



5380 37" Wide Belt Sander

Owners Manual



Oliver Machinery

Seattle, WA
info@olivermachinery.net

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Warranty

Thank you for your purchase of a genuine Oliver woodworking machine. Oliver makes every effort possible to assure that its equipment meets the highest possible standards of quality and durability. All products sold by Oliver are warranted to the original customer to be free from defects for a period of 2 (two) years on all parts, excluding electronics and motors, which are warranted for 1 (one) year. Oliver's obligation under this warranty shall be exclusively limited to repairing or replacing (at Oliver's option) products which are determined by Oliver to be defective upon delivery F.O.B. (return freight paid by customer) Oliver, and on inspection by Oliver. This warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligence, accidents, unauthorized repairs, alterations, lack of maintenance, acts of nature, or items that would normally be consumed or require replacement due to normal wear. In no event shall Oliver be liable for death, personal or property injury, or damages arising from the use of its products.

All specifications in this catalog are subject o change without notice. All photos and information contained in this catalog belong to Oliver Machinery.

Warning

Read this manual thoroughly before operating the machine. Oliver Machinery disclaims any liability for machines that have been altered or abused. Oliver Machinery reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

For More Information

Oliver Machinery is always adding new Industrial Woodworking products to the line. For complete, up-to-date product information, check with your local Oliver Machinery distributor, or visit www.olivermachinery.net

WARNING!

Read this manual completely and observe all warning labels on the machine. Oliver Machinery has made every attempt to provide a safe, reliable, easy-to-use piece of machinery. Safety, however, is ultimately the responsibility of the individual machine operator. As with any piece of machinery, the operator must exercise caution, patience, and common sense to safely run the machine. Before operating this product, become familiar with the safety rules in the following sections.

- **Always keep guards in place and in proper operating condition. Do not operate the machine without the guards for any reason.**
 - **This sander is intended to be used with wood and wood products only. Use of this sander and a dust collector with metal products is a potential fire hazard.**
 - **Support the workpiece adequately at all times during operation; maintain control of the work at all times.**
 - **This sander is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a wide belt sander, do not use until proper training and knowledge has been obtained.**
1. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
 2. **KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
 3. **DON'T USE IN A DANGEROUS ENVIRONMENT.** Don't use machinery in damp or wet locations, or expose them to rain. Keep work area well lighted.
 4. **KEEP CHILDREN AWAY.** All visitors should be kept a safe distance from the work area.
 5. **MAKE THE WORKSHOP KIDPROOF** with padlocks, master switches, or by removing starter keys.
 6. **DON'T FORCE THE MACHINE.** It will do the job better and safer at the rate for which it was designed.
 7. **USE THE RIGHT TOOL.** Don't force a machine or attachment to do a job for which it was not designed.
 8. **DEDICATED CIRCUIT.** Have an electrician hard wire the machine to a dedicated circuit that can handle the load. Follow all local electrical codes.
 9. **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.
 10. **ALWAYS USE SAFETY GLASSES.** Also use face or dust masks. Everyday eye glasses only have impact resistant lenses; they are not safety glasses.
 11. **DON'T OVERREACH.** Keep proper footing and balance at all times.
 12. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
 13. **ALWAYS DISCONNECT THE MACHINE FROM THE POWER SOURCE BEFORE SERVICING.**

14. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is in the off position before plugging in.
15. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Oliver Machinery may cause hazards or risk of injury to persons.
16. **NEVER STAND ON A MACHINE.** Serious injury could occur if the machine is tipped.
17. **CHECK DAMAGED PARTS.** Before further use of the machine, 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.
18. **NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN POWER OFF.** Don't leave the machine until it comes to a complete stop.
19. **SOME DUST CREATED** by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically-treated lumber.

Your risk from those 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 specifically designed to filter out microscopic particles
20. **DO NOT** operate machine while under the influence of drugs, alcohol or any medication.
21. **AVOID** kickback by sanding in accordance with directional arrows.
22. **SAND** with the grain of the wood.
23. **DO NOT** sand pieces of material that are too small to be safely supported.
24. **WHEN** sanding a large workpiece, provide additional support at table height.
25. **MAKE CERTAIN** the machine is electrically grounded and that all electrical connections are secure.
26. **ATTACH SANDER** to appropriately sized dust collection system.
27. **MAKE CERTAIN** the abrasive belt is free of defects (tears, holes, frayed edges, etc.)
28. **DO NOT** attempt to remove more than 1/32" of wood in one pass.
29. **DO NOT** open access doors while machine is running.
30. **NEVER** try to remove a workpiece from the machine after it has started feeding. Turn off the power, lower the table, then remove the workpiece.
31. **WHEN INSTALLING** a new abrasive belt, be sure to install it with the directional arrows on the backside of the sanding belt matching the drum rotation.
32. **SAVE THESE INSTRUCTIONS** refer to them often and use them to instruct others.

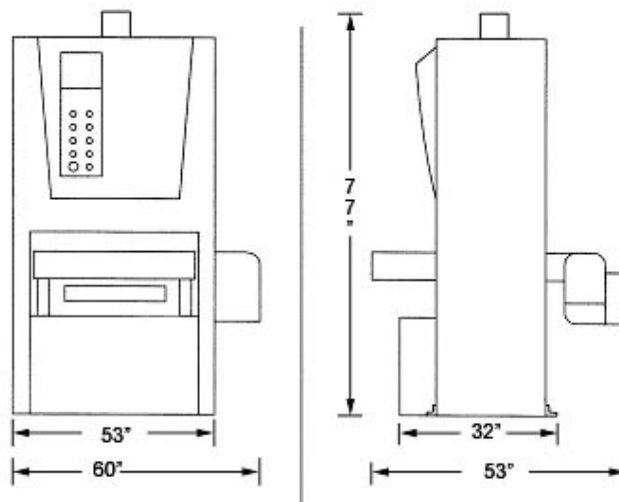
Table of Contents

Page Number

Warranty	2
Warnings	3-4
Table of Contents	5
Specifications	5
Contents of the Shipping Container	6
Uncrating the Machine	6
Machine Preparation and Setup	6
Connecting to a Dust Collector	7
Connecting to Air	7
Electrical Connections	7-8
Control Panel	8
Features and Controls	9
Installing Sanding Belts	10
Adjusting Platen Position	10
Setting Belt Tracking	11
Setting Belt Oscillation	12
Digital Controller	12
Changing Units of Measure	13
Sanding to a Specific Thickness	13
Calibrating the PV (Present Value)	13
Thickness Scale	14
Conveyor Tracking	14
Adjusting V-belt Tension	14
Replacing V-belts	14
Maintenance	15
Troubleshooting	15

Specifications

Main Motor	3 Ph, 20 HP, 220/440V
Conveyor Motor	3 Ph, 1 HP 220/440V
Table Height Adjust Motor	3 Ph, 1/4 HP 220/440V
Maximum Stock Width	37"
Maximum Stock Thickness	6"
Minimum Stock Thickness	1/8"
Air Requirements	70 psi
Dust Port Diameter	5"
Abrasive Belt Dimensions (W x L)	37" x 75"
Feed Speed	Variable 16 to 49 fpm
Gross Weight	2,550 lbs.



Contents of the Shipping Container

1. Oliver Wide Belt Sander

Toolbox Contents

- 4. Leveling Pads
- 4. M14x45 Hex Cap Bolts
- 4. M14 Hex Nuts
- 4. Handles (doors)
- 1. Handle (raising table)
- 1. T-Handle Hook
- 1. Phillips Head Screwdriver
- 1. Flat Head Screwdriver
- 4. Open End Wrenches
- 1. Closed End Wrench
- 6. Hex Angle Wrenches
- 2. Cans of Touch-Up Paint



Uncrating the Machine

Uncrate the machine and inspect the unit for signs of shipping damage. If damage is found, contact your dealer immediately. For protection against shifting during transport, the base of the wide belt sander was bolted to the shipping pallet in four places (A, Figure 1). Remove these bolts. Retain all packaging materials in case it becomes necessary to ship the machine back to the dealer, or to another site.

Machine Preparation and Setup

WARNING!

The equipment used to lift this machine must have a rated capacity at, or above the weight of the sander. Failure to comply may cause serious injury!

A forklift can be used to lift the machine from underneath. The sander can also be lifted from over head using the four lifting eyelets (B, Figure 1).

The sander must be positioned on a smooth, level surface. Install the leveling feet under the four corner flanges of the wide belt sander, as shown in Figure 2.



Figure 1

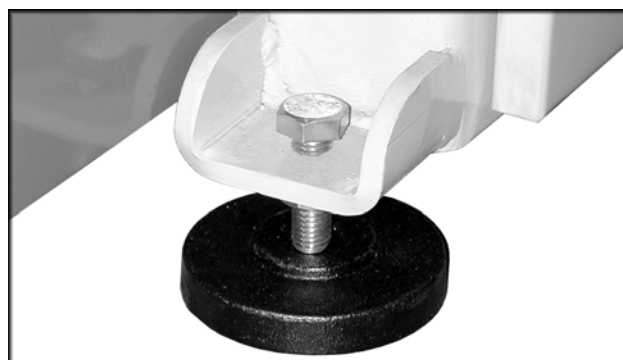


Figure 2

Connecting to a Dust Collector

The dust collection port is located at the top of the machine, (A, Figure 3). The dust port has a 6" diameter. Make sure the dust collection system has sufficient capacity and suction for your sander. Always turn on the dust collection system before starting the sander.

Connecting to Air

The pneumatic connection is made at the left, rear of the sander. Connect the air hose to the Oliver 5370 sander at the male, 3/4" quick connect fitting (B, Figure 4).

Pull up on adjustment knob (C, Figure 4) and turn to set the air pressure to approximately 80 psi. Push adjustment knob down to lock.

Drain any water that may accumulate in the collector by turning the valve (D, Figure 4).

Add air tool oil to the container (E, Figure 4) whenever the oil level reaches the minimum mark on the container.

Electrical Connections

This wide belt sander is 3-Phase, 220V/440V **pre-wired 220V**. If you need to switch the sander from 220V to 440V have a qualified electrician make the changes.

Maximum current draw is approximately 60 amps. Oliver Machinery recommends the use of a 4 conductor, 6 gauge electrical cable hard wired to a designated circuit.

WARNING!

Electrical connections and wiring must be done by a qualified electrician. The machine must be properly grounded. Failure to comply may cause serious injury!

1. **Disconnect machine from power source!**
2. Remove four screws that secure the cover of faceplate to the connection box.
3. Insert the power cable through strain relief, and attach the wires to the terminals, as shown in Figure 5. Continued next page.



Figure 3

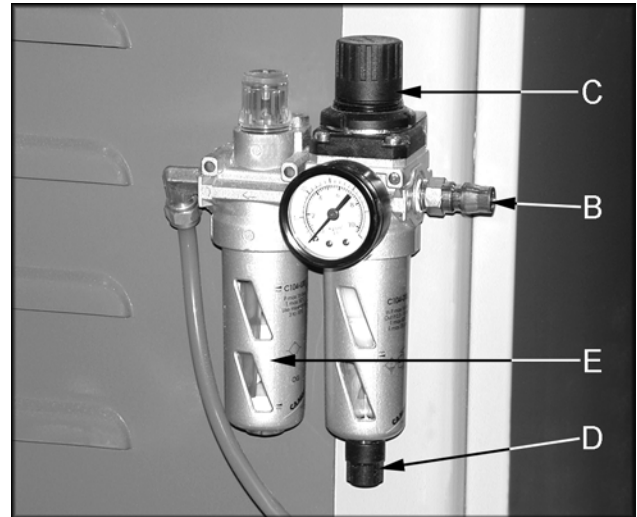


Figure 4



Figure 5

4. Re-install the connection box cover. **Note:** turn machine on and press the raise conveyor table button. If conveyor table lowers disconnect the machine from power source and switch two of the three power source wires.

Control Panel

- A. **Feed On:** Starts conveyor when main power switch is in the “ON” position.
- B. **Feed Stop:** Stops the conveyor.
- C. **Table Up:** Raises conveyor table when main power switch is in the “ON” position.
- D. **Table Down:** Lowers conveyor table when main power switch is in the “ON” position.
- E. **Spindle Off:** Stops the sanding belt.
- F. **Spindle On:** Starts sanding belt when main power switch is in the “ON” position.
- G. **Main Power On/Off:** Turns main power to the machine “ON or OFF.”
- H. **Emergency Stop:** Stops all functions of machine, but the sander still has power. To reset rotate switch clockwise until the button pops out.
- I. **Power Indicator:** Lights up when sander has power and main power switch is in the “ON” position.
- J. **Overload Indicator:** Lights up when the machine is overloaded.
- K. **Amp Meter:** Displays amp reading.
- L. **Digital Control:** Controls table height.

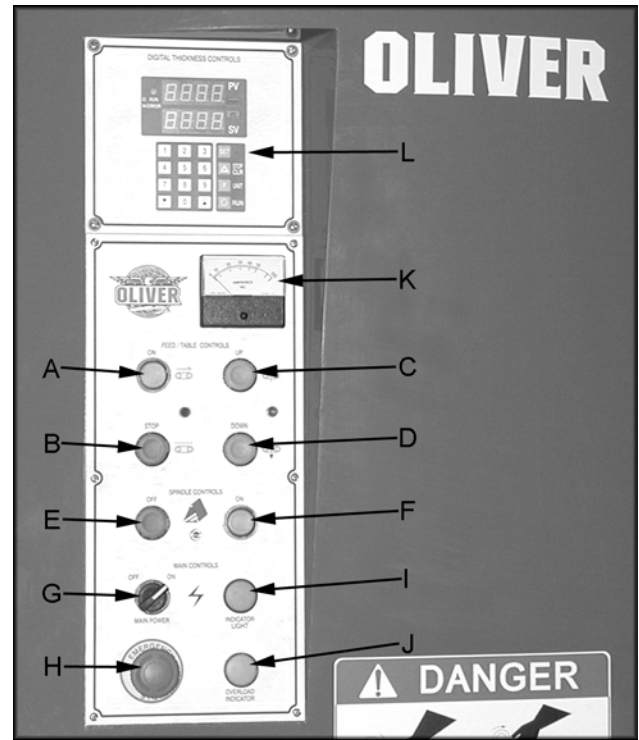


Figure 7

Features and Controls

- A. **Table Height Adjustment Handwheel:** The handwheel can be used to raise and lower the conveyor table.
- B. **Table Limit Switch:** There is a lower and upper limit switch to stop the conveyor table from lowering and raising while using the automatic controls. If these switches are triggered you will need to use the manual handwheel to move the conveyor past the switch before the automatic controls can be used again.
- C. **Emergency Stop:** Stops all functions of machine, but the sander still has power. To reset rotate the switch clockwise until button pops out.
- D. **Feed Rate Adjustment Knob:** Rotate knob to adjust conveyor feed rate between 16-49 feet per minute. **Important:** only change feed rate while the conveyor is moving!

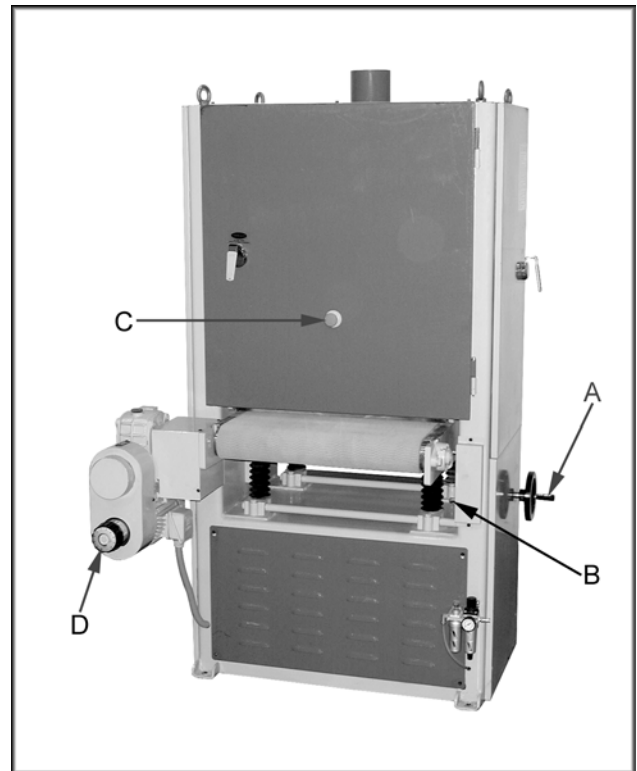


Figure 8

- E. **Door Handle:** Rotate handle to latch the door. Pull the handle straight up to remove and insert into any of the hubs found on the doors.
- F. **Thickness Limit Safety Switch:** The limit switch is behind the guard and will “trip” cutting power to the machine if the material being fed through the machine is too thick.
- G. **Electrical Box:** This houses the main electronics of the sander. There is an On/Off breaker inside the cabinet that must be in the “ON” position to operate the machine.

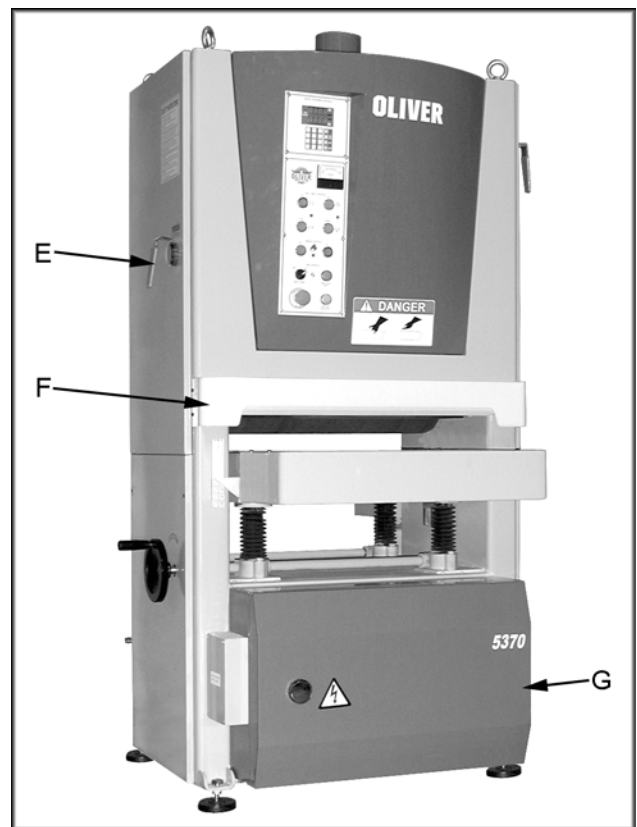


Figure 9

Installing Sanding Belts

1. **Disconnect sander from power source.**
2. Open access door to the sandpaper and turn the belt tension switch (A, Figure 10) to the "LOOSE" position. **Note:** you will need to have the machine connected to air.
3. Turn the locking handle (B, Figure 10) counter-clockwise and pull straight up to remove. You may need to jiggle the handle back and forth to free.
4. Remove the spacer (C, Figure 10).
5. Install the sanding belt as shown in Figure 11. **Note:** check the backside of the belt for any direction arrows and install accordingly. Also, make sure belt is installed in front of photoelectric sensor as shown in Figure 11.
6. Turn belt tension switch to "TIGHT" position and replace the spacer and locking handle.
7. Close and secure all doors.

Adjusting Platen Position

The platen can be adjusted up, or down. It can also be removed. You can achieve different results by experimenting with different positions.

1. **Disconnect sander from power source.**
2. Open access door to the platen and loosen the platen locking handle (D, Figure 11).
3. Rotate platen adjustment handle (E, Figure 11) until the desired position is achieved.
4. Re-tighten the locking handle.

If you want to sand on the drum surface rather than the platen:

1. **Disconnect sander from power source.**
2. Open access door to the sandpaper and turn the belt tension switch (A, Figure 10) to the "LOOSE" position. **Note:** you will need to have the machine connected to air.
3. Turn the locking handle (B, Figure 10) counter-clockwise and pull straight up to remove. You may need to jiggle the handle back and forth to free.
4. Remove the spacer (C, Figure 10).

5. Use the T-handle hook to pull the platen out towards you removing it completely. There is a hole in the end of the platen to accommodate the hook. Turn belt tension switch to "TIGHT" position and replace the spacer and locking handle.



Figure 10



Figure 11

Setting Belt Tracking

WARNING!

Setting belt tracking may require operator to have machine hooked to electrical and air power while having doors open. Use extreme caution! Failure to comply may cause serious injury!

The tracking has been set at the factory and should not need adjusting. If you are experiencing a tracking problem follow the steps listed below.

The abrasive belt must track between the two limit switches (A, Figure 12). The machine functions will stop if the belt activates one of the limit switches.

The air pressure should be approximately 80 psi, see "Connecting to Air," page 7.

1. Start by turning both valves (B, Figure 13) clockwise to close completely. This will turn off the oscillation.
2. Loosen belt tension and position sanding belt in the center of the idle roller.
3. Turn the sander main power switch to the "ON" position. Jog the main motor by pressing the spindle "ON" button quickly followed by the spindle "OFF" button.
4. Once you have determined which way the belt is drifting loosen the two hex nuts (C, Fig. 13).
5. If belt is running too far to the left (viewed from back of sander) rotate the top of the turnbuckle (D, Figure 13) toward the user.
6. If belt is running to far to the right (viewed from back of sander) adjust the top of the turnbuckle (D, Figure 13) away from the user.
7. Once the belt is tracking approximately in the center of the idle roller press the spindle "OFF" button.
8. Hold the turnbuckle in place while tightening the lock nuts.
9. Press the spindle "ON" button and recheck the tracking.

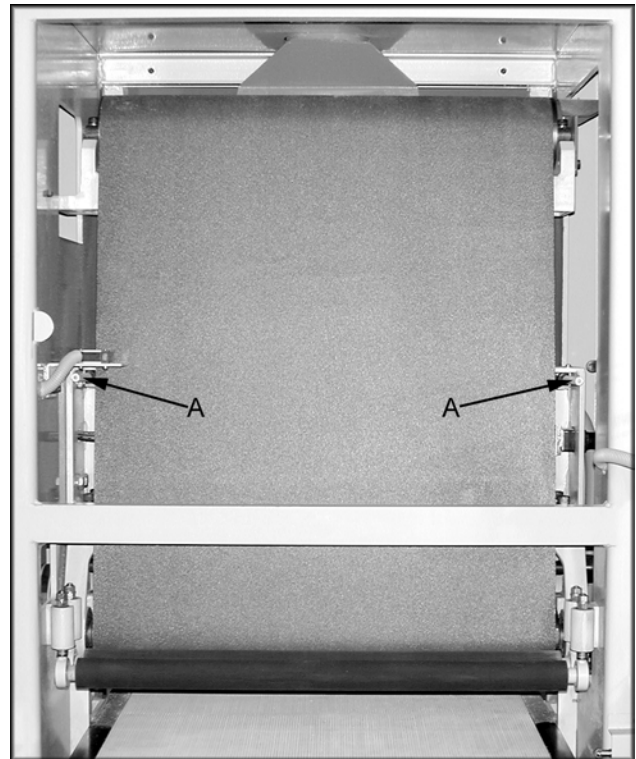


Figure 12

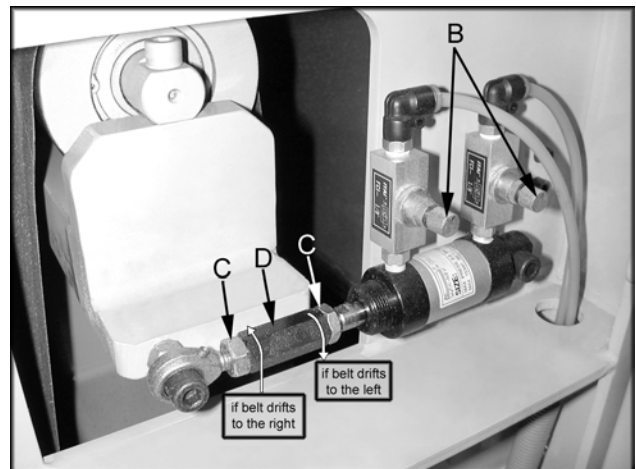


Figure 13

Setting Belt Oscillation

WARNING!

Setting belt oscillation may require operator to have machine hooked to electrical and air power while having doors open. Use extreme caution! Failure to comply may cause serious injury!

Now that the belt is tracking properly it is time to set the oscillation. Follow the steps listed below.

1. Start by opening both valves (A, Figure 14) approximately a 1/4 turn.
2. If the belt is oscillating too quickly, close each valve by approximately 1/16 turn. If the belt is oscillating too slowly, open each valve by approximately 1/16 turn.
3. Once the belt is oscillating with the correct speed (about one complete cycle every second), lock the valves in place with the lock rings (B, Figure 14).

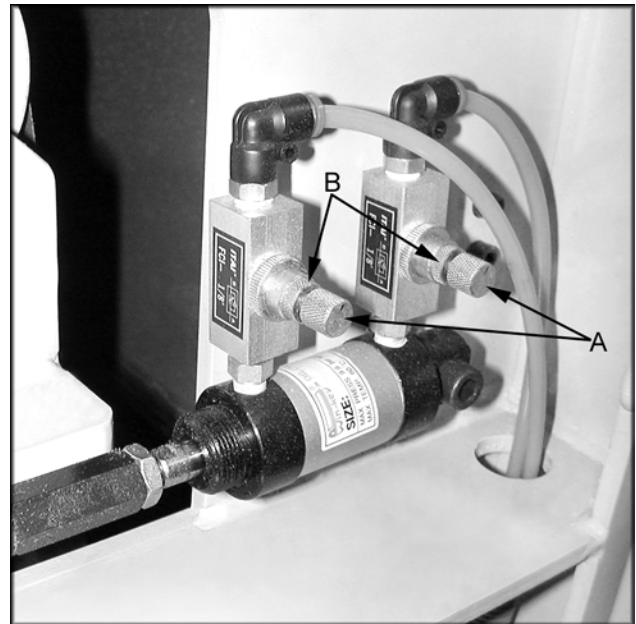


Figure 14

Digital Controller

- A. This LED readout displays the current thickness setting of the machine.
- B. The digital thickness controls are capable of operating and displaying in either inches, or millimeters.
- C. This LED readout displays the value input by the operator on the keypad.
- D. Four function buttons are available to the user: SET, STOP/CLEAR, UNITS, and RUN. The use of these buttons is detailed in the following sections.
- E. The keypad is used to input set values (the operator's desired thickness setting). The up and down arrows can be used to move the table up or down without keying in an exact numerical thickness value.
- F. This indicator light will illuminate a steady yellow when the table is moving up or down. This light will blink if there is an error of any sort.

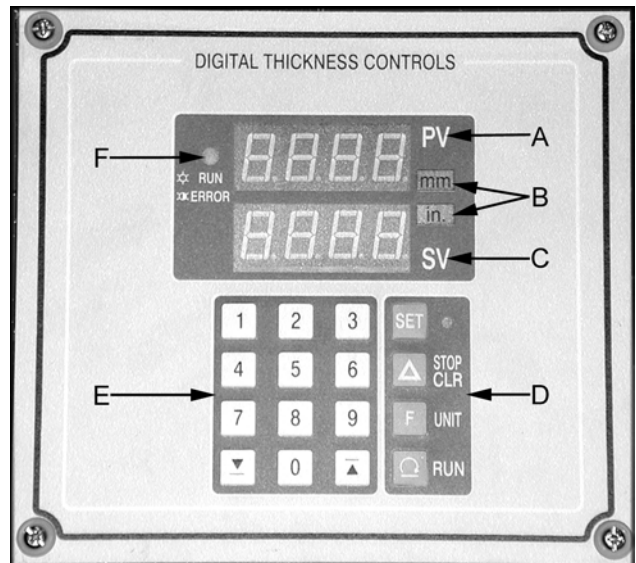


Figure 15

Changing Units of Measure

1. Press "SET" button (A, Figure 16) once, and two changes will occur. First the present value will change to "uuuu". Second the "SET" button indicator light will illuminate.
2. Now press "UNIT" button (B, Figure 16) once. The present value should now read inches, and the "Inches" indicator light should be illuminated.

Note: To change back to millimeters from inches follow the same procedure – press the "SET" button then "UNIT" button.

Sanding to a Specific Thickness

1. Key in the desired thickness setting on the keypad. The desired thickness setting will be displayed as the set value.
2. Press the "RUN" button (C, Figure 16). This will cause the table to move up, or down until the set value is achieved.
3. While the table is moving you will notice that the run indicator light will be illuminated.

Note: do not feed material through the sander while the conveyor is raising or lowering.

Calibrating the PV (Present Value)

The controller should be recalibrated in a variety of circumstances: whenever the platen height is adjusted, changing brands or grits of abrasive belt, setting up the machine for the first time, or the operator feels that the machine is not sanding to exactly the proper thickness.

The following sections will describe the use of a calibrating board. The calibrating board should be made of a hardwood.

1. With the sanding belt and feed belt turned "OFF", place your calibrating board on the feed belt and slide it into the machine.
2. Use the "UP" button (D, Figure 16) to raise the table so that the pressure rollers are about 1/32" above the calibrating board, see Figure 17.
3. Remove calibrating board from sander and turn the feed belt and abrasive belt "ON".
4. Use the "UP" button to raise the table 0.02", as indicated by PV (Present Value) and run the calibrating board through the sander.

5. If sander does not sand the top of your board, raise the table 0.01" and re-run the board.
6. Repeat Step 5 until the wide belt sander lightly sands the entire top surface of your calibrating board.
7. Measure the thickness of the board using a pair of calipers.
8. Enter the measured thickness value from Step 7 on the keypad. The value keyed in will be displayed as the SV (Set Value).
9. Press the SET button. The PV readout will now display "uuuu". Also, the SET indicator light will be illuminated.
10. Press the SET button again.
11. The PV and SV readouts should now both display the measured thickness of your calibrating board.

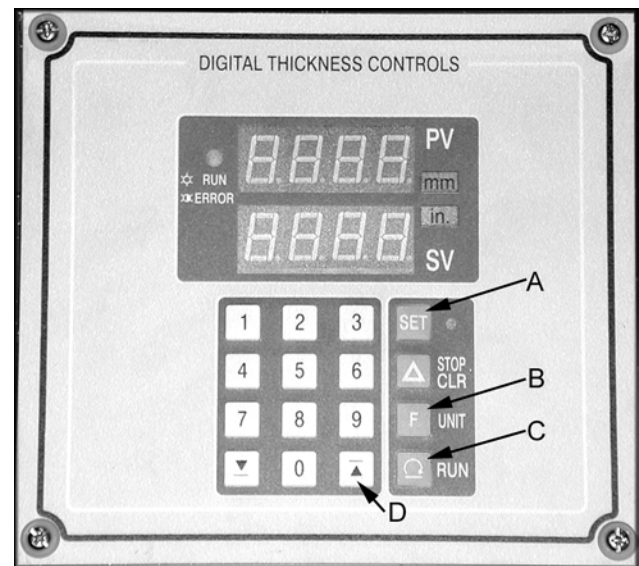


Figure 16

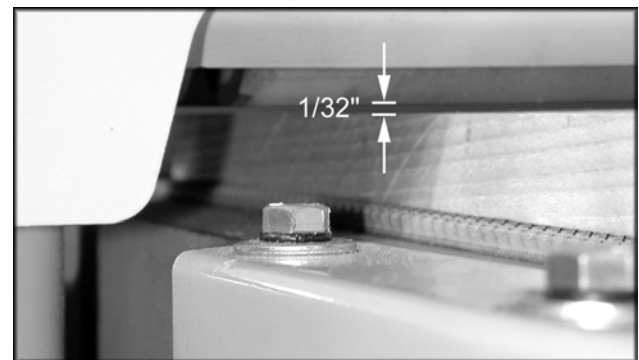


Figure 17

Thickness Scale

After setting the present value using the calibration board adjust the pointer (A, Figure 18) so that it matches the present value.

Conveyor Tracking

1. Remove the guard (B, Figure 18).
2. Turn on the conveyor and adjust to the highest speed.
3. If conveyor drifts to the left rotate tracking bolt (C, Figure 19) clockwise a 1/2 turn. The adjustments are not noticeable right away due to the slow speed the conveyor travels.
4. If conveyor drifts to the right rotate tracking bolt (D, Figure 19) clockwise a 1/2 turn. The adjustments are not noticeable right away due to the slow speed the conveyor travels.
5. Replace the guard after adjustments are complete and the conveyor is tracking properly.

Adjusting V-Belt Tension

1. **Disconnect the sander from the power source.**
2. Gain access to main motor (E, Figure 20) and the table raising motor (F, Figure 20).
3. Loosen bottom nuts (G, Figure 20) and lower motors to increase belt tension. Tighten the upper nuts.
4. Loosen upper nuts (G, Figure 20) and tighten lower nuts to raise the motors to decrease belt tension.

Replacing V-Belts

1. **Disconnect the sander from the power source.**
2. Gain access to main motor (E, Figure 20) and the table raising motor (F, Figure 20).
3. Loosen upper nuts (G, Figure 20) and tighten lower nuts to raise the motors to decrease belt tension.
4. Gain access to three main v-belts, or table raising/lowering belt and replace as needed.

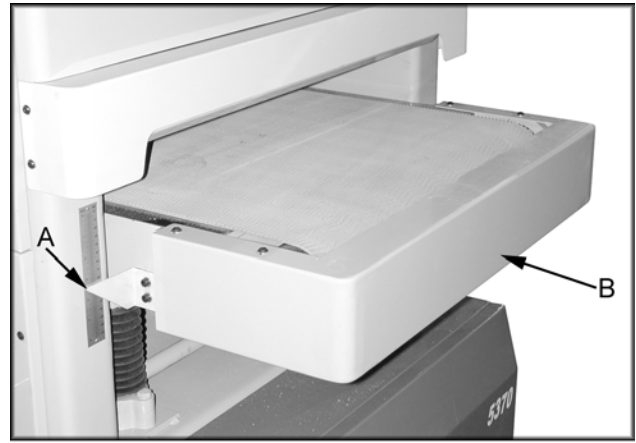


Figure 18

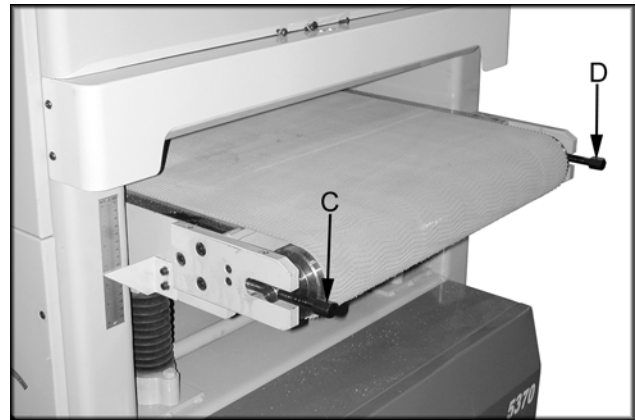


Figure 19

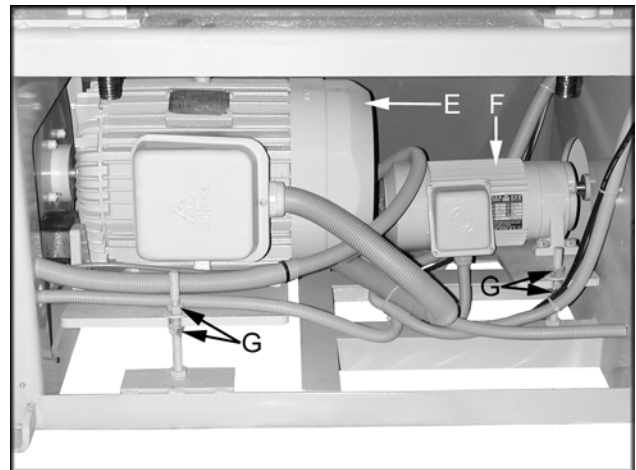


Figure 20

Maintenance

Maintenance	Daily	Weekly	Monthly
1. Keep the inside and outside of the machine free of sawdust.	X		
2. Replace worn or broken sanding belts.	X		
3. Check lubricant level in feed gear box – if low, fill with a multipurpose gear oil (such as Mobil SHC 630)		X	
4. Check lubricant level in pneumatic oiler assembly – if low, fill with a multipurpose air tool oil (such as Mobil Almo 525)		X	
5. Lubricate the grease fitting on the outfeed side of the feed table with a multipurpose grease (such as Mobile AW2 grease).			X
6. Remove condensation from the moisture collector found on the pneumatic inlet.	X		

Troubleshooting

Description of Symptoms	Possible Cause	Corrective Action
Machine will not turn on, no lights	<ol style="list-style-type: none"> No power Breaker tripped Magnetic switch tripped 	<ol style="list-style-type: none"> Check power cable and power source Check circuit breaker in the sander electrical box Reset the magnetic switches in the sander electrical box
Machine will not run, some lights on	<ol style="list-style-type: none"> Abrasive belt limit switch tripped Table limit switch tripped 	<ol style="list-style-type: none"> Make sure the belt is tracking properly Move the table manually with the handwheel to disengage the limit switch
Machine stops when sanding	<ol style="list-style-type: none"> Removing too much material Incorrect air pressure Drive belt slippage 	<ol style="list-style-type: none"> Move the table down to reduce sanding load Set air pressure to approximately 80 psi Tighten drive belts
Conveyor belt slips	Conveyor belt tension incorrect	Adjust conveyor belt tension
Snipe at beginning of workpiece	<ol style="list-style-type: none"> Incorrect tension in front pressure rollers Workpiece not supported properly 	<ol style="list-style-type: none"> Adjust front pressure rollers Support the workpiece adequately
Gouge at end of board	Workpiece not supported properly	Support the workpiece adequately
Sanding belt clogs too quickly	<ol style="list-style-type: none"> Grit of sanding belt is too fine Sanding overload Too much oil, dirt on wood surface 	<ol style="list-style-type: none"> Replace with larger grit Reduce sanding load Clean wood, or use better stock
Workpiece edges are rounded	Too much material being removed	Lower the table
Uneven thickness between the left and right sides of the workpiece	<ol style="list-style-type: none"> Conveyor table not parallel to contact roller Conveyor belt worn Graphite cloth and felt pad on platen are worn 	<ol style="list-style-type: none"> Adjust conveyor table/contact roller to parallel Replace conveyor belt Replace graphite and felt pad