

DT-IIP

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GENERAL SAFETY RULES

There is a certain amount of hazard involved with the use of woodworking machinery. Using the machine with the respect and caution demanded as far as safety precautions are concerned will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, severe personal injury to the operator can occur.

1. Read the operation manual before operating this machine.
2. If you are not thoroughly familiar with the machine operation, obtain advice from a supervisor or other qualified person.
3. The machine should be disconnected from the power source before performing maintenance or adjustments to the internal mechanisms, or when making repairs.
4. After maintenance job is finished, check to see if there are any tools or objects left on the machine. Close all safety guards.
5. Before leaving the machine, make sure the work area is clean.
6. Check timber for loose knots, nails, or other items, which may cause a hazard or affect the machine's performance.
7. Learn the machine's applications and limitations, as well as the specific potential hazards peculiar to it. Keep the machine in top condition for best and safest performance.
8. Keep all guards in place and in working order.
9. Do not force the machine. It will do the job better and be safer working at the rate for which it was designed.
10. All children and visitors should be kept a safe distance from the working area.
11. The operator should keep proper footing and balance at all times.
12. Do not operate the machine while under the influence of drugs, alcohol, or any other medication.
13. Avoid awkward operations and hand positions where a sudden slip could cause your hand to move into the cutterhead.
14. Never leave the machine until it comes to a complete stop, and never leave the machine running unattended.
15. The employer is responsible for selecting competent and qualified employees.
16. The employer must make sure that employees study and utilize this safety information.
17. Supervisors must alert personnel of any unsafe practices they observe.
18. All employees should be aware of first aid facilities and be encouraged to use them, regardless of the severity of the injuries.
19. Fire prevention must be practiced and fire protection must be available to prevent loss of life, personal injury, and property damage.
20. Safety shoes should be worn to provide protection against rolling objects, falling objects, and sharp edge in the workplace.
21. Eye protection should be worn and such devices should be carefully selected, fitted and used. Compulsory wearing of glasses with impact resistant lenses and side shields is a good safety policy. All eye protection should conform to ANSI Z87 standards.
22. Wear hearing protection when operating the machine.
23. Do not wear rings necklaces or jewelry around moving machinery.
24. Do not wear loose fitting clothes. Clothing should be comfortable, but long sleeves, neckties, etc. should not be worn.
25. Do not wear gloves or other hand covering articles around moving machinery.
26. Cover long hair with a hair net or cap.

27. Protective guards and shields must be in place at all times unless they must be removed for specific service or maintenance. They should be immediately replaced when service or maintenance is completed.
28. Make sure that operator clearly knows how to stop the machine before starting work.
29. Never clean or remove chips while the machine is running.
30. Maintain the machine in good operating condition. Report unusual conditions or machine malfunctions immediately.
31. Do not alter or remove guards and warning labels.
32. Keep the immediate area clean. Do not allow the floor to become slippery, or covered with dust or obstacles. Dust that accumulates in the work area is a hazard that can cause you to fall or slip against the machine or its controls.
33. Employees should be required to report to their supervisors any hazardous condition of the machine or in the immediate area.

SHIPPING & RECEIVING INSTRUCTIONS

This machine has been carefully inspected and tested before packing. It was delivered in good condition and was shipped in one wooden pallet.

When receiving this machine, inspect the wooden pallet and check to see if there is any damage. Then check the machine model and all items as according to the packing list.

If there is any damage on the machine or any missing parts, report it to your local distributor or the machine manufacturer immediately.

UNPACKING & CHECKING CONTENTS

The machine has been well packed at the manufacturer's factory and shipped in good condition. The machine is shipped in one wooden pallet.

Upon receiving the machine, carefully unpack it and check all items as according to the packing list.

If you find any part is missed or damaged, contact your local distributor or the manufacturer of the machine immediately. Do not attempt to operate the machine until the missing parts are obtained and are installed correctly.

CLEANING THE MACHINE

The machine is coated with rust preventative oil before shipment. When the machine has been moved to the proper work site, wipe the oil from the machine using a soft cloth soaked in kerosene. Do not use gasoline, lacquer thinner, or any other volatile solvent, as these may damage the paint surface of the machine.

LIFTING THE MACHINE

The machine should be lifted or moved by a forklift. Make sure the loading capacity of the forklift is sufficient to raise the machine. Pay special attention to the machine balance while lifting the machine to prevent the machine from falling. The forks of the forklift must protrude over the machine bottom for uniform distribution of the entire machine weight.

SPECIFICATIONS

Minimum Work Piece Size	200mm x 60mm
Maximum Work Piece Size	1500mm x 420mm
Minimum Dovetail Height	5mm
Maximum Dovetail Height	18mm
Minimum Front Thickness	7mm
Maximum Front Thickness	60mm
Minimum Side Thickness	7mm
Maximum Side Thickness	60mm
Number of Spindles	1
Motor	1 HP (1 Phase)
Spindle Speed (RPM)	18500 RPM
Table Height from Floor	1180mm
Dust Collection Ports Diameter	Front 2-1/2" Rear 4"
Packing Dimensions	105cm x 79cm x 160cm
Weight	540 lbs

ELECTRICAL SAFETY RULES

1. Do not alter or bypass any protective interlock.
2. Before starting the machine, read and observe all warning labels and markings such as nameplates and identification plates.
3. Only personnel who are properly trained and have adequate knowledge and skill should undertake all electrical/electronic troubleshooting and repair.
4. Use extra precautions in damp areas to prevent yourself from accidental grounding.
5. Make sure your body and your tools are clear of electrical grounding.
6. The control panel doors should be opened only when it is necessary to check the electrical equipment or electrical wiring.
7. Before applying power to any equipment, establish without a doubt that all persons are clear.
8. Be alert and be sure you can work with no outside distractions.
9. Avoid wearing metal frame glasses or wearing a metallic necklace or chain, and never work on electrical equipment while wearing rings, watches, or bracelets.
10. When replacing conductors, make sure they conform to the manufacturer's specifications, including proper color-coding.
11. Do not alter the electrical circuits. If machine damage is caused by an unauthorized alteration, the user is responsible, not the manufacturer.
12. Always assume the electrical power is ON and treat circuit as live. This caution develops a habit that may prevent an accident.
13. Give capacitors time to discharge. Otherwise, it should be done manually with care.
14. Use proper test equipment to make certain you have an open circuit. Test equipment must be checked and calibrated at regular intervals.
15. Open the control panel doors only when it is necessary to check the electrical equipment or wiring. After closing the door, make sure the disconnecting means are operating with the disconnecting handle mechanism in its proper position.
16. All covers on junction boxes must be closed before leaving any job.

INSTALLATION & ASSEMBLY

1. Remove the four screws and flat washers holding the machine to the pallet with a 14mm wrench, as shown in Figure 1.
2. Place lifting straps through the two eyebolts at the top of the machine (B, Figure 2). Using a forklift or hoist, lift the machine off the pallet and into its desired location. The dovetailer should be located in a dry area with sufficient lighting. Leave plenty of space around the machine for operations and routine maintenance work.
3. If desired, securing it to the floor can further stabilize the dovetailer, using lag screws through the four holes at the bottom of the cabinet.
4. A group of cords holds the headstock secure to the machine frame to prevent it from moving during shipping. These cords should not be cut and removed (see Figure 3.)
5. Exposed metal areas of the dovetailer (such as the table, template bar, cylinder clamps, rods, etc.) have been protected by a factory coating. This should be removed with a soft cloth dampened with kerosene or mineral spirits. Do not use an abrasive pad. Do not let solvent contact plastic or rubber parts as it may damage them.

Attaching Dust Hose

1. Slide the upper end of the hose over the chute on the dust hood (Figure 4).
2. Tighten the hose clamp with the attached screw, using a flat head screwdriver.

Installing Dust Chute

Remove the four socket head cap screws at the rear of the cabinet, using a 4mm hex wrench. Place the 4" diameter dust chute (Figure 5) over the hole, and re-insert and tighten the four socket head cap screws.

Dust Collection

The use of a dust collection system is strongly recommended for this machine. It will help keep your shop clean as well as minimize any health risks caused by wood dust. Make sure your dust collector has a capacity of at least 500 cubic feet per minute (CFM). Connect the intake hose of your dust collector to the 4" diameter dust chute at the back of the cabinet (Figure 5).

Grounding Instructions

WARNING: Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

This machine must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor, with insulation having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Use only three wire extension cords that have three-prong grounding plugs and three-pole receptacles that accept the tool's plug.

Repair or replace a damaged or worn cord immediately. Make sure the voltage of your power supply matches the specifications on the motor plate of the dovetailer.

115 Voltage Operation

As received from the factory, the dovetailer is designed to run on 115 volt power only. You may either connect a UL/CSA listed 115V plug or "hard-wire" the machine directly to a control panel. If hard-wired to a panel, make sure disconnect is available for the operator. The dovetailer must comply with all local and national codes after being wired.

1. If it is to be hard-wired, make sure the fuses have been removed or the breakers have been tripped in the circuit to which the dovetailer will be connected. Place a warning

placard on the fuse holder or circuit breaker to prevent it being turned on while the machine is being wired.

2. Refer to “Electrical Connections” for connecting the motor leads.
3. The dovetailer with a 115 volt plug should only be connected to an outlet having the same configuration. No adapter is available or should be used with the 115 volt plug.

Air Connection

Connect the air supply hose to the coupling on the air unit (Figure 7).

WARNING: Even after the air has been turned off to the machine, there may be residual air inside the lines and the clamping cylinders can still provide a hazard to fingers. After shutting off the air, always bleed residual air from the system by pushing the relief valve pin at the bottom of the air cup, shown in Figure 7. Keep the relief valve open until all air in the system has been removed.

ADJUSTMENTS

WARNING: Disconnect machine from power source, shut off air supply and bleed residual air from system before making adjustments. Failure to comply may cause serious injury.

Clamping Cylinders

The work pieces are clamped to the table by pneumatically operated aluminum cylinders (A, Figure 8). Each cylinder has its own air on/off lever. Simply turn the lever (B, Figure 8) to “on” position to activate the cylinder; the cylinder will respond immediately by clamping the work piece against the table.

WARNING: Always keep fingers out of the way of clamping cylinders. Failure to comply may cause serious injury.

Both vertical and horizontal clamping cylinders can be adjusted to match the thickness of your work pieces. To change the thickness capacity of the clamping cylinders, proceed as follows:

1. To increase the clamping capacity, loosen the top two hex nuts (A and B, Figure 9) on the stud at the end of the holder bracket, with a 30mm wrench. Do the same for the stud at the opposite end of the holder bracket.
2. Tighten the lower hex nut (C, Figure 9). You can do this without a wrench. This will raise the holder bracket. Do this incrementally on both studs until the desired height is reached. When finished, tighten top hex nuts (A & B, Figure 9) on both studs with the wrench.

NOTE: Make equal adjustment on both studs at each end of the holder bracket to ensure the clamps are parallel to the table. To check this, measure from the bottom edge of the holder bracket down to the table. Measure at each end of the holder bracket—the measurements should be equal. Figure 9 shows the horizontal clamping assembly—the procedure is identical for the vertical clamping assembly.

3. To decrease the clamping capacity, back off the lower hex nut (C, Figure 9) and tighten the top hex nut (A, Figure 9). This will lower the holder bracket.
4. When finished, tighten the lower hex nut © against the holder bracket, and bring hex nut (A) down against hex nut (A).

The clamping cylinders can also be adjusted laterally for better support of work pieces with differing widths. Simply loosen the locking handle (Figure 10) and slide the clamping cylinder to position. Re-tighten locking handle.

Clamping Pressure

The pressure exerted by the cylinder clamps against the work piece can be adjusted at the air regulator, shown in Figure 11. The hardness or softness of the wood will determine the amount of clamping pressure desired. Enough pressure should be used to prevent the work piece from slipping during operations. Forty (40) psi is suitable for clamping most wood; going above that is not recommended.

To change the clamping pressure, pull up on the knob (A, Figure 11) and rotate it clockwise to increase pressure, counterclockwise to decrease pressure. The attached needle indicator (B, Figure 11) shows the air pressure. Lock the setting by pushing the knob (A, Figure 11) back down.

Locking Handles

All locking handles, such as those shown in Figure 10, can be rotated out of the way if they interfere with other machine parts. Simply lift straight out on the locking handle and rotate it, then release, making sure it seats properly.

Template Bar

The four-sided template bar, shown in Figure 14, will allow you to create “half-blind” dovetails, where the dovetails are visible on only one side of the joint. It will create dovetails in one of four different “pitches” or centerlines. The available pitches are 1”, 1-1/2”, 2” and 2-1/2”. To change the pitch of a dovetail cut, proceed as follows:

1. First notice how the notches on the template bar are grouped toward the right side of the machine. The template bar should always be oriented in this fashion.
2. Release one end of the spring on the left side of the headstock