Operating Instructions and Parts Manual

Horizontal Band Saw

Model BS-300M

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BA9-1001492
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1.0 Table of Contents

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 machines 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. Blade adjustments and maintenance. Always keep blades sharp and properly adjusted for optimum performance.
17. Keep children away. Children must never be allowed in the work area. DO NOT let them handle machines, tools, or extension cords.
18. Keep visitors a safe distance from the work area.
19. 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.
20. 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.
21. Turn off power before checking, cleaning, or replacing any parts.
22. Be sure all equipment is properly installed and grounded according to national, state, and local codes.
23. Keep all cords dry, free from grease and oil, and protected from sparks and hot metal.
24. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. Bare wiring can kill!
25. DO NOT bypass or defeat any safety interlock systems.

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

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

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

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 BS-300M Horizontal Bandsaw. 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 Product Identification

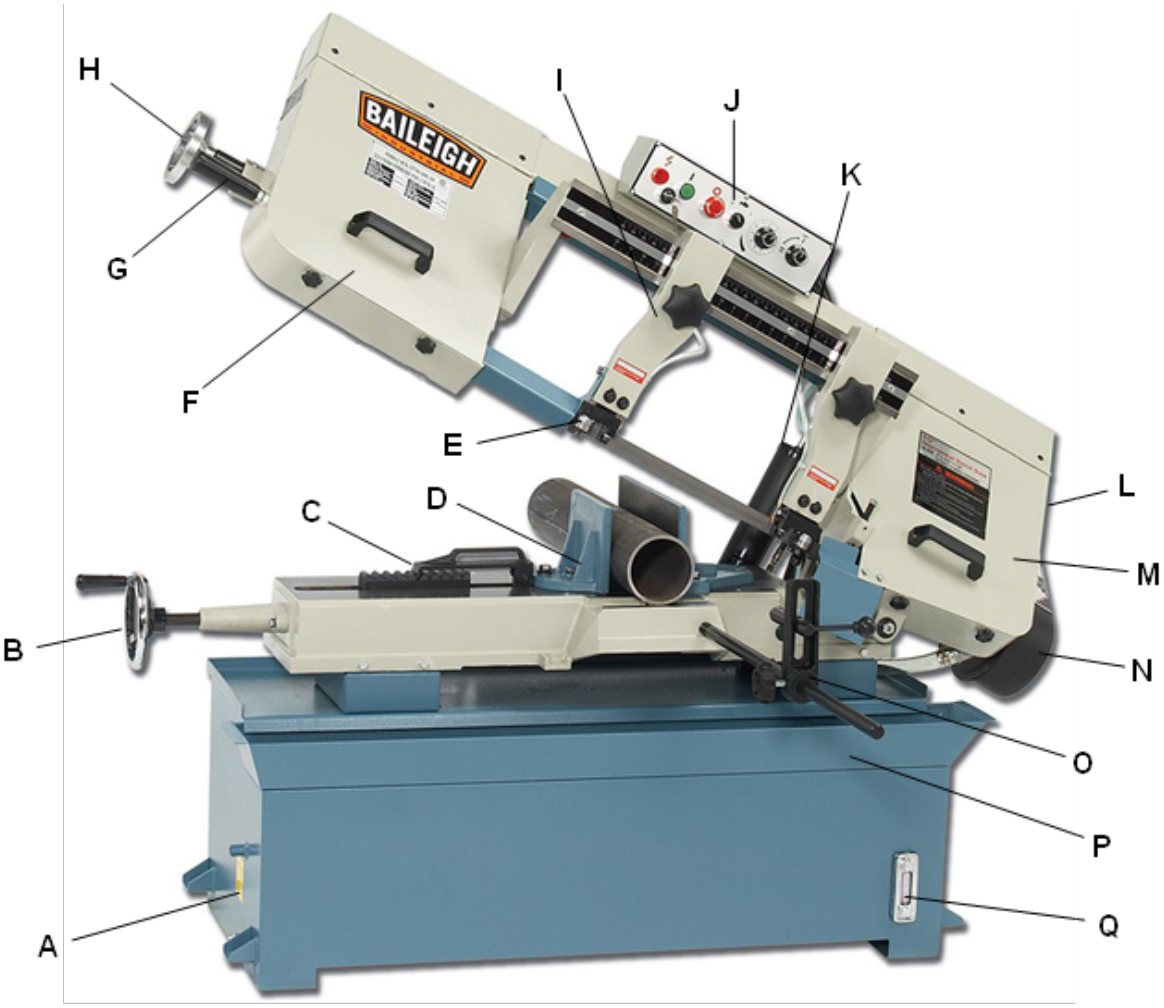


Figure 4-1

Figure 4-2

Table 4-1

Item	Description	Function
A	Saw Base	Supports the saw and houses the electrical enclosure and coolant tank
B	Vise Hand Wheel	Opens and closes the vise jaws
C	Vise Ratchet	Allows for quick adjustment of the vise jaws
D	Vise Jaws	Clamp material to be cut
E	Blade Guide Rollers	2 sets, Leading and trailing, guide the blade through the cut to hold the blade straight
F	Idler Wheel Housing	Houses the idler wheel and blade tension and tracking adjustments
G	Bow Lift Handle	Used to lift the saw bow to allow for material to be loaded
H	Blade Tension Adjuster	Loosens and tightens the saw blade for removal and operation
I	Blade Guide Brackets	Supports the blade guide rollers for blade support
J	Operation Control Panel	Houses the operational controls for the saw.
K	Bow Decent Cylinder	Hydraulic cylinder used to control the decent speed of the saw bow.
L	Motor (hidden)	Drives the saw blade through a pulley and gearbox system.
M	Drive Wheel Housing	Houses the drive wheel and blade debris brush
N	Belt Guard and Belt	Drive belt and pullies used to transmit power from the motor to the gearbox and drive wheel. Changing belt position on the pullies changes blade speed to one of four speeds. See chart on belt guard cover.
O	Material Stop Assembly	Used to set length of material to be cut for repeatable cut lengths.
P	Coolant Return Tray	Drains coolant back to coolant tank through the filter screens. Remove the tray to access the coolant pump and coolant tank for cleaning.
Q	Coolant Level Sight Gauge	Quick gauge to view coolant level.
R	Power Key Switch	Turns power ON to the operation controls
S	Power Indicator Lamp	Illuminates when power is ON and the saw bow is raised off of the down limit switch.
T	Blade Start Button	Starts the saw blade when the bow is raised.
U	Blade Stop/E-Stop Button	Stops the saw blade.
V	Coolant ON/OFF Switch	Starts and stops the coolant pump.
W	Descent Control Valve	Variable control to change the bow descent speed.
X	Descent ON/OFF Valve	Opens or closes the descent control to allow the bow to descend

5.0 Specifications

Table 5-1

Model number	BS-300M
Stock number	BA9-1001492
Motor	
Motor	2HP (1.5kW), 240V, 1ph, 60Hz, 11A
Power	240V, 1ph, 60Hz
General Specifications	
Capacity Rectangular 90° / 45°	9.84" x 16.33” / 9.84” x 7.5" (250 x 415 / 250 x 190mm)
Capacity Round 90° / 45°	9.84" / 7.5" (250 / 190mm)
Capacity Square 90° / 45°	9.84" / 7.5" (250 / 190mm)
Return	Manual
Miter Adjustment	Vise
Miter Angle	0 - 45°
Blade Size (H x T x L)	1” x .032” x 130” (25.4 x .9 x 3300mm)
Blade Speed (fpm)	82, 132, 170, or 235fpm (25, 40, 51, or 71mpm)
Blade Guide	Roller
Table Height	30.7” (780mm)
Descent Control	Hydraulic
Drive	Belt and Pulley
Weights and Dimensions	
Shipping Weight	842lbs. (382kg)
Shipping Dimensions	70" x 23" x 49" (1778 x 585 x 1245mm)

⚠WARNING

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.

⚠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.

6.2 Cleanup

⚠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.

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.
- 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.

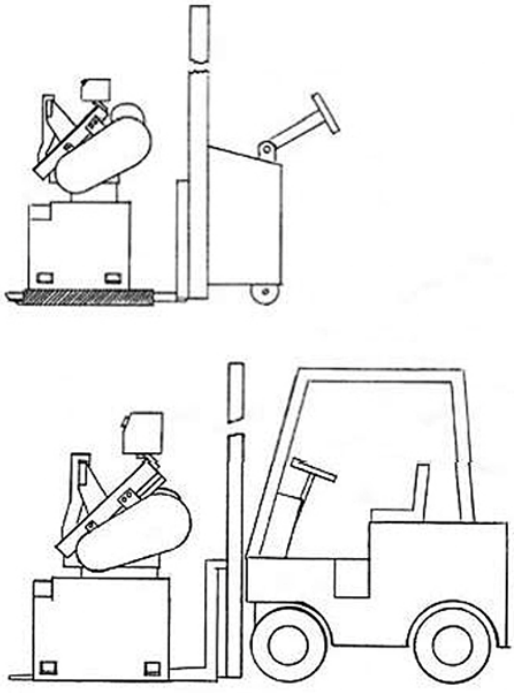


Figure 6-1

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, then lower slowly until it touches the floor.

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 surface. The accuracy of any machine depends on the precise placement of it to the mounting surface. If the unit wobbles or rocks once in place, be sure to eliminate by using shims.
- **FLOOR:** This machine 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

6.5 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.

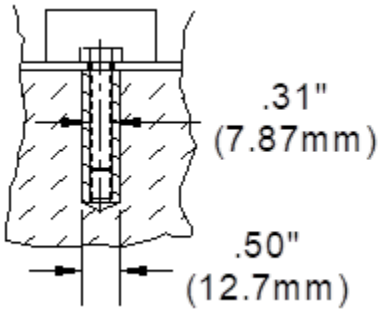


Figure 6-2

6.6 Assembly

⚠WARNING

For your own safety, DO NOT connect the machine to the power source until the machine is completely assembled and you read and understand the entire instruction manual.

For shipping purposes, the control box, the blade tension hand wheel, the bow lift handle, the material stop assembly, and the motor and belt guard have be removed and will require assembly to the machine.

6.6.1 Control Panel

1. Locate and remove the mounting bolts and washers from the top of the saw bow.
2. Remove the packaging from the control box and position the mounting tabs over the mounting holes with the controls facing the front of the saw and watching that the hoses and wiring are not twisted or pinched.
3. Install and tighten the washers and bolts to secure the control box to the top of the saw bow.

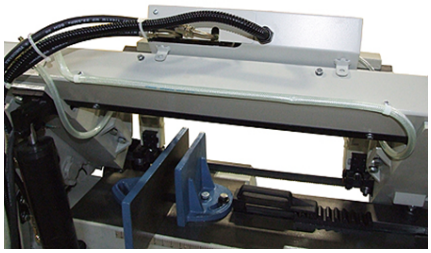


Figure 6-3

6.6.2 Handles

1. On the left end of the bow, loosen the two thumb screws and open the idler wheel cover.
2. Install the lift handle into the bow frame and secure in place.
3. Remove the tape from the end of the blade tension shaft being careful not to lose the key.
4. Install the hand wheel onto the shaft and tighten the setscrew.
5. Close the idler wheel cover and tighten the two thumb screws.

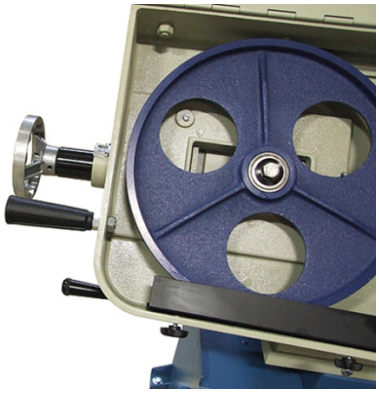


Figure 6-4

6.6.3 Material Stop

1. Install the material stop rod into the front of the saw table and fully tighten.
2. Install the stop contact and extension assembly onto the rod and tighten each in a position that will not interfere with the remaining setup.

Figure 6-5

6.6.4 Motor, Belt Guard, and Belt

1. Remove the nut and washer from the motor pivot pin.
2. Install the motor on the pivot pin as shown so that the pulleys are in line with each other.

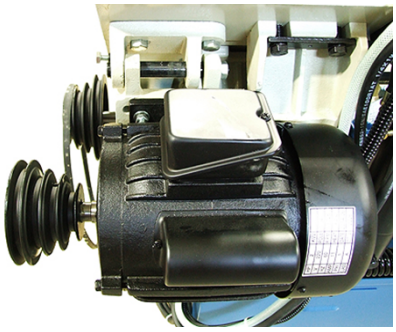


Figure 6-6

3. Raise the motor slightly and connect the belt tension adjuster to the motor mounting plate. Do not tighten at this time.

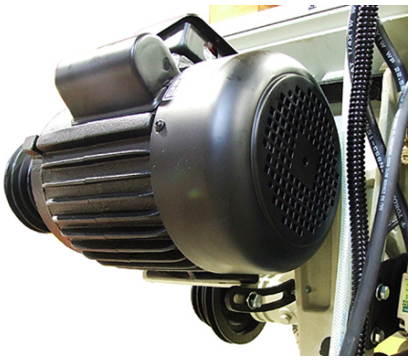


Figure 6-7

4. Route the belt guard behind the pullies and around the motor and gearbox shafts.
5. Mount and secured the guard assembly to the bow.
6. Install the belt onto the pullies making sure that the belt is on the same pulley groove for both pullies.

Figure 6-8

Your machine is provided with four speeds.

1. Install the belt onto the desired grooves on the pulleys and adjust belt tension by lifting/pulling the motor plate back and up until the belt is tight. Tighten the tension lock bolt.
2. Close belt and pulley guard cover and secure in place with the thumb screw.
3. Route the motor wire harness up to the junction box on the motor.
4. Remove the junction box cover.
5. Route the wires into the junction bow using the strain relief to hold the harness into the box.
6. Connect the green wire with the ring terminal to the ground screw on the base of the junction box.
7. Using the wire nut, connect the V1 wire to one of the black wires from the motor by twisting the wire strands together and then securing the connection with the wire nut.
8. Connect the other wire from the harness to the remaining motor wire and secure the wire nut.
9. Carefully tuck the wires inside the junction box and install the cover being careful not to pinch the wires.

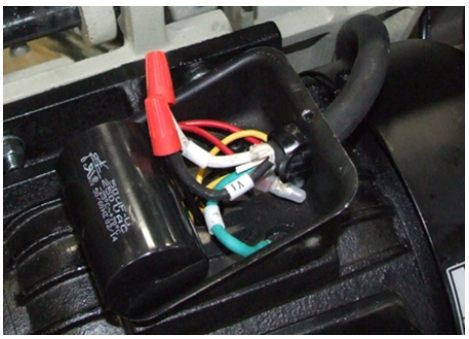


Figure 6-9

7.0 Electrical Connections

⚠CAUTION

HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN!

⚠CAUTION

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.

7.1 Power Specifications

Your machine is wired for 240 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.

⚠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.

7.3 Extension Cord Safety

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

Table 7-1

	Length		
AMP Rating	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.

7.4 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 saw toward the power supply.
   a. Route the power cord so that it will NOT become entangled in the saw bow, saw blade, or feed assembly in any way.
   b. Route the cord to the power supply is 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 turn ON to test the operation.
5. Turn the switch OFF when the machine is not in operation.

8.0 Before Each Use

- For dusty operations, wear a face shield along with safety goggles.
- It is important to choose the right blade for the material and the type of cutting you plan to do. This saw is equipped with a bi-metallic blade which can be used to cut stainless steel, steel, iron, brass, aluminum, wood, plastic.
- Make sure the direction of rotation arrow on the blade matches the direction arrow on the saw. The blade teeth should always point downward at the front of the saw.
- Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the power-head all the way down. Rotate the blade by hand checking for clearance. If the blade hits anything, make the adjustments shown in the Maintaining Maximum Cutting Capacity section.
- Never cut freehand.
- Make sure the cut-off piece can move sideways after it is cut off. Otherwise, it could get wedged against the blade and thrown violently.
- Never turn the saw "ON" before clearing everything except the work piece beneath the blade.
- Never put lubricants on the blade while it is spinning.

8.1 Whenever Saw is Running

- Never confine the piece being cut out.
- Never hold it, clamp it, touch it, or use length stops against it. It must be free to move sideways. If confined, it could get wedged against the blade and thrown violently.
- Avoid awkward hand positions where a sudden slip could cause a hand to move into the blade.
- Let the blade reach full speed before cutting.
- Feed the saw into the work piece only fast enough to let the blade cut without bogging down or binding.
- Before freeing jammed material, turn the switch off and unplug the saw. Wait for all moving parts to stop.
- After finishing a cut, keep holding the saw bow down, release the switch, and wait for all moving parts to stop before moving your hands.

8.2 Breaking in a Band Saw Blade

Sharp cutting edges with extremely small edge radii are required for high cutting capacity. To achieve the optimal tool life we recommend breaking-in the blade accordingly. The correct cutting speed is determined by the material being cut and its dimensions. It is very important that the new blade is first used with only 50% of the determined feed rate. This will avoid micro-breakages of the blade because of too large chip thicknesses. New band saw blades may tend toward vibrations and vibration sounds. In this case a slight reduction of the cutting speed is helpful. With small workpiece dimensions approximately 300cm² of the material should be cut for breaking-in. If large work piece dimensions are to be cut we recommend a breaking-in period of about 15 minutes. After breaking-in you may slowly increase the feed rate up to the determined value.

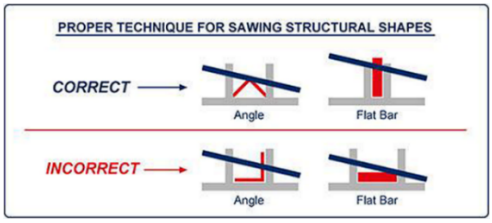


Figure 8-1

8.3 Metal Chip Indicators

Chips are the best indicator of correct material feed force. Monitor chip information and adjust feed accordingly.

- Thin or Powdered Chips – increase feed rate or reduce saw speed
- Burned Chips – reduce feed rate and / or saw speed
- Curly Silvery and Warm Chips – optimum feed rate and saw speed

8.4 Blade Terminology

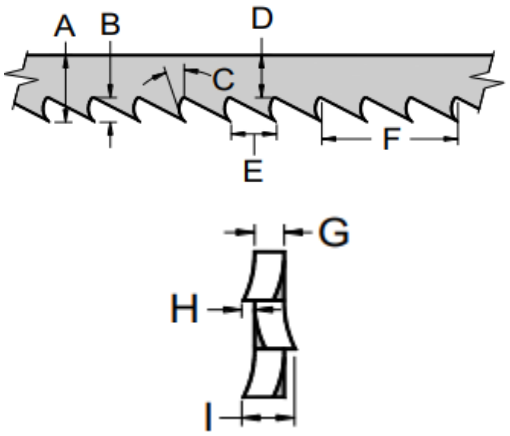


Figure 8-2

Table 8-1

Item	Description	Function
A	BLADE WIDTH	The widest part of the blade measured from the back edge of the blade to the tip of the tooth.
B	GULLET DEPTH	The distance from the tooth tip to the bottom of the curved area.
C	TOOTH RAKE	The angle of the tooth face from a line perpendicular to the length of the blade.
D	BLADE BACK	The distance between the back edge of the blade and the bottom of the gullet.
E	TOOTH PITCH	The distance between tooth tips.
F	TPI	The number of teeth per inch when measured from gullet to gullet.
G	GAUGE	The thickness of the blade.
H	TOOTH SET	The distance a tooth is bent from the blade.
I	KERF	The width of material that is removed by the blade when cutting.

8.5 Width of Blade

The blade width determines the largest and the smallest curve that can be cut. Usually the wider a blade is, the more accurate and straighter it will cut.

8.6 Length of Blade

The length of the band saw blade can be measured with a tape measure at it's circumference or by the formula below:

Blade Length = (2 x A) + (3.14 x B)

A = the distance in inches between the band saw pulley centers (when the upper pulley is midway in its adjustment range).

B = the band saw pulley diameter.

8.7 Blade Structure

Bi-metal blades are the most commonly used. They consist of a silicon-steel blade backing by a laser welded high speed steel (HHS) cutting edge. The type of stocks are classified in M2, M42, M51 and differ from each other because of their major hardness due to the increasing percentage of Cobalt (Cc) and molybdenum (Mo) contained in the metal alloy.

8.8 Blade Type

They differ essentially in their constructive characteristics, such as:

- Shape and cutting angle of tooth
- Pitch
- Set

8.8.1 Shape and Angle of Tooth

Regular Tooth:

O° rake and constant pitch.

Figure 8-3

Most common form for transversal or inclined cutting of solid small and average cross-sections or pipes, in laminated mild steel and gray iron or general metal.

Positive Rake Tooth:

9° - 10° positive rake and constant pitch.

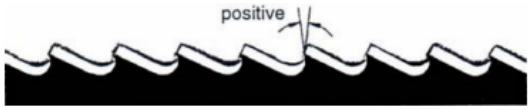


Figure 8-4

Particular use for crosswise or inclined cuts in solid sections or large pipes, but above all harder materials (highly alloyed and stainless steels, special bronze and forge pig iron).

Combo Tooth:

Pitch varies between teeth and consequently varying teeth size and varying gullet depths. Pitch varies between teeth, which ensures a smoother, quieter cut and longer blade life owing to the lack of vibration.

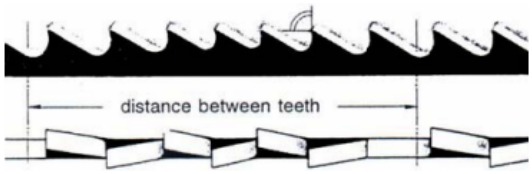


Figure 8-5

Another advantage offered in the use of this type of blade in the fact that with an only blade it is possible to cut a wide range of different materials in size and type.

Combo Tooth:

9° - 10° positive rake.

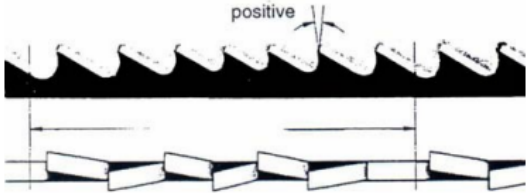


Figure 8-6

This type of blade is the most suitable for the cutting of section bars and large and thick pipes as well as for the cutting of solid bars at maximum machine capacity. Available pitches: 3-4/4-6.

8.9 Sets

Saw teeth bent out of the plane of the saw body, resulting in a wide cut in the workpiece.

Figure8-7

Regular or Raker Set:

Cutting teeth right and left, alternated by a straight tooth.

Figure 8-8

Of general use for materials with dimensions superior to 5 mm. Used for the cutting of steel, castings and hard nonferrous materials.

Wavy Set:

Set in smooth waves.

Figure 8-9

This set is associated with very fine teeth and it is mainly used for the cutting of pipes and thin section bars (from 1 to 3 mm).

Alternate Set (In Groups):

Groups of cutting teeth right and left, alternated by a straight tooth.

Figure 8-10

This set is associated with very fine teeth and it is used for extremely thin materials (less than 1mm).

Alternate Set (Individual Teeth):

Cutting teeth right and left.

Figure 8-11

This set is used for the cutting of nonferrous soft materials, plastics and wood.

9.0 Blade Care

The bandsaw blade is subjected to a tremendous amount of strain. Make sure to always use the appropriate feed rate for the type material you are cutting.

Be sure to select a blade of the proper width, style, and pitch that will produce the best cut in your material. Choosing the wrong blade can produce excess heat that can adversely affect the life of the blade.

A clean blade performs much better than one that is dirty. Blades that are gummed up and dirty offer more resistance when cutting through the material. This in turn creates unnecessary heat in the blade.

9.1 Choosing a Saw Blade

A general purpose blade is furnished with this band saw.

To achieve a quality, economical, and efficient saw cut, the following points must be taken into consideration:

- Type of material being cut (ferrous or non ferrous)
- Material hardness and physical dimensions
- Blade descent rate
- Longitudinal speed of blade
- Blade tooth profile

Choose a tooth pitch that is suitable for the workpiece. Thin-walled profiles, including tubes and pipes require close toothing. At least 3-6 teeth should be in contact with the material while cutting. Large solid or transverse sections require widely spaced toothing to allow for greater volume of chips and better tooth penetration. Soft materials such as plastics, light alloys, mild bronze, Teflon, etc. require widely spaced toothing to avoid clogging.

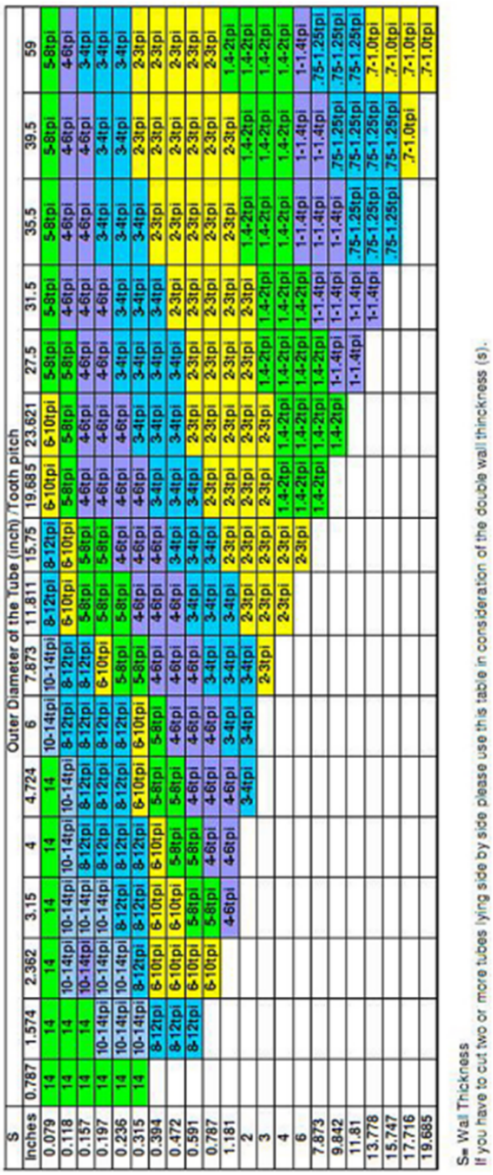


Figure 9-1

9.2 Blade Selection

Table 9-1

Material / Sawblade	◯ <3 mm <0.12”	⊥ T >5 mm >0.2”	● >50 mm >2”	● >100 mm >4”	● >150 mm >6”	● >200 mm >8”
(HSS) 14T	•					
(HSS) 6/10T		•				
(HSS) 5/8T			•			
(HSS) 4/6T			•	•		
(HSS) 3/4T				•		
(HSS) 2/3T					•	•
(HSS) 1/2T						•
(HCS) 10T	•					
(HCS) 8T		•				
(HCS) 6T			•			
(HCS) 4T				•		
(HCS) 2T					•	•

Remarks: HSS-High Speed Steel Sawblade

HCS-High Carbon Steel Sawblade

Note:

- When cutting standard wall pipe, tubes, channel iron, angle iron, and I beam, a 10 pitch saw blade of wave-set type or sawblade of (HSS) 6/10T is frequently used for good advantage.
- Tubes or structure with wall thickness or web thickness of 1/2” or more usually uses an 8 or 6 pitch blade or sawblade of (HSS) 4/6T satisfactorily.
- When rectangular solid bar is to be sawed, the work should, whenever possible, be loaded with the thinnest cross section exposed to the blade teeth. The pitch (or number of teeth per inch of blade) selected must provide engagement of at least 3 teeth in the workpiece. Should application of this rule not be possible because the thinnest cross section is too thin, the piece must be loaded with the wider dimension exposed to the saw teeth and a coarser blade selected from the listing of recommendations for round and square solid bars.

10.0 Blade Breakage

In some cases, blade breakage is unavoidable due to the stresses that are imparted on the blade. Avoidable breakage is often the result of poor care, or poor operator judgment when it comes to adjusting or mounting the blade or blade guides.

Listed below are some of the more common reasons for blade breakage.

- Top blade guide assembly is set too high above the piece part.
- The blade is tensioned incorrectly.
- Piece part is fed into the blade too quickly.
- Blade teeth are dull or broken.
- Blade is not properly aligned with the guides.
- Forcing a large width blade to cut a small radius.
- Using a blade with an improperly finished weld joint.
- Allowing the blade to run when not in use. (NEVER leave an unattended blade running.)

11.0 Adjustments

11.1 Changing Speeds

Your machine is provided with four speeds. To change speeds, proceed as follows:

1. Disconnect the machine from the power source.
2. Remove the belt guard cover knob (A) and swing belt and pulley guard down to expose the belt and pullies.

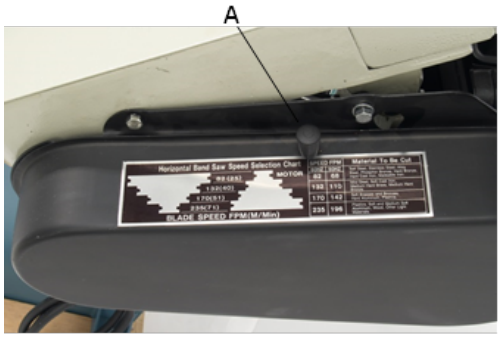


Figure 11-1

3. Release tension on the belt by loosening the tension lock nut (B) and letting the motor swing downward.

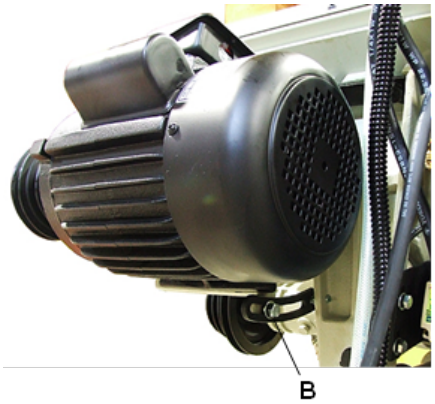


Figure 11-2

4. Install the belt onto the desired grooves on the pulleys and adjust belt tension by lifting/pulling the motor plate back and up until the belt is tight. Tighten the tension lock bolt.
5. Close belt and pulley guard cover and secure in place with the thumb screw.

Figure 11-3

11.2 Automatic Shut-Off Adjustment

The motor shall shut off immediately after the blade has cut through the material and just before the head comes to rest on the horizontal stop bolt.

1. If the machine continues to run after the workpiece has been fully cut, locate and adjust the micro switch stop bolt (A) by moving the stop bolt up.
2. If the machine shuts off before the workpiece has been completely cut, move the micro switch stop bolt (A) down.
3. Tighten the jam nut when the adjustment is complete.

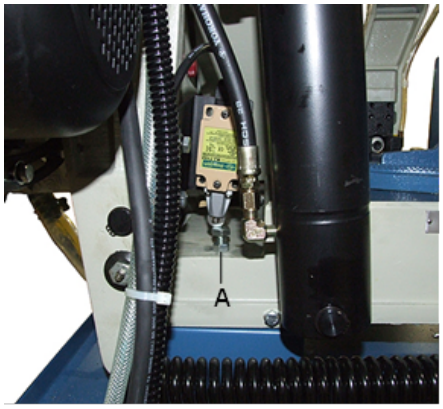


Figure 11-4

11.3 Thrust Roller Adjustment

1. Disconnect machine from the power source.
2. Loosen two hex socket cap screws (A).
3. Move guide seat (B) up or down until a clearance of 0.003” to 0.005” between back of blade and thrust roller is obtained.
4. Tighten two hex socket cap screws (A).
5. Repeat for other blade guide assembly.
6. Connect machine to power source.

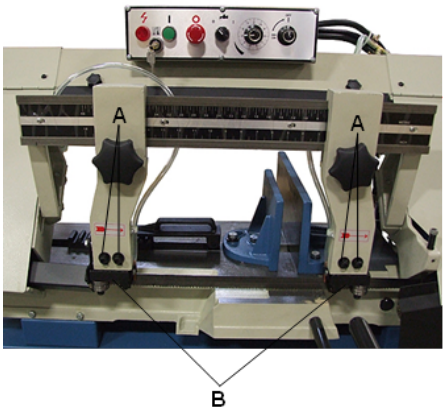


Figure 11-5

11.4 Guide Roller Adjustment

1. Disconnect machine from the power source.
2. Loosen blade guides (A) by loosening screws (B).
3. Slide blade guides away from blade.
4. Loosen locking screws (C) by using a hex wrench.
5. Adjust the eccentric bushings with a combination wrench until the ball bearings are snug to the blade.

Note: The blade should travel freely up and down between the ball bearings. Do not pinch the blade.

6. Tighten locking screws (C).
7. Slide blade guides back into contact with blade and tighten screws (B).
8. Connect machine to the power source.

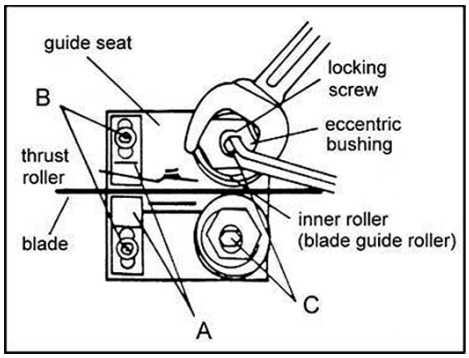


Figure 11-6

11.5 Blade Tracking Adjustment

Blade tracking has been set at the factory and should require no adjustment. If a tracking problem occurs, adjust the machine as follows:

⚠CAUTION

Since tracking can only be adjusted while machine is running, it is suggested that this adjustment be accomplished by qualified personnel that are familiar with this type of adjustment and the dangers associated with it.

1. Disconnect machine from the power source.
2. Raise saw bow to its highest position and turn the descent ON/OFF valve to the OFF position to hold saw bow in place.
3. Locate tracking adjustment plate on the back side of the blade idler wheel.
4. Loosen the three bolts (A) located on the top of the tracking nuts.
5. Tracking adjustment is accomplished by either loosening or tightening three adjusting nuts (B).
6. Tracking is set properly when the back of the blade lightly touches the wheel flange.

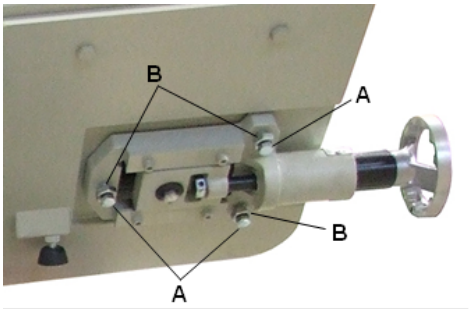


Figure 11-7

Note: Over-tracking (allowing blade back to rub hard against wheel flange) will damage the blade wheels and blade.

7. Tighten locking bolts (A) once properly tracking is completed.
8. Connect machine to the power source.

12.0 Operation

⚠CAUTION

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

⚠CAUTION

NEVER operate saw without blade guards in place.

12.1 General Operating Instructions

1. Check Coolant: Low coolant level causes foaming and high blade temperatures. Dirty or weak coolant can clog pump, causes crooked cuts, low cutting rate and permanent blade failure. Dirty coolant causes the growth of bacteria with ensuing skin irritation.
2. Keep vise slides clean and oiled.
3. Clean chips from blade wheels and wheels housing.
4. Saw Guide: Keep saw guides properly adjusted. Loose guides will affect cutting accuracy.
5. Saw Blade: Make sure the saw blade is sharp.
6. Blade Speed: Make sure the blade speed sets correctly for workpiece material and shaped.
7. Check Blade Tension: Particularly after initial cuts with a new blade.

12.2 Starting and Stopping the Machine

1. Place the descent ON/OFF valve (A) in the OFF position and raise the saw bow high enough to completely clear the material to be cut.
2. With power connected to the saw, turn the key switch (B) to the ON position. The power indicator lamp (C) will be illuminated when the bow is raised.
3. The machine is started by pushing the start button (D) and will continue to run until the saw bow is in the down position at the end of the cut, or when the stop button (E) is pushed. Pushing the stop button will stop the motor at any time.

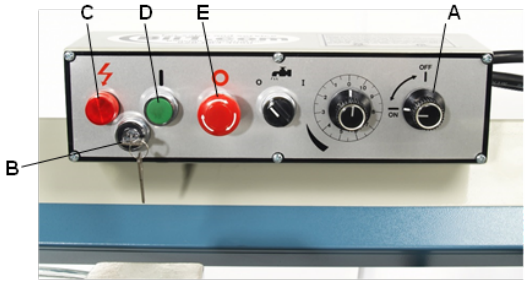


Figure 12-1

12.3 Setting Up the Machine for Operation

1. Select the proper speed and blade for the type of material you are going to cut.
2. Make sure blade tension is adjusted properly.
3. Lift the saw bow up and turn OFF the descent ON/OFF valve (A).
4. Place the material between the vise jaws, set the material for the desired length of cut and tighten the vise.
5. Make sure the left blade guide bracket (B) is adjusted as close as possible to the left vise jaw.
6. Turn the descent ON/OFF valve (A) to the ON position and turn the descent control valve (C) counter-clockwise until the saw blade begins to lower at the desired rate.
7. Proceed to cut through the workpiece. The machine will shut off upon completion of cut.

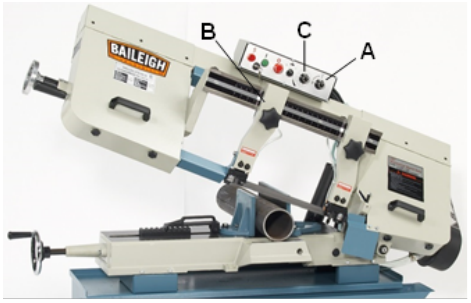


Figure 12-2

12.4 Adjusting Blade Guide Brackets

The blade guides should be set as close to the vise jaws as possible. The right blade guide bracket (A) has limited adjustment to clear the right hand vise jaw.

The left blade guide bracket (B) can be moved to the left or right depending on the size of the workpiece.

1. To move the left blade guide bracket (B), loosen the hand knob, position blade guide bracket as close to the work piece without interfering with the material, blade, or vise.
2. Tighten the hand knob.

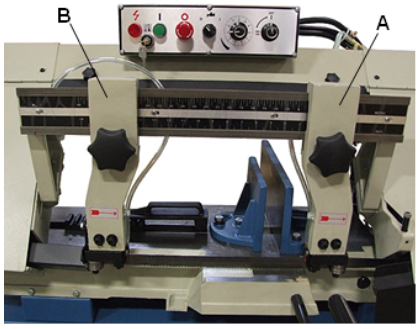


Figure 12-3

12.5 Vise Adjustment

To position the moveable vise jaw:

1. Turn vise handwheel (A) 1/2 turn counter-clockwise.
2. Move rack block (B) to desired location by sliding along the bed. Place the rack block latch onto the rack.
3. Turn the handwheel to tighten the vise.

To adjust the vise for angle cutting:

4. Loosen bolts (D) and pivot vise jaw to desired location.
5. Set the vise to desired angle, reinstall nuts and tighten the nut and bolt assemblies.
6. Make sure the movable vise jaw parallels to the fixed vise jaw.
7. Loosen the bolt (E) and adjust it until it is in parallel with the fixed vise jaw and tighten the bolt.

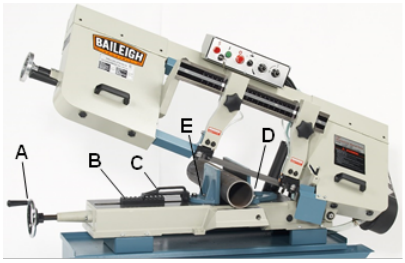


Figure 12-4

12.6 Adjusting Feed Rate

When the descent control valve (A) is turned clockwise as far as it can go, the saw bow will not move down. Turning the descent control valve counter-clockwise, will regulate the flow of oil from the cylinder and determine the speed at which the saw frame will lower and the blade will feed through the work.

Many factors are involved to make data charts practical on feed rates. As a general rule, an even pressure without forcing the blade gives best results. Avoid forcing the blade at the start as this may shorten blade life and produce a bad cut. By inspecting the chips while the cut is being made will indicate whether the feed rate is correct. Fine powdery chip indicates a feed rate which is too light. The teeth are rubbing over the surface instead of cutting.

Burned chip indicates excessive feed which causes the teeth to break off as the blade overheats. The ideal feed rate is indicated by chip that have a free curl and this will give the fastest cutting time and longest blade life.

Figure 12-5

13.0 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.

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.

14.0 Maintenance

⚠WARNING

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

⚠WARNING

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

⚠WARNING

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.

14.1 Blade Removal and Installation

When your machine was shipped, a blade was supplied and installed into the saw. When selecting a new blade refer to the selection of sawblades. The machine requires a blade 1" x 0.032" x 130". (27 x 0.9 x 3300mm).

1. Disconnect the machine from the power source.
2. Raise the saw frame about 6"-8" (152-203mm) turn the descent ON/OFF valve to the OFF position.
3. Open both wheel covers and remove the top blade cover.
4. Clean the chip out of the bow and blade track.
5. Release blade tension by turning the blade tension handwheel counter-clockwise.
6. Slide left blade guide arm to the right as far as possible.
7. Remove the blade from both wheels and out of each blade guide.

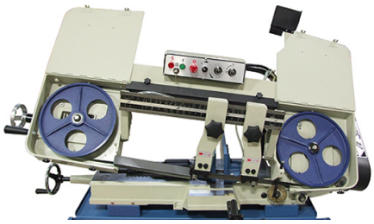


Figure 14-1

8. Make sure the teeth of the new blade are pointing in the direction of travel. If necessary, turn the blade inside out.
9. Place the blade in place on the wheels and through the upper blade guard.
10. Work the blade all the way up between the blade guide bearings with the back of the blade against the back-up bearing, as shown.

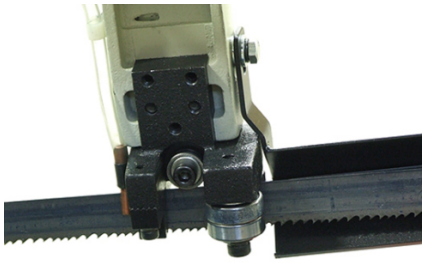


Figure 14-2

Note: If bearings need adjustment, refer to the section adjusting blade guide roller bearings.

11. Put light tension on the blade and work it on both wheels. Make sure that the back of the blade is against the wheel flanges of both wheels. This is very important.
12. When you are sure the back of the blade is against the wheel flanges of both wheels and properly inserted into the guides, finish putting tension on the blade.
13. Proper tension is achieved when the pointer is on the inner mark of the blade tension scale behind the fly wheel.
14. Jog the power "on" and "off" to be sure the blade is in place and tracking properly. If blade is not tracking properly refer to the section tracking the blade.

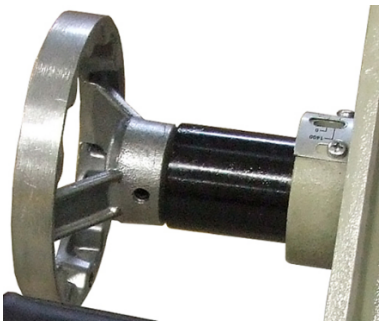


Figure 14-3

14.2 Gear Case

After the first 50 hours of use the gear box should be drained and refilled.

1. Remove drain plug (A) and drain all of the oil out of the gear box and replace plug.
2. Remove oil filler plug (B) located underneath the right blade wheel and fill the gear box with 1-1/2 pints (.7L) of MOBIL CYLINDER OIL # 600W or equivalent.
3. Verify that the oil level is between the mid-point and top of the sight glass.

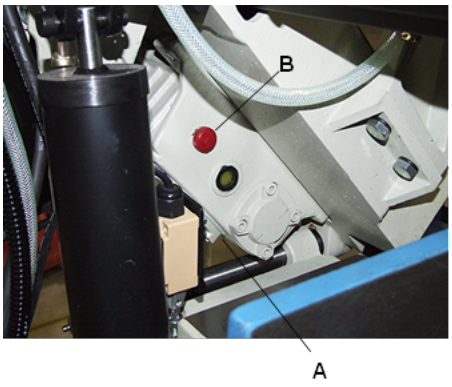
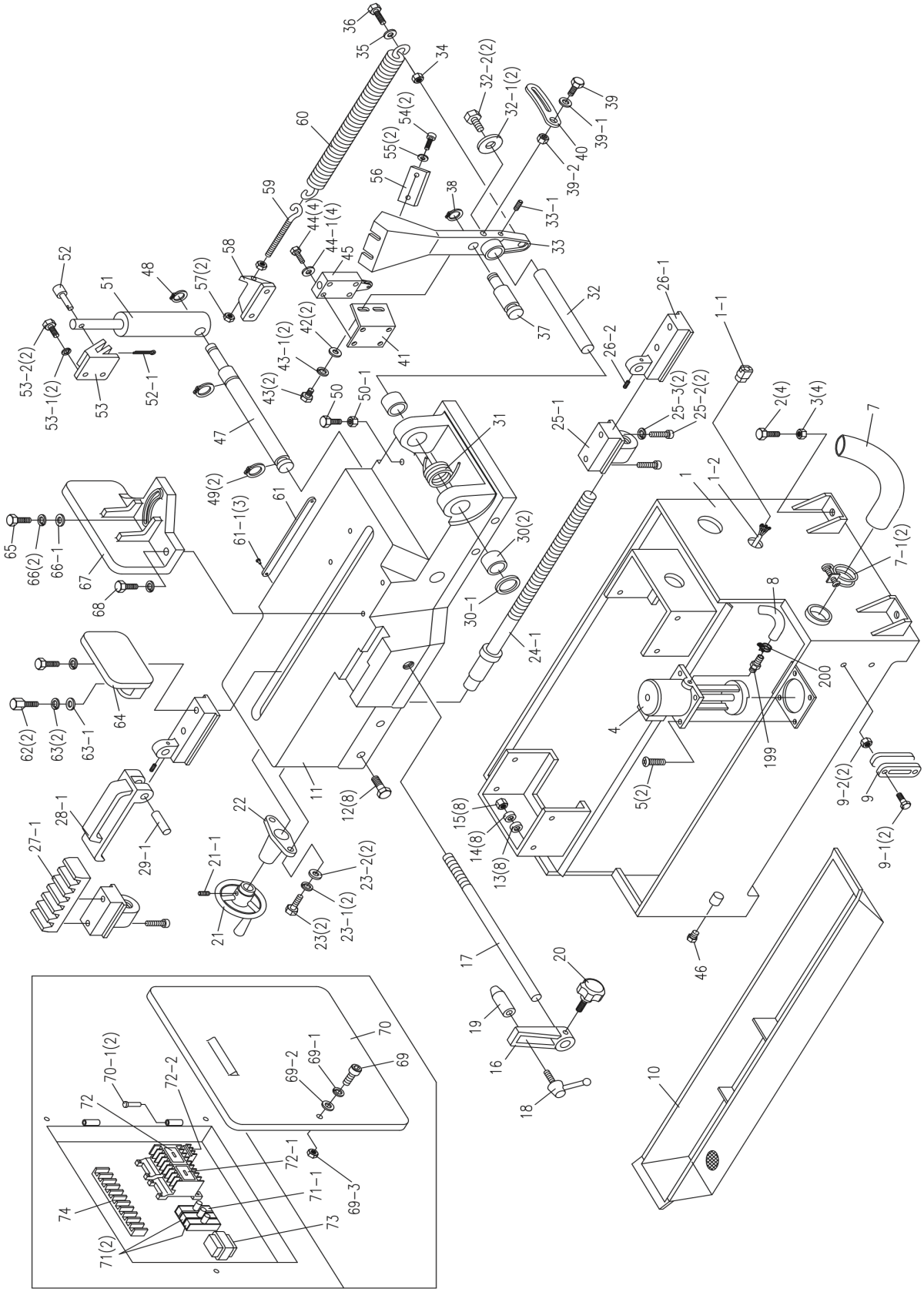


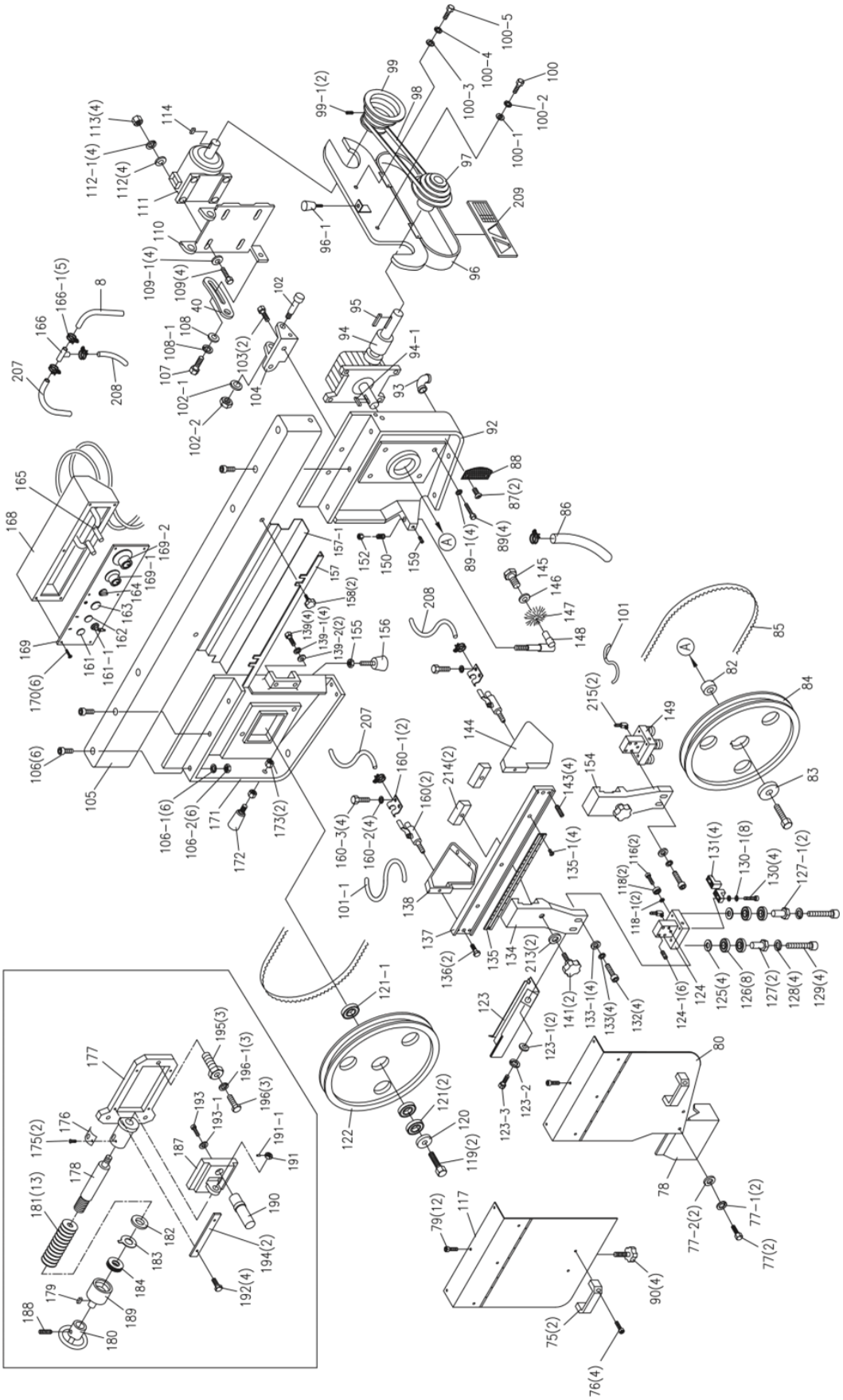
Figure 14-4

15.0 Replacement Parts

15.1.1 Horizontal Bandsaw Assembly – Exploded View A



15.1.2 Horizontal Bandsaw Assembly – Exploded View B



15.1.3 Horizontal Bandsaw Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	BA9-1224979	Base		1
1-1	BS300M-1-1	Wire Protector		1
1-2	BS300M-1-2	Power Cord		1
2	JT9-TS-2211651	Hex. Cap Bolt		4
3	CM9-TS-2342121	Nut		4
4	BA9-1226786	Coolant Pump		1
5	JT9-TS-1534052	Round Head Screw		2
6	CM9-TS-2361061	Lock Washer		2
7	BS300M-7	Hose		1
7-1	BS300M-7-1	Hose Clamp		2
8	BS300M-8	Hose		1
9	BS300M-9	Coolant Gauge		1
9-1	JT9-TS-1491041	Hex. Cap Bolt		2
9-2	JT9-TS-2342101	Nut		2
10	BS300M-10	Chip Tray		1
11	BA9-1021812	Bed		1
12	JT9-TS-1490051	Hex. Cap Bolt		8
13	JT9-TS-1550061	Washer		8
14	CM9-TS-2361081	Lock Washer		8
15	JT9-TS-1541031	Nut		8
16	BS300M-16	Work Stop Bracket		1
17	BS300M-17	Work Stop Rod		1
18	BS300M-18	Lock Handle		1
19	BS300M-19	Work Stop		1
20	BS300M-20	Lock Knob		1
21	BA9-1013832	Hand Wheel Assembly		1
21-1	BS300M-21-1	Set Screw		1
22	BS300M-22	Lead Screw Seat		1
23	JT9-TS-1490051	Hex. Cap Bolt		2
23-1	CM9-TS-2361081	Lock Washer		2
23-2	JT9-TS-1550061	Washer		2
24-1	BA9-1001365	Lead Screw		1
25-1	BS300M-25-1	Lead Screw Bracket		1
25-2	JT9-TS-1504051	Hex. Socket Cap Screw		2
25-3	TS-1550061	Lock Washer	(M8)	2
26-1	BS300M-26-1	Slide Bracket		1
26-2	JT9-TS-2276081	Set Screw		1
27-1	BA9-1001461	Rack		1
28-1	BA9-1001470	Rack Block		1
29-1	BS300M-29-1	Pin		1
30	BS300M-30	Closed Bearing		2
30-1	BS300M-30-1	Bushing		1
31	BA9-1231499	Torsion Spring		1
32	BS300M-32	Pivot Shaft		1
32-1	BS300M-32-1	Spacer		2
32-2	BS300M-32-2	Hex. Cap Bolt		2
33	BS300M-33	Pivot Bracket		1
33-1	JT9-TS-1525021	Set Screw		1
34	CM9-TS-2342121	Nut		1
35	JT9-TS-2360121	Washer		1
36	JT9-TS-1492041	Hex. Cap Bolt		1
37	BS300M-37	Torsion Spring Shaft		1
38	BS300M-38	C-Ring		1
39	JT9-TS-1490051	Hex. Cap Bolt		1
39-1	JT9-TS-1550061	Washer		1
39-2	JT9-TS-1541031	Nut		1
40	BS300M-40	Motor Tilt Plate		1
41	BS300M-41	Limit Switch Plate		1
42	JT9-TS-1550061	Washer		2

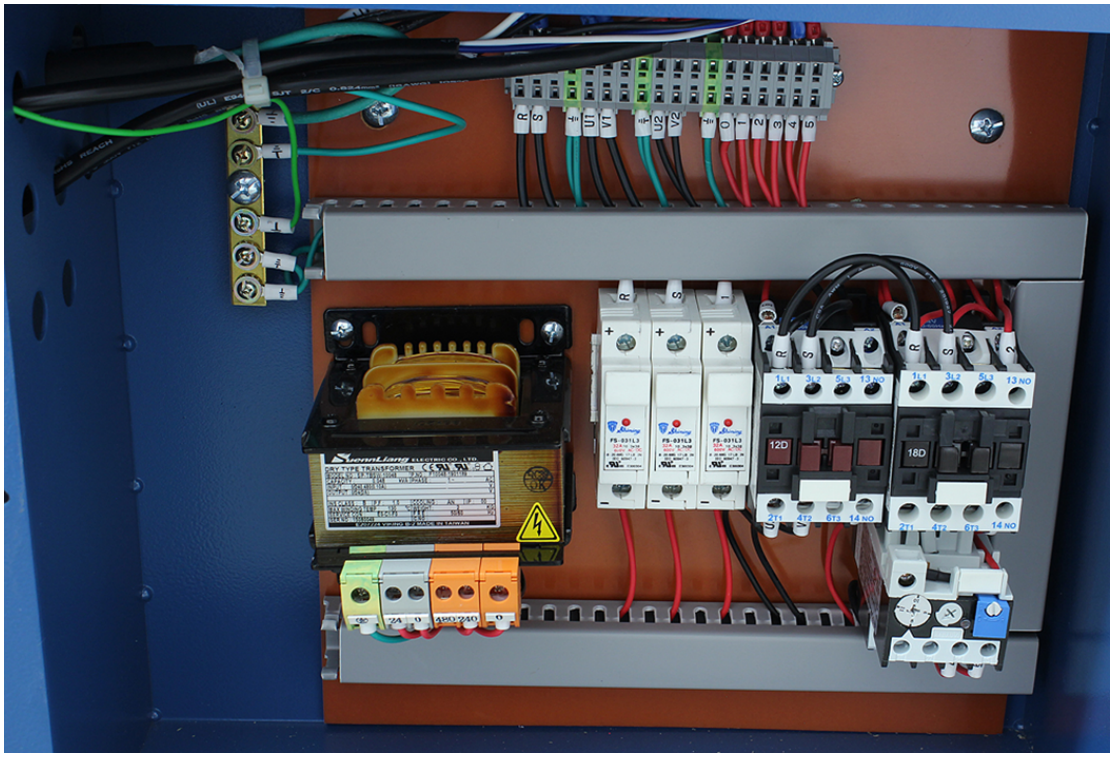
Index No	Part No	Description	Size	Qty
43	JT9-TS-1490031	Hex. Cap Bolt		2
43-1	CM9-TS-2361081	Lock Washer		2
44	JT9-TS-1482021	Hex. Cap Bolt		4
44-1	CM9-TS-1550041	Washer		4
45	BA1-7135	Limit Switch		1
46	BS300M-46	Drain Plug		1
47	BS300M-47	Cylinder Pin		1
48	BS300M-48	C-Ring		1
49	BS300M-49	C-Ring		2
50	JT9-TS-1491041	Hex. Cap Bolt		1
50-1	JT9-TS-2342101	Nut		1
51	BA9-1010947	Hydraulic Cylinder Assembly		1
52	BS300M-52	Cylinder Pin-Top		1
52-1	BS300M-52-1	Pin		1
53	BA9-1019049	Hydraulic Mounting Plate-Top		1
53-1	JT9-TS-2361101	Lock Washer		2
53-2	JT9-TS-1491041	Hex. Cap Bolt		2
54	JT9-TS-1492051	Hex. Cap Bolt		2
55	JT9-TS-2360121	Washer		2
56	BS300M-56	Lock Plate		1
57	JT9-TS-0640111	Nut		2
58	BS300M-58	Spring Bracket		1
59	BS300M-59	Spring Adjustable Rod		1
60	BA9-1226098	Spring		1
61	BS300M-61	Angle Scale		1
61-1	BS300M-61-1	Rivet		3
62	JT9-TS-1492041	Hex. Cap Bolt		2
63	JT9-TS-2361121	Lock Washer		2
63-1	JT9-TS-2360121	Washer		1
64	BA1-7147	Vise Jaw-Left		1
65	JT9-TS-1492051	Hex. Cap Bolt		1
66	JT9-TS-2361121	Lock Washer		2
66-1	JT9-TS-2360121	Washer		1
67	BA1-7148	Vise Jaw-Right		1
68	JT9-TS-1492041	Hex. Cap Bolt		1
69	BA9-1021478	Hex. Socket Cap Screw		1
69-1	BA9-1021479	Lock Washer		1
69-2	BA9-1021480	Washer		1
69-3	TS-2331061	Nut		1
70	BA9-1021481	Electrical Panel Cover		1
70-1	BA9-1021482	Pin		2
71	BS300M-71	Fuse Block(1A)		2
71-1	BS300M-71-1	Fuse Block(2A)		1
72	BA1-7151	Contactor (main motor) M1		1
72-1	BA1-7152	Contactor (pump) M2		1
72-2	BS300M-72-2	Overload Relay		1
73	BA1-7154/			
	BA9-1224643	Transformer		1
74	BS300M-74	Terminal Strip		1
75	BS300M-75	Handle		2
76	JT9-TS-1534052	Round Head Screw		4
77	JT9-TS-1482021	Hex. Cap Bolt		2
77-1	CM9-TS-2361061	Lock Washer		2
77-2	CM9-TS-1550041	Washer		2
78	BA9-1019780	Wire Brush Guard		1
79	JT9-TS-1503011	Hex. Socket Cap Screw		12
80	BS300M-80	Blade Wheel Cover-Right		1
81	CM9-TS-1550041	Washer		4
82	BS300M-82	Bushing		1
83	BS300M-83	Washer		1
84	BA9-1013168	Drive Wheel		1

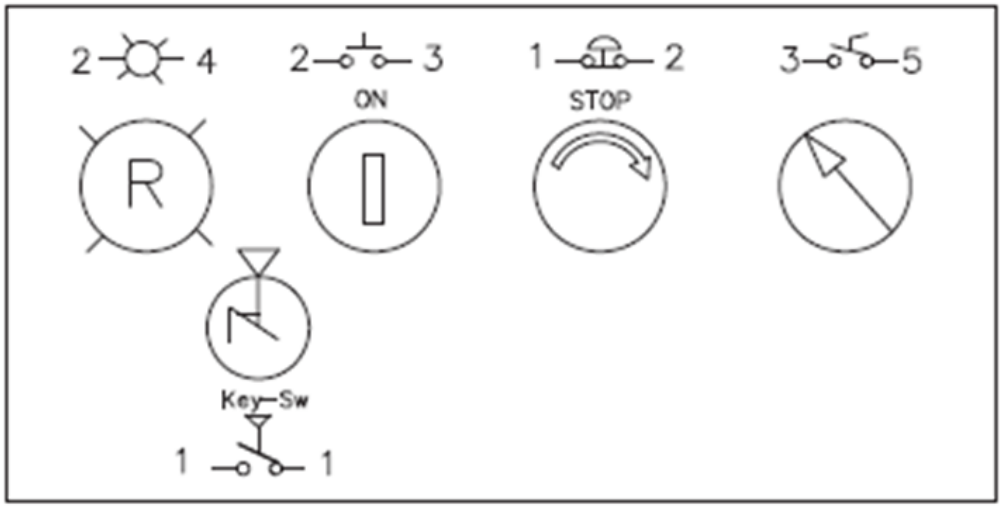
Index No	Part No	Description	Size	Qty
85	BS300M-85	Blade	(1"x0.035"x130")	1
86	BS300M-86	Hose		1
87	JT9-TS-1533032	Round Head Screw		2
88	BS300M-88	Filter Screen		1
89	JT9-TS-1492031	Hex. Cap Bolt		4
89-1	JT9-TS-2361121	Lock Washer		4
90	BS300M-90	Lock Knob		4
92	BS300M-92	Blade Wheel Box-Right		1
93	BS300M-93	Connector		1
94	BA9-1010873	Gear Box Assembly		1
94-1	BS300M-94-1	Key		1
95	BS300M-95	Key		1
96	BA9-1001762	Pulley Cover		1
96-1	BS300M-96-1	Lock Knob		1
97	BS300M-97	Gear Box Pulley		1
98	BA9-1002117	Belt		1
99	BA9-1002119	Motor Pulley		1
99-1	JT9-TS-1524021	Set Screw		2
100	PM9-TS-2228161	Hex. Cap Bolt		2
100-1	JT9-TS-1550061	Washer		2
100-2	CM9-TS-2361081	Lock Washer		2
100-3	TS-2361081	Lock Washer		1
100-4	TS-1550061	Washer		1
100-5	BS300M-100-5	Hex. Cap Bolt	(M8x30mm)	1
101	BS300M-101	Hose		1
101-1	BS300M-101-1	Hose		1
102	BS300M-102	Support Shaft		1
102-1	JT9-TS-2360121	Washer		1
102-2	CM9-TS-2342121	Nut		1
103	JT9-TS-1492031	Hex. Cap Bolt		2
104	BA9-1228553	Motor Mount Bracket		1
105	BS300M-105	Column		1
106	JT9-TS-1506011	Hex. Socket Cap Screw		6
106-1	JT9-TS-2361121	Lock Washer		6
106-2	CM9-TS-2342121	Nut		6
107	JT9-TS-1490051	Hex. Cap Bolt		1
108	JT9-TS-1550061	Washer		1
108-1	CM9-TS-2361081	Lock Washer		1
109	JT9-TS-1490081	Hex. Cap Bolt		4
109-1	JT9-TS-1550061	Washer		4
110	BA9-1228298	Motor Mount Plate		1
111	BA9-1017512	Motor	(230V/460V)	1
112	JT9-TS-1550061	Washer		4
112-1	CM9-TS-2361081	Lock Washer		4
113	JT9-TS-2311081	Nut		4
114	BS300M-114	Key		1
116	JT9-TS-1504041	Hex. Socket Cap Screw		2
117	BS300M-117	Blade Wheel Cover-Left		1
118	BS300M-118	Ball Bearing		2
118-1	CM9-TS-2361081	Lock Washer		2
119	BS300M-119	Hex. Cap Bolt		2
120	JT9-TS-2360121	Washer		1
121	JT9-BB-6205Z	Ball Bearing		2
121-1	JT9-BB-6205	Ball Bearing		1
122	BA9-1013169	Idler Wheel		1
123	BA9-1224796	Blade Guard		1
123-1	BA9-1224797	Washer		2
123-2	BA9-1224798	Lock Washer		1
123-3	BA9-1224799	Hex. Cap Bolt		1
124	BS300M-124	Guide Bracket-Left		1
124-1	JT9-TS-1524041	Set Screw		6

Index No	Part No	Description	Size	Qty
125	JT9-TS-1550061	Washer		4
126	JT9-BB-6201ZZ	Ball Bearing		8
127	BS300M-127	Eccentric Sleeve		2
127-1	BA9-1018318	Centric Sleeve		2
128	CM9-TS-2361081	Lock Washer		4
129	JT9-TS-1504091	Hex. Socket Cap Screw		4
130	JT9-TS-1503071	Hex. Socket Cap Screw		4
130-1	CM9-TS-1550041	Washer		8
131	BA9-1226668	Tungsten Carbide Blade Guide		4
132	JT9-TS-1490071	Hex. Cap Bolt		4
133	CM9-TS-2361081	Lock Washer		4
133-1	JT9-TS-1550061	Washer		4
134	BA9-1226198	Adjustable Bracket-Left		1
135	BS300M-135	Scale		1
135-1	BS300M-135-1	Round Head Screw		4
136	JT9-TS-1505031	Hex. Socket Cap Screw		2
137	BS300M-137	Slide		1
138	BS300M-138	Blade Bracket-Left		1
139	JT9-TS-1492021	Hex. Cap Bolt		4
139-1	JT9-TS-2361121	Lock Washer		4
139-2	JT9-TS-2360121	Washer		2
141	BS300M-141	Knob		2
143	JT9-TS-1524021	Set Screw		4
144	BS300M-144	Blade Bracket-Right		1
145	JT9-TS-1482021	Hex. Cap Bolt		1
146	CM9-TS-1550041	Washer		1
147	BS300M-147	Wire Brush		1
148	BA9-1021310	Wire Brush Rod		1
149	BA9-1226200	Guide Bracket-Right		1
150	BA9-1021311	Spring		1
152	JT9-TS-2311101	Nut		1
154	BS300M-154	Adjustable Bracket-Right		1
155	JT9-TS-1540081	Nut		1
156	BS300M-156	Stand Bolt		1
157	BA9-1010282	Blade Guard		1
157-1	BS300M-157-1	Blade Guard-Down		1
158	BS300M-158	Lock Knob		2
159	JT9-TS-2276081	Set Screw		1
160	BA9-1226707	Adjusting Valve		2
160-1	BS300M-160-1	Brace		2
160-2	CM9-TS-2361061	Lock Washer		4
160-3	JT9-TS-1482021	Hex. Cap Bolt		4
161	BA9-1019853	Power Indicator Light		1
161-1	BS300M-161-1	Switch with Key		1
162	BA9-1001493	Start Switch		1
163	BA9-1020634	Emergency Stop Switch		1
164	BA9-1021204	Pump Switch		1
165	BA9-1008722	Speed Control Valve		1
166	BS300M-166	Connection Tube		1
166-1	BS300M-166-1	Hose Clamp		5
168	BA9-1226201	Control Box		1
169	BA9-1226202	Control Panel		1
169-1	BA9-1021205	Oil Regulating Micro Switch		1
169-2	BA9-1021206	On/Off Switch		1
170	BA9-1226203	Round Head Screw		6
171	BA9-1022298	Wheel Box-Left		1
172	BS300M-172	Handle		1
173	JT9-TS-1540081	Nut		2
175	JT9-TS-1533032	Round Head Screw		2
176	BS300M-176	Indicator Scale		1
177	BS300M-177	Slide Bracket		1

Index No	Part No	Description	Size	Qty
178	BS300M-178	Tension Shaft		1
179	BA9-1021312	Key		1
180	BA9-1226766	Handwheel		1
181	BS300M-181	Disc Spring		13
182	BS300M-182	Flat Washer		1
183	BS300M-183	Tension Indicator		1
184	BS300M-184	Thrust Bearing		1
187	BS300M-187	Slide		1
188	JT9-TS-1524021	Set Screw		1
189	BA9-1022291	Extension Bar		1
190	BS300M-190	Blade Wheel Shaft		1
191	JT9-TS-1540081	Nut		1
191-1	JT9-TS-1523011	Set Screw		1
192	JT9-TS-1504051	Hex. Socket Cap Screw		4
193	BS300M-193	Hex. Cap Bolt		1
193-1	JT9-TS-2360121	Washer		1
194	BS300M-194	Gib		2
195	BS300M-195	Hex. Cap Bolt		3
196	JT9-TS-1491101	Hex. Cap Bolt		3
196-1	JT9-TS-2361101	Lock Washer		3
199	BS300M-199	Hose Fitting		1
200	BS300M-200	Hose Clamp		1
207	BS300M-207	Hose		1
208	BS300M-208	Hose		1
209	BS300M-209	Speed Chart Label		1
213	CM9-TS-1550071	Washer		2
214	BS300M-214	Clamp		2
215	BS300M-215	Connector (plastic)		2
216	BS300M-216	Hose Clamp		2

16.0 Wiring Diagram





Electrical Panel Layout

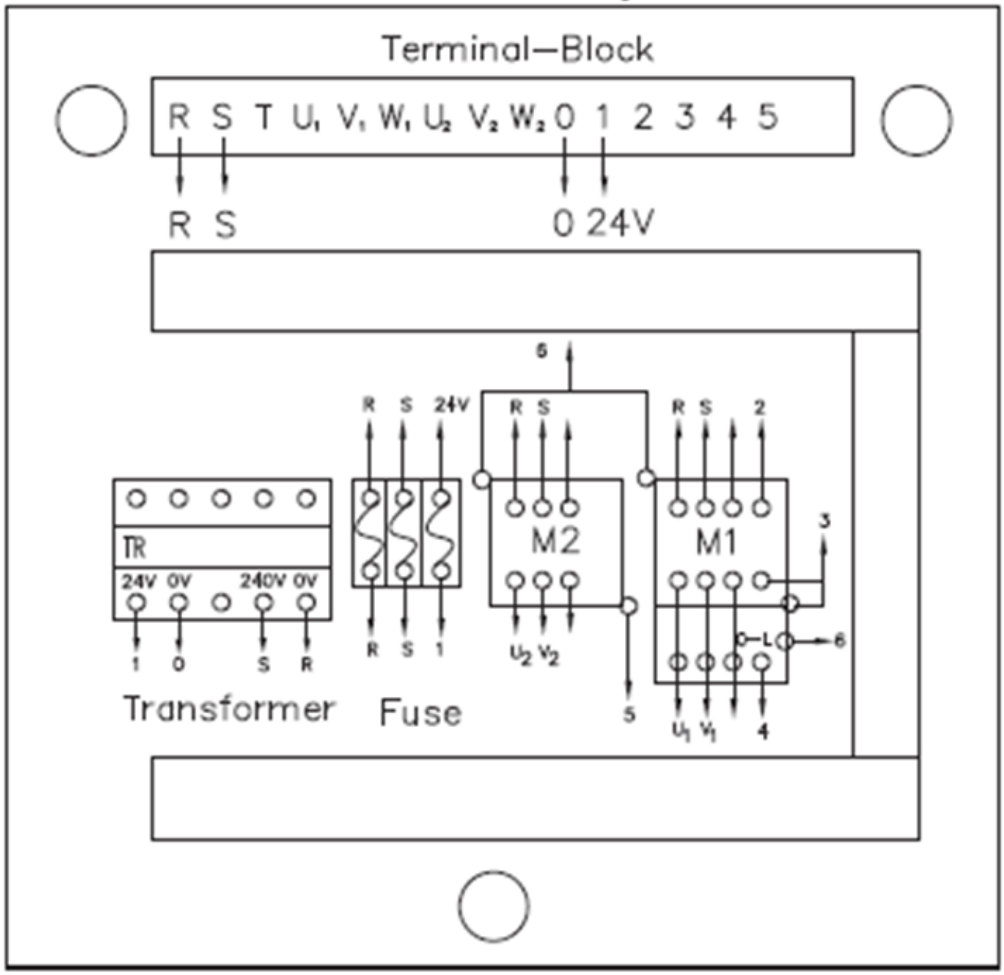
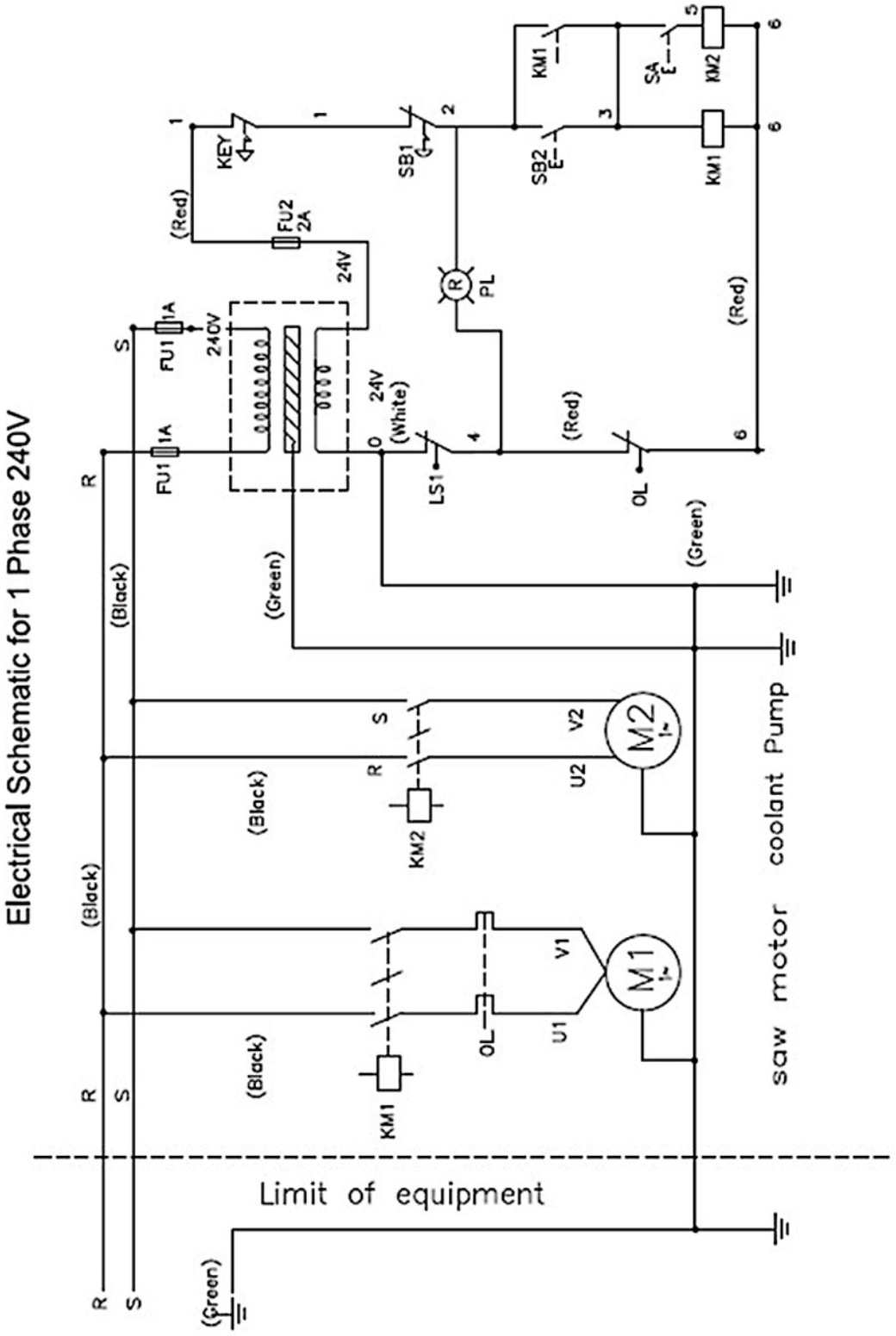


Table 9-1

Item	Description and Function	Technical data	Remarks
FU1	AC Fuse to Transformer	32A 600V AC/DC (10.3*38)	CUL, CE
FU2	AC Low Voltage to Transformer	32A 600V AC/DC (10.3*38)	CUL, CE
KM1	Main Motor Contactors	AC1:25A 600V ui:1000V AC3:16A 440V	CSA, UL, CE
KM2	Coolant Pump Contactors	AC1:25A 600V ui:1000V AC3:16A 440V	CSA, UL, CE
OL	Overload Relay	U:600VAC Current:14-17A Ith:6A	CUL, CE
TC	Transformer	INPUT/240V (0.048KVA) OUTPUT/24V(2A) 1~AC	CUL, CE
LS1	Cut-Limit Switch (Down Limit)	MJ7102 10A 300VAC MAX RESISTIVE 0.8A/125V DC 0.4A/250V DC	CUL, CE
SB1	Emergency Stop	10A 250VAC 7.5A 380VAC	CSA, UL, CE
Key	Key-Switch	10A 250VAC Key-SW	CSA, UL, CE
SB2	Start – On	10A 250VAC G	CSA, UL, CE
SA	Coolant Pump – (0-1)	10A 250VAC BK	CSA, UL, CE
TB	Cassette Terminal Block	500V2.5mm^2 300V 15A	CSA, UL, VDE, CE
PL	Power Indicator Lamp	Lamp 24V R	CSA, UL, CE

16.1 Electrical Schematic



17.0 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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