



T E C H N O L O G I E S

MAXYM Dovetailer Installation & Maintenance Manual

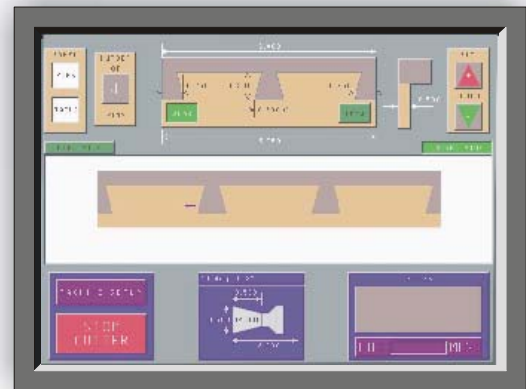
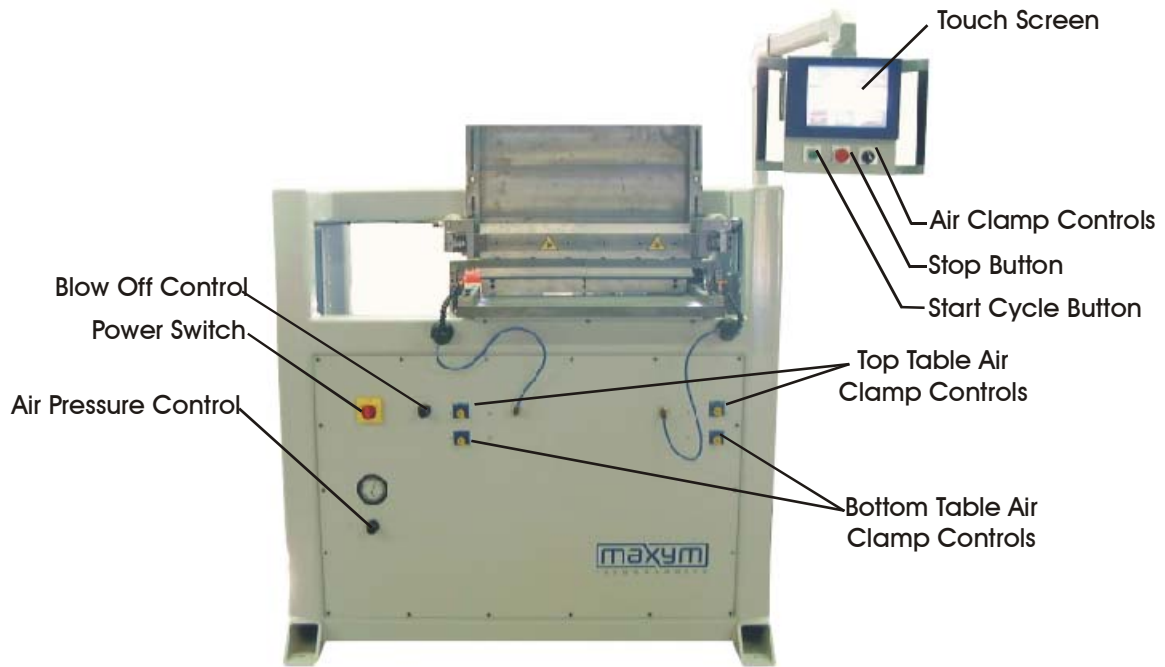


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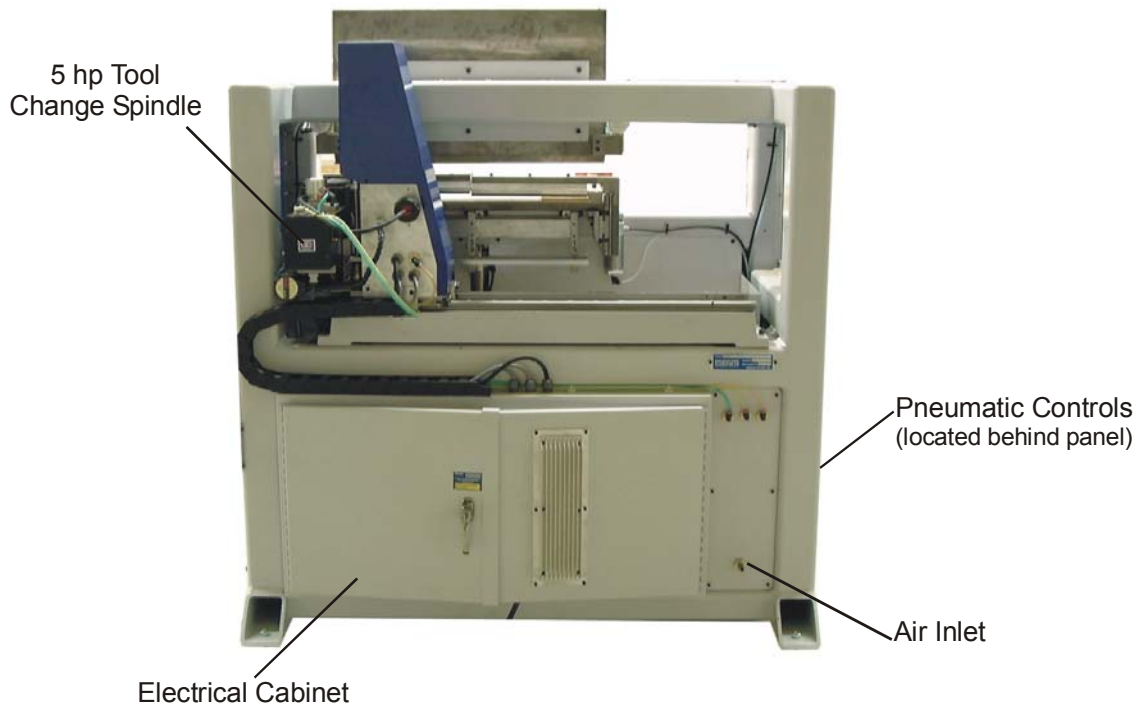
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Visual Tour

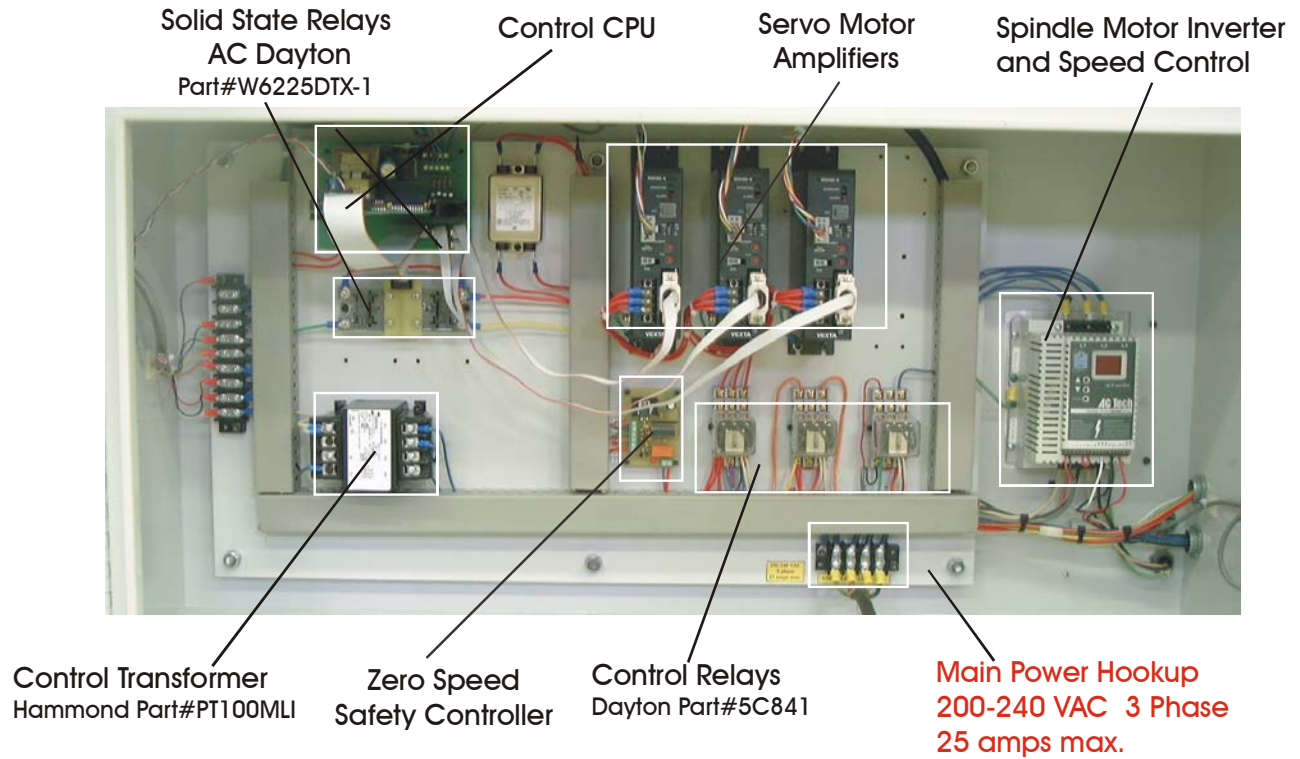
Front View



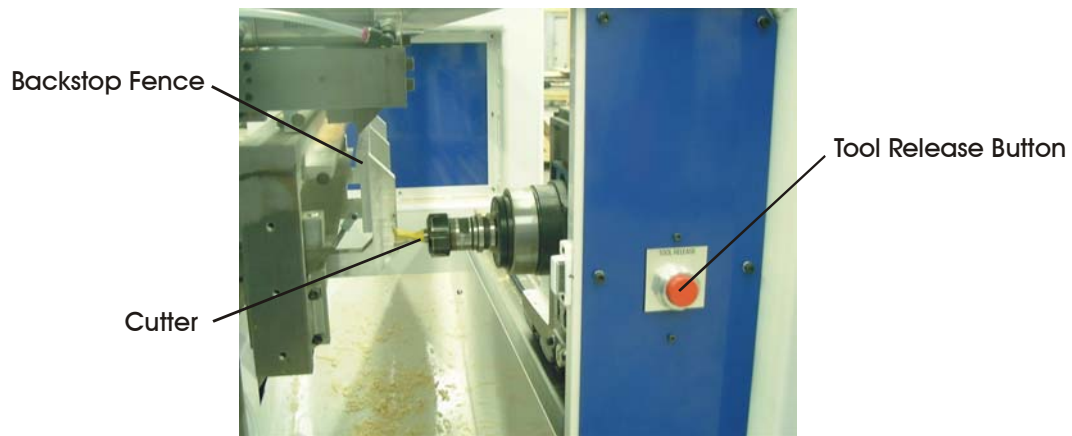
Rear View



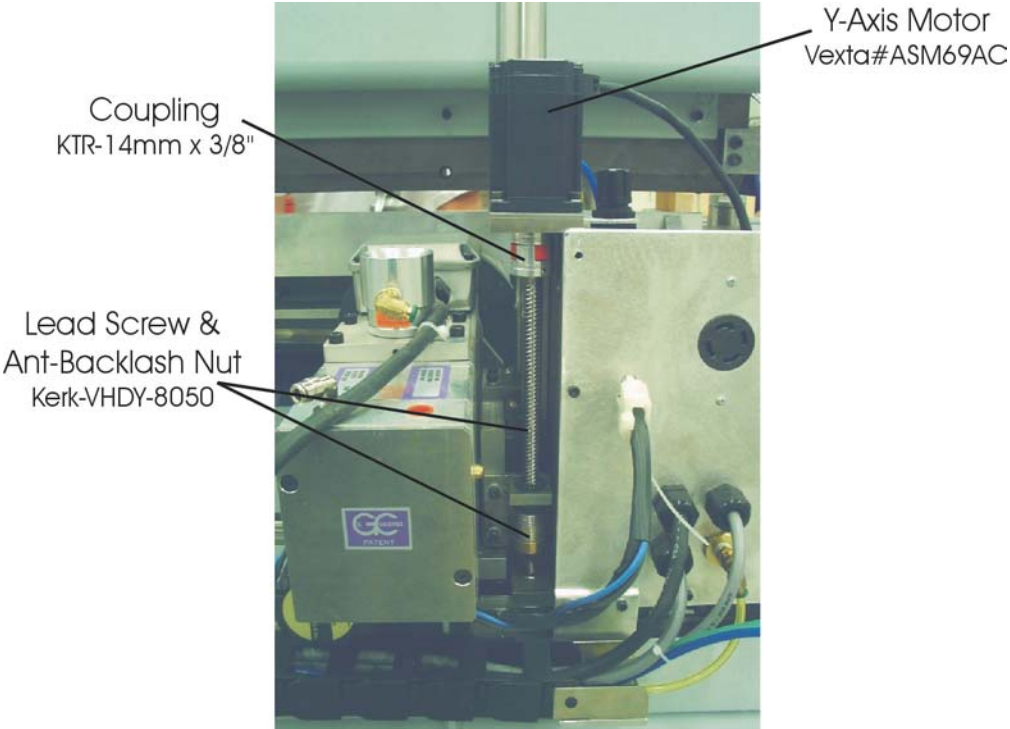
Electrical Cabinet



Cutter, Backstop Fence and Tool Release Button

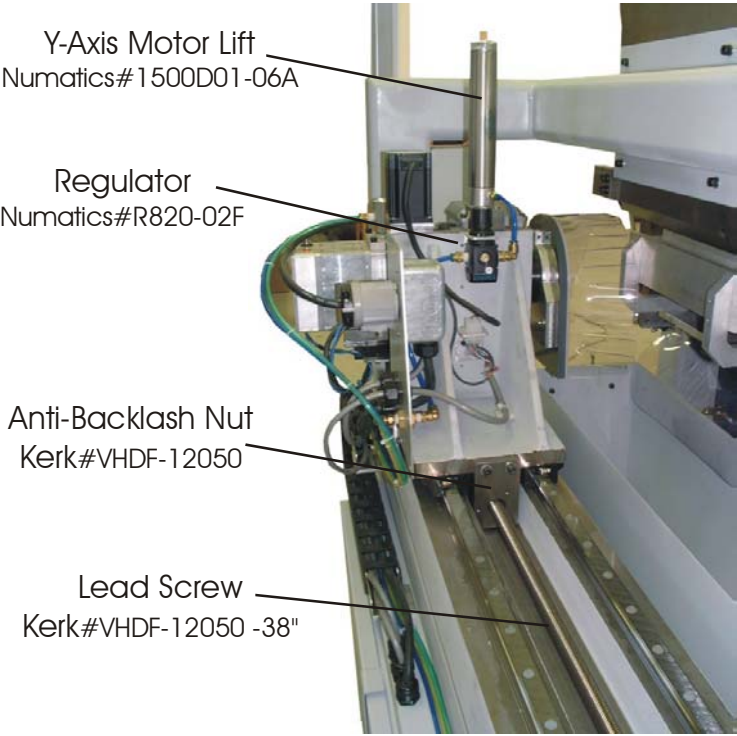


Y Axis



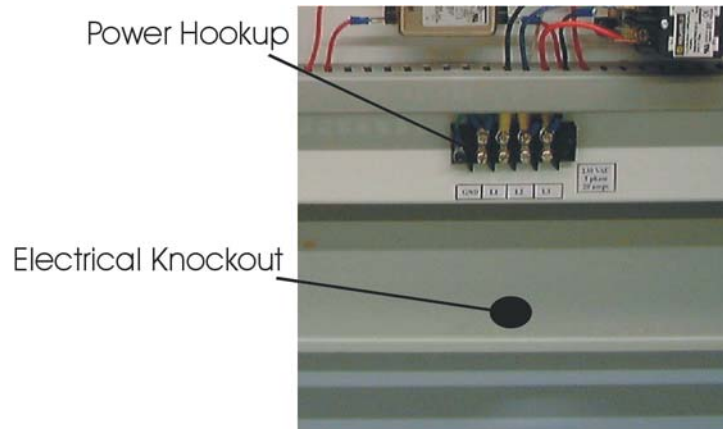
Note: Z Axis components are the same as the Y Axis

X Axis & Y Axis Components



Setting Up the Dovetailer

Electrical Hookup



The MAXYM Dovetailer requires 200-250 VAC 3 phase power at a maximum of 25 amps. The power connects at the lower rear of the dovetailer inside the electrical cabinet, as shown below. Power enters the electrical cabinet through a knockout hole on the lower edge of the cabinet near the power hookup terminal block. An external disconnect should be supplied to shut off the power to the dovetailer if the power switch is not accessible.

Air Hookup

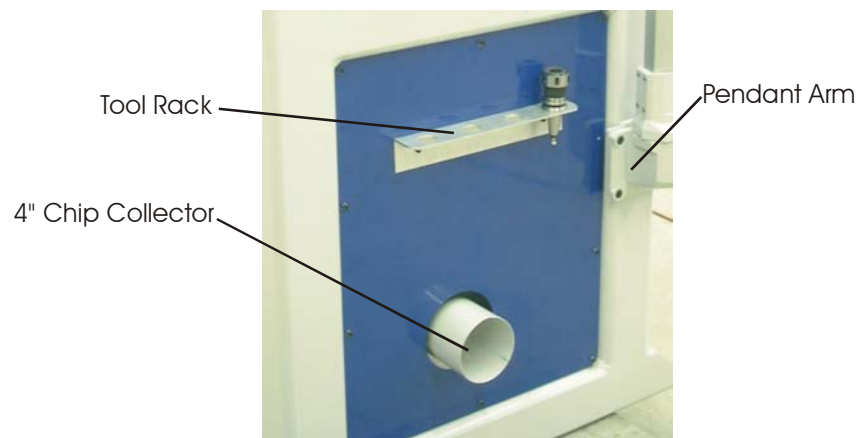
Compressed air is required for the operation of the Maxym Dovetailer. The air clamps on the dovetailer require a minimum of 80 psi for safe clamping. The spindle motor's lift is also supplemented with compressed air, requiring a minimum of 40 psi. The dovetailer will not operate if the compressed air pressure drops below 40 psi.

The compressed air connects to a 1/4" female N.P.T. pipe fitting on the rear side of the dovetailer.. See **Rear View on Page 1**.

Note: Even though there is a filter and water trap on the back of the air connection panel, the air supply should be clean and dry.

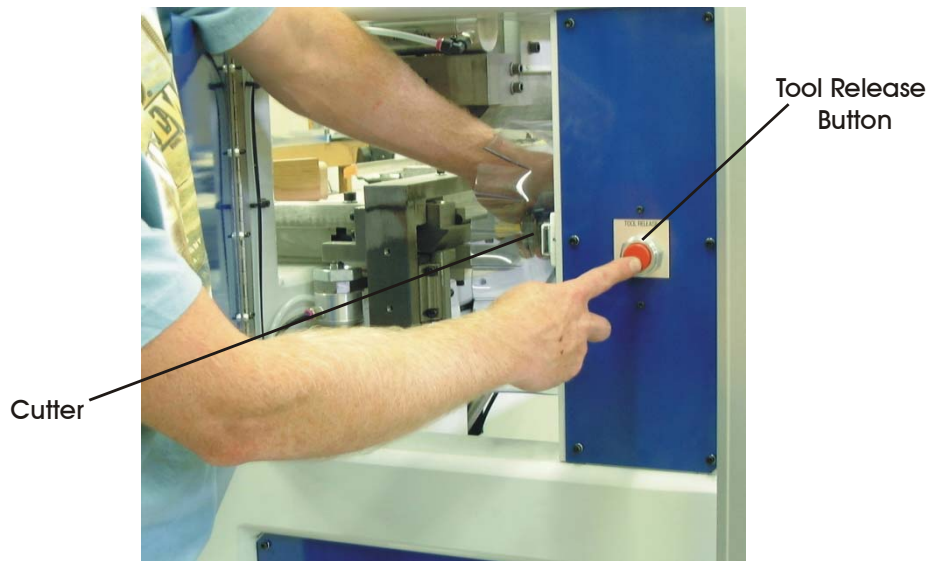
Dust Collection Hookup

A 4" hose connection is located on the right hand side of the machine, as shown below.



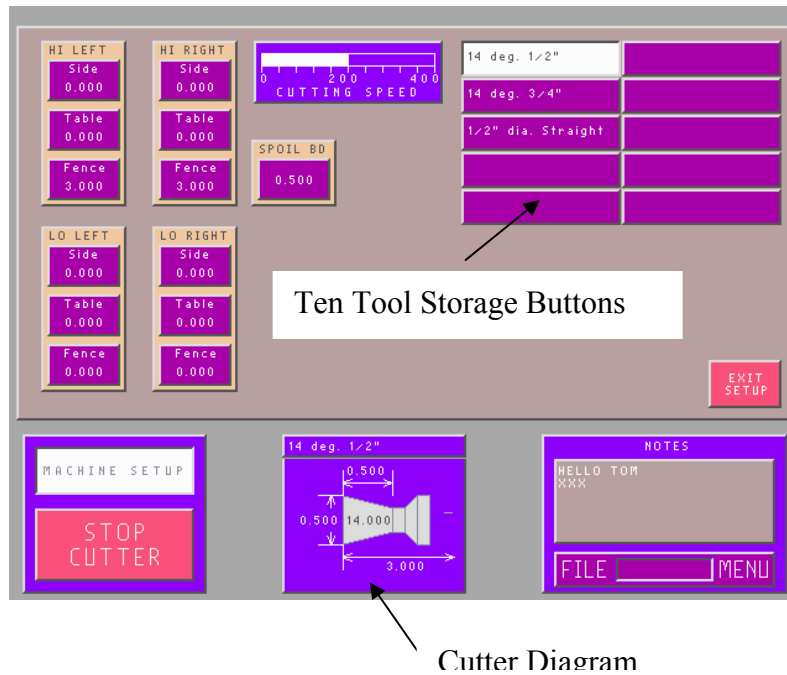
Changing the Cutter

To change the cutter you hold on to the tool and then press on the Tool Release Button as shown below.

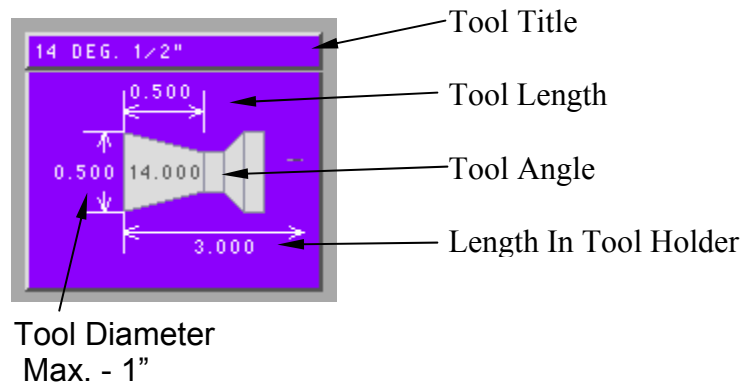


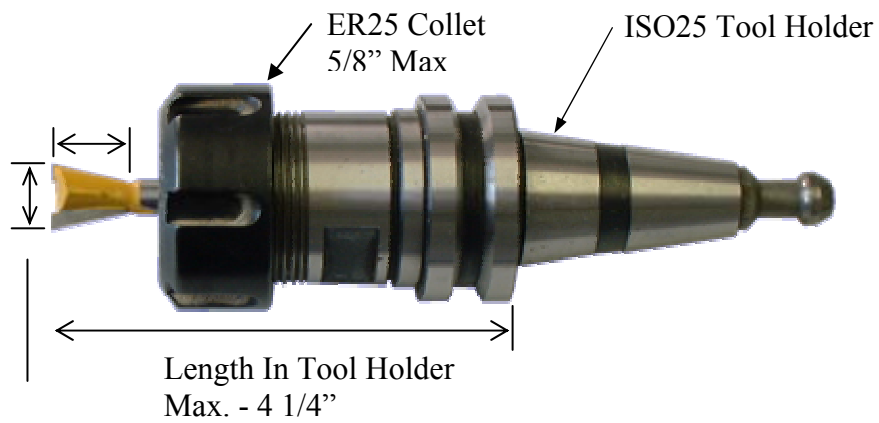
Preparing your dovetail Tools

Before you operate your Maxym dovetailer you will need to know the type of cutters you will be using. You can enter up to ten different cutters in the tool table. To enter cutters into the table touch the **MACHINE SETUP** button. Touch one of the ten tool buttons on the upper right corner of the setup screen. If you touch a blank button you will be ask if you would like to create a straight or angle entry. Then touch the dimension you would like to change on the cutter diagram at the bottom of the screen.



After entering the tool dimensions you must enter a tool title for the tool to be entered in the table. If you would like to remove a tool from the table touch the tool button and then touch the title on the cutter diagram. When the keypad appears touch the 'ESC' to remove the tool.





Straight tools are used for cutting through pins. The Tool Angle must be entered for the mating tail, therefore a straight tool entry must be setup for each joint angle even if you are using the same tool.

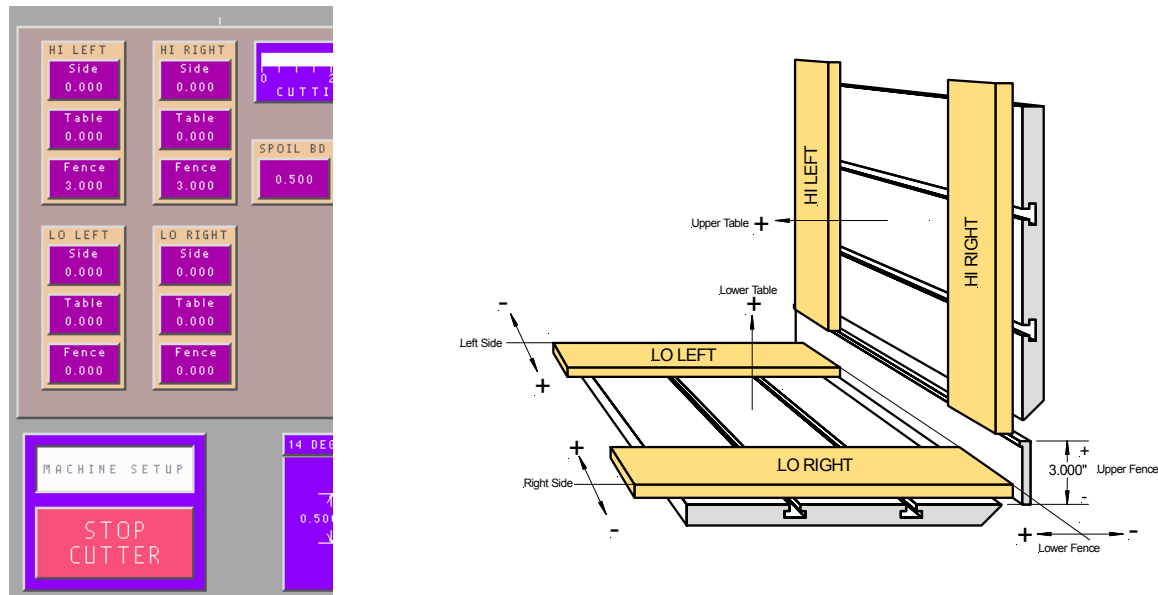
The Length in the Tool Holder can be measured with an indicator stand. Before measuring the tool holder, be sure to zero the indicator by touching the tip to the stand base and setting all the displays to zero.



Calibration

The Maxym Dovetailer is calibrated at the factory prior to shipping. These settings are saved in a permanent file on the Dovetailer. It is recommended that you cut and measure a test dovetail to ensure that the machine is calibrated. See the Maxym Dovetailer Operating Manual for using the touch screen to setup your dovetail joint.

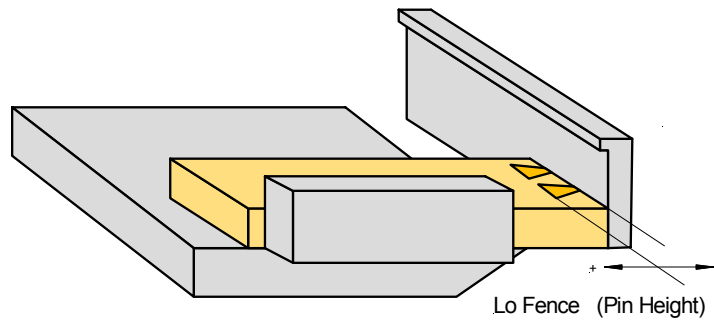
Three dimensions, **SIDE**, **TABLE** and **FENCE**, calibrate the dovetailer at each of the four corners of the machine.



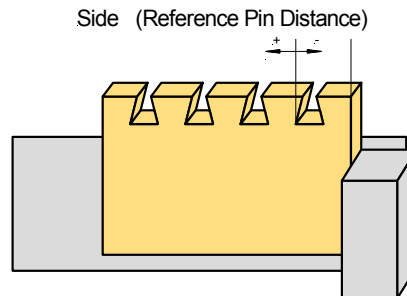
The calibration points are used to reference the stocks position to the center line of the spindle. The **SIDE** calibration is referenced from one of the four side fences. The **TABLE** calibration is referenced from the surface of the table at the edge of the four fences. The **FENCE** calibration is where the stock makes contact with the insert stop at the four fence locations.

The lower table should be set first, starting with the fence. Because of the tapered cutter, the insert fence will affect the side dimensions. This is also true of the upper table, but to get an accurate upper fence setting, you will need to fit it to the blind tail cut on the lower table.

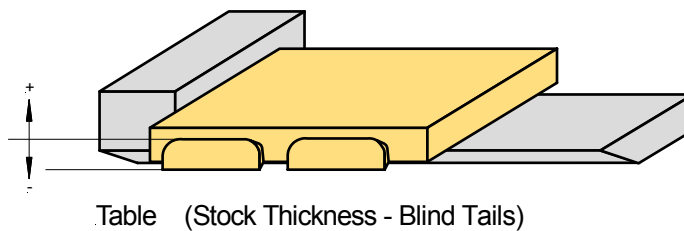
The fence calibrations use different references for the lower and upper tables. For the lower tables insert fence calibration you should check to see if the tail height matches the Pin Height as entered.



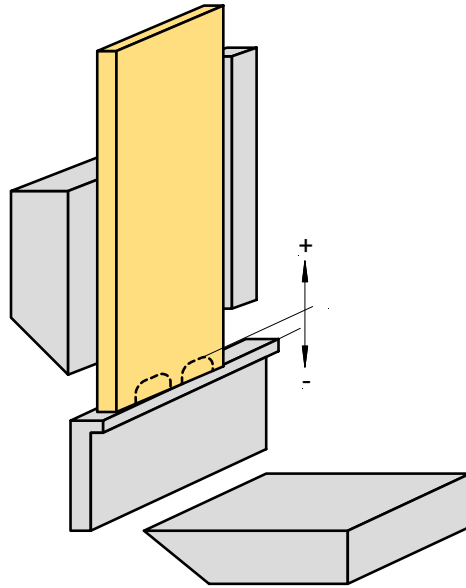
To check the side calibrations, measure the distance from the edge of the stock to the inside of the pin located closest to the fence. Remember, this pin could be a partial pin or 'half pin'. Making this number larger will increase the distance from the fence. All the calibration numbers can be positive or negative. If the number is negative, increasing the number will decrease the distance.



The table calibration can be checked by measuring the height of the blind tail. The height should match the Stock Thickness.



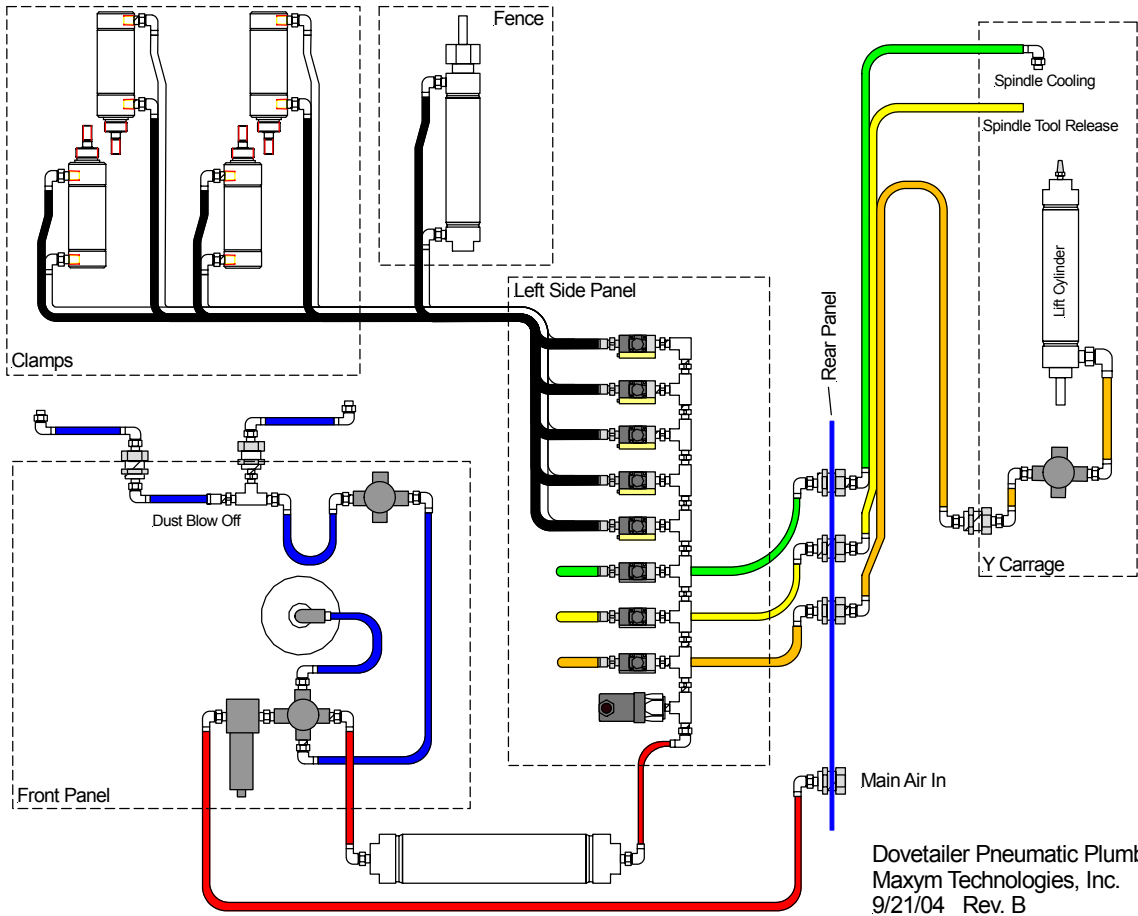
The upper table is used to cut only the blind pin and the depth of the pin should be compared to the Stock Thickness.



Hi Fence (Stock Thickness - Blind Pins)

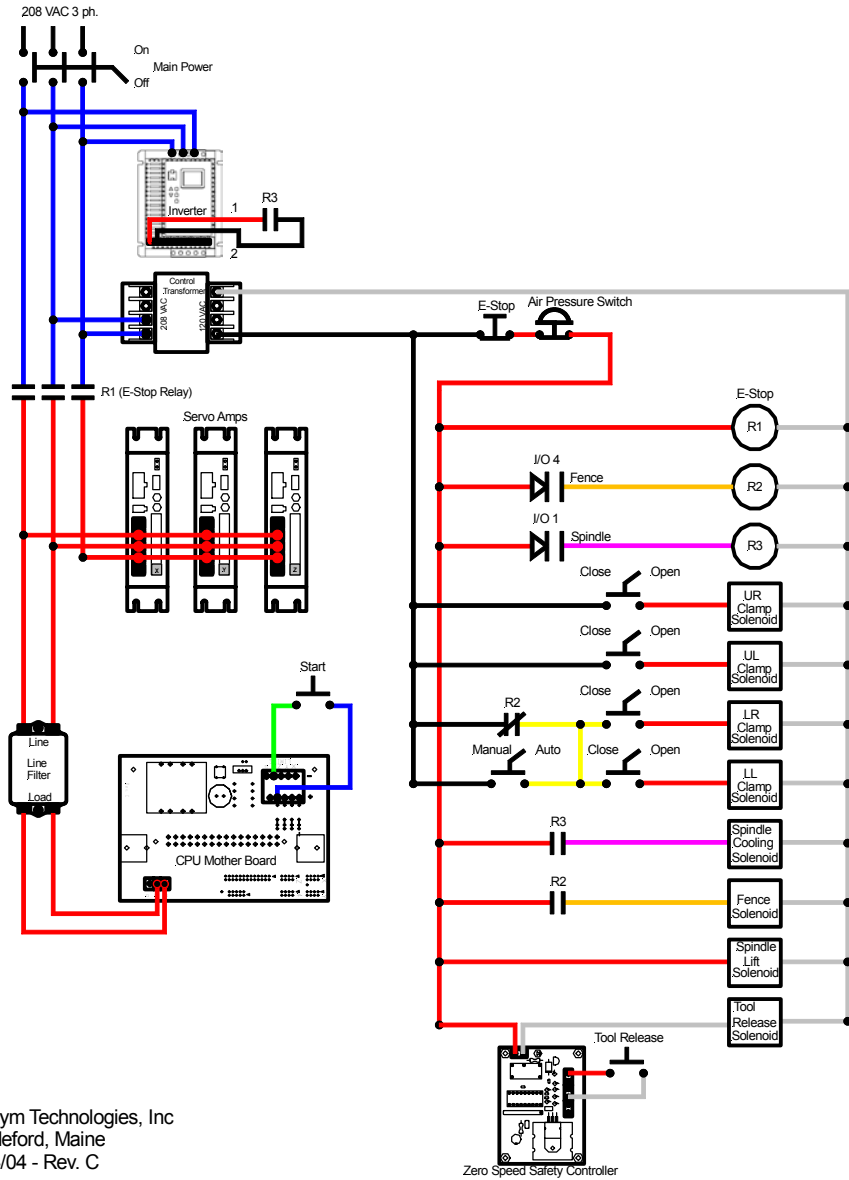
To access one of the four locations you will use the **LEFT SIDE** or **RIGHT SIDE** buttons for the lower table and these buttons along with the **BLIND** and **PINS** for the upper table. Remember, the upper table is used to cut blind pins only.

Plumbing Diagram



Dovetailer Pneumatic Plumbing
Maxym Technologies, Inc.
9/21/04 Rev. B

Wiring Schematic



Maxym Technologies, Inc
Biddeford, Maine
9/24/04 - Rev. C

MAXYM Dovetailer Maintenance Schedule

The Maxym Dovetailer requires very little maintenance to keep it running smoothly. In fact, most maintenance involves keeping the machine clean and as dust free as possible in a shop environment.

Bearing Ways

When: If the machine is used for 8 hours a day, then the machine should be cleaned once a month. If the machine runs 16 hours a day, then the machine should be cleaned every two weeks. If you cut soft wood such as pine, which contains more resin, then once a week is sufficient. If you cut plastics or hard woods on the machine, then once a month is sufficient.

Use: There are five bearing ways that carry the spindle in its two axes: two on the X axis, two on the Y axis and one on the powered back stop. These bearings should be wiped with penetrating oil such as WD40 or Marvel Mystery Oil to remove buildup of dust and resin from wood. After cleaning the bearings they should then be wiped down with motor oil such as 10W-30. This step prevents the steel ways from corrosion, but does not serve as a lubricant.

Do not use heavy lubricant or grease in the bearing ways because this will trap dust and bind the machine.

Bearing Carriages

When: The carriages should be greased every 12 months, if the machine is operating 8 hours a day.

Over greasing can open end seals and contaminate bearings.

Use: Lithium Soap based grease No. 2.

Drive Screws

The drive screws are made of stainless steel and do not require lubrication.

When: If the machine is used for 8 hours a day, then the machine should be cleaned once a month. If the machine runs 16 hours a day, then the machine should be cleaned every two weeks. If you cut soft wood such as pine, which contains more resin, then once a week is sufficient. If you cut plastics or hard woods on the machine, then once a month is sufficient.

Use: There are three drive screws, one on the X axis, one on the Y axis and the other one the Z axis. Clean these screws with penetrating oil such as WD40 or Marvel Mystery Oil to remove buildup of dust and resin from wood. After cleaning the screws, remove the excess oil. No other lubrication is required.

Do not use a heavy lubricant or grease because this will trap dust and bind the machine.

Router

Refer to the operating manuals supplied with the routers.

Servo Motors

When: No Maintenance

Use: No Maintenance

Limited Warranty

MAXYM Technologies warrants that the Maxym software and hardware will perform substantially in accordance with MAXYM Technologies software operating manual and hardware specifications, and will be free of defects in material and workmanship under normal use and service for a period of one year from the date of receipt.

MAXYM Technologies's entire liability and your exclusive remedy shall be, at MAXYM Technologies option, either return of the price paid or repair or replacement of the defective software and or defective hardware component that does not meet MAXYM Technologies's limited warranty and which is returned to MAXYM Technologies with a copy of your sales receipt. This limited warranty is void if failure of the software or hardware has resulted from accident, abuse, or misapplication. Any replacement or repair will be warranted for the remainder of the original warranty period or 30 days, which ever is longer.

MAXYM Technologies disclaims all other warranties, whether expressed or implied, including but not limited to implied warranties, merchantability, and fitness for a particular purpose, with respect to the software, hardware, and accompanying written materials. This limited warranty gives you specific legal rights. You may have others, which vary from state to state.

In no event shall MAXYM Technologies or its suppliers be liable for any damages whatsoever (including without limitation, damages for the loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or the inability to use this MAXYM Technologies Robot product, even if MAXYM Technologies has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.



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