

Operating Instructions and Parts Manual Electric Roll Bender

Model R-M10E



Baileigh Industrial

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1.0 Table of Contents

Section 1.0 Table of Contents	Page
2.0 Safety Instructions	
3.0 About This Manual	
4.0 Product Identification	
4.1 Overall Dimensions	
4.2 Standard Roller Dimensions	
5.0 Specifications	
6.0 Setup and Assembly	
6.1 Unpacking and Checking Contents	
6.2 Cleaning	
6.3 Transporting and Lifting	
6.4 Installation	9
6.5 Assembly	10
7.0 Electrical Connections	11
7.1 Power Specifications	11
7.2 Considerations	11
7.3 Power Cord Connection	11
8.0 Material Selection	12
9.0 Understanding Springback	12
10.0 Mounting the Rolls	12
11.0 Operation	13
11.1 Start – Up Instructions	13
11.2 Operating Instructions	13
12.0 Maintenance	15
13.0 Replacement Parts	16
13.1.1 Electric Roll Bender Assembly – Exploded View	16
13.1.2 Electric Roll Bender Assembly – Parts List	18
14.0 Wiring Diagram	
14.1 Electrical Components	
14.1.1 Electrical Parts List	
15.0 Warranty and Service	



2.0 Safety Instructions

Failure to follow these rules may result in serious personal injury

- 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.
- Make sure guards are in place and in proper working order before operating machinery.
- 4. Keep work area clean. Cluttered areas invite injuries.
- Remove any adjusting tools. Before operating the machine, make sure any adjusting tools have been removed.
- 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.
- 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 machines rated capacity.
- 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 appropriate. 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.

- Use eye and ear protection. Always wear ISO approved impact safety goggles. Wear a fullface shield if you are producing metal filings.
- Do not overreach. Maintain proper footing and balance at all times. DO NOT reach over or across a running machine.
- 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.
- Keep children away. Children must never be allowed in the work area. DO NOT let them handle machines, tools, or extension cords.
- 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.
- 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.
- 19. Turn off power before checking, cleaning, or replacing any parts.
- Be sure all equipment is properly installed and grounded according to national, state, and local codes.
- 21. 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.
- 22. Keep visitors a safe distance from the work

Familiarize yourself with the following safety notices used in this manual:

▲ CAUTION machine damage.

This means that if precautions are not heeded, it may result in minor injury and/or

AWARNING

This means that if precautions are not heeded, it may result in serious injury or death.

A DANGER

This means that if precautions are not heeded, it will result in serious or fatal, injury.

Save the Instructions

3.0 About This Manual

This manual is provided by Baileigh Industrial, covering the safe operation and maintenance procedures for a Baileigh Model R-M10E Electric Roll Bender. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

Technical Support handles questions on setup, operation, schematics, warranty issues, and individual parts needed. Our Technical Support department can be reached at 920-684-4990.

If there are questions or comments, please contact your local supplier or Baileigh Industrial. We can also be reached at our web site: www.baileigh.com.

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

AWARNING

Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

Register your product online -

https://baileigh.com/product-registration



4.0 Product Identification

4.1 Overall Dimensions

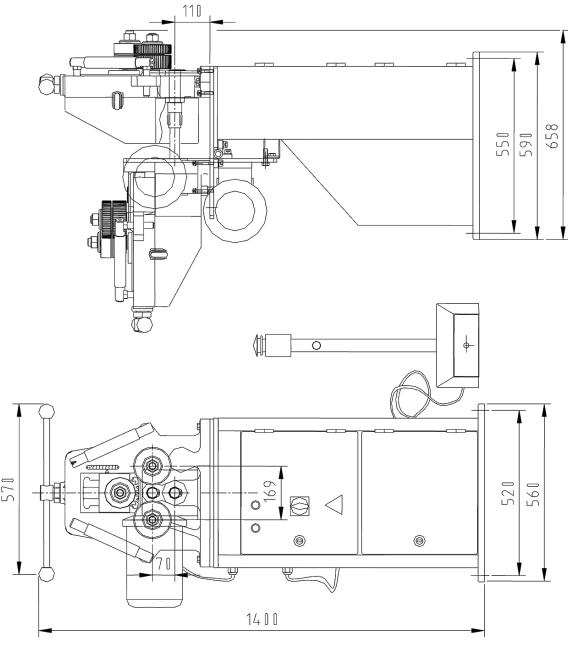
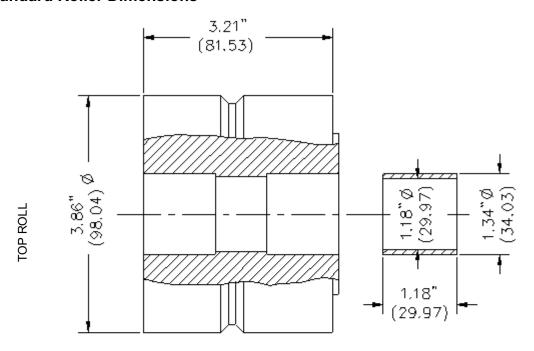
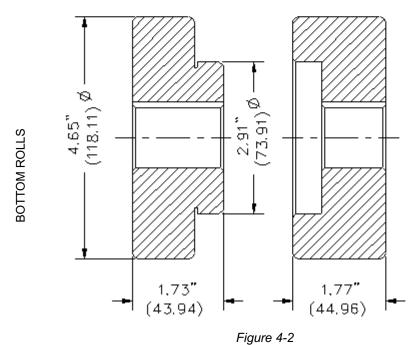


Figure 4-1

4.2 Standard Roller Dimensions





Roll material SAE 1050 hardened to 40 HRC

Note: Special rollers are available from Baileigh Industrial Inc.

5.0 Specifications

Table 5-1

Model Number	R-M10E		
Stock Number	BA9-1013217		
Motor and Electrical			
Power	220V / 3ph / 60Hz		
Motor	1.5HP (1.1kW) 220V / 3ph / 60Hz / 5A		
General Specifications			
Shaft Center Distance	6.65" (169mm)		
Shaft Diameter	1.181" (30mm)		
Roll Adjustment	Manual		
Lower Roll Diameter	4.65" (118mm)		
Upper Roll Diameter	5.86" (98mm)		
Pinch	Single		
Roll Speed	10.6 rpm		
Round Tube Capacity	Size: 1.25" (.078") / Min. Dia.: 31.5" [31.75mm (2mm) / Min. Dia.: 800mm]		
Solid Round Capacity	Size: .875" / Min. Dia. 20" [22mm / Min. Dia. 508mm]		
Pipe Capacity (sch. 40)	Size: 1" / Min. Dia.: 28" [25.4mm / Min. Dia.: 711mm]		
Square Capacity	Size: 1.25" / Min. Dia.: 10" [31.75mm / Min. Dia.: 254mm]		
Square Tube Capacity	Size: 1.25" (.078") / Min. Dia.: 35" [31.75mm (2mm) / Min. Dia.: 889mm]		
Angle Iron Capacity	Size: 1.25" (.157") / Min. Dia.: 30" [31.75mm (4mm) / Min. Dia.: 762mm]		
Flat Bar Easy Way	Size: 1.96" (.39") / Min. Dia.: 15.75" [50mm (9.9mm) / Min. Dia.: 400mm]		
Flat Bar Hard Way	Size: 1.18" (.39") / Min. Dia.: 19.685" [29.9mm (9.9mm) / Min. Dia.: 500mm]		
Weights and Dimensions			
Shipping Weight	508 lbs. (230kgs)		
Shipping Dimensions	27.5" x 27.5" x 56" (700 x 700 x 1420mm)		
Based on a material tensile strength of *	60000 PSI – mild steel		
~			

Many different profiles, pipes, and tubes can be bent by your Baileigh R-M10E powered roll bender. To achieve consistent results you must also use good quality materials. Find a reputable steel distributor in your area to supply all your steel needs.

AWARNINGDO NOT feed profiles having a thickness greater than specified for the capacity of the machine. DO NOT feed more than one piece at a time. DO NOT use machine for purposes other than designed for.

AWARNING

Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.

6.0 Setup and Assembly

6.1 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.

AWARNING

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

AWARNING

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

6.2 Cleaning

AWARNING

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

ACAUTION

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.

6.3 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.



Figure 6-1

- 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.

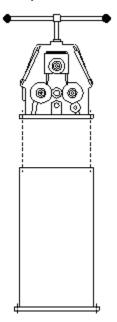


Figure 6-2

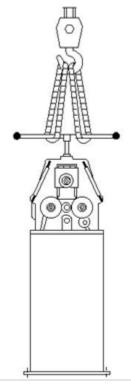


Figure 6-3

6.4 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 is capable of supporting 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.

6.4.1 Securing the Base

AWARNING

Before operating; make sure it is positioned firmly on a solid level floor. If it tips over on you, it could cause severe injury or death. Before operating; make sure it is positioned firmly on a solid level floor.

The accuracy of any machine depends on the precise placement of it to the mounting surface.

Place shims under the four feet mounted in the base as required for leveling.

For safe operation, the machine needs to be bolted to the floor with anchor bolts.

- Because the R-M10E does not run at high speed, it is not necessary to use vibration dampers.
- For proper operation the machine must be placed on a flat, preferably concrete surface and properly leveled.
- Provide a minimum of a 3ft. (92cm) clearance area (safety zone) around the machine and the material being formed, to prevent accidental contact with persons or objects.

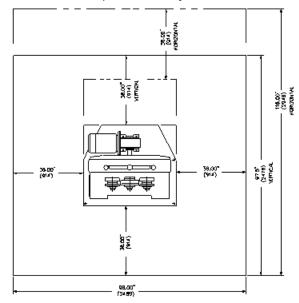


Figure 6-4

6.4.2 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.
- This machine requires a solid floor such as concrete at a minimum of 4" (102mm) thick. 6" (153mm) minimum is preferred.

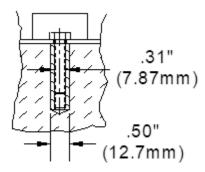


Figure 6-5

6.5 Assembly

WARNING

For your own safety, Disconnect the machine from the power source until the machine is completely assembled and you read and understand the entire instruction manual.

- After preparing the base to be secured to the floor, mount the head to the base using the bolts provide.
- Clean the rust inhibitor off of the entire machine and lubricate the moving and bare metal parts with 30 or 40 weight non-detergent motor oil or equivalent.
- Open the back cover and lightly grease the gears and pinch adjustment screw using general purpose grease.

6.5.1 Head Positioning

ACAUTION

Avoid crushing type injury and machine damage. Make sure machine is properly secured to floor before tilting head to avoid tipping.

The R-M10E is designed to operate either in the horizontal or vertical position. By removing two bolts the headstock can easily be pivoted to a horizontal position.

- 1. The head is shipped in the horizontal position. This roll bender may be used this way or have the head pivoted up to the vertical position.
- 2. Remove the two cap screws and washers (A) from the top of the cabinet and save to secure the head in the vertical position.

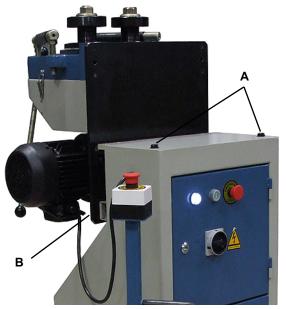


Figure 6-5

Remove the two cap screws (B) at the back of the cabinet which secure the head in the horizontal position.



Figure 6-6

- Using proper lifting techniques tilt the head up to the vertical position and install and tighten the two cap screws (A) removed from the top of the cabinet
- Install the two cap screw from the back of the cabinet, back into the mounting bracket for use later if the head is tilted back to a horizontal position.

7.0 Electrical Connections

WARNING

Baileigh Industrial is not responsible for any damage caused by wiring up to an alternative 3-phase power source other than direct 3-phase. If you are using an alternate power source, consult a certified electrician or contact Baileigh Industrial prior to energizing the machine.

ACAUTION

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.

AWARNING

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.

7.1 Power Specifications

Your machine is wired for 220 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 ±5%, and for the frequency is ±1%.

7.2 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.

AWARNING

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.

7.3 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.
 - Route the cord to the power supply in a way that does NOT create a trip hazard.

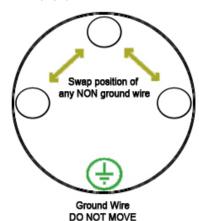


Figure 7-1

- Connect the power cord to the power supply, or have an electrician install the correct plug for the application. 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 turn ON to test the operation. Turn the switch OFF when the machine is not in operation.
- Check that the motor is running in the correct direction.
- 6. If not, cut the power to the machine. Swap the position of any two of the three power wires; but DO NOT change the position of the green grounding wire!

8.0 Material Selection

ACAUTION

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.

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

When bending pipe or tube the outer part of the bend is stretched and the inner section compressed. The result of these opposite and unequal stresses is that the pipe or tube tends to flatten or collapse. To prevent such distortion, the common practice is to support the wall of the pipe or tube in some manner during the bending operation. One such method is to fill the piece with sand and plug the ends. Other methods can be found to achieve favorable results.

Listed below are some of the factors that control or influence the success of a bending operation.

- Mechanical properties of the material being bent
- Thickness of the material to be bent
- Size of the inside bend radius
- · Speed at which the bend occurs
- Grain direction of the steel to be bent
- Coefficient of friction
- Roller design

9.0 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.

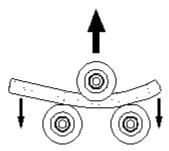


Figure 9-1

10.0 Mounting the Rolls

Rolls must be mounted correctly, depending on the type of profile to be bent. This will save the machine from undue stress and limit defects in the profile.

 Disconnect and lockout power to the roll bender when changing roll sets.

- To change rolls, use the (supplied) wrench to remove the nuts. The two lower shafts are connected to the drive so they will not spin. The upper freewheeling shaft can be manually held with a wrench.
- 3. After changing rolls, replace and lightly tighten nut to shaft.
- 4. To find the distance needed between the top and bottom rolls, place a sample of the material to be bent in between the rolls. The groove of the upper roll should be 2-4 mm (.078"-.156") larger than the thickness of the material. Make a test bend with a sample of your material. This allows you to find the material spring back, and to determine the number of passes needed to achieve the desired radius.
- The lower rolls are keyed to the shaft. If a vibration is felt during the bending process, remove the key from the lower right roller shaft to make the rolls freewheeling.

11.0 Operation

ACAUTION

Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.

ACAUTION

When handling large heavy material, make sure they are properly supported.

11.1 Start - Up Instructions

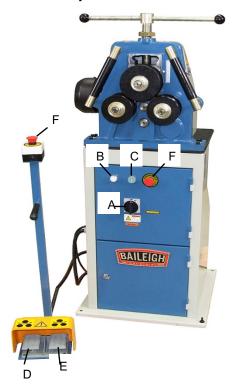


Figure 11-1

- Select the proper rolls for material being formed.
- Make sure area around rolls is free from any obstructions.
- 3. Turn the On/Off switch (A) to the ON position. The white lamp (B) will come on.
- 4. Press the green start button (C) to activate the foot pedals.
- 5. Step on the left foot pedal (D) and confirm that the bottom rolls rotate to the left, counterclockwise (ccw). This will cause the material to move to the left when loaded.
- Step on the right foot pedal (E) and confirm that the bottom rolls rotate to the right, clockwise (cw). This will cause the material to move to the right when loaded.
- With either foot pedal depressed, press either EMERGENCY STOP switch (F) to stop the rolls from turning.
- 8. Twist the emergency stop button clockwise (cw) to reset.
- Follow the next operation instructions to load and bend material.

11.2 Operating Instructions

A CAUTION

Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.

ACAUTION

When handling large heavy sheets make sure they are properly supported.

- Place the material flat on the rolls as shown in the top figure. Make sure that material is placed parallel to the floor and touching all three rolls at the same time. This condition is called "zero position".
- Rotate the pressure adjustment screw on the top of the bender to move the upper roll down and position it to apply enough force to firmly contact the material without bending or denting the material.

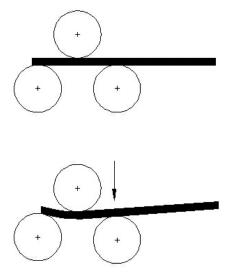


Figure 11-2

- Using the scale located to the right of the upper roll, turn the adjustment screw 5 increments to apply the beginning bend pressure. To avoid deforming the piece, DO NOT apply more force than necessary.
- 4. To get desired radius, make consecutive passes through rolls using left and right foot pedals and gradually lower the upper roll after each pass. If the radius is larger than needed, move the upper roll down to apply more force. Keep track of your up/down position using the calibrated scale as a guide. This will help ensure consistency of parts.

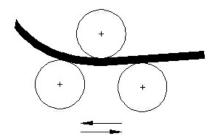


Figure 11-3

5. To prevent material from bending left or right you must adjust the guide rolls to apply pressure as needed to guide the material onto the plane desired. As the guides are adjustable on top and bottom, you can arrange them to the opposite direction that the material is inclined to go.

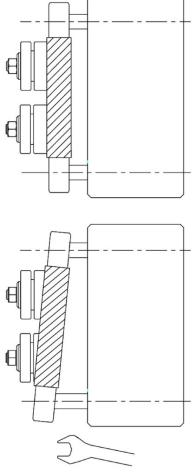


Figure 11-4

6. Extending the guides farther out will assist in creating a spiral condition for coiling materials.

Note: To get a circular profile, side guide joints must be parallel to the machine face. Otherwise, you get spiral profiles.

Using optional specials rolls, many material profile configurations are possible.

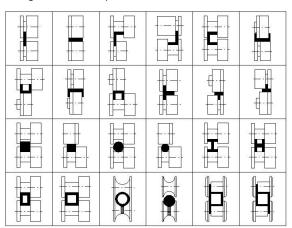


Figure 11-5

When bending long materials, an adjustable feeder conveyor is recommended to keep work piece parallel to floor, allowing for easier loading of Roll Bender. If necessary, the machine can be laid on its back to operate in a horizontal position.

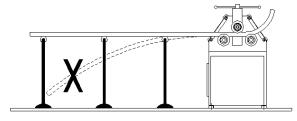


Figure 11-6

12.0 Maintenance

AWARNING

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

AWARNING

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

AWARNING

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.
- Regularly inspect, clean, and lubricate the moving parts of the machine.
- Gears, threaded shafts, and bearings should be greased once a month.
- Also check that all nuts and bolts are properly tightened.

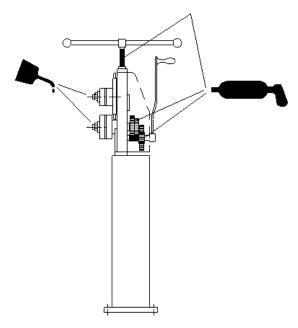
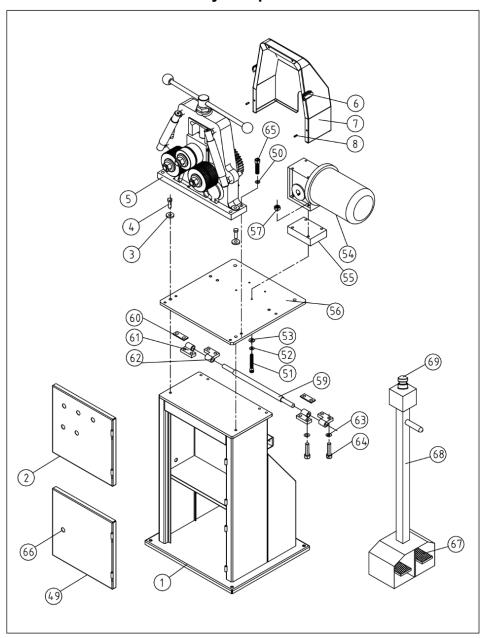


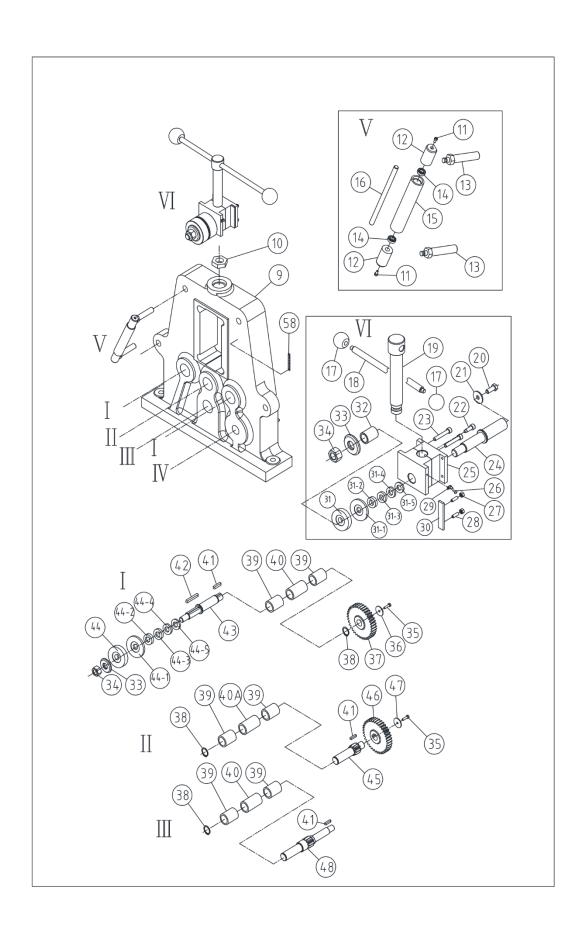
Figure 12-1

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

13.0 Replacement Parts

13.1.1 Electric Roll Bender Assembly – Exploded View





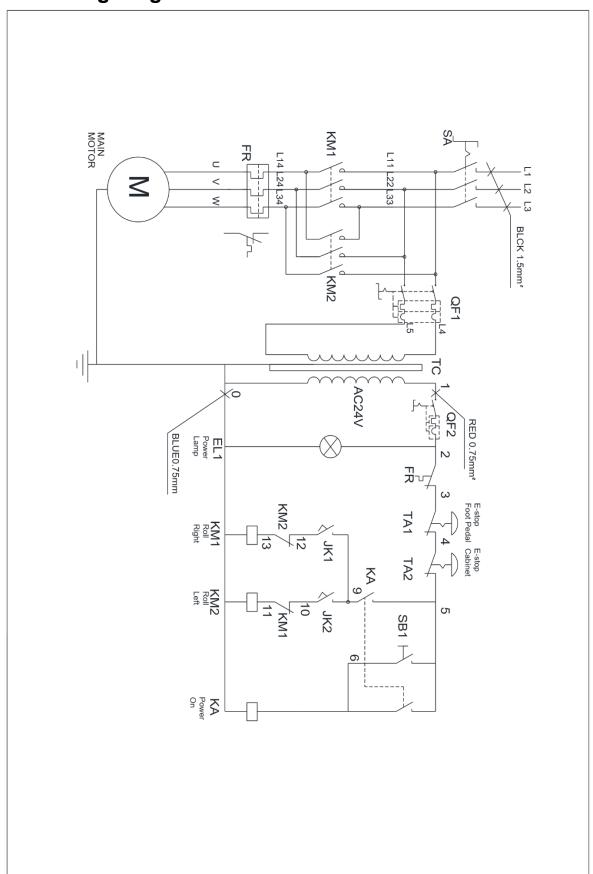
13.1.2 Electric Roll Bender Assembly – Parts List

Index No	Part No	Description	Size	Qty
		Base		
2	**	Door		1
3	**	Flat Washer	M12	2
4	**	Hex Cap Screw	M12X45	2
5	**	Body		1
		Lock Buckle		
		Shield		
		Spring Pin		
9	.BA9-1231236	Body		1
		Hex Thin Nut		
11	. ^	Socket Head Cap Screw	M5X10	4
12		Side Guide Joint		
13	**	Side Guide Bolt		4
14	**	Lateral Guide Shaft	6001-22	4
10	**	Side Guide Shaft	•••••	۷ ک
		Lever Ball		
10	BA9-1000036	Rotating Lever		ا
19	**	Turning Shaft	M40V20	ا
20	**	Washer	IVI 12A3U	ا
21	**	Bolt	•••••	ا
22	**	Socket Head Cap Screw	M10V60	I 1
23	DAO 1020401	Socket nead Cap Screw	WITUX6U	4
24	BA9-1020491	Top Roll Shaft		ا
25	**	Middle BeddingSocket Head Cap Screw	MEV40	1
20	**	Hex Nut, Nylon Lock	NIOA IU	I
20	**	Socket Set Screw, Cup Point	IVIO	4
28	**	Socket Set Screw, Cup Point	IVI8X25	4
30		Finger		
30	**	Middle Bedding Slide Spacer Roll	(Thickness 26 0mm)	∠
21 1	**	Spacer	(Thickness 20.9IIIII)	I
21 2	**	Spacer	(Thickness 12IIIII)	I 1
21 2	**	Spacer	(Thickness 10.5IIIII)	! 1
31-3	**	Spacer	(Thickness 10.711111)	1 1
31-4	**	Spacer	(Thickness 8 7mm)	1 1
32	RΔ9_1020490	Bearing Bushing	(THICKITESS 0.711111)	1
33	**	Tooling Washer		∠
34		Hex Nut		
		Hex Cap Screw		
36				
37				
38	**	Retaining Rings, EXT	M35	4
39	**	Graphite Bearing (1) 3530		8
40	**	Graphite Bearing (2) 3539		2
40A	.BA9-1230487	Graphite Bearing (1)		2
41	**	Flat Key	8X30	4
42	**	Flat Key		
43	.BA9-1022530	Lower Roll		
44	**	Spacer Lower Roll		
44-1	**	Spacer		
44-2	**	Spacer		
44-3	**	Spacer		2
44-4	**	Spacer		2
44-5	**	Spacer		<u>-</u>
45	**	Shaft		1
46	**	_		
47	**	Cover		
48	.BA9-1230373	Gear Shaft		

Index No	Part No	Description	Size	Qty
49	**	. Door		1
50	**	. Flat Washer	. M10	4
51	**	Socket Head Cap Screw	. M8X60	4
		. Lock Washer		
53	**	. Flat Washer	. M8	4
54	**	. Speed Reduce	. NMRV063	1
		. Subplate		
		Turning Table		
		. Hex Nut		
58	**	. Scale		1
59	**	Turning Axis		1
60	**	. Subplate		2
61	**	. Hinge		2
62	**	. Hinge		2
63	**	. Flat Washer	. M12	8
64	**	. Socket Head Cap Screw	. M12X30	8
65	**	. Socket Head Cap Screw	. M10X40	4
66	**	. Door Lock and Key		2
67	**	. Foot Switch		1
		. Stand for Switch		
		. Emergency		
	.BA9-1020747	. Foot Pedal Assembly		

^{**} These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

14.0 Wiring Diagram



14.1 Electrical Components



14.1.1 Electrical Parts List

Index No	Part No	Description	Size C	Qty
SA	.BA9-1017121	. Main Disconnect		
KM1, KM2	**	. Contactor, CAN-05		
M	.BA9-1019293	. Motor		
QF1	**	. Circuit Breaker, DZ47-63, C2		
TC	.BA9-1017519	. Transformer		
QF2	**	. Circuit Breaker, DZ47-63, C1		
EL1	**	. Power Lamp		
FR	**	. Thermal Overload		
SA1, SA2	**	. Emergency Stop		
		. Foot Pedal Switch		
SB1 w/EL1	**	. Start Switch w/ Lamp		
KA	**	. Power Relay, MY4		

^{**} These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

15.0 Warranty and Service

Thank you for your purchase of a machine from Baileigh Industrial. 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 an 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 an 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 an 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 INCIDENTIAL, 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, lightning, 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 Industrial issued RGA number PRIOR to returning any materials.
- · Returned materials must be received at Baileigh Industrial 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 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 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 Baileigh-Service@jpwindustries.com



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