



Operating Instructions and Parts Manual

Manual Cold Saw

Model CS-275EU



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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 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 appropriate. DO NOT wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are recommended when using machinery. Wear a restrictive hair covering to contain long hair.
11. Use eye and ear protection. Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
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 visitors a safe distance from the work area.
18. Keep children away. Children must never be allowed in the work area. DO NOT let them handle machines, tools, or extension cords.
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. Do not cut where the atmosphere might contain flammable dust, gas, or liquid vapors such as from gasoline.
22. DO NOT touch live electrical components or parts.
23. Turn off power before checking, cleaning, or replacing any parts.
24. Be sure all equipment is properly installed and grounded according to national, state, and local codes.
25. Keep all cords dry, free from grease and oil, and protected from sparks and hot metal.
26. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. Bare wiring can kill!
27. DO NOT bypass or defeat any safety interlock systems.
28. Always check that the work piece is securely clamped and that long pieces are properly supported.
29. DO NOT use a saw blade size that is outside the limits of the machine specifications.
30. Immediately release the start / run trigger button if the saw blade should get stuck in a cut. Press the red power off switch and remove the yellow lock key before raising the machine head. Then open the vise and remove the work piece. Check the blade teeth for damage. If any of the teeth are broken or missing replace the saw blade.
31. The operator should stand in front of the machine using a single hand to grip the feed handle.
32. A proper break-in period for the cold saw is recommended. Intervals of 30 minutes to be repeated two or three times, after which the cold saw may be used continuously.

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, or fatal, injury.

⚠ 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 CS-275EU Manual Cold Saw. 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

4.1 Saw Blade Head Assembly

The section of the machine composed of the saw motor, gear case, blade and blade guard, and feed handle and trigger switch.

4.1.1 Feed Handle

A long-angled tube with a grip for raising and lowering the disk head and a trigger switch to start and stop the saw motor.

4.1.2 Gear Case

The central part of the assembly, housing the gear system. The motor mounts to the back and the output to the blade is to the left side.

4.1.3 Blade Guard

The Blade guard has a stationary cover which mounts to the left side of the gear case and a movable part which has linkage connect to it to cause the guard to open and expose the lower part of the blade as the feed handle is pulled downward.

4.1.4 Saw Blade

The saw blade is mounted onto the end of the arbor shaft and positioned to be centered within the guard assembly.



Figure 4-1

4.2 Electrical Box

The electrical box is mounted to the right of the saw blade head assembly and house the electrical control system except for the trigger switch. The function of the switches will be discussed later.

4.3 Machine Base

A heavy cast iron structure that supports the miter system, vise system, head assembly, and holds the coolant system.

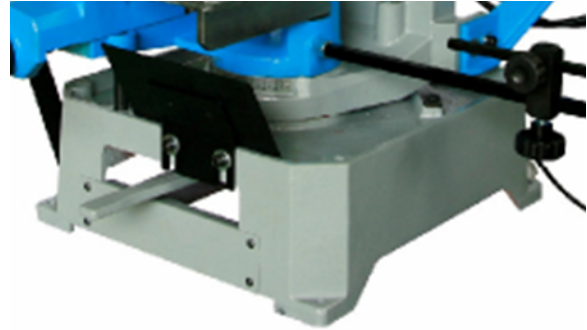


Figure 4-2

4.4 Vise

A clamping system that provides the basic support and grip for the work material. A handwheel opens and closes the vise jaws.

From the operators position in front of the saw, the left side of the vise has the jaws to clamp the material. The right-side bar provides support to reduce and prevent the material from kicking out at the end of the cut.



Figure 4-3

4.5 Material Stop

The material stop to the right side of the vise may be used to set the cut length of the material. This is especially useful for multiple cuts of the same length.

4.6 Support Roller

The support roller to the left or infeed side of the vise will assist in holding the material on plane with the vise table as well as assist in feeding the material through the vise.



Figure 4-4

4.7 Stand

Support structure for the machine head assembly, machine base, vise system, and coolant pump system.



Figure 4-5

4.8 Coolant Pump

Located in the back of the machine stand, the self contained coolant system includes a tank, coolant pump, filter, and hoses.



Figure 4-6

4.9 Product Dimensions

Machine Dimensions
(when assembled)

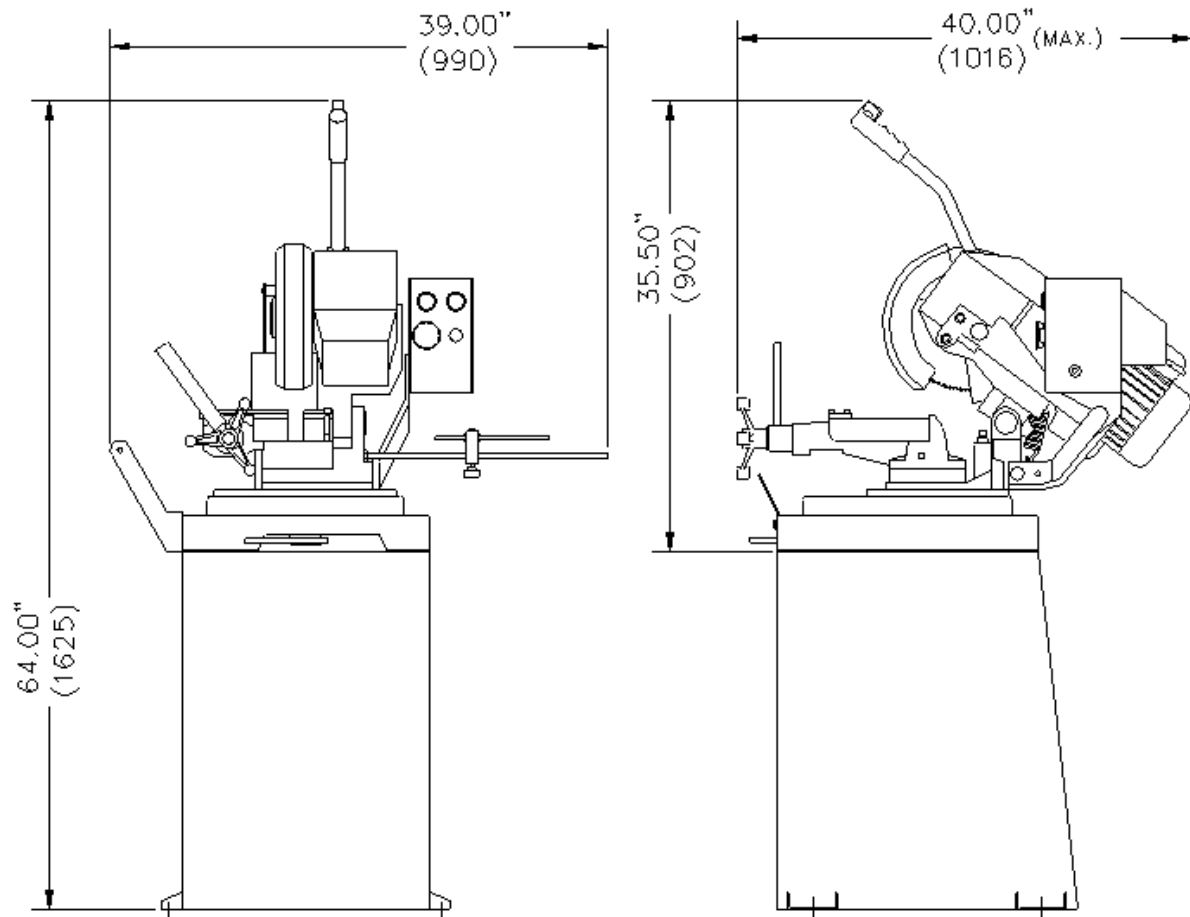


Figure 4-7

5.0 Specifications

Table 5-1

Model number	CS-275EU
Stock number	BA9-1002434
Motor and Electrical	
Main Motor	1.5HP (1.1kW) 110V, 60Hz, 14A
Power	110V, 60Hz
Coolant Pump	1/8HP (93W) 110V, 60Hz, 1.2A
General Specifications	
Operation	Manual
Head Style	Pivot
Blade Size (Customer Supplied, must match work material)	Ø11" (275mm) x T0.08" (2mm)
Arbor Size	1.26" (32mm)
Blade Speed	52 RPM
Vice Style	Single Action with Cam Lock
Head Miter	45° Left / 45° Right
Maximum Vice Opening	4" (101mm)
Coolant Tank	1.5gal (5.7L)
Slotting Ability	Yes
Material Stop Length	30" (762mm)
Vise Table Height from Floor	38" (965.2mm)
Weights and Dimensions	
Net Weight with Stand	330lbs (150kg)
Shipping Weight	425lbs (193kg)
Overall Dimensions (LxWxH)	40" x 39" x 72" (1016x991x1829mm)
Base Footprint	23" x 24" (584 x 610mm)
Shipping Dimensions (LxWxH)	60" x 44" x 48" (1524 x 1118 x 1220mm)

5.1 Cutting Capacities:

Table 5-2

	Solid Bars			Tubing		
Angle						
90°	3.3" (83.82mm)	2.5" x 2.5" (63.5x63.5mm)	3.1" x 2" (78.7 x 51mm)	3.3" (83.82mm)	2.5" x 2.5" (63.5x63.5mm)	3.1" x 2" (78.7 x 51mm)
45°	3.3" (83.82mm)	2.2" x 2.2" (56 x 56mm)	2.2" x 2" (55.8 x 51mm)	3.3" (83.82mm)	2.2" x 2.2" (56 x 56mm)	2.2" x 2" (55.8 x 51mm)

⚠ 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

⚠ 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.

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

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.



Two Person Lift. Use an assistant or lifting device (preferred) to support the weight of the saw body. Do not lift alone.



Figure 6-1

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 forklift 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 6-2

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, worktables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Keep the floor free of oil and make sure it is not slippery.
- Remove scrap and waste materials regularly, and make sure the work area is free from obstructing objects.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.
- **LEVELING:** The machine should be sited on a level, concrete floor. Provisions for securing it should be in position prior to placing the machine. The accuracy of any machine depends on the precise placement of it to the mounting surface.
- **FLOOR:** This 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.

6.4.1 Anchoring the Machine

This saw can be operated as free standing if; all of the installation points are followed and the saw is solid and will not tip, rock, or move, with or without material loaded or during operation.

If it does not meet these criteria, then the saw should be anchored as follows.

- 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.

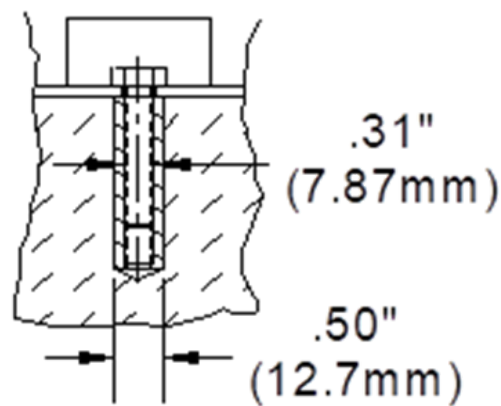


Figure 6-3

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

6.5 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.

Take out the accessories box (A) and the coolant tank (B) from inside of the stand and set aside for later use.

Lift off the stand (C) and place into the intended working location (D).

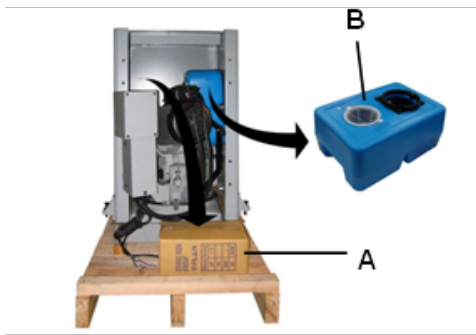


Figure 6-4

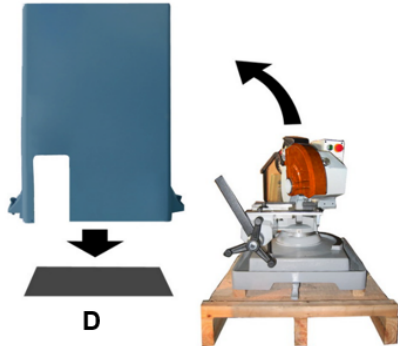


Figure 6-5

6.5.1 Prepare the Machine for Hoisting

- Method 1: Using a sling (E), carefully wrap it around the collar of the moveable jaw and motor mount.

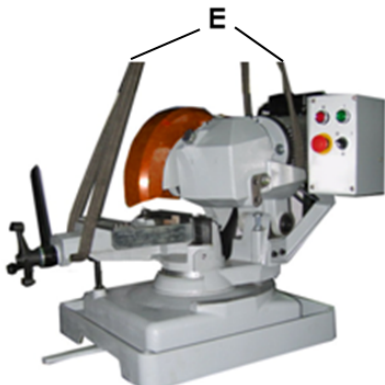


Figure 6-6

6.5.2 Place the Machine on the Top of the Stand

- Using an overhead hoist, lift the machine head.
- Align and insert the four setscrews (G) on the underside of the machine base into the #2 & #3 gaskets, while lowering the head onto the stand.
- Secure the machine onto the stand using nuts on the underside of the stand holes.
- Attach the #1 gasket and drain flange to the head with (2) socket head bolts.



Figure 6-7

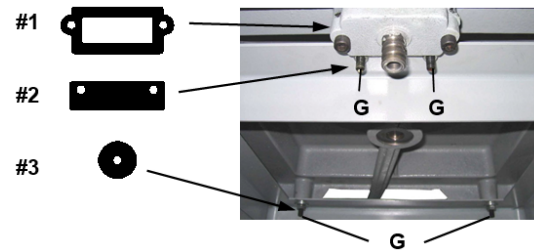


Figure 6-8

6.5.3 Attach the Coolant Tank Platform

- Insert platform (H) into the interior of the machine stand.
- Align the platform holes (I) to the screw holes on the machine stand.
- Apply an M8 washer to each M8X12 screw and secure the platform (H) to the stand.

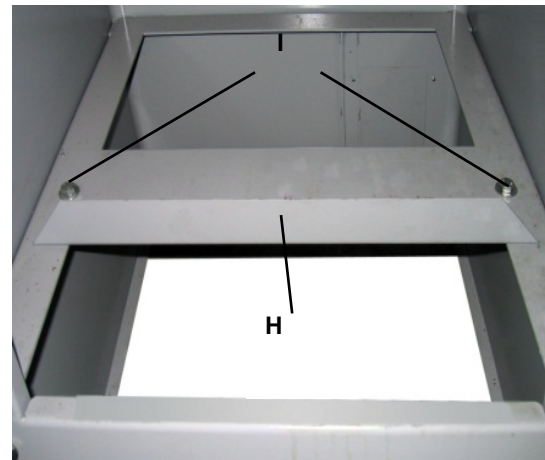


Figure 6-9

6.5.4 Remove the Oil Fill Transport Plug from Gear Transfer Case

- Use a wrench to unscrew an M20x40 hex screw from the oil fill hole (J).

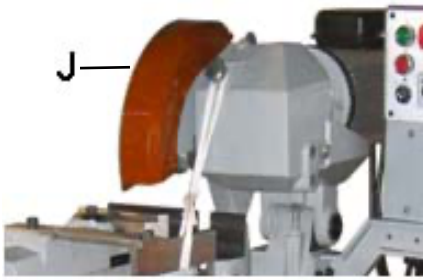


Figure 6-10

6.5.5 Attach the Feed Handle to the Head Assembly

- Insert the threaded end of the feed handle (L) into the gear oil fill hole (J).
- Turn the handle clockwise (cw) until tight so that the trigger switch (K) points up.
- Tighten jam nut clockwise (cw).

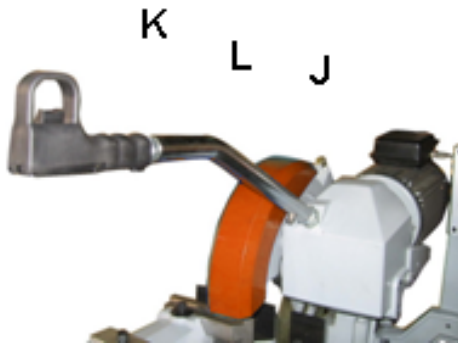


Figure 6-11

6.5.6 Connect Feed Handle Cable to Motor Box

- Locate the open socket (M) at the side of the electrical box on the motor.
- Plug the feed handle cable connector into socket (M).
- Use a wrench to tighten the connector nut (N).

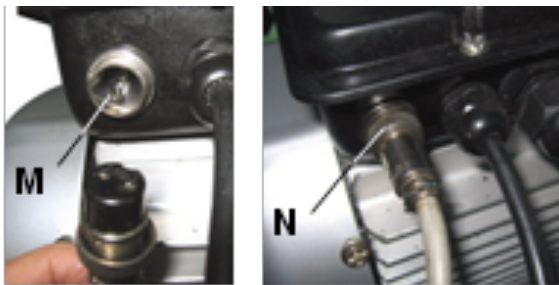


Figure 6-12

6.5.7 Attach the Support Roller to the Left Side of the Base

- Place the support roller (P) up to the machine base and align the 2 slots (O) with the screw holes in the base.
- Using (2) M10 washers and (2) M10x25 hex bolts, attach the support roller to the base.
- (DO NOT Tighten).

- Place a level across the mouth of the vise and the top of the roller. Raise or lower roller (P) until level, then secure by tightening bolts.

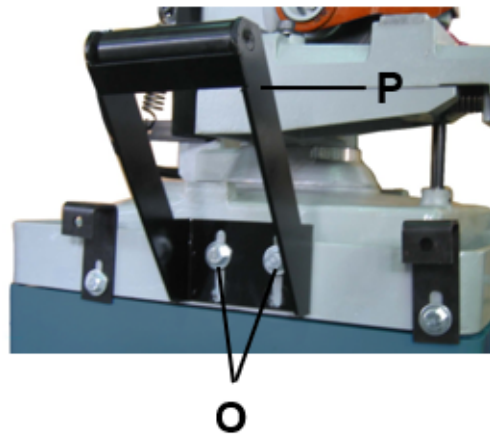


Figure 6-13

6.5.8 Attach the Bar Stop to the Vise

- Insert the threaded end of the long rod (R) into the side of the vise.
- Turn clockwise (cw) until snug making sure graduated scale can be easily read.
- Using a wrench, turn hex jam nut (Q) clockwise (cw) until tight.

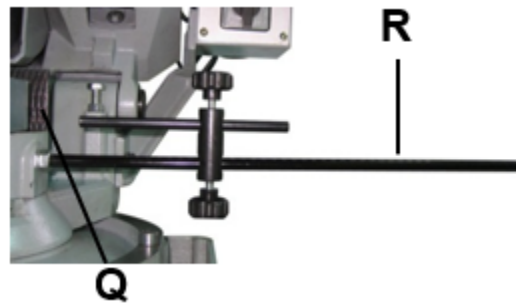


Figure 6-14

6.5.9 Attach the Cover Plate to Machine Stand

- Place plate (S) next to the hole at the base of the machine stand.
- Align the mounting holes and secure with (4) M5x6 screws.



Figure 6-15

6.5.10 Assemble the Coolant Tank

- Insert the coolant pump (X) into the coolant tank (T).
- Using (2) M6 washers and (2) M6x20 bolts, secure pump to tank.
- Place the hose clamp (U) onto the 0.375" flow tube (V) and connect tube to hose connector. Tighten the hose clamp.



Figure 6-16

6.5.11 Install the Coolant Tank

- Place the coolant pump (X) towards the rear opening of the machine stand.
- Place the coolant tank (T) onto the coolant platform (H). The trough of the tank fits over the vertical lip of the platform.
- Insert one end of the 0.50" drain hose (W) onto the hose connector (Z) on the underside of the machine base.
- Place the other end into the insert (Y) of the coolant tank.

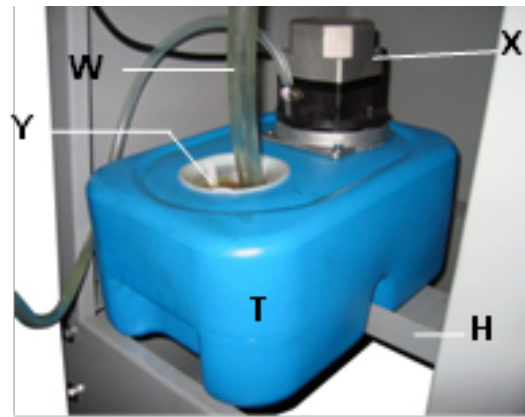


Figure 6-17

6.5.12 Attach the Rear Plate to the Back of the Stand

- Place rear plate (AA) across the back of the machine stand.
- Align the plate holes and secure the plate with (4) M8 washers and (4) M8x25 screws.

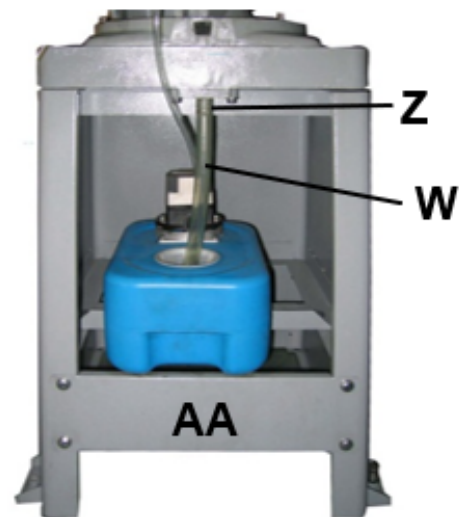


Figure 6-18

6.5.13 Install the Splash Plate

- Insert the splash plate (AB) onto the front sidewall of machine base.
- Align the 2 slots (AC) and attach plate with (2) M8 washers and (2) M8x20 hex screws.
- Adjust the plate to its proper position and tighten bolts.



Figure 6-19

7.0 Electrical Connections

⚠ CAUTION

HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN!

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

⚠ WARNING

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

7.1 Power Specifications

Your machine is wired for 110 volts, 60hz alternating current. Before connecting the machine to the power source, make sure the power source is OFF. Before switching on the power, you must check the voltage and frequency of the power to see if they meet with the requirement, the allowed range for the voltage is $\pm 5\%$, and for the frequency is $\pm 1\%$.

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

AMP Rating	Length		
	25ft	50ft	100ft
1-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No
Wire Gauge			

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

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 table toward the power supply.
 - a. Route the power cord so that it will NOT become entangled in the saw, saw blade, or counterbalance assembly in any way.
 - b. Route the cord to the power supply in a way that does NOT create a trip hazard.

3. Connect the power cord to the power supply and check that the power cord has not been damaged during installation.
4. When the saw blade is clear of any obstruction and raised to the up position, the saw turned ON to test operation. Turn the saw OFF and press the E-Stop button when the saw is not in operation.

8.0 Adjustments

! WARNING

Before performing the following operations, the electric power supply and the power cable must be completely disconnected.

8.1 Adjustment of Saw Blade Head

If excessive axial play is found on the pivot hinge, it will be necessary to tighten the screws.

Note: Do not overtighten.

8.2 Adjusting the Mitering Lock Lever

1. The lock lever may require adjustment when the lever contacts the machine base and fails to lock the machine head at required angle. To re-adjust lever:
2. Loosen bolt (A).
3. Support the bushing (B) so that it does not drop.
4. Pivot lever (C) to unlock side (D) to allow more range of motion.
5. Re-tighten bolt (A).

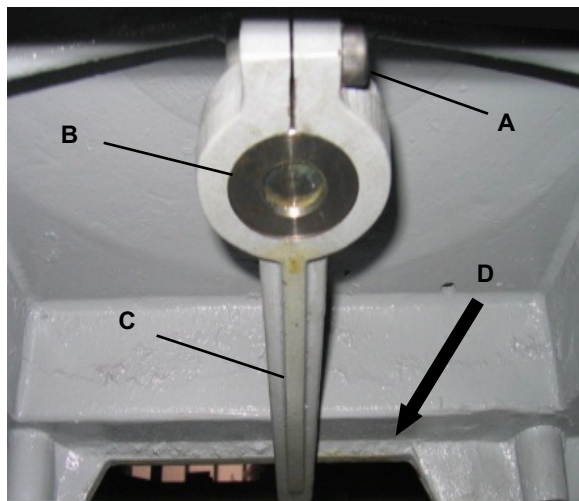


Figure 8-1

8.3 Changing the Saw Blade

1. To change the saw blade:
2. Release and pivot the mobile guard (A) by removing the hex socket screw (B).
3. Place a block of wood into the vise.

4. Lower the machine head to rest the saw blade on the block of wood.
5. Using a hex wrench, remove the lock bolt (C) in a clockwise (cw) direction. (It has a left handed thread).
6. Remove the blade (D) and blade washer (E) from the spindle.
7. Remove the blade washer from the saw blade (D).
8. Place washer (E) onto the replacement blade and follow above procedure in reverse.
9. Check for proper blade rotation.

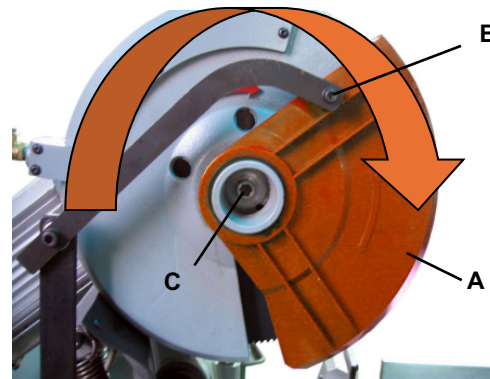


Figure 8-2

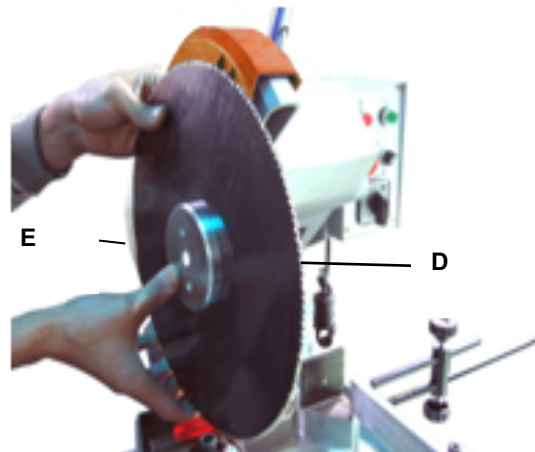


Figure 8-3

8.4 Blade Tracking Adjustment

The head pivot shaft is supported by eccentric bushings. If blade tracks off center resulting in crooked cuts, adjust as follows.

1. Loosen two set screws (A) from rear of head pivot with 4mm hex wrench.

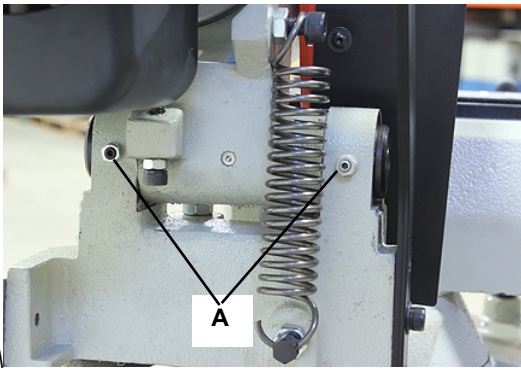


Figure 8-4

2. If blade tracks to right side (viewed from front of machine), rotate right socket screw (under the electrical box) clockwise with 5mm hex wrench.

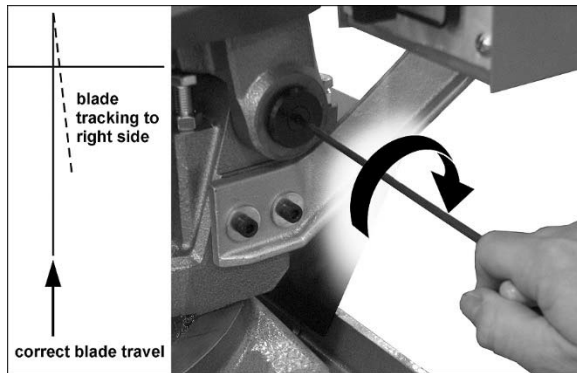


Figure 8-5

3. If blade tracks to left side, rotate left socket screw counterclockwise.
4. Tighten set screws (A) and operate saw to verify correctness of adjustment.

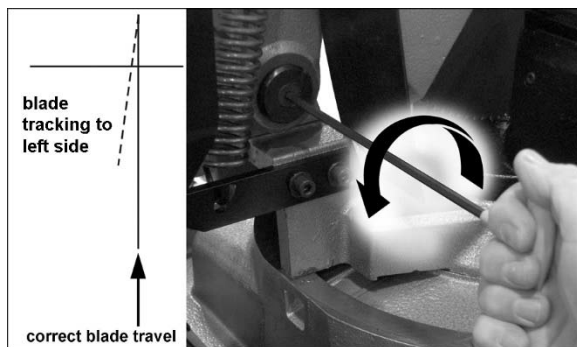


Figure 8-6

9.0 Operation

⚠ CAUTION

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

⚠ CAUTION

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

9.1 Miter Angle

⚠ CAUTION

Check that the cutting blade clears all parts of the vise assembly before cutting. The blade can strike parts of the assembly (especially during miter cuts) if not properly adjusted.

1. Push the miter lock lever (A) to the left to release the disk head assembly.
2. Rotate the disk head assembly to the desired miter angle.
3. Use the indicator scale (B) to set the desired cut angle. (Fine tune the angle as needed to get the exact angle.)

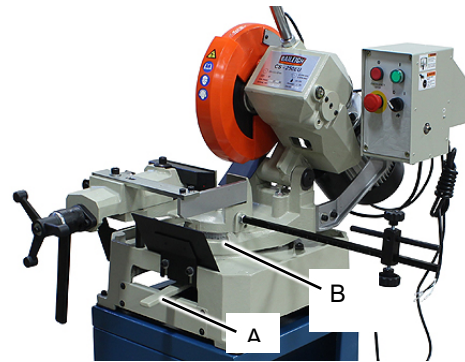


Figure 9-1

4. Pull the miter lock lever (A) back to the right to lock in the angle. ALWAYS LOCK THE LEVER BEFORE CUTTING.
5. Adjust the vise clamping jaw (C) to allow for the blade to clear the vise without contacting the jaw.

IMPORTANT: Never allow the saw to cut into the vise jaws.

6. Loosen the clamping bolt (D) and slide the jaw left or right as needed to clear the saw blade. The jaw should be between 0.25" and 0.5" (6 – 13mm) without contacting the saw blade.
7. Adjust the clamping support to the right side of the blade by loosening and the mounting bolt and sliding the support within the slots (E) or when needed, changing the slots. If absolutely necessary, the clamping support may be removed.

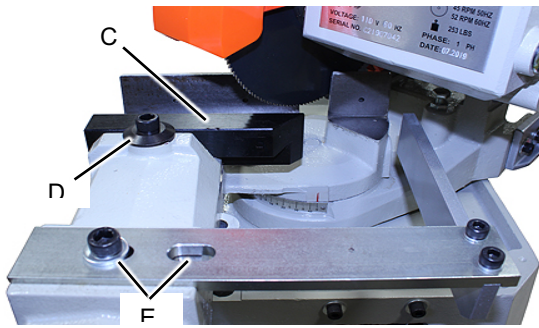


Figure 9-2

9.2 Vise Operation

1. Use the hand wheel (A) to open and close the vise jaw (B) for pieces that vary in width.
 - a. Counter clockwise (ccw) to open jaws
 - b. Clockwise (cw) to close jaws
2. Use the vise release lever (Z) to quickly clamp and unclamp pieces of the same width. The release lever is a 1/2 turn lever, from straight up (loosen) to straight down (clamped).
 - a. Clockwise (cw) to clamp the piece
 - b. Counter clockwise (ccw) to unclamp the piece

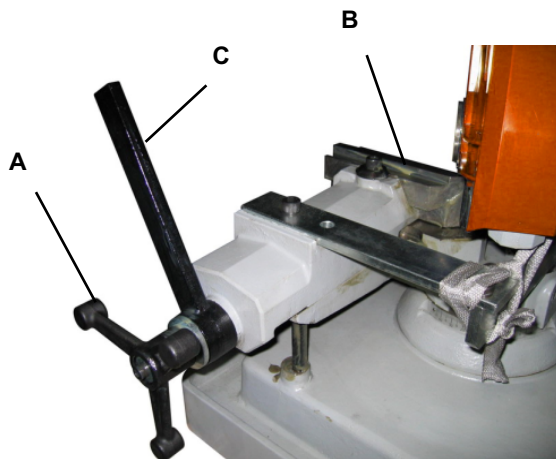


Figure 9-3

9.3 Loading the Piece Part

1. Use the vise hand-wheel to open the jaws wider than the width of the piece.
2. Measure and mark off the length of material to be cut.
3. Place the piece on the flat surface in between the vise jaws.
4. Slide the piece through the jaws so the scribed length mark lines up with the blade or disk.
5. Push the piece up against the back vise jaw.
6. Turn the hand-wheel clockwise (cw) to clamp the piece.

If repetitive cuts are required for material of the same width:

1. Turn the vise hand-wheel clockwise (**cw**) to approach the piece part, leaving approximately 3/16" (5mm) gap between front jaw and the piece part.
2. Then use the vise lock lever to clamp and unclamp the piece.

9.4 Setting Cut Length

Setting the cut length eliminates measuring duplicate pieces.

1. Measure and mark the length of material to be cut off.
2. Load the piece part.
3. Line up the cut.
4. Clamp the piece part.
5. Loosen the hex nut at the base of the bar riser (A).
6. Slide the bar riser (A) along the long rod (B) so that the tip of stop bar (C) touches the end of the piece part.
7. Tighten the hex nut at the base of the bar riser (A).

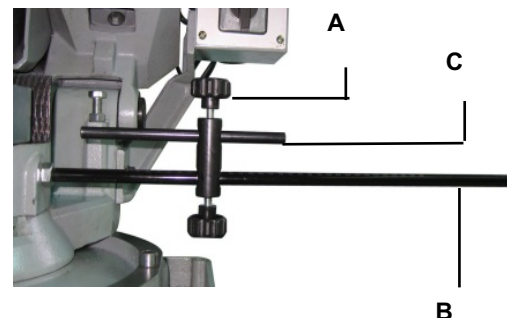


Figure 9-4

9.5 Using the Stop Bar

1. Cut off the first length from the clamped piece part.
2. Unclamp the piece part.
3. Slide the piece part forward until it reaches the tip of the stop bar (C).
4. Clamp the piece part.
5. Proceed with the cutting cycle.

9.6 Cutting Operation Cycle

1. Set the miter cut angle.
2. Open the vise jaws.
3. Load and clamp the piece part.
4. Adjust the bar stop for cutting length.

5. Press button (A) to turn power on to the saw. (Green light will be lit).
6. Set the coolant switch (B) to on.
7. Grasp the feed handle (C).
8. Press the trigger switch (D) to start blade motor.
9. Pull down the feed handle (C) applying a steady and constant pressure.
10. After cut-off, raise feed handle slowly.
11. Release the trigger switch (D) to stop the blade motor.
12. Use vise lever to open the jaws.
13. Remove or advance the piece part forward for next cut.
14. To turn off machine power press the stop button (E)
15. To stop machine in an emergency situation, press the EMERGENCY STOP button (F).
16. Before restarting machine, emergency stop button must be reset with a clockwise (cw) twist.

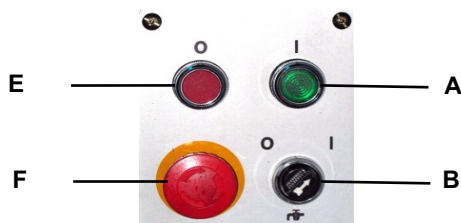


Figure 9-5

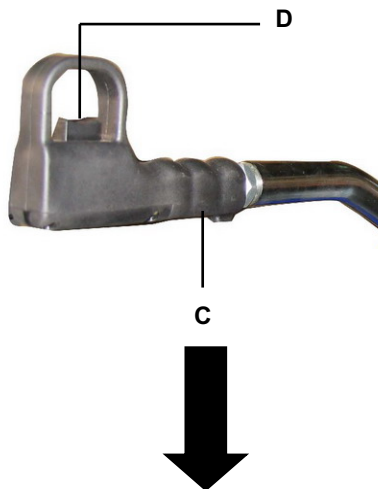


Figure 9-6

NOTICE

Do not allow the saw to slam back up to the start position. Doing so will cause damage to the pivot block and the weight of the motor will cause damage to the gear case adaptor over time.

9.7 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.

The Baileigh cold saw is now ready to start work. For quality cutting and machine performance always use the correct type of blade or disk and recommended cutting speeds. To extend the life of a new blade or disk, the first two or three cuts must be made while exerting a slight pressure on the piece part. This will double the normal cutting time.

10.0 Choosing a Saw Blade

Note: The saw blade included with this cold saw is a general-purpose blade. It is considered a starter blade and is intended to allow for the saw to make cut as soon as it is safely set up and ready for operation.

While this blade will cut many material profiles, the best cutting results will be achieved using a blade which is chosen to match the material to be cut.

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
- Rotational 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, wood, etc., require widely spaced toothing to avoid clogging.

10.1.1 General Characteristics

Fine Tooth Pitch – used for thin wall materials such as sheet steel, tubes and profiles.

Coarse Tooth Pitch – used for large cross-sections, and for soft materials (aluminum alloys and soft alloys in general).

10.1.2 Determining Proper Tooth Pitch

Proper tooth pitch depends on:

The size of the section.

The hardness of the material.