

OPERATION MANUAL



BEAD ROLLING MACHINE

Model. MBR-475XT

Order Code S631

Edition No : MBR-475XT-1

Date of Issue : 04/2023

MACHINE DETAILS

MACHINE	<input type="text" value="Bead Rolling Machine"/>
MODEL NO.	<input type="text" value="MBR-475XT"/>
SERIAL NO.	<input type="text"/>
DATE OF MANF.	<input type="text"/>

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NOTE:

This manual is only for your reference. At the time of the compiling of this manual every effort to be exact with the instructions, specifications, drawings, and photographs of the machine was taken. Owing to the continuous improvement of the HAFCO METALMASTER machine, changes may be made at any time without obligation or notice. Please ensure the local voltage is the same as listed on the specification plate before operating any electric machine.

SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible hazardous conditions



WARNING Indicates a potentially hazardous situation causing injury or death



CAUTION Indicates an alert against unsafe practices.



Note: Used to alert the user to useful information



NOTE:

In order to see the type and model of the machine, please see the specification plate. Usually found on the back of the machine. See example (Fig.1)

Fig.1

	
PRODUCT SPECIFICATIONS	
Model: MBR-475XT	Capacity: 1.2mm
Voltage: 240V 50Hz	Weight: 75kg
Motor: 0.25kW / 1/3HP	Mfg Date:
Full Load Current: 1.66amps	Made in China
Serial No: <input type="text"/>	
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1.1 SPECIFICATION

Order Code	S631
MODEL	MBR-475XT
Capacity (mm)	1.2
Speed Range (R.P.M.)	0 ~ 17
Guide Fence	Adjustable
Drive Shaft Diameter (mm)	25 Reduced to 22
Bead Roll Sizes (mm / inch)	6.35mm (1/4"), 9mm (3/8"), 12.7mm (1/2")
Flange Roll Sizes (mm / inch)	1.6mm (1/16"), 3mm (1/8"), 6.35mm (1/4")
Shearing Roll (mm)	1.0
Power Required (Volts / Hz)	240 / 50
Variable Speed Motor (Watts)	250
Motor Speed (R.P.M.)	1300
Full Load Current (Amps)	1.66
Dimensions L x W x H (mm)	1080 x 610 x 1150
Shipping Dimensions L x W x H (mm)	1120 x 630 x 300
Weight (kgs)	75

1.2 ACCESSORIES INCLUDED

1 x Roving Foot Pedal with Emergency Stop

1 x Heavy Duty Stand with wheels

DIES:

1 x 6.35mm (1/4") Bead Roll Set

1 x 9mm (3/8") Bead Roll Set

1 x 12mm (1/2") Bead Roll Set

1 x 1.6mm (1/16") Flange Roll Set

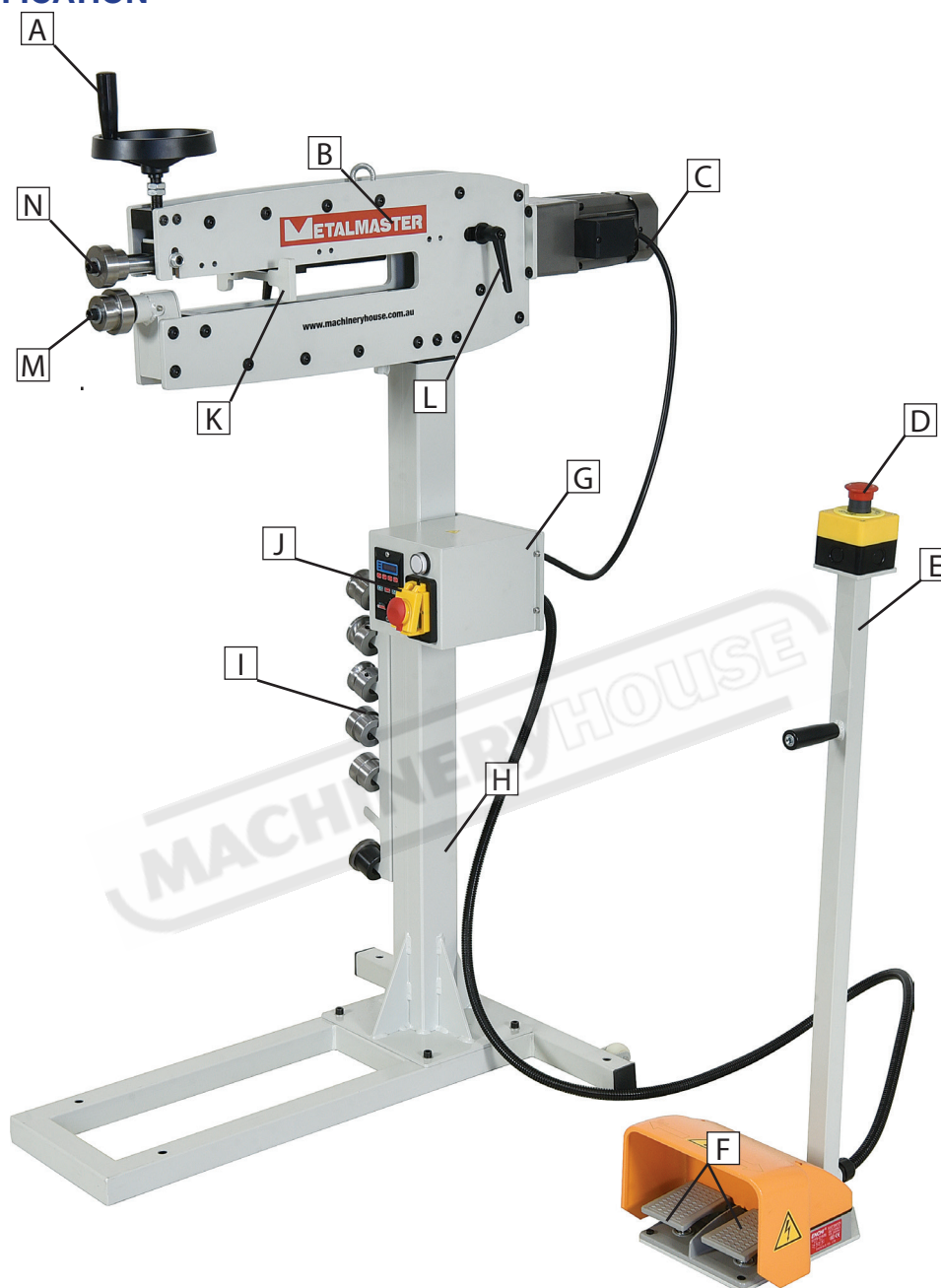
1 x 3mm (1/8") Flange Roll Set

1 x 6.35mm (1/4") Flange Roll Set

1 x Shearing Roll Set



1.3 IDENTIFICATION



A	Top Shaft Adjusting Handle	H	Stand
B	Main Frame	I	Die Rack
C	Motor	J	Control Panel
D	Emergency Stop Button	K	Adjustable Fence
E	Roving Foot Pedals	L	Adjustable Top Shaft Clamp
F	Forward & Reverse Pedals	M	Bottom Fixed Shaft
G	Electrical Box	N	Top Adjustable Shaft

2.1 GENERAL METALWORKING MACHINE SAFETY

DO NOT use this machine unless you have read this manual or have been instructed in the use of this machine in its safe use and operation



WARNING

This manual provides safety instructions on the correct setup, operation, maintenance, and service of this machine. Save this manual, refer to it often, and use it to instruct other operators. Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine is solely responsible for its safe use. This responsibility includes, but is not limited to proper installation in a safe environment, personnel training and authorization to use, proper inspection and maintenance, manual availability and comprehension, of the application of the safety devices, integrity, and the use of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



- ✓ Always wear safety glasses or goggles.
- ✓ Wear appropriate safety footwear.
- ✓ Wear respiratory protection where required.
- ✓ Gloves should never be worn while operating the machine, and only worn when handling the workpiece.
- ✓ Wear hearing protection in areas > 85 dBA. If you have trouble hearing someone speak from one metre (three feet) away, the noise level from the machine may be hazardous.
- ✓ DISCONNECTION OF THE MACHINE FROM POWER when making adjustments or servicing.
- ✓ Check and adjust all safety devices before each job.
- ✓ Ensure that guards are in position and in good working condition before operating.
- ✓ Ensure that all stationary equipment is anchored securely to the floor.
- ✓ Ensure all machines have a start/stop button within easy reach of the operator.
- ✓ Each machine should have only one operator at a time. However, everyone should know how to stop the machine in an emergency.

2.1 GENERAL METALWORKING MACHINE SAFETY Cont.

- ✓ Ensure that keys and adjusting wrenches have been removed from the machine before turning on the power. Appropriate storage for tooling should be provided.
- ✓ Ensure that all cutting tools and blades are clean and sharp. They should be able to cut freely without being forced.
- ✓ Stop the machine before measuring, cleaning or making any adjustments.
- ✓ Wait until the machine has stopped running to clear cuttings with a vacuum, brush or rake.
- ✓ Keep hands away from the cutting head and all moving parts.
- ✓ Avoid awkward operations and hand positions. A sudden slip could cause the hand to move into the cutting tool or blade.
- ✓ Return all portable tooling to their proper storage place after use.
- ✓ Clean all tools after use.
- ✓ Keep work area clean. Floors should be level and have a non-slip surface.
- ✓ Use good lighting so that the work piece, cutting blades, and machine controls can be seen clearly. Position any shade lighting sources so that they do not cause any glare or reflections.
- ✓ Ensure there is enough room around the machine to do the job safely.
- ✓ Obtain first aid immediately for all injuries.
- ✓ Understand that the health and fire hazards can vary from material to material. Make sure all appropriate precautions are taken.
- ✓ Clean machines and the surrounding area when the operation is finished.
- ✓ Use proper lock out procedures when servicing or cleaning the machines or power tools.

DO NOT

- × Do not distract an operator. Horseplay can lead to injuries and should be strictly prohibited.
- × Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewellery that can be come entangled in moving parts. Confine long hair.
- × Do not handle cuttings by hand because they are very sharp. Do not free a stalled cutter without turning the power off first. Do not clean hands with cutting fluids.
- × Do not use rags or wear gloves near moving parts of machines.
- × Do not use compressed air to blow debris from machines or to clean dirt from clothes.
- × Do not force the machine. It will do the job safer and better at the rate for which it was designed.



WARNING

*Before operating any machine, take time to read and understand all safety signs and symbols.
If not understood seek explanation from your supervisor.*

2.1 GENERAL METALWORKING MACHINE SAFETY Cont.

HAZARDS ASSOCIATED WITH MACHINES include, but are not limited to:

- Being struck by ejected parts of the machinery
- Being struck by material ejected from the machinery
- Contact or entanglement with the machinery
- Contact or entanglement with any material in motion

Health Hazards (other than physical injury caused by moving parts)

- Chemical hazards that can irritate, burn, or pass through the skin
- Airborne items that can be inhaled, such as oil mist, metal fumes, solvents, and dust
- Heat, noise, and vibration
- Ionizing or non-ionizing radiation (X-ray, lasers, etc.)
- Biological contamination and waste
- Soft tissue injuries (for example, to the hands, arms, shoulders, back, or neck) resulting from repetitive motion, awkward posture, extended lifting, and pressure grip)

Other Hazards

- Slips and falls from and around machinery during maintenance
- Unstable equipment that is not secured against falling over
- Safe access to/from machines (access, egress)
- Fire or explosion
- Pressure injection injuries from the release of fluids and gases under high pressure
- Electrical Hazards, such as electrocution from faulty or ungrounded electrical components
- Environment in which the machine is used (in a machine shop, or in a work site)



WARNING.

Before operating any machine, take time to read and understand all safety signs and symbols. If not understood seek explanation from trade magazines or an experienced operator.

2.2 SPECIFIC SAFETY FOR BEAD ROLLING MACHINE

DO NOT use this machine unless you have been instructed in its safe use and operation and have read and understood this manual



Safety glasses must be worn when operating this equipment



Long and loose hair must be contained when operating this equipment.



Safety footwear must be worn when operating this equipment



Close fitting/protective clothing must be worn when operating the machine

PRE-OPERATIONAL SAFETY CHECKS

- ☐ Locate and ensure you are familiar with all machine operations and controls.
- ☐ Ensure all guards are fitted, secure and functional. Do not operate if guards are missing or faulty.
- ☐ Working parts should be well lubricated and the dies free of rust and dirt.
- ☐ Check workspaces and walkways to ensure no slip/trip hazards are present.
- ☐ Be aware of other people in the area and ensure the area is clear before using equipment.

OPERATIONAL SAFETY CHECKS

- ☐ Adjust the chosen dies slowly and in small adjustments.
- ☐ Take care during the initial feeding of the workpiece into the dies.
- ☐ Hold the workpiece sufficiently far back from the edge being fed into the dies, to allow for the in-feed speed of the machine.
- ☐ Wind handle at a slow even rate. Be aware of rotating dies
- ☐ Only one person may operate this machine at any one time.

ENDING OPERATIONS AND CLEANING UP

- ☐ Ensure the machine is left in a safe condition after use.
- ☐ Leave the work area in a safe, clean and tidy state.

POTENTIAL HAZARDS AND INJURIES

- ☐ Sharp edges and burrs.
- ☐ Crush and pinch points.
- ☐ Hair/clothing getting caught in moving machine parts.
- ☐ Operator's hands may be caught and drawn into the rotating dies.

DON'T

- ☐ Do not use faulty equipment. Immediately stop and repair suspect machinery.
- ☐ Do not attempt to form material beyond the capacity of the machine.

3. POWER SUPPLY

3.1 ELECTRICAL INSTALLATION

Place the machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure there is access to a means of disconnecting the power source. The electrical circuit must meet the requirements for 240V.

NOTE : The use of an extension cord is not recommended as it may decrease the life of electrical components on your machine.

ELECTRICAL REQUIREMENTS

Nominal Voltage.....	240V
Cycle.....	50 Hz
Phase.....	Single Phase
Power Supply Circuit.....	10 Amps
Full Load Current.....	1.66 Amps

(Full load current rating is also on the specification plate on the motor.)

3.2 FULL-LOAD CURRENT RATING

The full-load current rating is the amperage a machine draws when running at 100% of the output power. Where machines have more than one motor, the full load current is the amperage drawn by the largest motor or a total of all the motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating for these machine at 240V is 1.66 Amps

It should be noted that the full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating and if the machine is overloaded for a long period of time, damage, overheating, or fire may be caused to the motor and circuitry.

This is especially true if connected to an undersized circuit or a long extension lead. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements.



4 SETUP

4.1 UNPACKING

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. If items are damaged, please contact your distributor.

NOTE: Save all the packaging materials until you are completely satisfied with the machine and have resolved any issues with the distributor, or the shipping agent.

When unpacking, check the packing list to make sure that all parts shown are included. If any parts are missing or broken, please contact your distributor.

4.2 CLEAN - UP

The unpainted surfaces of the machine have been coated with a waxy oil to protect them from corrosion during shipment. Remove the protective coating with a solvent cleaner or a citrus based degreaser.

Optimum performance from your machine will be achieved when you clean all moving parts or sliding contact surfaces that are coated with rust prevented products.

It is advised to avoid chlorine based solvents, such as acetone or brake parts cleaner, as they will damage painted surfaces and strip metal should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

4.3 SITE PREPARATION

When selecting the site for the machine, consider the largest size of workpiece that will be processed through the machine and provide enough space around the machine for operating the machine safely. Consideration should be given to the installation of auxiliary equipment. Leave enough space around the machine to open or remove doors/covers as required for the maintenance and service as described in this manual.

It is recommended that the machine is anchored to the floor to prevent tipping or shifting. It also reduces vibration that may occur during operation.

4.4 LIFTING INSTRUCTIONS



WARNING

This machine is extremely heavy. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.



On the day that the machine arrives, make sure that a forklift or lifting device, with sufficient capacity is available to unload the machine from the vehicle. Ensure access to the chosen site is clear and that doors and ceilings are sufficiently high and wide enough to receive the machine.

LIFTING POINT

When lifting the machine only certified lifting slings should be used with the lifting point. (Fig. 4.1)
Ensure that when lifting, the machine does not tip over.
Check that the lifting slings do not interfere with the parts of the machine that may be damaged.



FIG. 4.1

4.5 ANCHORING TO THE FLOOR

MOUNTING OPTION

The machine is best mounted on a concrete slab.
Masonry anchors with bolts are the best way to anchor machinery, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later, if needed. (Fig. 4.2)



FIG. 4.2

4.6 MACHINE LEVELING

Whilst this machine is not as critical as some, it is important to set your machine up so that it operates to optimum performance.
After your machine has been anchored to a concrete slab floor, it then needs to be leveled.
Loosen the hold down bolts and place a level on the surface of the working table. Metal shims need to be placed under corner of the base of the machine until level. Once level then tighten the hold down bolts. (Fig. 4.3).

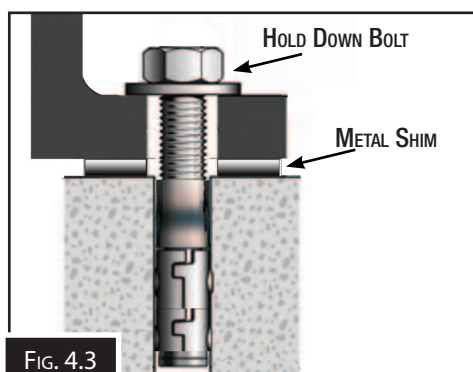


FIG. 4.3



CAUTION

The machine must not rest on supports other than those defined in Fig. 4.3

4.7 ASSEMBLY

The machine must be fully assembled before it can be operated. First clean any parts that are coated in rust preventative to ensure the assembly process can proceed smoothly.

The motor is pre-assembled on the main head, with the control box and foot pedal switches attached to the stand. All the wiring is connected ready for use.

To assemble the machine

1. Place the Stand on the floor.
2. Connect the Vertical Post and the Headstock with screws. (Fig. 4.4)
3. Place the Headstock and the Vertical Post on the Stand with four screws, four spring washers and four washers



FIG. 4.4

NOTE: When assembling, please make sure not to stretch the electrical cables or pull the cables out of the motor, control box and foot pedal.

4.8 TEST RUN

Once the assembly is complete, test run the machine to ensure it is properly connected to the power supply and that safety components are functioning correctly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem before operating the machine again. The Troubleshooting table in the Maintenance section of this manual can help.

To test run the machine:

1. Clear all the setup tools away from the machine.
 2. Connect machine to power. Power indicator light on the control panel will illuminate.
 3. Check that the Emergency button on top of the stand has been released and is in the raised ON position.
 4. Raise the yellow cover on the control panel to expose the ON and OFF button. Press the ON Button
 5. Press the left pedal to start the motor. Verify the motor starts up and runs smoothly without any unusual problems or noises.
 6. Confirm that the upper mandrel rotates clockwise and the lower mandrel rotates counter clockwise, then release foot pedal to stop the motor.
 7. Press the left pedal and hold it down. While the pedal is down press the emergency stop button. The machine should stop immediately. Release the foot pedal and try to restart the machine by pressing the ON button. The machine should not start.
 8. Release the emergency stop button by twisting the top red button until it pops up. The machine should now start.
 9. Repeat Steps 4–7 with the right control pedal. Confirm mandrels rotate in the opposite direction, then press the red button on the control panel to switch the power OFF.
- The Test Run is complete

5. OPERATION

This machine may perform many types of operations that are beyond the scope of this manual. Many of these operations may be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine!

If you are an inexperienced operator, we strongly recommend that you read books, trade articles, or seek training from an experienced operator before performing any unfamiliar operations. **Above all, your safety should come first!**

5.1 CONTROLS

The purpose of this control overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, and the machine controls and what they do. It also helps the operator to understand if they are discussed later in this manual.

NOTE: DO NOT START the machine until all of the setup instructions have been performed. Operating a machine that is not set up may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

The machine is fitted with an AC variable speed inverter motor which is controlled in three ways. (Fig.5.1)

1. **ON/ OFF Switch (B).** Switches ON or OFF the power circuit in the machine.
2. **Power Lamp (A).** Is illuminated when the power is connected to the machine
3. **Foot Pedal.** Starts the mandrels turning and selects the direction of rotation.

NOTE: Motor speed control (C) is the AC inverter and the parameters are set in the factory and locked. The parameters should only be changed by a factory service engineer. (Fig.5.1) You use this to change the speed.

- E. When the forward pedal is pressed the FWD light stays illuminated indicating the rolls are moving in a forward direction.
- D. When the reverse pedal is pressed the REV light stays illuminated indicating the rolls are moving in a reverse direction.
- F. None of these buttons are used or need to be adjusted during normal operation of the machine. They are only used by service engineers to access the parameters for the AC inverter motor. (Fig. 5.2)
- G. This dial is used to adjust the speed of the rolls.
- H. Displays the speed of the rolls in Hz.

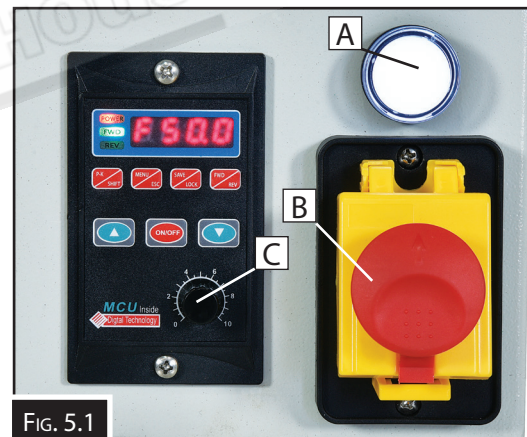


FIG. 5.1

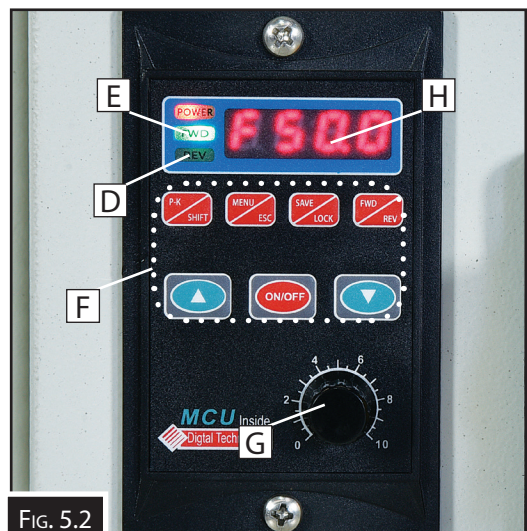


FIG. 5.2

5.1 CONTROLS CONTINUED

ON/OFF SWITCH

The ON/OFF safety switch is located on the front of the machine for quick, easy and safe access. The switch is fitted with a yellow door with a RED button in the centre of it.

To start the machine the yellow door needs to be released by pressing against the catch (Fig.5.3) to open it and reveal the green ON and RED stop buttons.

Push the bottom green button (A) to turn the machine ON. Push the top red button (B) to turn the machine OFF. (Fig.5.4)

In an emergency the red button on the yellow door can be pressed and held with the catch and the machine will stop. With the door closed the machine cannot be started until the catch is released and the buttons exposed.

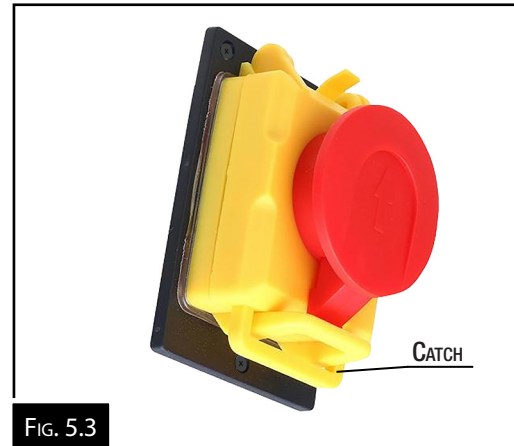


FIG. 5.3

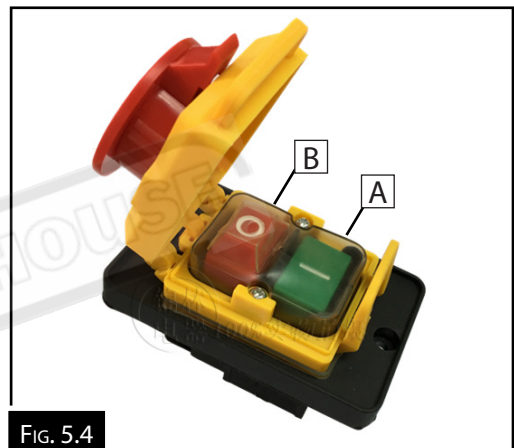


FIG. 5.4



CAUTION

Never walk away from the machine while it is still running. Always lock the switch in the Off position and unplug from the power supply when not in use.

FOOT PEDAL & EMERGENCY STOP

Controls the forward and reverse direction of the mandrels. (Fig.5.5)

Can be moved to any position for ease of operation. Depress the pedal to start the rotation. Once the pedal is released the mandrels will stop.

On the top of the stand is the emergency stop button. When pressed the machine will stop. Before the machine will restart the emergency button needs to be twisted to release the stop button.



FIG.5.5

5.2 AC MOTOR & INVERTER WARNING!!!

The machine is fitted with a controller that controls the operations of the machine including the speed of the machine through an AC inverter motor. In order to understand the function of the Inverter and ensure the safety of the user, please read and follow the instructions as detailed in this manual. When operating the machine if any abnormal problem is found that is not covered in this operating manual, please contact your local distributor and our service engineers will solve the problem for you.

NOTE: *The AC motor fitted to this machine, is an electronic power device. For safety reasons please note the paragraphs containing Caution and Warning symbols in this section. They are important safety precautions to observe when, transporting, installing, and when operating and servicing the AC unit.*

NOTE: *The parameters for the AC inverter motor have been set at the factory and should not need to be touched.*

WARNING

Do Not: Touch the PCB or components on the PCB (printed circuit board) before the charging indicator light has gone out.

Do Not: Attempt to wire or check the circuitry, or component signals on the PCB when the power is switched ON.

Do Not: Attempt to disassemble or modify internal circuitry, wiring or components of the inverter.

Do Not: Use the machine if the earthing cable is disconnect from the inverter and the machine
The earthing cable must be connected at all time when being used.

CAUTION

Do Not: Attempt to perform dielectric strength tests to the internal components of the inverter unit. There are sensitive semi-conductor devices that are vulnerable to high voltage in the inverter

Do Not: Connect the output terminals (T1), (T2) and (T3) to the AC power unit.

Do Not: Make contact between the inverter with the primary PCB board. The CMOS IC is Vulnerable to static electrical charges.

5.3 MANDREL ALIGNMENT

Before operations, and whenever you change the die sets, always make sure the mandrels are aligned to ensure properly formed beads. (Fig.5.6)

To align the mandrels,

1. Lower the upper mandrel until it almost touches the lower mandrel.
2. For Shearing Rolls use the 8mm thick collar or other sizes of washers to align the top & bottom shearing rolls. Make sure that the cutting edges should almost be touching.
3. For Bead Rolls, use the 8mm thick collar or other sizes of washers to align the top & bottom bead roll, make sure the centre line of the top bead aligns the centre of the bottom radius groove. (Fig. 5.7)

To create a smooth bead radius, you can use a small bead roll on the top, and a larger radius groove on the bottom. For example, 1/4" top bead and 1/2" bottom radius groove. To adjust the top shaft in or out, loosen the handles on each side of the head. (A in Fig. 5.8)

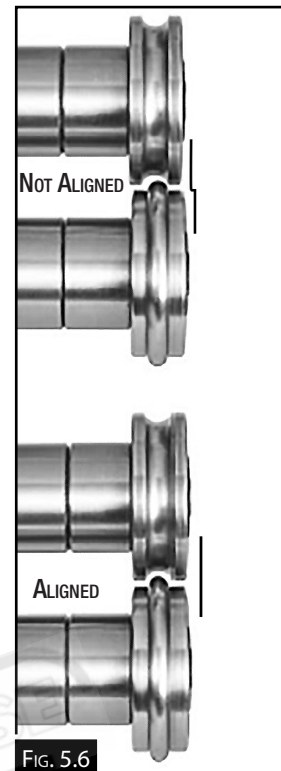


FIG. 5.6

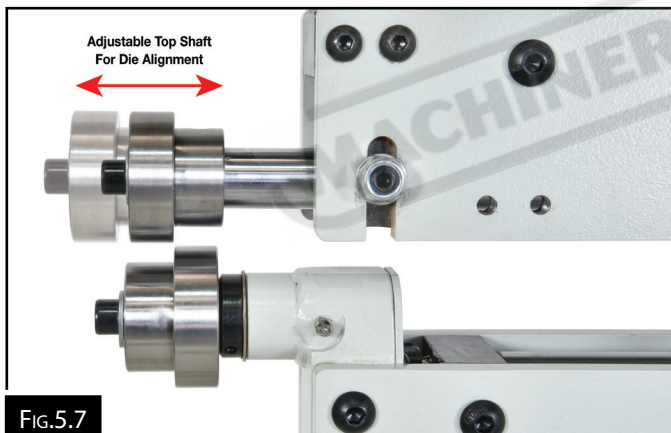


FIG.5.7



FIG. 5.8

5.4 ADJUSTING THE FENCE POSITION

To create straight, consistent beads that are parallel with an edge of the workpiece, the fence is used to guide the workpiece in a straight line at a set distance from the mandrel dies.

To adjust the fence, loosen the clamp, then move the fence toward or away from the mandrel dies as needed, then re-tighten the clamp. (Fig. 5.9)

The fence has two mounting positions to maximize the rigidity

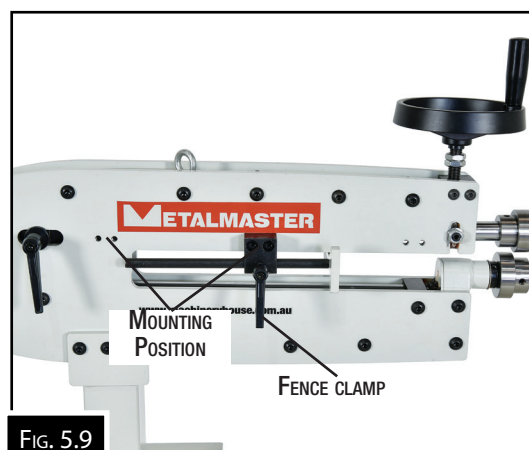


FIG. 5.9

6. MAINTENANCE

6.1 SCHEDULE

1. Clean the Transmission of dirt and debris after 250 hours of use.
2. Lubricate the Copper Bushing periodically.
3. Replace the grease in the Worm Gear Box every 2 years.

6.2 TROUBLESHOOTING

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	<ol style="list-style-type: none"> 1. Main power switch in OFF position at fault. 2. Plug/receptacle at fault/wired wrong 3. Incorrect power supply voltage/circuit size. 4. Power supply circuit breaker tripped or blown fuse 5. Motor wires connected incorrectly. 6. Motor at fault. 7. Emergency Stop button not released. 	<ol style="list-style-type: none"> 1. Switch to ON position. Replace. 2. Test for good contacts; correct the wiring. 3. Ensure correct power supply voltage/circuit size. 4. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker 5. Correct motor wiring connections. 6. Test/repair/replace. 7. Release Emergency Stop button by twisting the button
Machine stalls or is underpowered	<ol style="list-style-type: none"> 1. Machine undersized for task. 2. Wrong workpiece material. 3. Motor overheated. 4. Motor wired incorrectly. 5. Plug/receptacle at fault. 6. Foot pedal switch at fault. 7. Motor bearings at fault. 	<ol style="list-style-type: none"> 1. Reduce downward pressure of upper roller. 2. Use correct type/size of sheet metal stock. 3. Clean motor, let cool, and reduce workload. 4. Wire motor correctly. 5. Test for good contacts/correct wiring. 6. Test/replace switch. 7. Test and replace
Workpiece deforms, kinks, or is crushed during operation	<ol style="list-style-type: none"> 1. Excessive rolling pressure. 2. Mandrel dies not properly aligned. 3. Mandrel die (s) are damaged. 	<ol style="list-style-type: none"> 1. Reduce downward pressure of upper mandrel. 2. Align mandrel dies 3. Replace mandrel die(s)
Workpiece does not move when rollers rotate.	<ol style="list-style-type: none"> 1. Not enough rolling pressure. 2. Grease/oil on workpiece/mandrel dies, causing dies to slip against work piece. 	<ol style="list-style-type: none"> 1. Increase down pressure of upper mandrel. 2. Thoroughly clean workpiece/mandrel dies to prevent slipping

SPARE PARTS SECTION

BEAD ROLLING MACHINE

Model. MBR-475XT

Order Code S631

Edition No : MBR-475XT-1

Date of Issue : 04/2023

The following section covers the spare parts diagrams and lists that were current at the time this manual was originally printed. Due to continuous improvements of the machine, changes may be made at any time without notification.

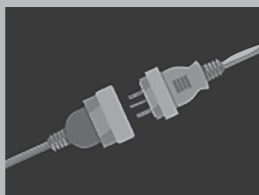
HOW TO ORDER SPARE PARTS

1. Have your machines **model number, serial number & date of manufacture** on hand, these can be found on the specification plate mounted on the machine
2. A scanned copy of your parts list/diagram with required spare part/s identified
3. Go to www.machineryhouse.com.au/contactus and fill out the inquiry form attaching a copy of scanned parts list.



WARNING

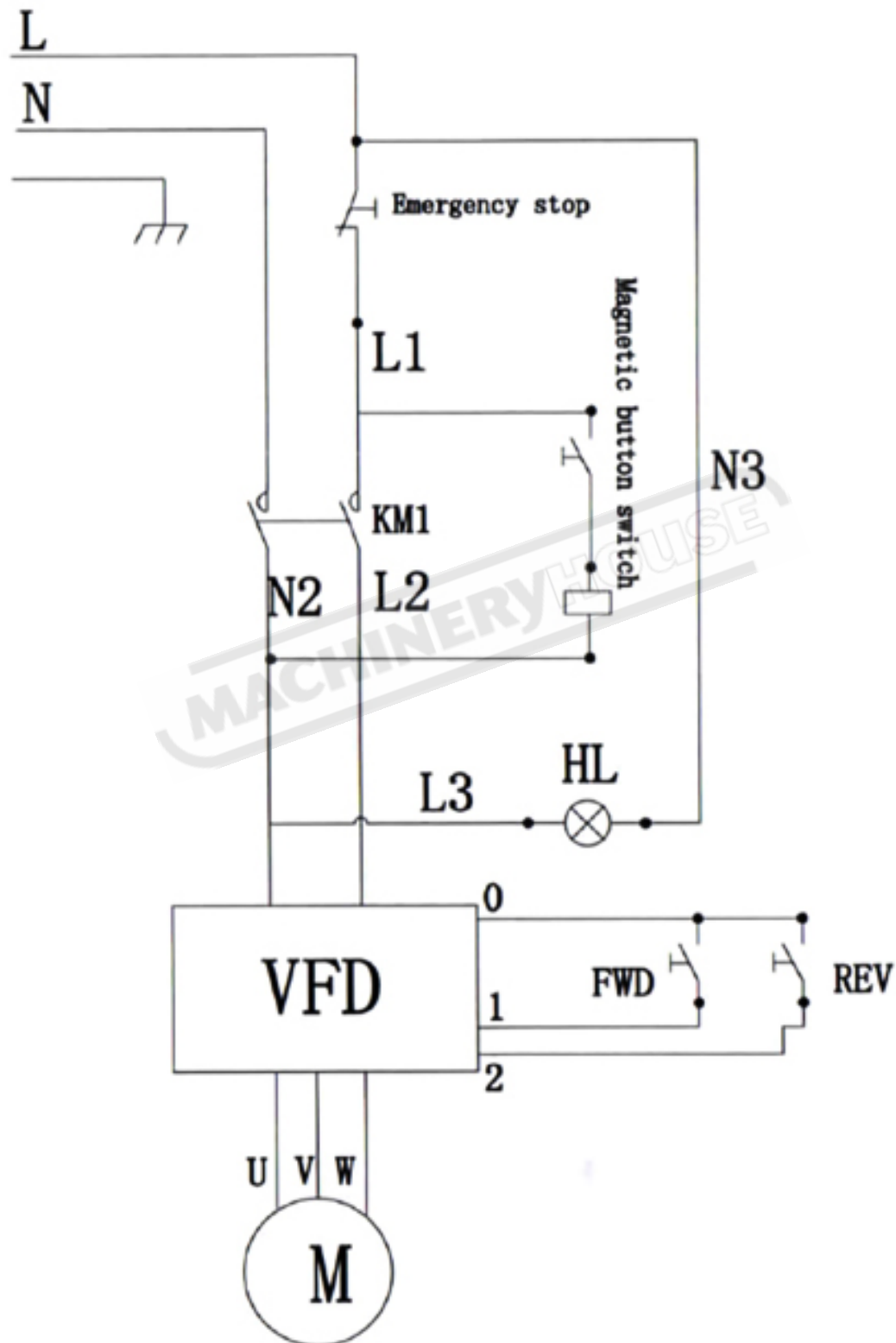
The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



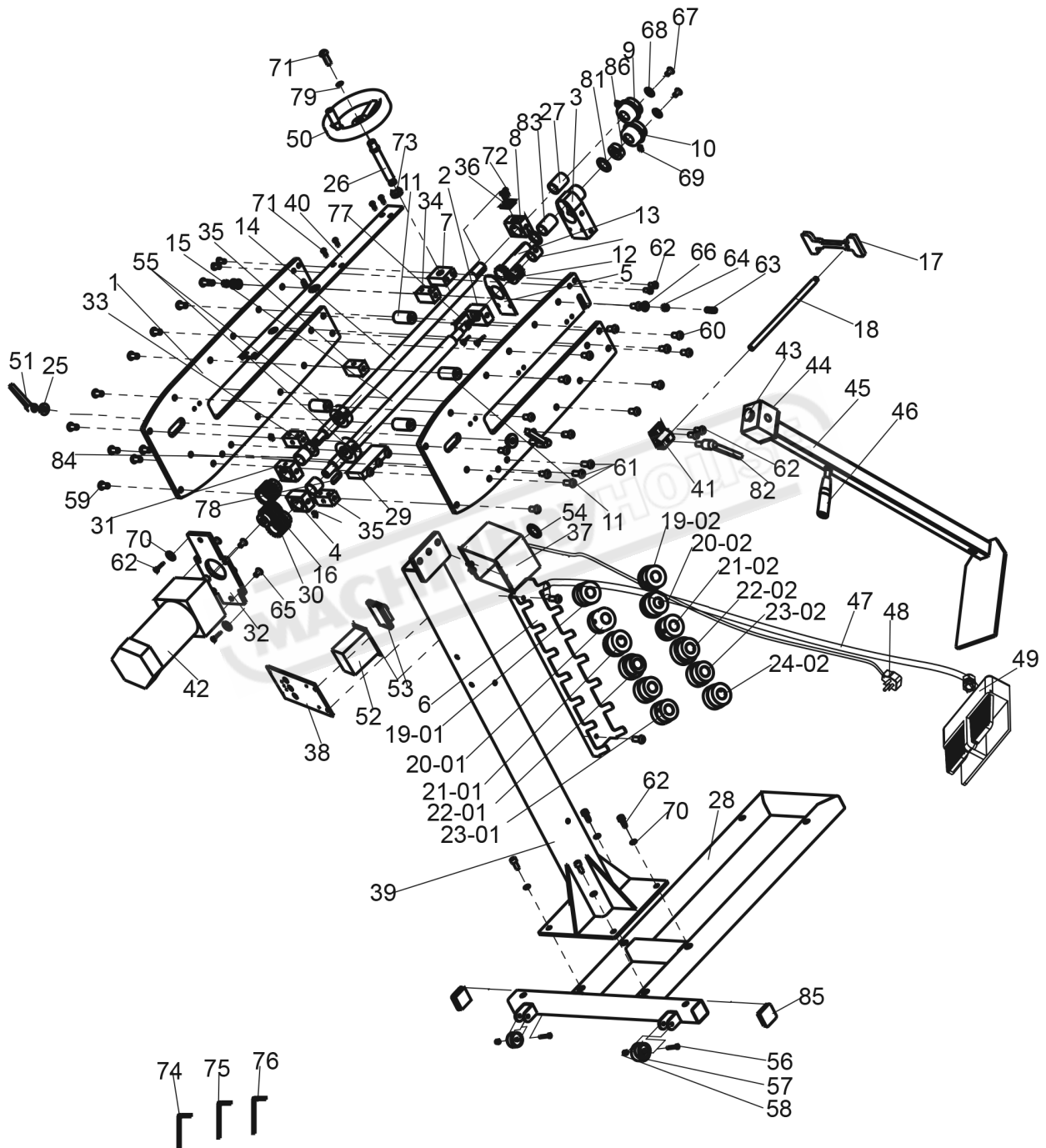
WARNING

Always disconnect the power to the machine before servicing or doing maintenance to the machine.

ELECTRICAL DIAGRAM



SPARE PARTS DIAGRAM



SPARE PARTS LIST

Item	DESCRIPTION	Qty	Item	DESCRIPTION	Qty
1	Side Plate	2	41	Guide Fence Seat	1
2	Shaft Seat	1	42	Motor	1
3	Shaft Seat	1	43	Emergency Stop Box	1
4	Shaft Seat	1	44	Emergency Stop Box	1
5	Safe Plate	1	45	Stand	1
6	Die Storage Rack	1	46	Handle	1
7	Threaded Rod Seat	1	47	Foot Pedal Cable	1
8	Shaft Seat	1	48	Power Cord	1
9	Short Cutting Die	1	49	Foot Switch	1
10	Long Cutting Die	1	50	Hand Wheel	1
11	Plate Spacer	5	51	Handle M10X25	2
12	Gear	1	52	Inverter	1
13	Gear	1	53	Safe Switch	1
14	Upper Shaft	1	54	Power Lamp	1
15	Driving Shaft	1	55	Collar	2
16	Gear	1	56	Bolt M6X40	2
17	Guide Fence	1	57	Wheel	2
18	Guide Fence Shaft	1	58	Nut M6	2
19-01	12mm Half-Round Die(Convex)	1	59	Screw M10X20	29
19-02	12mm Half-Round Die(Concave)	1	60	Screw M10X16	2
20-01	10mm Half-Round Die(Convex)	1	61	Screw M10X30	3
20-02	10mm Half-Round Die(Concave)	1	62	Screw M8X20	6
21-01	6mm Half-Round Die(Convex)	1	63	Screw M10X30	2
21-02	6mm Half-Round Die(Concave)	1	64	Nut M10	2
22-01	6mm Flange Die	1	65	Screw M8X16	4
22-02	6mm Flange Die	1	66	Washer M10	2
23-01	3mm Flange Die	1	67	Screw M10X20	2
23-02	3mm Flange Die	1	68	Washer	2
24-01	2mm Flange Die	1	69	Screw M8X8	18
24-02	2mm Flange Die	1	70	Washer M8	4
25	Washer	2	71	Screw M6X12	11
26	Threaded Rod	1	72	Screw M5X12	2
27	Bushing	1	73	M16 Nut	2
28	Stand	1	74	Hex Key Wrench S=4	1
29	Plate	1	75	Hex Key Wrench S=6	1
30	Gear	2	76	Hex Key Wrench S=8	1
31	Shaft Seat	1	77	Key 5X10	1
32	Square Plate	1	78	Key 5X20	4
33	Plate Spacer	1	79	Washer	1
34	Plate Spacer(Two Holes)	2	80	Washer	5
35	Plate Spacer(one Hole)	2	81	Washer	1
36	Locking Plate	1	82	Handle	1
37	Control Box	1	83	Bushing	1
38	Plate	1	84	Bushing	2
39	Leg	1	85	Casing Cap	2
40	Plate	1	86	Collar	1

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY



WARNING

General Machinery Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

- 1. Read the entire Manual before starting machinery.** Machinery may cause serious injury if not correctly used.
- 2. Always use correct hearing protection when operating machinery.** Machinery noise may cause permanent hearing damage.
- 3. Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
- 4. Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
- 5. Always wear correct respirators around fumes or dust when operating machinery.** Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
- 6. Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
- 7. Keep work clean and make sure you have good lighting.** Cluttered and dark shadows may cause accidents.
- 8. Personnel must be properly trained or well supervised when operating machinery.** Make sure you have clear and safe understanding of the machine you are operating.
- 9. Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
- 10. Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
- 11. Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
- 12. Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
- 13. Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.
- 14. Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
- 15. Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
- 16. Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
- 17. Do not overreach.** Keep proper footing and balance at all times.
- 18. Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
- 19. Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
- 20. Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
- 21. Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
- 22. Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
- 23. Lock mobile bases.** Make sure any mobile bases are locked before using machine.
- 24. Allergic reactions.** Certain metal shavings and cutting fluids may cause an allergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
- 25. Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

WARNING

Electric Swage & Jenny Machine Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

- 1. Maintenance.** Make sure the Swage & Jenny is turned off and disconnect from the main power supply and make sure all moving parts have come to a complete stop before any inspection, adjustment or maintenance is carried out.
- 2. Swage & Jenny Condition.** A Swage & Jenny must be maintained for a proper working condition. Never operate a Swage & Jenny that has damaged or worn parts. Scheduled routine maintenance should be performed on a scheduled basis.
- 3. Roll Condition.** Never operate a Swage & Jenny with a damaged or badly worn rolls. Replace if required. Rolls should never be greased or lubricated as rolls will slip the material and will not bend.
- 4. Roll Direction.** Be aware of the correct rotational axis of the motor when a qualified electrician connects the Machine.
- 5. Hand Hazard.** Keep hands and fingers clear from moving parts. Serious injury can occur if hand or finger tips get pinched by rolls and can be dragged into machine.
- 6. Switching.** Always turn the Swage & Jenny off and make sure all moving parts have come to a complete stop before leaving. Do not leave running unattended for any reason.
- 7. Personal Protection.** Gloves, safety glasses and safety hat are recommended during operation.
- 8. Avoiding Entanglement.** Swage & Jenny guards must be used at all times. Tie up long hair and use the correct hair nets to avoid any entanglement with the Swage & Jenny moving parts.
- 9. Understand the machines controls.** Make sure you understand the use and operation of all controls.
- 10. Trained Operator.** This machine must be operated by authorized and trained personnel.
- 11. Power outage.** In the event of a power failure during use of the machine, turn off all switches to avoid possible sudden start up once power is restored.
- 12. Work area hazards.** Keep the area around the Swage & Jenny clean from oil, tools, chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents.
- 13. Guards.** Do not operate Swage & Jenny without the correct guards in place. Necessary guards protect you from injuries by gearbox, motors and other moving gears & parts. The only other area which needs to be carefully monitored during use is the rotational area of the rolls.
- 14. Material condition.** Material must be clean of oil and dry. Oily material can slip and will not bend.
- 15. Material hardness.** Make sure your hardness is the same throughout the material, we recommend that you use certified material. Never bend hard steel, glass or fragile material on this machine.
- 16. Feeding material.** Making a tight bend in one pass is not possible. So you need several passes before you can achieve a certain radius. Tighter curves and full radius always need more passes.
- 17. Stopping the Rolls.** Do not stop or slow the rolls with your hand or workpiece. Allow the Swage & Jenny to stop on its own.
- 18. Emergency stop.** Use the emergency stop button in case of any emergency.
- 19. Hearing protection and hazards.** Always wear hearing protection as noise generated from machine and workpiece can cause permanent hearing loss over time.
- 20. Call for help.** If at any time you experience difficulties, stop the machine and call your nearest branch service department for help.

PLANT SAFETY PROGRAM

NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

Electric Swage & Jenny Machine

Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures
This program is based upon the Safe Work Australia, Code of Practice - Managing Risks of Plant in the Workplace (WHSA 2011 No10)

Item No.	Hazard Identification	Hazard Assessment	Risk Control Strategies (Recommended for Purchase / Buyer / User)
A	ENTANGLEMENT	HIGH	Eliminate, avoid loose clothing / Long hair etc.
B	CRUSHING	LOW	Secure & support work material. Ensure machine is bolted down.
C	CUTTING, STABBING, PUNCTURING.	MEDIUM	Isolate power to machine prior to any checks or maintenance being carried out. Do not adjust or clean until the machine has fully stopped. Wear gloves to prevent cuts from material.
D	SHEARING	MEDIUM	Isolate power to machine when checks or maintenance is being carried out. Make sure all guards are secured shut when machine is on. Hands should be kept clear of moving parts such as rolls etc.
F	STRIKING	MEDIUM	Ensure area is kept clear of material being rolled.
H	ELECTRICAL	MEDIUM	All electrical enclosures should only be opened with a tool that is not to be kept with the machine. Machine should be installed & checked by a Licensed Electrician.
O	OTHER HAZARDS, NOISE.	LOW	Wear hearing protection as required.
Plant Safety Program to be read in conjunction with manufactures instructions			



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Authorised and signed by:

Safety officer:

Manager:

Revised Date: 2nd March 2015