T800i Shaper Manual
Limited Warranty

New machines and accessories sold by Laguna Tools carry a one-year warranty effective from the date of shipping. Machines sold through dealers must be registered with Laguna Tools within 30 days of purchase to be covered by this warranty. Laguna Tools guarantees all new machines and accessories sold to be free of manufacturers’ defective workmanship, parts and materials. We will repair or replace, without charge, any parts determined by Laguna Tools, Inc. to be a manufacturer’s defect. We require that the defective item/part be returned to Laguna Tools with the complaint. Any machines returned to Laguna Tools must be returned with packaging in the same manner in which it was received. If a part or blade is being returned it must have adequate packaging to ensure no damage is received during shipping. In the event the item/part is determined to be damaged due to lack of maintenance, cleaning or misuse/abuse, the customer will be responsible for the cost to replace the item/part, plus all related shipping charges. This limited warranty does not apply to natural disasters, acts of terrorism, normal wear and tear, product failure due to lack of maintenance or cleaning, damage caused by accident, neglect, lack of or inadequate dust collection, misuse/abuse or damage caused where repair or alterations have been made or attempted by others.

Laguna Tools, Inc. is not responsible for additional tools or modifications sold or performed (other than from/by Laguna Tools, Inc.) on any Laguna Tools, Inc. machine. Warranty maybe voided upon the addition of such described tools and/or modifications, determined on a case-by-case basis.

Software purchased through Laguna Tools Inc. is not covered under this warranty and all technical support must be managed through the software provider. Software is non-refundable.

Normal user alignment, adjustment, tuning and machine settings are not covered by this warranty. It is the responsibility of the user to understand basic machinery operation, settings and procedures and to properly maintain the equipment in accordance with the standards provided by the manufacturer.

Parts, under warranty, are shipped at Laguna Tools, Inc.’s cost either by common carrier, FEDEX ground service or a similar method. Technical support to install replacement parts is primarily provided by phone, fax, e-mail or Laguna Tools Customer Support Website. The labor required to install replacement parts is the responsibility of the user.

Laguna Tools is not responsible for damage or loss caused by a freight company or other circumstances not in our control. All claims for loss or damaged goods must be notified to Laguna Tools within twenty-four hours of delivery. Please contact our Customer Service Department for more information.

Only new machines sold to the original owner are covered by this warranty. For warranty repair information, call 1-800-332-4094.
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Safety Rules

As with all machinery there are certain hazards involved with the operation and use. Using equipment with caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. If you have any questions relative to the installation and operation, do not use the equipment until you have contacted your supplying distributor.

Read carefully before operating the shaper:

1. Keep the working area clean and be sure adequate lighting is available.
2. Do not wear loose clothing, gloves, bracelets, necklaces or ornaments. Wear face, eye, respiratory and body protection devices as indicated for the operation or environment.
3. Be sure that the power is disconnected from the machine before tools are serviced or an attachment is to be fitted or removed.
4. Never leave the machine with the power on.
5. Do not use dull, gummy or cracked cutting tools.
6. Be sure that the keys and adjusting wrenches have been removed and all the nuts and bolts are secured.
Noise emission

Notes concerning noise emission:
Given that there exists a relationship between noise level and exposure times, it is not possible to be precise enough to determine the need for supplementary precautions. The factors affecting the true level of exposure to operators are clearly the amount of time exposed, the characteristics of the working environment, other sources of dust and noise, etc. For example, adjacent machines affect the level of ambient noise. It is possible that exposure level limits will vary from country to country.

Specification sheet

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table dimensions</td>
<td>800mm x 800mm 31 ½” x 31 ½’</td>
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<tr>
<td>Height, Ground to table</td>
<td>806mm 31 ¾”</td>
</tr>
<tr>
<td>Weight net</td>
<td>330kg 726lb</td>
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<tr>
<td>Motor power</td>
<td>4,8kW 6,4 hp 3 phase</td>
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<tr>
<td>Spindle speeds</td>
<td>1400 / 3500 / 6000 / 8000 rpm</td>
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<tr>
<td>Diameter of spindle</td>
<td>31,75mm 1 ¼”</td>
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<tr>
<td>Usable spindle length</td>
<td>175mm 6.9”</td>
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<tr>
<td>Spindle tilt</td>
<td>90 to – 45 Degrees</td>
</tr>
<tr>
<td>Noise level [machine only]</td>
<td>3500 rpm 69dB 8000 rpm 76dB</td>
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</table>

Receiving your machine

Note: It is probable that a third party will deliver your machine. Before you unpack your new machine, you will need to first inspect the packing, invoice and shipping documents supplied by the driver. Ensure that
there is no visible damage to the packing or the machine. You need to do this prior to the driver leaving. All damage must be noted on the delivery documents and signed by you and the delivery driver. You must then contact the seller [Laguna Tools] as soon as practical. If damage is found after delivery, contact the seller as soon as practical.

Introduction to shaper

This Shaper is designed to give you years of safe service. Read this owners manual in its entirety before assembly or use.

Parts of the shaper

The machine does not have many parts. The major parts are discussed in this manual. If you are not familiar with the machine, take the time to read this section and become familiar with the machine.

Identification

There is a plate at the back of the machine listing all the manufacturing data including the serial number, model, etc.

Cabinet

The cabinet has a large footprint and is a welded construction manufactured from heavy gauge steel plate. The cabinet houses all the parts of the
machine and the heavy construction ensures that the machine is stable. This weight also helps to absorb any vibration that is produced during cutting.

**Table**

The table is manufactured from cast iron [cast iron is a live material and will move over time] and is provided with leveling bolts that clamp the table to the cabinet and also level it.

**Spindle housing**

The spindle housing assembly is attached to the table and is of a heavy cast-iron construction. It houses the motor, spindle, tilt mechanism, and vertical movement adjustment. This is the heart for your machine and allows adjustment of the cutter speed, angle and position.

**Shaper fence system**

The machine is supplied with a shaper fence system that incorporates the following features: Dust port, aluminum adjustable fence system, hold down, hold in assembly.

**Electrical system**

The electrical system consists of an electrical motor [with breaking system], start switch, stop switch, limit switches, door switch, speed indicators, contactor and internal breaker. No cable or plug is supplied as the length of the cable and the type of plug will be dependent on your installation. There is a CEE plug and socket fitted to the machine to allow easy connection and disconnection of the electrical power to the machine.

**Control panel**

The control panel has the following features:

1. Forward / reverse switch.
2. Stop button.
4. Speed selected indicator lights [1400, 3500, 6000 and 8000rpm].

The spindle tilt, vertical movement handles and locking handles are located on the sides of the machine.

**Dust collection**

A dust collection port is located at the back of the machine and is 4” diameter. It connects to the bottom of the spindle housing. A second dust collection port is located at the back of the shaper hood and has a diameter of 4 3/4”
Table insert rings

On the machine there are 3 table insert rings and a blanking disc to allow for different cutter configurations and sizes.

Mobility kit [optional]

The mobility kit is easy to fit, and the machine is located directly on the floor when the mobility kit is not in use.

Unpacking your machine

To unpack your machine you will need tin snips, knife screw driver [star] and a wrench.

1. Using the tin snips cut the banding that is securing the box [If fitted].
   WARNING: EXTREME CAUTION MUST BE USED BECAUSE THE BANDING WILL SPRING AND COULD CAUSE INJURY. Then dismantle the box or remove the screws that secure the box to the base [row of screws around the bottom of the box].

2. Lift the box off and discard. This may need two people.

3. Using the knife, cut the plastic wrap and remove it.

4. Remove the boxes on the base of the box.

5. Remove the base mounting bolts that secure the machine to the base.

6. It is recommended that the machine be removed from the pallet by lifting it with a hoist or forklift. Place a sling as shown and lift vertically. Four lifting hooks are provided to assist you [“S” shaped] that fit into the holes at the bottom of the cabinet.

7. Remove the pallet and lower to the floor.
   The machine can be lifted using a forklift truck, by using a “SLING” as shown with a minimum lifting capability of 2,000 Kg [4,400lb]

Note: The machine is heavy, and if you have any doubt about the described procedure seek professional assistance. Do not attempt any procedure that you feel is unsafe or that you do not have the physical capability of achieving.
What you will receive with your machine

- Lifting hooks
- Optional mobility kit
- Shaper Fence system
- Laguna T800I
**Fitting the optional mobility kit [If ordered]**

Slide the axel through the lower inside holes on the side of the machine and fit the spacer [large washer] onto the axel.

Fit the wheel assembly, nut and washer on to the axel.

To activate the mobility kit, insert the handle into the tube and rotate so that the machine is lifted. When in the up position, insert the sliding pin. Repeat on the other side of the machine.

Fit the cast-iron bracket to the front of the machine with the bolts provided into the tapped holes. Move the machine by inserting the transport bar and lifting.
Assembly and setup

Where to locate your machine

Before you remove your machine from the pallet, select the area where you will use your machine. There are no hard and fast rules for its location, but below are a few guidelines:

1. Ensure that there is sufficient clearance all round the machine, as you will have to have access to the back of the machine.
2. Adequate lighting. The better the lighting the more accurately and safely you will be able to work.
3. Solid floor. You should select a solid flat floor, preferably concrete or something similar.
4. Close to power source.
5. Close to dust collection.
6. Provide for a place that will be suitable for storing finished products and blanks.

Assembling your machine

Cleaning the machine

Remove the rust protection grease with WD 40 or similar solvent. It is important that you remove all the grease and re-lubricate with a Teflon-based lubricant, as Teflon has less tendency to attract sawdust and cause clogging. You should also wax the table as this also protects the cast iron from rust.

Leveling the machine

After you have located your machine in its final position, you will have to level it.

1. Place a spirit level on the table. You will have to level the machine in both directions.
2. The base of the machine is provided with threaded leveling holes and bolts. You can also bolt the machine to the floor [bolts not provided].
3. If you decide to bolt the machine to the floor, you can level it with shims [shims not provided] or use the leveling bolts. If you decide to use the leveling bolts, do not over-tighten them as this could damage the base of the machine and could cause the machine to vibrate.
4. When leveling the machine that is not bolted to the floor, insert the leveling bolts into the corner holes and adjust the bolts so that the machine is level in both planes and does not rock on the floor.

Electrical connection
Note: The machine is not supplied with an electrical cord or a plug, as the type of cable and plug will be dependent on the installation.

It is advisable that qualified personnel carry out the electrical installation. Ensure that the main supply corresponds with that of the machine. Use wiring suitable for the power and the length of cable that is needed for your installation. The machine is supplied with a CEE plug mounted on the machine and the corresponding socket that you can use to connect the main cable to. On the machine the yellow/green wire is ground; the other colored wires are power phase. It does not matter what color combination you use, (there is no neutral). Check that the spindle rotates in the correct orientation to the switch setting selected. If the rotation is incorrect, you need to swap locations of 2 of the power leads and it will change the rotation.

**Fitting the electrical cable**

The CEE plug and socket are located under the control box. The electrical cable is fitted as shown. You will see a wire that is yellow and green or green; this is the ground wire, and the other colored wires are power. Green and yellow all other wiring is neutral.

On 3-phase machines what color combination [yellow/green or green] is ground; all other wiring is neutral. If the spindle rotates in the wrong direction you need to swap locations of 2 of the power leads, and it will rotate in the correct direction.

**Before Starting the machine**

1. Read and understand the instruction manual before operating the machine.
2. If you are still not thoroughly familiar with the operation of the machine, get advice from a qualified person.
3. Make sure the machine is properly grounded and that the wiring codes are followed.
4. Do not operate the machine while under the influence of drugs, alcohol, or if tired.
5. Always wear eye protection, safety glasses or a safety shield, and hearing protection.
6. Wear dust mask; long-term exposure to the fine dust created by the machine is not healthy.
7. Remove your tie, rings, watch, and all jewelry. Roll up your sleeves and never wear loose clothing. You do not want anything to get caught in the machine.
8. Make sure that the guards are in place and use them at all times. The guards protect you.
9. Stop the machine before fitting or removing a job.

Operating the machine
Machine test

Now is the time to test the machine.
1. Close the door. If you try to start the machine with the door open, the machine will not start.
2. Check that there are no cutters are fitted; it is far safer to test the machine with out the cutter fitted.
3. Check that the red stop switch is in the fully out position.
4. Check that the machine is clear of all tools and other loose objects.
5. Check that all the adjusting and locking handles are tight.
6. Start the machine by turning the start switch.
7. Now is the time to check that all the safety switches are functioning correctly before you fit a cutter.
8. With the machine running, press the red stop switch. The motor should have the power removed and slow down.
9. With the machine running, open the door very slowly until the door switch functions. The motor should have the power removed and slow down. Close the door and wait for the motor to completely stop before you fully open the doors.
10. **If any of the safety switches fail to operate correctly, do not use the machine until the fault has been corrected.**
11. Check that the rotation of the spindle is correct.

Before you cut any wood, read the safety rules at the front of this manual

Fitting the shaper fence system
1. Fit the steel bar to the table by aligning the dowels with the relevant holes in the table.

2. On the shaper fence housing, release the clamp handle located on the same side as the bar will be fitted. Lower the shaper fence system onto the steel bar, and screw the clamp screws into the holes in the table [do not fully tighten].

Note: There are 2 sets of holes in the table to extend the range of the fence.

3. Tighten the clamp handle.

4. The shaper fence is now assembled to the machine.

5. The steel bar on the table has a rule to assist you in setting and adjusting the shaper fence.

6. To adjust the fence forward or back, leave the side ratchet handle clamped, release the top clamp knobs that clamp the assembly to the table and adjust the knob that is located at the back of the assembly [this knob will move the assembly forward or back]. Once the required adjustment has been made, reclamp the top clamp knobs.
7. To adjust the left hand fence [when viewed standing in front of the machine] rotate the knob at the back of the assembly.

8. Fit the Hold down and the hold in assembly.

**Fitting a cutter**

- Cutter spindle and spacers
- Spindle height adjustment handle
- Hold down and hold in assembly
- Fitting hold down & hold in assembly
- Back view of shaper fence assembly
- Side ratchet handle
- Adjustment knob
1. **With the power disconnected from the machine.**

2. Release the clamp screw on top of the hinged cover of the shaper fence system and swing the cover back.

3. Raise the shaper spindle so that it lifts the blanking disc; remove the disc and rings.

4. Raise the spindle to the maximum height, and ensure that the spindle is in the 90-degree position.

5. Open the side door and engage the shaft-locking knob, you may have to rotate the shaft to align the locking pin with the shaft.

6. Loosen the clamp bolt on the end of the spindle, and loosen the allen set screws. Remove the spacer rings, clean both the spacer rings and the spindle shaft.

7. Select the spacers that are suitable for the cutter head that you are fitting.
Note: Always mount the cutter head as close to the bottom of the spindle as practical, this will minimize vibration, reduces stress on the machine and improve the surface finish of the cut.

8. Fit the cutter head. Ensure that the cutter is fitted for the correct rotation.

Note: When fitting the spacers, make sure that the security ring is fitted [the ring with the socket allen screws]. The security ring ensures that the cutter will not loosen during motor breaking. Always tighten the two allen set screws before operating the machine.

9. Tighten the lock bolt.

10. Refit the table rings [Select the rings that will minimize the gap between the cutter and the table rings]. Adjust the height and angle of the cutter.

11. Release the shaft-locking pin; rotate the cutter shaft by hand to ensure that it rotates freely and does not contact any part of the machine or the shaper fence.

12. Re-lock the hinged cover in place and adjust the hold-down and hold-in clamps.

Speed selection

The speed selection will depend on various factors such as the type of wood, diameter of cutter, cutter material, etc.

To change the spindle speed

1. Disconnect the power from the machine.
2. Open the access door.
3. Loosen the ratchet handle to remove the tension on the drive belt
4. On the door is located the pulley speed selection chart.
5. The belt runs through a metal “U” bracket that is attached to a speed selection knob. Change the speed selection knob to the speed required and move the belts to the relevant pulleys. The speed selection knob controls the indicator lights on the control panel.
6. Tension the drive belt by pulling the handle that is attached to the motor support plate and lock in position with the ratchet clamping screw.
7. Close the access door.
8. Reconnect the power to the machine, and check that the indicator light corresponds with the speed selected.

**Spindle tilt**

To adjust the spindle angle, release the clamp, adjust to the required angle and re-clamp the spindle.

**Spindle vertical adjustment**

To adjust the spindle vertically, release the clamp, adjust to the required height and re-clamp.

**Maintenance and troubleshooting**

All tools and machines require regular maintenance, and the shaper is no exception. This section details the general maintenance and care of your machine. In general, we recommend that you only use a Teflon-based lubricant on the machine. Regular oil attracts dust and dirt, the Teflon tends to dry and has fewer tendencies to accumulate dirt and sawdust on your machine.

**Weekly maintenance**

1. Check that all nuts and bolts are tight
2. Clean the machine and check that the dust hose is clear. Make sure that all moving parts are clean and free from sawdust and dirt.
3. Lubricate all moving parts with a Teflon-based lubricant.
4. Wax the table and all non-painted parts.
5. Check the drive belt for damage, oil, dirt and cracks.
6. Check that the breaking system on the motor stops the electrical motor in less than 10 seconds.

**Note:** You can only function the break a maximum of 10 times per hour.

**Drive belt**

The drive belt should last a long time [depending on the usage] but needs to be inspected regularly for cracks, cuts and general wear. If damage is found, replace the belt.

**Bearings**

All bearings are sealed for life and do not require any maintenance. If a bearing becomes faulty, replace it.

**Rust**

The shaper is made from steel and cast iron. All non-painted surfaces will rust if not protected. It is recommended that the table be coated with wax. All moving none painted surfaces should be lubricated / protected with a Teflon-based lubricant.

**Troubleshooting**

**Poor cut**

1. Cutter head not fitted to the bottom of the shaper spindle. Reposition the cutter on the spindle.
2. Cutter blades blunt. Replace or re-sharpen the blades.
3. Tilt or vertical movement hand wheels not locked. Lock the movement wheels.
4. Direction of cutter rotation incorrect.
5. Over-feeding the job. Slow the feed rate.

**Machine will not start**

1. Check that the start switch is being turned fully.
2. Check that the electrical power cord is plugged into the power outlet.
3. Check that the electrical supply is on [reset the breaker].
4. With the power disconnected from the machine, check that the wiring in the plug is correct. Check that the rubber insulation is stripped enough and is not causing a bad connection. Check that all the screws are tight.
5. With the power disconnected from the machine, check that the wiring to the machine plug is correct. Check that the rubber insulation is
stripped enough and is not causing a bad connection. Check that all the screws are tight.

6. Check that you have the correct power, 220V not 110V.
7. Check that the earth wire is wired correctly.
8. Check that the door is closed.
9. Check that the stop switch is in the full out position.
10. Check that the internal breaker is not tripped.

**The machine will not stop**
This is a very rare occurrence as the machine is designed to fail-safe. If it should occur and you cannot fix the fault, seek professional assistance. The machine must be disconnected from the power and never run until the fault has been rectified.

1. Stop switch faulty. Replace the stop switch.
2. Internal contactor faulty. Replace the contactor.

**Motor tries to start but will not turn**

1. With the power disconnected from the machine, try to turn the shaper spindle by hand. If the spindle will not turn, check the reason for the jamming. Typical reasons are: spindle lock engaged, cutter head contacting the shaper fence or table rings.

**Motor overheats**

The motor is designed to run very hot, but should it overheat, it has an internal terminal overload protector that will shut it down until the motor has cooled down, and then it will reset automatically. If the motor overheats wait until it has cooled down and restart. If the motor shuts down, instantly check for the reason. Typical reasons are: dull blade, overfeeding the wood, motor cooling fan clogged or faulty, motor cooling fins clogged, break engaged and excessive ambient temperature.

**Squeaking noise**

1. Check that the motor cooling fan is not contacting the fan cover.
2. Check the bearings.
3. Check the drive belt.

**Cutter slows down during a cut**

1. Loose drive belt. Re-tension the belt.
2. Dull blade. Replace the blade or have it re-sharpened.
3. Feeding the wood too fast. Slow down the feed rate.
4. Oil or dirt on the drive belt. Clean or replace the drive belts.
Cutter overheats

1. Dull blade. Change the blade or re sharpen the blade.

Machine vibrates

1. Machine not level on the floor. Re-level the machine, ensuring that it has no movement.
2. Damaged drive belt. Replace the belt.
3. Cutter head unbalanced.

Poor dust collection

1. Check the capacity of the dust collection system. You need a minimum of 1,000 cubic feet per minute at the machine. The stronger the dust collection, the better.
2. Check that the dust hose is not blocked.
3. Check that the dust collector is not full.

Accessories

The following accessories are available from Laguna Tools:
- Mobility kit.
- Cutters and cutter heads.
- Work benches.
- Tool cabinet [floor standing] and tool box.
Spare parts

Ordering spare-parts

When ordering spare parts specify:
- Machine Model
- Part number required, taken from the exploded view drawings and parts lists on the following page.
- Quantity required

EXAMPLE: To order a motor pulley.
Model: Shaper T 800 1
Part description: Motor drive pulley. [Guiding washer]
Part number: M5-321M.60.00.57
Quantity: 1 piece
**Φ 250М.02.00.00.00 Cutter with Sloping Spindle**

<table>
<thead>
<tr>
<th>№</th>
<th>Denotation</th>
<th>Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>БДС 1232-85</td>
<td>Bolt M8x25</td>
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<tr>
<td>2.</td>
<td>БДС 833-82</td>
<td>Washer 2 8H</td>
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<td>3.</td>
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<td>End washer</td>
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<td>ДМ5-401.60.00.44</td>
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<td>7.</td>
<td>БДС 4890-79</td>
<td>Radial ball bearing with 2 protective washers 6208-2x/40x80x18/</td>
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