



Operating Instructions and Parts Manual

Metal Bead Roller

Model BR-22



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2.0 Safety Instructions

⚠ WARNING

Failure to follow these rules may result in serious personal injury

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.
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

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

⚠ CAUTION

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

⚠ WARNING

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

⚠ 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 BR-22 Metal Bead Roller. 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.

WARNING

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 Specifications

Rotary machine is hand operated and will form sheet metal up to 22 Gauge (.76mm) thickness mild steel (or equivalent). The Rotary machine is constructed of cast iron and steel ensuring minimum deflection of the work-piece during forming operations. Six die sets are included, allowing the following operations to be performed: large and small turning, burring, wiring, ogee beading, and crimping.

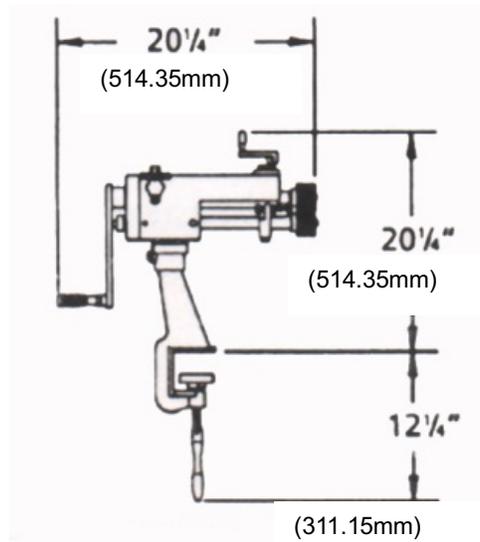


Figure 4-1

Table 4-1

Maximum thickness	22 GA. (.030") mild steel
Throat depth	7" (178mm)
Material stop range	0-7" (0-178mm)
Maximum thickness of mounting surface	2" (51mm)
Weight	47 Lbs (21.32kg)

⚠ WARNING

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

5.0 Setup and Assembly

5.1 Unpacking and Checking Contents

Your Baileigh Metal Bead Roller is shipped complete in one box. 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.

⚠ WARNING

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

5.2 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.

The rotary machine comes assembled as one unit with one die set attached. Additional parts which need to be fastened to the tool should be located and accounted for before assembling:

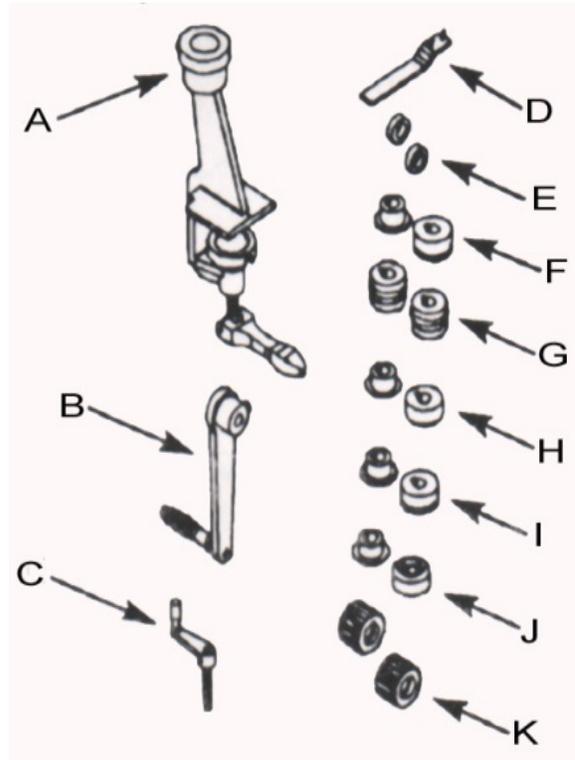


Figure 5-1

- A Base assembly
- B Crank handle assembly
- C Adjusting handle assembly
- D Wrench
- E Spacers, 2 each
- F Small turning die set
- G Ogee bead die set
- H Burring die set
- I Large turning die set
- J Wiring die set
- K Crimping die set

5.3 Assembly

- Machine should be installed on a level surface, with proper lighting.
- Machine is to be bench mounted.
- Be sure to provide clearance for crank arm rotation.
- Area around machine should be clear of scraps, oil or dirt.
- Apply a suitable non-skid material to floor.

5.3.1 Mount Base Assembly

- Mount base assembly to a suitable area on workbench. The thickness of the mounting surface cannot exceed 2" (51mm). Secure in position using clamp handle.

5.3.2 Mount Rotary Machine to Base

- Mount rotary machine body to base. Secure with hex head bolt.

5.3.3 Mount Handle to Machine

- Mount the crank assembly to the driving shaft. Secure with hex head bolt. Mount the adjusting handle assembly into top of body.

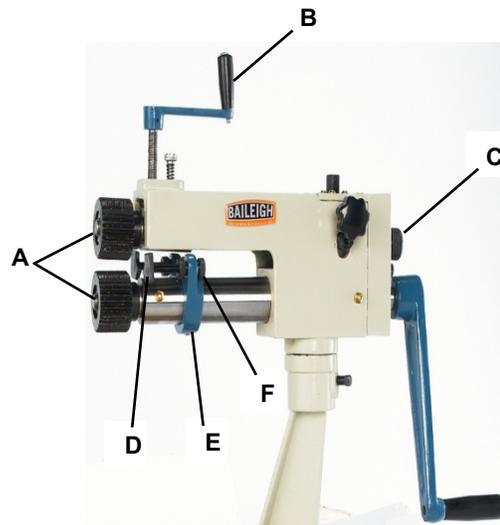


Figure 6-1

6.0 Operation

⚠ CAUTION

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

⚠ CAUTION

Keep hands and fingers clear of the die area.

Be sure to keep hands clear of forming dies when rotating crank handle. The maximum capacity of the machine is 22 gauge (.76mm) mild steel or equivalent.

1. Select the die set required for the operation to be performed.
2. Place spacers, dies and retaining nuts onto the driving and driven shafts (A). Tighten the retaining nuts with wrench provided.
3. Adjust the position of the upper die according to thickness of the workpiece by using the adjusting handle (B).
4. Adjust the horizontal position of the upper die by rotating the adjusting nut (C).
5. Adjust the stop gauges (D) or the stop plate (E) to the required size. The required size is the distance the form will be from the edge of the metal. Use the stop gauge for sheet and use the stop plate for cylinders. The stop gauge can be finely adjusted using the thumb nuts (F).
6. Insert metal between dies and slowly rotate the crank arm. Check the workpiece. It may be necessary to fine tune the adjustments made in steps 3 - 5. Repeat steps 3 thru 5 until the correct form is obtained.

7.0 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.

The maximum capacity of the machine is 22 gauge (.76mm) mild steel or equivalent. Below is an equivalency chart for use when working with materials other than mild steel.

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.

Table 7-1

EQUIVALENCY CHART	
Mild steel	.030" (.762mm)
Stainless steel	.020" (.508mm)
Cold-rolled steel	.024" (.609mm)
Aluminum	.055" (1.40mm)
Soft brass	.046" (1.17mm)
1/2 Hard brass	.030" (.762mm)
Annealed phosphor bronze	.034" (.864mm)
Soft copper	.046" (1.17mm)
Hard copper	.034" (.864mm)

Turning	Turning	Burring	Wiring	Ogee Bead	Crimping
					

Profiles of Roll Dies included with Rotary Machine

8.0 Maintenance



Figure 8-1

- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts, bolts, and screws are properly tightened.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.
- All exposed iron surfaces should be coated with light oil to prevent rusting. Use a multi-purpose or bearing grease for lubrication.
- The adjusting block should be greased.
- Grease the driving shaft fittings (G) monthly.

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

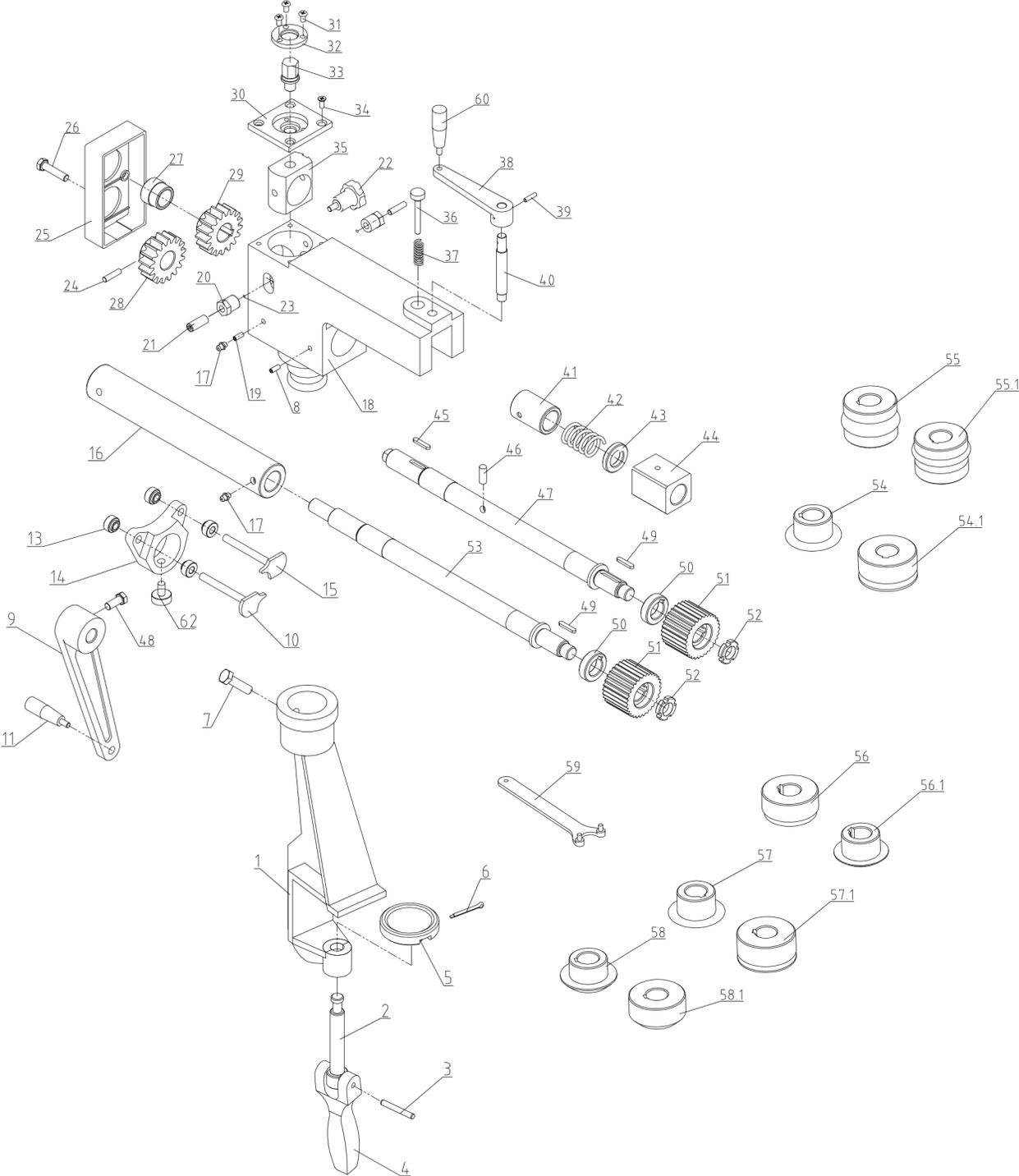
9.0 Troubleshooting Chart

Table 9-1

Symptom	Possible Cause(s)	Corrective Action
Dies cut through metal	Dies are too close together.	Adjust die position using adjusting handle.
Dies do not make the form correctly	Dies are improperly adjusted.	Adjust die position using adjusting nut.
	Thumb screw loose.	Tighten thumb screw.
	Workpiece material too thick.	Do not exceed machine capacity of .030" (.76mm) mild steel or equivalent, See Equivalency Chart.
Crank arm difficult to turn	Adjusting block loose or not in proper position.	Adjust set screws and secure by tightening lock nuts. Loosen knob and adjust position of adjusting block by turning adjusting bolt. Retighten knob.
	Improper lubrication.	Lubricate properly, See Lubrication.

10.0 Replacement Parts

10.1.1 Metal Bead Roller Assembly – Exploded View



10.1.2 Metal Bead Roller Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	BA9-1014895	Base		1
2	BA9-1014896	Clamp Bolt		1
3	BA9-1014897	Roll Pin	6X45	1
4	BA9-1014898	Clamp Handle		1
5	BA9-1014899	Clamp Head		1
6	BA9-1014900	Cotter Pin	4X32	1
7	BA9-1014901	Square Set Screws, Long Dog Point	M10X25	1
8	BA9-1014902	Socket Set Screw, Flat Point	M8X10	1
9	BA9-1014903	Crank Arm		1
10	BA9-1000939	Stop Gauge (Left)		1
11	BA9-1014904	Handle	M10X80	1
13	BA9-1000940	Thumb Nut M8-1.25 Rd. w/ 18 W x 11mm		4
14	BA9-1000941	Stop Plate		1
15	BA9-1000942	Stop Gauge (Right)		1
16	BA9-1014906	Shaft Sleeve		1
17	BA9-1014907	Straight Grease Fittings	M8X1	2
18	BA9-1014908	Body		1
19	BA9-1014909	Socket Set Screw, Flat Point	M8X10	1
20	BA9-1014910	Lock Nut M8-1.25, 14mm Shoulder		2
21	BA9-1014911	Socket Set Screw, Cup Point	M8X16	2
22	BA9-1014912	Knob	M8X20	1
23	BA9-1014913	Steel Ball	φ6	2
24	BA9-1014914	Taper pins	5X35	1
25	BA9-1014915	Cover		1
26	BA9-1014916	Hex Cap Screw	M8X35	2
27	BA9-1014917	Adjusting Nut		1
28	BA9-1014918	Driving Gear		1
29	BA9-1014919	Driven Gear		1
30	BA9-1014920	Square Plate		1
31	BA9-1014921	Pan Head MACH Screw	M5X10	3
32	BA9-1014922	Round Retainer Plate		1
33	BA9-1014923	Adjusting Bolt		1
34	BA9-1014924	MACH Screw, Flat HD	M6X16	4
35	BA9-1014925	Adjusting Block		1
36	BA9-1014926	Thumb Screw		1
37	BA9-1014927	Spring		1
38	BA1-9850	Adjusting Handle		1
39	**	Taper pins	3X22	1
40	BA1-9851	Adjusting Screw		1
41	BA9-1014931	Sleeve		1
42	BA9-1014932	Spring		1
43	BA9-1000943	Collar M8 x 28.6OD x 7.5mm		1
44	BA9-1014933	Adjusting Block		1
45	BA9-1000944	Flat Key	6X20	1
46	BA9-1014934	Roll Pin	5X35	1
47	BA9-1014935	Driven Shaft		1
48	BA9-1014936	Hex Cap Screw	M8X20	1
49	BA9-1014937	Flat Key	6X30	2
50	BA9-1000945	Keyed Spacer		4
51	BA9-1014938	Crimping Roll Dies		2
52	BA9-1000946	Retaining Nut M16-2.0		2
53	BA9-1014939	Driving Shaft		1
54	BA9-1014940	Small Turning Roll Dies		1
54.1	BA1-10030	Small Turning Roll Dies		1
55	BA9-1014941	Ogee Bead Roll Dies		1
55.1	BA1-10029	Ogee Bead Roll Dies		1
56	BA9-1014942	Burring Roll Dies		1
56.1	BA1-10028	Burring Roll Dies		1
57	BA9-1014943	Large Turning Roll Dies		1

Index No	Part No	Description	Size	Qty
57.1	BA1-10027	Large Turning Roll Dies		1
58	BA9-1014944	Wiring Roll Dies		1
58.1	BA1-10026	Wiring Roll Dies		1
59	BA9-1000947	Wrench		1
60	BA1-9857	Handle	M6X50	1
62	BA9-1014947	Star Handle		1
	BA9-1011677	Handle assembly - Parts 38-40, 60		

*** 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."

11.0 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 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, 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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