



OPERATOR'S MANUAL

Metal Working



ELECTRIC SLIP ROLL MODEL: SR-5016E

Baileigh Industrial Holdings LLC
P.O. Box 531
Manitowoc, WI 54221-0531
Phone: 920.684.4990
Fax: 920.684.3944
sales@baileigh.com

REPRODUCTION OF THIS MANUAL IN ANY FORM WITHOUT WRITTEN APPROVAL OF BAILEIGH INDUSTRIAL HOLDINGS LLC IS PROHIBITED. Baileigh Industrial Holdings LLC, Inc. does not assume and hereby disclaims any liability for any damage or loss caused by an omission or error in this Operator's Manual, resulting from accident, negligence, or other occurrence.



Table of Contents

THANK YOU & WARRANTY	1
INTRODUCTION.....	3
GENERAL NOTES.....	3
SAFETY INSTRUCTIONS	4
SAFETY PRECAUTIONS	6
Dear Valued Customer:.....	6
TECHNICAL SPECIFICATIONS	8
TECHNICAL SUPPORT	8
UNPACKING AND CHECKING CONTENTS.....	9
TRANSPORTING AND LIFTING	10
INSTALLATION.....	11
Anchoring the Machine	11
OVERALL DIMENSIONS.....	12
GETTING TO KNOW YOUR MACHINE	13
ELECTRICAL	16
OPERATION	18
Removing the Rolled Piece Part.....	19
Foot Switch Operation	19
SHEET ROLLING PROCEDURE.....	20
Determining Length of Material.....	20
Adjusting the Bottom Front Roll	20
Pre-Bending and Finish Rolling	21
BENDING ALLOWANCE	23
UNDERSTANDING SPRINGBACK	23
MATERIAL SELECTION	23
DRIVE CHAIN ADJUSTMENT	24
LUBRICATION AND MAINTENANCE	25
PARTS IDENTIFICATION DRAWING	26
Parts List	29
ELECTRICAL SCHEMATIC	31
ELECTRICAL COMPONENTS	32
ELECTRICAL ENCLOSURE COMPONENTS	33
Electrical Component Bill of Material	34
TROUBLESHOOTING	35



THANK YOU & WARRANTY

Thank you for your purchase of a machine from Baileigh Industrial Holdings LLC. We hope that you find it productive and useful to you for a long time to come.

Inspection & Acceptance. Buyer shall inspect all Goods within ten (10) days after receipt thereof. Buyer's payment shall constitute final acceptance of the Goods and shall act as a waiver of the Buyer's rights to inspect or reject the goods unless otherwise agreed. If Buyer rejects any merchandise, Buyer must first obtain a Returned Goods Authorization ("RGA") number before returning any goods to Seller. Goods returned without an RGA will be refused. Seller will not be responsible for any freight costs, damages to goods, or any other costs or liabilities pertaining to goods returned without a RGA. Seller shall have the right to substitute a conforming tender. Buyer will be responsible for all freight costs to and from Buyer and repackaging costs, if any, if Buyer refuses to accept shipment. If Goods are returned in unsalable condition, Buyer shall be responsible for full value of the Goods. Buyer may not return any special-order Goods. Any Goods returned hereunder shall be subject to a restocking fee equal to 30% of the invoice price.

Specifications. Seller may, at its option, make changes in the designs, specifications or components of the Goods to improve the safety of such Goods, or if in Seller's judgment, such changes will be beneficial to their operation or use. Buyer may not make any changes in the specifications for the Goods unless Seller approves of such changes in writing, in which event Seller may impose additional charges to implement such changes.

Limited Warranty. Seller warrants to the original end-user that the Goods manufactured or provided by Seller under this Agreement shall be free of defects in material or workmanship for a period of twelve (12) months from the date of purchase, provided that the Goods are installed, used, and maintained in accordance with any instruction manual or technical guidelines provided by the Seller or supplied with the Goods, if applicable. The original end-user must give written notice to Seller of any suspected defect in the Goods prior to the expiration of the warranty period. The original end-user must also obtain a RGA from Seller prior to returning any Goods to Seller for warranty service under this paragraph. Seller will not accept any responsibility for Goods returned without a RGA. The original end-user shall be responsible for all costs and expenses associated with returning the Goods to Seller for warranty service. In the event of a defect, Seller, at its sole option, shall repair or replace the defective Goods or refund to the original end-user the purchase price for such defective Goods. Goods are not eligible for replacement or return after a period of 10 days from date of receipt. The foregoing warranty is Seller's sole obligation, and the original end-user's exclusive remedy, with regard to any defective Goods. This limited warranty does not apply to: (a) die sets, tooling, and saw blades; (b) periodic or routine maintenance and setup, (c) repair or replacement of the Goods due to normal wear and tear, (d) defects or damage to the Goods resulting from misuse, abuse, neglect, or accidents, (f) defects or damage to the Goods resulting from improper or unauthorized alterations, modifications, or changes; and (f) any Goods that has not been installed and/or maintained in accordance with the instruction manual or technical guidelines provided by Seller.

EXCLUSION OF OTHER WARRANTIES. THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ANY AND ALL OTHER EXPRESS, STATUTORY OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. NO WARRANTY IS MADE WHICH EXTENDS BEYOND THAT WHICH IS EXPRESSLY CONTAINED HEREIN.

Limitation of Liability. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY OTHER PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR DOWN TIME) ARISING FROM OR IN MANNER CONNECTED WITH THE GOODS, ANY BREACH BY SELLER OR ITS AGENTS OF THIS AGREEMENT, OR ANY OTHER CAUSE WHATSOEVER, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY OF LIABILITY. BUYER'S REMEDY WITH RESPECT TO ANY CLAIM ARISING UNDER THIS AGREEMENT IS STRICTLY LIMITED TO NO MORE THAN THE AMOUNT PAID BY THE BUYER FOR THE GOODS.



Force Majeure. Seller shall not be responsible for any delay in the delivery of, or failure to deliver, Goods due to causes beyond Seller's reasonable control including, without limitation, acts of God, acts of war or terrorism, enemy actions, hostilities, strikes, labor difficulties, embargoes, non-delivery or late delivery of materials, parts and equipment or transportation delays not caused by the fault of Seller, delays caused by civil authorities, governmental regulations or orders, fire, lightening, natural disasters or any other cause beyond Seller's reasonable control. In the event of any such delay, performance will be postponed by such length of time as may be reasonably necessary to compensate for the delay.

Installation. If Buyer purchases any Goods that require installation, Buyer shall, at its expense, make all arrangements and connections necessary to install and operate the Goods. Buyer shall install the Goods in accordance with any Seller instructions and shall indemnify Seller against any and all damages, demands, suits, causes of action, claims and expenses (including actual attorneys' fees and costs) arising directly or indirectly out of Buyer's failure to properly install the Goods.

Work By Others; Safety Devices. Unless agreed to in writing by Seller, Seller has no responsibility for labor or work performed by Buyer or others, of any nature, relating to design, manufacture, fabrication, use, installation or provision of Goods. Buyer is solely responsible for furnishing and requiring its employees and customers to use all safety devices, guards and safe operating procedures required by law and/or as set forth in manuals and instruction sheets furnished by Seller. Buyer is responsible for consulting all operator manuals, ANSI or comparable safety standards, OSHA regulations and other sources of safety standards and regulations applicable to the use and operation of the Goods.

Remedies. Each of the rights and remedies of Seller under this Agreement is cumulative and in addition to any other or further remedies provided under this Agreement or at law or equity.

Attorney's Fees. In the event legal action is necessary to recover monies due from Buyer or to enforce any provision of this Agreement, Buyer shall be liable to Seller for all costs and expenses associated therewith, including Seller's actual attorney fees and costs.

Governing Law/Venue. This Agreement shall be construed and governed under the laws of the State of Wisconsin, without application of conflict of law principles. Each party agrees that all actions or proceedings arising out of or in connection with this Agreement shall be commenced, tried, and litigated only in the state courts sitting in Manitowoc County, Wisconsin or the U.S. Federal Court for the Eastern District of Wisconsin. Each party waives any right it may have to assert the doctrine of "forum non conveniens" or to object to venue to the extent that any proceeding is brought in accordance with this section. Each party consents to and waives any objection to the exercise of personal jurisdiction over it by courts described in this section. Each party waives to the fullest extent permitted by applicable law the right to a trial by jury.

Summary of Return Policy.

- 10 Day acceptance period from date of delivery. Damage claims and order discrepancies will not be accepted after this time.
- You must obtain a Baileigh issued RGA number PRIOR to returning any materials.
- Returned materials must be received at Baileigh in new condition and in original packaging.
- Altered items are not eligible for return.
- Buyer is responsible for all shipping charges.
- A 30% re-stocking fee applies to all returns.

Baileigh Industrial Holdings LLC makes every effort to ensure that our posted specifications, images, pricing and product availability are as correct and timely as possible. We apologize for any discrepancies that may occur. Baileigh Industrial Holdings LLC reserves the right to make any and all changes deemed necessary in the course of business including but not limited to pricing, product specifications, quantities, and product availability.

For Customer Service & Technical Support:

Please contact one of our knowledgeable Sales and Service team members at:
(920) 684-4990 or e-mail us at sales@baileigh.com



INTRODUCTION

The quality and reliability of the components assembled on a Baileigh Industrial Holdings LLC machine guarantee near perfect functioning, free from problems, even under the most demanding working conditions. However, if a situation arises, refer to the manual first. If a solution cannot be found, contact the distributor where you purchased our product. Make sure you have the serial number and production year of the machine (stamped on the nameplate). For replacement parts refer to the assembly numbers on the parts list drawings.

Our technical staff will do their best to help you get your machine back in working order.

In this manual you will find: (when applicable)

- Safety procedures
- Correct installation guidelines
- Description of the functional parts of the machine
- Capacity charts
- Setup and start-up instructions
- Machine operation
- Scheduled maintenance
- Parts lists

GENERAL NOTES

After receiving your equipment remove the protective container. Do a complete visual inspection, and if damage is noted, **photograph it for insurance claims** and contact your carrier at once, requesting inspection. Also contact Baileigh Industrial Holdings LLC and inform them of the unexpected occurrence. Temporarily suspend installation.

Take necessary precautions while loading / unloading or moving the machine to avoid any injuries.

Your machine is designed and manufactured to work smoothly and efficiently. Following proper maintenance instructions will help ensure this. Try and use original spare parts, whenever possible, and most importantly; **DO NOT** overload the machine or make any modifications.



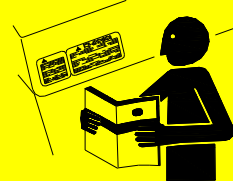
Note: This symbol refers to useful information throughout the manual.



IMPORTANT

PLEASE READ THIS OPERATORS MANUAL CAREFULLY

It contains important safety information, instructions, and necessary operating procedures. The continual observance of these procedures will help increase your production and extend the life of the equipment.



SAFETY INSTRUCTIONS

LEARN TO RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your machine or in this manual, **BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY!**



Follow recommended precautions and safe operating practices.

UNDERSTAND SIGNAL WORDS

A signal word – **DANGER**, **WARNING**, or **CAUTION** – is used with the safety alert symbol. **NOTICE**, which is not related to personal injury, is used without a symbol.

DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates a situation which, if not avoided, could result in property damage.

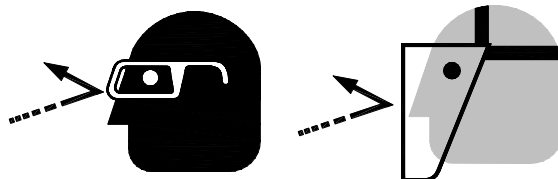


SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.



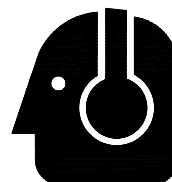
PROTECT EYES

Wear safety glasses or suitable eye protection when working on or around machinery.



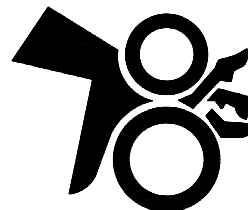
PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as ear muffs or earplugs to protect against objectionable or uncomfortable loud noises.



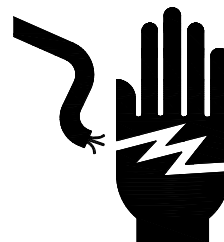
BEWARE OF PINCH POINTS

Keep hands and fingers away from the rolls when the machine is in operation. Contain long hair, **DO NOT** wear jewelry or loose fitting clothing.



HIGH VOLTAGE

USE CAUTION IN HIGH VOLTAGE AREAS. DO NOT assume the power to be off.
FOLLOW PROPER LOCKOUT PROCEDURES.



EMERGENCY STOP BUTTON

In the event of incorrect operation or dangerous conditions, the machine can be stopped immediately by pressing the **E-STOP** button. Twist the emergency stop button clockwise (cw) to reset. Note: Resetting the E-Stop will not start the machine.



CALIFORNIA PROPOSITION 65

WARNING: Cancer and Reproductive Harm.
www.P65Warnings.ca.gov





SAFETY PRECAUTIONS



Metal working 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, hold-downs, safety glasses, dust masks and hearing protection can reduce your potential for injury. But even the best guard will not 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.

REMEMBER: Your personal safety is your responsibility.



**WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN
SERIOUS PERSONAL INJURY**

Dear Valued Customer:

- All Baileigh machines should be used only for their intended use.
- Baileigh does not recommend or endorse making any modifications or alterations to a Baileigh machine. Modifications or alterations to a machine may pose a substantial risk of injury to the operator or others and may do substantial damage to the machine.
- Any modifications or alterations to a Baileigh machine will invalidate the machine's warranty.

PLEASE ENJOY YOUR BAILEIGH MACHINE!PLEASE ENJOY IT SAFELY!

1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learn the machine's application and limitations as well as the specific hazards.
2. **Only trained and qualified personnel can operate this machine.**
3. **Make sure guards are in place and in proper working order before operating machinery.**
4. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
5. **Keep work area clean.** Cluttered areas invite injuries.
6. **Overloading machine.** By overloading the machine, you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
7. **Dressing material edges.** Always chamfer and deburr all sharp edges.



8. **Do not force tool.** Your machine will do a better and safer job if used as intended. **DO NOT** use inappropriate attachments in an attempt to exceed the machine's rated capacity.
9. **Use the right tool for the job. DO NOT** attempt to force a small tool or attachment to do the work of a large industrial tool. **DO NOT** use a tool for a purpose for which it was not intended.
10. **Dress appropriately. DO NOT** wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are recommended when using machinery. Wear a restrictive hair covering to contain long hair.
11. **Use eye protection.** Always wear ISO approved protective eye wear when operating machinery. Wear a full-face shield if you are producing metal filings. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specification. Use of eye wear which does not comply with ANSI Z87.1 specification could result in severe injury from breakage of eye protection.
12. **Do not overreach.** Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
13. **Stay alert.** Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
14. **Check for damaged parts.** Before using any tool or machine, carefully check any part that appears damaged. Check for alignment and binding of moving parts that may affect proper machine operation.
15. **Observe work area conditions. DO NOT** use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lighted. **DO NOT** use electrically powered tools in the presence of flammable gases or liquids.
16. **Keep children away.** Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
17. Keep visitors a safe distance from the work area.
18. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of reach of children.
19. **DO NOT operate machine if under the influence of alcohol or drugs.** Read warning labels on prescriptions. If there is any doubt, **DO NOT** operate the machine.
20. **Turn off** power before checking, cleaning, or replacing any parts.
21. Be sure **all** equipment is properly installed and grounded according to national, state, and local codes.
22. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill!** **DO NOT** touch live electrical components or parts.
23. **DO NOT** bypass or defeat any safety interlock systems.



TECHNICAL SPECIFICATIONS

Forming Width	51" (1295mm)
Roll Speed	22rpm
Upper Roll Diameter	3" (76.2mm)
Minimum Forming Diameter	4.5" (114.3mm)
Mild Steel Capacity	16ga. (1.5mm)
Wire Grooves	.335", .407", .512" (8.5, 10.3, 13mm)
Stand	Yes
Power	110V, 60hz 15A
Motor	1.5hp (1.1kw)
Shipping Weight	885lbs. (401kg)
Shipping Dimensions	70" x 24" x 44" (1778 x 610 x 1118mm)
Based on a material tensile strength of *64000 PSI – mild steel	

TECHNICAL SUPPORT

Our technical support department can be reached at 920.684.4990 and asking for the support desk for purchased machines. Tech Support handles questions on machine setup, schematics, warranty issues, and individual parts needs: (other than die sets and blades).

For specific application needs or future machine purchases contact the Sales Department at: sales@baileigh.com, Phone: 920.684.4990, or Fax: 920.684.3944.



Note: The photos and illustrations used in this manual are representative only and may not depict the actual color, labeling or accessories and may be intended to illustrate technique only.



Note: The specifications and dimensions presented here are subject to change without prior notice due to improvements of our products.



UNPACKING AND CHECKING CONTENTS

Your Baileigh machine is shipped complete. Separate all parts from the packing material and check each item carefully. Make certain all items are accounted for before discarding any packing material.



WARNING: SUFFOCATION HAZARD! Immediately discard any plastic bags and packing materials to eliminate choking and suffocation hazards to children and animals.

If any parts are missing, **DO NOT** place the machine into service until the missing parts are obtained and installed correctly.

Cleaning



WARNING: DO NOT USE gasoline or other petroleum products to clean the machine. They have low flash points and can explode or cause fire.



CAUTION: When using cleaning solvents work in a well-ventilated area. Many cleaning solvents are toxic if inhaled.

Your machine may be shipped with a rustproof waxy coating and/or grease on the exposed unpainted metal surfaces. Fully and completely remove this protective coating using a degreaser or solvent cleaner. Moving items will need to be moved along their travel path to allow for cleaning the entire surface. For a more thorough cleaning, some parts will occasionally have to be removed. **DO NOT USE** acetone or brake cleaner as they may damage painted surfaces.

Follow manufacturer's label instructions when using any type of cleaning product. After cleaning, wipe unpainted metal surfaces with a light coating of quality oil or grease for protection.



Important: This waxy coating is **NOT** a lubricant and will cause the machine to stick and lose performance as the coating continues to dry.



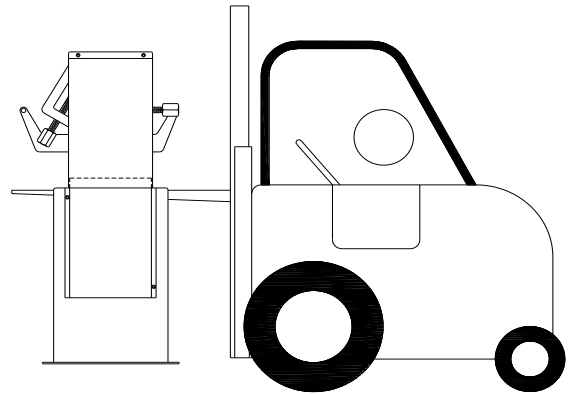


TRANSPORTING AND LIFTING

NOTICE: *Lifting and carrying operations should be carried out by skilled workers, such as a truck operator, crane operator, etc. If a crane is used to lift the machine, attach the lifting chain carefully, making sure the machine is well balanced.*

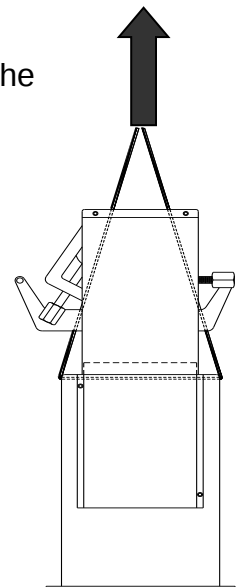
Follow these guidelines when lifting with truck or trolley:

- The lift truck must be able to lift at least 1.5 – 2 times the machines gross weight.
- Make sure the machine is balanced. While transporting, avoid rough or jerky motion, and maintain a safe clearance zone around the transport area.
- Use a fork lift with sufficient lifting capacity and forks that are long enough to reach the complete width of the machine.
- Remove the securing bolts that attach the machine to the pallet.
- Approaching the machine from the side, lift the machine on the frame taking care that there are no cables or pipes in the area of the forks.
- Move the machine to the required position and lower gently to the floor.
- Level the machine so that all the supporting feet are taking the weight of the machine and no rocking is taking place.



Follow these guidelines when lifting crane or hoist:

- Always lift and carry the machine with the lifting holes provided at the top of the machine.
- Use lift equipment such as straps, chains, capable of lifting 1.5 to 2 times the weight of the machine.
- Take proper precautions for handling and lifting.
- Check if the load is properly balanced by lifting it an inch or two.
- Lift the machine, avoiding sudden accelerations or quick changes of direction.
- Locate the machine where it is to be installed, and lower slowly until it touches the floor.





INSTALLATION

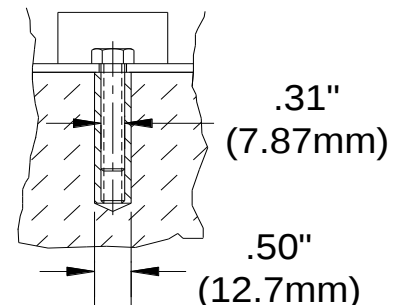
IMPORTANT:

Consider the following when looking for a suitable location to place the machine:

- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Keep the floor free of oil and make sure it is not slippery.
- Remove scrap and waste materials regularly, and make sure the work area is free from obstructing objects.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.
- **LEVELING:** The machine should be sited on a level, concrete floor. Provisions for securing it should be in position prior to placing the machine. The accuracy of any machine depends on the precise placement of it to the mounting surface.
- **FLOOR:** This tool distributes a large amount of weight over a small area. Make certain that the floor can support the weight of the machine, work stock, and the operator. The floor should also be a level surface. If the unit wobbles or rocks once in place, be sure to eliminate by using shims.
- **WORKING CLEARANCES:** Take into consideration the size of the material to be processed. Make sure that you allow enough space for you to operate the machine freely.
- **POWER SUPPLY PLACEMENT:** The power supply should be located close enough to the machine so that the power cord is not in an area where it would cause a tripping hazard. Be sure to observe all electrical codes if installing new circuits and/or outlets.

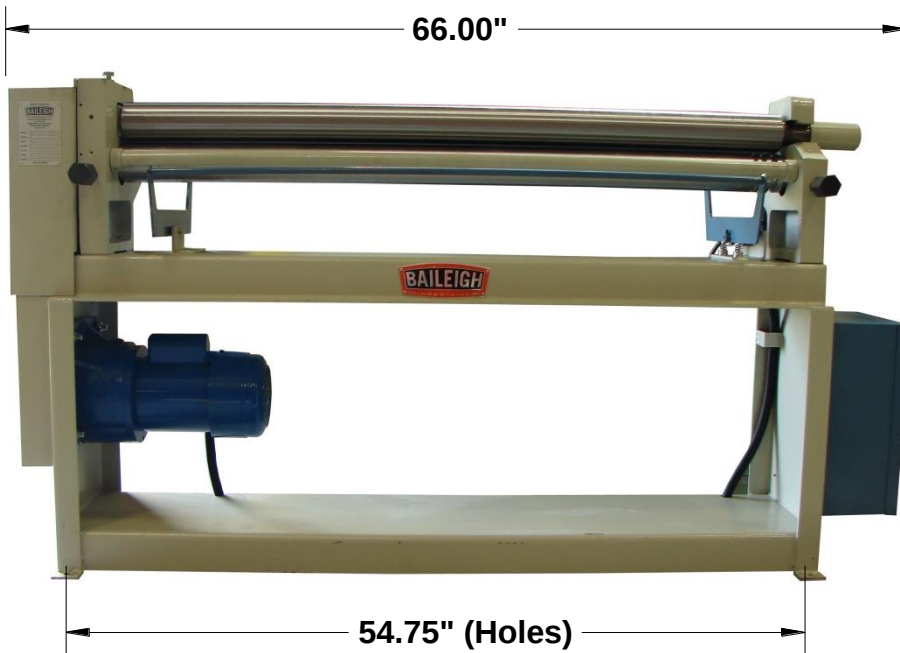
Anchoring the Machine

- Once positioned, anchor the machine to the floor, as shown in the diagram. Use bolts and expansion plugs or sunken tie rods that connect through and are sized for the holes in the base of the stand.



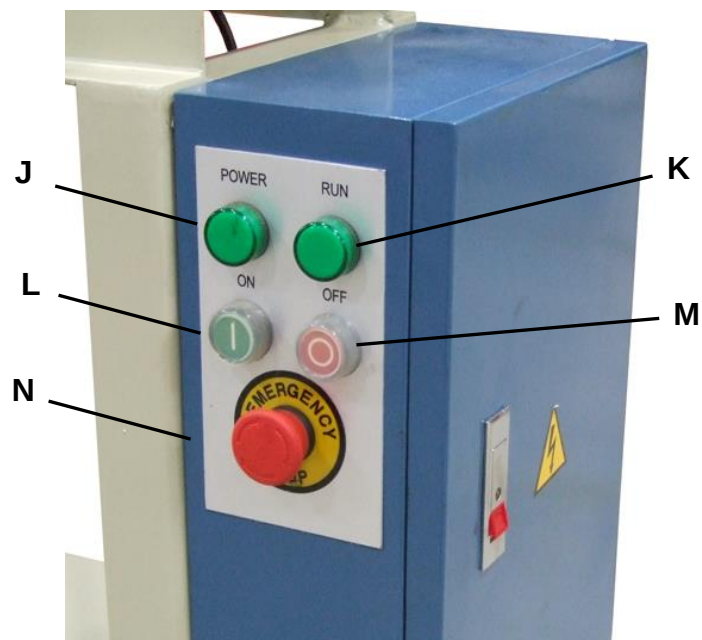
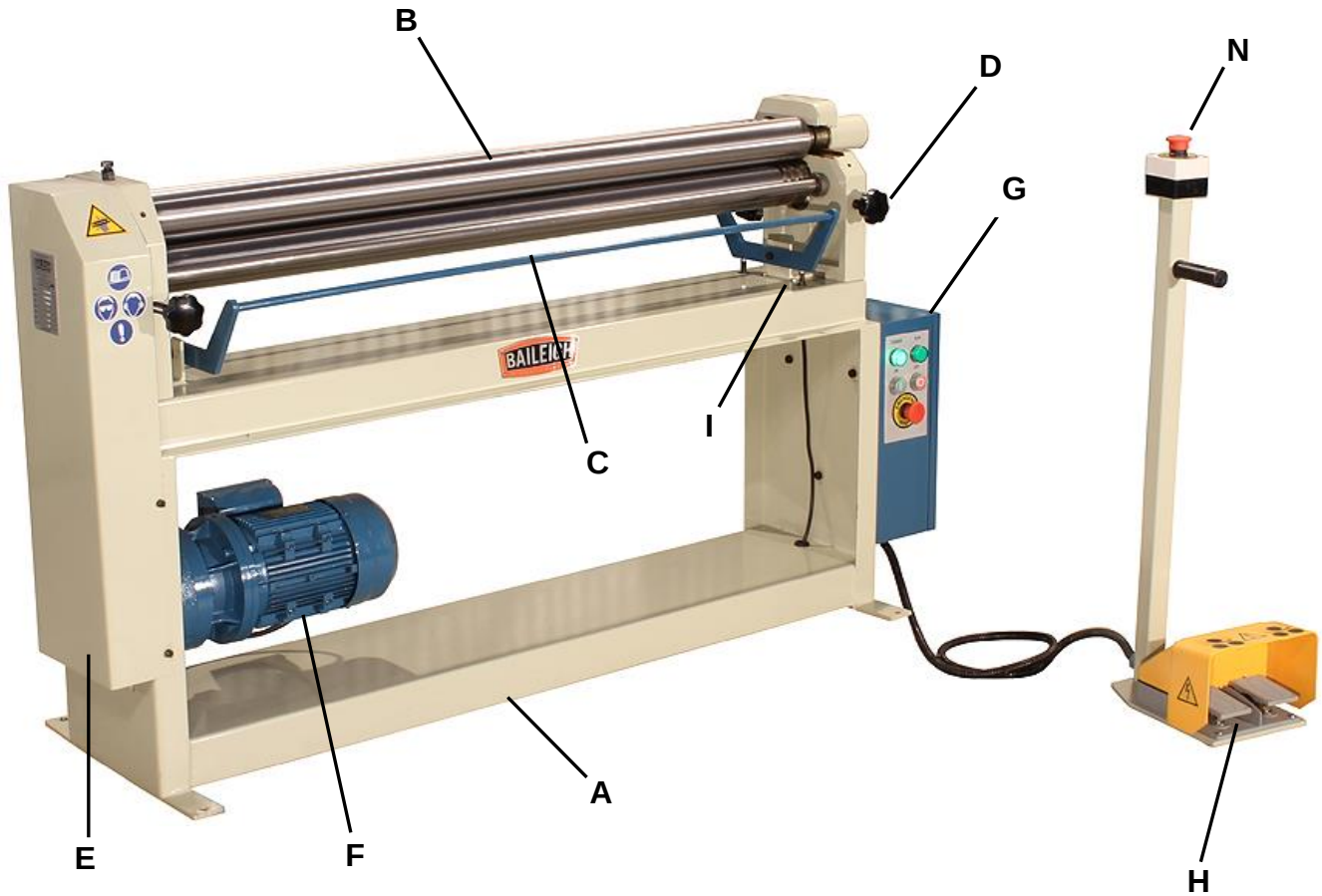


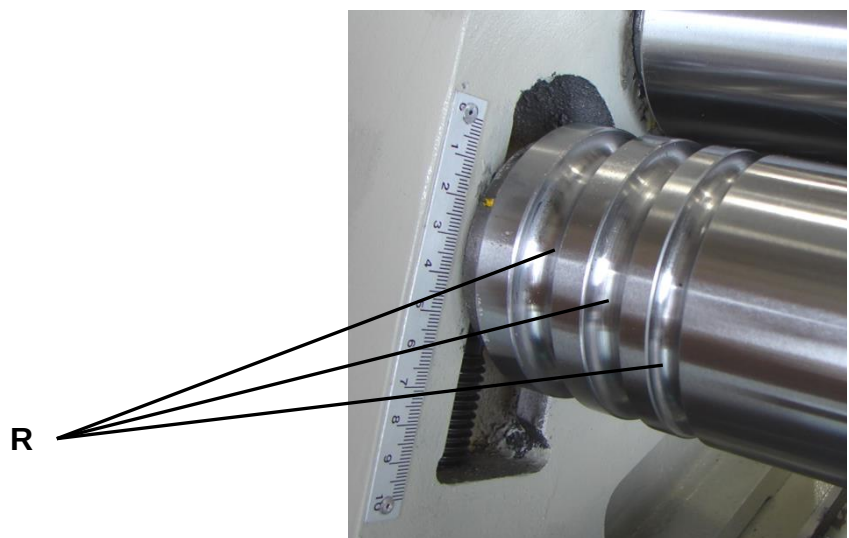
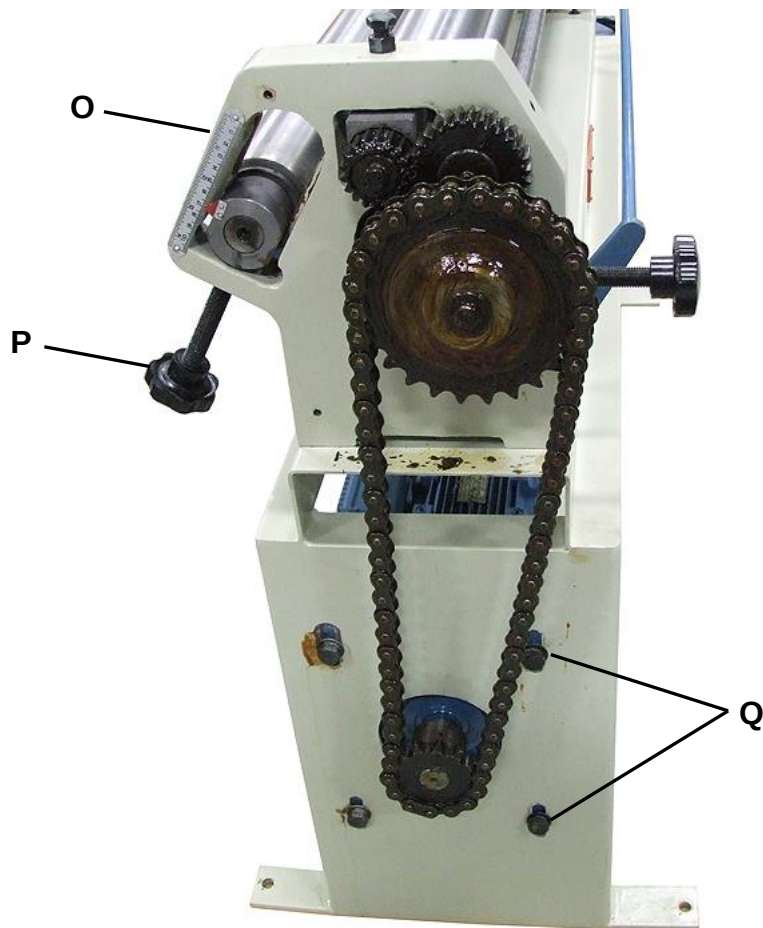
OVERALL DIMENSIONS





GETTING TO KNOW YOUR MACHINE







A	Machine Stand	Supports machine components.
B	Top Pivot Roll	Pivots to allow removal of finished piece part.
C	Safety Stop Bar	Activates switch to stop drive motor.
D	Lower Roll Adjustment	Up-down motion to pinch material for rolling.
E	Chain Guard	Covers drive chain and gears.
F	1.5hp Motor W/Reducer	Provides power to rolls.
G	Electrical Enclosure	Houses electrical components.
H	Dual Foot Switch	Controls forward and reverse motion of rolls.
I	Stop Bar Micro Switch	Shuts off power when actuated.
J	Power Lamp	Illuminates when the motor is running
K	Run Lamp	Illuminates when the rolls are turning
L	Power On Switch	Starts the motor
M	Power Off Switch	Stops the motor
N	Emergency Stop Switch	Stops the motor
O	Idle Roll Scale	Used to set the back roll parallel to the other rolls
P	Idler Roll Adjustment	Used to set diameter of piece part.
Q	Chain Tension Slides	Keeps adequate tension on drive chain.
R	Wire Grooves	For Forming round stock



ELECTRICAL



CAUTION: HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN!

Check if the available power supply is the same as listed on the machine nameplate.



WARNING: Make sure the grounding wire (green) is properly connected to avoid electric shock. DO NOT switch the position of the green grounding wire if any electrical plug wires are switched during hookup.

Power Specifications

Your machine is wired for 110 volts, 60hz alternating current. Before connecting the machine to the power source, make sure the power source is OFF.

Before switching on the power, you must check the voltage and frequency of the power to see if they meet with the requirement, the allowed range for the voltage is $\pm 5\%$, and for the frequency is $\pm 1\%$.

Considerations

- Observe local electrical codes when connecting the machine.
- The circuit should be protected with a time delay fuse or circuit breaker with an amperage rating slightly higher than the full load current of machine.
- A separate electrical circuit should be used for your machines. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine.
- All line connections should make good contact. Running on low voltage will damage the motor.
- 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 machine 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.



WARNING: In all cases, make certain the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.



- Improper connection of the equipment-grounding conductor can result in 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 qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.
- Repair or replace damaged or worn cord immediately.

Extension Cord Safety

Extension cord should be in good condition and meet the minimum wire gauge requirements listed below:

AMP RATING	LENGTH		
	25ft	50ft	100ft
1-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No
WIRE GAUGE			

An undersized cord decreases line voltage, causing loss of power and overheating. All cords should use a ground wire and plug pin. Replace any damaged cords immediately.

Power cord connection:

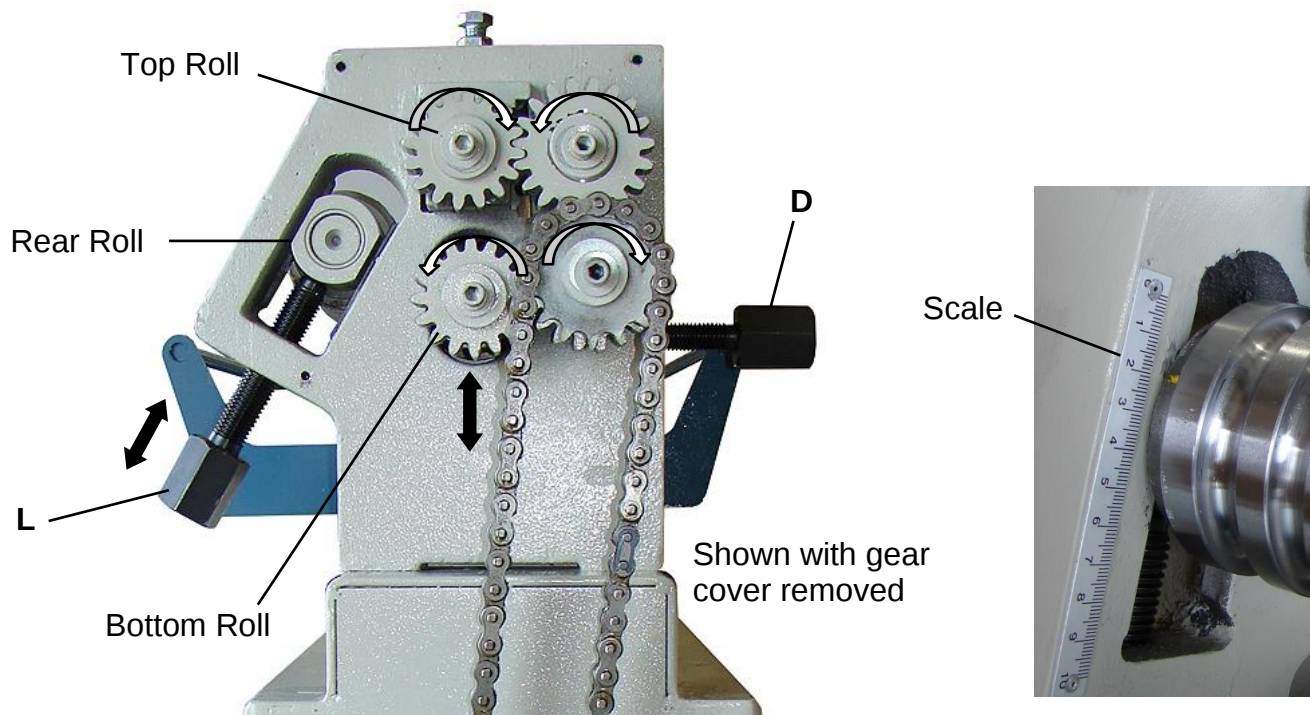
1. Turn the main disconnect switch on the control panel to the OFF position.
2. Unwrap the power cord and route the cord away from the machine toward the power supply.
 - a. Route the power cord so that it will NOT become entangled in the machine in any way.
 - b. Route the cord to the power supply in a way that does NOT create a trip hazard.
3. Connect the power cord to the power supply and check that the power cord has not been damaged during installation.
4. When the machine is clear of any obstruction. The main power switch may be turned ON to test the operation. Turn the switch OFF when the machine is not in operation.



OPERATION

⚠ CAUTION: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges. When handling large heavy material make sure they are properly supported.

- **DO NOT** exceed rated capacity on this slip roll. It has been tested at the factory to roll 16 Ga. x 50" wide mild steel.
- The Baileigh SR-5016E slip roller has three 3" diameter rolls. The two front rolls, one placed vertically above the other are clamping rolls. The bottom roll is adjustable for material thickness up to 16 gauge. By turning the two bolts (**D**) clockwise (**cw**), the roller rises, closing the gap. Counterclockwise (**ccw**) rotation lowers the roller or increases the gap between the rolls. The rear roll controls the diameter of the finished piece part and is adjusted with two bolts (**L**). Both ends of the rear roll have scales and indicator marks. This will help maintain an equal distance between rolls along the entire length.





Removing the Rolled Piece Part



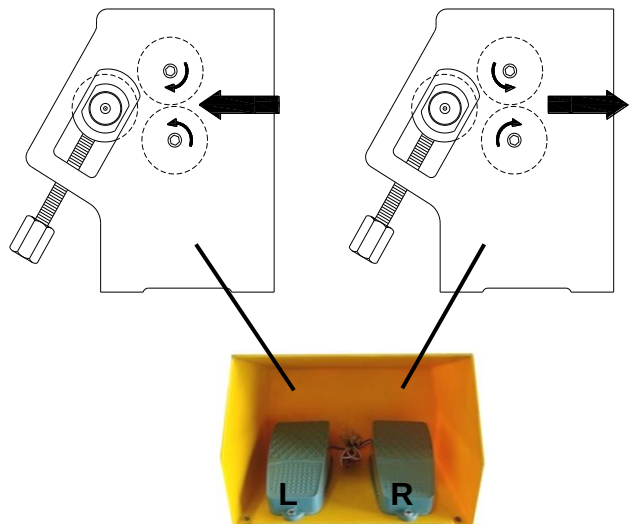
CAUTION: To avoid Operator Injury or Machine Damage NEVER run the machine while the roll is pivoted out.

1. Press down on the safety stop bar to de-energize the motor.
2. Turn the two bolts (D) counterclockwise (ccw) which will lower the bottom front roll.
3. Grasp the clamp handle head as shown, and pull out. The top front roll can now be pivoted out.
4. Remove the piece part from the roll and return the roll to the rest position.
5. Slide the clamp handle head back in to lock the top roll.
6. Press the RESET button on the electrical box to re-energize the motor.



Foot Switch Operation

1. When the Left (L) pedal is pressed down the material will be drawn into the rolls. Make sure the front bottom roll is set properly for the gauge material being run.
2. When the Right (R) pedal is pressed down the material will back out from the rolls.





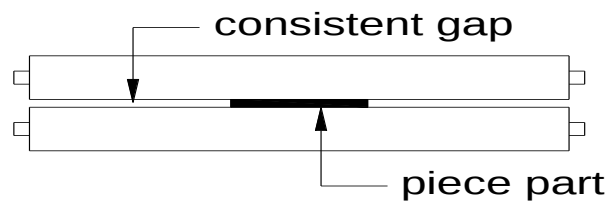
SHEET ROLLING PROCEDURE

Determining Length of Material

LENGTH OF MATERIAL necessary to form the desired size circle is the first consideration in circle forming. To determine the approximate length of material needed use the formula: $C = \pi \times D$, Where C is the circumference, π is the value of 3.1416, and D is the diameter. For example, to find the length of material (C or Circumference) to form a 4" diameter circle, multiply (3.1416 x 4). The result is 12.5664 or the approximate length of material needed. Cut a few pieces of material to this length for test forming. Material may have to be lengthened or shortened depending upon results of the test forming run.

Adjusting the Bottom Front Roll

BOTTOM FRONT ROLL adjustment is necessary to secure the piece part between the top and bottom rolls. To raise or lower the bottom roll, turn the adjusting bolts located at the front of the machine. Clockwise (cw) for up and counterclockwise (ccw) for down. Insert the material (16ga. max.) between the rolls from the front of the machine and set the rolls so the material fits snugly. Make sure the gap along the full length of the rolls is consistent. Now remove the material from the rolls.



Adjusting the Rear Roll

REAR ROLL adjustment is necessary to set the diameter of the circle to be formed. To raise or lower the rear roll, turn the adjusting bolts located at the rear of the machine. Clockwise (cw) is for a smaller diameter and counterclockwise (ccw) is for a larger diameter. Use the scales at each end of the rear roll to keep the roll gap and formed diameter consistent. If the rolls are not adjusted exactly parallel, the material will spiral during the rolling process. Because material springback varies with the kind of material being formed, only by test forming several pieces can the correct adjustments be made.

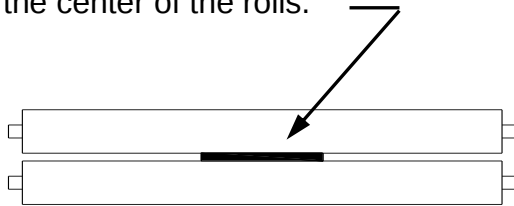


Pre-Bending and Finish Rolling

PRE-BENDING is the operation where the ends of the material are bent to the same radius as that of the finished piece. This principle is used to get the best results in full circle bending.

Before bending, follow these steps:

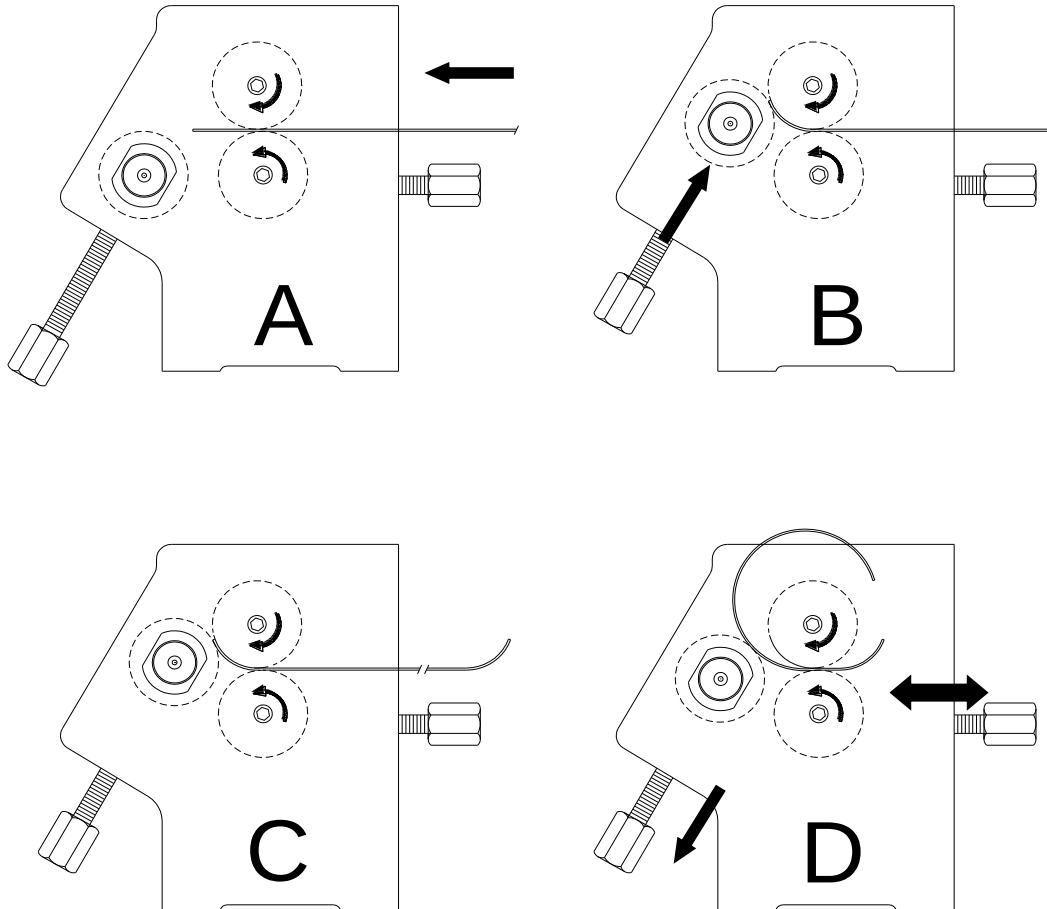
- Clean the material and rolls of any dust or grease.
- Make sure the edges of the piece part are free of chips and burrs.
- Check that the material is flat.
- Have a template of the finished diameter to compare with.
- Always work in the center of the rolls.



Note: Thorough cleaning of the rolls is necessary to avoid possible sliding of the material through the rolls.

(Views A, B, C, & D are shown on the next page.)

1. Lower the rear roller to a point below the material entering the rolls, as in View "A".
2. Load the material. Using the left foot pedal, drive the piece forward to a point as in view "A".
3. Turn the two adjusting knobs (L) clockwise (cw) until you have an approximate radius to your finished piece. See view "B"
4. Back the piece out using the right foot pedal, turn the piece part, and repeat the above sequence for the other end. See view "C"
5. Now that you have a pre-bend on both ends, it is time to roll the final diameter.
6. Back down the rear roller and start rolling the piece forward and reverse as shown in view "D".
7. Start raising the rear roll gradually and continue rolling the piece forward and reverse. until you have reached the finished diameter.
8. Press on the stop bar to disengage the motor.
9. Now lower the front bottom roll so that the piece part will pull off when the top roll is slipped out. See "Removing the Rolled Piece Part".





BENDING ALLOWANCE

In order to bend sheet metal accurately, you will need to consider the total length of each bend. This is referred to as bend allowance. Subtract the bend allowance from the sum of the outside dimensions of the piece part to obtain the actual overall length or width of the piece. Because of differences in sheet metal hardness, and whether the bend is made with the grain or against it, exact allowances must sometimes be made by trial and error. However bend allowances for general use can be obtained from metal working books or from the Internet.

UNDERSTANDING SPRINGBACK

Springback, also known as elastic recovery, is the result of the metal wanting to return to its original shape after undergoing compression and stretch. After the bending leaf is removed from the metal and the load is released, the piece part relaxes, forcing the bent portion of the metal to return slightly to its original shape. The key to obtaining the correct bend angle is to over bend the metal a little and allow it to spring back to the desired angle. All metals exhibit a certain amount of spring back.

MATERIAL SELECTION



CAUTION: It must be determined by the customer that materials being processed through the machine are NOT potentially hazardous to operator or personnel working nearby.

When selecting materials keep these instructions in mind:

- Material must be clean and dry. (without oil)
- Material should have a smooth surface so it processes easily.
- Dimensional properties of material must be consistent and not exceed the machine capacity values.
- Chemical structure of material must be consistent.
- Buy certificated steel from the same vendor when possible.



DRIVE CHAIN ADJUSTMENT

The drive chain on the Baileigh 5016 slip roll has been properly adjusted at the factory. Because of the relatively slow rpm of the drive components, there should be minimal wear on the chain.



CAUTION: Before removing the guards make sure that the power to the machine has been disconnected.

To tighten the chain:

1. Disconnect and lockout power to the machine.
2. Remove the chain guard.
3. Loosen the (4) bolts holding the motor assembly to the base.
4. Allow the weight of the motor and gearbox assembly to hold the chain tight.
5. Tighten motor bolts.
6. ALWAYS replace the drive guard before running the machine!!



LUBRICATION AND MAINTENANCE



WARNING: Make sure the electrical disconnect is OFF before working on the machine.

Maintenance should be performed on a regular basis by qualified personnel.

Always follow proper safety precautions when working on or around any machinery.

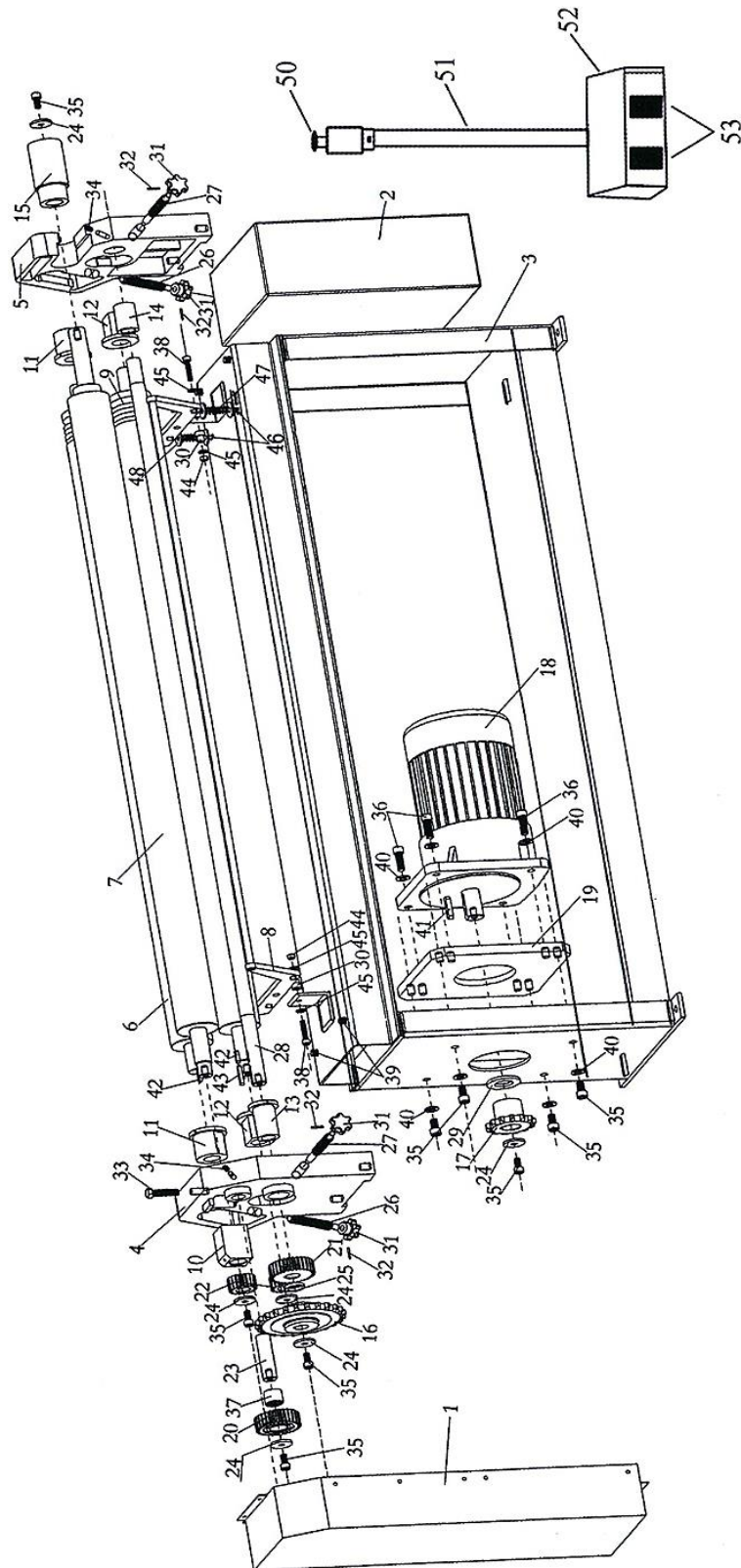
- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts and bolts are properly tightened.
- On a weekly basis clean the machine and the area around it.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.

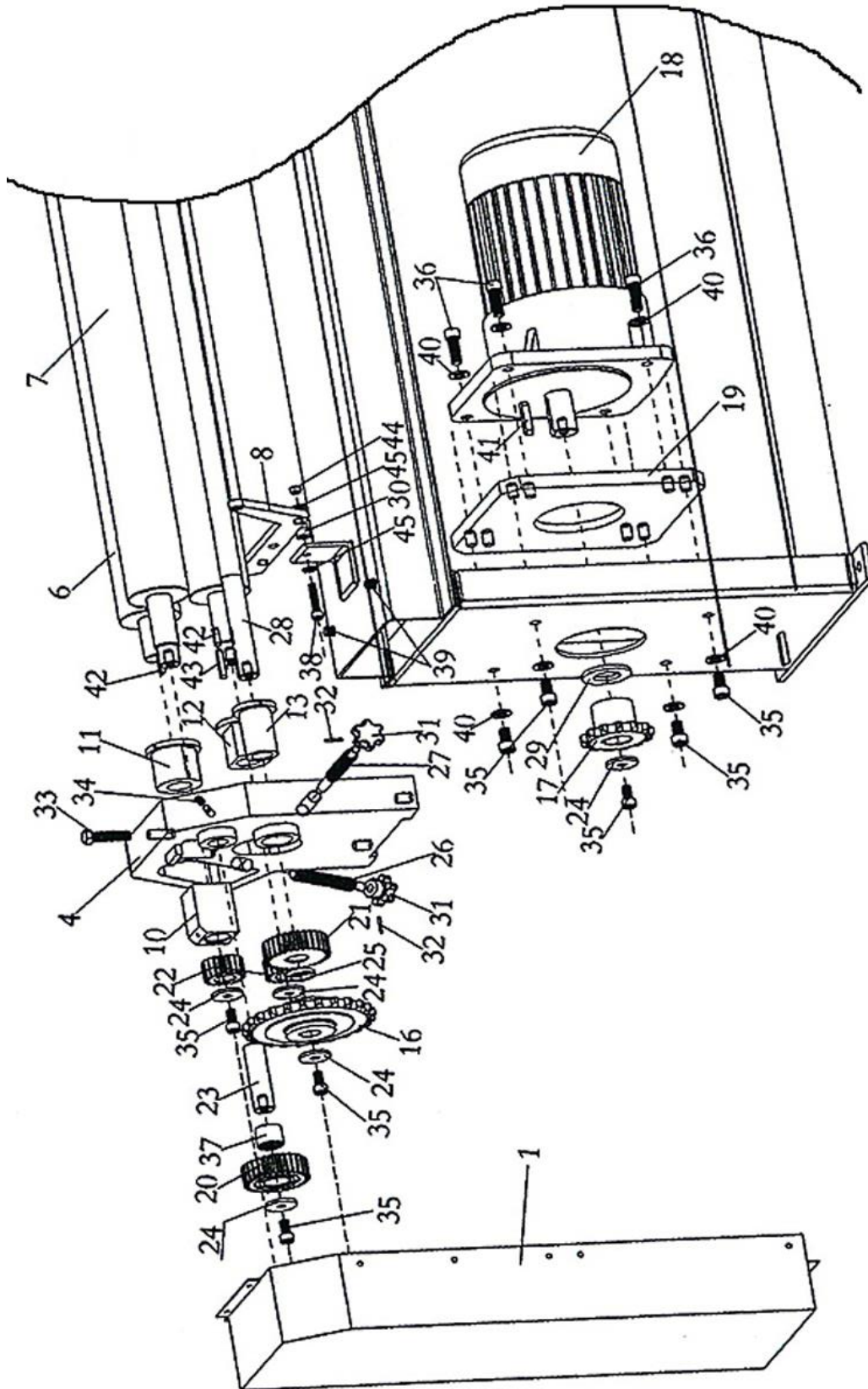


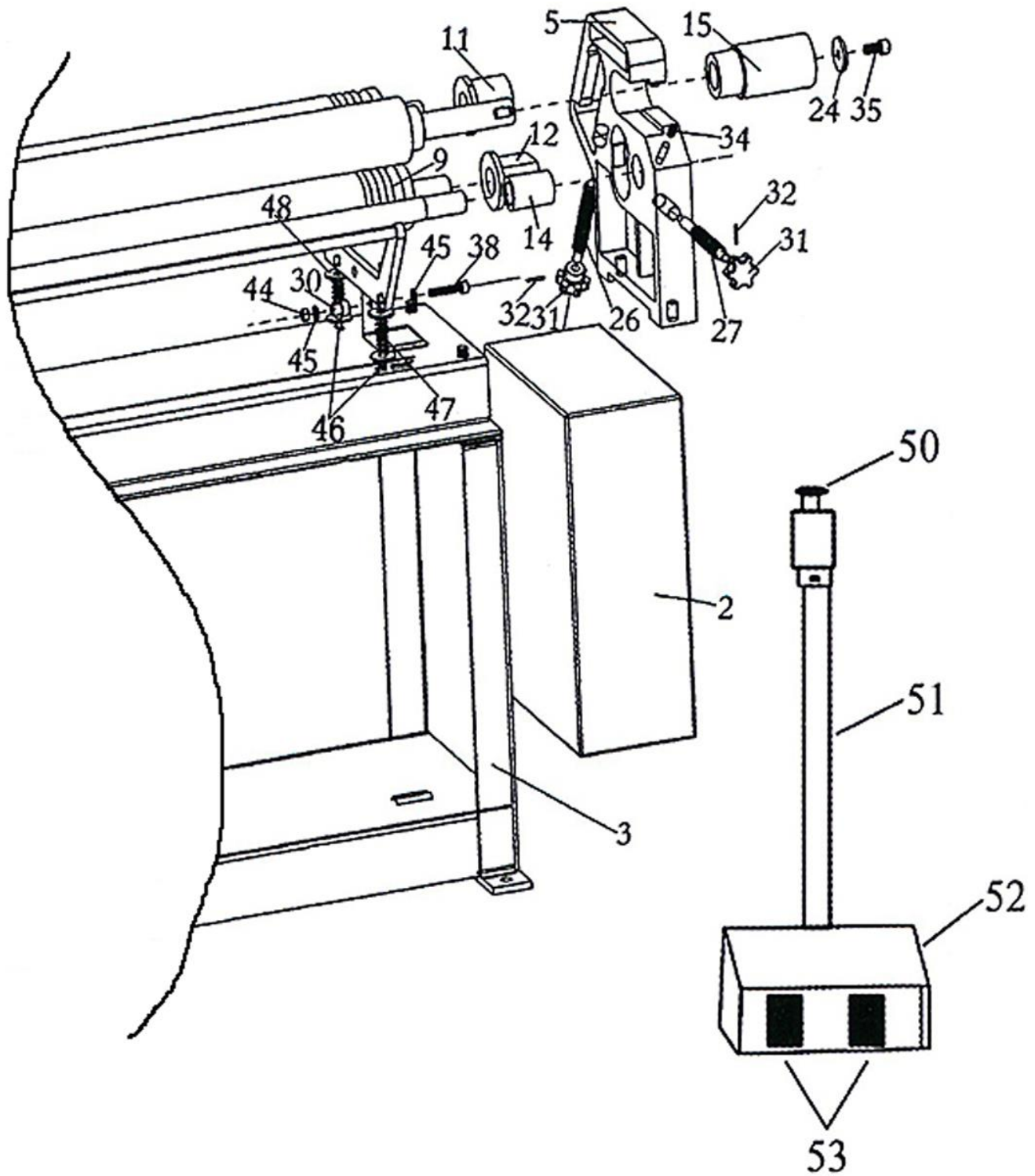
Note: *Proper maintenance can increase the life expectancy of your machine.*



PARTS IDENTIFICATION DRAWING









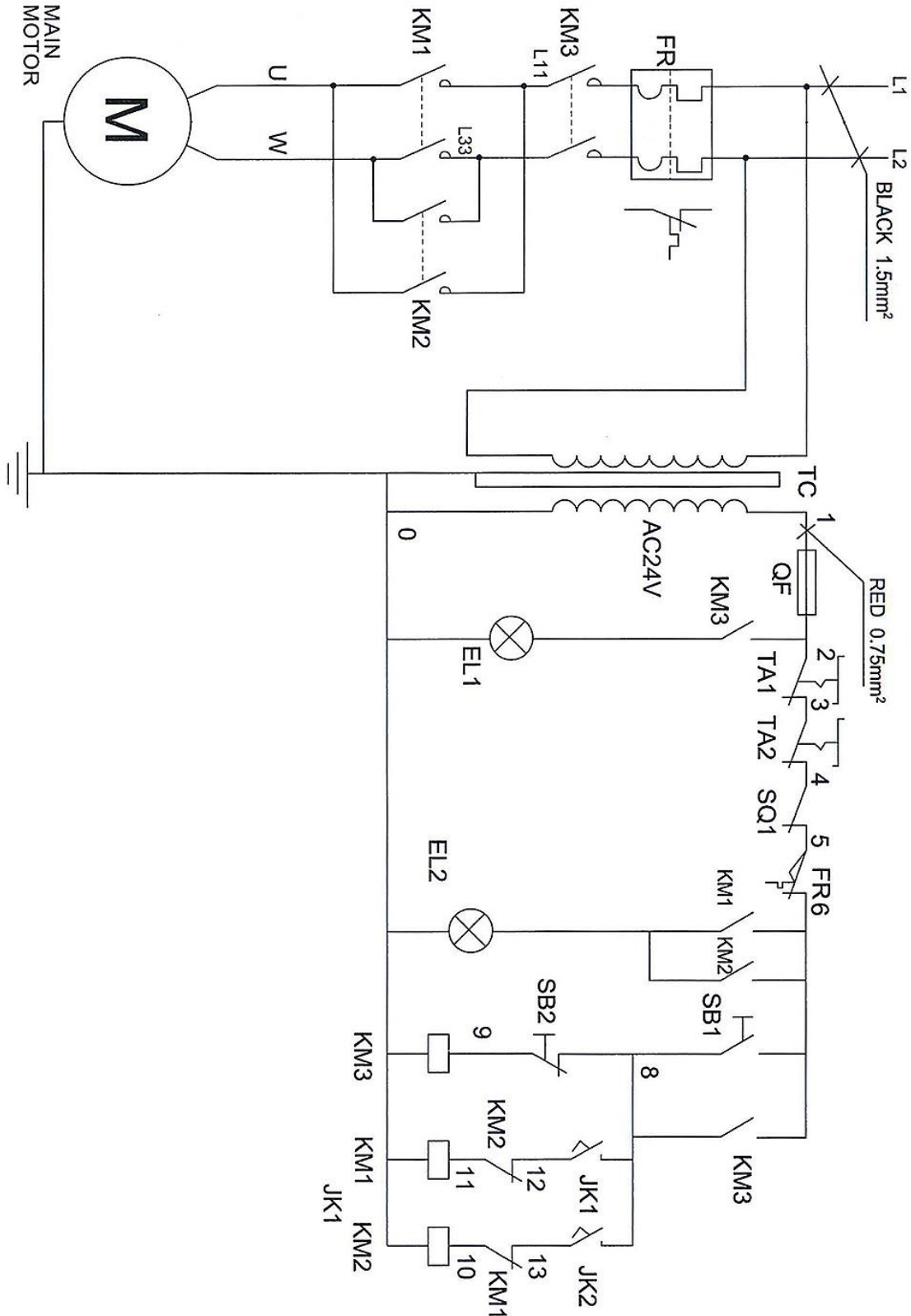
Parts List

Item	Part No.	Description	Qty.
1	SR5016E-1	Protecting Cover	1
2	SR5016E-2	Electric Box	1
3	SR5016E-3	Stand Body	1
4	SR5016E-4	Left Frame	1
5	SR5016E-5	Right Frame	1
6	SR5016E-6	Adjusting Roller	1
7	SR5016E-7	Driver Roller	1
8	SR5016E-8	Protecting Bracket	1
9	SR5016E-9	Auxiliary Roller	1
10	SR5016E-10	Square Bushing	1
11	SR5016E-11	Steel Flange Bushing (mm) 30 / 56w/flat /52.5 (flange 65 / 7.5)	2
12	SR5016E-12	Supporting Bushing	2
13	SR5016E-13	Left Bushing for Driver Roller (mm) 25 / 32 / 61	1
14	SR5016E-14	Right Bushing for Driver Roller (mm) 25 / 32 / 48	1
15	SR5016E-15	Sleeve for Handle (50mm)	1
16	SR5016E-16	Large Chain Wheel/Sprocket	1
17	SR5016E-17	Small Chain Wheel/Sprocket	1
18	SR5016E-18	Motor	1
19	SR5016E-19	Link Plate for Motor	1
20	SR5016E-20+DU-Gear	Gear	1
21	SR5016E-21-Gear	Driver Gear	1
22	SR5016E-22-Gear	Driven Gear	2
23	SR5016E-23	Gear Wheel Shaft	1
24	SR5016E-24	Right Washer M10 (10.6 ID/ 41OD/ 4.4TH) BLK	6
	SR5016E-24A	Left Washer M6	6
25	SR5016E-25	Adjusting Washer, Black Collar (mm) 26 / 32 / 4	1
26	SR5016E-26	Bolt for Adjusting Roller	2
	SR5016E-26.31.32	Roll Adjusting Assembly	2
27	SR5016E-27	Bolt for Auxiliary Roller	2
	SR5016E-27.31.32	Auxiliary Roll Adjusting Assembly	2
28	SR5016E-28	Transmission Shaft	1
29	SR5016E-29	Washer	1
30	SR5016E-30	Bushing	2

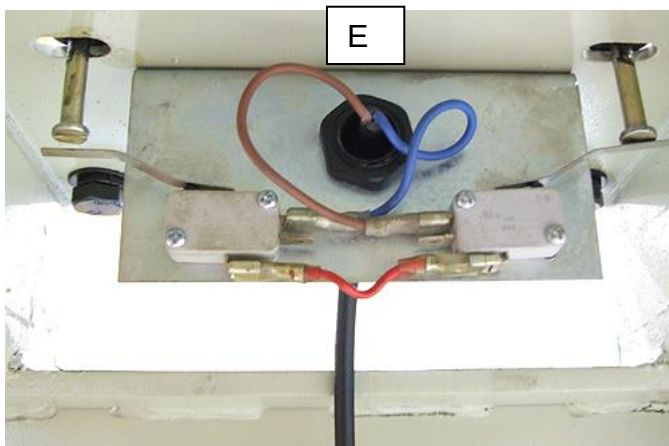
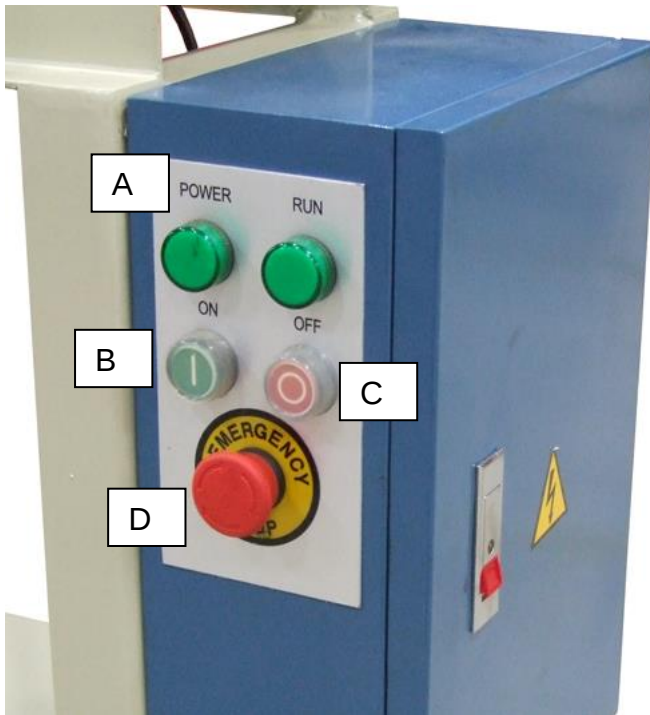


Item	Part No.	Description	Qty.
31	SR5016E-31	Handle	4
32	SR5016E-32	Spring Pin 3*30 mm	4
33	SR5016E-33	Bolt M12-1.75 x 50	1
34	SR5016E-34	Screw M8 x 20	2
35	SR5016E-35	Screw M10-1.5 x 20	5
36	SR5016E-36	Screw M12-1.75 x 35	4
37	SR5016E-37	Shell Needle 1" Bore, 1.25"OD, 1" W	1
38	SR5016E-38	Screw M8 x 40	2
39	SR5016E-39	Bolt M12 x 25	4
40	SR5016E-40	Flat Washer	8
41	SR5016E-41	Key 10 x 45	1
42	SR5016E-42	Key 6 x 25	3
43	SR5016E-43	Key 6 x 40	1
44	SR5016E-44	Nut M8	2
45	SR5016E-45	Flat Washer	4
46	SR5016E-46	M6-1.0 x 75 Phillips Head Screw	2
47	SR5016E-47	Compression Spring Ø10mm x 32mmL	2
48	SR5016E-48	Flat Washer	4
49	SR5016E-49	Chain	1
50	SR5016E-50	Emergency switch	1
51	SR5016E-51	Pole	1
52	SR5016E-52	Box cover	1
53	SR5016E-53	Pedal switch	1
	SR5016E-5053	Foot Pedal Complete, Includes items 50, 51, 52, and 53	

ELECTRICAL SCHEMATIC



ELECTRICAL COMPONENTS



ELECTRICAL ENCLOSURE COMPONENTS





Electrical Component Bill of Material

Item	Part No.	Description	Specification	Symbol	Qty.
A	SR5016E-Lamp	Indicator light, Power and Run Lamp	XB5EVB3-24V	EL1, EL2	2
B		On Push Button Switch	XB5AA3311	SB1	1
C		Off Push Button Switch	XB5AA4322	SB2	1
D		Emergency Stop Switch	XB5AC21/ZB2-BE102C	TA	2
E	SR5016E-SLS	Limit Switch	V9-16S23D800	SQ1	2
F		Foot Pedal Switch		JK1, JK2	2
G		Thermal Overload	DZ108-20	FR	1
H		Breaker	DZ47-63, C2	QF	2
I		Relay	JZX-22F	KM3	1
J	SR5016E-Contactor	Contactor	CU-11/F4-22	KM1, KM2	2
K	SR5016E-K	Transformer	1Ø 110-220/20-24V 2A 60Hz	TC	1
	SR5016E-Motor	Motor	80B5-4 110V, 1.5hp,60hz, 1680rpm	M	1



TROUBLESHOOTING



WARNING: Make sure the electrical disconnect is OFF before working on the machine.

FAULT	PROBABLE CAUSE	REMEDY
Slip Roll creates cones instead of cylinders.	Rolls are not parallel to each other.	Adjust the rear roll to be parallel to the top roll.
A noticeable crease forms in the piece part.	Excessive pressure applied to one spot.	Reduce the radius and make the bend in several passes.
Piece part is pitted.	Material sheet is dirty or roll is damaged.	Clean material, polish nicks in roller.



NOTES



NOTES



BAILEIGH INDUSTRIAL HOLDINGS LLC
1625 DUFEK DRIVE MANITOWOC, WI 54220
PHONE: 920. 684. 4990 FAX: 920. 684. 3944
www.baileigh.com