



# OPERATOR'S MANUAL



## MANUAL COLD SAW – PNEUMATIC VISE MODEL: CS-350P

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## Table of Contents

THANK YOU & WARRANTY .....	1
INTRODUCTION.....	3
GENERAL NOTES.....	3
SAFETY INSTRUCTIONS .....	4
SAFETY PRECAUTIONS .....	6
TECHNICAL SPECIFICATIONS .....	8
TECHNICAL SUPPORT .....	8
UNPACKING AND CHECKING CONTENTS.....	9
Cleaning .....	9
TRANSPORTING AND LIFTING .....	10
INSTALLATION.....	11
Anchoring the Machine.....	11
OVERALL DIMENSIONS.....	12
GETTING TO KNOW YOUR MACHINE .....	13
Disk Head Assembly .....	14
Machine Base.....	15
Vise .....	15
Stand.....	15
Coolant Pump.....	15
ASSEMBLY AND SET UP .....	16
ELECTRICAL.....	19
Power cord connection: .....	20
MACHINE ADJUSTMENTS .....	21
Disk Head Adjustment .....	21
Saw Blade Replacement .....	21
OPERATION.....	22
Miter Angle .....	22
Vise Operation.....	22
Loading Piece Part .....	23
Setting Cut Length.....	23
Cutting Operation Cycle .....	24
MATERIAL SELECTION.....	25
CHOOSING A SAW BLADE .....	26
BLADE SELECTION CHART.....	27
LUBRICATION AND MAINTENANCE .....	28
Gearbox Oil Replacement .....	29
Accessing and Cleaning the Coolant System.....	30
Oils for Lubricating Coolant .....	30
Storing Machine for Extended Period of Time .....	30
LUBRICATION OIL TABLE 1 .....	31
LUBRICATION OIL TABLE 2.....	31
PARTS DIAGRAM - A.....	32



Parts List - A.....	33
PARTS DIAGRAM - B.....	36
Parts List - B.....	37
PARTS DIAGRAM - C.....	38
Parts List - C.....	39
PARTS DIAGRAM - D.....	41
PARTS List - D.....	42
PARTS DIAGRAM - E.....	43
PARTS List - E.....	43
PARTS DIAGRAM - F.....	44
Parts List - F.....	45
PARTS DIAGRAM - G.....	46
Parts List - G.....	46
ELECTRICAL SCHEMATIC.....	47
PNEUMATIC CIRCUIT DIAGRAM.....	48
TROUBLESHOOTING.....	49



## THANK YOU & WARRANTY

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 a RGA will be refused. Seller will not be responsible for any freight costs, damages to goods, or any other costs or liabilities pertaining to goods returned without a RGA. Seller shall have the right to substitute a conforming tender. Buyer will be responsible for all freight costs to and from Buyer and repackaging costs, if any, if Buyer refuses to accept shipment. If Goods are returned in unsalable condition, Buyer shall be responsible for full value of the Goods. Buyer may not return any special order Goods. Any Goods returned hereunder shall be subject to a restocking fee equal to 30% of the invoice price.

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

**Limited Warranty.** Seller warrants to the original end-user that the Goods manufactured or provided by Seller under this Agreement shall be free of defects in material or workmanship for a period of twelve (12) months from the date of purchase, provided that the Goods are installed, used, and maintained in accordance with any instruction manual or technical guidelines provided by the Seller or supplied with the Goods, if applicable. The original end-user must give written notice to Seller of any suspected defect in the Goods prior to the expiration of the warranty period. The original end-user must also obtain a RGA from Seller prior to returning any Goods to Seller for warranty service under this paragraph. Seller will not accept any responsibility for Goods returned without a RGA. The original end-user shall be responsible for all costs and expenses associated with returning the Goods to Seller for warranty service. In the event of a defect, Seller, at its sole option, shall repair or replace the defective Goods or refund to the original end-user the purchase price for such defective Goods. Goods are not eligible for replacement or return after a period of 30 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, (e) defects or damage to the Goods resulting from improper or unauthorized alterations, modifications, or changes; and (f) any Goods that has not been installed and/or maintained in accordance with the instruction manual or technical guidelines provided by Seller.

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

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



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

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

**Work by Others; Safety Devices.** Unless agreed to in writing by Seller, Seller has no responsibility for labor or work performed by Buyer or others, of any nature, relating to design, manufacture, fabrication, use, installation or provision of Goods. Buyer is solely responsible for furnishing, and requiring its employees and customers to use all safety devices, guards and safe operating procedures required by law and/or as set forth in manuals and instruction sheets furnished by Seller. Buyer is responsible for consulting all operators' 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 attorneys' fees and costs.

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

**Summary of Return Policy.**

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

Baileigh Industrial 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 [sales@baileighindustrial.com](mailto:sales@baileighindustrial.com)



## **INTRODUCTION**

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

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

### **In this manual you will find: (when applicable)**

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

## **GENERAL NOTES**

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

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

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



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



## **IMPORTANT** **PLEASE READ THIS OPERATORS MANUAL CAREFULLY**

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



## **SAFETY INSTRUCTIONS**

### **LEARN TO RECOGNIZE SAFETY INFORMATION**

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



Follow recommended precautions and safe operating practices.

### **UNDERSTAND SIGNAL WORDS**

A signal word – **DANGER**, **WARNING**, or **CAUTION** is used with the safety alert symbol. **DANGER** identifies a hazard or unsafe practice that will result in severe **Injury or Death.**



Safety signs with signal word **DANGER** or **WARNING** are typically near specific hazards.



General precautions are listed on **CAUTION** safety signs. **CAUTION** also calls attention to safety messages in this manual.



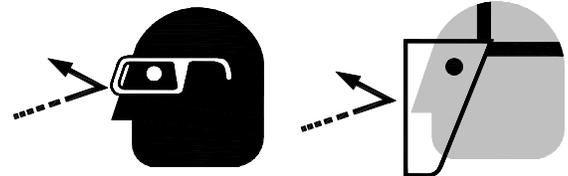


**SAVE THESE INSTRUCTIONS.**  
**Refer to them often and use them to instruct others.**



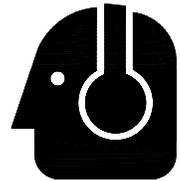
**PROTECT EYES**

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



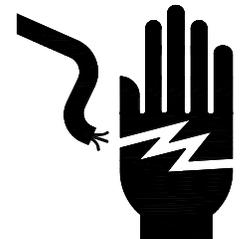
**PROTECT AGAINST NOISE**

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



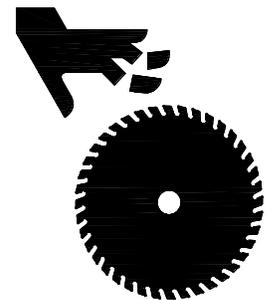
**HIGH VOLTAGE**

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



**ROTATING BLADE HAZARD**

Moving saw blade may result in loss of fingers or limb. **DO NOT** operate with guard removed. **Follow lockout/tagout procedures before servicing.**



**EMERGENCY STOP BUTTON**

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





## SAFETY PRECAUTIONS



Metal working can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

Safety equipment such as guards, hold-downs, safety glasses, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. **Always use common sense** and exercise **caution** in the workshop. If a procedure feels dangerous, don't try it.

**REMEMBER: Your personal safety is your responsibility.**



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

1. **Only trained and qualified personnel can operate this machine.**
2. **Make sure guards are in place and in proper working order before operating machinery.**
3. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
4. **Keep work area clean.** Cluttered areas invite injuries.
5. **Overloading machine.** By overloading the machine you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
6. **Dressing material edges.** Always chamfer and deburr all sharp edges.
7. **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.
8. **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.
9. **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.
10. **Use eye and ear protection.** Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.



11. **Do not overreach.** Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
12. **Stay alert.** Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
13. **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.
14. **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.
15. **Blade adjustments and maintenance.** Always keep blades sharp and properly adjusted for optimum performance.
16. **Keep children away.** Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
17. **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.
18. **DO NOT operate machine if under the influence of alcohol or drugs.** Read warning labels on prescriptions. If there is any doubt, **DO NOT** operate the machine.
19. **DO NOT** touch live electrical components or parts.
20. Be sure all equipment is properly installed and grounded according to national, state, and local codes.
21. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill!**
22. **DO NOT** bypass or defeat any safety interlock systems.
23. Keep visitors a safe distance from the work area.



## TECHNICAL SPECIFICATIONS

Max. Blade Diameter	14" (355.6mm)
Operation	Manual with Pneumatic Vice
Round Solid at 45°	1.575" (40mm)
Square Tube at 45°	2.953" x 2.953" (75 x 75mm)
Round Tube at 45°	2.953" (75mm)
Rectangle Tube at 45°	2.953" x 2.362" (75 x 60mm)
Round Solid at 90°	2.362" (60mm)
Rectangle Tube at 90°	4.25" x 3.5" (108 x 89mm)
Square Tube at 90°	4.25" x 4.25" (108 x 108mm)
Round Tube at 90°	4.331" (110mm)
Coolant System	1/8hp (93w)
Coolant System Capacity (80%)	5.3gal. (20L)
Slotting Capable	Yes, Left and Right
Vice Style	Dual Action, Self-Centering
Max. Vice Opening	6.5" (165mm)
Head Style	Pivot
Arbor Size	1.26" (32mm)
Motor	4.0hp (2.98kw)
Power	220V, 3ph, 60hz
Air Supply (Min – Max)	80psi – 100psi (.55 – .69mpa)
Shipping Weight	834lbs. (379kg)
Shipping Dimensions	60" x 44" x 48" (1524 x 1118 x 1220mm)

## TECHNICAL SUPPORT

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

For specific application needs or future machine purchases contact the Sales Department at: [sales@baileighindustrial.com](mailto:sales@baileighindustrial.com), Phone: 920.684.4990, or Fax: 920.684.3944.



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



## UNPACKING AND CHECKING CONTENTS

Your Baileigh machine is shipped complete in one crate. 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:** If any parts are missing, do not plug in the power cable, or turn the power switch on until the missing parts are obtained and installed correctly.

### Cleaning

Your machine may be shipped with a rustproof waxy oil coating and grease on the exposed unpainted metal surfaces. To remove this protective coating, use a degreaser or solvent cleaner. 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.

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

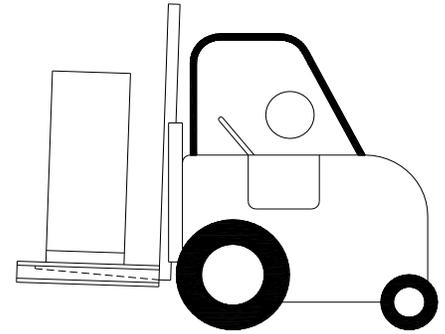
**⚠ CAUTION:** When using cleaning solvents work in a well-ventilated area. Many cleaning solvents are toxic if inhaled.





## TRANSPORTING AND LIFTING

**⚠ CAUTION:** 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. Choose a location that will keep the machine free from vibration and dust from other machinery. Keep in mind that having a large clearance area around the machine is important for safe and efficient working conditions.



### Follow these guidelines when lifting:

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





## INSTALLATION

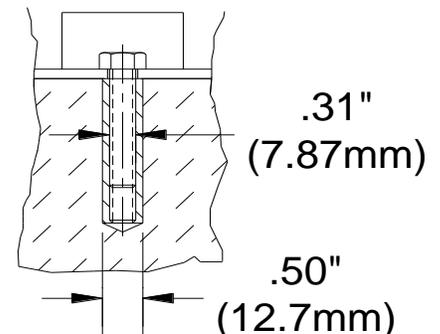
### **IMPORTANT:**

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

### Anchoring the Machine

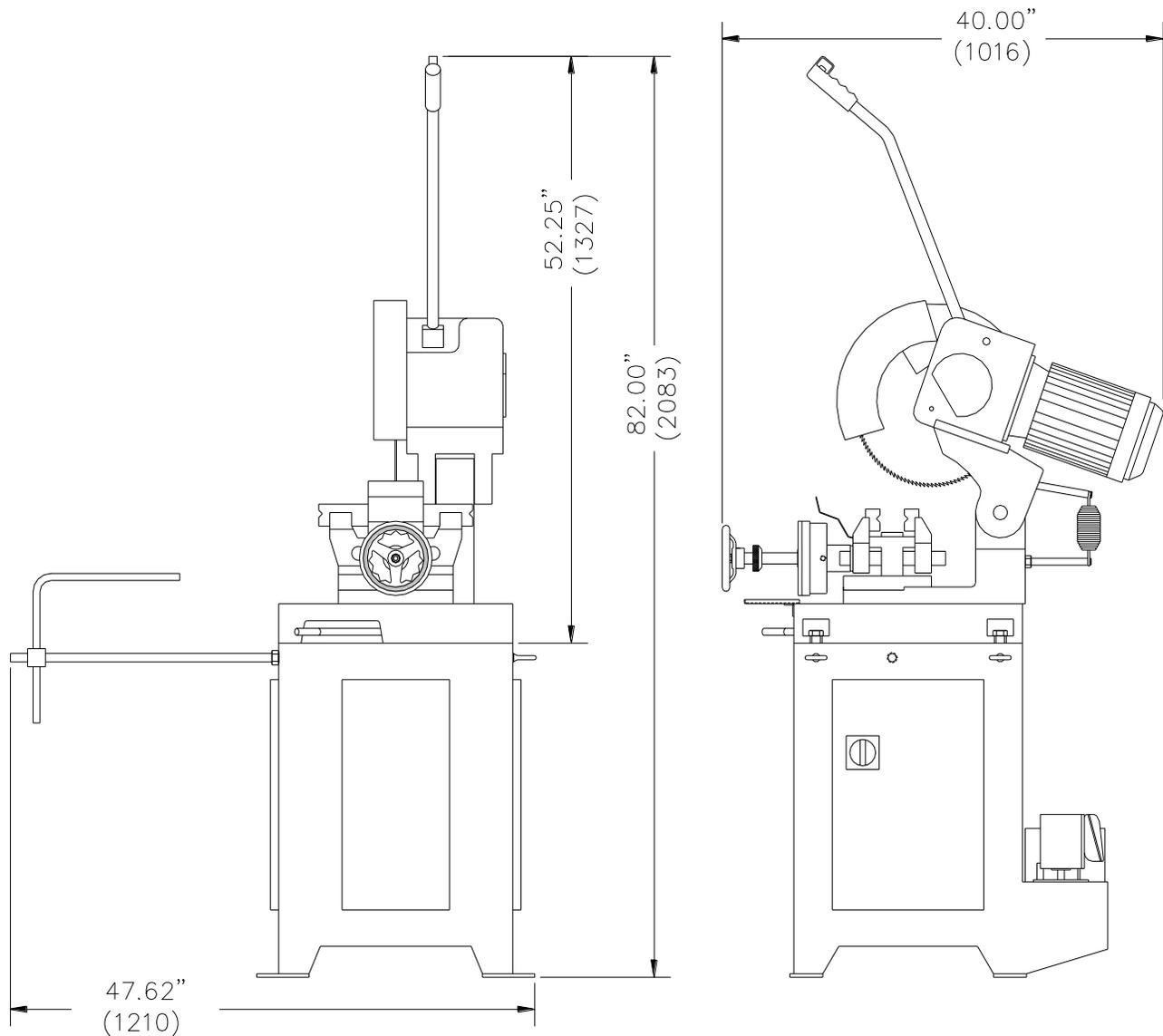
- Once positioned, anchor the machine to the floor, as shown in the diagram, using bolts and expansion plugs or sunken tie rods that connect through holes in the base of the stand.
- Maintain a minimum distance of 32.00" from the wall to rear of the machine.





## OVERALL DIMENSIONS

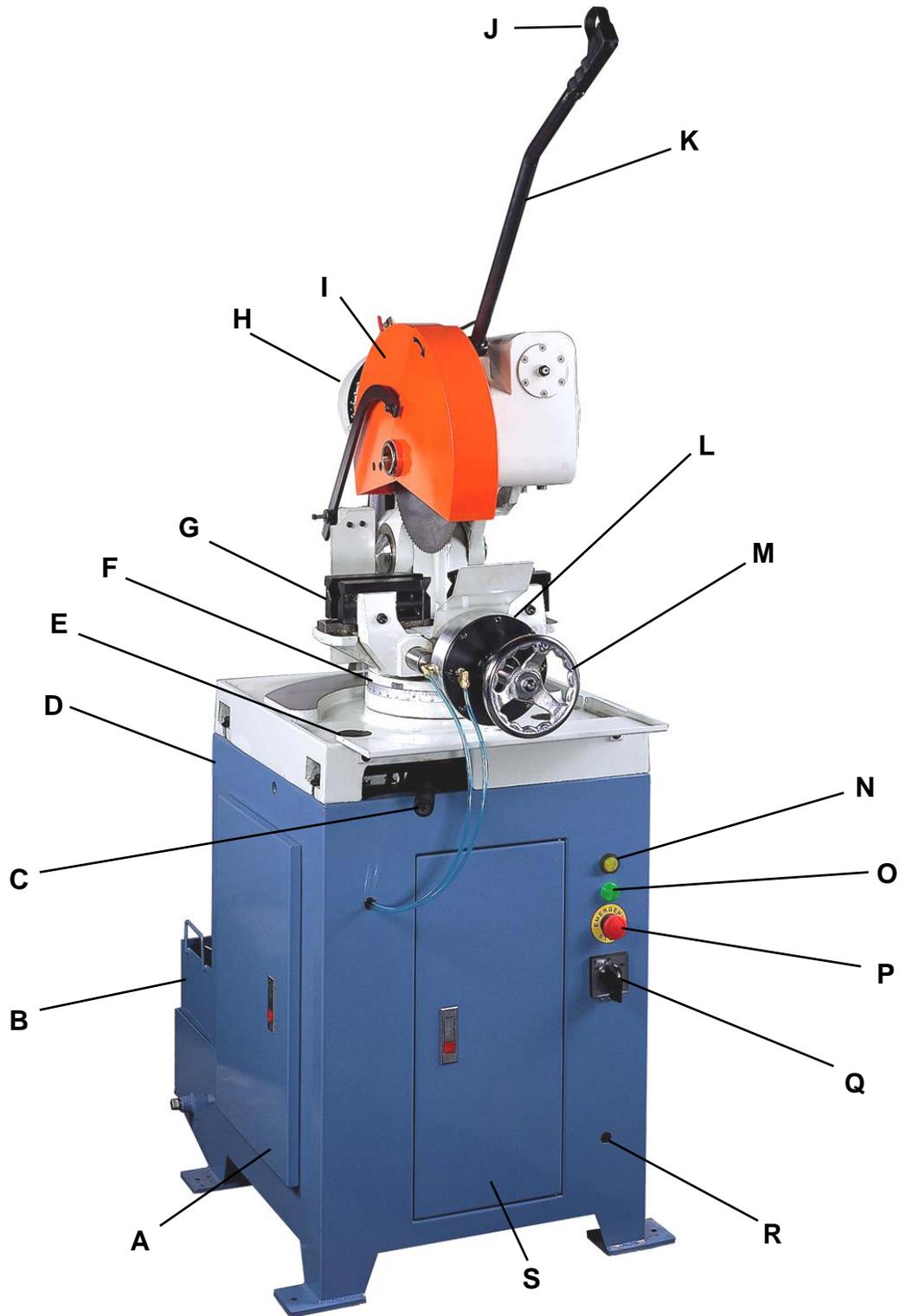
Machine Dimensions (when assembled)



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



GETTING TO KNOW YOUR MACHINE





Item	Description	Function
A	Side Door Compartment	Houses filter, regulator, lubricator, and solenoid
B	Chip basket	For collecting metal chips
C	Miter lock lever	Tightens and loosens table to set angles
D	Air-Inlet connector	For connecting customer supplied air
E	Filter tank	For filtering metal chips and contaminants
F	Angle indicator	For showing angular cutting degrees
G	Front and rear jaw	For clamping piece part
H	Spindle Motor	For driving the spindle
I	3-piece saw guard	Provides safety protection from saw blade
J	Trigger switch	For starting the spindle motor
K	Feed handle	Used for guiding blade into piece part
L	Vise air cylinder	Pneumatically powers the front vise clamp
M	Vise hand-wheel	Turning hand-wheel opens and closes vise
N	Emergency stop button	Press this switch to stop all machine motion
O	Yellow push button	Activates timer for retracting jaw cylinder
P	Green "Power ON" Light	Lights up when power switch is on
Q	2-Speed Switch	Changes saw blade from 26 rpm to 52 rpm
R	Foot switch receptacle	Plug in foot switch
S	Front Door compartment	Use for storing tools, blades, manual, etc.

### **Disk Head Assembly**

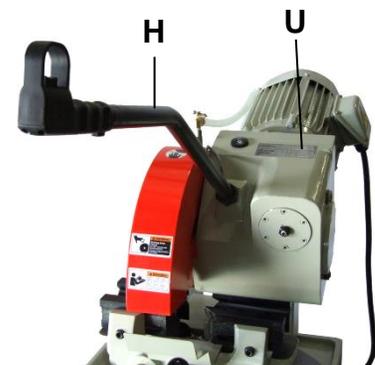
The section of the machine composed of the motor, gear transfer system, disc or blade, and feed handle.

#### **H. 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 blade motor.

#### **U. Transfer Case**

The central part of the assembly, housing the gear system and oil tank.





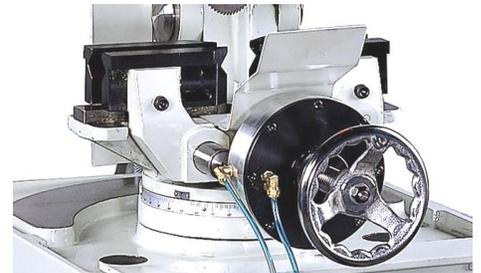
### **Machine Base**

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



### **Vise**

A clamping system that provides the basic support and grip for the work material. A handwheel opens and closes the vise jaws. The front jaw has a quick grip and release feature using a pneumatic cylinder.



### **Stand**

Support structure for the machine head assembly, machine base, vise system, and the coolant pump system. The stand also houses the air and electrical system components.



### **Coolant Pump**

Located at the back of the machine is a self-contained coolant system. It includes a tank with removable chip basket, a coolant pump, and hoses.



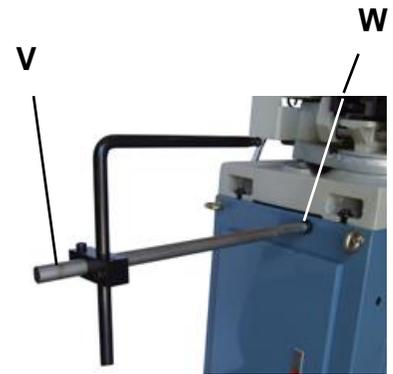


## ASSEMBLY AND SET UP

**⚠ 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.

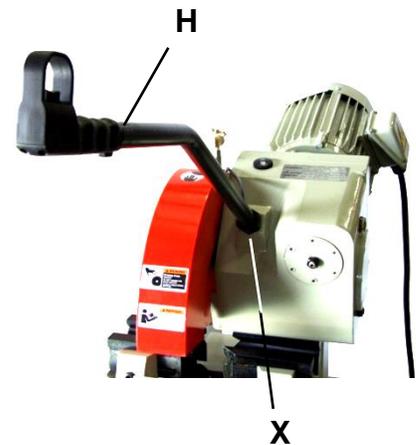
### Attach the bar stop to the stand.

1. Insert the threaded end of the long rod (V) into the side of the stand. (Can be mounted on left side or right side.)
2. Turn clockwise (cw) until snug, making sure graduated scale can be easily read.
3. Using a wrench, turn hex jam nut (W) clockwise (cw) until tight.



### Attach the feed handle to the head assembly.

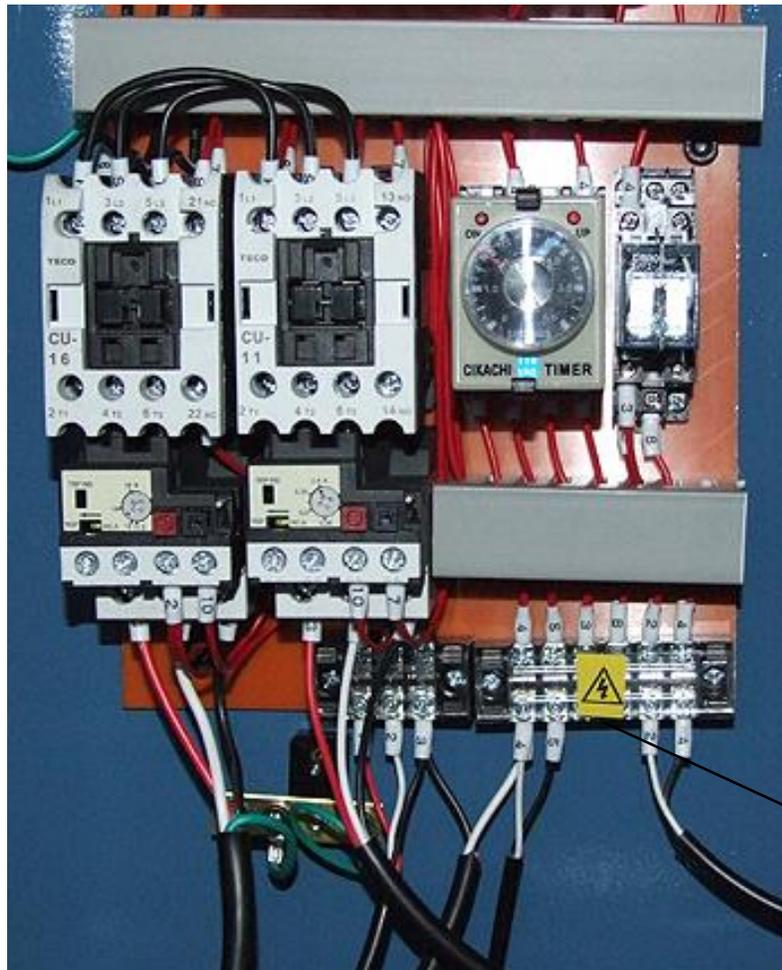
1. Insert the threaded end of the feed handle (H) into the handle receiver block (X).
2. Turn the handle clockwise (cw) until tight, so that the trigger switch points toward the motor.
3. Tighten jam nut.





### **Connect feed handle cable to machine stand.**

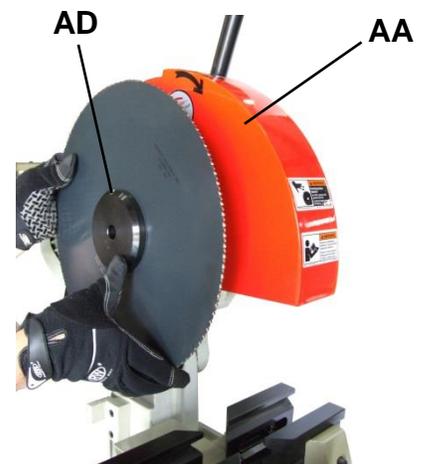
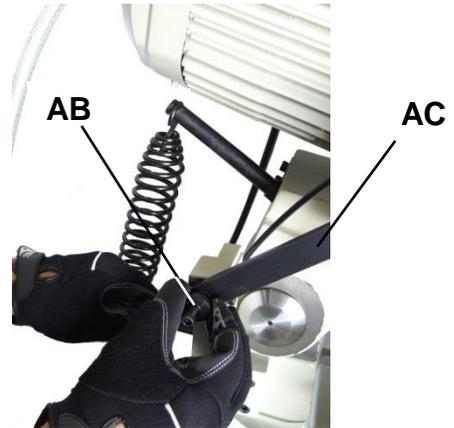
1. Route the trigger cable toward and alongside of the motor cable.
2. Locate the open port (Y) on the rear side of the machine stand, upper left corner.
3. Remove the retaining nut from the strain relief and route the wires into the electrical enclosure.
4. Install the strain relief nut and secure in place.
5. Route the wires toward the terminal strip (T).
6. Connect the wires to the matching terminal wire numbers.





### **Mounting the saw blade (Sold Separately)**

1. Rotate the pivot guard (AA) by pulling back on the knurled washer (AB) which releases the rocking hook (AC).
2. Remove the lock bolt (through the access hole), by turning clockwise (cw). Remove blade washer (AD) from the spindle.
3. Align blade washer (AD) to saw blade and mount to spindle.
4. (Note: Be sure teeth point in the direction as indicated by the arrow on the guard.)
5. Tighten lock bolt counterclockwise (ccw). (It has a left handed thread).
6. Rotate pivot guard (AA) and reconnect rocking hook (AC).
7. Check for proper blade rotation.





## ELECTRICAL

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

**⚠ 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.

### Motor Specifications

Your tool is wired for 220 volt, 60Hz alternating current. Before connecting the tool to the power source, make sure the machine is cut off from power source.

### Considerations

- Observe local electrical codes when connecting the machine.
- The circuit should be protected with a time delay fuse or circuit breaker with a amperage rating slightly higher than the full load current of machine.
- A separate electrical circuit should be used for your tools. 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 tool. 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 tool 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 a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
- Repair or replace damaged or worn cord immediately.

### **Extension Cord Safety**

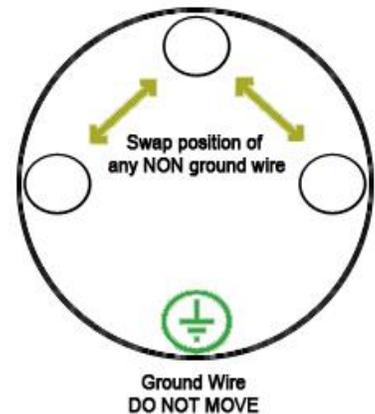
Extension cord should be in good condition and meet the minimum wire gauge requirements listed below:

AMP RATING	LENGTH		
	25ft	50ft	100ft
0-6	16	16	16
7-10	16	16	14
11-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No
WIRE GAUGE			

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

### **Power cord connection:**

- Connect the power wires to a non-fused breaker in the off position.
- Once hooked up, turn on the power supply and start the cold saw motor.
- Check that the saw blade is running in the direction as indicated by the arrowhead on the blade guard. If not, cut the power to the machine. Swap the position of any two of the three power wires; but DO NOT change the position of the green grounding wire!





## MACHINE ADJUSTMENTS

**⚠ WARNING:** Make sure the electrical disconnect is OFF before working on the machine.  
Maintenance should be performed on a regular basis by qualified personnel.  
Always follow proper safety precautions when working on or around any machinery.

### Disk Head Adjustment

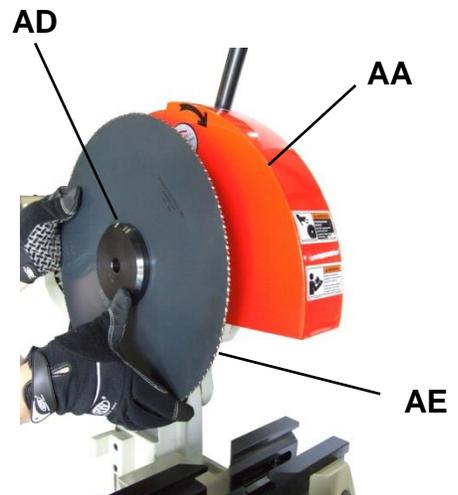
If excessive axial play is found on the pivot hinge, it will be necessary to tighten the screws.



**Note:** DO NOT overtighten.

### Saw Blade Replacement

1. Rotate the pivot guard (AA) by pulling back on the knurled washer (AB) which releases the rocking hook (AC).
2. Place a block of wood into the vise.
3. Lower the machine head to rest the saw blade on the block of wood.
4. Using a hex wrench, remove the lock bolt in a clockwise (cw) direction. (It has a left-handed thread).
5. Remove the blade (AE) and blade washer (AD) from the spindle.
6. Remove the blade washer from the saw blade.
7. Place blade washer (AD) onto the replacement blade and follow above procedure in reverse.
8. Check for proper blade rotation.



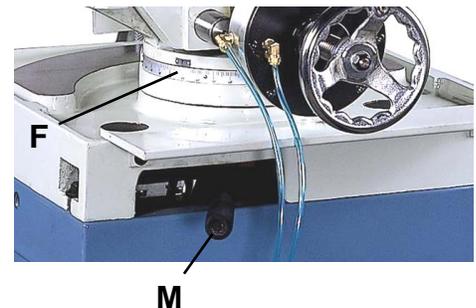


## OPERATION

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

### Miter Angle

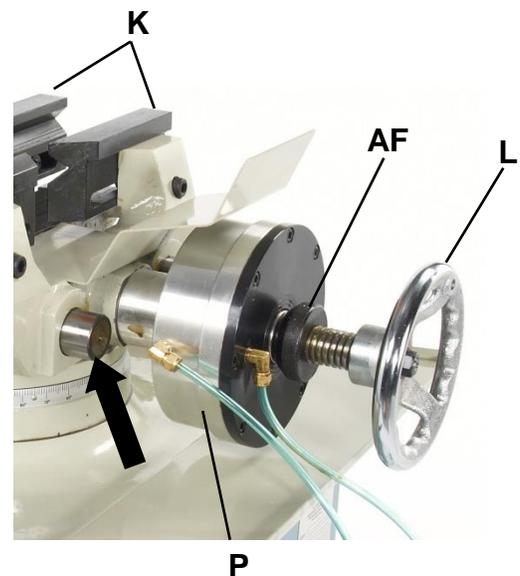
1. Use the miter lock lever (M) to release the disk head assembly.
2. Rotate the disk head assembly to the correct miter angle.
3. Check the miter angle on the angle indicator (F) (below the vise).
4. Use the miter lock lever (M) to lock in the angle.



**⚠ IMPORTANT:** Verify 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.

### Vise Operation

1. Use the hand wheel (L) to open (ccw) and close (cw) the vise jaws (K) for pieces that vary in width.
2. Press the footswitch to extend the piston.
3. Using the handwheel, load and secure the workpiece.
4. After securing the part in the vise, turn the locknut (AF) (ccw) until it is firmly tightened against the air cylinder (P).
5. To open the vise, press the yellow pushbutton. (This button is on a timer to allow the operator time to grasp the part for removal or to advance the part.)
6. Pressing the footswitch extends the front jaw to clamp the part.



**⚠ IMPORTANT:** DO NOT allow the vise base to open beyond the travel limits of the slide rails or the assembly may de-rail. (See arrow)

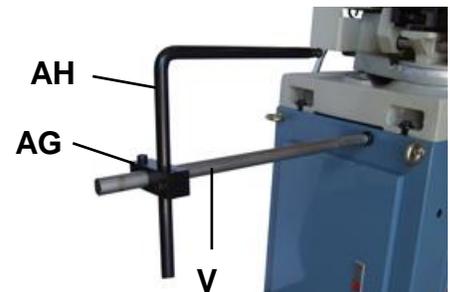


### **Loading Piece Part**

1. Setup vise jaws as described in Vise Operation.
2. Measure and mark off the length of material to be cut.
3. Slide the piece through the jaws so the scribed length mark lines up with the blade or disk.
4. Push the piece up against the back vise jaw.
5. Press the footswitch to clamp the piece.

### **Setting Cut Length**

1. Setting the cut length eliminates measuring duplicate pieces.
2. Measure and mark the length of material to be cut off.
3. Load the piece part.
4. Line up the cut.
5. Clamp the piece part.
6. Loosen the socket hex bolt at the base of the bar riser (AG).
7. Slide the bar riser (AG) along the long rod (V) so that the tip of stop bar (AH) touches the end of the piece part.
8. Tighten the socket hex bolt at the base of the bar riser.



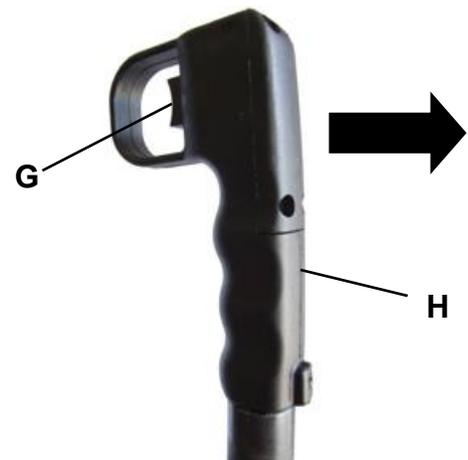
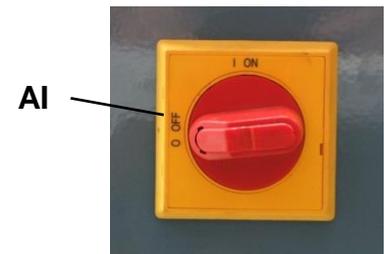
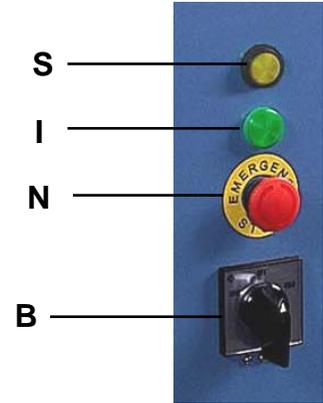
### **Using the stop bar**

1. Cut off the first length from the clamped piece part.
2. Press the yellow pushbutton to unclamp the piece part.
3. Slide the piece part forward until it reaches the tip of the stop bar (AH).
4. Press the footswitch to clamp the piece part
5. Proceed with the cutting cycle.



## 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. Turn ON the main disconnect switch (AI). The GREEN main power light (I) will be lit.
6. Adjust the coolant valve, located at the top of the blade guard.
7. Set speed with selector switch (B) (Low for ferrous metal) (High for non-ferrous metal).
8. Grasp the feed handle (H).
9. Press the trigger switch (G) to start blade motor and coolant pump motor.
10. Pull down the feed handle (H) applying a steady and constant pressure.
11. After cut-off, raise feed handle slowly.
12. Release the trigger switch (G) to stop the blade motor and coolant pump motor.
13. Press pushbutton (S) to open the front jaw (timed).
14. Remove or advance the piece part forward for next cut.
15. To turn off power to blade motor, turn the two-speed selector switch (B) to off.



is pulled.

**Note:** Coolant motor will still run when trigger

16. To stop machine in an emergency situation press the EMERGENCY STOP button (N). Before machine can be restarted, emergency stop button must be reset with a clockwise (cw) twist.



**Note:** Resetting E-Stop will not start the machine.

The Baileigh Industrial 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. Doing so will double the normal cutting time.



- 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.
- Always check that the workpiece is securely clamped and that long pieces are properly supported.
- DO NOT use a saw blade size that is outside the limits of the machines specifications.
- Immediately release the start / run trigger button if the saw blade should get stuck in a cut. Turn power off at the selector switch (located beneath the emergency stop button) before raising the machine head. Then open the vise and remove the workpiece. Check the blade teeth for damage. If any of the teeth are broken or missing replace the saw blade.
- The operator should stand in front of the machine using a single hand to grip the feed handle.
- Your machine is designed and manufactured to work smoothly and efficiently. Following proper maintenance instructions will help ensure this. Try and use original spare parts, whenever possible, and most importantly; DO NOT overload the machine or make any modifications.



## **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.



## **CHOOSING A SAW BLADE**

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 tothing. At least 3-6 teeth should be in contact with the material while cutting. Large solid or transverse sections require widely spaced tothing to allow for greater volume of chips and better tooth penetration. Soft materials or plastics such as light alloys, mild bronze, Teflon, wood, etc., require widely spaced tothing to avoid clogging.

Use the chart on the following page to help select the saw blade suitable for your application.



## BLADE SELECTION CHART

Tube Diameter	Wall Thickness	Blade Diameter - Metric (Normal Inch)						
		225 (9")	250 (10")	275 (10-3/4")	300 (12")	315 (12-1/2")	350 (14")	401.0 (16")
1/2"	.030"-.090"	220BW	240BW	280BW	300BW	300BW	320BW	340BW
1/2"	.090"-.150"	200BW	220BW	240BW	280BW	280BW	300BW	320BW
1"	.030"-.060"	220BW	240BW	280BW	300BW	300BW	320BW	340BW
1"	.060"-.090"	220BW	220BW	240BW	280BW	280BW	300BW	320BW
1"	.090"-.150"	180BW	220BW	220BW	240BW	240BW	280BW	300BW
1-1/2"	.030"-.060"	220BW	240BW	260BW	300BW	300BW	320BW	340BW
1-1/2"	.060"-.090"	200BW	220BW	240BW	280BW	280BW	300BW	320BW
1-1/2"	.090"-.150"	180BW	200BW	220BW	240BW	240BW	280BW	300BW
1-1/2"	.150"-.250"	140C	160C	180C	200C	220C	220C	240BW
2"	.030"-.060"	240BW	260BW	280BW	300BW	300BW	320BW	340BW
2"	.060"-.090"	180BW	200BW	220BW	240BW	240BW	280BW	320BW
2"	.090"-.180"	140C	160C	180C	220C	220C	220C	300BW
2"	.180"-.300"	120C	140C	160C	180C	180C	200C	240BW
2"	.300"-.500"	100C	110C	120C	140C	140C	160C	180C
2-1/2"	.030"-.060"	240BW	260BW	280BW	300BW	300BW	320BW	340BW
2-1/2"	.060"-.090"	200BW	220BW	240BW	260BW	260BW	280BW	300BW
2-1/2"	.090"-.150"	180BW	180C	180C	200C	200C	220C	240BW
2-1/2"	.150"-.250"	120C	140C	160C	180C	180C	200C	220C
2-1/2"	.250"-.400"	100C	110C	120C	140C	140C	160C	180C
2-1/2"	.400".500"	90C	100C	110C	120C	120C	140C	160C
3"	.030"-.060"			280BW	300BW	300BW	320BW	340BW
3"	.060"-.090"			240BW	260BW	260BW	280BW	300BW
3"	.090"-.150"			180C	200C	200C	220C	240BW
3"	.150".250"			160C	180C	180C	200C	220C
3"	.150"-.250"			120C	140C	140C	160C	180C
3"	.250"-.400"			100C	120C	120C	140C	160C
3-1/2"	.030"-.060"				300BW	300BW	320BW	340BW
3-1/2"	.060"-.090"				260BW	260BW	280BW	300BW
3-1/2"	.090"-.150"				200C	200C	220C	240BW
3-1/2"	.150".250"				180C	180C	200C	220C
3-1/2"	.150"-.250"				140C	140C	160C	180C
3-1/2"	.250"-.400"				120C	120C	140C	160C

For Stainless Steel: Recommended Teeth X 1.2 approx.

For Non-Ferrous Materials: Recommended Teeth X .75 Approx

SOLID Diameter	Blade Diameter - Metric (Normal Inch)						
	225 (9")	250 (10")	275 (10-3/4")	300 (12")	315 (12-1/2")	350 (14")	401.0 (16")
1/4"-3/4"	180BW	180C	200C	220BW	220BW	280BW	320BW
3/4"-1-1/4"	120C	120C	140C	180C	180C	220BW	240BW
1-1/4"-1-3/4"	100C	100C	120C	140C	140C	180C	200C
1-3/4"-2-1/4"	80C	80C	100C	120C	120C	120C	140C
2-1/4"-2-3/4"	60C	60C	70C	80C	80C	80C	90C
2-3/4"-3-1/2"				60C	60C	60C	80C

Baileigh Industrial offers a wide selection of tooth styles for various cutting applications. Please phone Baileigh Industrial at (920.684.4990) or fax to (920.684.3944) to have one of our technicians assist you in selecting the proper cold saw blades for your cutting applications.



## LUBRICATION AND MAINTENANCE

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

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

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

### Daily Maintenance

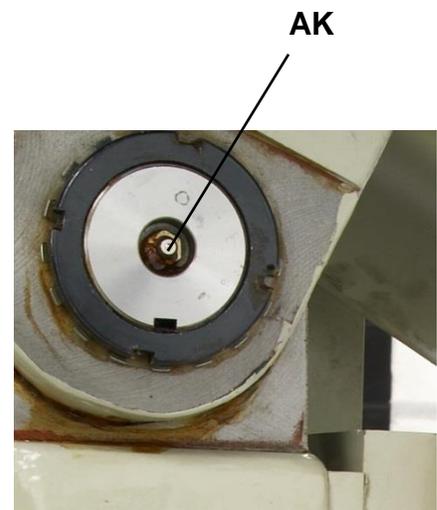
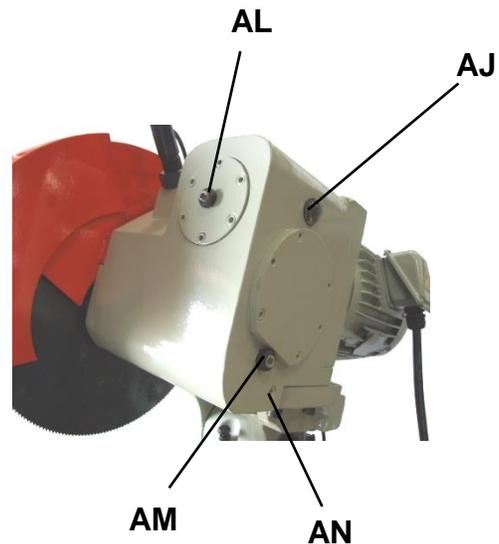
- Do a general cleaning by removing dust and metal chips from the machine.
- Top off the coolant tank. (80% of full tank capacity)
- Clean both filter screens located on the saw basin as often as necessary.
- Inspect the disk/saw blade for wear.
- Check that the blade guard, shields, and emergency stop are in good working order.
- When through using machine, raise the head to reduce stress on the return spring.

### Weekly Maintenance

- Check the oil fill window (AJ) It is located on the side of the saw head and should be at least half full at all times.
- Thoroughly clean the machine including the coolant tank. (See accessing and cleaning the cooling system).
- Clean and grease the vise screw and sliding surfaces.
- Clean the guard housing for the disk/saw blade.
- Sharpen the saw teeth.

### Monthly Maintenance

- Check that all screws on the motor, the pump, the vise jaws, and the guard are tight and secure.
- Check that the saw guard is operating properly.
- There is a grease fitting (AK) on the side of the saw head pivot for lubricating the saw head joint. Using a grease gun inject grease through this fitting.

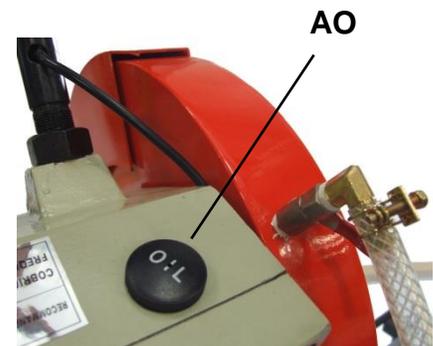




- Check the gear backlash. After the machine has been in use for a long period, the gears inside the saw head may become worn slightly, resulting in a clearance between the gears. Before checking the gear backlash be sure to turn and lock out main power source to the saw. Checking the gear backlash can be done by shifting the saw blade up and down and side to side. If a chatting occurs then the backlash needs to be adjusted. To do so loosen the backlash adjustment fix nut and turn the backlash adjustment screw (AL) or (AM) until the chatter is gone. Tighten up the fix nut after adjustment is completed.

### Gearbox Oil Replacement

- 1st Time: After initial operation of 30 hours.
  - 2nd Time: After 1 month of operation
  - 3rd Time: Every 3 months of operation
1. To change the oil you need to place a suitable container under the remove the oil drain plug (AN).
  2. Remove the oil drain plug and the oil fill cap (AO) located on the top of the gearbox. Be sure the gearbox is completely empty before putting the oil drain plug back in.
  3. Fill the gearbox with fresh oil until it reaches the center of the oil sight window.



**!** **IMPORTANT:** Used oil products must be disposed of in a proper manner following your local regulations.



### **Accessing and Cleaning the Coolant System**

1. Remove the chip basket (E) from the tank and clean thoroughly.
2. Drain coolant from both ends of tank by removing drain plugs (Z)
3. Wash out the dirt and debris from tank.
4. Replace both drain plugs.
5. Re-fill tank with coolant solution.
6. Replace chip basket.



### **Oils for Lubricating Coolant**

Any 10:1 (water to coolant) solution will work, however we recommend Baileigh B-Cool 20:1 (water to coolant) biodegradable metal cutting fluid. It has excellent cooling and heat transfer characteristics, is non-flammable, and extends blade and machine life. Each gallon of concentrate makes 21 gallons of coolant.

### **Storing Machine for Extended Period of Time**

If the Cold Saw is to be inactive for a long period of time, prepare the machine as follows:

1. Detach the plug from the electrical supply panel.
2. Release the head return spring.
3. Empty and clean the coolant tank.
4. Clean and grease the machine.
5. Cover the machine



### **LUBRICATION OIL TABLE 1**

**Above 82°F (Select from the products listed below)**

Brand	Hydraulic Tank Oil	Gear Oil	Slideway Oil
Mobil	DTE XL 68, DTE 16M	Mobilgear 634, SHC 460	Mobil Vactra Oil No. 4
Shell	Shell Tellus Oil 68	Shell Omala Oil 460	Shell Tonna Oil T220
Exxon	Nuto H 68	Spartan EP 460	Febis K220

Brand	Hydraulic Cylinder Oil	Air Lube System	Grease Fittings
Mobil	DTE 21	DTE 21	Mobil UX2 EPO
Shell	Shell Carnea Oil 10	Shell Carnea Oil 10	Aluania Greaser 1
Exxon	Spinesso 10	Spinesso 10	Ronex MP Beacon 2

### **LUBRICATION OIL TABLE 2**

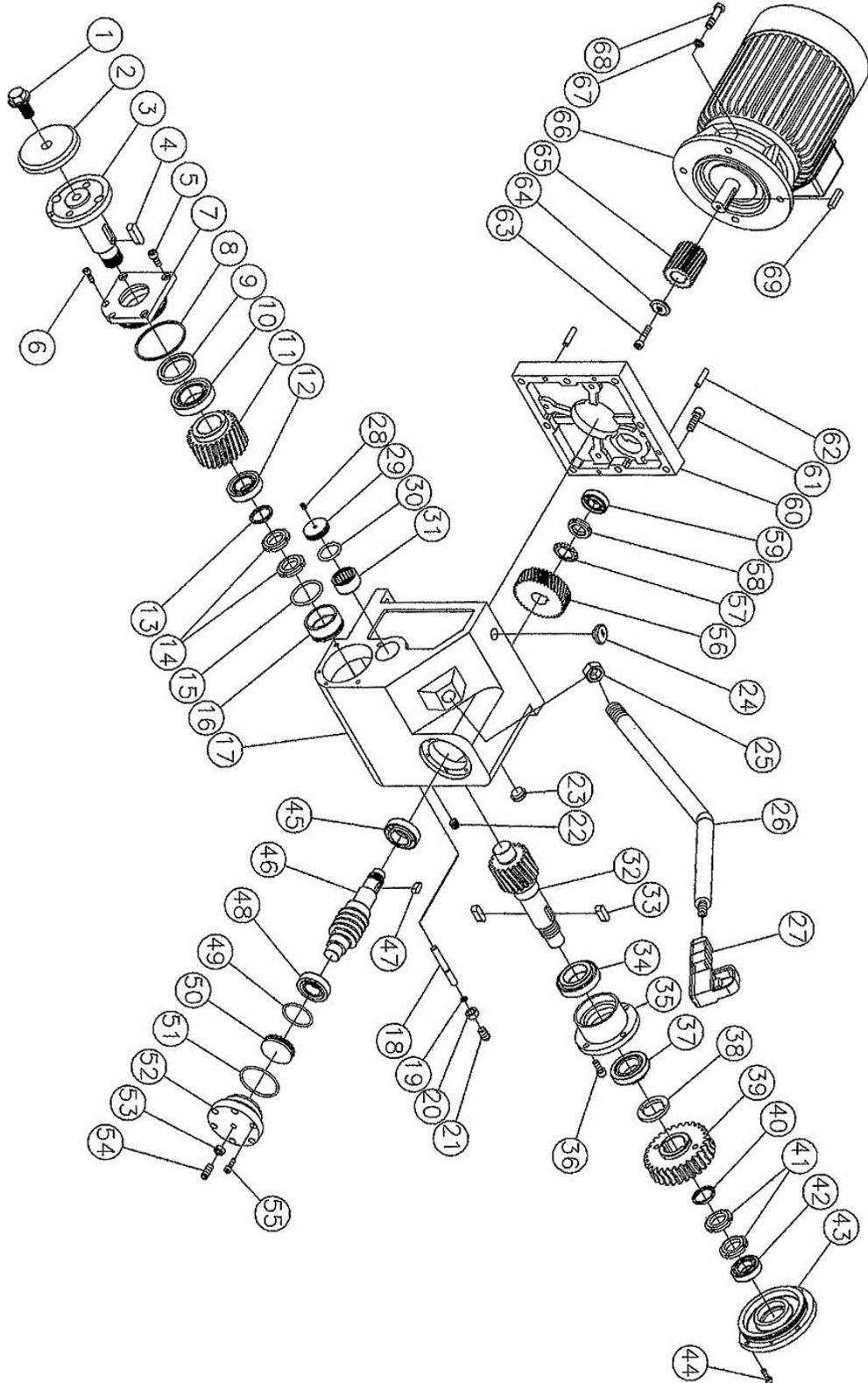
**Below 82°F (Select from the products listed below)**

Brand	Hydraulic Tank Oil	Gear Oil	Slideway Oil
Mobil	DTE XL 46, SHC 525	Mobilgear 630, SHC 220	Mobil Vactra Oil No. 4
Shell	Shell Tellus Oil 46	Shell Omala Oil 220	Shell Tonna Oil T220
Exxon	Nuto H 46	Spartan EP 220	Febis K220

Brand	Hydraulic Cylinder Oil	Air Lube System	Grease Fittings
Mobil	DTE 21	DTE 21	Mobil UX2 EPO
Shell	Shell Carnea Oil 10	Shell Carnea Oil 10	Aluania Greaser 1
Exxon	Spinesso 10	Spinesso 10	Ronex MP Beacon 2



**PARTS DIAGRAM - A**





**Parts List - A**

Item	Description	Spec.	Qty.
1	Saw Blade Lock Screw	M16-13 x 32 (LHT)	1
2	Blade Washer		1
	Saw Blade		1
3	Spindle		1
4	Key	12x8x40	1
5	Hex Socket Setscrew	M8x20	3
6	Hex Socket Setscrew	M6x20	2
7	Spindle Front Cap		1
8	"O"-Ring	G80	1
9	Oil Seal	TC45629	1
10	Bearing	32008	1
11	Worm Gear		1
12	Bearing	32006	1
13	Washer		1
14	Nut	M30xP1.5	2
15	"O"-Ring	G50	1
16	Bearing Case		1
17	Saw Head		1
18	Collar		1
19	"O"-Ring	P7	1
20	Hex. Socket Set Screw	M12x35	1
21	Nut	M12	1
22	Plug	PT1/4	1
23	Oil Window		1
24	Oil Cap	3/4"x18	1
25	Nut	M24xP1.5	1
26	Handle Bar	S20C	1
27	Trigger Assembly		1
28	Hex Socket Set Screw	M6x6	1
29	Hole Plug		1
30	"O"-Ring	G35	1
31	Bearing	TA3020	1
32	Worm Gear		1



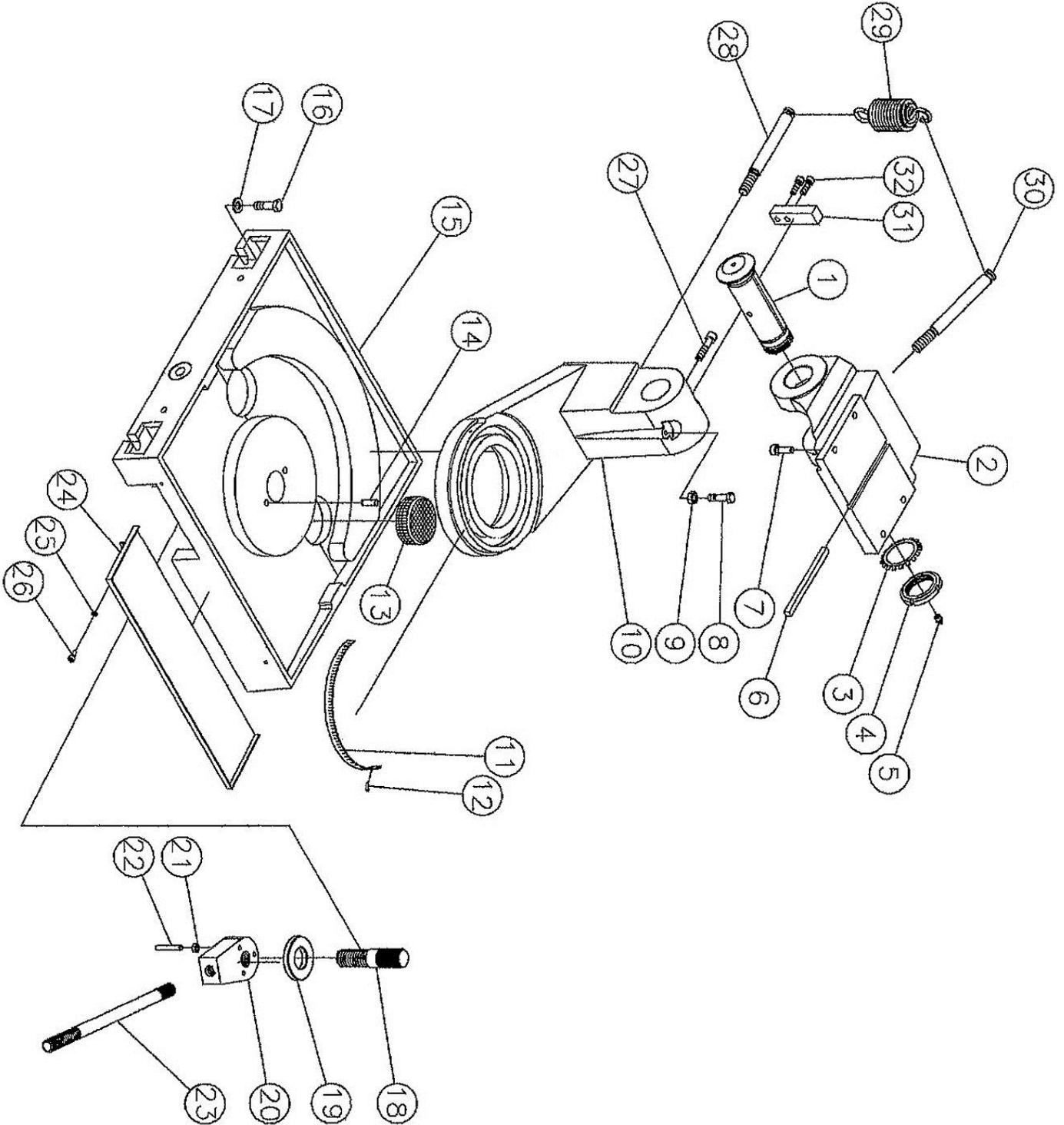
Item	Description	Spec.	Qty.
33	Key	10x8x30	1
34	Bearing	32008	1
35	Bearing Case		1
36	Hex. Socket Head Screw	M8x20	4
37	Bearing	32007	1
38	Washer		1
39	Helical Gear		1
40	Washer		1
41	Nut	M30xP1.5	2
42	Bearing	6005	1
43	Spindle Rear Cap		1
44	Hex. Socket Head Screw	M6x16	4
45	Bearing	32006	1
46	Worm		1
47	Key	8x8x20	1
48	Bearing	30205	1
49	"O"-Ring	G45	1
50	Bearing Case		1
51	Hex. Socket Head Screw	M6x20	6
52	Bearing Seat		1
53	Nut	M10	1
54	Hex. Socket Set Screw	M10x25	1
55	Hex. Socket Set Screw	M10x25	6
56	Worm Gear	(40T)L (29T)H	1
57	Washer		1
58	Nut	M25xP1.5	2
59	Bearing	6004Z	1
60	Saw Head Top Cover		1
61	Hex. Socket Head Screw	M10x40	1
62	Pin	8x15 dia.	1
63	Hex. Socket Head Screw	M8x15	1
64	Washer		1
65	Motor Gear Wheel	(22T)L (33T)H	1



Item	Description	Spec.	Qty.
66	Motor	4/3 HP 2/4P	1
67	Spring Washer	10 dia.	4
68	Hex. Socket Screw	M10x30	4
69	Key		1



**PARTS DIAGRAM - B**



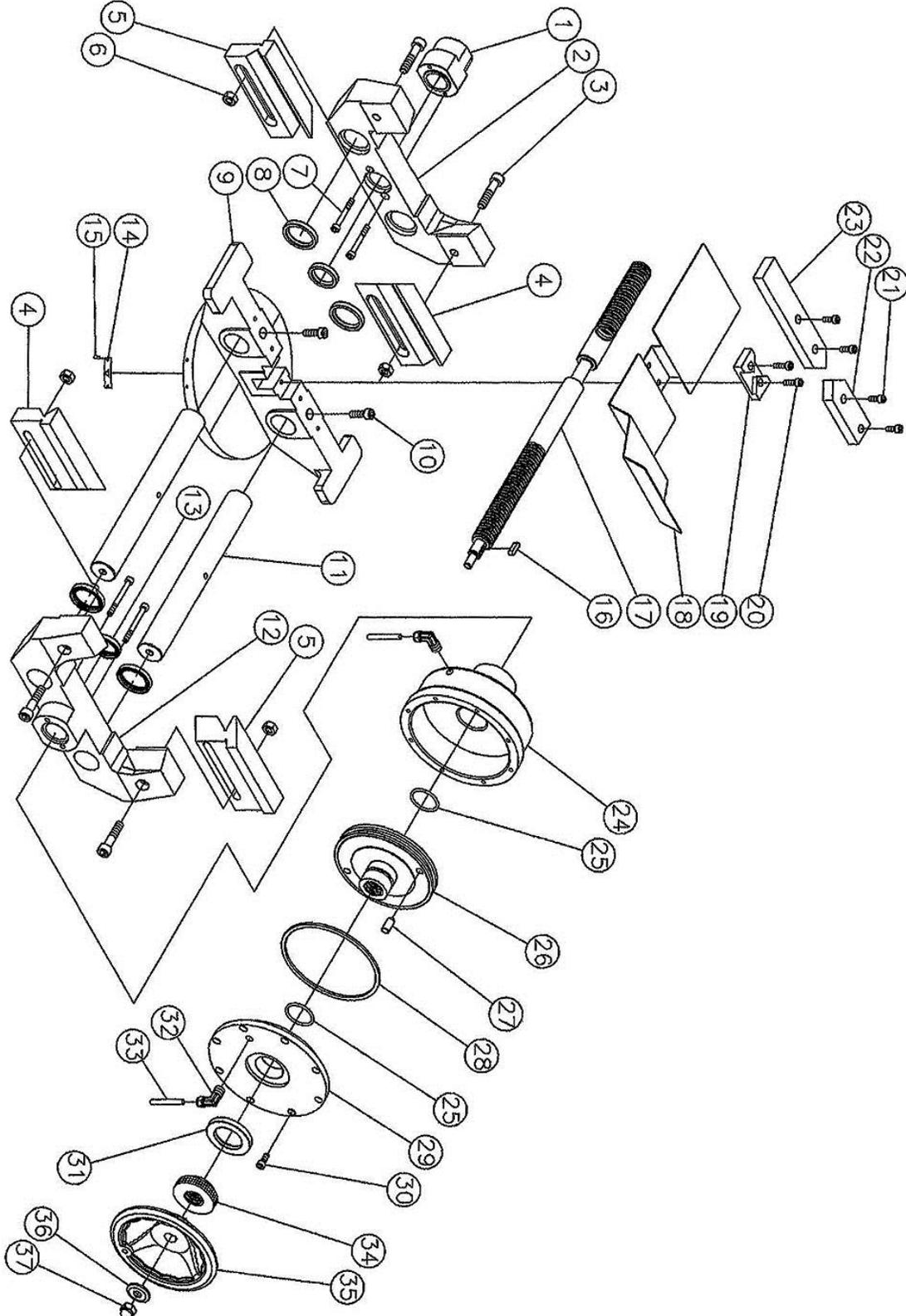


**Parts List - B**

Item	Description	Spec.	Qty.
1	Rocking Arm Shaft		1
2	Main Shaft Bracket		1
3	Plum Washer	50 dia.	1
4	Nut	M50xP1.5	1
5	Grease Nipple		1
6	Key	10x10x80	1
7	Hex. Screw	M10x30	4
8	Hex. Bolt	M8x40	1
9	Screw Nut	M8	1
10	Rotary Table Post		1
11	Rivet		4
12	Angle Scale		1
13	Filter Screen		1
14	Locating Pin		2
15	Base		1
16	Hex Bolt	M12	4
17	Washer		4
18	Locking Thread Rod		1
19	Locating Plate		1
20	Lock Nut		1
21	Hex. Socket Fixing Screw	M8x50	3
22	Screw Nut	M8	3
23	Locking Lever		1
23A	Plastic Knob		1
24	Cylinder Splash Guard		1
25	Washer	M6	2
26	Hex Screw	M6x16	2
27	Hex Bolt	M12	1
28	Lower Spring Mounting Stud		1
29	Spring	SWPB	1
30	Upper Spring Mounting Stud		1
31	Block		1
32	Hex. Socket Head Screw		2



## PARTS DIAGRAM - C





**Parts List - C**

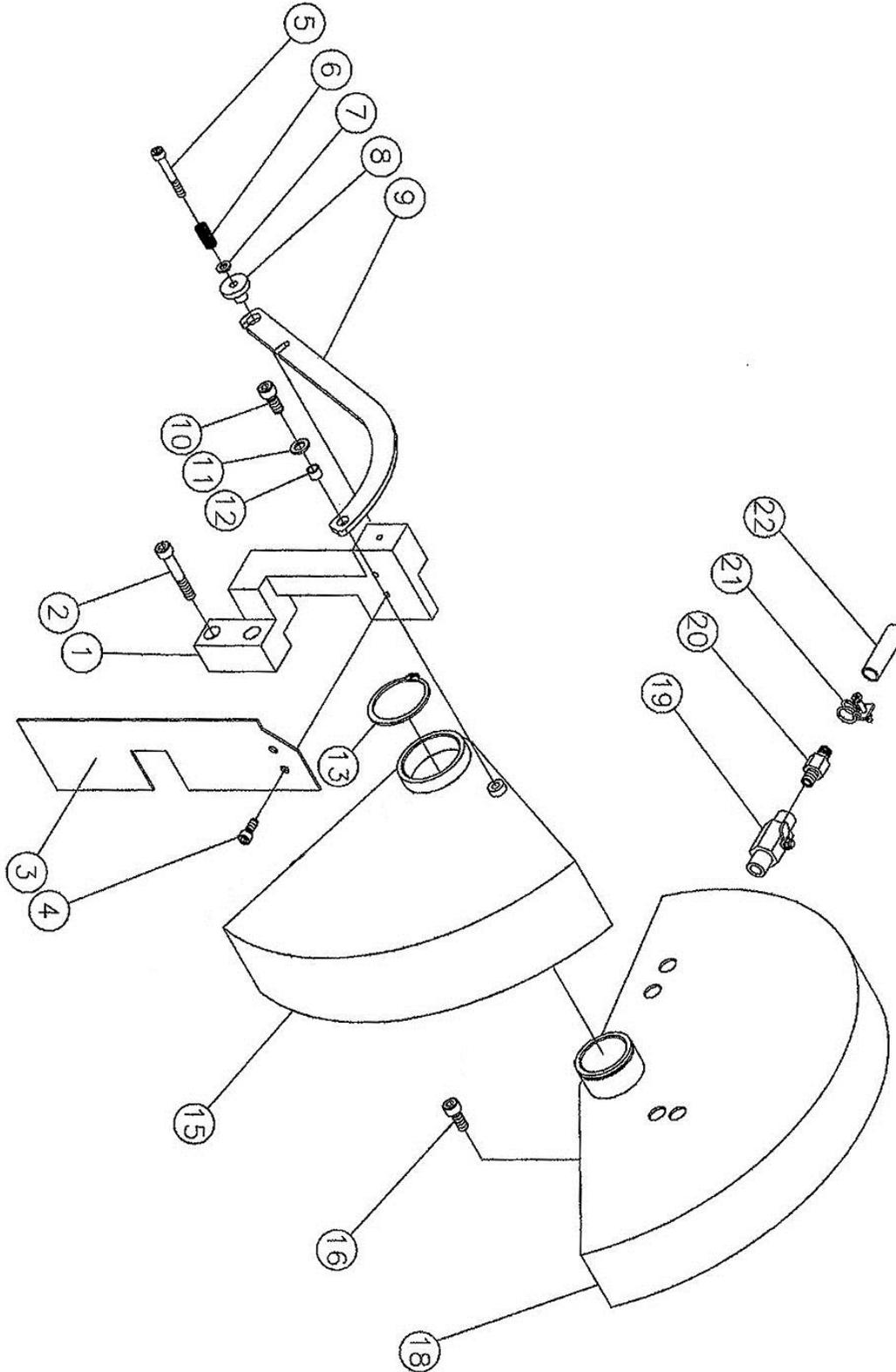
Item	Description	Spec.	Qty.
1	Nut		1
2	Vise Base		1
3	Hex Screw	M10x45	4
4	Right Clamp Jaw		2
5	Left Clamp Jaw		2
6	Nut	M10	4
7	Hex. Socket Head Screw	M6x60	4
8	Oil Seal – Slide Rail	VC35455	4
9	Vise Base		1
10	Socket Head Screw	M8x25	2
11	Sliding Rail		2
12	Vise Base		1
13	Oil Seal – Lead Screw	TC28387	2
14	Instruction Plate		1
15	Rivet		2
16	Two-Head Half Round Key	6x6x20	1
17	Lead Screw		1
18	Screw Splash Guard		1
19	Pressure Plate		1
20	Hex Socket Head Screw	M6x20	2
21	Hex. Socket Head Screw	M6x16	4
22	Press Rod		1
23	Press Rod		1
24	Cylinder		1
25	“O” Ring	G35	2
26	Piston		1
27	Piston Dowel		2
28	“O” Ring	P130	1
29	Piston Cylinder		1
30	Hex. Socket Head Screw	M6x12	8
31	Oil Seal	40626	1
32	Adapter	1/8” NPT	2
33	Air Tubing		2



Item	Description	Spec.	Qty.
34	Adjusting Screw Nut		1
35	Vise Hand Wheel		1
36	Washer	M10	1
37	Hex. Head Nut	M10	1



**PARTS DIAGRAM - D**



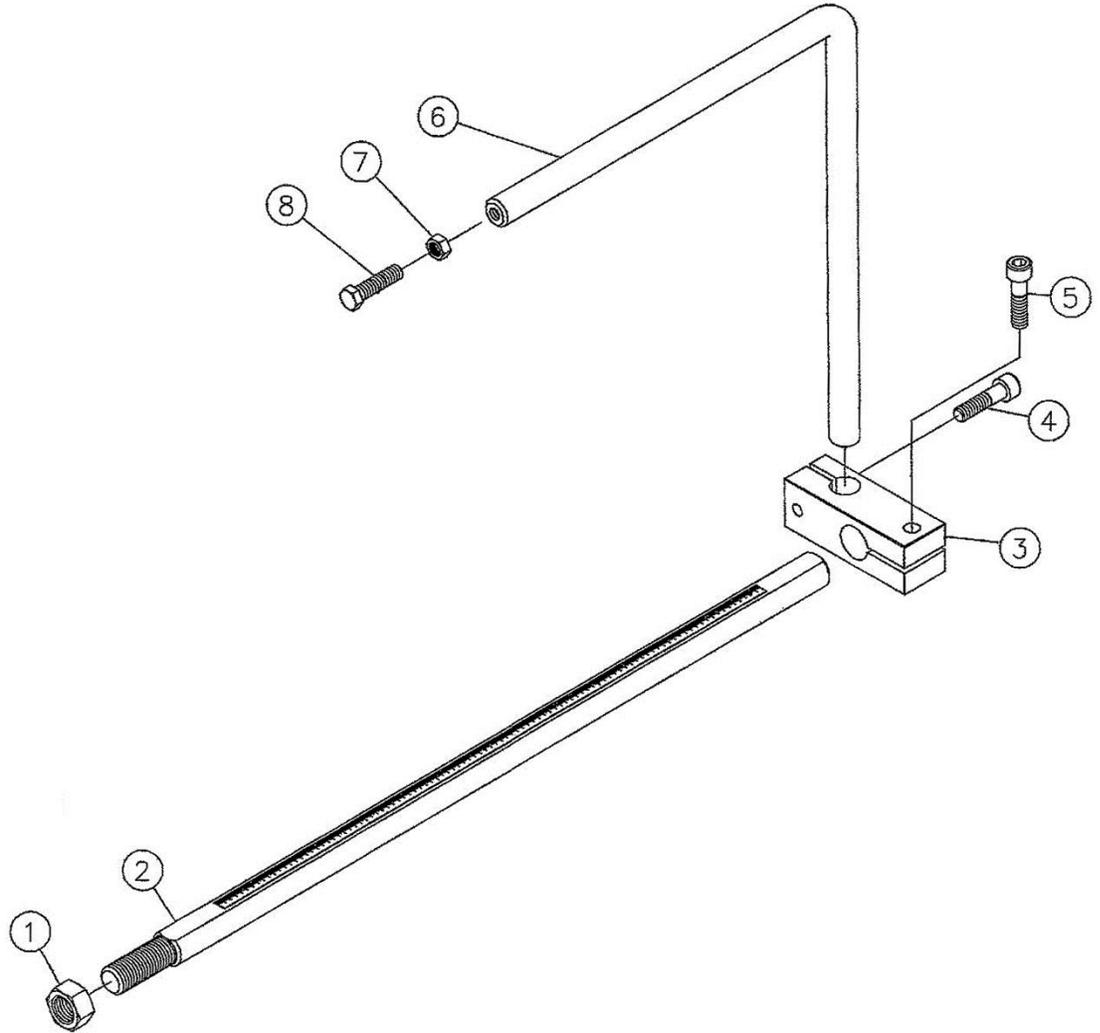


**PARTS List - D**

Item	Description	Spec.	Qty.
1	Rod Base		1
2	Socket Head Screw		1
3	Back Splash		1
4	Hex Screw		1
5	Hex Screw		1
6	Spring		1
7	Washer		1
8	Bushing		1
9	Pulling Rod		1
10	Hex Screw		1
11	Washer		1
12	Bushing		1
13	Retaining Ring		1
15-18	Blade Guard	CS350M-Blade Guard	1
16	Socket Head Screw		2
19	Coolant Valve		1
20	Bayonet Fitting		1
21	Hose Clamp		1
22	Coolant Hose		1



**PARTS DIAGRAM - E**

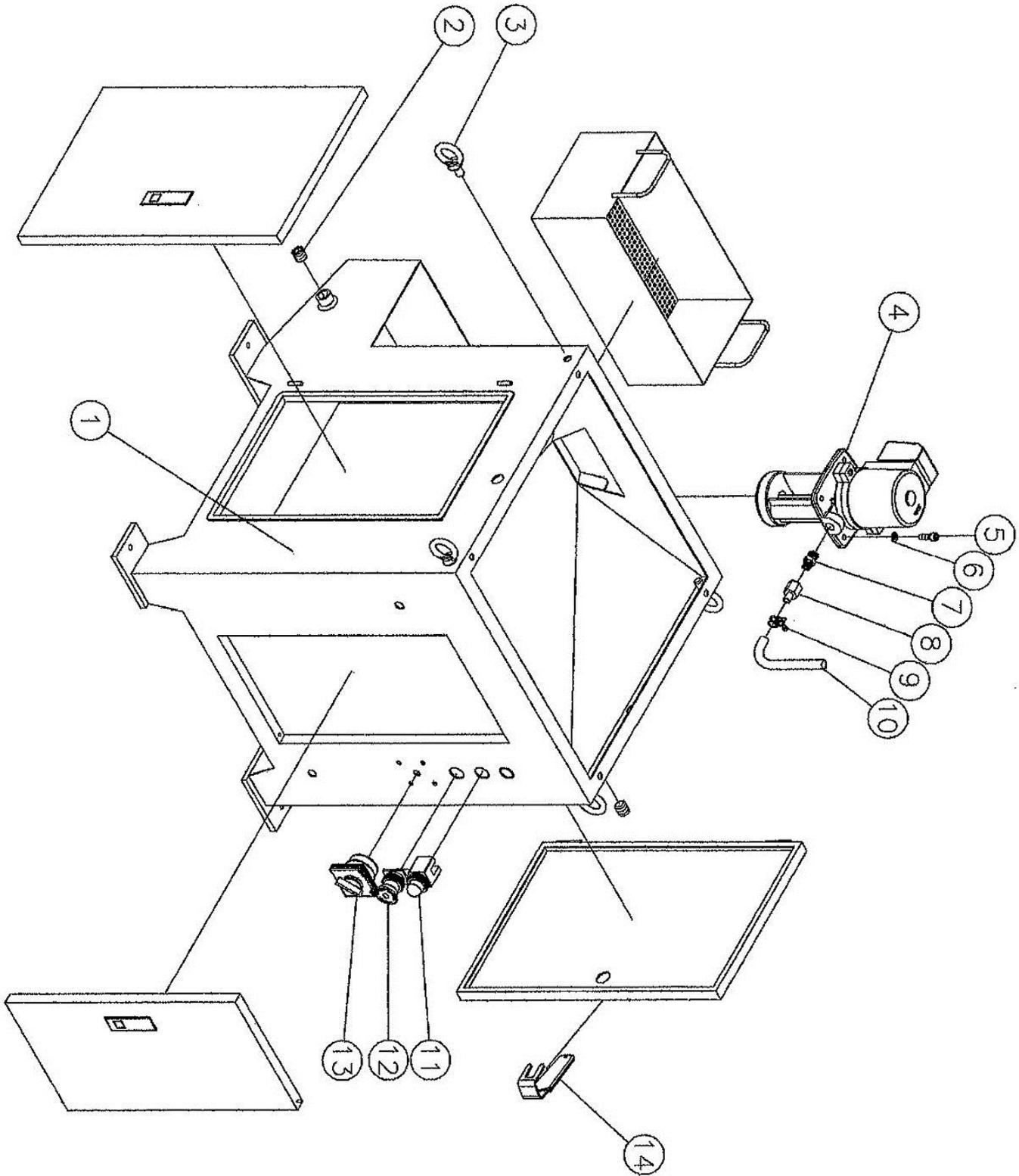


**PARTS List - E**

Item	Description	Spec.	Qty.
1	Hex Nut	M20xP2.5	1
2	Rule Gauge Shaft with Scale	S20C	1
3	Stopper Arm	FC20	1
4	Socket Head Screw	M6x25	1
5	Socket Head Screw	M10x45	1
6	Stopper	S20C	1
7	Hex Nut	M10xP1.5	1
8	Hex Bolt	M10x35	1



**PARTS DIAGRAM - F**



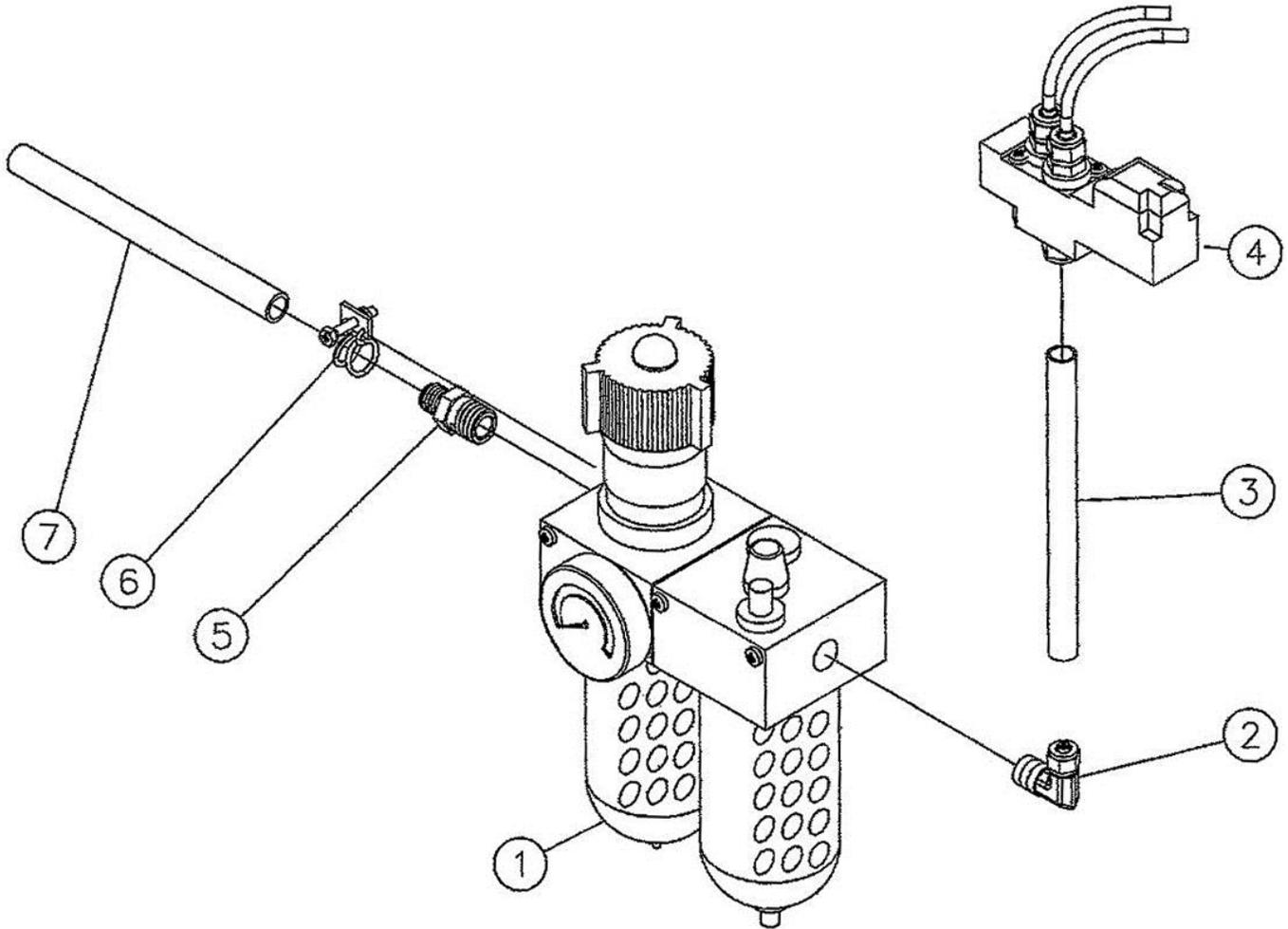


**Parts List - F**

Item	Description	Spec.	Qty.
1	Frame		1
2	Pipe Plug, Coolant Drain		2
3	Machinery Eye Bolt	1/2"D x 1-1/2"SL (#25), WLL: 2600 lbs. (1180kg)	4
	Chip / Filings Basket		1
4	Coolant Pump		1
5	Hex. Socket Head Screw		4
6	Washer		4
7	Tube Connector		1
8	Bayonet Fitting		1
9	Hose Clamp		1
10	Flexible Tube		1
11	Switch		1
12	Switch		1
13	Switch		1
14	Lock Lever		1



**PARTS DIAGRAM - G**

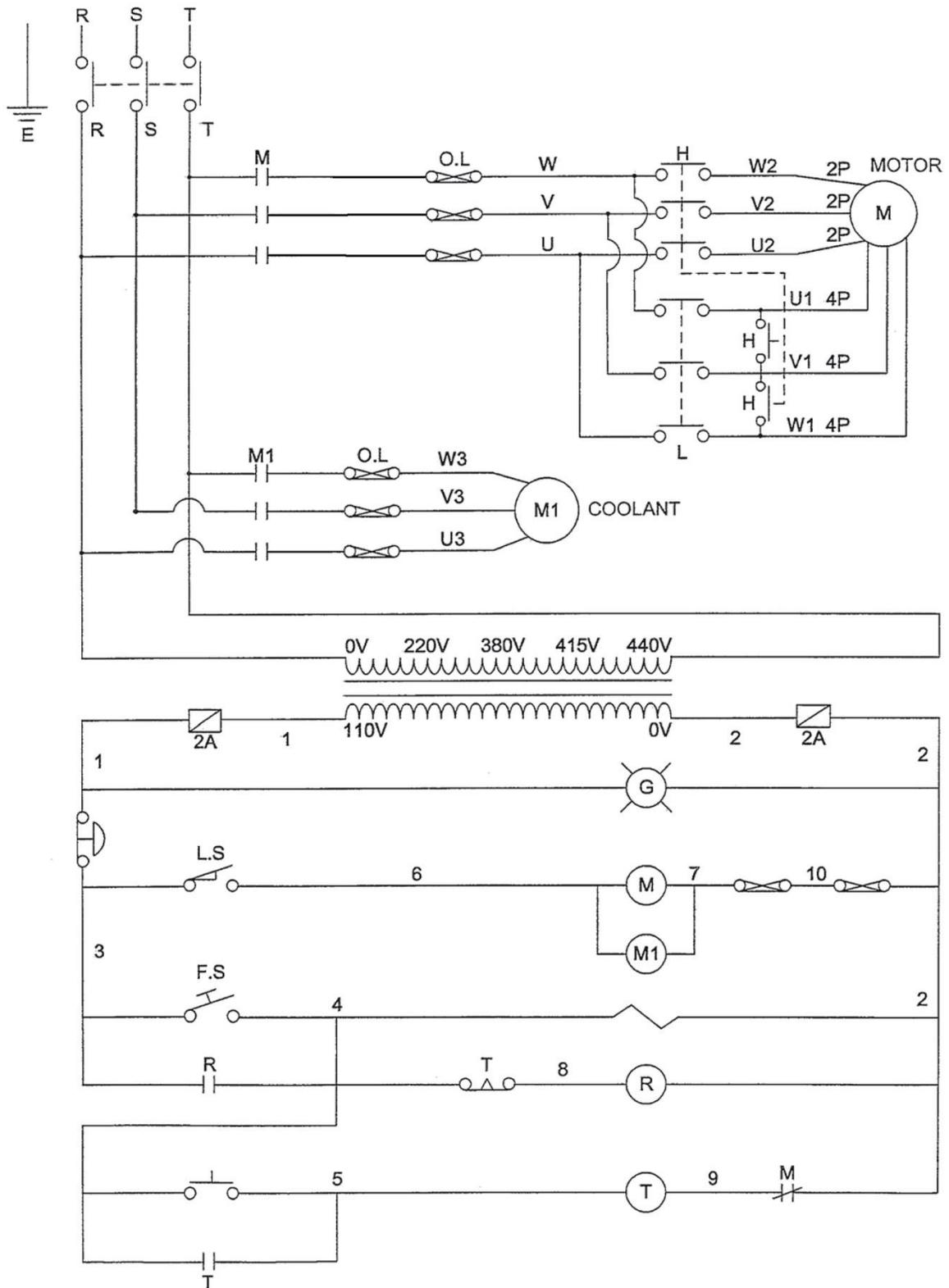


**Parts List - G**

Item	Description	Spec.	Qty.
1	Filter / Regulator / Lubricator Unit	3/8"	1
	Pressure Gauge		1
2	90° Elbow		1
3	Flexible Air Tubing		1
4	Solenoid Valve		1
5	Bayonet Fitting	3/8"	1
6	Hose Clamp	3/8"	1
7	Flexible Air Tubing		1

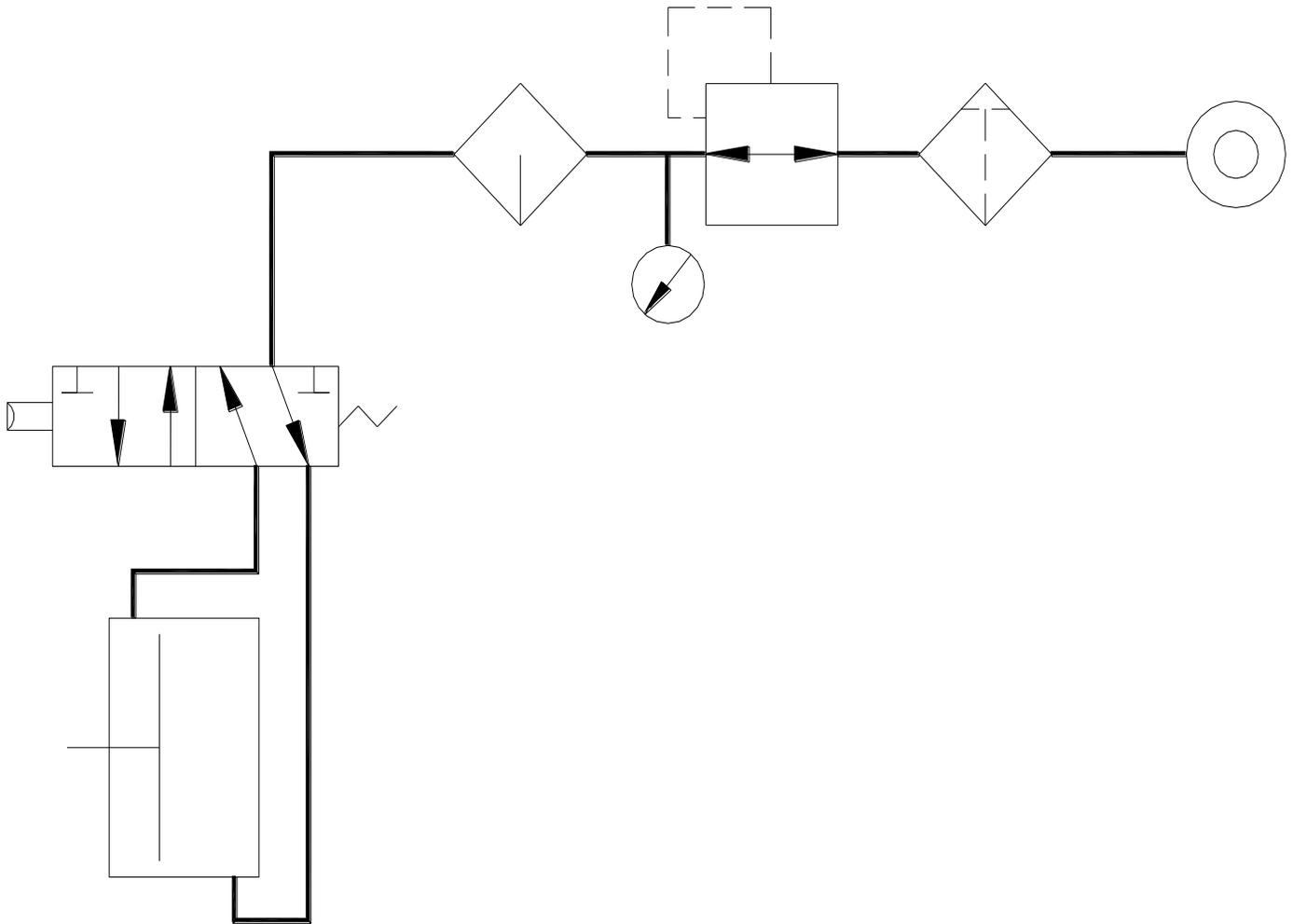


# ELECTRICAL SCHEMATIC





**PNEUMATIC CIRCUIT DIAGRAM**

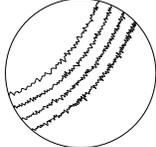




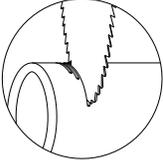
## TROUBLESHOOTING

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

FAULT	PROBABLE CAUSE	REMEDY
<p>TOOTH BREAKAGE</p> 	<p>Too fast advance</p> <p>Wrong cutting speed</p> <p>Wrong tooth pitch</p> <p>Low quality disk</p> <p>Ineffective gripping of the part in the vise.</p> <p>Previously broken tooth left in the cut.</p> <p>Cutting resumed on a groove made previously.</p> <p>Insufficient lubricating coolant or wrong coolant.</p> <p>Sticky accumulation of material on the disk.</p>	<p>Decrease advance, exerting less cutting pressure.</p> <p>Change disk speed and/or diameter.</p> <p>Choose a suitable disk.</p> <p>Use a better quality disk.</p> <p>Check the gripping of the part.</p> <p>Accurately remove all the parts left in.</p> <p>Make the cut elsewhere, turning the part.</p> <p>Check the level of the liquid in the tank. Increase the flow of lubricating coolant, checking that the hole and the liquid outlet pipe are not blocked.</p> <p>Check the blend of lubricating coolant and choose a better quality disk.</p>
<p>PREMATURE DISK WEAR</p> 	<p>Wrong running in of the disk.</p> <p>Wrong cutting speed.</p>	<p>When cutting for the first time run in the tool, making a series of cuts at a low advance speed, spraying the cutting area with lubricating coolant.</p> <p>Change disk speed and / or diameter.</p>

	<p>Unsuitable tooth profile.</p> <p>Wrong tooth pitch.</p> <p>Low quality disk.</p> <p>Insufficient lubricating refrigerant.</p>	<p>Choose a suitable disk.</p> <p>Choose a suitable disk.</p> <p>Use a better quality disk.</p> <p>Check the level of the liquid in the tank. Increase the flow of lubricating coolant, checking that the hole and the liquid outlet pipe are not blocked.</p>
<p>CHIPPED DISK</p> 	<p>Hardness, shape or flaws in the material</p> <p>Wrong cutting speed.</p> <p>Wrong tooth pitch.</p> <p>Vibrations</p> <p>Disk incorrectly sharpened.</p> <p>Low quality disk.</p> <p>Incorrect emulsion of the lubricating coolant</p>	<p>Reduce the cutting pressure and/or the advance.</p> <p>Change disk speed and/or diameter.</p> <p>Choose a suitable disk.</p> <p>Check gripping of the part.</p> <p>Replace the disk with one that is more suitable and correctly sharpened.</p> <p>Use a better quality disk.</p> <p>Check the percentage of water and oil in the emulsion.</p>
<p>RIDGES ON THE CUTTING SURFACE</p> 	<p>Ineffective gripping of the part in the vise.</p> <p>Too fast advance.</p> <p>Disk teeth are worn.</p> <p>Insufficient lubricating coolant.</p>	<p>Check the gripping of the part.</p> <p>Decrease advance, exerting less cutting pressure.</p> <p>Sharpen the tool.</p> <p>Check the level of the liquid in the tank. Increase the flow of lubricating coolant, checking that the hole and the liquid outlet pipe are not blocked.</p>



	Toothing does not unload shavings well.	Choose a blade with a larger tooth pitch that allows better unloading of shavings and that holds more lubricating coolant.
<p>CUT OFF THE STRAIGHT</p> 	<p>Too fast advance.</p> <p>Ineffective gripping of the part in the vise.</p> <p>Disk head off the straight.</p> <p>Disk sides differently sharpened.</p> <p>Dirt on the gripping device.</p>	<p>Decrease advance, exerting less cutting pressure.</p> <p>Check the gripping of the part which may be moving sideways.</p> <p>Adjust the head.</p> <p>Choose proper tool quality, type, and construction characteristics.</p> <p>Carefully clean the laying and contact surfaces.</p>
<p>BLADE STICKS IN THE CUT</p> 	<p>Too fast advance.</p> <p>Low cutting speed.</p> <p>Wrong tooth pitch.</p> <p>Sticky accumulation of material on the disk.</p> <p>Insufficient lubricating refrigerant.</p>	<p>Decrease advance, exerting less cutting pressure.</p> <p>Increase speed.</p> <p>Choose a suitable disk.</p> <p>Check the blend of lubricating coolant and choose a better quality disk.</p> <p>Check the level of the liquid in the tank. Increase the flow of lubricating coolant, checking that the hole and the liquid outlet pipe are not blocked.</p>



NOTES



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