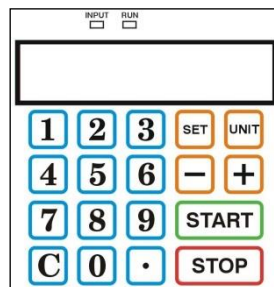
Step 4.
Take your finger away then the parameter can be input.



Step 1.
Turn off the power switch and the figure on the display will disappear.



Step 5.
For instance, the parameter is (00000.0), please press button(0)six times. The parameter shown on the display is 00000.0



The figure shown on the display is 100.0

Step 6.
Press button (SET) and continue to press until the display stops flashing and shows the figure before the power switch was turned off. Then take your finger away, the input of the parameter is completed.

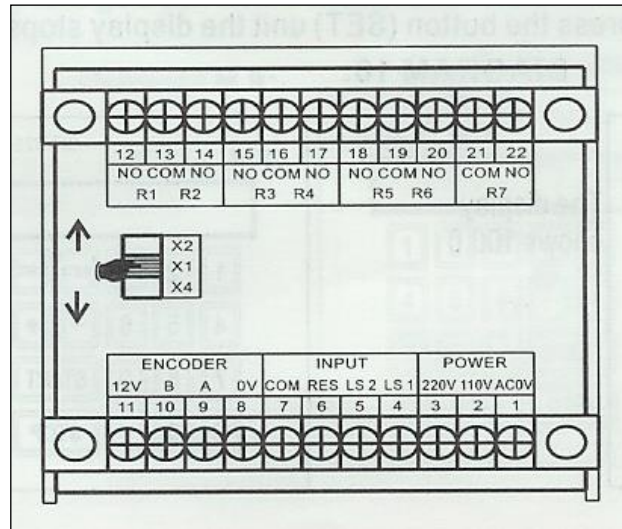
10. DESCRIPTION OF MAGNIFICATION SETTING

1. This controller can multiply the numbers of ENCODER'S signal one, two or four times to increase the resolution.
2. The function of X1, X2 and X4 can be selected by moving the switch on the rear of this controller.
3. To adopt this function, the power switch has to be turned off and then choose the required J magnification. Turn on the power switch. The operation is completed accordingly.

DIAGRAM 11 :

Move up the switch to X2

Move down the switch to X4

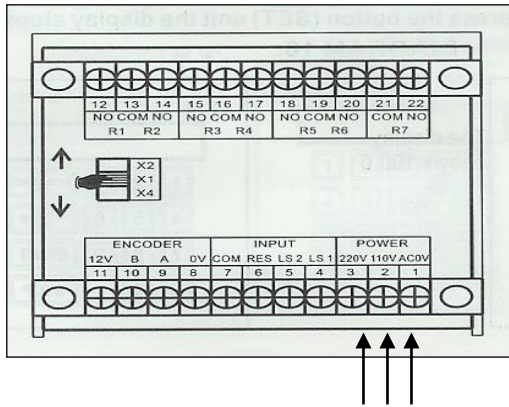


11. TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
1.The display fails to show figures.	1. Check if the voltage of the power 220V or AC110V is normal.	Please re-input correct voltage.
	2. Check if the fuse is burnt out and fused to be broken	Replace a new 1A fuse
	3. If the above two point are checked to be normal, that means this controller is out of order.	Send back to the supplier for repair.
2.The display does show, but the figures are abnormal.	1. The figures shown are incorrect.	Correct dimension of the controller in accordance with the actual dimension.
	2. The parameter is incorrect.	Calculate correct parameter and input again.
	3. After finishing point 1 & 2 turn off the power and turn on again	If it's still abnormal, please send back to the supplier for repair.
3.The display does show figures, but when the up-down motor operates, the figure fails to change in accordance with the change of the machine's dimension.	1. If the proximity switch is used and under normal induction, the instruction light of the induction switch will be illuminated or put out in accordance with the table moves up or down.	If the instruction lights fail to be illuminated, please change the proximity switch.
	2. If the distance between the induction unit and induction sheet is more than 1MM.	Adjust the distance between the induction unit and induction sheet to be less than 1MM.
	3. If ENCODER is used, check if ENCODER runs in accordance with the table moves up or down.	If the axle connector of ENCODER and the table got off or damaged, please replace a new one or have it replaired.
	4. Check if phase A.B is with the change of DC12V and 0V, please measure with Watt-hour meter.	If there is no change on phase A.B, please replace ENCODER.
4.travel dimension is incorrect.	If the correction is made at 30mm but the dimension at 150mm isn't complied with the scale, but back to 30mm, the dimension is complied with the scale.	The parameter of the controller isn't complied with the machine, please correct the parameter.
5.The display only dot is lighting.	The digit reader is " minus " range.	Replace correct dimension data reference page 3.

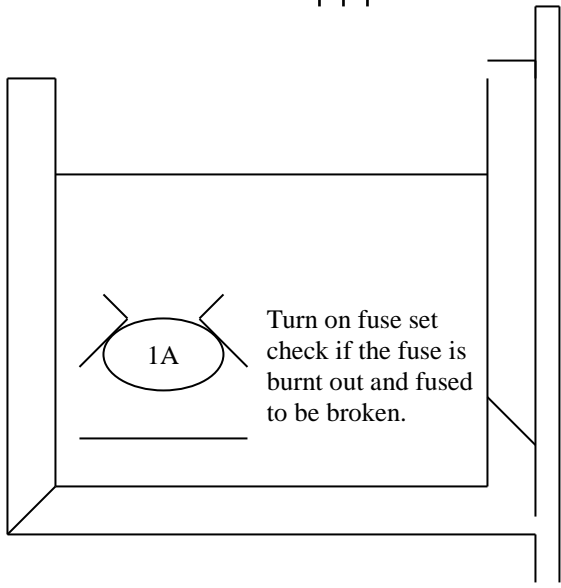
SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
The display fails to show figures.	Check if the Voltage of power AC 220V or AC 11 OV is normal.	Please ensure power voltage is correct.

PS. Please input correct power voltage user have to make sure this controller if the power voltage of the power AC.11 OV or AC 220V.

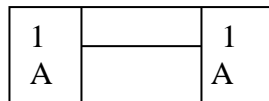


Please make sure that terminal (1) and terminal (2) have the voltage AC 110V or terminal (1) and terminal (3) have the voltage AC 220V.

**Check input power line normal follow next page.
Check input power line abnormal please inform to the supplier.**



**When the fuse is burnt out please renew fuse 1A by yourself.
When .the fuse isn't burn please send back to the supplier for repair.
PS.To renew fuse's dimension, dimension standard equal 1A.**

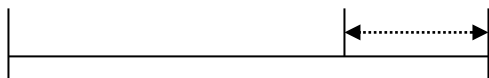


Dimension 20mm fuse (1A)

SYMPTOM	POSSIBLE CAUSE
The figures show on can't match with the actual dimension.	<ol style="list-style-type: none"> 1. Correct dimension of the controller latch with the actual if it is mistake. 2. To make sure the parameter. 3. Check if the sensor under normal induction. 4. To make sure magnification selecting switch.

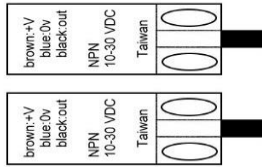
POSSIBLE SOLUTION

1. Please make sure the actual dimension and after re-enter correct data.



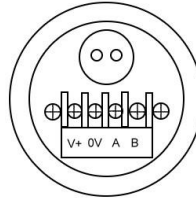
- Parameter data will go to change when the drive construction is different than before please to reach consignee they will show you instruction handbook (teach you how to calculate correct parameter data and enter formula) Function will follow kinds of controller and has difference.
- Please ask machine consignee about sensor setting and sensor style.

A. Proximity Switch



A. The proximity switch is used and under normal induction the red LED will be illuminated or put out in accordance with the table moves up or down if red LED fail to be unusual illuminated means proximity isn't good.

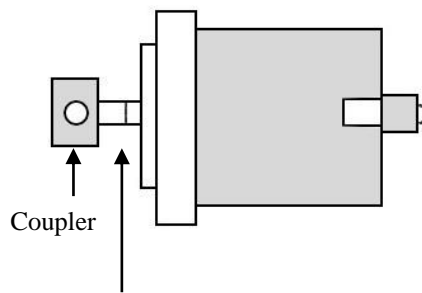
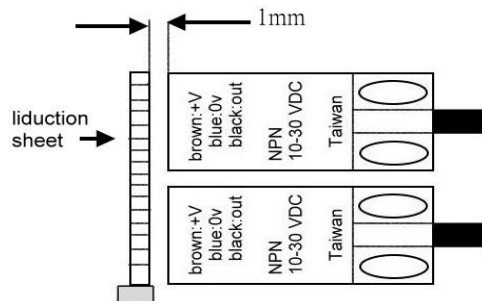
B. ENCODER.



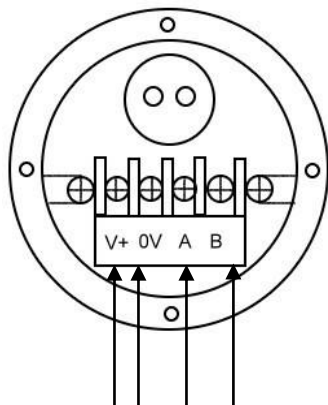
B. If ENCODER is used, the red LED will be illuminated or put out in accordance with the table moves up or down, if red LED fail to be unusual illuminated means ENCODER isn't good or couple loose.

SYMPTOM	POSSIBLE CAUSE
The display does show figures when the up or down motor operates the figure fail to change in accordance with the change of machine's dimension.	<ol style="list-style-type: none"> The distance between the induction unit and induction sheet isn't more or less than 1mm. If ENCODER is used, check if ENCODER runs in accordance with the table move up or down. Check If phae A.B is with the change of DC12V and 0v, please measure with Watt-hour meter.

POSSIBLE SOLUTION



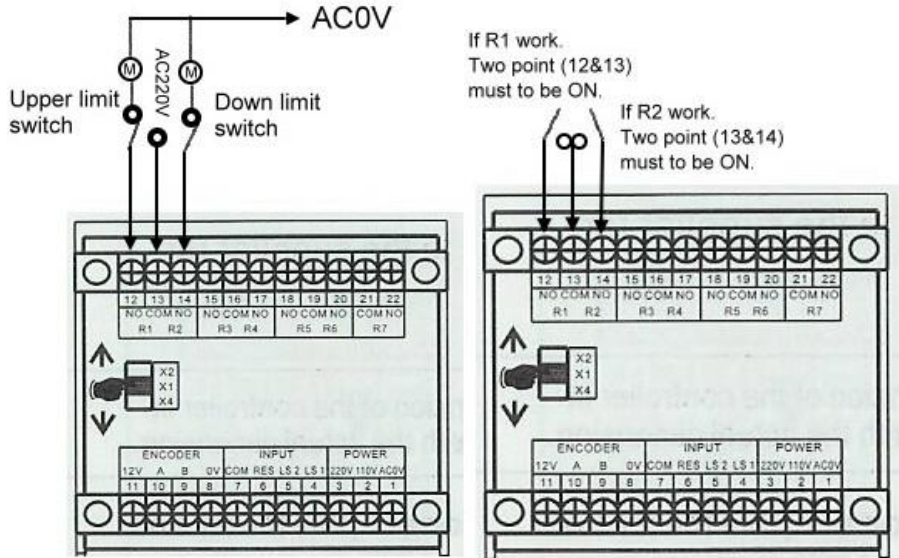
Check if ENCODER runs in accordance with the table move up or down or convey link's screw has loose.



Check if phase A.B is with the change of DC12V and 0V. Please measure with Watt-hour meter.

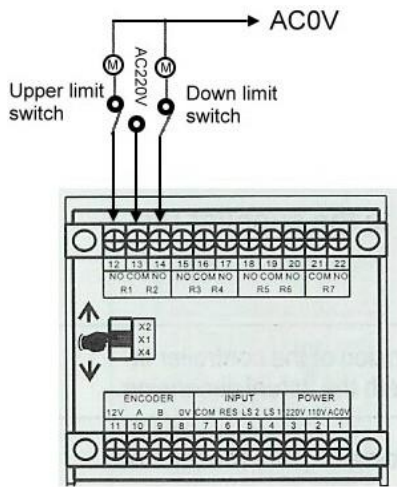
SYMPTOM	POSSIBLE CAUSE
Enter current dimension and put start key on but the up I down motor operates can't runs.	<ol style="list-style-type: none"> 1. Check if R1 & R2 connector-line are short circuit. 2. Please measure with meter check if R1 & R2 have output act. 3. Check if R1.R2 magnetic switch is skipped or damaged.

POSSIBLE SOLUTION



1. Check if R1&R2 wire are got off or cut off.

1. Please measure with Watt-hour meter check if R1&R2 have output act.



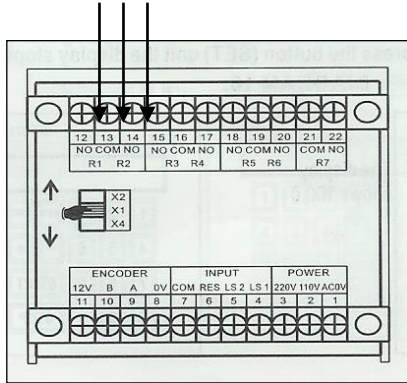
3. Upper limit & down limit switch are working or damaged.

PS : NO.3 please check with factory about inspection and place setting because installations can be different for each machine.

SYMPTOM	POSSIBLE CAUSE
Put (STOP) key on ,but the up-down motor operates still moves.	<ol style="list-style-type: none"> 1. Please measure with meter. Turn off power. Check if R1&R2 connections are short. 2. Check if manual up and down key are damaged. 3. Turn off power. Check if (R1,R2) magnetic switch are damaged.

POSSIBLE SOLUTION

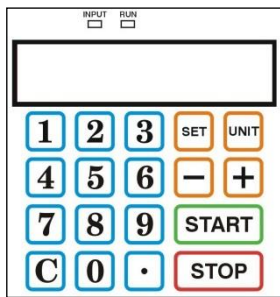
Turn off power. Take off terminal 12, 13, 14 and measure with Watt-hour meter. If terminal 12, 13 and terminal 13, 14 are short or in crash situation, please send back to the supplier for repair.



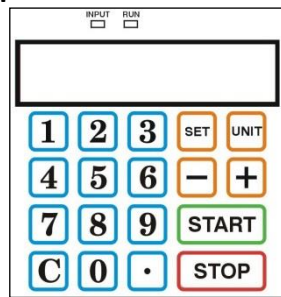
1. Turn off the power. Check R 1 & R2 are short.
2. Please measure with meter check if hand-moved up and down key are damaged.
3. Please ask machine factory technicians about inspection and place setting because machine style along with installation goes different.

SYMPTOM	POSSIBLE CAUSE
When display is off during machine operation, or keypads are not functioning, or display is flickering	<ol style="list-style-type: none"> 1. Restart machine. 2. Check if circuit is loose.

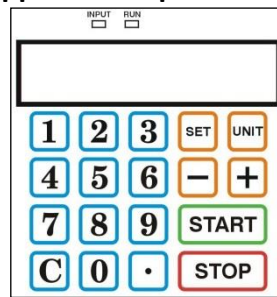
If situation below occurs, please send back to the supplier for repair.



“RUN” light is off

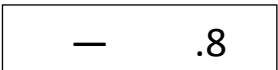


Display is off



Display data is confused.
When display is on but keypads are not operable.

TROUBLESHOOTING DISPLAY SHOWING MINUS DIGITS

1. If controller display shows  It means wrong dimension.
The controller can't run in the minus range.
2. To correct this problem, please reinsert correct dimension data.
3. Please refer to Page 19, section “5. OPERATING INSTRUCTION FOR CORRECTING CURRENT DIMENSION”.

WARNING :

In order not to cause any danger by the wrong dimension setup for machinery operation, only trained professionals should be allowed to make any changes in setting the digital readout.

SECTION 5 : SET UP

About this Section

The purpose of this section is to guide you through the required steps to get your machine out of its packaging and into operating condition.



WARNING :

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



WARNING :

Wear safety glasses during the entire setup process!

Unpacking

The Model HP300PBX is shipped from the manufacturer in a carefully built crate and/or pallet. If you discover the machine is damaged after you have signed for delivery, please immediately call Customer Service at 1-888-982-2683 for advice.

Save the containers and all packing materials for possible inspection by the carrier or its agent. Otherwise, filing a freight claim can be difficult.

When you are completely satisfied with the condition of your shipment, you should inventory its parts.

Piece Inventory

After all the parts have been removed from the crate, you should have :

- Band Resaw Machine
- Bandsaw Blade 188" x 2"
- Tool Box
- Combination Wrench Set
- Hex Wrench Set
- Instruction Manual

In the event that any non-proprietary parts are missing, we would be glad to replace them, or for the sake of expediency, replacements can be obtained at your local hardware store.

Clean Up

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as the degreaser. To clean thoroughly, some parts may need to be removed. For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated. Avoid chlorine-based solvents as they may damage painted surfaces should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.



WARNING :

Gasoline and petroleum products have low flash points and could cause an explosion or fire if used to clean machinery. Do not use gasoline or petroleum products to clean the machinery.



WARNING :

Smoking near solvents could ignite an explosion or fire and cause serious injury. Do not smoke while using solvents.



CAUTION :

Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Lack of ventilation while using these solvents could cause serious personal health risks or fire. Take precautions from this hazard by only using cleaning solvents in a well-ventilated area.

Site Considerations

1. Floor Load :

The Model HP300PBX represents a large weight load in a large footprint. Most commercial floors are suitable for your machine. Some residential floors may require additional build up to support both the machine and operator.

2. Working Clearances :

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your machine.

3. Lighting and Outlets :

Lighting should be bright enough to eliminate shadow and prevent eye strain. Electrical circuits should be dedicated or large enough to handle amperage requirements. Outlets should be located near each machine so power or extension cords are clear of high-traffic areas. Observe local electrical codes for proper installation of new lighting, outlets, or circuits.



CAUTION :

Unsupervised children and visitors inside your shop could cause serious personal injury to themselves. Lock all entrances to the shop when you are away and Do not allow unsupervised children or visitors in your shop at any time.

Removing Resaw from Pallet



WARNING :

The Model HP300PBX is a heavy machine that weighs approximately 1800 kgs. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the iron pallet.

To remove the resaw from the pallet :

1. Remove the lag bolts from the stand feet that secure the resaw to the pallet.
2. Check the conditions and make sure the hoist rings are properly tightened prior to lifting the machine.
Using a forklift with dual chain and hook for capacity of at least 5000lbs (approx. 2270kgs) , lift the resaw with from the frame location indicated in below picture, and move it to your predetermined location.



*Lifting Points for moving the resaw with a forklift.

Mounting Resaw to the Floor

Although not required, we recommend that you mount your new resaw machine to the floor. Because this is an optional step and floor materials may vary, floor mounting hardware is not included.

Note—The instructions below are given for a typical heavy-duty shop floor made of 6" thick concrete. Also, anchor studs may be substituted for lag bolts, but are more difficult to deal with if you decide to move your machine at a later point.

Bolting to Concrete Floors

Lag shield anchors with lag bolts and anchor studs are two popular methods for anchoring an object to a concrete floor. We suggest you research the many options and methods for mounting your machine and choose the best that fits your specific application.

Connecting to Power Source

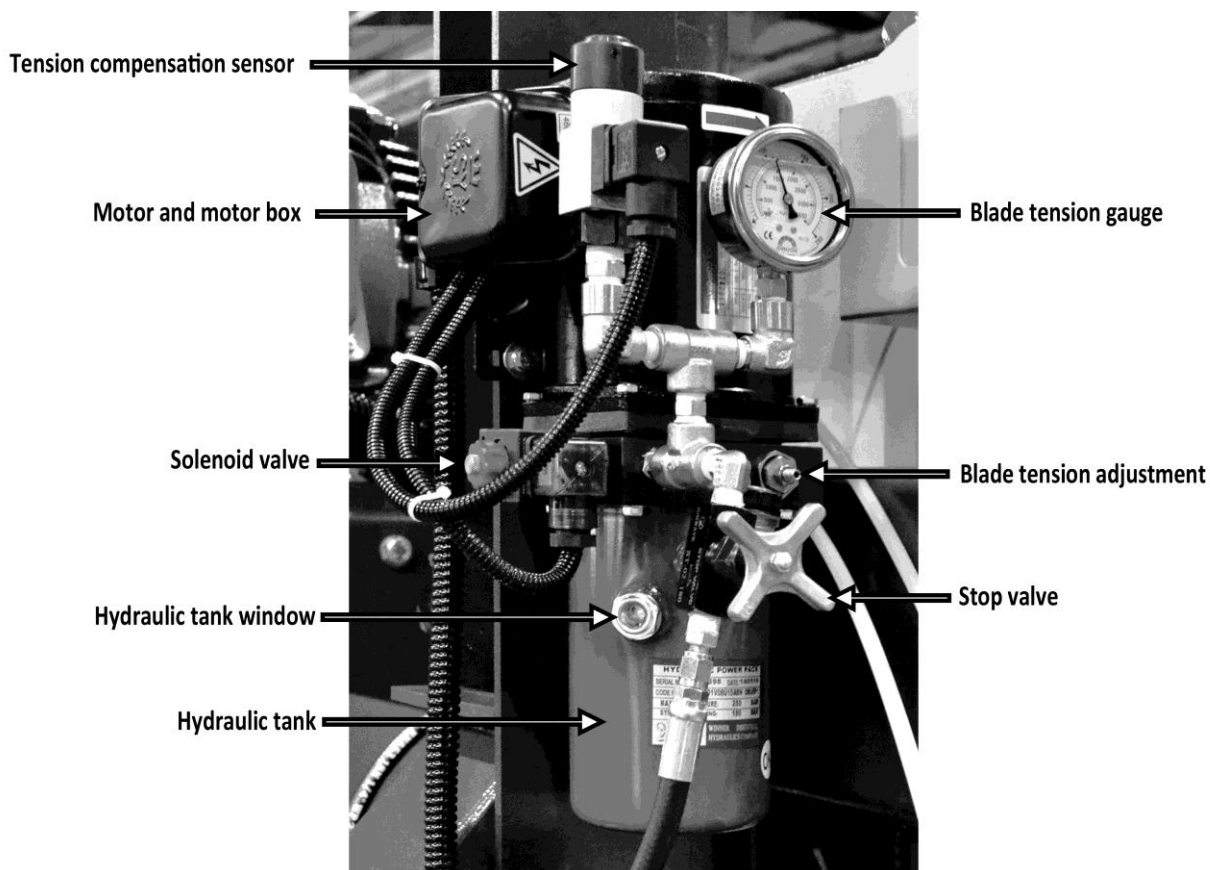
If you have performed all of the previous setup instructions, you are ready to connect the resaw to the power source.

To connect the resaw to the power source :

1. Read through Section 2 : Circuit Requirements to double-check that your setup follows the safety and circuit requirements, and that the power cord you have chosen meets the minimum requirements for this machine.
2. Open the electrical panel on the machine.
3. Connect the cord to the machine circuit breaker terminals.
4. Close and latch the electrical panel on the machine.
5. Shut off the main power at the circuit breaker and install the cord to the disconnect switch.

Hydraulic Blade Tension System with Automatic Compensation

The saw blade is tensioned by hydraulic cylinder with an automatic compensation system. The blade tension system is turned on or off by a control switch on the control panel. The blade tension can vary depending on the blade thickness, material and length. The saw blade required for the HP300PBX is 188" x 2" (LxW).



Installing Blade



WARNING :

Saw blades can cause serious harm when handled inappropriately. Please follow below instruction carefully and make sure to have all the required protection gears on. DO NOT TURN ON THE MAIN MOTOR OR THE CONVEYOR MOTOR DURING THE ENTIRE PROCESS.

Blade installation can be done by one person but is easiest if done with two people.

To install the blade :

1. Put on safety glasses and heavy leather gloves.
2. Look to make sure the saw wheels and conveyor have come to a complete stop, and then open the wheel cover to gain access to the wheels.
3. Hold the blade from each side, and position it in front of the wheels so the blade teeth are facing the front of the machine.
4. Carefully fit the blade over each wheel, and position it between the blade guides. Make sure the teeth point toward the right-hand side of the machine, as you are facing the front.

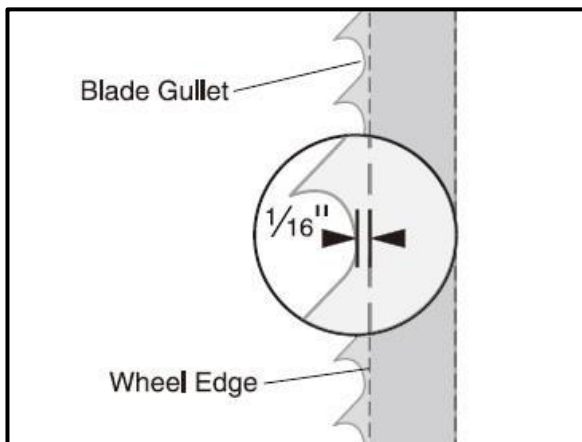


Blade positioned between blade guides.



Blade positioned on wheel.

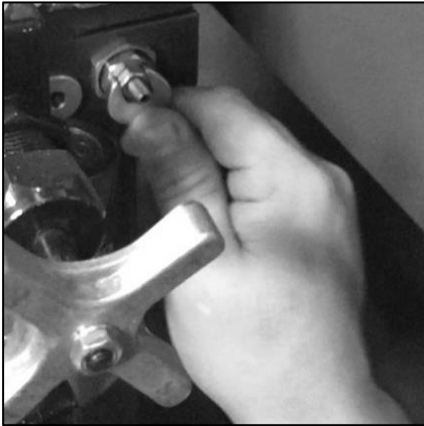
4. Position the blade on the wheels so that the tooth gullet is approximately 1/16" over the edge of the wheel.



5. Loosen the stop valve and tighten the blade with the blade tension switch on control panel.
6. Make sure the blade has been properly tensioned by checking the blade tension gauge and inspecting the saw blade.

Adjusting Saw Blade Tension

1. To change the tension, loosen the hex screw with a wrench



2. Use an Allen key to adjust the tension. Make sure the blade tension system is on. Slowly turn the Allen key counterclockwise to add pressure or clockwise to reduce pressure.



3. Once you have reached the proper pressure, hold on to the Allen key firmly while tightening the hex screw with a wrench.



Adjusting Blade Guides

Each blade guide assembly consists of Guide Blocks and a Support Bearing.

The blade guides keep the blade stable during operation, so make sure they are properly adjusted before starting the bandsaw.



WARNING :

These instructions present a serious injury hazard if done while machine is connected to power. Make sure main motor power and conveyor motor are off while doing this.

Guide Blocks

The guide blocks consist of an upper and lower block that stabilizes the blade from up/down movement during operation.

The lower block is designed to remain in a fixed position, and the upper block is designed to be adjusted during each blade change. When the machine is new, the lower block is set at the factory and should not need to be adjusted. The upper block, however, should be adjusted every time you install a new blade or re-install an old blade.

To adjust the upper guide block :

1. Loosen the guide block adjustment bolt.

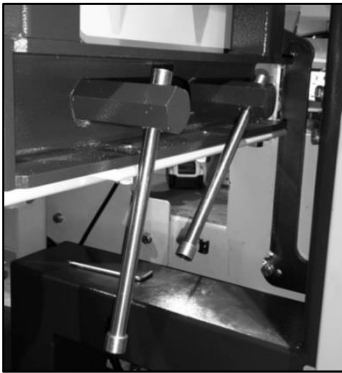


Guide block adjustment bolt.

2. Slide the upper guide block up, place a dollar bill underneath the upper guide block, then let the upper

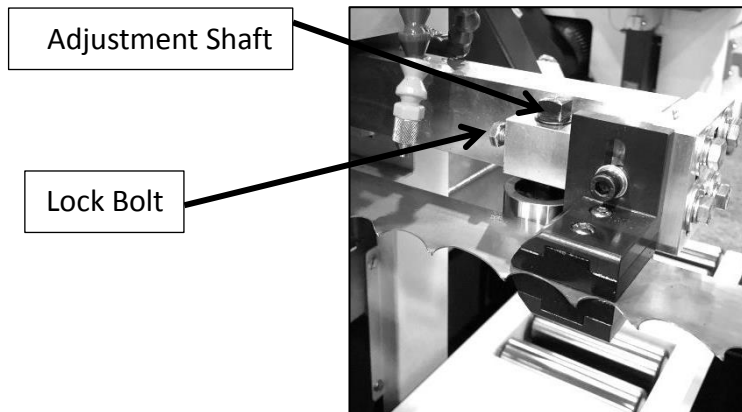
guide block slide down to sandwich the dollar between the blade and the upper guide block.

3. Keep the dollar bill in place and tighten the upper guide block.
4. Remove the dollar bill.
5. Repeat steps 1-4 with the blade guide on the other side of the conveyor.
6. The blade guide distance can also be adjusted by loosening the extended hex bolt with the handles in the back of the frame.



Support Bearing

The support bearing is positioned behind the blade to brace it from pushing backwards during a cut. Please see below, the support bearing components to clarify the adjustment instruction.



Support bearing components.

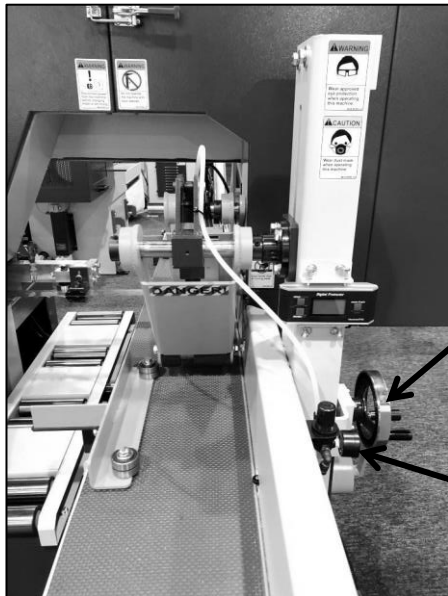
To adjust the Support Bearings :

1. Loosen the lock bolt approximately 1/4 turn.
Note—If you loosen the lock bolt too much, the support bearing will fall out of place.
2. Turn the adjustment shaft until the support bearing is positioned approximately 0.016" behind the back of the blade. Use a feeler gauge or four thicknesses of a dollar bill to check this.
3. Tighten the lock bolt, and repeat with the other support bearing.
4. Test the adjustment of the support bearings by spinning the wheels by hand, at full blade tension, in the

same direction of operation. While you are spinning the wheels, the support bearings should not turn. (The support bearings should only turn during cutting operations.)

Adjusting Infeed Pneumatic Pressure Roller

The infeed pressure roller is designed to allow a small range of swing movement in order to have the roller as close as possible to the saw blade but not run into the saw blade. The height of the infeed pressure roller can be adjusted by the hand wheel. The pneumatic pressure can be adjusted by the pneumatic pressure regulator as well. The infeed pressure roller should be adjusted accordingly to allow the rollers to hold down the workpiece firmly without too much pressure applied that the workpiece cannot be fed through.

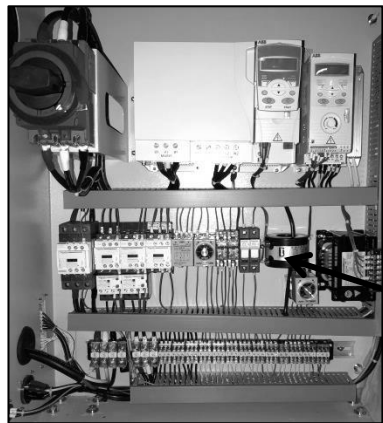


Height Adjustment Hand Wheel

Pneumatic Pressure Regulator

Adjusting Timer for Smooth Infeed

Smooth infeed feature is designed to lower the impact of the initial contact between the workpiece and the saw blade, which helps prolong your saw blade life span and minimize the possibility of the saw blade from dipping upon force. There is a timer located in the control box that can control the time setting of the smooth infeed from 0 to 3 seconds.



Timer



Connecting to Dust Collector

To be effective, the dust collection system that you connect to the resaw must be able draw at least 1000 CFM at the point where you connect your hose to the machine.

Note—This number is an approximation and has been provided for estimation purposes only.

To connect the resaw to a dust collector :

Attach a 4" dust hose to the dust port as shown in below, and be sure to tighten the hose clamp to ensure a snug fit.



Test Run



WARNING :

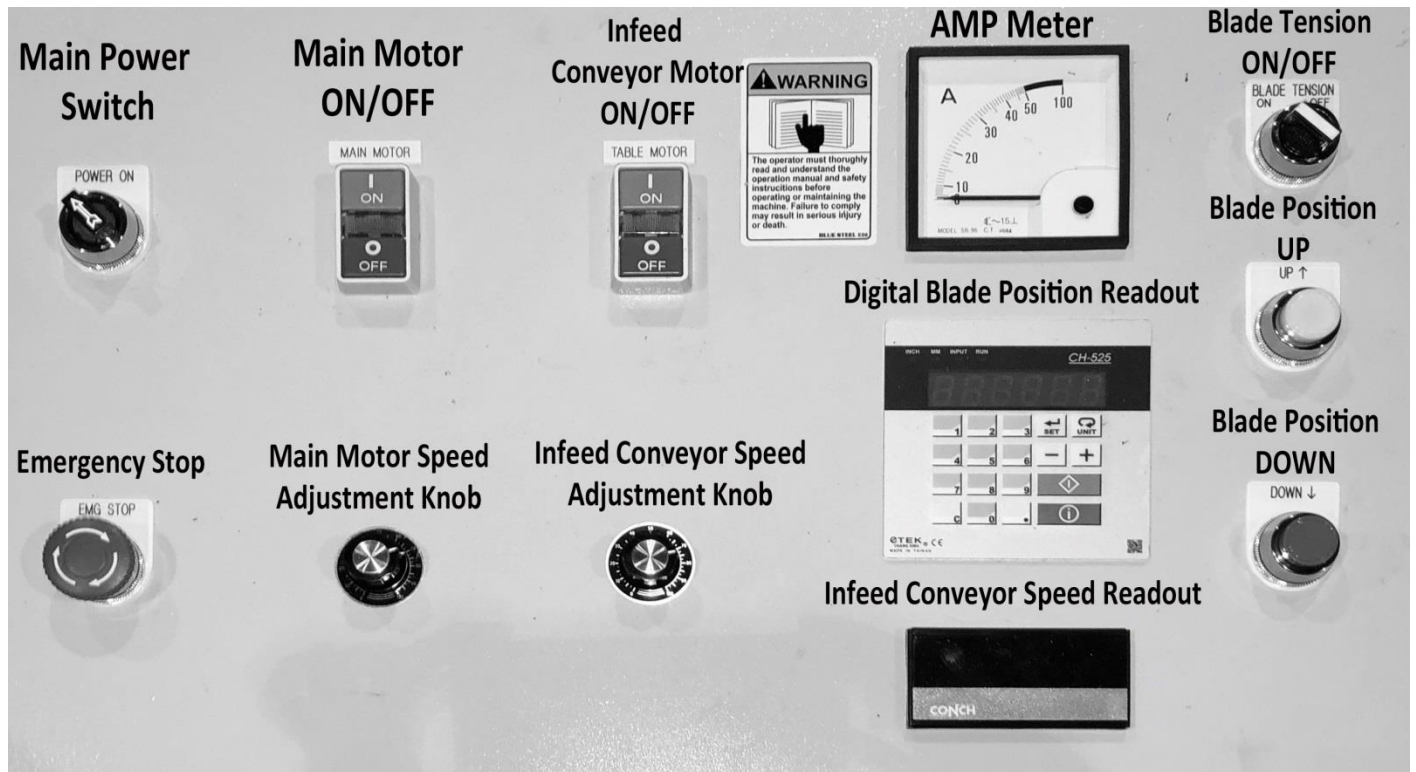
Before starting the resaw, make sure you have performed the preceding assembly and adjustment instructions, and you have read through the rest of the manual and are familiar with the various functions and safety issues associated with this machine. Failure to follow this warning could result in serious personal injury or even death.

To test run the resaw :

1. Make sure the wheel cover is closed and all tools or other objects are cleared away from the resaw.
2. Connect air compressor to the pneumatic pressure regulator on the left side of the resaw and adjust infeed pressure roller to proper height and pressure.
3. Put on safety glasses and make sure any bystanders are also wearing safety glasses.
4. Turn the POWER ON switch clockwise.
5. Press the UP and DOWN buttons to make sure the resaw head moves in the proper direction.
 - A. — If the resaw head moves in the opposite direction as the buttons state, then the power needs to be disconnected and the power wires need to be switched at the circuit breaker in the electrical box.
6. Once you have performed steps 1-4 and everything is okay with the machine and set up, press the

MAIN MOTOR ON button. As you are standing in front of the machine, make sure that the blade is moving from left to right.

7. Press the TABLE MOTOR ON button to start the infeed conveyor to test the conveyor belt. If the conveyor belt does not turn after pushing the conveyor on button, adjust the conveyor speed knob.
 - A. — If any problems occur, press the EMG STOP button. Investigate and correct the problem before operating the machine further. If you need help, refer to the troubleshooting section in the back of this manual.



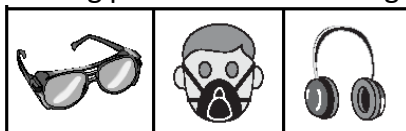
SECTION 6 : OPERATIONS

Operation Safety

Your safety is important! Please follow the warnings below :

WARNING :

Damage to your eyes, lungs, and ears could result from failure to wear safety glasses, a dust mask, and hearing protection while using this machine.





WARNING :

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing rolled up and long hair tied up and away from moving machinery.

NOTICE :

The following section was designed to give instructions on the basic operations of this machine. However, it is in no way comprehensive of all of the machine's applications.

Stock Preparation

The Model HP300PBX is capable of sawing rough cut lumber or slicing boards as thin as 1/16" with a high degree of precision.

Always make sure that any stock you plan on cutting is clean and free of nails, staples, or embedded stones. Also, keep in mind that precision cuts require a much greater preparation process than do rough cuts.

To prepare the stock for a precision cut :

1. Surface Plane on a Jointer—
The concave face of the workpiece should be planed flat on a jointer.
2. Surface Plane on a Thickness Planer—
The opposite face of the workpiece should be planed flat with a thickness planer.
3. Edge Joint on a Jointer—
The concave edge (viewed from end-to-end) of the workpiece should be edge jointed flat on a jointer.
This flat edge will glide along the fence rollers during the resaw operation.

Resawing

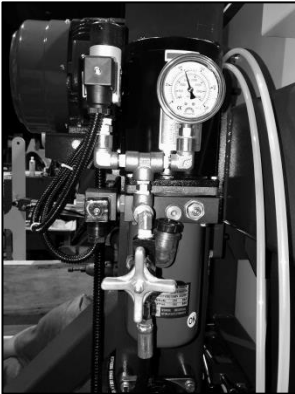
To perform a resaw operation :

1. Make sure the blade is installed and tensioned correctly.
2. Make sure the blade is tracking correctly. See "Adjusting Blade Guides".
3. Turn the control panel POWER ON switch clockwise to supply power to the machine.
4. Set the blade height through the control panel.

Note—The accuracy of the blade height shown on the digital display can only be assured if the calibration process has been performed.

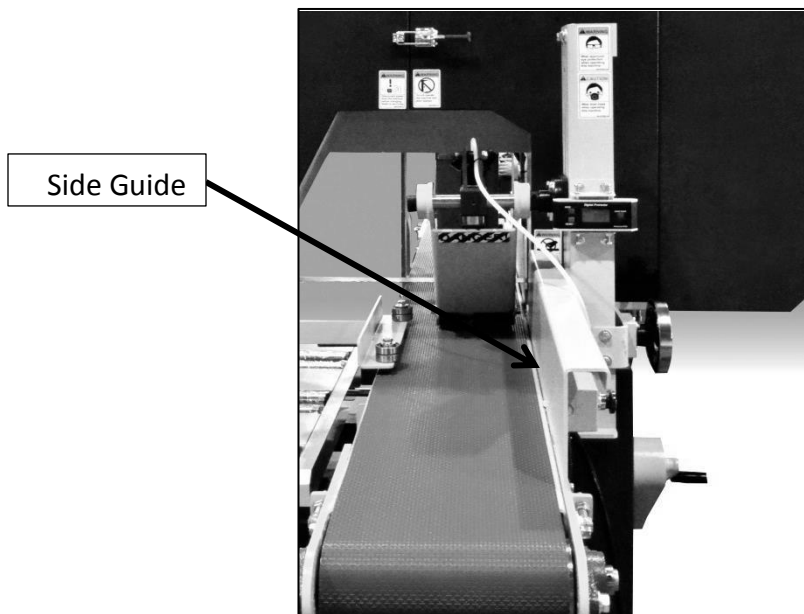
5. Press the MAIN MOTOR ON button to start the bandsaw blade.

6. Double check the blade tension.



7. The workpiece should be prepared on a jointer and a thickness planer as described in the previous subsection.

8. Press the TABLE MOTOR ON button to start the infeed conveyor and adjust the infeed speed with the knob below it. Begin feeding the workpiece under the front pressure rollers with the jointed edge against the side guide.



9. Receive the workpiece on the outfeed side of the machine.

Note—If a second person is receiving the workpieces, use the return conveyor to send them back to the person on the infeed side.

Blade Information

Blade choices are limited due to the specialized nature of the Model HP300PBx. The only variables when selecting a blade are the type of cutting tooth and the number of teeth-per-inch (Tooth Pitch).

Blade Tooth Type

Carbon Steel—The least expensive type, carbon steel blades are adequate for most cutting applications; however, they dull quickly and for economical reasons they are usually replaced rather than resharpened.

Carbide-Tipped—The most expensive type, carbide-tipped blades are designed for continuous use in production shop situations. They hold a sharp edge longer than carbon steel and they can be resharpened many times before needing to be replaced.

Blade Length and Width

The required blade length for the Model HP300PBx is 188"x2".

Blade Care

A bandsaw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain longer use from a bandsaw blade if you give it fair treatment and always use the appropriate feed rate for your operation.

A clean blade will perform much better than a dirty blade. A dirty blade passes through the cutting material with much more resistance than a clean blade. This extra resistance will also cause unnecessary heat. Maintain your blades with a cutting blade lubricant.

Blade Breakage

Blade breakage is unavoidable, in some cases, since it is the natural result of the peculiar stresses placed on bandsaw blades. Blade breakage is also due to avoidable circumstances. Avoidable breakage is most often the result of poor care or judgment on the part of the operator when mounting or adjusting the blade or support guides.

The most common causes of blade breakage are :

- Faulty alignment or adjustment of the guides.
- Using a blade with a lumpy or improperly finished braze or weld.
- Feeding the workpiece too fast.
- Tooth dullness or absence of sufficient set.
- Excessive or too little blade tension.
- Running the bandsaw excessively when not resawing.
- Not releasing blade tension after use.

SECTION 7 : MAINTENANCE



WARNING :

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Cleaning

Inside Wheel Cover

To keep the bandsaw working properly, regularly open the wheel cover and vacuum any sawdust from the machine that did not make it into the dust collector.

Conveyor Belts

Use compressed air to clean the built-up sawdust from the conveyor belts. Eye injuries frequently occur when cleaning with compressed air—wear safety glasses to protect you. Also wear a dust mask or respirator to protect your lungs from airborne dust particles.

Hydraulic Elevation Rams

Use a dry rag to remove sawdust from the hydraulic elevation rams, and then wipe the rams down with a light coat of hydraulic fluid.

Painted Surfaces

These areas may be cleaned with a dry or damp rag; however, make sure you Do not clean bare metal surfaces with a damp rag or they may rust.

Miscellaneous

Always be aware of the condition of your machine. Routinely check the condition of the following items and repair or replace as necessary :

- Loose mounting bolts
- Worn switch
- Worn or damaged blade
- Worn or damaged support bearings or guide bearings

V-Belts

To ensure optimum power transmission from the motor to the blade and to the hydraulic pump, the V-belts must be in good condition (free from cracks, fraying and wear) and operate under proper tension. Check the V-belts at least every 3 months ; more often if the bandsaw is used daily.

Bearings

Sealed and pre-lubricated ball bearings require no lubrication for the life of the bearings. All bearings are standard sizes, and replacements can be purchased from our parts department or bearing supply store.

Greasing

The photos on this page label the grease fittings by number for easy identification. Wipe clean and lubricate the grease fittings with two pumps of high temp bearing grease. The proper greasing intervals are indicated by white boxes on the chart below.

Note—This page was designed to be copied and used as a check-off chart to help maintain a regular lubrication schedule.

Check white boxes after lubricating fittings. Date Started :

HR400IDFB GREASE SCHEDULE/CHECK-OFF CHART							
MACHINE AREA	FITTINGS	HOURS OF USE					
		160	320	480	640	800	960
Main Wheels	4, 9						
Blade Tension Device	2, 3, 17						
Main Conveyor	6, 11, 14						
Return Conveyor	7, 12, 13						
Lifting Posts	10, 16						
Pressure Rollers	8, 15						
Wheel Cover Bearings	1, 5						

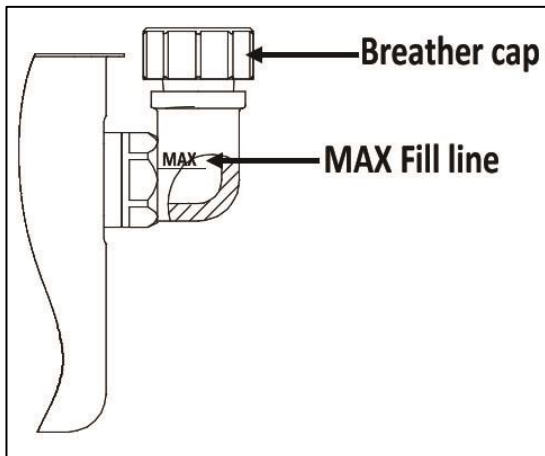
Note — 160 hours is the equivalent of 1 month of regular use.

Hydraulic Fluid Schedule

Check the hydraulic fluid level daily.

The hydraulic system controls blade tension. In order for this system to function properly and operate at the correct temperature, the hydraulic fluid level in the tank should be 2/3 full on the fluid sight window, which is located on the side of the tank. Do not exceed the Max Level marked on the elbow

Note—To add hydraulic fluid, remove the breather cap shown. Use an ISO VG 32— Antiwear 32 Hydraulic Fluid or equivalent. Using inferior hydraulic oil will cause a short life span, poor performance and malfunctions.



To inspect the hydraulic fluid :

1. Look at the color of the hydraulic fluid in the sight window.
 - If the fluid is milky in appearance, then the hydraulic fluid is contaminated with water.
 - If the fluid is dark brown or opaque, then the hydraulic fluid is severely contaminated.
2. Smell the hydraulic fluid (remove breather cap).
 - If the fluid smells rancid or burnt, then thermal breakdown has most likely occurred.

Inspection Results

If you determine that your hydraulic fluid is contaminated or has experienced thermal breakdown, then you should perform a major service.

Hydraulic System Major Service

The hydraulic system major service consists of performing a complete “Minor Service,” draining the old hydraulic fluid, cleaning the tank, and filling the tank with new fluid.

WARNING :

The hydraulic system on this machine creates very high pressure and the hydraulic fluid gets hot. Always stop the resaw, open the conveyor speed valves, make sure the pressure gauge reads 0 psi, and make sure the fluid cools down before removing any lines or servicing the hydraulic system.

To drain the hydraulic fluid :

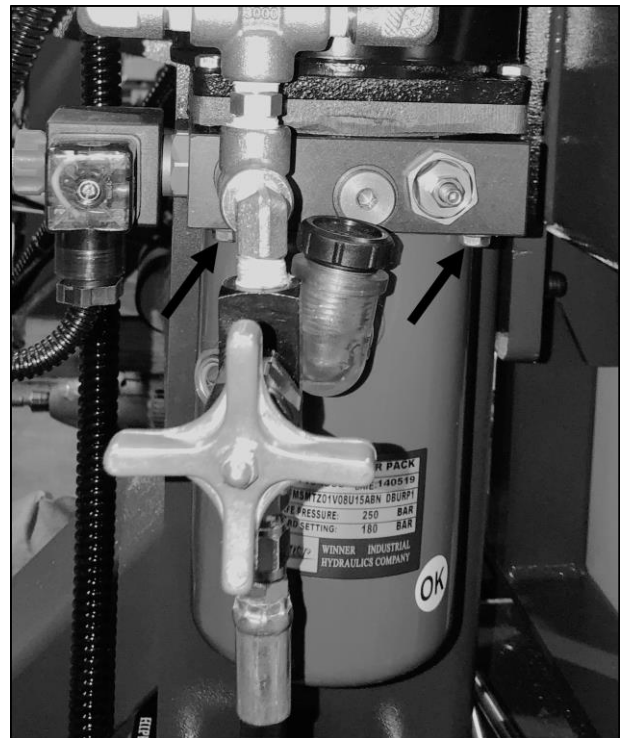
1. Unscrew the 4 screws that hold the hydraulic tank to the black plate between the tank and the motor. Use a flathead screwdriver to help push the tank away from the plate.
2. Carefully remove the tank and drain. As there are many parts in the hydraulic tank, when removing the tank, please slowly and carefully pull downwards.

To clean the bottom of the tank :

1. Use a lint free rag to wipe up and remove the sludge from the bottom of the tank.
2. Use clean hydraulic fluid on a clean rag to clean additional contaminants from bottom and sides of the tank.

To fill the tank with new fluid :

1. Make sure that you have re-installed the tank screen, that the drain plug is tight, and that you have replaced the access plate on top of the tank.
2. Using an ISO VG 32—Antiwear 32 Hydraulic Fluid, fill the tank until the sight window is 2/3 full or the fluid level is at the 60°C mark on the sight window thermometer.



SECTION 8 : SERVICE ADJUSTMENTS



WARNING :

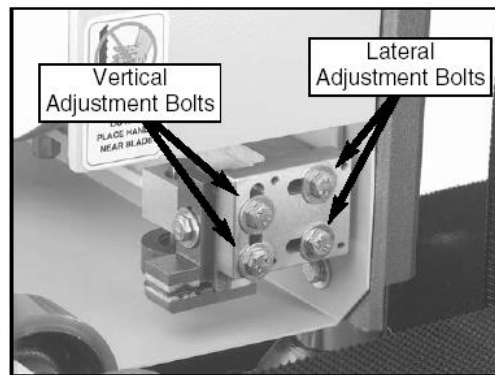
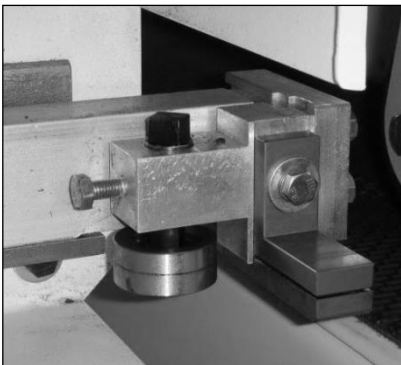
Always disconnect power to the machine before performing service adjustments. Failure to do this may result in serious personal injury.

Adjusting Lower Blade Guides

The instructions on adjusting the upper guide blocks and support bearing are given in Section 5 : Set Up. This section focuses on adjusting the lower blade guides, which is a non-routine adjustment that would typically be done before the upper blade guide and support bearing would be adjusted.

To adjust the lower blade guides :

1. Disconnect the resaw from the power source.
2. Open the wheel cover for easy access to the blade guide assemblies.
3. Make sure the blade is tensioned in the same manner that will be used for operation.
4. Loosen the lateral adjustment bolts.



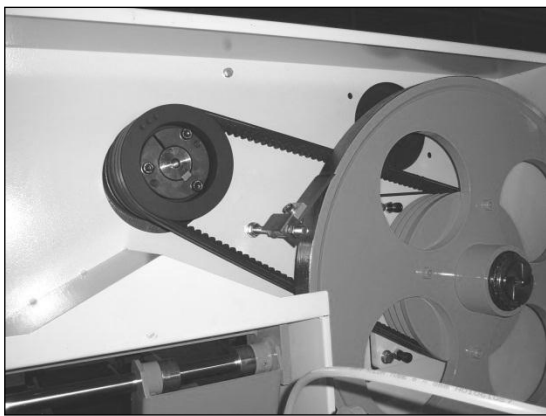
5. Adjust the assembly so the blade guides are approximately 1/16" behind the gullets of the blade teeth, and tighten the lateral bolts.
6. Loosen the vertical adjustment bolts.
7. Adjust the lower blade guide so it barely touches the bottom of the blade, and then tighten the vertical adjustment bolts.
8. Repeat steps 4-5 on the other blade guide.
9. Adjust the upper guide blocks and the support bearings.
10. Close the wheel cover.

Adjusting V-Belt Tension

Properly tensioned V-belts help the Model HP-400PB operate at its best. However, adjusting the V-belts is not an exact science and does require personal judgement. Adjusting the belts too loose will decrease the performance of the machine and adjusting the belts too tight may cause premature wear of the bearings and other components attached to the belts.

On the Model HP-400PB there is a triple-drive V-belt system that connects the motor to the wheel pulley and a single-drive V-belt system that connects the wheel pulley to the hydraulic pump.

On both systems, the belts should deflect no more than 1/2" and not less than 1/4" when pressing between the pulleys with your index finger.



To adjust the V-belt tension for the saw wheels :

1. Disconnect the resaw from the power source.
2. To tension the three V-belts that connect the motor to the wheel pulley, adjust the tension by moving the motor mount nuts up or down until the belts are in the proper deflection range.

Note—The belts tighten when you move the motor mount up.

To adjust the tension for the hydraulic pump V-belt :

1. Remove the small pulley cover from the pump seat.
2. Adjust the belt tension by loosening the cap screws.
3. Rotate the pump seat up or down until the belt has the proper deflection.
4. Tighten the cap screws to lock the pump seat in place.
5. Re-install the pulley covers.

Replacing V-Belts

If the belts deteriorate or break, they will need to be replaced. When replacing one of the belts that connect the motor to the wheel pulley, you should replace all three at the same time to ensure optimum performance.

To replace the belts that connects the motor to the wheel pulley :

1. Disconnect the resaw from the power source!
2. Read the previous subsection titled “Adjusting V-Belt Tension” to become familiar with the V-belt tension controls.
3. Remove the large pulley guard.
4. Adjust the motor mount nuts down as far as they will go.
5. Remove the hydraulic pump V-belt from the wheel pulley by loosening the oil seat cap screws and pivoting the pump seat up.
6. Remove and replace all three V-belts that connect the motor to the wheel pulley.
7. Re-install and tension the hydraulic pump belt on the wheel pulley.
8. Tension the newly installed V-belts and replace the belt cover.

To replace the V-belt that connects the hydraulic pump to the wheel pulley :

1. Disconnect the resaw from the power source.
2. Remove the large pulley guard that covers the wheel pulley.
3. Remove the small pulley guard that covers the hydraulic pump pulley.
4. Loosen the pump seat cap screws and pivot the pump seat up to release the belt tension.
5. Remove the two cap screws that secure the pulley bracket to the pump seat.
6. Remove the pulley bracket w/assembly to split the connector and make it possible to remove the belt from the hydraulic pump pulley.
7. Remove the old V-belt and replace with a new V-belt.
8. Inspect the rubber seal that was between the connector pieces.
 - If the rubber seal is pliable and smooth, use it again.
 - If the rubber seal is dry and cracked, replace it.
9. Re-assemble the pulley bracket and tension the new V-belt.
10. Replace both pulley guards.

Adjusting Main Conveyor Table

The main conveyor table can be adjusted left-to right and front-to-back to make the table parallel to the blade in both directions. This is an involved procedure that requires you to cut up a piece of test stock and make many repeat adjustments.

Because of the complexity of this procedure, we will first give instructions on checking the table, so that you can be sure you need to perform the adjustment.

Before attempting these instructions, you need to have a perfectly squared up piece of stock that is as wide

as possible and is at least two feet long. The wider the stock, the more accurate your procedure will be (we recommend using the maximum width that the resaw will allow). Also, you need to make sure that your blade is in good condition, the blade is tracked/tensioned properly and the blade guides are properly adjusted.

To check the main conveyor table alignment :

1. Cut a 1/4" slice off of your squared-up test stock.
2. Using a dial caliper, measure the thickness of the cut piece at all four corners and in even locations along the edges of the stock. As you take these measurements, write them directly on the stock, near the location where you took the measurement.
3. Study the written measurements on your test piece.
Note—DO NOT place too much importance on the first and last six inches of the board, because the board will only have been under one pressure roller during that part of the cut.
*If the measurements are more than 0.030" different from one side to the other, you will need to adjust the conveyor table.

To adjust the conveyor table :

1. Disconnect the resaw from the power source.
2. Use your test board to determine which direction the conveyor table needs to be moved. For example, if the right side of the board was thicker than the left side—you will need to move either the right side of the conveyor up or move the left side of the conveyor down.
3. Adjust the four adjustment bolts that control the conveyor table height as determined from step 5.
Note—For adjustment bolt locations see the adjustment bolt.



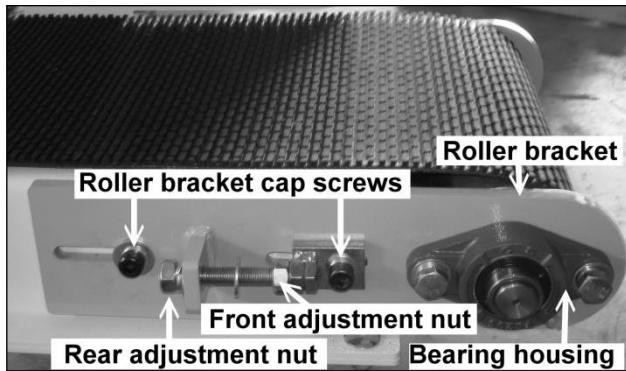
4. Tighten the lock nuts on the adjustment bolts, connect the resaw to the power, and repeat steps 1-6 until the measurements on your cut piece are within 0.030".

Tracking Conveyors

“Tracking” the conveyor belts means balancing the way they ride on the end rollers. The conveyors are tracking correctly when they are centered between the roller brackets on each side of the conveyor. If the conveyor belts start rubbing against the roller brackets, then you need to track them as described.

To set the conveyor tracking :

1. Loosen the two roller bracket cap screws about 3/4 of a turn. Do this on the both sides of the conveyor.



Roller bracket cap screws and adjustment nuts.

- 2 Loosen the rear adjustment nuts away from the bracket plates on both sides of the conveyor.
3. Start the conveyor belt.
4. On the side that the belt tracks toward, turn the front adjustment nut counter-clockwise half of a turn, and watch the belt tracking.

Note—The effect of the adjustment can sometimes take two minutes before the results are fully apparent.

—If the tracking was not corrected by this adjustment, proceed to step 5. If the tracking was corrected, skip to step 6.

5. On the side that the belt tracks away from, turn the front adjustment nut clockwise half of a turn, and watch the belt tracking.

Note—If the tracking was not corrected by this adjustment, repeat step 4.

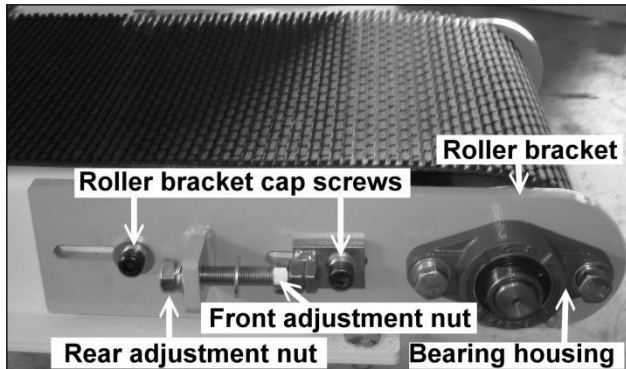
6. When the conveyor belt is tracking in the center of the roller brackets, run the conveyor for at least two minutes to ensure that it will remain tracking correctly.
7. Tighten the rear adjustment nuts against the bracket plates, and then tighten the front adjustment nuts against the bracket plates to make sure that the tracking adjustment will not slowly change during normal operation.

Replacing Conveyors

Although the conveyor belts have slight differences in size and access, the replacement instructions are the same.

To replace the conveyor belts :

1. Start the conveyor belt that you want to replace.
2. Stop the conveyor belt when the conveyor belt seam is accessible.
3. Disconnect the resaw from the power source!
4. Loosen the roller bracket by turning the roller bracket cap screws 3/4 of a turn.



5. Loosen the rear adjustment nuts away from the bracket plate.
6. Mark the front adjustment nut with a magic marker or a piece of tape, and thread the front adjustment nut all the way up, while keeping track of the number of full turns that you moved the nut.
Note—Write the number of turns down, so you do not forget. Remembering this number is an important part of the re-assembly process.
7. Slide the roller brackets toward the body of the resaw to loosen the belt.
8. Remove the stiff cable from the center of the seam to separate it.
9. Remove the old conveyor belt from the conveyor table, and replace the new conveyor belt in its place.
10. Mesh the seam “teeth” together on the new belt, and insert the stiff cable into the center of the seam to lock it together.



11. Slide the roller brackets away from the body of the resaw to tighten the belt.
12. Turn the front adjustment bolts the exact number of rotations that you turned them when you loosened them.
Note—The new belt may be tighter than the old one because it has not been broken-in. If this is the case, deduct one or two turns from your original number of turns.

SECTION 9 : Troubleshooting

Motor will not start.	<ol style="list-style-type: none"> 1. Low voltage. 2. Open circuit in motor or loose connections. 	<ol style="list-style-type: none"> 1. Check power line for proper voltage. 2. Inspect all lead connections on motor for loose or open connections.
Motor will not start; fuses or circuit breakers blow.	<ol style="list-style-type: none"> 1. Short circuit in line cord or plug. 2. Short circuit in motor or loose connections. 3. Circuit Overloaded 	<ol style="list-style-type: none"> 1. Repair or replace cord or plug for damaged insulation and shorted wires. 2. Repair or replace all connections on motor for loose or connections shorted terminals or worn insulation. 3. Reduce load on circuit.
Motor fails to develop full power (power output of motor decreases rapidly with decrease in voltage at motor terminals).	<ol style="list-style-type: none"> 1. Power line overloaded with lights, appliances, and other motors. 2. Undersized wires or circuits too long. 3. General overloading of power company facilities. 	<ol style="list-style-type: none"> 1. Reduce load on power line. 2. Increase wire sizes or reduce length of wire. 3. Request a power check from the power company.
Motor overheats.	<ol style="list-style-type: none"> 1. Motor overloaded. 2. Air circulation through the motor restricted. 	<ol style="list-style-type: none"> 1. Reduce load on motor. 2. Clean out motor to provide normal air circulation.
Motor stalls (resulting in blown fuses or tripped circuit)	<ol style="list-style-type: none"> 1. Short circuit in motor or loose connections. 2. Low voltage. 3. Incorrect fuses or circuit breakers in power line. 4. Motor overloaded. 	<ol style="list-style-type: none"> 1. Repair or replace connections on motor for loose or shorted terminals or worn insulation. 2. Correct the low voltage conditions. 3. Install correct fuses or circuit breakers. 4. Reduce load on motor.
Machine slows when operating.	Applying too much pressure to workpiece.	Feed workpiece slower.
Blade does not run evenly on wheels.	<ol style="list-style-type: none"> 1. Blade support bearings set incorrectly. 2. Wheels are not coplanar. 	<ol style="list-style-type: none"> 1. Adjust blade support bearings. 2. Call Our Service Department
Blade does not cut evenly.	<ol style="list-style-type: none"> 1. Blade is not properly tensioned. 2. Wheels are not coplanar. 3. Tooth set is uneven. 4. Teeth are sharper on one side than the other. 	<ol style="list-style-type: none"> 1. Adjust blade tension. 2. Call Our Service Department. 3. Replace blade. 4. Replace blade.
Blade slows when cutting. Blade makes a squealing noise, especially on start-up.	<ol style="list-style-type: none"> 1. V-belt loose. 2. V-belt worn out. 	<ol style="list-style-type: none"> 1. Tighten V-belt. 2. Replace V-belt.