Swift Series:

Swift Vacuum

Owner's Manual

Laguna Tools
744 Refuge Way Grande Prairie, TX
Service: +1 (800) 234 1976
Email: customerservice@laguantools.com
Updated August 2021

For immediate service on any Laguna Tools products:

Call: +1 (800) 234 1976
or
Email: customerservice@lagunatools.com

LAGUNA AMERICAN HEADQUARTERS
Texas: 744 Refuge Way Suite 200, Grand Prairie, Texas 75050, U.S.A. Phone: +1-800-332-4094
Huntington Beach: 7291 Heil Ave Huntington Beach, CA 92647, U.S.A. Phone: +1-949-474-1200
South Carolina: 825 Bistline Dr. Ste 101, West Columbia, SC 29172, U.S.A. Phone: +1-800-234-1976
Minnesota: 5250 West 74th St, Edina, MN 55439, U.S.A Phone: +1-949-474-1200
lagunatools.com
supermaxtools.com
lagunacleanair.com
lagunalathe.com

LAGUNA EUROPE
Walker Rd, Bardon Hill, Coalville LE67 1TU, United Kingdom. Phone: +44-1530-516921
lagunatools.uk

DAKE CORPORATION
724 Robbins Road, Grand Haven, MI 49417, United States +1-800-937-3253
dakecorp.com

Published: August 2021 in South Carolina

Contents

General Information

SAVE THESE INSTRUCTIONS

Refer to them often and use them to instruct others.

Please read and understand all warnings and operation instructions before using any tool or equipment. Always follow basic safety precautions to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. This product should ***NOT*** be modified and/or used for any application other than for which it was designed.

NOTICE! It is important for you to read and understand this manual. The information it contains is provided for your safety while assembling and operating this machine.

Safety Signs and Call-Outs:

DANGER An imminently hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION A potentially hazardous situation which, if not avoided, could result in death or serious injury.

WARNING! A potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE A helpful tip from our technical staff. Sometimes displayed as ***NOTICE!*** instead.

	Disconnect from power before proceeding.		Wear ear protection.
	Be aware of possible laceration danger.		Wear Eye Protection.
	Be aware of possible crushing danger.		Wear a full face shield.
	Electrical Hazard.		Wear lung protection.
			Requires X People

Safety Rules

PLEASE READ AND UNDERSTAND ALL SAFETY WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS MACHINE

FAILURE to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, improper operation or assembly of this machine could result in personal injury to the operator. Safety equipment such as guards, push sticks, hold downs,feather boards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention.

ALWAYS use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it.Consult a professional to find an an alternative procedure which is safer and more efficient.

NOTICE! **Your personal safety is YOUR responsibility.**

⚠ WARNING! This machine was designed for certain applications only. We strongly recommend that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, **DO NOT** use the machine until you have first contacted the manufacturer to determine if it can or should be performed on the product.

⚠ WARNING! If you have any questions relative to its application **DO NOT** use the product until you have contacted the manufacturer and we have advised you. When using an electrical machine, basic precautions should always be followed, including the following:

Read and understand all warnings and operation instructions before using any tool or equipment.
Always follow basic safety precautions to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. This product should NOT be modified and/or used for any application other than for which it was designed.
It is important for you to read and understand this manual. The information it contains relates to protecting your safety and preventing problems.

Machine & Workshop Safety Instructions

READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. FAILURE TO
FOLLOW ALL INSTRUCTIONS LISTED BELOW, MAY RESULT IN ELECTRIC SHOCK, FIRE, AND/OR SERIOUS PERSONAL INJURY
OR PROPERTY DAMAGE.

MACHINERY CAN BE DANGEROUS IF SAFE AND PROPER OPERATING PROCEDURES ARE NOT FOLLOWED. AS WITH ALL
MACHINERY, THERE ARE CERTAIN HAZARDS INVOLVED WITH THE OPERATION OF THE PRODUCT. USING

THE MACHINE WITH
RESPECT AND 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. SAFETY
EQUIPMENT SUCH AS GUARDS, PUSH STICKS, HOLD-DOWNS, FEATHER BOARDS, GOGGLES, DUST MASKS AND HEARING
PROTECTION CAN REDUCE YOUR POTENTIAL FOR INJURY. BUT EVEN THE BEST GUARD WON'T MAKE UP FOR POOR
JUDGMENT, CARELESSNESS OR INATTENTION. ALWAYS USE COMMON SENSE AND EXERCISE CAUTION IN THE WORKSHOP.
IF A PROCEDURE FEELS DANGEROUS, DON'T TRY IT. FIGURE OUT AN ALTERNATIVE PROCEDURE THAT FEELS SAFER.
REMEMBER: YOUR PERSONAL SAFETY IS YOUR RESPONSIBILITY.

OWNER'S MANUAL. READ AND UNDERSTAND THIS OWNER'S MANUAL BEFORE USING MACHINE.

TRAINED OPERATORS ONLY. UNTRAINED OPERATORS HAVE A HIGHER RISK OF BEING HURT OR KILLED. ONLY ALLOW

TRAINED/SUPERVISED PEOPLE TO USE THIS MACHINE. WHEN MACHINE IS NOT BEING USED, DIS-CONNECT POWER,
REMOVE SWITCH KEYS, OR LOCK-OUT MACHINE TO PREVENT UNAUTHORIZED USE—ESPECIALLY AROUND CHILDREN. MAKE
YOUR WORKSHOP KID PROOF!

DANGEROUS ENVIRONMENTS. DO NOT USE MACHINERY IN AREAS THAT ARE WET, CLUTTERED, OR HAVE POOR LIGHTING.
OPERATING MACHINERY IN THESE AREAS GREATLY INCREASES THE RISK OF ACCIDENTS AND INJURY.

MENTAL ALERTNESS REQUIRED. FULL MENTAL ALERTNESS IS REQUIRED FOR SAFE OPERATION OF MACHINERY. NEVER
OPERATE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL, WHEN TIRED, OR WHEN DISTRACTED.

ELECTRICAL EQUIPMENT INJURY RISKS. YOU CAN BE SHOCKED, BURNED, OR KILLED BY TOUCHING LIVE ELECTRICAL
COMPONENTS OR IMPROPERLY GROUNDED MACHINERY. TO REDUCE THIS RISK, ONLY ALLOW QUALIFIED SERVICE
PERSONNEL TO DO ELECTRICAL INSTALLATION OR REPAIR WORK, AND ALWAYS DISCONNECT POWER BEFORE ACCESSING
OR EXPOSING ELECTRICAL EQUIPMENT.

DISCONNECT POWER FIRST. ALWAYS DISCONNECT MACHINE FROM POWER SUPPLY BEFORE MAKING ADJUSTMENTS,
CHANGING TOOLING, OR SERVICING MACHINE. THIS PREVENTS AN INJURY RISK FROM UNINTENDED START-UP OR
CONTACT WITH LIVE ELECTRICAL COMPONENTS.

EYE PROTECTION. ALWAYS WEAR ANSI-APPROVED SAFETY GLASSES OR A FACE SHIELD WHEN OPERATING OR OBSERVING

MACHINERY TO REDUCE THE RISK OF EYE INJURY OR BLINDNESS FROM FLYING PARTICLES. EVERYDAY EYEGLASSES ARE
NOT APPROVED SAFETY GLASSES.

WEARING PROPER APPAREL. DO NOT WEAR CLOTHING, APPAREL OR JEWELRY THAT CAN BECOME ENTANGLED IN MOVING
PARTS. ALWAYS TIE BACK OR COVER LONG HAIR. WEAR NON-SLIP FOOTWEAR TO REDUCE RISK OF SLIPPING AND LOSING
CONTROL OR ACCIDENTALLY CONTACTING CUTTING TOOL OR MOVING PARTS.

HAZARDOUS DUST. DUST CREATED BY MACHINERY OPERATIONS MAY CAUSE CANCER, BIRTH DEFECTS, OR LONG-TERM
RESPIRATORY DAMAGE. BE AWARE OF DUST HAZARDS ASSOCIATED WITH EACH WORKPIECE MATE-RIAL. ALWAYS WEAR A
NIOSH-APPROVED RESPIRATOR TO REDUCE YOUR RISK.

HEARING PROTECTION. ALWAYS WEAR HEARING PROTECTION WHEN OPERATING OR OBSERVING LOUD MACHINERY.
EXTENDED EXPOSURE TO THIS NOISE WITHOUT HEARING PROTECTION CAN CAUSE PERMANENT HEARING LOSS.

REMOVE ADJUSTING TOOLS. TOOLS LEFT ON MACHINERY CAN BECOME DANGEROUS PROJECTILES UPON STARTUP. NEVER
LEAVE CHUCK KEYS, WRENCHES, OR ANY OTHER TOOLS ON MACHINE. ALWAYS VERIFY REMOVAL BEFORE STARTING!

USE CORRECT TOOL FOR THE JOB. ONLY USE THIS TOOL FOR ITS INTENDED PURPOSE—DO NOT FORCE IT OR AN
ATTACHMENT TO DO A JOB FOR WHICH IT WAS NOT DESIGNED. NEVER MAKE UNAPPROVED MODIFICATIONS, MODIFYING
TOOL OR USING IT DIFFERENTLY THAN INTENDED MAY RESULT IN MALFUNCTION OR MECHANICAL FAILURE THAT CAN
LEAD TO PERSONAL INJURY OR DEATH!

AWKWARD POSITIONS. KEEP PROPER FOOTING AND BALANCE AT ALL TIMES WHEN OPERATING MACHINE. DO NOT
OVERREACH! AVOID AWKWARD HAND POSITIONS THAT MAKE WORKPIECE CONTROL DIFFICULT OR INCREASE THE RISK OF
ACCIDENTAL INJURY.

CHILDREN & BYSTANDERS. KEEP CHILDREN AND BYSTANDERS AT A SAFE DISTANCE FROM THE WORK AREA.STOP USING
MACHINE IF THEY BECOME A DISTRACTION.

GUARDS & COVERS. GUARDS AND COVERS REDUCE ACCIDENTAL CONTACT WITH MOVING PARTS OR FLYING DEBRIS. MAKE
SURE THEY ARE PROPERLY INSTALLED, UNDAMAGED, AND WORKING CORRECTLY BEFORE OPERATING MACHINE.
FORCING MACHINERY. DO NOT FORCE MACHINE. IT WILL DO THE JOB SAFER AND BETTER AT THE RATE FOR WHICH IT WAS

DESIGNED.

NEVER STAND ON THE MACHINE. SERIOUS INJURY MAY OCCUR IF MACHINE IS TIPPED OR IF THE CUTTING TOOL IS
UNINTENTIONALLY CONTACTED.

STABLE MACHINE. UNEXPECTED MOVEMENT DURING OPERATION GREATLY INCREASES RISK OF INJURY OR LOSS OF
CONTROL. BEFORE STARTING, VERIFY MACHINE IS STABLE AND MOBILE BASE (IF USED) IS LOCKED.

USE RECOMMENDED ACCESSORIES. CONSULT THIS OWNER'S MANUAL OR THE MANUFACTURER FOR RECOMMENDED
ACCESSORIES. USING IMPROPER ACCESSORIES WILL INCREASE THE RISK OF SERIOUS INJURY.

UNATTENDED OPERATION. TO REDUCE THE RISK OF ACCIDENTAL INJURY, TURN MACHINE OFF AND ENSURE ALL MOVING
PARTS COMPLETELY STOP BEFORE WALKING AWAY. NEVER LEAVE MACHINE RUNNING WHILE UNATTENDED.

MAINTAIN WITH CARE. FOLLOW ALL MAINTENANCE INSTRUCTIONS AND LUBRICATION SCHEDULES TO KEEP MACHINE IN
GOOD WORKING CONDITION. A MACHINE THAT IS IMPROPERLY MAINTAINED COULD MALFUNCTION, LEADING TO SERIOUS
PERSONAL INJURY OR DEATH.

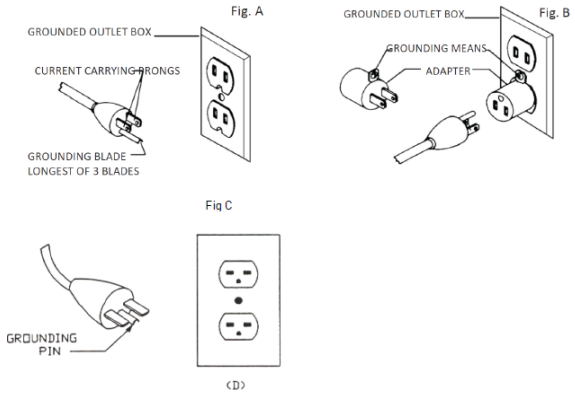
DAMAGED PARTS. REGULARLY INSPECT MACHINE FOR DAMAGED, LOOSE, OR WRONGLY ADJUSTED PARTS—OR ANY
CONDITION THAT COULD AFFECT SAFE OPERATION. IMMEDIATELY REPAIR/REPLACE BEFORE OPERATING MACHINE. FOR
YOUR OWN SAFETY, DO NOT OPERATE MACHINE WITH DAMAGED PARTS!

MAINTAIN POWER CORDS. WHEN DISCONNECTING CORD-CONNECTED MACHINES FROM POWER, GRAB AND PULL THE
PLUG—NOT THE CORD. PULLING THE CORD MAY DAMAGE THE WIRES INSIDE. DO NOT HANDLE CORD/PLUG WITH WET
HANDS. AVOID CORD DAMAGE BY KEEPING IT AWAY FROM HEATED SURFACES, HIGH TRAFFIC AREAS, HARSH CHEMICALS,
AND WET/DAMP LOCATIONS.

Electrical Safety

Grounding Methods

Grounding Methods Provided by CSA Group. (A) Receptacle with nominal rating less than 150 volts. (B) 150 volt receptacle without grounding pin fitted with adapter. (C) 150-250 volt receptacle.



1. All grounded, cord-connected machines:
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. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
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 3-wire extension cords that have 3-prong grounding plugs and 3 pole receptacles that accept the tool's plug.
Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating less than 150 volts:
This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A. The tool has a grounding plug that looks like the plug illustrated in Fig A. A temporary adapter, which looks like the adapter illustrated in Fig B may be used to connect this plug to a 2 pole receptacle as shown in Fig B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. This adapter is not permitted in Canada. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

3. Grounded, cord-connected tools intended for use on a supply circuit

having a nominal rating between 150 – 250 volts, inclusive:
This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig C. The tool has a grounding plug that looks like the plug illustrated in Fig C. Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

Receiving Your Machine

Your machine will likely be delivered by a third party service. Before you unpack your machine, you will first need to 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 must 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, within 24 hours. It is advisable to photograph any shipping damage to support an insurance claim.

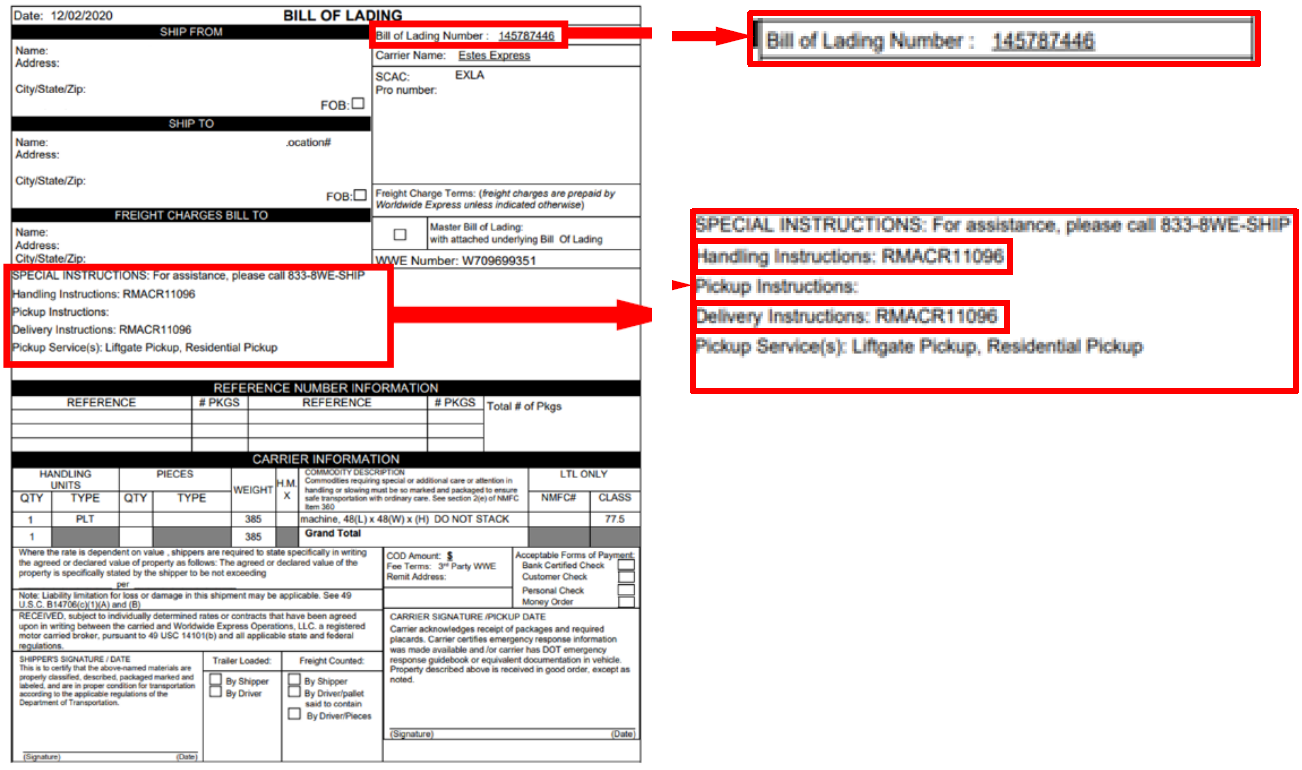
Note: You may find sawdust in your machine upon arrival. This is because the machine has been tested prior to shipment from the factory and / or Laguna Tools. Laguna Tools endeavors to test machines prior to shipping to customers as movement can take place during transportation. It must be noted that additional machine movement can take place between Laguna Tools and the end user and some adjustments may have to be undertaken by the customer. These adjustments are covered in the various sections of this manual.

Most large machinery will be delivering on a tractor trailer 48'-53' long. Please notify Sales Representative with any Delivery Restrictions.

• Customer is required to have a forklift (6000lb. or larger is recommended) with 72" forks or fork extensions and operator.

• Note any visible damage, torn packaging, scuffs or any abnormal marks on the delivery receipt or Bill of Lading (BOL).

Delivery Protocol Sheet



Date: 12/02/2020 **BILL OF LADING**

SHIP FROM
Name:
Address:
City/State/Zip:
FOB: ☐

SHIP TO
Name: .ocation#
Address:
City/State/Zip:
FOB: ☐

FREIGHT CHARGES BILL TO
Name:
Address:
City/State/Zip:

Bill of Lading Number : 145787446
Carrier Name: Estes Express
SCAC: EXLA
Pro number:

Freight Charge Terms: (*freight charges are prepaid by Worldwide Express unless indicated otherwise*)

☐ Master Bill of Lading: with attached underlying Bill Of Lading

WWE Number: W709699351

SPECIAL INSTRUCTIONS: For assistance, please call 833-8WE-SHIP
Handling Instructions: RMACR11096
Pickup Instructions:
Delivery Instructions: RMACR11096
Pickup Service(s): Liftgate Pickup, Residential Pickup

REFERENCE NUMBER INFORMATION

REFERENCE	# PKGS	REFERENCE	# PKGS	Total # of Pkgs

CARRIER INFORMATION

HANDLING UNITS QTY	HANDLING UNITS TYPE	PIECES QTY	PIECES TYPE	WEIGHT	H.M. X	COMMODITY DESCRIPTION	LTL ONLY NMFC#	LTL ONLY CLASS
1	PLT			385		machine, 48(L) x 48(W) x (H) DO NOT STACK		77.5
1				385		**Grand Total**		

Where the rate is dependent on value , shippers are required to state specifically in writing the agreed or declared value of property as follows: The agreed or declared value of the property is specifically stated by the shipper to be not exceeding _____ per _____

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706(c)(1)(A) and (B)

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carried and Worldwide Express Operations, LLC. a registered motor carried broker, pursuant to 49 USC 14101(b) and all applicable state and federal regulations.

SHIPPER'S SIGNATURE / DATE
This is to certify that the above-named materials are properly classified, described, packaged marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.
(Signature) (Date)

Trailer Loaded: ☐ By Shipper ☐ By Driver

Freight Counted: ☐ By Shipper ☐ By Driver/pallet said to contain ☐ By Driver/Pieces

COD Amount: $
Fee Terms: 3rd Party WWE
Remit Address:

Acceptable Forms of Payment: Bank Certified Check ☐ Customer Check ☐ Personal Check ☐ Money Order ☐

CARRIER SIGNATURE /PICKUP DATE
Carrier acknowledges receipt of packages and required placards. Carrier certifies emergency response information was made available and /or carrier has DOT emergency response guidebook or equivalent documentation in vehicle. Property described above is received in good order, except as noted.
(Signature) (Date)

Bill of Lading Number : 145787446

SPECIAL INSTRUCTIONS: For assistance, please call 833-8WE-SHIP
Handling Instructions: RMACR11096
Pickup Instructions:
Delivery Instructions: RMACR11096
Pickup Service(s): Liftgate Pickup, Residential Pickup

Machine Placement

Your machine will likely be delivered by a third party delivery service. Before unpacking your new machine, first inspect the packaging, the invoice, and the shipping documents supplied by the driver. When unpacking your machine, separate all enclosed items from the packing materials and inspect them for damages. Ensure that there is no visible damage to either the packaging or the machine **BEFORE** the driver leaves. Save all packaging materials until you are satisfied with the machine and/or have resolved any issues concerning any missing or damaged items.

NOTICE! All shipping damage must be noted upon delivery and signed by the owner and the delivery driver. If you find any damaged items in your package, you must contact Laguna Tools to file a complaint. In order to return damaged goods under the limited warranty to Laguna Tools, Inc., you MUST have the original packaging. All claims of loss or damaged goods must be reported to Laguna Tools within 24 HOURS of delivery. Please contact the Laguna Tools, Inc. Customer Service Department to make claims for any damaged items/parts.

NOTICE! It is probable that you will find sawdust within your machine. This is because the machine has been tested prior to shipment from the factory and or Laguna Tools. We test machines prior to shipping to customers, but movement can take place during transportation. Some adjustments may have to be undertaken by the customer. These adjustments are covered in the various sections of this manual.

PLACEMENT: Before you remove your machine from the packaging, 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. There should be sufficient area at the front of the machine to allow you to work on it comfortably.
2. There should be sufficient area at the back of the machine to allow access for adjustments and maintenance to be conducted.
3. Adequate lighting. The better the lighting the more accurately and safely you will be able to work.
4. Solid floor. You should select a solid flat floor, preferably one made of concrete or something similar.
5. Locate it close to a power source and dust collection.
6. Allow an area for the storage of blanks, finished products and tools.

LOCATING YOUR MACHINE: The physical environment where you locate your machine is important for safe assembly and operation of your machine. Before removing your dust collector from the packaging consider the weight load, electrical installation requirements, lighting, dust collection, and space allocation available for the band saw and accompanying materials.

SPACE ALLOCATION/DUST COLLECTION: Consider the largest size and length of wood or other materials which will be processed through your machine. Leave ample around the machine for the operator to handle both the equipment and the materials begin cut. Leave enough space around the machine to open or remove doors/covers as require by the maintenance described in the owner's manual. Allow enough space for proper dust collection from your machine. For optimal operation, ensure that your machine is located in a dry environment free from excessive moisture, extreme weather conditions, hazardous chemicals, or airborne abrasives.

ELECTRICAL REQUIREMENTS: Place your machine near an existing power source with the appropriate voltage required to operate your machine. Ensure that all power cords are protected from traffic, moisture, chemicals, or other hazards. For you safety, have a qualified electrician assess your electrical needs and grounding if you have any doubts about your own ability to do so. We **DO NOT** recommend that you use an extension cord to supply power to your machine.

LIGHTING: Ensure that the lighting your band saw is placed under is adequate enough that regular operation and maintenance can be performed safely. Any glares, shadows, or strobe lighting which may distract or prevent the operator from safely operating the machinery should be removed from the working area.

MACHINE WEIGHT LOAD: Ensure that the surface where your machine is located can bear the full weight of your machine as well as any additional equipment which may be placed on the band saw. Also consider the weight of the operator and any materials which may be stored around the machine when selecting a location for your machine.

Unpacking Your Machine

To unpack your machine, you will need tin snips, a knife, and a wrench.

1.) Using the tin snips, cut the banding that is securing the machine to the Pallet [if fitted].

⚠ WARNING! EXTREME CAUTION MUST BE USED BECAUSE THE BANDING WILL SPRING AND COULD CAUSE INJURY.

2.) Remove the box from the CNC machine if fitted and any other packaging material. The parts ordered with the machine will be packed on or inside the machine. 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.

3.) Use a forklift with sufficient lifting capacity and forks that are long enough to extend the complete width of the machine. ***NOTICE:*** One should obtain a 7000 lbs. forklift with 6' fork extensions.

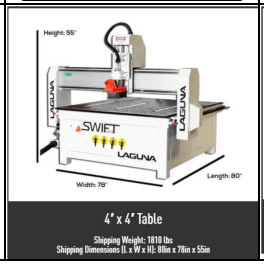
4.) Remove the securing bolts that attach the machine to the pallet [if fitted].

5.) Approaching the machine from the side, lift the machine on the frame taking care that there are no cables or pipes around the forks.

6.) Move the machine to the required position and lower gently to the floor.

Machine Specifications

Specifications Sheet:

Item	Swift 48" x 48" or 4' x 4'	Swift 48" x 96" or 4' x 8'	Swift 60" x 120" or 5' x 10'
Motor	3 hp very quiet spindle	3 hp very quiet spindle	3 hp very quiet spindle
Spindle	1 or 3 Phase Industrial Induction Spindle, Liquid Cooled	1 or 3 Phase Industrial Induction Spindle, Liquid Cooled	1 or 3 Phase Industrial Induction Spindle, Liquid Cooled.
Spindle RPM	6,000 - 24,000	6,000 - 24,000	6,000 - 24,000
Controller	Rich Auto DSP Controller	Rich Auto DSP Controller	Rich Auto DSP Controller
Dust Chute Diameter	4 inches	4 inches	4 inches
Volts	220V Single Phase/ 30 Amp	220V Single Phase/30 Amp	220V Single Phase/ 30 Amp
Gantry Clearance	8 inches	8 inches	8 inches
Machine Work Table	T-slot	T-slot	T-slot
Z-axis	Precision Ball Screw	Precision Ball Screw	Precision Ball Screw
X & Y-Axis	Rack & Pinion	Rack & Pinion	Rack & Pinion
Machine Foot Print	73"w x 80"l x 55"h	67"w x 120"l x 80"h	90"w x 144"l x 58"h
Work Envelope	48" x 48" or 4' x4'	48" x 96" or 4' x 8'	60" x 120" or 5' x 10'
Photo	 4' x 4' Table Shipping Weight: 1810 lbs Shipping Dimensions (L x W x H): 88in x 78in x 55in	 4' x 8' Table Shipping Weight: 2100 lbs Shipping Dimensions (L x W x H): 126in x 78in x 55in	 5' x 10' Table Shipping Weight: 2250 lbs Shipping Dimensions (L x W x H): 144in x 98in x 58in

Machine Overview

Introduction to CNC Machines
The CNC is designed to give you years of safe service. Read this owner's manual in its entirety before assembly or use. The advantage of the CNC machine is that it can, in most cases, fully machine the complete job without it being removed from the table so that you have finished parts of high accuracy that are totally repeatable. It can also produce intricate carvings with the purchase of the relevant software. Nesting is also a valuable feature of CNC machining that saves on waste and costs. It is possible to reduce the number of different machines in the shop as the CNC will perform multiple functions and is a must for cabinet makers and serious wood workers.

Swift Vacuum
The Laguna Swift Vacuum CNC Router features a work envelope of **4' x 4', 4' x 8', 5' x 10'**. It also includes an industrial-grade liquid cooled electro-spindle. The Swift vacuum features a 4-zone (4' x 4' table) or 6-zone (4' x 8'/5' x 10') vacuum phenolic table to hold down your parts.

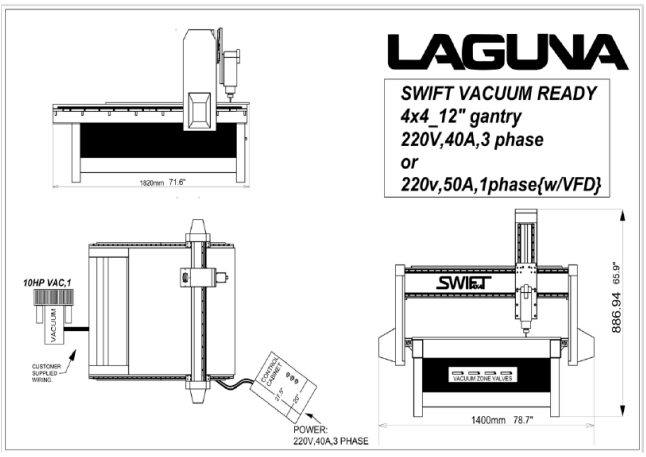
Machine Briefing
The Laguna Swift CdNC offers a rugged platform with rigidity and accuracy to process materials including wood, plastics, foams, aluminum, and composites. The optional vacuum table and 4th axis turner expands the possibilities of this machine even further. Built to the same standards as our Smartshop line and using many of the same components, the Swift CNC is a durable machine that your business can depend on.

Features of the machine:
- 3HP Water Cooled Electro-Spindle (ER-20 Collet)
- 6,000 – 24,000 RPM Spindle
- Vacuum Table
- Hand-Held Controller
- Gantry Height: 7-½"
- Ball Screw "On" Z-Axis
- Double Helical Rack Drive on X & Y Axis

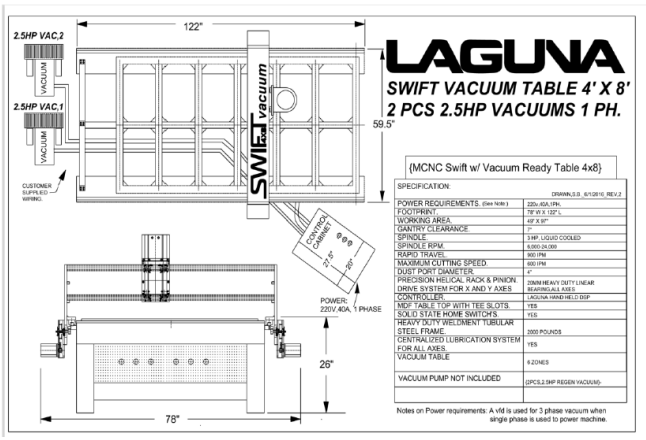
****Vacuum Pump Sold Separately****

Layouts & Footprints

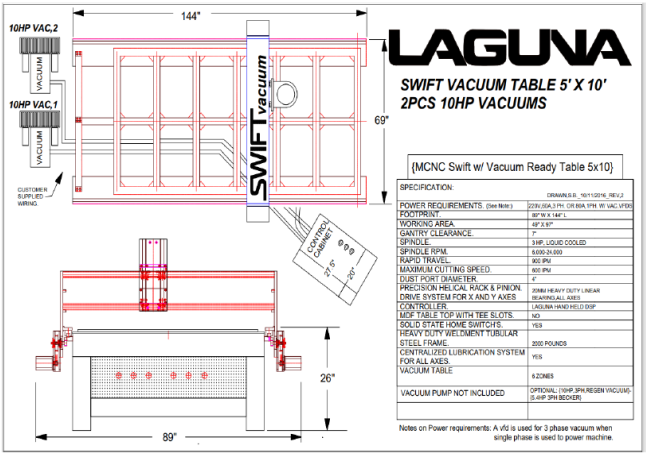
Swift 4' x 4' Table



Swift 4' x 8' Table

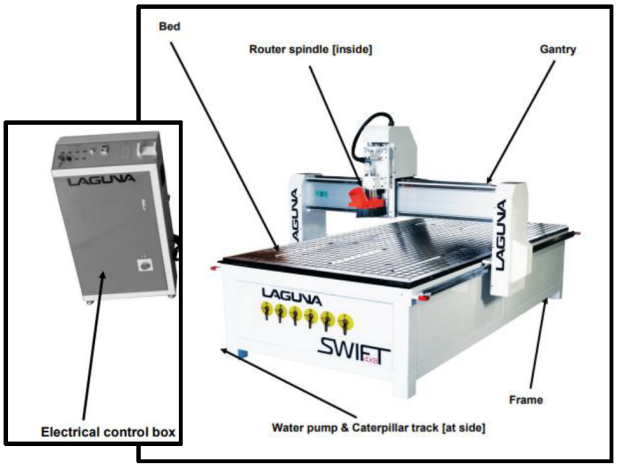


Swift 5' x 10' Table

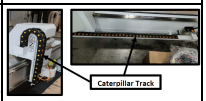


Parts of the Swift Vacuum

Overview:

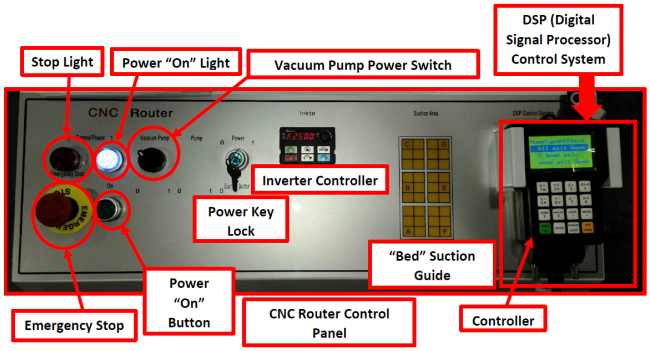


Parts of the Swift Vacuum cont'd

Part Name	Description	Photo
Bed	The bed of the machine consists of a heavy steel frame with a plastic top that is slotted for the vacuum function. It has “T-Slots”. The “T” slots are used to clamp the job or fixtures to the bed.	
Gantry	The gantry straddles the bed and carries the router spindle motion system. It is moved along the length of the bed by a precision ball screw system that is controlled by the machine controller.	
Router Spindle	The router spindle is moved along the gantry by a precision ball screw system that is controlled by the machine controller.	
Frame	The frame is a heavy welded construction that supports all the other parts of the machine.	
Caterpillar Track	The caterpillar track runs along the side of the machine in a trough and carries all the electrical cables and the spindle cooling tubes.	
Water Pump	The water pump provides coolant for the router spindle motor. Running the router spindle. The water pump provides coolant for the router spindle motor. Running the router spindle without the cooling pump running can lead to spindle bearing failure. (***NOTE:*** See the page on *Water Pump Installation* for more detailed instructions on installing the water pump)	
Electrical Control Box	The electrical control box is located on the side of the machine in a dust free enclosure. (***NOTE:*** See the page *Parts of the Electrical Control Box* for a more detailed parts breakdown on the electrical control box)	

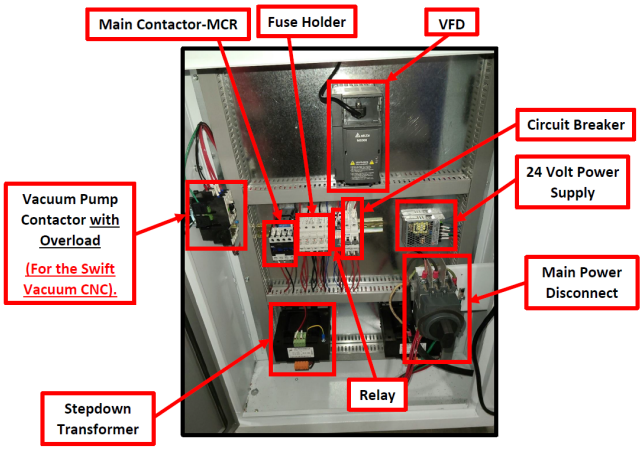
Parts of the Electrical Control Box

Parts of the Electrical Control Box

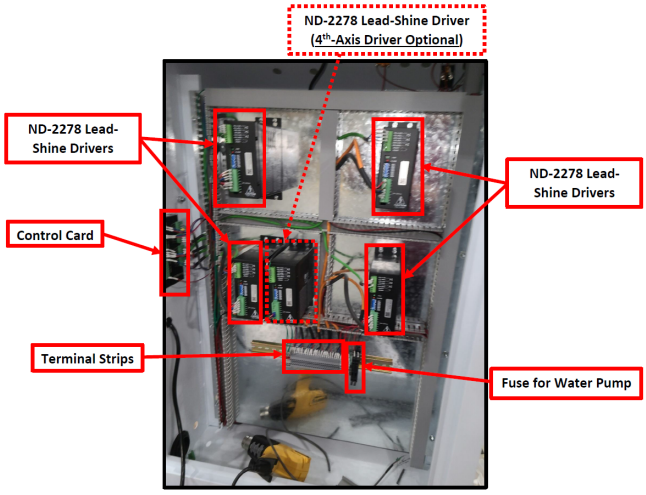


Electrical Control Cabinet

Front Panel:



Back Panel:


ND-2278 Lead-Shine Driver
(4th-Axis Driver Optional)
ND-2278 Lead-Shine Drivers
Control Card
Terminal Strips
ND-2278 Lead-Shine Drivers
Fuse for Water Pump

Water Pump Installation

Water Pump Installation:
1) Connect one pipe to the water pump and the other pipe will be placed in the water container for the return water. It is not important which pipe is used as the return.

2) Fit the 90 Degree connector to the pump. Connect one of the pipes to the water pump by pushing it into the 90 deg connector. Lightly pull on the pipe to ensure that it is connected correctly.

3) Fill a container about ¾ full of clean Distilled or Deionized water.

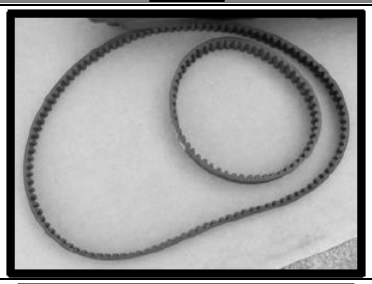
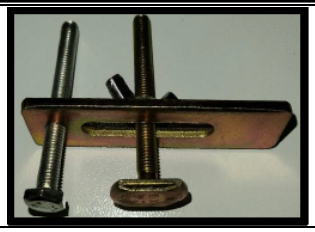
4) Lower the water pump into the container ensuring that it is the correct way up [water inlet lowest] and place the water return pipe into the container.

Note: For CNC Machines Operations being performed in the Northern or Cold Regions, the operator can use a 50/50 mix of DISTILLED WATER/DEIONIZED WATER with Glycol ANTI-FREEZE.

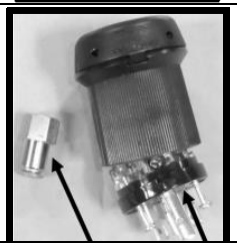
The logical position for the water container is just behind the control box close to the caterpillar track. Ensure that it is close to the machine as you do not want to kick the container and spill the water.
Once the assembly is complete and the water pump electrical connection has been made, [plug the pump into the machine water pump socket] lift the water return pipe up and check that the water is flowing.
Place the lid onto the container to keep dust and dirt out of the container. Check the container periodically as the water will evaporate.

Note: If the spindle is run without cooling, it could be damaged and fail.
Note: : If your shop is subject to freezing temperatures antifreeze must be added to the cooling water.
Note: No water container is supplied. You will need a container with a minimum of 5 gallons capacity. If your shop is subject to high ambient temperatures a larger water container may be required.
Note: If water is not flowing or is slow, reverse the hoses on the pump and flow should regain, sometimes the system will create an air bubble during shipping causing vapor lock.
Note: A qualified electrician must carry out the electrical installation. Lower the water pump into the container ensuring that it is the correct way up [water inlet lowest] and place the water return pipe into the container. The logical position for the water container is just behind the control box close to the caterpillar track. Ensure that it is close to the machine as you do not want to kick the container and spill the water. Once the assembly is complete and the water pump electrical connection has been made, plug the pump into the machine water pump socket, lift the water return pipe up and check that the water is flowing. Place the lid onto the container to keep dust and dirt out of the container. Check the container periodically as the water will evaporate.
Note: If the spindle is run without cooling, it could be damaged and fail.

Parts of the CNC Machine

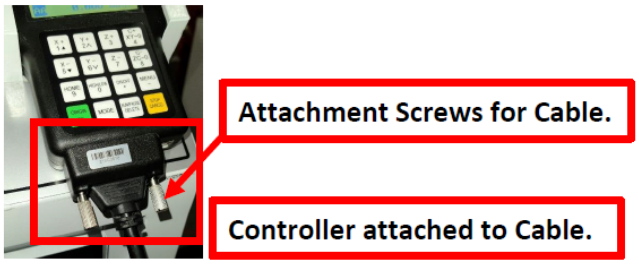
Part Name	Photo
Spare Drive Belts	
Dust Shroud/Hood	
Wrenches	
Table Clamps (Qty. of 8 Provided)	
Coolant Container/ Bucket for Coolant	

Parts of the CNC Machine cont'd

Part Name	Photo
Hand Held Controller	
Collet	
USB Memory Stick (8G Max.)	
Touch-Off Puck	
Pipe Fitting Plug	

Assembly & Setup

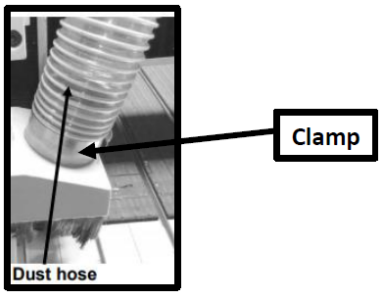
Assembling the Controller:
Fit the Cable to the controller and ensure that the screws are finger tight.



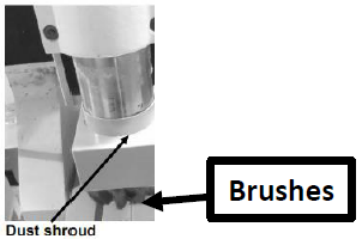
Note: When using a memory stick, it fits into a slot on the top of the hand-held controller and must not exceed 8G in capacity.

Fitting the Dust Hose

1.) Fit the dust hose to the dust shroud and secure with a clamp. Ensure that it is tight as it is very inconvenient to have it fall off during production.

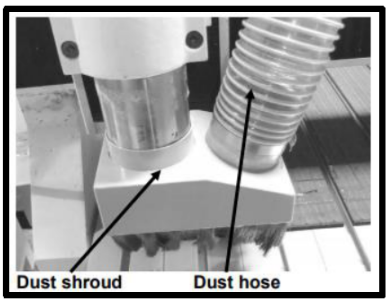


2.) Fit the shroud to the router head. Adjust the shroud so that the brushes are even with the tip of the router bits that you will be using.



Note: If it is too low the brushes may drag on the job being cut and could be cut by the router bit. If it is too high and is not in contact with the job
suction may not be optimal. Once adjusted, clamp with the clamping Allen screw.

3.) The head of the machine will move all the way across the table and the dust hose will follow the head.



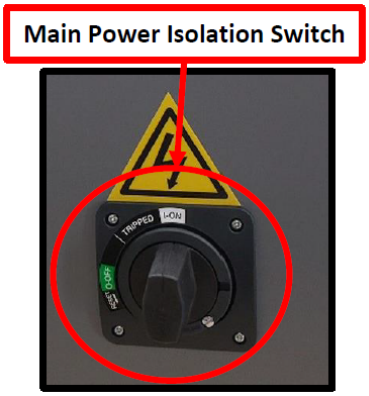
Note: If there is insufficient slack, the hose may break or damage the dust shroud. It is suggested that the hose be suspended from the ceiling of ones Facility with sufficient slack so that it will not restrict movement. It will also be out of the way and not causing a trip hazard.

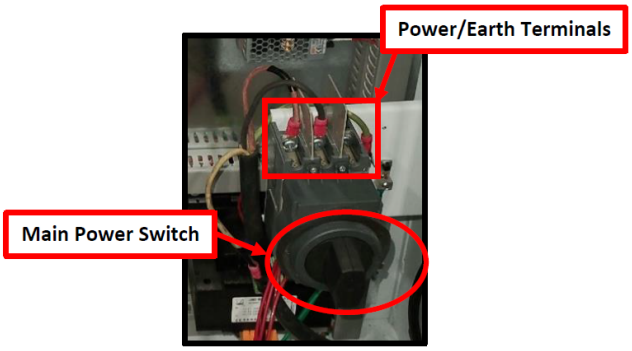
Electrical Connection for the Machine

NOTICE! **No cable is supplied as this will depend on the local wiring codes and your electrical supply.**
Ensure that when installing the electrical supply to the machine that 220v (220 Volts) single phase is supplied.
It is recommended that you use a 30-amp Breaker. Wire to Terminal L1 & L2. Terminal L3 is not used.

Note: When wiring the machine to your electrical system, keep your cable as short as possible and the cable should not be allowed to run along the floor, as this will cause a trip hazard. There is a cable that has a female electrical socket for connection to the water pump.

Note: A qualified electrician must carry out the electrical installation.

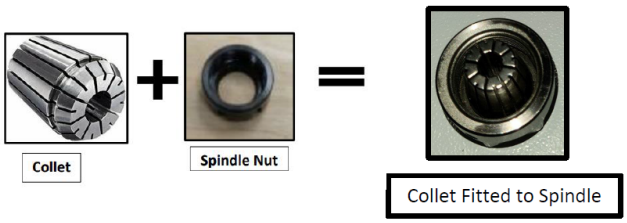




Fitting the Router Bit into the Router Head

Note: Before changing or fitting the router bit always disconnect the power to the machine.

Note: Collets & spindle collet hole must be cleaned regularly. Ensure that the slots in the collets are free of sawdust as sawdust builds up and will stop the collet compressing. If the collet or spindle hole are not clean, the router bit may not run true, and this will affect the performance of your machine.

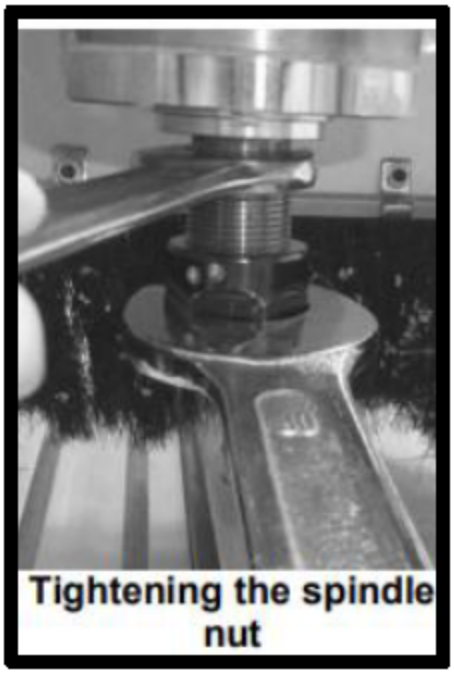


1.) Select a router bit and its relevant collet.
2.) Fit the collet into the spindle nut. Press the collet into the spindle nut until it snaps into place.

Note: The router bit must not be fitted into the collet until the collet has been fitted into the spindle nut. With the router bit fitted into
the collet the collet cannot compress and snap into the spindle nut. The face of the collet and the face of the spindle nut will be close to flush.

Note: To remove the collet, hold the spindle nut and press the collet on the side. The collet will compress and pop out. Do not try to remove the collet while a cutter is fitted as the collet will not compress and pop out.

3.) Fit the spindle nut and collet assembly onto the spindle thread by hand.



4.) Press the bit into the collet but note that the flute of the router bit must not be inside the collet and should be a minimum of 1/16 “ outside the collet. Hold the router spindle with the supplied wrench and tighten the collet with a second wrench. Do not overtighten.

Note: Use this process for all other router bits that you need to fit but you will have to change the collet if the shank of the router bit is a different size.

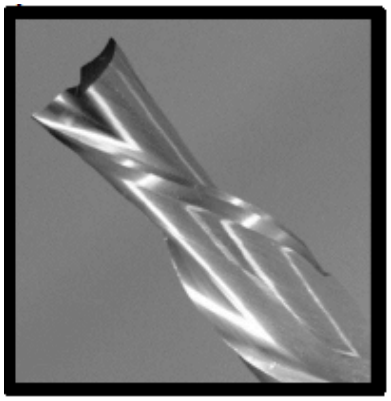
Types of Router Bits

TYPES OF ROUTER BITS:

The five basic types of router bits which may by used with the Swift Vacuum are outlined below.

1.) Straight
2.) Up Shear
3.) Down Shear
4.) Combination (also called compression)
5.) Form Tools (Round Over, Ogee, etc.)

1.) **Straight Router Bits:** These are the standard router bits that are commonly used with hand held routers and are usually available at home centers.



2.) **Up-Shear Router Bits:** These bits have flutes that are spiraled upward (a standard twist drill is an example of this type of bit). This bit design removes the chips from the kerf but tends to chip the top surface, especially veneers or melamine surfaces. Ball Nose Router Bits are a variation of the up-shear bit design but have a radiuses end. These bits are typically used for 3D surfacing applications.

3.) **Down-Shear Router Bits:** These bits are like the up shear but with an opposite spiral that tends to pack the chips into the kerf. These bits prevent chipping the material surface, especially with veneers or melamine surfaces.

4.) **Combination (Compression) Router Bits:** These bits combine the advantages of both up shear and down shear designs. The top section of the tool is down shear to prevent chipping the top surface of the material and the lower part of the bit is up shear to prevent chipping the bottom surface of the material. Combination Router Bits are the preferred configuration for machining veneered plywood as well as melamine surfaced product. A variation of the bit is called the “Mortising Compression” router bit. With this bit, the up-shear portion of the bit is less than ¼” in length so that the bit can be used on ¼” veneered plywood and for dados.

5.) **Form Router Bits:** Typically, are available in standard profiles such as round over, ogee, etc. Router bits that have a shape associated with them would be classified with this group.

Controller Button Functions

Note: There is a comprehensive manual for the hand-held controller. Below is a list of the main key functions. The controller may vary from the hand-held controller shown below.

First Row Buttons

Function	Description
X+/1	Moves the gantry in the X direction away from the home end of the bed.
Y+/2	Moves the gantry in the Y direction away from the home end of the bed.
Z+/3	Moves the router head in the Z [Up direction] away from the table surface.
XY-0/4	Set's Machine "Origin".

Second Row Buttons

Function	Description
X-/5	Moves the gantry in the X direction towards the home end of the bed.
Y-/6	Moves the router head in the Y direction towards the home end of the bed.
Z-/7	Moves the router head in the Z (Down Direction) towards the table surface.
Z-0/8	Used set the tool to the “Zero” surface (Tool “Touch-Off”.)

Third Row Buttons

Function	Description
HOME / 9	Causes the machine to move to the “Home” position, first in the Z-Axis, followed by X and then Y. (Home is a mechanically determined position using mechanical switches/sensors.)
HIGH/LOW / 0	Toggles jogging speeds between High and Low ranges.
ONOFF/	Turns the Router Spindle on and Off.
MENU /	Provides access to various setup features.

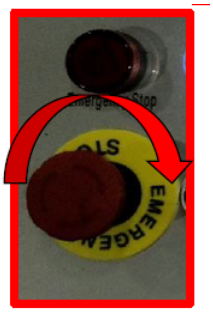
Fourth Row Buttons

Function	Description
ORIGIN /OK	Use to accept commands (“On”.) Origin causes machine to the machines “Origin”.
MODE	Toggles between the three jogging modes: Continuous, Step or Distance.
"RUN/ PAUSE / DELETE"	Used to load a program from either the USB drive or internal memory. While the program is running, causes the Operation to **“Pause”**.
STOP / CANCEL	Stops a running program. Also used to cancel commands.

Turning On the Machine

Before you turn on the machine remove all tools and other objects from the machine table.

1) Release the “Emergency Stop” by twisting clockwise until it pops out.

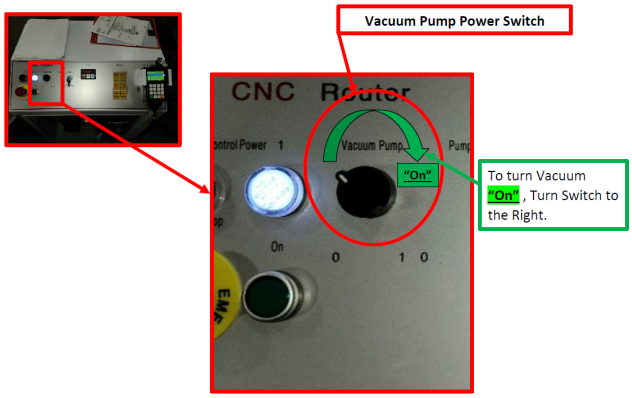


2) Turn the Main Power Isolation Switch Clockwise to the “On” Position.

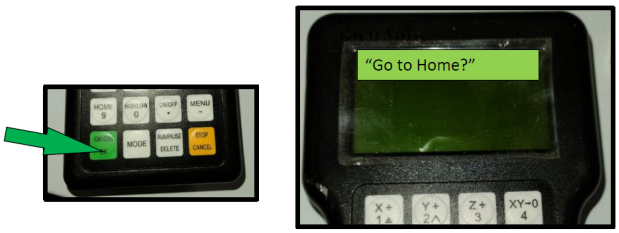
3) Turn the Main Power Key Lock Clockwise to the from the “0”, “Off” Position, to the “1”, or “On” Position.

4) Press the **"Start Button"** that will turn power on to the machine, **Power "On" Light will appear**.

5) To turn vacuum **"On"** , turn switch to the right.

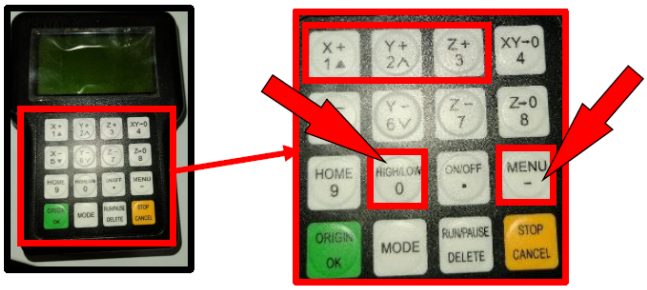


Pressing the **"Green Button"** will also power the controller and the display will light up (see above).
The screen will display "Go to Home?" Make sure that the table surface is clear of obstructions and press the **"Green Origin/OK button"**.



6) The router head will move to the home position on the table.

Note: "Home" is a mechanical position that is a constant and is determined by switches on each of the 3-Axes.



X+= Across (from left-to-right when standing in front of the machine).
Y+ = Length (from front-to-back when standing in front of the machine).
Z+= vertical (up). By pressing HIGH LOW / 0 and MENU / - the display will change to AX=0, AY=0, and AZ=0.
When the X, Y and Z have an A in front, this denotes that the dimensions displayed are about the machine's home position. When the X, Y, and Z values are displayed with a number (1-9) this indicated the dimensional relationship of the machine from the machine "Origin."

To Remove the Router Head

There are three different methods to move the router head:

1.) **Continuous Mode:** Press the mode button until Continuous is displayed. The display will show (bottom row of the screen) the changing location of the router head as it moves location. By holding X+ button down, the machine will move constantly until the button is released. This is the same for X-, Y+, Y-, Z+ and Z-. The “High/Low” button determines the speed of the jogging moves.

2.) **Step Mode:** Press the mode button until step is displayed. With step selected, each time X, or Y button is pressed it will move the router head by 0.5mm in high setting and 0.1mm in the low setting.

3.) **Distance Mode:** Press the mode button a third time and Distance is displayed. This allows you to input a position into the controller that you want the router spindle to move to. As an example, if you want to move the router spindle 100 mm from the home position in the X and / or Y-Axis:

3a.) Press the mode button until "Distance" is displayed.

3b.) Type in "100" and press **OK**

3c.) Pressing the X+= button will now move the router 100mm in the X+ axis. The router head also move the set distance in the X+, X-, Y+ and Y- depending on the button that is pressed. To move the router head in the Z axis, press the Z+= / 3 [UP] or the Z- / 7 button [DOWN]. By pressing any of the other X, Y or Z + or – buttons the router head will move 100mm in the selected direction.

Jogging Speed

You can select between a Low or High speed. By pressing the HIGH LOW / 0 button you can toggle between the two speeds. The High-speed jog setting is approximately 4 times the speed of Low-speed jog setting.

Setting the Work Envelope

The Work Envelope is a volume that defines the movement limits of the router spindle. The X0, Y0 corner of the work envelope is determined by the machine's Home Position. The X+ and Y+ limits of the work envelope are determined by the "Table Size: Settings (MENU/MACHINE SETUP/TABLE SIZE) and provide the "soft limits" for the machine. The Table Size settings prevent the possibility of the spindle assembly/gantry from being jogged into the machine's frame.

Ensure that the controller display is indicating the "Machine Coordinates". Those numbers correspond to the machine Home position that is determined by physical limit switches. Machine Coordinates are indicated on the screen by the designation "AX"", AY", or "AZ". I the Machine Coordinates are not being displayed, depressing the HIGH/LOW and MENU buttons together will toggle between the machine coordinates and ORIGIN coordinates. (e.g., 1-9.).

1.) Select Low Speed by pressing the HIGH LOW / 0 button. Select Continuous by press the mode button until "Continuous" is displayed. The position of the router head as it changes will be shown at the bottom of the display. Move the router spindle to the home position by pressing the Home button.

2.) Move the router head to the max X position by pressing the X+ button until the router spindle stops. Note the displayed AX= value.

3.) Press the Y+ button and hold until the router gantry stops moving, note the displayed AY value.

4.) Typically, on the Laguna Swift 4 x 4 CNC machine the work envelope will be 1300mm [51.181 in] x 1300mm [51.181 in] (work envelopes vary by machine model).

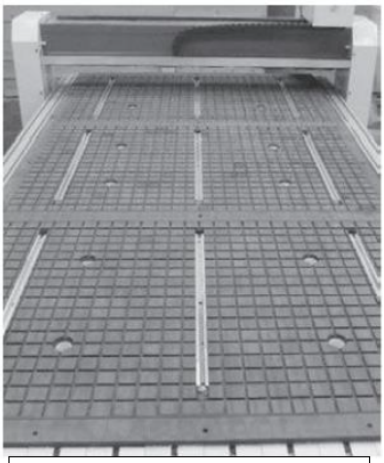
5.) Machining can only be performed if the tool path center lines fall within the work envelope. If an error message is displayed while trying to execute a program indicating an over travel error in one of the Axes, executing the program would require that a tool path fall outside of the machine's Work Envelope.

PLEASE NOTE THAT THE SELECTION OF THE "ORIGIN" ALSO EFFECTS PLACEMENT OF THE PROGRAM WITHIN THE WORK ENVELOPE.

Using the Vacuum Table

The vacuum table has 6 zones, and you can set the configuration to suit the type of work that you will be producing. Each zone is controlled by a switch that is located at the front of the machine. The table has two holes in each zone that extract the air and generate the vacuum. The table has grooves that ensure the air is extracted evenly across the zone. To seal the zone from leakage, a foam rubber gasket is pressed into the outer grooves. This gasket sits slightly proud of the table and is compressed by the spoil board [sometimes called sacrificial board] as the vacuum is applied. T slots are also provided to allow you to clamp jobs / spoil boards to the table should it be required.

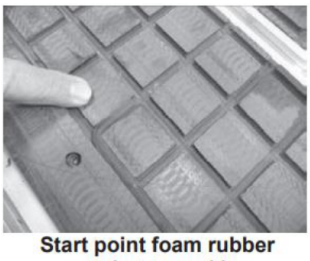
Note: The better the vacuum created, the more securely the parts will be held in place. Follow the below instructions to obtain optimum results.



Vacuum Table

Fitting the Foam Rubber Gasket:

It is important that the foam rubber gasket is pressed evenly into the grove in the vacuum table around the zone that you are constructing. To ensure a good seal, it is strongly recommended that the gasket is turned in at the beginning [as shown]. The gasket tends to stretch while fitting and over time it may relax and shorten. The extra length of gasket allows you to re-set it and make the seal again. If the initial turn is not put in place, there is no margin for error, and you may have to discard a complete length just for being one inch short. It is recommended that you initially create 3 Zones, each one completely across the table. You can change the configuration at a later stage.



Start point foam rubber gasket turned in

Inserting foam rubber gasket

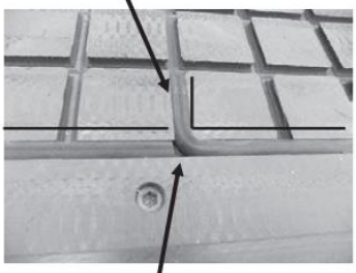
NOTICE! Do not stretch the foam rubber gasket while you are fitting it into the grove in the vacuum table.

Cutting end of foam rubber gasket

Suggested One Configuration

Vacuum One

Gasket turned in



Final finished joint

Spoil Board

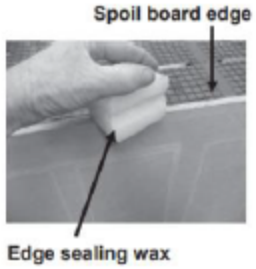
The Spoil Board has two functions:

1.) To protect the vacuum table from the cutters. You will set the depth of your cutter a few thousandths of an inch deeper than the job thickness. If there was no spoil board this would mean that you would be cutting into the vacuum table.

2.) To transfer the vacuum from the table to the job. This means that the spoil board must be porous to allow air to be sucked from the underside of the job. We have found that low cost MDF is the best material for this function.

Spoil Board Preparation
When you purchase your MDF spoil board it should be no thinner than 3/4 inch. Contrary to what you might think, the thicker the MDF the better the suction that is created. However, it is not recommended that your spoil board is thicker than 1 inch.

The MDF that you purchase will not be flat and the machine will be cutting to accuracy in the order of a few thousandths of an inch so you will have to machine the spoil board flat. After your spoil board has been skimmed many times and is ½ inch thick discard it and start a new spoil board. The spoil board edges are very porous and must be sealed. We recommend that a hard candle wax is used as it contains no water. Never use a water-based product to seal the edges of the board as this will make the board grow and it will be unsuitable as a spoil board.



Note: Some glues contain water and can affect the edges of the spoil board.
Note: Do not confuse flatness with bow. If the board is bowed the vacuum may not pull the board down and you will lose vacuum.
Never use a bowed board as a spoil board.

1.) Cut your spoil board to the size of the bed of the machine.
2.) Place on the vacuum table. Prior to placing the spoil board onto the vacuum table, ensure that the table is perfectly clean, free from sawdust and dirt. If there is sawdust etc. on the table, it will change the height of the spoil board and it will not be flat. It is strongly recommended that you do not wipe or brush the table clean but use a hand held blower. Do not use a vacuum cleaner as it may draw the foam seal out of the grove and damage it.

Note: It takes at least 2-two people to load a spoil board. You must never put the edge of the board on the vacuum table and push it across. This will snag on the foam rubber gasket and rip it with the result that you will lose the vacuum seal and must replace the seal. Only lift the board into place and lower it onto the vacuum table in the correct position.

3.) Turn on the Vacuum.
4.) Fly cut the total surface of the spoil board.

Note: Only remove the minimum to achieve a flat surface over the complete surface. You will have to skim the surface several times during the life of the spoil board to clean it up and you should get into the habit of only skimming the minimum off the surface.

5.) Once one face is flat, remove the vacuum, turn the spoil board over and repeat the process for the other spoil board.

Spoil Board Precautions

Precautions Regarding Spoil Boards

The spoil board is porous and will absorb moisture. As moisture is absorbed the dimensions of the board will change. In general, this will not be a problem as the changes from day to day are not significant. Also, the changes will, in general, be over the complete board. There are however exceptions. Your morning coffee can do a great deal of damage if spilt. If water etc. is spilt, it will be absorbed into the board and make the board grow in that area. Do not allow the board to become wet. If an accident should happen, remove the board from the machine and allow it to dry.

This may take several days. Replace the board with a new board. Once the wet board has completely dried it may be possible to skim the board and re-use it, but the likelihood is that it is scrap.

Vacuum Table T-Slots

The vacuum table has 9-nine T-Slots to enable fixtures and jobs to be clamped directly to the table. Clamps are provided but it must be noted, the table must be protected with a packer when using jacking bolts. If the jacking bolts meet the plastic of the table, the plastic will be damaged. The packer must be as large as possible to spread the load on the plastic of the table.

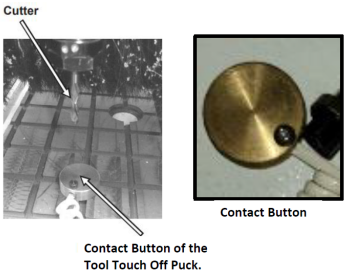
T- Slots are also provided at the end and sides of the table and can be used for clamping jobs and fixtures.

Vacuum Table

Automatic "Z" Origin Point [Tool "Touch Off" Point]

The machine is provided with an automatic tool height adjustment. Place the contact button on the clean spoil board directly under the cutter. To activate the automatic tool height adjustment, press Menu & On/Off key at the same time on the control pad. This will cause the cutter to move slowly down. Once the cutter touches the contact button, electrical contact is made, and the cutter will move up and away from the contact button. The machine now knows the height of the cutter.

Contact Button of the Tool Touch Off Puck.



There is also a manual method that is detailed below:

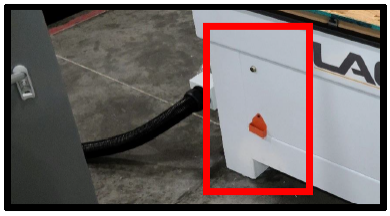
1.) Fit a flat bottom router bit to the spindle.
2.) Jog [Z] the tip of the tool down so that it is just above the top of the spoil board using the "Continues" (CONTINUOUS???) button.
3.) Step down in slow mode [0.1mm 0.004" each time the button is pressed] while turning the router collet by hand in the reverse direction. As you feel pressure, stop jogging down.

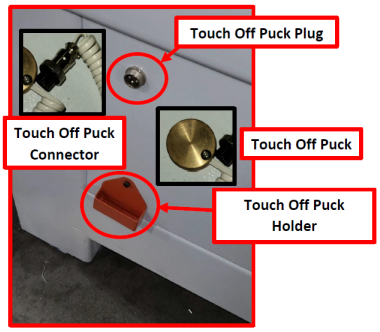
⚠ WARNING! DO NOT turn the router bit by hand! as it is sharp and could cause injury.

4.) Select the distance mode and enter 0.0254mm [0.0001"] Press Z+ [UP] and rotate the cutter in the reverse direction until the cutter is free to move and there is no drag. The cutter is now within 0.001" above the spoil board.
5.) Once the router bit is at Zero press the Z-0 / 8 button to set the zero point.
6.) Jog the router bit up or press the origin button to move the router bit up and to the origin point.

Fitting the "Touch Off" Puck

The touch off puck plugs into the front of the machine and is stored in the puck holder.





Touch Off Puck & Plug

Setting the Spoil Board on the Vacuum Table

How to Move the Router Head to the Spoil Board Corner Position:

1.) With the router head in the home position, drop the router bit to just above the spoil board top face as described earlier [Z axis].
2.) Use the distance command as described earlier [press mode, toggle through to distance] to set the X and Y position to 40.38mm.
3.) Press X+.
4.) Once the router head has stopped moving press Y+.
5.) The point of the router bit is now located over the point where the corner of the spoil board should be.
6.) You may need to move the router bit lower so that it is closer to the top surface of the spoil board by pressing the Z- button.
7.) Press the top right-hand button XY-0 / 4 this will set the origin and the machine now has a new datum point which will be the X=0 / Y=0 in your design program.
8.) Move the spoil board so that the corner of the spoil board is directly under the point of the router bit and adjust the spoil board position so that it is parallel with the edges of the vacuum table. Vacuum can now be applied to the spoil board.

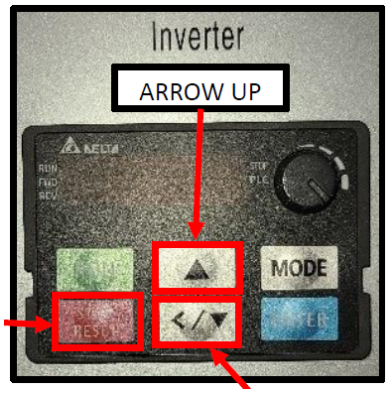
Resetting the Origin Point

1.) Bring the router head to the origin point by pressing origin button.
2.) Lower the router bit by pressing Z= so that it is just above the spoil board.
Note the position of the tip of the router bit point and you will probably find the origin point will have to be adjusted.
3.) Jog the point over so that it lines up with the edge of the spoil board in the X axis.
4. Jog the point over so that it lines up with the edge of the spoil board in the Y axis.
5.) Reset the origin point by pressing the top right-hand button XY-0 / 4. This will set the origin and the machine now has a new datum point.

Spindle Speed Control

Only 3-Three Buttons are Operator accessible:
ARROW UP, ARROW DOWN, and **STOP KEY**.
ARROW UP Key is used to raise the spindle speed.
ARROW DOWN Key is used to lower the spindle speed.

The **Stop Key** is available to stop the spindle during a program activation.
Display reads in hertz, 200hz = 12,000, 300hz = 18,000,
400hz = 24,000.



Loading a Program into the Machine

NOTICE! The controller has a USB slot located at the top.

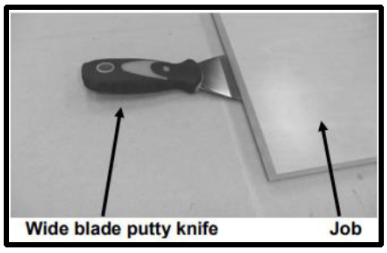
1.) Load your program into your USB drive.
2.) Fit the USB into the USB slot in the controller.
3.) Press the button RUN PAUSE/ DELETE. The display will show U disc.
4.) Press the OK button. What is in the USB drive will be shown on the screen.
5.) Use the arrow keys to select the file that you need to load into the controller.
6.) Select, then press OK button.
7.) Once the code / program has been downloaded the machine will start to operate. Note. Ensure that you are clear of the machine as the spindle will start to turn and could cause injury.
8.) The router will just cut the surface of the spoil board the distance that you set in the design software, (We suggest 1.6mm [1/16”) and cut the outline of the job. This will give you the location of the part on the spoil board.

Fitting a Job to the Spoil Board

One can use double-sided tape to attach the job to the spoil board. If you are using double-sided tape, ensure that the spoil board and the job are clean and do not have saw dust or chips as this will affect the ability of the tape to hold the job securely. Only use the smallest amount of double-sided tape as it will make it easier to remove the job once machined.

Removing the Job from the Spoil Board:

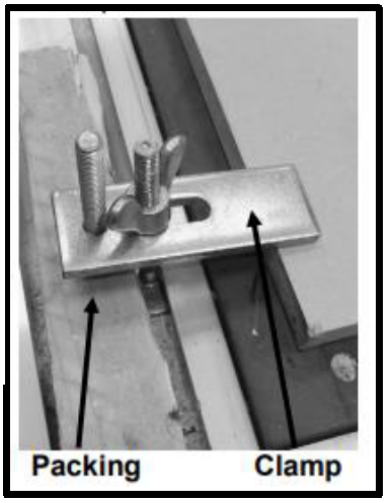
Pry the job off the spoil board with a wide blade putty knife or something similar.



Fitting the Job to the Table using the "T" Slots:

One may find it convenient to clamp the job to the spoil board with the table clamps. However, note that this attachment method can only be used if the outside edges are not being machined. When using the clamps, place a piece of packing under the jacking bolt to protect the bed of the machine.

Table Clamps
(Qty. of 8 Provided)



Vacuum (SV 200 400 Valve) Adjustment

NOTE: Torx bit TX30 X2 10mm wrenches

1) Remove the plastic valve cover.

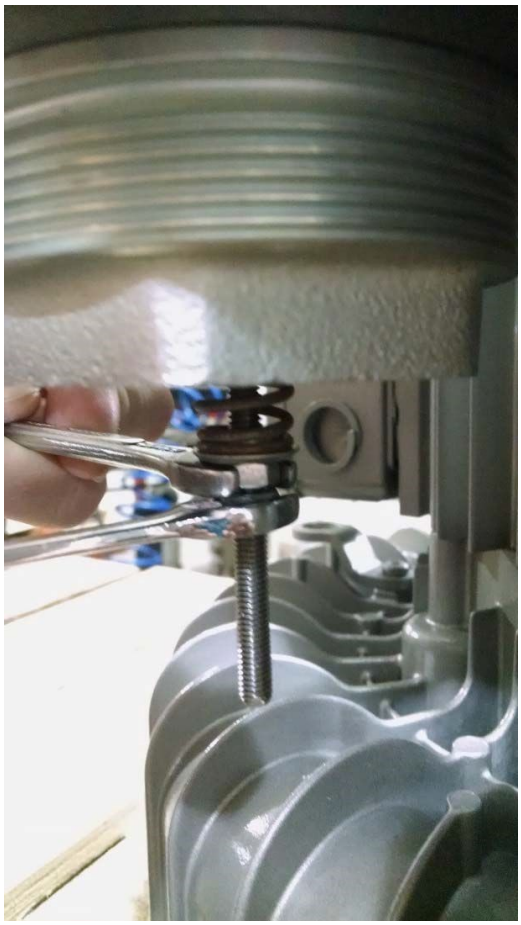
2) Remove the Two Torx screws are found in between the plastic valve cover and bottom cover of the impeller.

3) The valve stem will be exposed. Crack the two nuts apart and adjust the “tension nut” to achieve desired vacuum level.

NOTICE This should be done while the pump is running. A gauge should be used at the inlet port of the pump, to accurately adjust the valve.
Loosen the valve tension for less vacuum. Tighten the valve tension for more vacuum.

⚠ WARNING! Do not exceeded recommended vacuum levels. Call the Service department for exact values.

4) Once the desired vacuum level is achieved, Loctite the nuts and tighten them against each other.



5) Reassemble the valve cover.

Maintenance & Troubleshooting

As with any machine, to ensure optimal performance you must conduct regular maintenance.

Note: If you are operating within a Quality System Certified Facility (ISO/QS 9000, TS-16949,etc.), be advised to incorporate the daily & weekly maintenance checks into the preventive maintenance protocol of the facilities Quality System.

Daily Checks

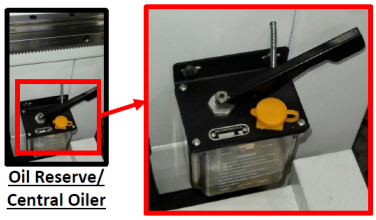
1.) Clean the machine and lubricate unpainted surfaces with a Teflon lubricant. Wipe off any excess and buff with a dry polishing cloth. This will reduce the likelihood of rust forming.
2.) Check cutter teeth for chips and dullness.
3.) Generally inspect the machine for damage and loose or worn parts.

Weekly Checks

1. Clean the cutters.
2. Check cutter teeth for chips and dullness.
3. Generally inspect the machine for damage and loose or worn parts.
4. Check the dust extraction for blockages and any large bits that could cause blockages.

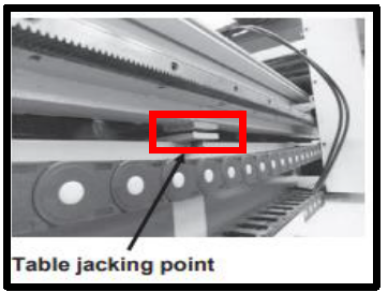
Oiling the Machine:

The machine is provided with a central oiler. Do not over lubricate the machine as excess oil attracts dirt and sawdust. It is recommended that one pump of the oiler once a month will be sufficient to keep your machine lubricated. When the oil tank needs filling, top up with a good quality SAE 30 weight oil.



Jacking the Table Level:

The machine is provided with table jacking points. The jacking points come factory set and should not need adjustment. Do not adjust the jacking points until you have contacted Laguna Tools customer service.

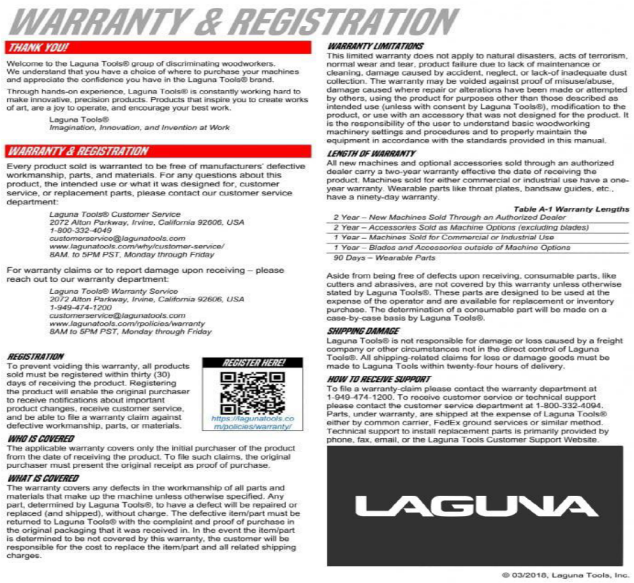


Troubleshooting

Problem	Possible Solution
Machine will not start	1) Check that the start switch is being pressed full in. 2.) Check that the red stop switch is fully out. 3.) Check that the electrical power cord is plugged into the power outlet. 4.) Check that the electrical supply is on [reset the breaker]. 5.) With the power disconnected from the machine, check the wiring to 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.
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.) Internal breaker faulty. Replace the breaker.
Motor tries to start but will not start	1.) With the power disconnected from the machine, try to turn the spindle by hand. If the spindle will not turn, check the reason for the jamming. 2.) Motor faulty. Replace the motor
Motor Overheats	The motor is designed to run hot, but should it overheat it has an internal thermal overload protector that will shut it down until the motor has cooled and then it will reset automatically. If the motor overheats wait until it has cooled and restart. If the motor shuts down consistently check for the reason. Typical reasons are dull cutting tools, no water in the coolant tank, blockage in the coolant pipe and excessive ambient temperature.
Squeaking Noise	1.) Check the bearings.
Spindle Slows Down During A Cut	1.) Dull cutting tools. Replace the tool or have it re-sharpened. 2.) Feeding the wood too fast. Slow down the feed rate.
Machine Vibrates	1.) Machine not level on the floor. Re-level the machine ensuring that it has no movement.

Warranties & Policies

Laguna Tools Warranty & Registration Form



WARRANTY & REGISTRATION

THANK YOU!

Welcome to the Laguna Tools® group of discriminating woodworkers. We understand that you have a choice of where to purchase your machines and appreciate the confidence you have in the Laguna Tools® brand.

Through hands-on experience, Laguna Tools® is constantly working hard to make innovative, precision products. Products that inspire you to create works of art, are a joy to operate, and encourage your best work.

Laguna Tools®
Imagination, Innovation, and Invention at Work

WARRANTY & REGISTRATION

Every product sold is warranted to be free of manufacturers' defective workmanship, parts, and materials. For any questions about this product, the intended use or what it was designed for, customer service, or replacement parts, please contact our customer service department:

Laguna Tools® Customer Service
2072 Alton Parkway, Irvine, California 92606, USA
1-800-332-4049
customerservice@lagunatools.com
www.lagunatools.com/why/customer-service/
8AM. to 5PM PST, Monday through Friday

For warranty claims or to report damage upon receiving – please reach out to our warranty department:

Laguna Tools® Warranty Service
2072 Alton Parkway, Irvine, California 92606, USA
1-949-474-1200
customerservice@lagunatools.com
www.lagunatools.com/policies/warranty
8AM to 5PM PST, Monday through Friday

REGISTRATION

To prevent voiding this warranty, all products sold must be registered within thirty (30) days of receiving the product. Registering the product will enable the original purchaser to receive notifications about important product changes, receive customer service, and be able to file a warranty claim against defective workmanship, parts, or materials.

REGISTER HERE!

https://lagunatools.com/policies/warranty/

WHO IS COVERED

The applicable warranty covers only the initial purchaser of the product from the date of receiving the product. To file such claims, the original purchaser must present the original receipt as proof of purchase.

WHAT IS COVERED

The warranty covers any defects in the workmanship of all parts and materials that make up the machine unless otherwise specified. Any part, determined by Laguna Tools®, to have a defect will be repaired or replaced (and shipped), without charge. The defective item/part must be returned to Laguna Tools® with the complaint and proof of purchase in the original packaging that it was received in. In the event the item/part is determined to be not covered by this warranty, the customer will be responsible for the cost to replace the item/part and all related shipping charges.

WARRANTY LIMITATIONS

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, or lack-of inadequate dust collection. The warranty may be voided against proof of misuse/abuse, damage caused where repair or alterations have been made or attempted by others, using the product for purposes other than those described as intended use (unless with consent by Laguna Tools®), modification to the product, or use with an accessory that was not designed for the product. It is the responsibility of the user to understand basic woodworking machinery settings and procedures and to properly maintain the equipment in accordance with the standards provided in this manual.

LENGTH OF WARRANTY

All new machines and optional accessories sold through an authorized dealer carry a two-year warranty effective the date of receiving the product. Machines sold for either commercial or industrial use have a one-year warranty. Wearable parts like throat plates, bandsaw guides, etc., have a ninety-day warranty.

Table A-1 Warranty Lengths

2 Year – New Machines Sold Through an Authorized Dealer
2 Year – Accessories Sold as Machine Options (excluding blades)
1 Year – Machines Sold for Commercial or Industrial Use
1 Year – Blades and Accessories outside of Machine Options
90 Days – Wearable Parts

Aside from being free of defects upon receiving, consumable parts, like cutters and abrasives, are not covered by this warranty unless otherwise stated by Laguna Tools®. These parts are designed to be used at the expense of the operator and are available for replacement or inventory purchase. The determination of a consumable part will be made on a case-by-case basis by Laguna Tools®.

SHIPPING DAMAGE

Laguna Tools® is not responsible for damage or loss caused by a freight company or other circumstances not in the direct control of Laguna Tools®. All shipping-related claims for loss or damage goods must be made to Laguna Tools within twenty-four hours of delivery.

HOW TO RECEIVE SUPPORT

To file a warranty-claim please contact the warranty department at 1-949-474-1200. To receive customer service or technical support please contact the customer service department at 1-800-332-4094. Parts, under warranty, are shipped at the expense of Laguna Tools® either by common carrier, FedEx ground services or similar method. Technical support to install replacement parts is primarily provided by phone, fax, email, or the Laguna Tools Customer Support Website.

LAGUNA

© 03/2018, Laguna Tools, Inc.

Dealer Machinery Warranty:

New woodworking machines sold by Laguna Tools carry a two-year warranty effective from the date of dealer invoice to customer/end-user. 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 machine 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. The end-user must request an RMA (return material authorization) number from Customer Service and include the (RMA) number with any and all returned parts/components requesting warranty coverage.* 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.

NOTE: Issuing an RMA number is for referencing materials and issues, it does NOT indicate warranty acceptance/conformity.

CNC Limited Warranty:

New CNC machines sold by Laguna Tools carry a one-year warranty effective from the date of shipping. Laguna Tools guarantees all new machine 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 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

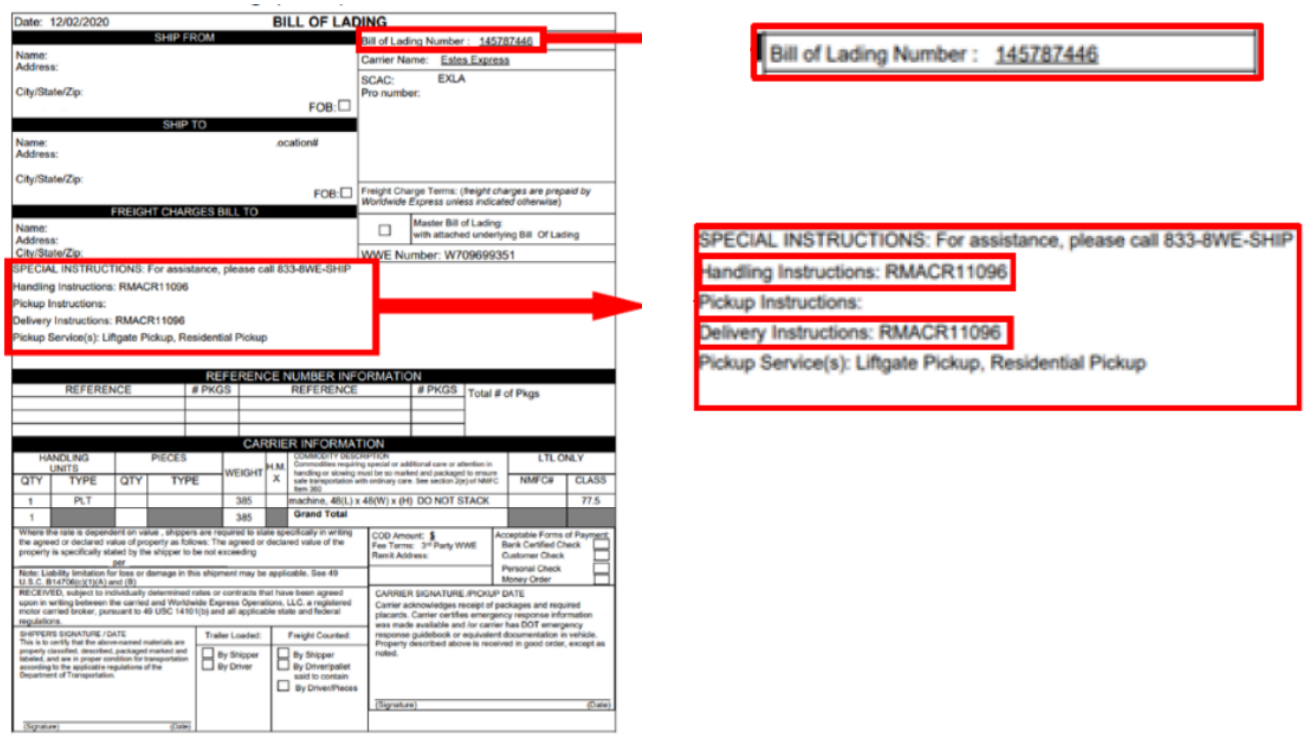
collection, misuse/abuse or damage caused where repair or alterations have been made or attempted by others. Laguna Tools, Inc. is not responsible for additional tools or modifications sold or performed (other than from/by Laguna Tools, Inc.) on any Laguna Tools, Inc. woodworking machine. Warranty maybe 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. Normal user alignment, adjustment, tuning, and machine settings are not covered by this warranty. It is the responsibility of the user to understand basic woodworking machinery 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.

Swift Standard Damage Statement

Swift Standard Damage Notification

The machines are thoroughly tested before leaving any of our Laguna Tools Facilities, but that does not mean that the Machines will not experience any damage in transit. Before signing the Bill of Lading (See Example Below) when the tucking company drops off the machine, **visually inspect the entire crate and check for any damage.**

Bill of Lading (BOL) Sample



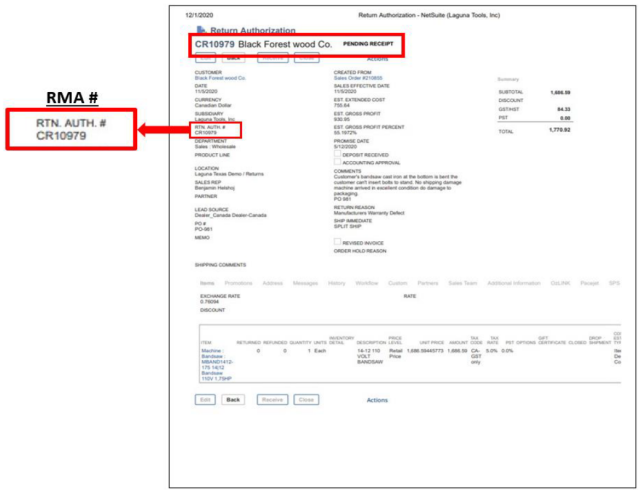
Laguna Tools is not responsible for errors or omissions. Specifications subject to change. Machines may be shown with optional accessories.

Return Material Authorization (RMA) Procedure

Laguna Tools Packaging/RMA Example Procedure

****Any machines returned to Laguna Tools must be returned with packaging in the same way 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.**

We require that the defective item/part be returned to Laguna Tools with the complaint. The end-user must request an **RMA (Return Material Authorization) Number** from Customer Service and include the (RMA) number with all returned parts/components requesting warranty coverage.



Modifications Policy

No Modifications Allowed or Sold

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. woodworking machine. Warranty maybe voided upon the addition of such described tools and/or modifications, determined on a case-by-case basis. Normal user alignment, adjustment, tuning, and machine settings are not covered by this warranty. It is the responsibility of the user to understand basic woodworking machinery 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 or repair information, call 1-800-332-4094.**

LAGUNA SuperMax

LAGUNA AMERICAN HEADQUARTERS

Texas: 744 Refuge Way Suite 200, Grand Prairie, Texas 75050, U.S.A. Phone: +1-800-332-4094
Huntington Beach: 7291 Heil Ave Huntington Beach, CA 92647, U.S.A. Phone: +1-949-474-1200
South Carolina: 825 Bistline Dr. Ste 101, West Columbia, SC 29172, U.S.A. Phone: +1-800-234-1976
Minnesota: 5250 West 74th St, Edina, MN 55439, U.S.A Phone: +1-949-474-1200

LAGUNA EUROPE

Walker Rd, Bardon Hill, Coalville LE67 1TU, United Kingdom. Phone: +44-1530-516921