

# LAGUNA

## OWNERS'S MANUAL

# SPS-9

## Small Part Sander



MSAN9x5-1K-0197

[Lagunatools.com](http://Lagunatools.com)

Thank you for investing in the SPS-9 by Laguna Tools. This machine is one of a family of unique machines proudly offered by Laguna Tools. Every Laguna machine is engineered for years of dependable service. Please feel free to contact Laguna Tools if you have a question or suggestion. We appreciate working with you and your choice of a Laguna Tools machine for your shop.

Regards,  
Torben Helshoj  
President & Founder Laguna Tools

This manual applies to the SPS-9. Enter the model number and serial number below for quick reference when ordering accessories, supplies or parts.

Model: \_\_\_\_\_

Serial: \_\_\_\_\_

Date of purchase: \_\_\_\_\_

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# Safety

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.

## Safety Call-outs


### DANGER!

A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.  
SOMETIMES DISPLAYED AS  DANGER!

### WARNING

A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.  
SOMETIMES DISPLAYED AS  WARNING!

### CAUTION!

A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.  
SOMETIMES DISPLAYED AS  CAUTION!

### NOTICE!

A HELPFUL TIP FROM OUR TECHNICAL STAFF. SOMETIMES DISPLAYED AS NOTICE!

## Safety Symbols



Disconnect from power before proceeding.



Be aware of possible laceration danger.



Be aware of possible crushing danger.



Be aware of possible crushing danger.



Electrical Hazard.



Wear ear protection.



Wear Eye Protection.



Wear a full face shield.



Wear lung protection.



Requires X People

## ⚠ PROP 65 WARNING

SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. SOME EXAMPLES OF THESE CHEMICALS ARE:

- LEAD FROM LEAD-BASED PAINTS.
  - CRYSTALLINE SILICA FROM BRICKS, CEMENT AND OTHER MASONRY PRODUCTS.
  - ARSENIC AND CHROMIUM FROM CHEMICALLY-TREATED LUMBER.
- YOUR RISK FROM THESE EXPOSURES VARIES, DEPENDING ON HOW OFTEN YOU DO THIS TYPE OF WORK. TO REDUCE YOUR EXPOSURE TO THESE CHEMICALS: WORK IN A WELL VENTILATED AREA, AND WORK WITH APPROVED SAFETY EQUIPMENT, SUCH AS THOSE DUST MASKS THAT ARE SPECIALLY DESIGNED TO FILTER OUT MICROSCOPIC PARTICLES.

## ⚠ APPLICATIONS 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.
- 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.

## ⚠ WARNING!

### 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, disconnect 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 material. 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 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.

**NOTE:**

**ONLY PROPERLY TRAINED PERSONAL SHOULD OPERATE THIS MACHINE!**

# Electrical Safety

## WARNING!

- RUNNING ON A DIFFERENT VOLTAGE THAN STATED BELOW WILL DAMAGE THE MACHINE. NEVER RUN THE MACHINE IN WET OR DAMP CONDITIONS.
- ELECTROCUTION, FIRE, SHOCK, OR EQUIPMENT DAMAGE MAY OCCUR IF MACHINE IS NOT PROPERLY GROUNDED AND CONNECTED TO POWER SUPPLY.

## Motor Specifications

The standard main motor is typically a 5 HP, three phase, 208-230 volt, but always confirm on the motor/machine label. It does NOT include a cord or plug. Have a qualified electrician install a cord and plug or hard-wire into a disconnect following all applicable codes. Confirm your motor electrical configuration before connecting power! It is listed on the motor label. Before connecting the machine to the power source, make sure the starter and/or switches are in the "OFF" position.

## Power Supply

A separate electrical circuit should be used for each machine. This circuit should not be less than the wiring listed below and should be protected with an appropriate circuit breaker based on the total running and start-up amperage's (listed below). If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug.

## SPS-9

VOLTAGE 208-230V

PHASE 3PH

HERTZ 60Hz

FULL LOAD AMPERAGE @ 230 volts 14.3 Amp

**⚠ WARNING!** Below are RECOMMENDATIONS to be used for this machine based on the above information. Variables that may affect this are:

- Actual voltage supplied to the machine
- Electrical code that must be met in your local province.

An electrician will verify that all the demands are met to properly wire the machine. If you have absolutely any doubt when wiring this machine - please consult with a qualified electrician.

PLUG/RECEPTACLE **Not Included**

WIRING (Gauge) See Jacket Printing

CIRCUIT BREAKER @ 230 volts 20 Amp (min.)

If this information is different than what is stated on the Motor Specification Plate - omit this information. It is possible that the documentation is outdated to a machine change - such as a different motor. Always check the motor plate prior to any wiring. If any doubts, please consult a certified electrician.

Know when to use a time delay fuse! AKA Slow blow fuse. Generally, if the motor uses a start capacitor, a time delay fuse is required. This type of fuse will not trip with the initial amperage needed to start the machine, which is typically double that of the running amperage. Most machines should use this type of fuse.

**Note:** most commercial circuit breakers are slow-blow or "time-delay" by default, to compensate for start-up.

# FOREWORD

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## Safety Summary

Warning! Remember to put safety first. Think!

Failure to heed the following warnings may result in serious injury or death.

1. READ AND UNDERSTAND the operator's manual before operating this machine.

This machine is DANGEROUS unless it is:

- PROPERLY GUARDED for personal safety.
- PROPERLY ALIGNED and ADJUSTED.
- PROPERLY MAINTAINED in good working condition.
- PROPERLY USED for its intended use.

2. Avoid ACCIDENTAL START-UP AND ELECTRICAL SHOCK

3. ALWAYS DISCONNECT electrical power and lockout main disconnect switch before performing maintenance, service, adjustment, or cleaning.

4. KICKBACK OR KICKOUT: (Work piece being sanded and ejected at high speed, toward infeed or outfeed) may occur unless you:

- NEVER allow work pieces to overlap, double feed or ride on top of each other.
- FIRMLY hold work piece against feed conveyor belt or roll to control part.
- STAY OUT of the path of a work piece kickout to further protect against personal injury.

5. FIRE OR EXPLOSION may occur unless you:

- CLEAN the sander daily, properly disposing of potential fuel.
- KEEP sparks& flames (smoking, welding, etc.) at least 20 feet from sander and duct work.
- NEVER process different metals without first completely cleaning the machine.
- NEVER process short or excessively thick work pieces, which could cause jam- ups, forcing the hold-down shoes/rolls into the abrasive belt, creating sparks.

6. CRUSHING injuries may occur unless you:

- KEEP all shields, guards, covers and doors in place.
- KEEP hands, fingers, feet, clothing, etc. away from all moving parts, revolving rolls and conveyor belts.
- NEVER clean, oil or repair machinery while it is in motion.
- NEVER wear gloves when operating machine.
- NEVER place hands or fingers between work pieces and the conveyor belt. Your hands may become caught and pulled into the sander.
- DO NOT create pinch point when adding, feeding and/or unloading equipment.

7. ABRADING or CRUSHING injuries may occur unless you:

- NEVER clean the abrasive belt while it is on the sander. Remove the abrasive belt and clean separately.



# SAFETY

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## General Safety Instructions

**1. Read and understand the entire manual before installing, testing, and starting the machine.**

Machinery presents serious injury hazards to untrained users, read and memories the safety instruction and followed it carefully.

**2. Ensure work area in order.** Do not use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.

**3. Keep work area clean and well lighted.** Clutter and shadows may cause accidents.

**4. Keep children and visitor a safe distance from the work area.**

**5. Only allow trained and authorized personnel to operate, maintain the machinery.** Make sure operation instructions are safe and clearly understood.

**6. Wear proper apparel.** Do not wear loose clothing, neckties, bracelets which may caught in the moving parts of the machine. Wear protective hair covering to contain long hair and wear non-slip footwear.

**7. Check for damaged parts and make sure all protective devices in place before using machinery.** Check for blinding or misaligned parts, broken parts, loose bolts, and other conditions that may impair machine operation, repair or replace damaged parts before operation. Check all guards are in good working and fixed in position.

**8. Do not force machinery.** Work at the speed for which the machine or accessory was designed for.

**9. Never carry out any work pieces on moving parts.** Before carrying out work pieces on such parts, make sure they are stopped or in the rest position and the power supply is switched **OFF**.

**10. Never leave when machine is running.** Turn the power **OFF** and allow all moving parts come to complete stop before leaving machine unattended.

**11. Do not overreach.** Maintain stability and balance at all times.

**12. Before restarting the machine after a stoppage. Make sure there is no any person in the danger zone**

## **Safety Instructions**





- 1. Use dust collection system.** Never operate the sander without an adequate dust collector in place and running to minimize health hazards.
- 2. Respirator and safety glasses.** Always wear a respirator and safety glasses while operating the machine. Dust and chips are created when sanding, some debris will be ejected, becoming hazards to the eyes and lungs.
- 3. Avoiding entanglement.** Becoming entangled in the moving parts of this machine can cause pinching and crushing injuries. To avoid these hazards, do not wear loose clothing, gloves, jewelry, and the back long hair. Keep all guards in place and doors closed and secure.
- 4. Work-piece inspection.** Nails, staples, knots, or other imperfections in the work-piece can be dislodged and thrown from the sander at a high speed into the operator. Never attempt to sand stock that has imperfections or embedded foreign objects.
- 5. Work-piece quantity.** Never sanded two or more work pieces side by side. Since work pieces are not exactly the same thickness, one of them may be thrown from the sander at a high rate of speed.
- 6. Work-piece size.** Attempting to sand work piece that is thinner, narrower, or shorter than is recommended in this manual can cause kickback or damage to machine. Always make sure the work-piece is above the minimum size requirements for this sander.
- 7. Hand placement.** The sanding brush can remove a large amount of flesh in a few seconds. Always keep hands away from the turning brush. Avoid pinching injuries by never putting your hand between the work-piece and the machine.
- 8. Body placement.** In case of kickback, avoid personal injury by always keeping your body to the side of the sanding path.

### **NOTICE!**

No list of safety guides can be complete. Every shop/ factory environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious injury, damage to equipment, or poor work results.

# Label Specifications

FIGURES	TITLE	DESCRIPTION
	<p><b>WARNING OF ELECTRIC SHOCK</b></p>	<ul style="list-style-type: none"> <li>● Hazardous voltage. Can shock, burn or cause death.</li> <li>● Do not service before disconnecting power.</li> <li>● Do not operate when the doors are open.</li> </ul>
	<p><b>DANGER OF KICKBACK</b></p>	<ul style="list-style-type: none"> <li>● Work piece kick back hazard. It will cause severe injury or death.</li> <li>● Do not overlap or double feed parts</li> <li>● Do not stand line with work piece.</li> <li>● Keep machine properly adjusted.</li> </ul>
	<p><b>WARNING OF MOVING PARTS</b></p>	<ul style="list-style-type: none"> <li>● Moving parts hazard, it can cause severe injury.</li> <li>● Keep away from moving parts.</li> <li>● Do not wear gloves or loose clothing.</li> <li>● Do not operate without doors, covers, and guard in place.</li> </ul>
	<p><b>WARNING OF PINCHED</b></p>	<ul style="list-style-type: none"> <li>● Pinch point hazard. Can cause severe injury.</li> <li>● Do not put hands between work piece and conveyor belt.</li> <li>● Do not wear gloves or loose clothing.</li> <li>● Keep away from moving parts.</li> </ul>

	<p><b>DANGER OF ABRASIVE MOVING PARTS</b></p>	<ul style="list-style-type: none"> <li>• Touch rotating abrasive belt will cause severe injury.</li> <li>• Keep away from moving parts.</li> <li>• Remove abrasive belt for cleaning.</li> <li>• Do not operate without doors, covers, and guard in place.</li> </ul>
	<p><b>ATTENTION OF SPEED ADJUSTED</b></p>	<ul style="list-style-type: none"> <li>• Do not change speed when the machine is not in operation.</li> </ul>
	<p><b>ELECTRICAL WARNING LABEL</b></p>	<ul style="list-style-type: none"> <li>• This warning label indicated the location of electrical control system, and electrical components cabinet.</li> <li>• For electrical maintenance shall be made by qualified person. Do not leave cover or open doors until the power source has been <b>OFF</b> and machine has come to complete stop.</li> </ul>
	<p><b>DIRECTION INDICATED LABEL</b></p>	<ul style="list-style-type: none"> <li>• This label is indicated the conveyor Turning direction.</li> <li>• Please confirm the rotated direction of conveyor belt while the machine connected to factory power source.</li> </ul>

# **INSTALLATION**

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## **Unpacking/installation**

The machine was packed in a crate for shipment. Nails are sharp! Please use caution when unpacking and removing the crate.

When using a forklift to lift the machine take care to prevent bumping, make sure the forklift forks are in a stable position and extend through the bottom of machine, while maintaining balance of the machine. Place the machine on a proper site that is flat, well lit and allows safe access for operation and maintenance.

The Sanding machine you have purchased is designed to operate at a high performance level. To reach this expectation it requires careful installation. The methods and care used to install this machine will affect its sanding performance and ability to hold tolerances.

When the machine arrives, CHECK FOR SHIPPING DAMAGE. If there is damage, accurately record the damage on the Bill of Lading before the transport company leaves your plant. This will provide the insurance company with a clear record of the damage. Immediately make a claim for damages against the transport company.

Have the proper equipment and personnel to assist you in removing the skid and placing the machine. We recommend you have trained machine riggers to assist you in uncrating and placing the machine.

Set the machine in place. Read and understand this operation and maintenance manual before operating or doing any maintenance on this machine. Read and understand the Safety Summary.

You will need a set of open/closed end metric wrenches, a large adjustable wrench, and a accurate bubble type level.

Read all of the tags and decals attached to the machine. They contain needed information for the safe operation, proper placing, and setup of the machine.

- \* Locate the electrical attachment points, and dust collection outlets.
- \* Use caution when placing the machine. Allow space for opening the outboard door, for loading abrasive belts, and material handling at the infeed and outfeed of the machine.

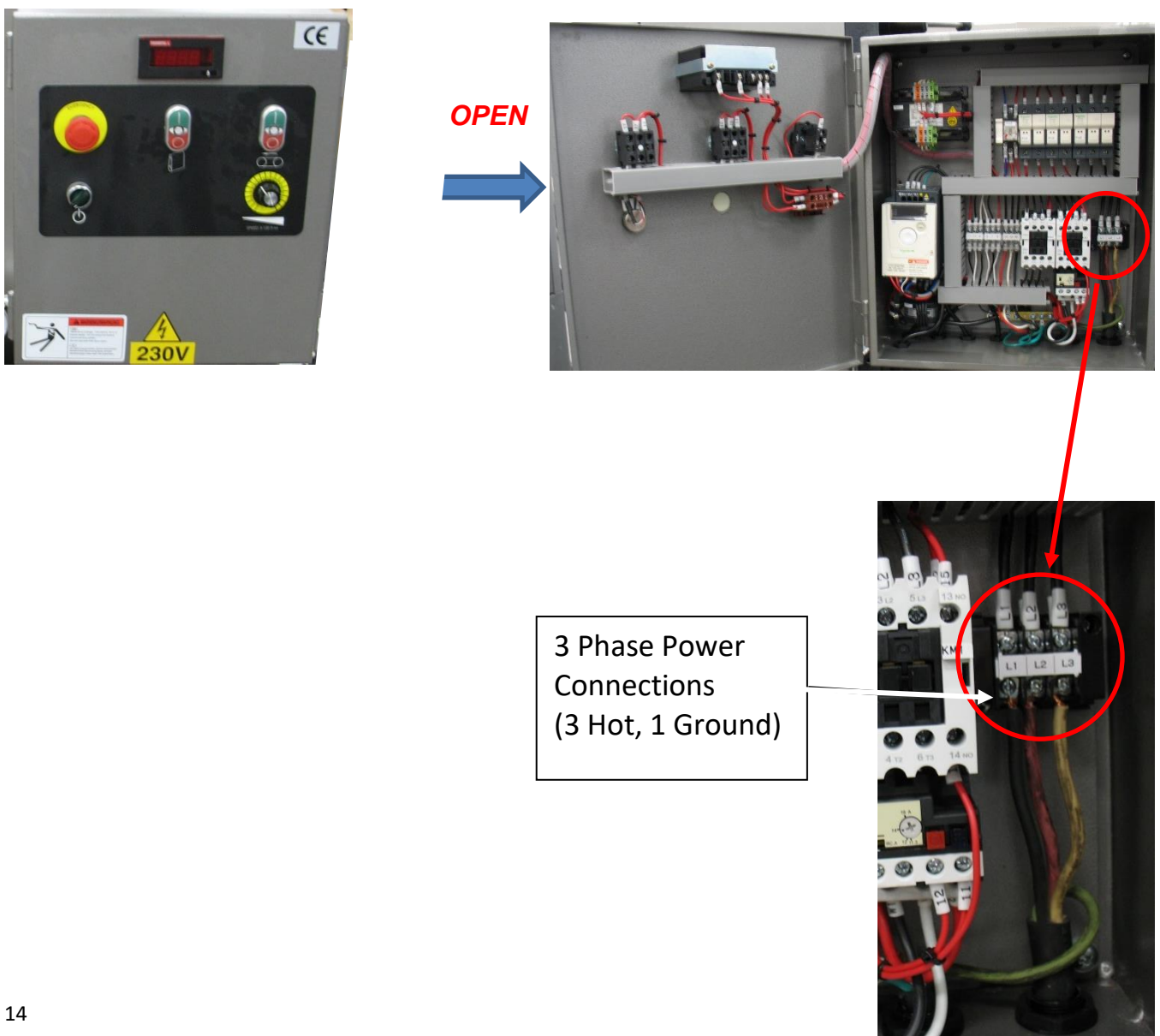
# Notice!!! Power Connection

## **A. Power Connection**

Before connecting power supply cord, it is important to make sure that the voltage (V), frequency (Hz), and phase (Ph) of the power source are compatible with the machine.

The machine must be connected to the main power supply by a qualified electrician.

1. Check the supply power voltage, use voltage meter to check if the supply power voltage is matched to machine, this machine is typically supplied with 3 phase power, so L1&L2, L2&L3 and L1&L3 all have to be checked. Single Phase power would have two “hot” leads and one ground wire.
2. Open the control box, unscrew the terminals tagged L1, L2 ,L3 and ground, insert the pin of power wire of L1, L2, L3 and ground to each matched terminal and tighten the screw. Single phase requires attaching two (hot) leads and the ground wire.
3. **Confirm Rotation**; Confirm the abrasive belt is making a “climb-cut” and turning in the same direction as the conveyor belt (Clockwise when looking into the chamber from the left side of machine). If not, reverse two (of the three) 3 Phase input (hot) leads to change rotation (**only applies to 3 Phase motors**). Single Phase required rewiring motor within the motor conduit box and wiring diagram under the cover of the conduit box.

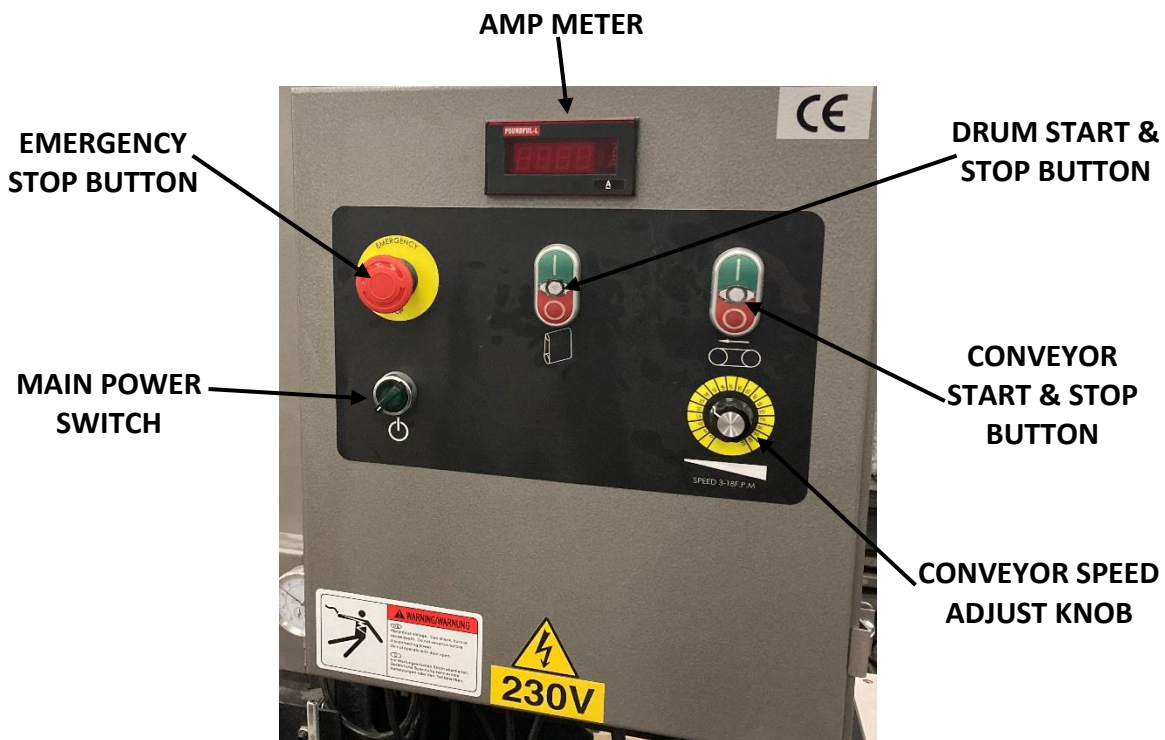


# OPERATION

## Reminder before Operation

- Make sure there is no object on the conveyor bed before turning on the machine.
- Confirm abrasive belt is turning in the correct direction (Clockwise when looking into chamber from left side). See “Power Connection” if correction is required.
- Adjust the height position of conveyor and manually rotate the abrasive belt. Confirm the abrasive is in the correct contact with the test piece.
  - Confirm all screws and guards are tightened securely.
  - Do not remove or open the safety devices and guards while the machine is running.
  - Never attempt to perform sanding operation until the dust collection system is started.
  - Make sure that the conveyor belt moving is moving the correct direction. Set the feed speed properly.
  - Make sure the hold-down rollers have been adjusted.
  - Confirm that the tools and adjusting wrench have been removed before starting.

## Control Panel Description



CONVEYOR SPEED ADJUSTMENT KNOB: to adjust conveyor speed, turn counterclockwise to slower feed; turn clockwise to increase feed rate.

CONVEYOR START & STOP BUTTON: Press the “green” button to start conveyor & “red” button to stop conveyor.

DRUM START & STOP BUTTON: Press the “green” button to START the drum (Sanding head) and the “red” button to STOP the drum.

AMP METER, **Do NOT** operate the machine with amperage greater than FLA amps of main motor showing on the digital AMP METER.

The Sanding Head will stop when;

- Any EMERGENCY STOP BUTTON is pressed.
- Any limit switch inside the machine case is activated.
- The sanding head door is not closed properly.
- Power is disconnected.

EMERGENCY STOP BUTTONS: Press either (front or back) button to stop all functions of this machine; turn clockwise to deactivate.

## **How to operate**

1. Measure the workpiece thickness
2. Adjust the conveyor bed position to match the workpiece thickness.

**NOTE:** Proper abrasive contact is when the sanding belt is touching the workpiece and the belt can be rotated by hand. If set too deep, the belt will not be able to rotate with hand pressure.

3. There is a dial indicator near the bed. Use it for micro-adjustments. To operate; loosen the black knob and move the rod until it touches the bottom of the dial indicator stud and the scale reads "0". When adjusting thinner the dial indicator will show the movement of the conveyor table.



4. Turn on the drum (sanding belt).
5. Turn on the conveyor. The speed is variable.
6. Turn on the vacuum source/dust collection and place the workpiece on the conveyor. Confirm the vacuum source is the correct size (CFM) and type to safely collect dust and debris from the material being sanded!
7. Adjust the conveyor height for successive passes.



## **Please NOTE:**

There are 2 limit switches installed on each side of abrasive belt for preventing the belt from damaging the machine. When either side of limit switch is activated, the machine stops running. Turn power OFF. Loosen the tension of the abrasive belt. Move the belt away from the switch. Close the access door. Re-tension the belt and make a slight tracking adjustment. Turn power ON, run machine and watch tracking. If necessary adjust tracking.



## **Conveyor Belt Tensioning & Tracking**

As the conveyor belt rotates around the conveyor bed it can shift to one side or the other. It can be adjusted to follow the correct path/track around the conveyor bed. adjustment is called tracking the conveyor belt. It is also called "track the belt". The belt should track in the center of the conveyor bed.

The conveyor belt must be turned "ON" to make adjustments.

Adjust the conveyor belt tracking by loosening the lock nut and adjust the conveyor belt adjustment bolt on each side of the conveyor.

- Tighten the right-side adjusting bolt to move the conveyor belt to the left.
- Tighten the left-side adjusting bolt to move the conveyor belt to the right.

Tighten the lock nut. Do not overtighten the belt. The conveyor belt should be just tight enough to rotate around the conveyor bed without slipping. If it seems too tight on a side, loosen the adjustment bolt on the opposite side of the conveyor.

### **CAUTION:**

DO NOT OVERTIGHTEN THE CONVEYOR BELT. THE CONVEYOR BELT OR THE BEARINGS COULD FAIL PREMATURELY BY OVERTIGHTENING.

# Abrasive belt tracking

There are 2 limit switches installed, one on each side of abrasive belt, for preventing abrasive belt from moving out of track. When either side of limit switch is activated, the machine stops running.

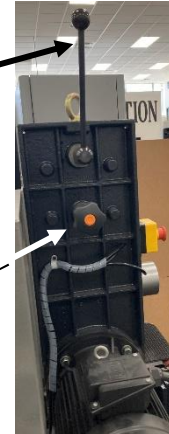
*View from the sanding head case side*



*View from conveyor out-feed side (back)*



*View from sanding motor side*



1. Open the sanding head case and check which side limit switch is activated.
  2. Pull down the Cam Tension Handle to loosen abrasive belt tension and move abrasive belt to the center of rollers, then release the Cam Tension Handle.
  3. Close the sanding head case, check if “power” light is ON.
  4. Slightly turn the Belt Tracking Knob to adjust the belt tracking, referring to the views above:
    - If the belt tracks to the left, turn the Belt Tracking Adjustment Knob clockwise to adjust belt tracking to the right.
    - If the belt tracks to the right, turn the Belt Tracking Adjustment Knob counter-clockwise to adjust belt tracking to the left.
- NOTE:** If the belt tracks back-and-forth or moves to one side quickly, this typically indicates excessive adjustment to the tracking knob. Adjust the knob less and watch the belt.

The rotation of the belt and direction of the “arrow” on the back of the belt (if so equipped) must be correct. See “Power Connection” section to correct motor rotation.

## **Abrasive belt replacement:**

1. Turn OFF the machine and wait for it to come to a complete stop.
2. Open the sanding head case for access to the abrasive belt.
3. Pull down the cam tension handle to loosen abrasive belt and remove it from the rollers.
4. Install the new abrasive belt, positioning the arrow printed on the inside

- of the belt with the direction of the roller rotation.
5. Center the abrasive belt on the rollers.
  6. Release the cam tension handle to tighten the abrasive belt.

## **MAINTENANCE**

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### **Notices for Maintenance Personnel**

Ordinary maintenance must be carried out only by trained and authorized personal. Before carrying out extraordinary maintenance or replacement of parts, please contact the manufacturer or the company's authorized service center.

Follow the maintenance safety rules given below for maintenance.

- Start by checking that the power is switched **OFF**.
- Carry out all work after the machine stopped.
- Dispose of spent lubricants and oil in the proper manner.
- Use the individual protection devices and wear appropriate clothing.

### **Cleaning**

The SPS-9 is designed to operate at a high performance level. It requires careful care and maintenance. The methods and care used to maintain this sander affect its performance and ability to hold tolerances.

The frequency of cleaning will depend how often it is used. We recommend that you clean your sander daily.

#### **Attention!**

Cleaning this sander is considered normal maintenance and DANGER exists if not performed according to instructions.

Follow the instructions below to clean the Sander:

1. Turn off all power to abrasive head and feed drive.
2. Determine that abrasive belts are at a complete STOP.
3. Disconnect power and lock out main disconnect switch and the compressed air system of sander before doing any maintenance work.
4. Turn on your dust collection system. This will help collect the dust you will stir up when cleaning the sander.
5. Open the outboard door (belt loading door).
6. Remove abrasive belt(s).

### **Warning!**

Never use a standard industrial vacuum cleaner. An explosion-proof vacuum cleaner must be used for cleaning the machine.

7. Using a clean rag wipe off all excess grease, debris or swarf inside the machine.
8. Remove all objects clogging dust hood(s)
9. Remove dust by using a brush and pan. Use low pressure compressed air (30 psi /2.1 bar) only to blow off areas not accessible by brushing.

### **Warning!**

Take care using compressed air. Do not cause dust clouds to form. Dust clouds are potentially explosive.

10. Clean the following areas:

- Dust hood(s).
- Under the conveyor bed.
- Inside the conveyor bed.

## **Lubrication**

Use a good grade of multi-purpose medium high temperature extreme pressure grease for normal through heavy duty applications.

The amount of operation or running time controls the frequency of lubrication intervals.

**Lubricate the following components as indicated.**

### **Sanding head with contact drum**

- Contact Drum Bearing-Sealed
- Idler Roll Bearing - Grease every 150 hours

### **Conveyor Bed with Conveyor Belt**

- Drive roll bearings -Grease every 300 hours

### **Gear Reducers-Sealed**

### **Conveyor Bed Slides, every three to four months**

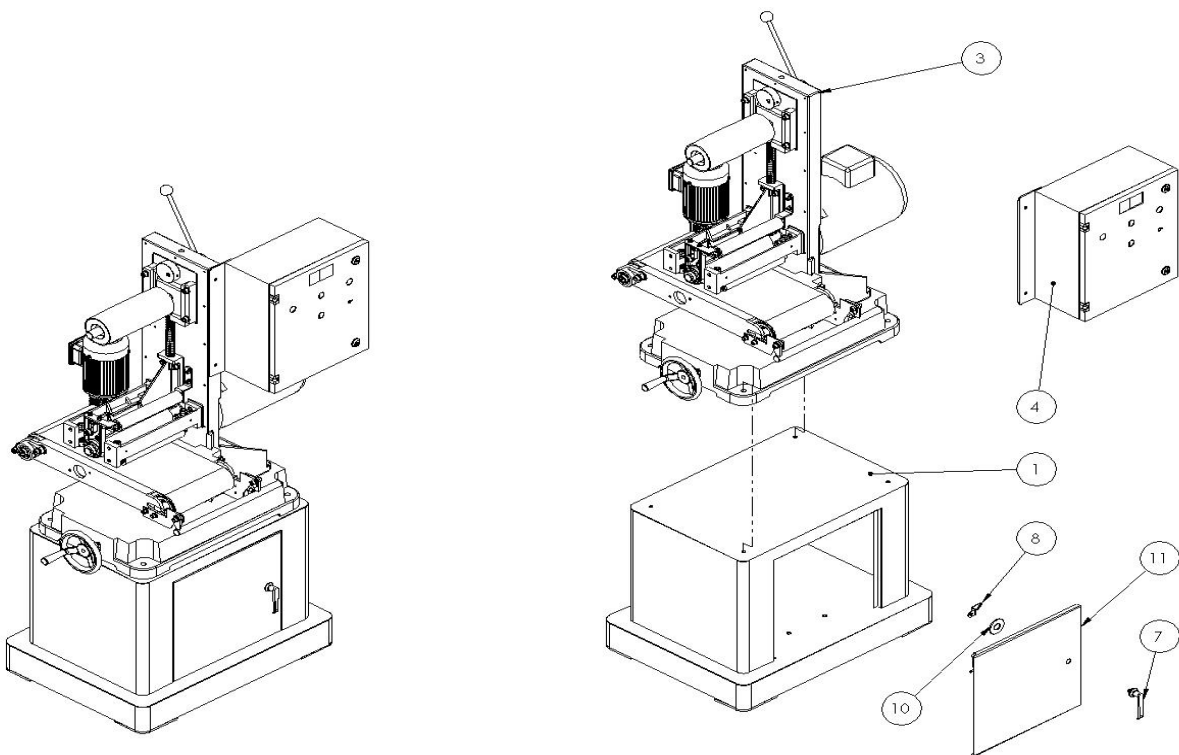
- When machine is equipped with guide bars on the frame and a slide block on the conveyor bed, clean off old grease and lubricate with any good grade of grease.

# Parts Lists & Exploded Views

## SPS-9 Assembly

Item	Part No.	Description	Qty.
1	E0010005	Cabinet Stand	1
3	B0030004	Abrasive Belt Station Assembly	1
4	D0030005	Electrical Box Assembly	1
7	J0110005	Door Handle	1
8	J0110006	Door Lock	1
10	M0512200	M22 Washer	1
11	E0020054	Cabinet Stand Door	1

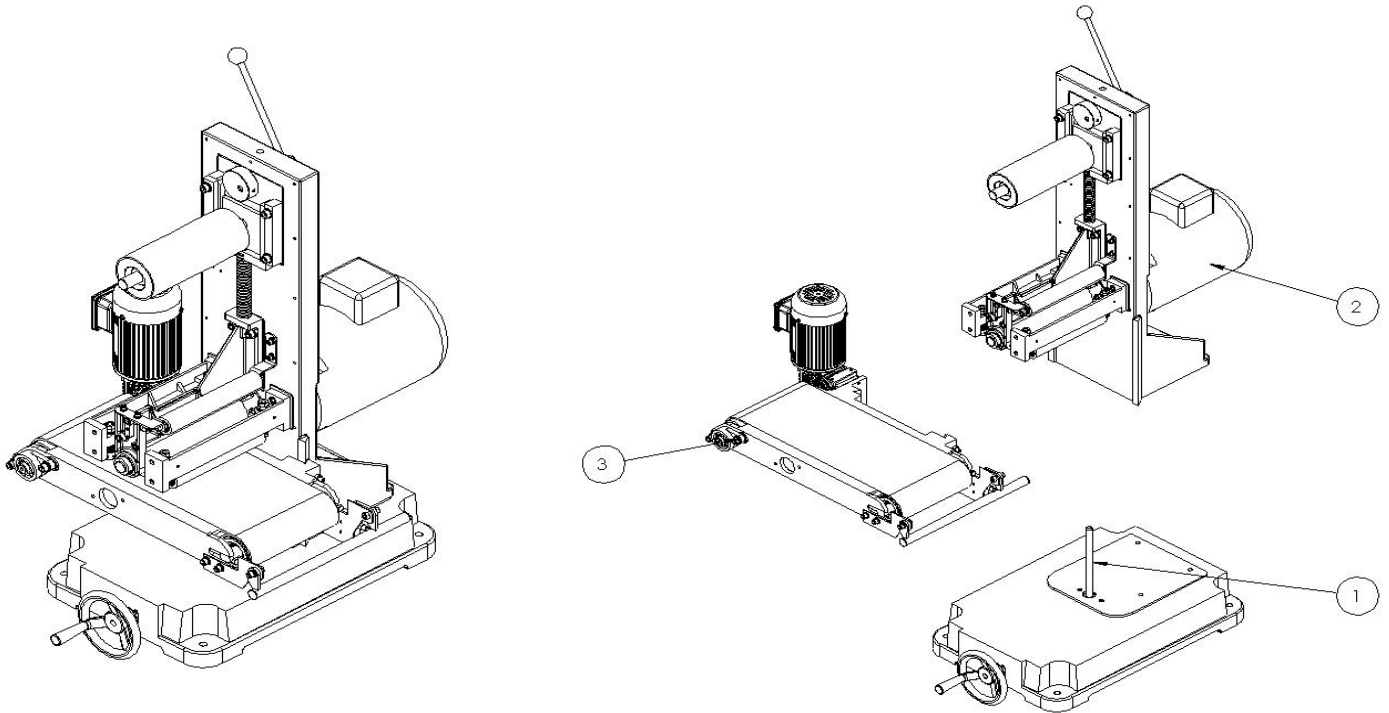
## SPS-9 Assembly



# Abrasive and Conveyor Assembly

Item	Part No.	Description	Qty.
1	C0040003	Lifting System Assembly	1
2	C0020003	Abrasive System Assembly	1
3	C0010003	Conveyor System Assembly	1

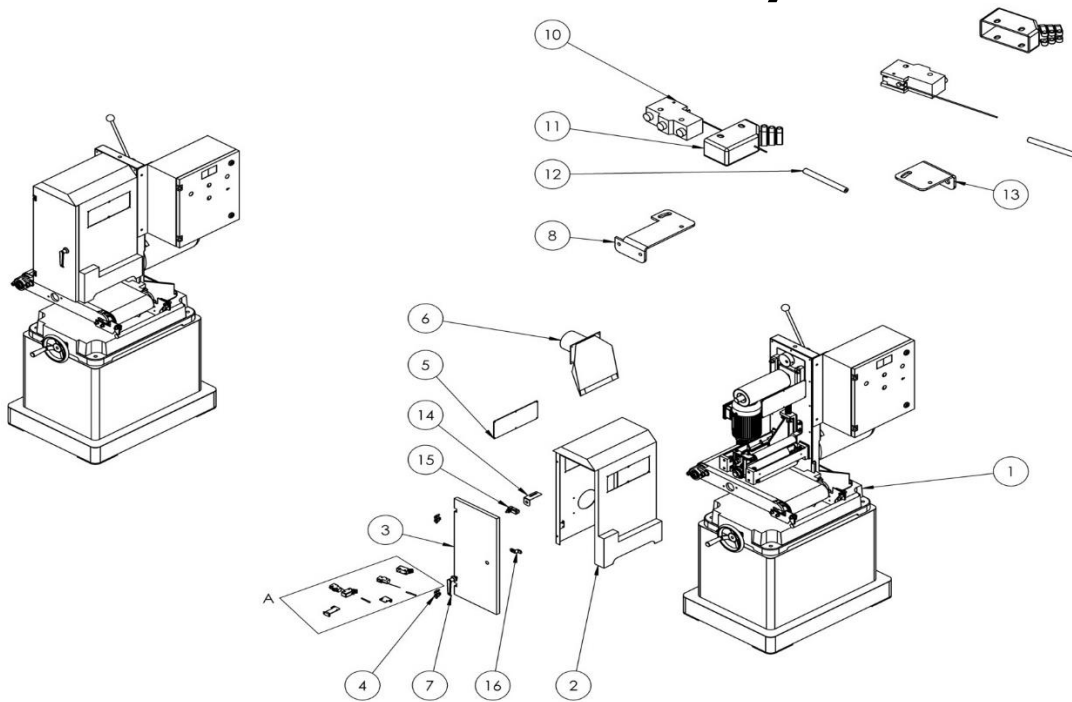
# Abrasive and Conveyor Assembly



# Abrasive Cover Assembly

Item	Part No.	Description	Qty.
1	B0010003	SPS-9 Assembly	1
2	E0020026	Machine Cover	1
3	E0020025	Abrasive Belt Access Door	1
4	J0110001	Hinge	2
5	E0170002	Viewing Window PC Cover	2
6	E0030005	Dust Collecting Port	1
7	J0110005	Door Handle	1
9	E0140005	Limit Switch Support Stand - Outside	1
10	J2000002	Limit Switch Z-15HW78-B	2
11	J2000005	Cover of Limit Switch WJ-CB-2	2
12	J2000006	Ceramic Tube	2
13	E0140004	Limit Switch Support Stand - Inside	1
14	E0140008	Micro Switch Support Stand for Cover Door	1
15	J2000009	Micro Switch MJ-1307	1
16	J0110009	Door Lock	1

# Abrasive Cover Assembly



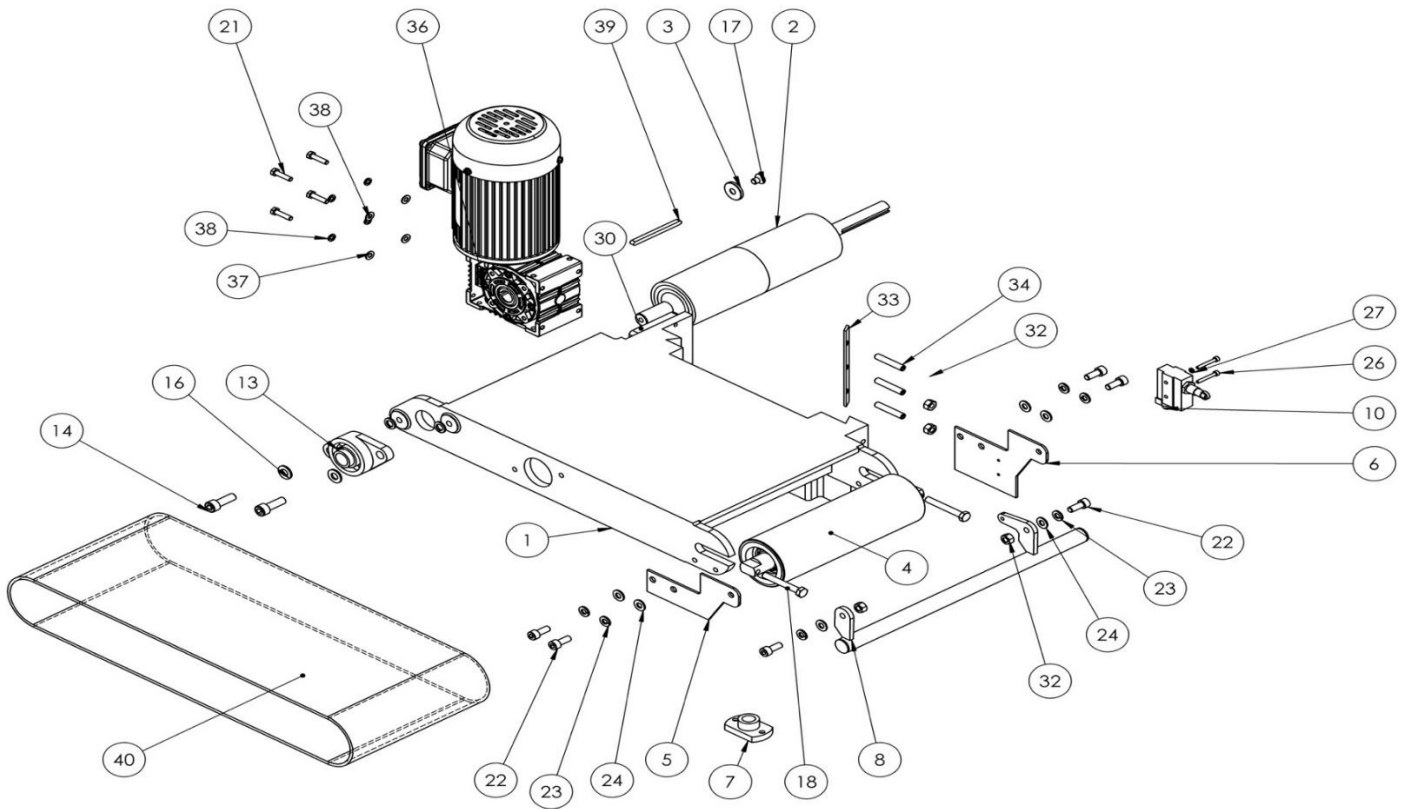
# Conveyor System Assembly

Item	Part No.	Description	Qty.
1	E0050004	Cast Iron Conveyor Table	1
2	E0040004	Conveyor Roller	1
3	E0150004	M8 Washer	1
4	D0010002	Conveyor Roller Assembly	1
5	E0330006	Support Stand of Safety Bar-Left	1
6	E0330007	Support Stand of Safety Bar-Right	1
7	E0250003	Lead Screw Holder	1
8	E0390002	Safety Bar	1
10	J2000003	Limit Switch for Safety Bar	1
13	J0030204	Flanged Ball Bearing Units (UCFL-204)	1
14	M0201030	Hexagon Socket Screw -M10X30	2
16	M0510100	Plain Washer -M10X2mm	2
17	M0220822	Flat Head Hexagon Socket Screw -M8X12	1
18	M0400860	Hex Head Bolt -M8X60	2
21	M0400625	Hex Head Bolt -M6X25	4
22	M0200820	Hexagon Socket Screw -M8x20	6
23	M0520080	Spring Washer- M8	6
24	M0510081	Plain Washer -M8	6
26	M0200430	Hexagon Socket Screw -M4X30	2
27	M0520040	Spring Washer- M4	2
29	M0200630	Hexagon Socket Screw -M6X30	2
30	E0070017	Conveyor Motor Mounting Plate	1
32	M0500080	Hex. Nut- M8	5



33	E0260004	Bronze Strip	1
34	M0230845	Hex Set Screw - M8xL45	3
35	M0520100	Spring Washer- M10	2
36	J0030007	Hollow Shaft Worm Gear Motor- AMVB- 49-1/4HP (1:100)	1
37	M0510060	Plain Washer- M6-Ø13T1	4
38	M0520060	Spring Washer- M6	4
39	M0700680	Rounded Key- 6x6x80	1
40	J2110004	Conveyor Belt- 5x228x1208	1

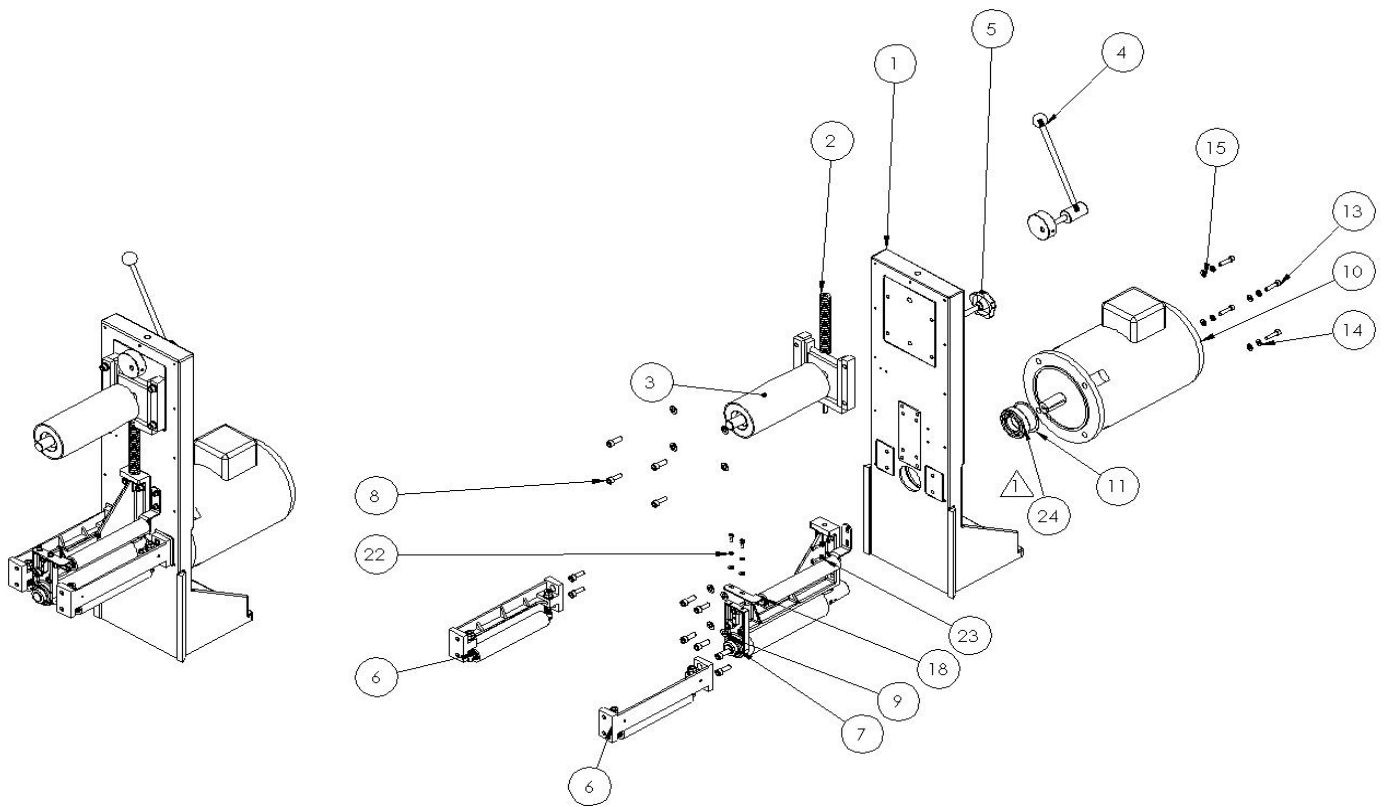
# Conveyor System Assembly



# Abrasive System Assembly

Item	Part No.	Description	Qty.
1	E0160003	Cast Iron Abrasive Stand	1
2	E0480001	Flat Wire Compression Springs - TH 25-175 (JIS)	1
3	D0120001	Abrasive Drum Assembly	1
4	D0130001	Abrasive Belt Quick Release Handlebar Assembly	1
5	D0190001	Adjustable Screw Knob	1
6	D0110001	Hold Down Roller Assembly	2
7	D0120002	Abrasive Driving Drum Assembly	1
8	M0201030	Hexagon Socket Screw- M10X30	12
9	M0510100	Plain Washer- M10X2mm	8
10	J0500003	3 Phase Induction Motor - AMVK-112M-5HP-4P	1
11	M0090780	Retaining Rings-Internal-C-Type-CR078	1
13	M0200835	Hexagon Socket Screw- M8x35	4
14	M0520080	Spring Washer M8	4
15	M0510081	Plain Washer M8	4
17	M0200616	Hexagon Socket Screw- M6X16	4
18	D0120003	Idler Roller Assembly	1
21	M0231299	Hexagon Socket Screw- M12x100	1
22	M0520060	Spring Washer M6	4
23	M0510060	Plain Washer M6-Ø13T1	4
24	M0062082	Deep Groove Ball Bearing-6208ZZ	1

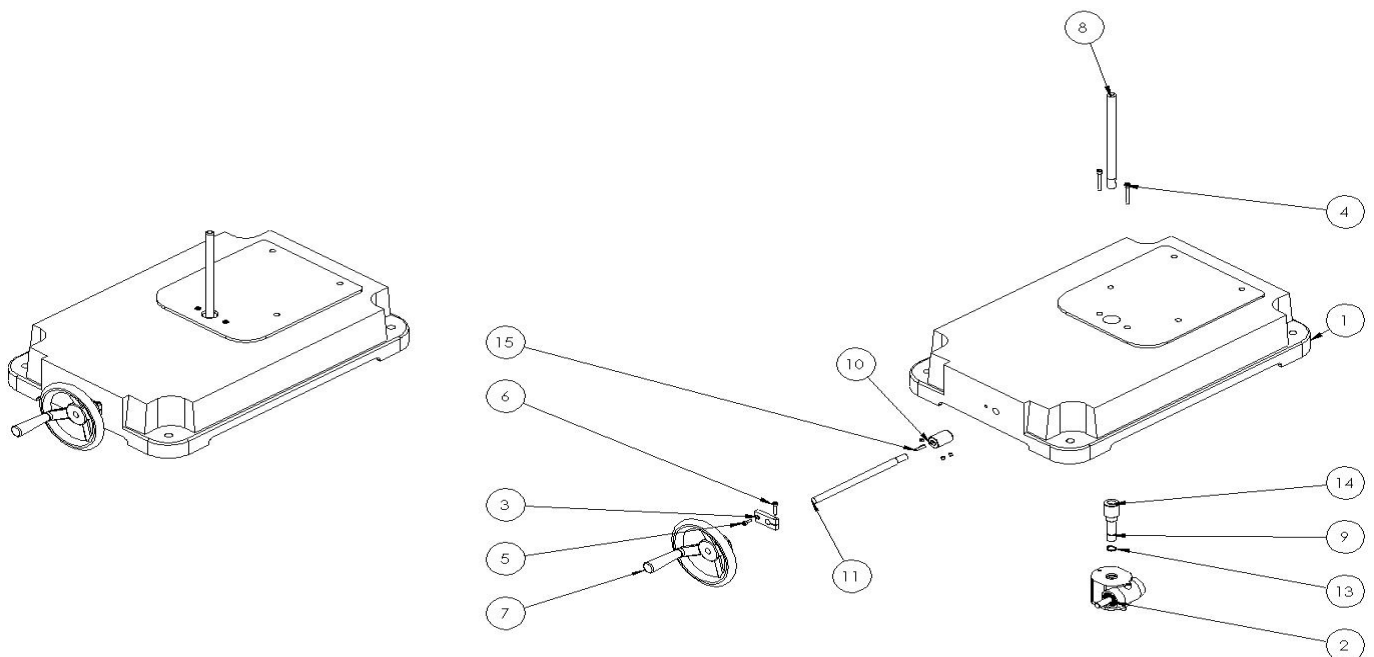
# Abrasive System Assembly



# Lifting System Assembly

Item	Part No.	Description	Qty.
1	E0460001	Cast Iron Base	1
2	D0100003	Worm Gearbox Set	1
3	E0460002	Guide Holder	1
4	M0200645	Hexagon Socket Screw - M6xL45	2
5	M0200512	Hexagon Socket Screw - M5xL12	1
6	M0200525	Hexagon Socket Screw - M5xL45	1
7	M0620001	Hand Wheel- $\phi$ 12.7	1
8	E0470009	Lifting Screw	1
9	E0470006	Worm Shaft	1
10	E0470007	Sleeve Coupling	1
11	E0470010	Worm Gear Shaft	1
12	M0700528	Rounded Key -5x5x28	1
13	M0080150	Retaining Rings-External-C-Type-CS015	1
14	M0230606	Hex Socket Flat Head Cap Screws- M6xL6	5
15	M0710422	Single-End Rounded Machine Key - 4x4x22	1

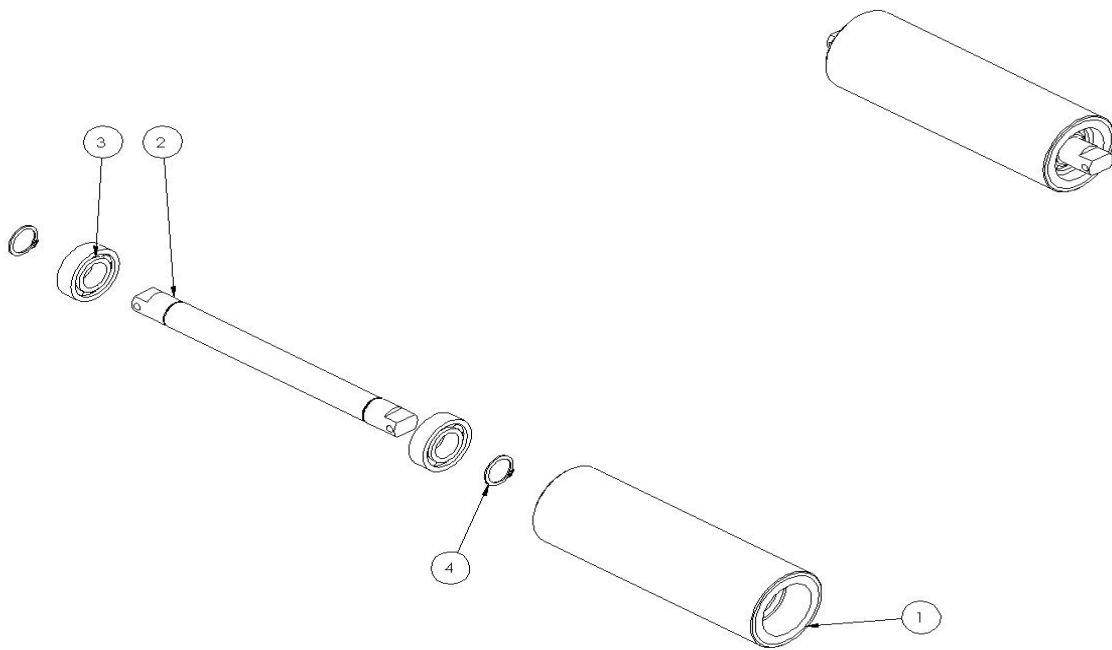
# Lifting System Assembly



# Conveyor Roller Assembly

Item	Part No.	Description	Qty.
1	E0040003	Driven Roller	1
2	E0060004	Shaft of Driven Roller	1
3	M0062052	Deep Groove Ball Bearings - 6205ZZ	2
4	M0080260	Retaining Rings-External-C-Type-CS26	2

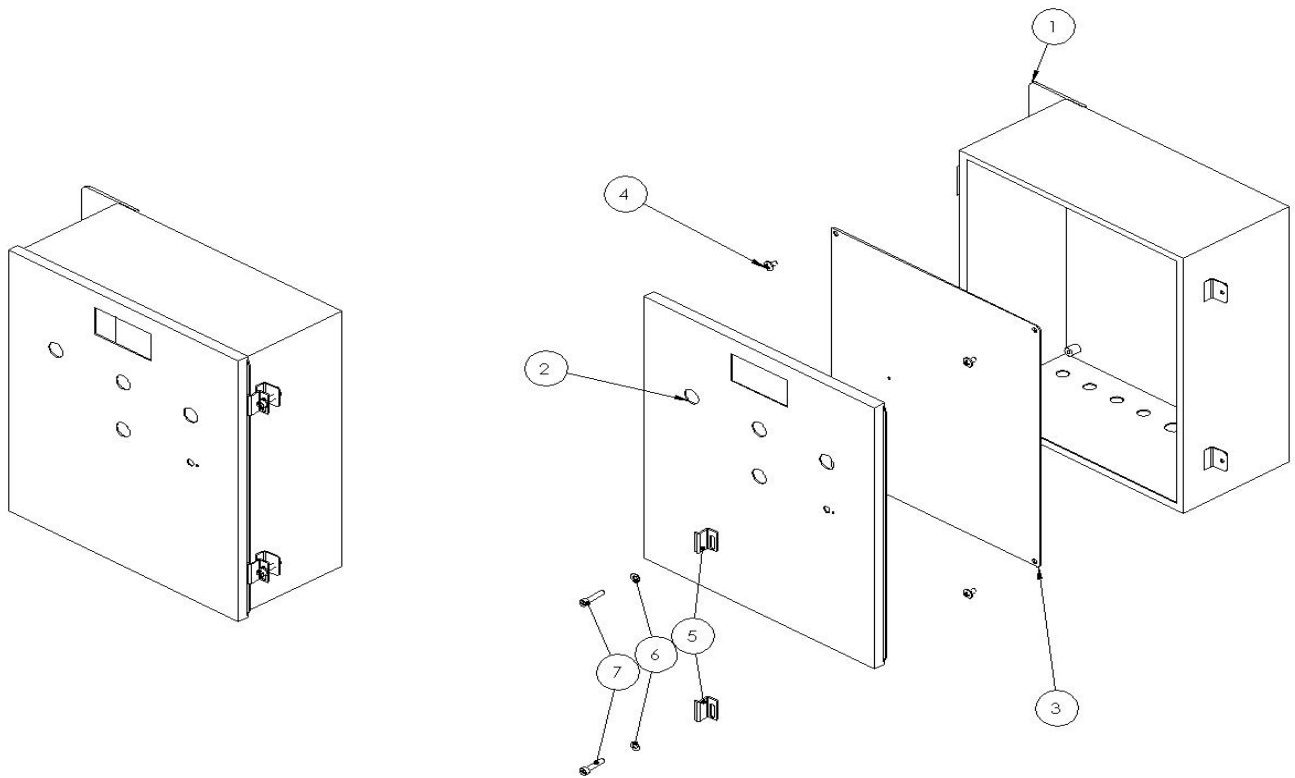
# Conveyor Roller Assembly



# Electrical Enclosure Box

Item	Part No.	Description	Qty.
1	E0310006	Electrical Box	1
2	E0290006	Control Panel	1
3	E0320013	Distribution Board	1
4	M0240610	Crosshead Screw- M6x10	4
5	E0310007	Door Lock	2
6	M0510060	Plain Washer- M6-Ø13T1	2
7	M0200630	Hexagon Socket Screw - M6X30	2

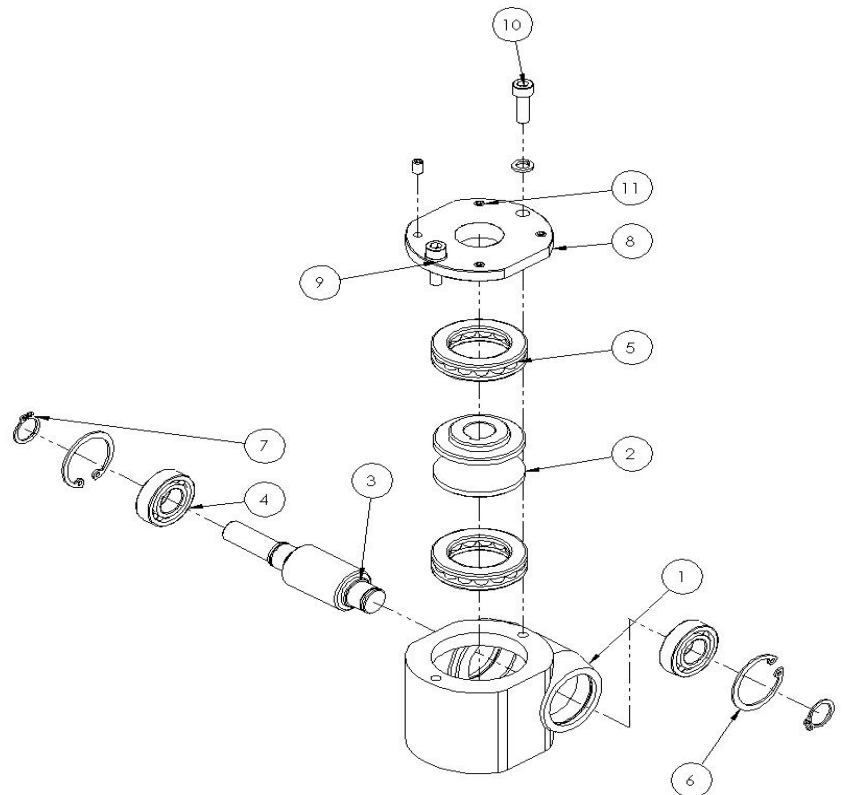
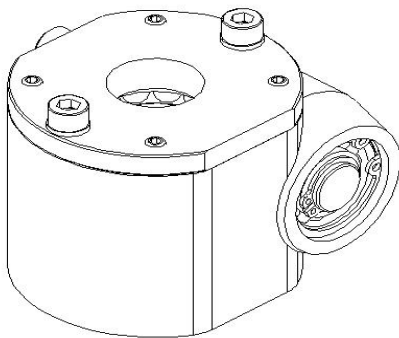
# Electrical Enclosure Box



# Gearbox

Item	Part No.	Description	Qty.
1	E0470001	Worm Gear Box	1
2	E0470003	Worm Gear	1
3	E0470005	Worm	1
4	M0060020	Deep Groove Ball Bearings - 6002	2
5	M0051106	Thrust Bearing 51106	2
6	M0090320	Retaining Rings-Internal-C-Type-CR32	2
7	M0080150	Retaining Rings-External-C-Type-CS15	2
8	E0470002	Cap	1
9	M0520060	Spring Washer M6	2
10	M0200620	Socket Head Cap Screw M6x20L	2
11	M0230508	Hex Set Screw M6	4

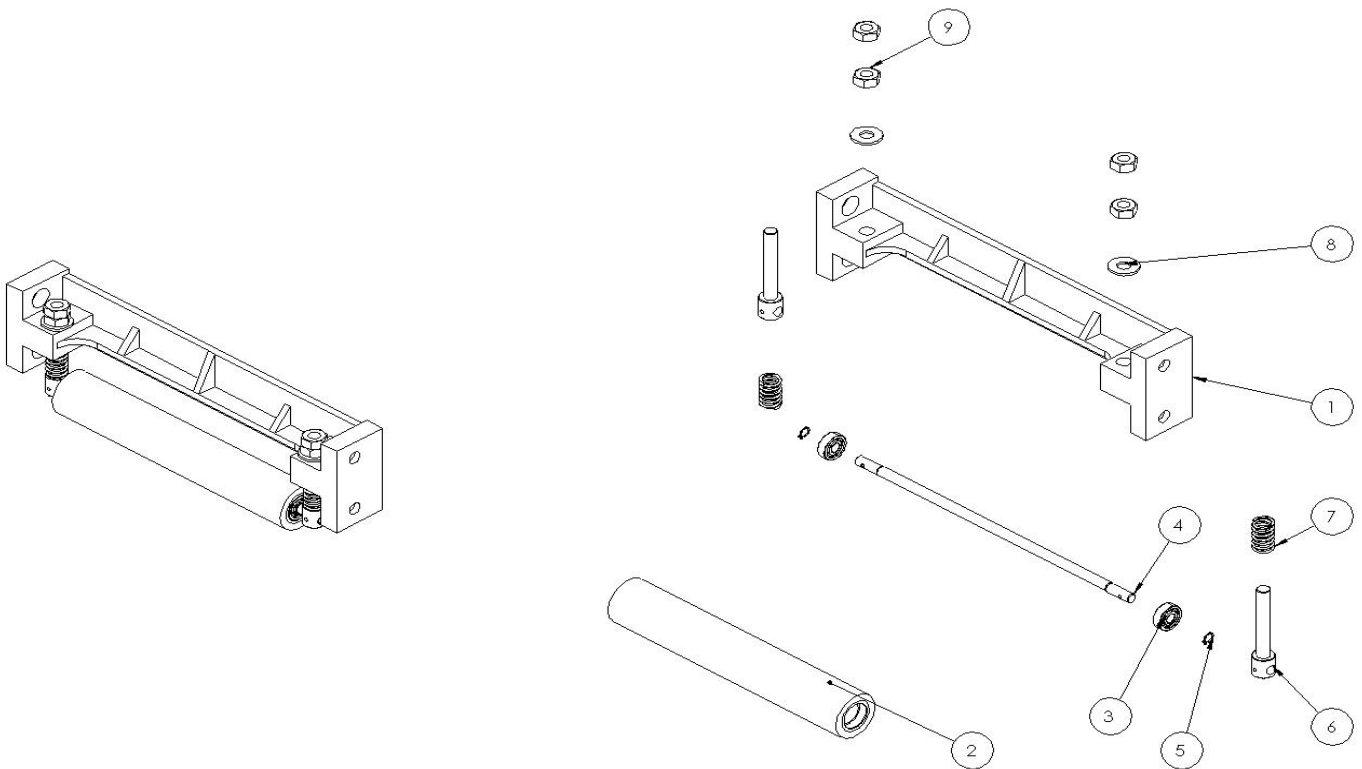
# Gearbox



# Hold Down Roller Assembly

Item	Part No.	Description	Qty.
1	E0090003	Cast Iron Support Bracket	1
2	E0180003	Hold Down Roller	1
3	M0046080	Small Diameter Ball Bearings-608	2
4	E0190002	Shaft of Hold Down Roller	1
5	M0080080	Retaining Rings-External-C-Type-CS008	2
6	E0090004	Floating Shaft	2
7	E0090005	Spring	2
8	M0510101	Plain Washer -M10-Ø23T2	2
9	M0500100	Hex Nut- M10	4

# Hold Down Roller Assembly

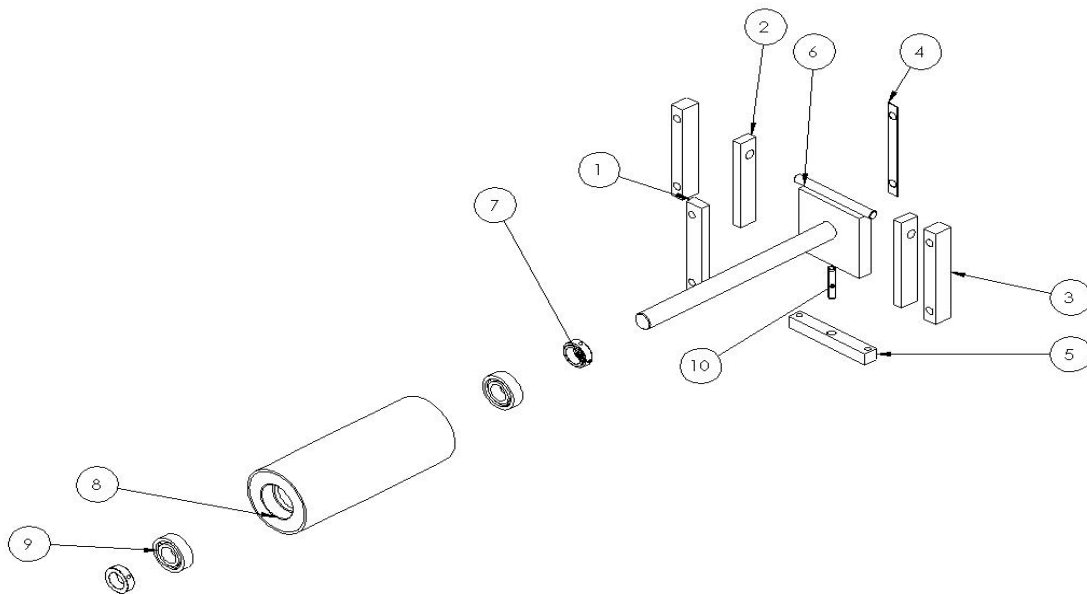
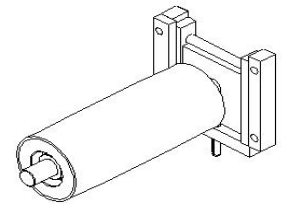




# Abrasive Drum Assembly

Item	Part No.	Description	Qty.
1	E0330008	Flat Plate	1
2	E0330009	Support Plate	2
3	E0330010	Side Plate	2
4	E0150005	Gap Sheet	1
5	E0330011	Spring Plate	1
6	E0060005	Support Rod	1
7	E0230012	Set Collar	2
8	E0040005	Abrasive Driven Drum	1
9	M0062050	Deep Groove Ball Bearings - 6205	2
10	M0590010	Spring Pin- n10x50	1

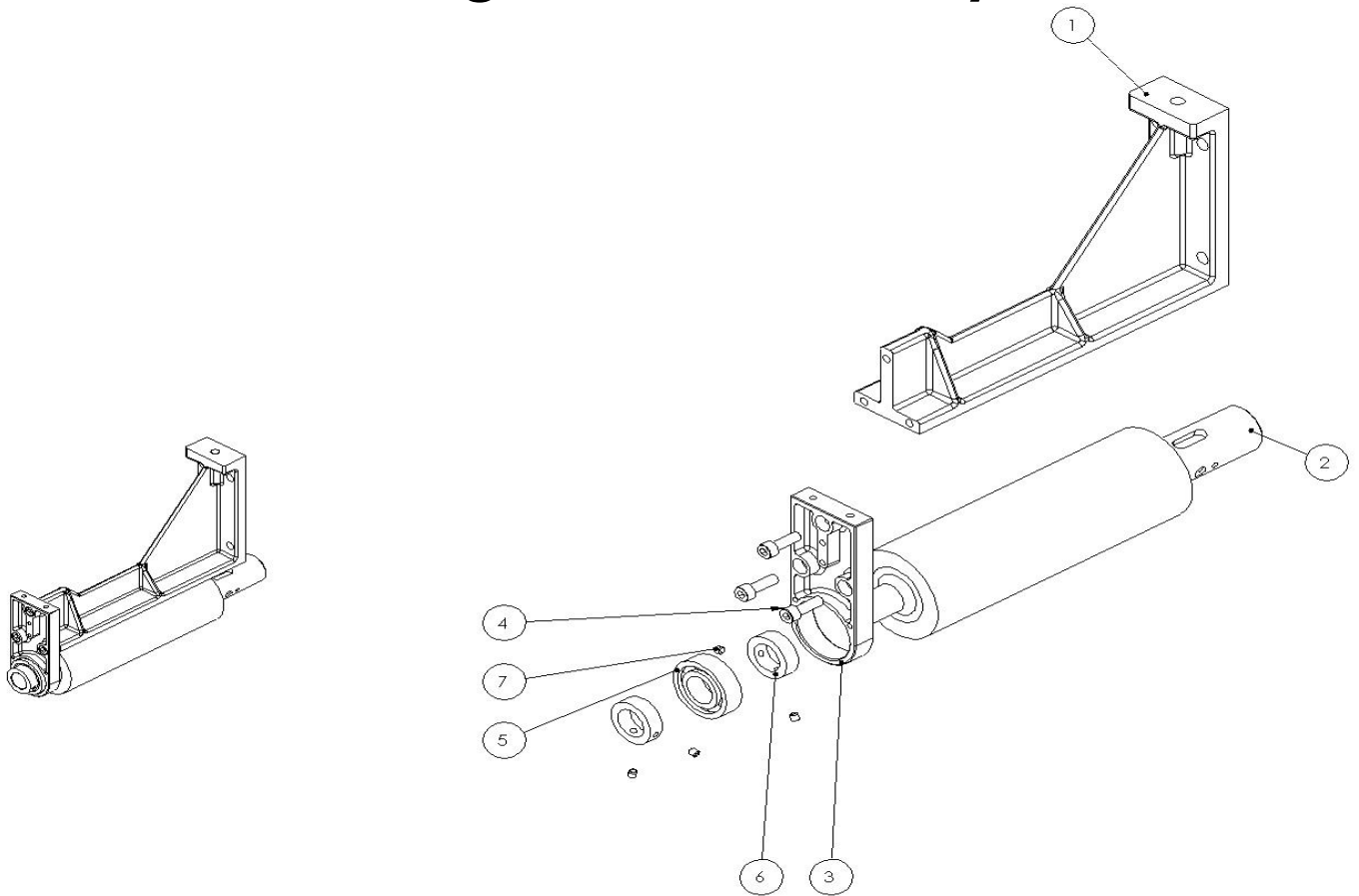
# Abrasive Drum Assembly



# Abrasive Driving Drum Assembly

Item	Part No.	Description	Qty.
1	E0060008	Cast Iron Support Bracket	1
2	E0060007	Abrasive Driving Roller	1
3	E0060009	Drum Shaft Support Stand	1
4	M0200825	Hexagon Socket Screw- M8x25	3
5	M0062050	Deep Groove Ball Bearings - 6205	1
6	E0060010	Set Collar	2
7	M0230606	Hexagon Socket Headless Set Screws- M6xL6	4

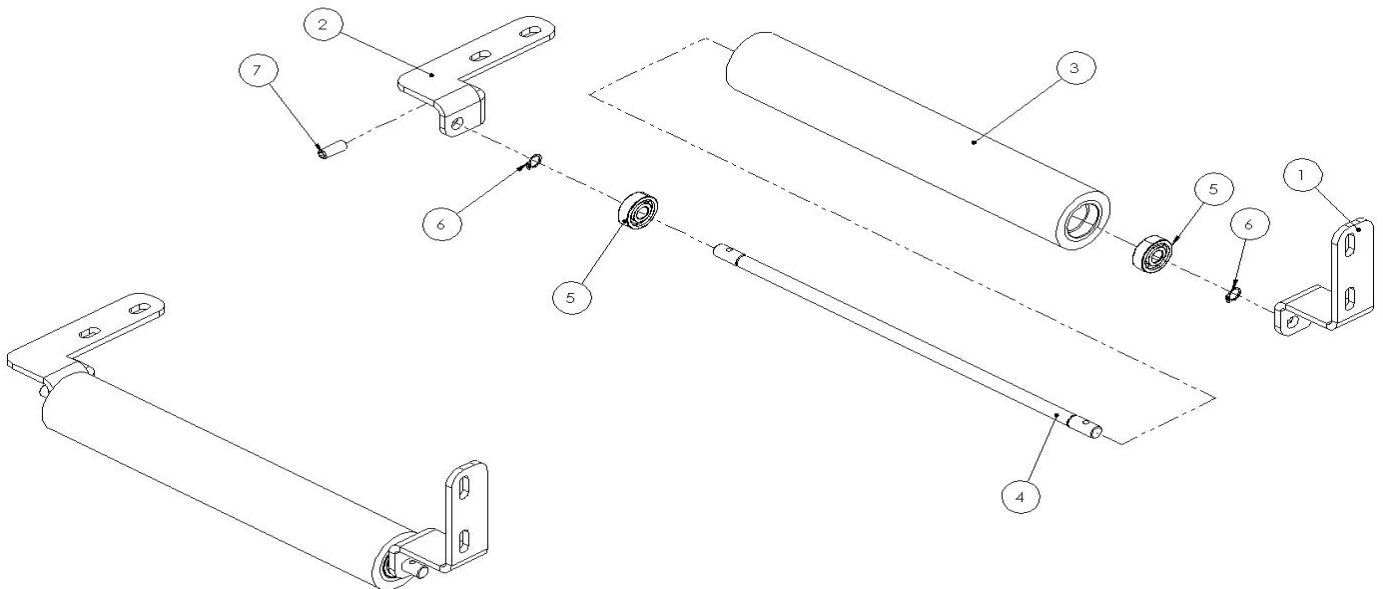
# Abrasive Driving Drum Assembly



# Idler Roller Assembly

Item	Part No.	Description	Qty.
1	E0060011	Idler Roller Bracket-Back	1
2	E0060012	Idler Roller Bracket-Front	1
3	E0180002	Idler Roller	1
4	E0190001	Shaft of Idler Roller	1
5	M0046080	Small Diameter Ball Bearing- 608	2
6	M0080080	Retaining Rings-External-C-Type-CS008	2
7	M0230616	M6x16	1

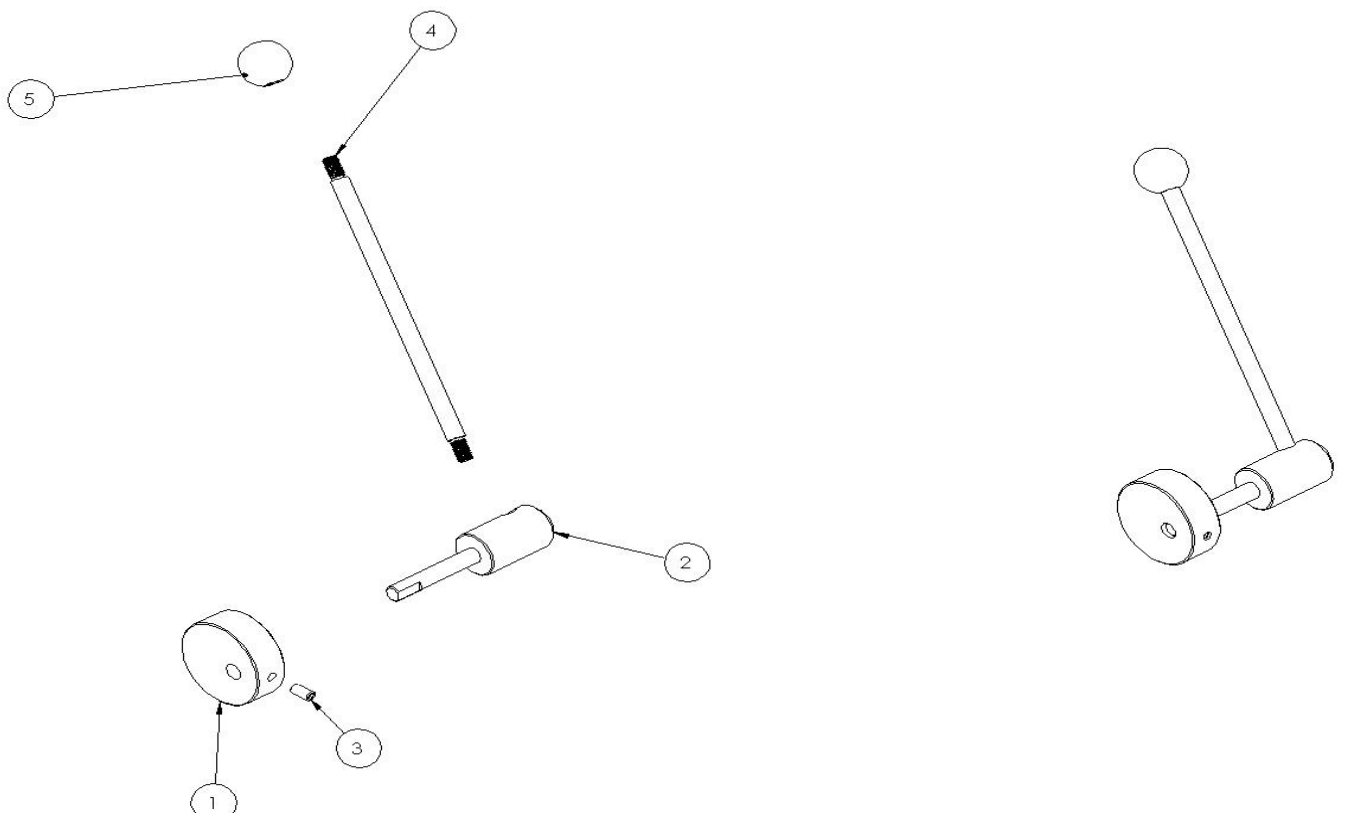
# Idler Roller Assembly



# Quick Release Handle Bar

Item	Part No.	Description	Qty.
1	E0490001	Eccentric Wheel	1
2	E0060006	Shaft	1
3	M0230816	Hexagon Socket Headless Screw	1
4	E0330012	Handlebar	1
5	M0550001	Ball Knob M10	1

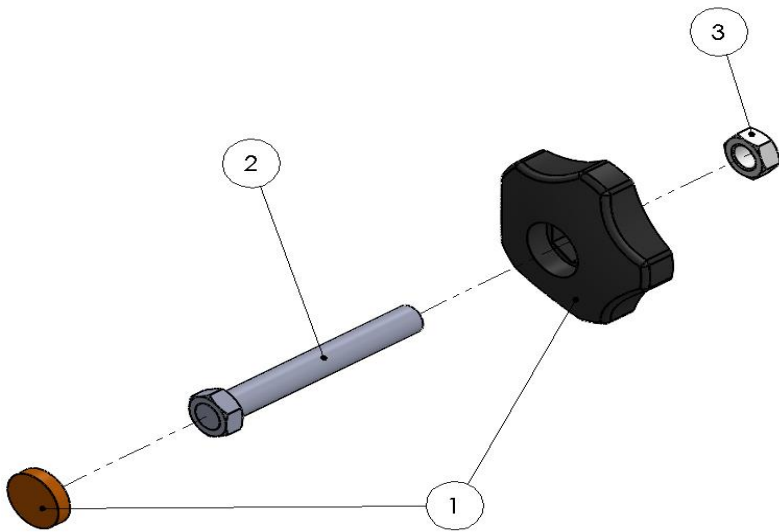
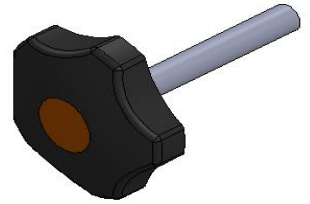
# Quick Release Handlebar



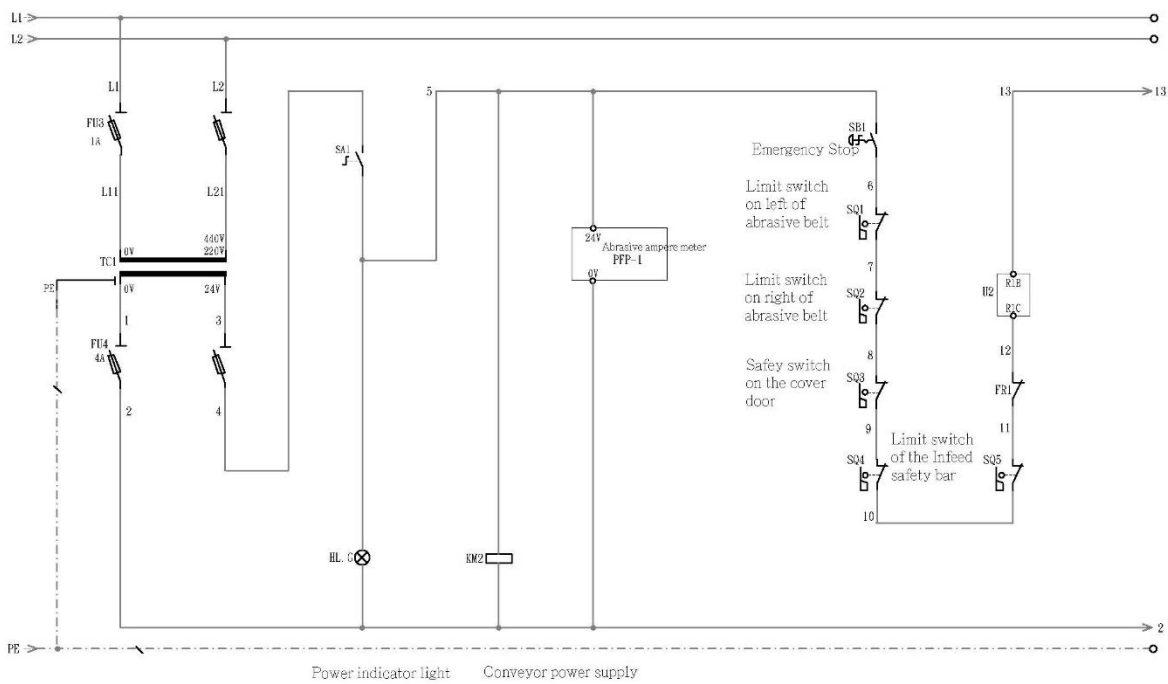
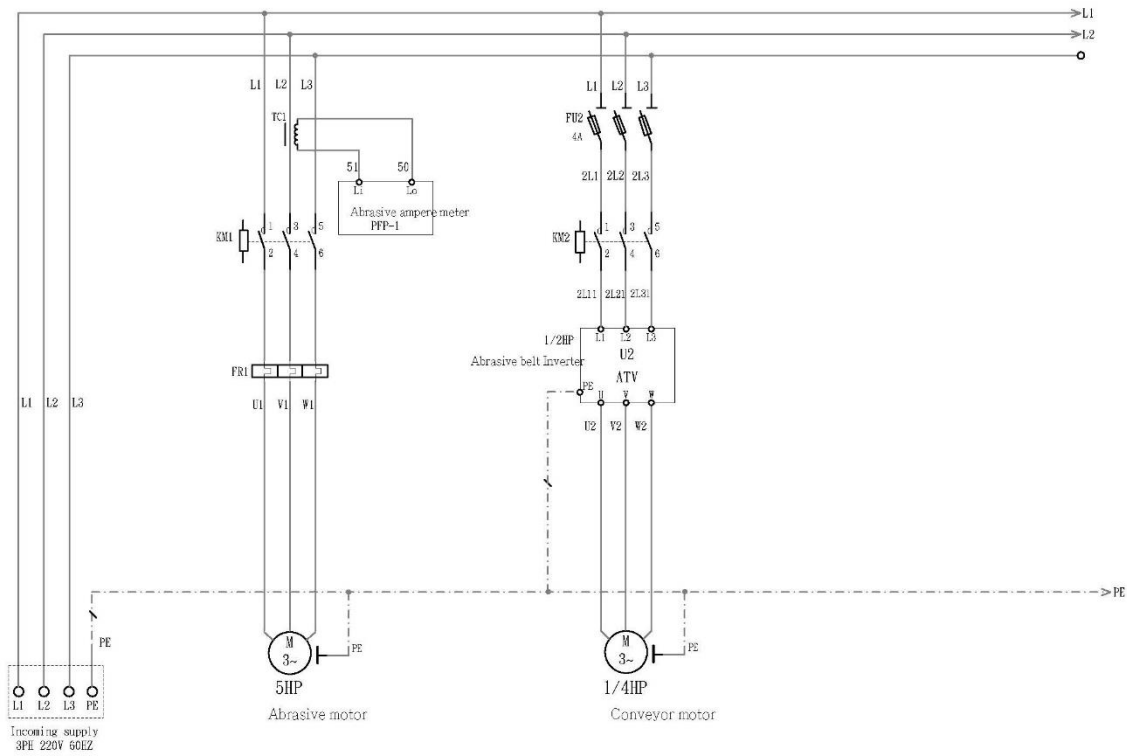
# Adjustable Screw Knob

Item	Part No.	Description	Qty.
1	M0550005	Star Knob	1
2	E0060013	Fine Thread Bolt	1
3	M0500121	Hex Nut-Fine Thread	1

# Adjustable Screw Knob



# Wiring Diagrams, 220 volt 3 Phase

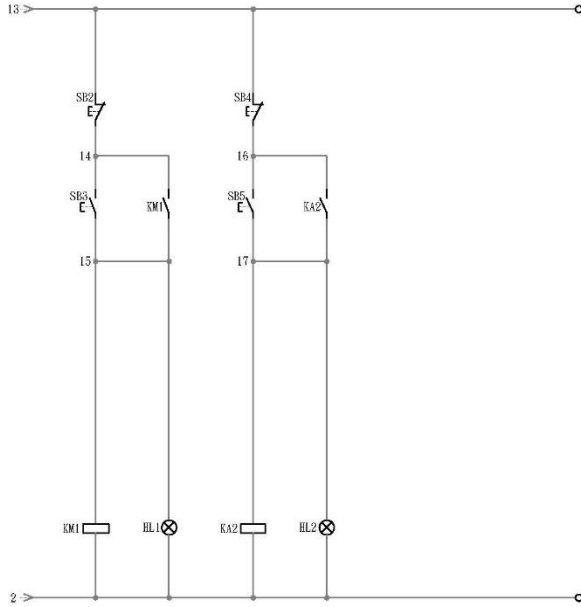


Laguna Tools®  
Imagination, Innovation, and Invention at Work

## 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  
744 Refuge Way, Grand Prairie, Texas 75050, USA  
1-800-234-1976  
customerservice@lagunatools.com  
www.lagunatools.com/why/customer-service/  
CALL US 800-234-1976 Monday through Friday



Abrasive Start    Abrasive Indicator Light    Conveyor Start    Conveyor Indicator Light

... replaced (and shipped), without charge. The defective item/part must be returned to Laguna Tools® with the complaint and proof of purchase in

responsible for the cost to replace the item/part and all related shipping charges.

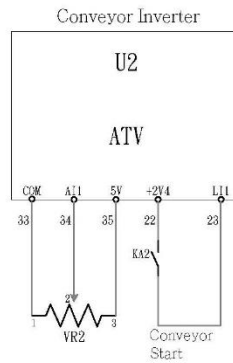
intended use (unless with consent by Laguna Tools®), modification to the product, or use with an accessory that was not designed for the product. It is the responsibility of the user to understand basic woodworking machinery settings and procedures and to properly maintain the equipment in accordance 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



consumable parts, like warranty unless otherwise intended to be used at the placement or inventory part will be made on a

loss caused by a freight control of Laguna image goods must be of delivery.

only department at technical support at 1-800-332-4049. use of Laguna Tools® is or similar method. primarily provided by our Support Website.



# 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  
744 Refuge Way, Grand Prairie, Texas 75050, USA  
1-800-234-1976  
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  
744 Refuge Way, Grand Prairie, Texas 75050, USA  
1-800-332-4049  
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.



### 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 1-800-234-1976. To receive customer service or technical support please contact the customer service department at 1-800-332-4049. 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

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# SPS-9 Specifications

Max. width	9" (228 mm)
Max. thickness	4" (100 mm)
Min. length*	5" (127 mm)
Conveyor Speed	3-18 ft./min.
Dust/debris port	4" (100 mm)
Main Motor	5 HP, 3 Ph, 208-230 V
Conveyor Motor	¼ HP
Abrasive Belt	9" x 48"
Weight	617 lbs. (280 kg.)

\*Minimum length can vary depending on material thickness, flatness and make-up.

For immediate service on any Laguna Tools products:

**+1 (800) 332-4049**

**customerservice@lagunatools.com**

**LAGUNA** *SuperMax* BY LAGUNA



**LAGUNA AMERICAN HEADQUARTERS**

Texas: 744 Refuge Way Suite 200, Grand Prairie, Texas 75050, U.S.A. Phone: +1-800-332-4094

California: 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

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724 Robbins Road, Grand Haven, MI 49417, United States +1-800-937-3253

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