

# **BAKER** **Products**



## ***Baker Corner Rounder™*** ***User Manual***

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## INTRODUCTION

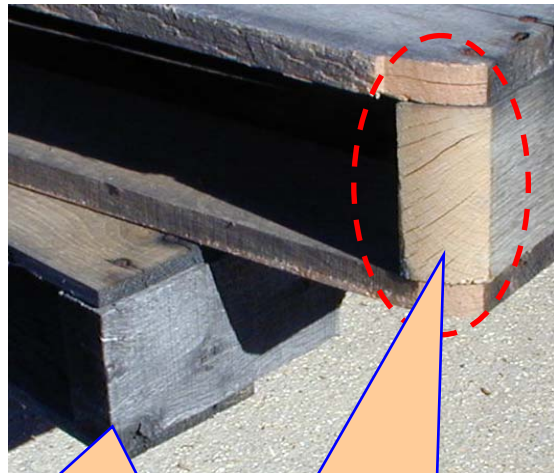
**Thank you and congratulations** on the purchase of your new **Baker Corner Rounder**. It has been designed to be durable, productive and easy to use. When properly used and maintained, it will provide you with many years of profitable operation.

For safety reasons, and for your own best use of the **Baker Corner Rounder**, we insist that you read this manual fully, and constantly review and refer back to it as necessary.

No one should attempt to operate or perform maintenance on this equipment until they have been trained and taken the time to read and understand the information contained in this manual.

## Machine Purpose

The **Baker Corner Rounder** is designed to trim or cut the corner of your pallet so that each corner edge is round after being processed on the machine.



Corner edge of pallet before being processed

Corner edge after processing on the Baker Corner Rounder

## Machine Function

The **Baker Corner Rounder** utilizes a 10 horsepower electric motor to spin the carbide tip cutter-head and requires incoming air pressure to actuate the cutter-head raise/lower cylinder.

The **Baker Corner Rounder** can cycle approximately 30 times a minute (without material) and process material up to 6 inches in height.

**Note:** The **Baker Corner Rounder** has a single 6-inch dust removal chute and will not operate without proper dust collection for chip removal. This machine requires a minimum of 1,500 CFM suction at the dust removal chute.



## Definition of Terms

|                                    |   |
|------------------------------------|---|
| <b>All Stop</b>                    | Safety button (typically “red”) designed to immediately shut-down machine operation   |
| <b>CFM</b> (cubic feet per minute) | A measure of the volume of a substance flowing through air within a fixed period of time  |
| <b>Cutter Head</b>                 | A device that rotates on an axis and cuts wood or other material it is designed to remove   |
| <b>Diagram</b>                     | A plan, sketch, drawing, or outline designed to demonstrate or explain how something works or to clarify the relationship between the parts of a whole                                    |
| <b>Fence</b>                       | A straight edge guide used to keep a board a set distance from a blade or cutter  |
| <b>Hold-down</b>                   | A device that holds down and steadies the material as it is being cut   |
| <b>In-feed</b>                     | The direction a work piece (board) is fed into a blade or cutter  |
| <b>Lockout / Tagout</b>            | The term Lockout/Tagout requires authorized employee(s) to lock and tag the energy-isolating device(s) to prevent the release of hazardous energy in order to prevent injury to employees |
| <b>Off-load</b>                    | The side of a machine where the work piece (board) exits  |

## Manual Contents Notice

This manual is not totally comprehensive. It does not and cannot convey every possible safety and operational problem that may arise while using this machine. The manual will cover many of the basic and specific safety procedures needed in an industrial environment.

All federal and state laws and any regulations having jurisdiction covering the safety requirements for use of this machine take precedence over the statements in this manual. Users of this machine must adhere to such regulations.

## Machine Specifications and Requirements

**Cutter:** One (1), 10-inch diameter carbide tipped cutter-head

**Production Rate:** Cutter-head cycles approximately 30 times/minute without material

**Power:** 10-hp electric motor

**Sawdust Removal:** 6” (152mm) outlet; min. of 1,500 CFM suction required at machine dust removal chute

**Required Electrical:** 220/440V 3-phase 60Hz (*standard USA voltages*)

*Other voltages available upon request, machine comes completely pre-wired; NEMA 12 enclosure with starters, disconnects, control voltage transformer and circuit overload protection; start/stop station with All-stop button*

**Required Air Pressure:** Minimum of 3/8-inch incoming airline with a line pressure of at least 120 psi or higher. Set airline regulator to 100 psi.



## Warranty

Ellington Industrial Supply, Inc. machinery is warranted against defects in material or workmanship starting from the date of shipment from the manufacturing plant.

This warranty is given solely to the “original purchaser” of the equipment and is in no way to be expressed or implied that it is transferable to any other parties without the written consent and approval from the CEO or Sales Manager of Baker Products.

Our one (1) year warranty period covers all items built at our manufacturing facilities including structural frame, cowlings, doors, shafting, dust chutes, belt extenders, conveyor wheels and guards.

We honor six (6) months of warranty coverage for miscellaneous vendor-purchased-supplied items including bearings, chain, sprockets, hydraulic components, etc.

Ninety (90) days of warranty coverage is provided on all electrical parts. All electrical components and wiring has been installed in accordance with the National Electrical Code (NEC) of the United States of America.

Ellington Industrial Supply, Inc. does not warranty this machine to meet any other requirements or jurisdiction of any electrical or safety codes of any other state, municipality, other country or jurisdiction. The purchaser assumes all risk and liability whatsoever resulting from the use thereof whether used singularly or in conjunction with other machinery or apparatus, including, but not limited to, all matters resulting from sawdust generation.

**Note:** *No warranty is provided on any electrical components or parts if equipment is powered or connected to a roto-phase electrical converter in order to create a three phase power supply for operational current from a single phase source.*

Any change in materials, design, or performance intended to improve any product of Ellington Industrial Supply, Inc. shall not obligate Ellington Industrial Supply, Inc. to modify any previously manufactured equipment.

This manual may contain details that if not properly followed can affect the performance of your equipment. You are responsible for proper use and maintenance of your equipment and we reserve the right to deny warranty work if deemed to be caused by a lack of proper maintenance or negligence by the owner or any of their employees.





## Defective Parts

Parts claimed defective must be returned freight prepaid, to our plant in Ellington, Missouri. Any part determined defective due to faulty workmanship or materials will be replaced or repaired (at our option) free of charge, F.O.B. our plant. This warranty does not cover expendable items (i.e. drive belts, band wheels, conveyor belting, blades, cutters, guides, etc.). Except as expressly provided herein, this warranty is in lieu of all other warranties, expressed or implied, including a warranty of merchantability or fitness for a particular purpose. This warranty is "void" if any part of the unit has been tampered with, modified, altered, or operated with parts other than supplied or recommended by Ellington Industrial Supply, Inc. In no event shall Ellington Industrial Supply, Inc. be liable for special, indirect, incidental or consequential damages, however arising, including but not limited to, the loss of earnings or the cost of downtime.

## Service Policy

In the event that you have any problems, call us at (573) 663-7711 any time between 8:00 AM and 5:00 PM (CST), Monday through Friday. A member of our trained staff will answer any questions you may have. We charge nothing for this service.

The only charge is for replacement parts not covered by warranty or after our inspection we deem that the problem is due to operator error or lack of proper maintenance or neglect.

If it is necessary for a member of our service department to visit your plant at your request, there will be a charge for this service. Call our service department for current prices.

## Retain this Information for your Records

Model Number: .....  
Serial Number: .....  
Date of Purchase: .....  
Electrical: .....  
Dust Removal: .....

### Ellington Industrial Supply, Inc.

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## RULES FOR SAFE OPERATION

The purpose of safety symbols and signage is to draw your attention to real or possible hazardous conditions that may exist when operating this equipment. Please remember that safety symbols and signage alone do not eliminate danger and are not substitute for proper training and education regarding operational hazards.

|  |   |
|--|---|
|   | <p>This symbol and warning indicates a potentially hazardous situation, which, if not avoided, <u>will</u> result in death or serious injury.</p>                     |
|   | <p>This symbol and warning indicates a potentially hazardous situation, which, if not avoided, <u>could</u> result in death or serious injury.</p>                    |
|   | <p>This symbol and warning indicates a potentially hazardous situation, which, if not avoided, <u>may</u> result in minor or moderate injury.</p>                     |
|  | <p>This warning provides notice and instruction regarding a potentially hazardous situation, which, if not avoided <u>will</u> result in serious injury or death.</p> |

## SAFETY EXPECTATIONS FOR OPERATING POWER EQUIPMENT

### ALWAYS...

- ENSURE THAT TRAINED PERSONNEL OPERATE, MAINTAIN AND REPAIR THIS EQUIPMENT
- TURN POWER OFF AND LOCKOUT / TAGOUT PRIOR TO PERFORMING MAINTENANCE
- KEEP WORK AREA CLEAN AND WELL LIGHTED TO MINIMIZE OR ELIMINATE HAZARDS
- KEEP CHILDREN AND VISITORS AWAY FROM OPERATING EQUIPMENT
- OPERATE THE EQUIPMENT AT THE RATE IT WAS DESIGNED FOR
- KEEP GUARDS IN PLACE WHEN OPERATING EQUIPMENT
- REMOVE TOOLS BEFORE RESUMING OPERATION
- USE PROPER EXTENSION CORD
- WEAR PROPER APPAREL AND AVOID CLOTHING AND ACCESSORIES THAT COULD GET CAUGHT IN MOVING PARTS
- ALWAYS WEAR SAFETY GLASSES AND HEARING PROTECTION
- AVOID "KICK-BACK" BY KNOWING WHAT CONDITIONS CAN CREATE IT
- CHECK DAMAGED PARTS AND REPAIR OR REPLACE THEM IMMEDIATELY

### NEVER...

- LEAVE TOOL RUNNING OR UNATTENDED, ALWAYS TURN POWER OFF
- OPERATE EQUIPMENT WHEN TIRED, FATIGUED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL
- ALLOW UNTRAINED PERSONNEL TO OPERATE, MAINTAIN OR REPAIR THIS EQUIPMENT

**No list of safety expectations can ever be complete as every work environment is as different as the people operating it.**

**Always keep safety as your highest priority and always use this machine with caution and respect.**

## Control of Hazardous Energy – (Lockout / Tagout)

Lockout / Tagout (LOTO) refers to specific practices and procedures to safeguard employees from the unexpected energy, startup of machinery/equipment, or the release of hazardous energy during service or maintenance activities.

This requires that a designated individual turn off and disconnect the machinery/equipment from its energy source(s) before performing service or maintenance and that the authorized employee(s) lock and tag the energy-isolating device(s) to prevent the release of hazardous energy and take steps to verify that the energy has been isolated effectively.

### List of Related Terms

|                                       |  |
|---------------------------------------|--|
| <b>Affected Employee</b>              | An employee whose job requires them to operate a machine or piece of equipment on which service or maintenance is being performed under Lockout / Tagout.  |
| <b>Authorized Employee</b>            | A person who locks or implements a tagout system procedure on machines or equipment to perform the service or maintenance on that machine or equipment. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing service or maintenance.   |
| <b>Energy Source</b>                  | Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.  |
| <b>Lockout</b>                        | The placement of a lockout device (such as a lock) on an energy-isolating device, in accordance with an established procedure that ensures that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.   |
| <b>Servicing and / or Maintenance</b> | Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or un-jamming of machines or equipment, and making adjustments or tool changes where the employee may be exposed to the unexpected energy, start-up of equipment or release of hazardous energy. |
| <b>Tagout</b>                         | The placement of a tagout device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.   |



**Example of lockout tags, lockout hasp and keyed lock**



Machine Safety Decals \*\* Adhere to ALL Safety Warnings! \*\*



## Safety First

- ☞ Always allow all moving parts to stop completely before changing blade or servicing machine.
- ☞ Never operate machine without guards and doors in place.
- ☞ Always wear eye and ear protection when operating machine.
- ☞ Never wear loose clothing when operating this machine.
- ☞ Always keep fingers and hands away from blade while operating machine.

**Do Not Operate  
Without Guards**

**BAKER**  
Products

**DANGER-SHARP CUTTERS**

281062

## INSTALLATION

### Receiving and Inspection

- Upon receipt and prior to signing carrier's documents, conduct a walk-around and visual inspection of your new equipment. Note any damage in writing upon the carrier's bill of lading and contact us immediately.

**Note:** *All new equipment is assembled and thoroughly tested prior to shipment, however damage may occur during transit, which could cause the machine to not operate correctly during start-up.*

### Unpacking

- If machine was delivered via flatbed trailer, remove straps or chains securing it in place.
- If machine was delivered by crate, carefully remove upper crating materials from the base skid.
- Remove lag screws, strapping, etc. that attaches the machine to the skid.



Lift points under the main frame from either side of machine

### Machine Moving

- Lift machine at the indicated lift points only.
  - o Use a safety strap to avoid tip-over.
- Transport machine to the installation site.

### Machine Positioning (*Placement, Leveling, Alignment*)

- For optimum performance, designate a solid and level foundation that is covered and dry, free of environmental elements such as rain or snow that could cause electrical or slip hazards.
- Provide a minimum of 3 feet of clear workspace in front of the electrical panel.
- Provide a minimum of 4 feet of clear workspace in front of in-feed and off-load area.

### Power and Utilities Requirements

- For safe and effective operation confirm your incoming voltage and available amperage is equal to what the machine has been wired for at the factory.
  - **A qualified electrician should complete electrical connections and check for correct motor directional rotation.**
- Ensure all wiring and electrical connections are located in a safe position and away from any hazardous conditions.
- Efficient dust and chip removal requires a minimum of 1,500 CFM suction at the machine dust removal chute. This is an employer/owner responsibility.





## SET-UP AND OPERATION

### Operator Training

According to many OSHA, ANSI, STATE, and LOCAL CODES, it is the EMPLOYER'S RESPONSIBILITY to:

- Permit only trained and authorized employees to operate and maintain equipment.
- Inspect and maintain guards, safety devices and start/stop controls.
- Instruct, train and supervise the safe method of work.

Be sure personnel are properly trained and safety rules are clearly understood before operating or performing maintenance.

- ✓ **Operator**
- ✓ **Machine**
- ✓ **Guards**
- ✓ **Devices**
- ✓ **Instructions**

*All of these together make up the safety system.  
Failure of any one of these factors will increase  
accident potential.*

### Initial Start-Up

Perform a "bump" to the motor for phase rotation by turning on the power for 1 second.

**Note:** *It is recommend you run sufficient test pallets through the machine before making initial corner rounder depth adjustments and after any other adjustments that are made.*

**Note:** *Prior to start-up and then again after two weeks, check that all nuts and bolts are tight. Then follow the instruction and schedule outlined in the Inspection and Preventative Maintenance section.*

## Getting Started To BEGIN Processing

**Step 1:** Complete a visual inspection to ensure all guards/covers are in place and secure.

**Step 2:** Engage Cutter(s) via control station – press the green “cutter” button(s).

**Note:** *Ensure airline is attached and providing ample air pressure to the machine or door/clamp will not open.*

**Step 3:** Load pallet onto the in-feed surface and wedge one of the corners into the opening so that it fits firmly against both fences.

**Step 4:** Remove your hands from the pallet and engage both of the black buttons to actuate the door/clamp, holding the pallet in place while the activated cutter-head raises and lowers to round the corner.

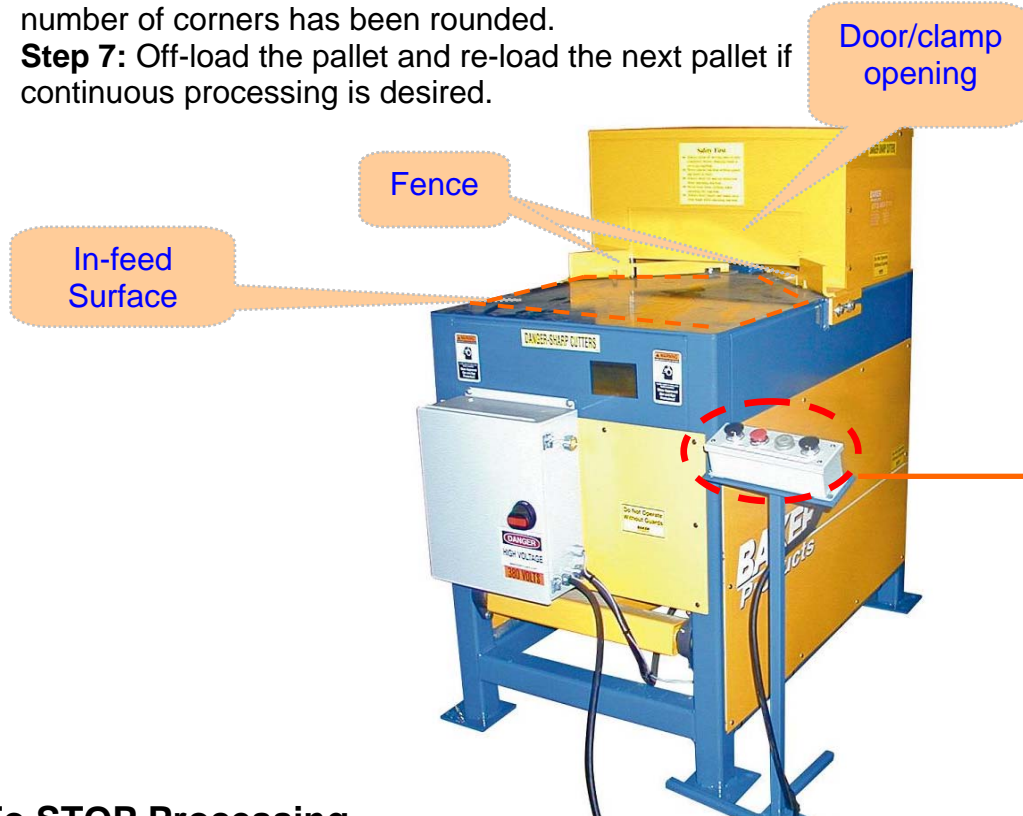
**Step 6:** Pull the pallet outward, rotate it to the next corner and repeat **Step 4**. Continue this sequence until the required number of corners has been rounded.

**Step 7:** Off-load the pallet and re-load the next pallet if continuous processing is desired.

## Control Station



Figure 12



## To STOP Processing

**Step 1:** Remove pallet from the in-feed surface and place in a safe location.

**Step 2:** Disengage cutter head by pressing the “All Stop” button.

**Note:** *Cutter head does not stop spinning automatically and will coast to a stop.*



## MAINTENANCE

### Inspection and Preventative Maintenance

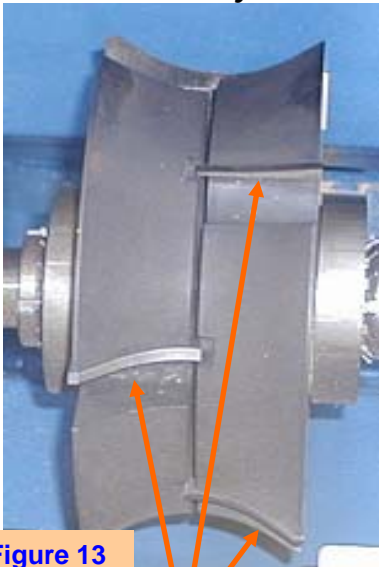
**Note:** Prior to start-up and then again after two weeks check that all nuts/bolts and chains are tight, then follow the schedule outlined below from that point forward.



**Lockout / Tagout power supply prior to inspecting or performing any preventative maintenance.**

| Frequency      | Recommendation  |
|----------------|---|
| Daily          | Use an air-hose to remove the wood chips that accumulate in and around the machine.   |
| Weekly         | Safely check sharpness <b>carbide cutter-head</b> by inspecting corner round quality; replace as necessary. ( <b>Figure 13</b> )  |
| Weekly         | Check mainframe and <b>cutter-head drive shaft bearings</b> for wear. Signs of wear include excessive heat, squeaking sounds or looseness. ( <b>Figure 13A</b> )                                    |
| Weekly         | Grease <b>cutter-head drive shaft bearings</b> via the grease nipple ( <b>Figure 13B</b> ). We recommend JT-6 grease ( <b>no more than 3 pumps</b> ).   |
| Monthly        | Grease <b>mainframe bearings</b> ( <b>Figure 13A</b> ) and <b>raise/lower cylinder shafts</b> ( <b>Figure 14</b> ) via the grease nipple. We recommend JT-6 grease ( <b>no more than 3 pumps</b> ). |
| Monthly        | Check <b>drive belt</b> for wear and ensure belt tension is "taut" with no more than 1/2" deflection ( <b>Figure 14A</b> ).   |
| Every 3 Months | Grease <b>spherical rod ends</b> ( <b>Figure 14B</b> ) via the grease nipple. We recommend JT-6 grease ( <b>no more than 3 pumps</b> ).   |

**Weekly**



**Figure 13**

Check cutter blades weekly by monitoring corner round quality

**Weekly**



**Figure 13A**

Check mainframe bearings for wear (1 on each corner for a total of 4) – **Grease Monthly**

**Weekly**



**Figure 13B**

Check cutter-head drive shaft bearings for wear (1 on each side for a total of 2) – **Grease Weekly**



## MAINTENANCE Inspection and Preventative Maintenance

**⚠ DANGER** Lockout / Tagout power supply prior to inspecting or performing any preventative maintenance.

**Monthly**



Figure 14

Grease Raise/lower cylinder shaft via the grease nipples (2 on each shaft pictured, for a total of 4 grease points)

**Monthly**



Check drive belt for wear and ensure belt tension is "taut" with no more than 1/2" deflection.

**Every 3 Months**

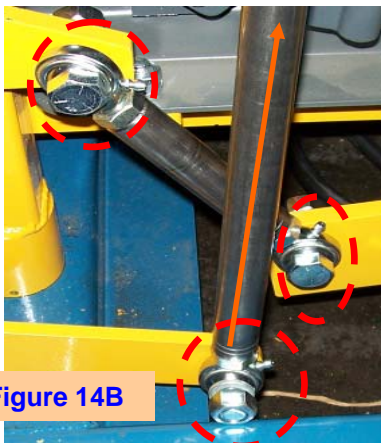


Figure 14B

Grease spherical rod ends (1 on each end of shaft pictured (2 per side), for a total of 8 collars and grease nipples)

Access spherical rod ends via the side panels









## Troubleshooting Chart



**Lockout / Tagout prior to performing any checks or maintenance**

| If                              | Check   |
|---------------------------------|---|
| Machine won't start             | <ul style="list-style-type: none"> <li>• Verify incoming voltage and available amperage are equal to what the machine was wired for at the factory.</li> <li>• Inspect for loose connection(s).</li> <li>• If trouble continues contact our service department or have a qualified electrician trouble-shoot the problem.</li> </ul>  |
| Pallet jams or kick-back occurs | <ul style="list-style-type: none"> <li>• Verify incoming airline pressure is set at the required psi (100 psi at the regulator) so the door can raise and lower as it's designed.</li> <li>• Check to ensure the airline is not kinked or obstructed in its airflow.</li> <li>• Verify that cutter-head can raise and lower without obstruction.</li> <li>• Clear machine and re-start operations.</li> </ul> |
| Degrading corner round quality  | <ul style="list-style-type: none"> <li>• Power-down and Lockout / Tagout machine.</li> <li>• Safely inspect cutter blades for sharpness; replace as necessary.</li> <li>• Check and verify depth of corner round setting.</li> </ul>  |

## PARTS AND SERVICE

| Part No. & Pic.   | Description   | Part No. & Pic.   | Description   |
|---|---|---|---|
| 101080<br>   | BEARING 1-1/4" (2-BOLT FLANGE) 5/8" BOLT HOLE       | 101014<br>          | BEARING 1" (2-BOLT FLANGE) 17/32" BOLT HOLE                         |
| 101125<br>   | BEARING 1-1/2" PILLOW BLOCK                         | 171096 / 171097<br> | SPHERICAL ROD END (171096 = RIGHT ROD END); (171097 = LEFT ROD END) |
| 241076<br>   | TOM THUMB CYLINDER 1-3/8" X 12"                     | 111267<br>          | BELT B-60 (63")   |
| 241103<br> | ENERTROLS SHOCK 1/2" X 2" W/FIXED SQUARE REAR MOUNT | 151074<br>        | ELECTRIC 10-HP MOTOR 208-230/460V                                   |

### Service Contact Information

In the event that you have any problems, call us at (573) 663-7711 any time between 8:00 AM and 5:00 PM (CST), Monday through Friday.

### Serial Number Location

The model and serial number are located on the front right side of the machine.

***Please refer to your serial number and model number when speaking to a service technician or ordering replacement parts.***

## ELECTRICAL DIAGRAM

380 VOLTS

30 AMPS

L1 L2 L3

