METALMASTER

Edition : 2.0
Date: (02/25)

Instruction Manual

MAGNETIC PANBRAKE
MB1250

Order Code: (S542)

MACHINE DETAILS

MACHINE.	MAGNETIC PANBRAKE
MODEL NO.	MB1250
SERIAL NO.	
DATE OF MANF.	

IMPORTED BY

AUSTRALIA

HARE&FORBES MACHINERYHOUSE

www.machineryhouse.com.au

NEW ZEALAND

MACHINERYHOUSE

www.machineryhouse.co.nz

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 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)

METALMASTER

PRODUCT SPECIFICATIONS

Model: MB1250	Nett Weight: 160kg
Capacity: 1250 x 1.6mm	Voltage: 240V/50Hz
MFG Date:	FLC: 9.0A

Serial No:

Imported by **www.machineryhouse.com.au**

Made in China **www.machineryhouse.co.nz**

FIG.1

CONTENTS:

1.1 SPECIFICATIONS

Order Code	S542
MODEL	**MB-1250**
(mm) Useful Length	1250
(mm) Normal Capacity - Mild Steel	1.6
(mm) Normal Capacity - Aluminium	1.6
(mm) Normal Capacity - Stainless Steel	1.0
(ton) Clamping Force	6
(V) Power Supply	Single Phase 240
(A) Power Amps	10
(C) Protection	70 °
(No / Yes) Includes Footpedal	Yes
(mm) Bending Edge Length	1300
(mm) Distance Between Lifters	`1250
(mm) Minimum U-channel Bend	16
(mm) Closed Channel Minimum Internal	99 x 27
(mm) Z-reverse Bends Minimum Spacing	36 x 18
(cm) Dimensions Width x Depth x Height	1300 x 900 x 940
(kg) Nett Weight	150

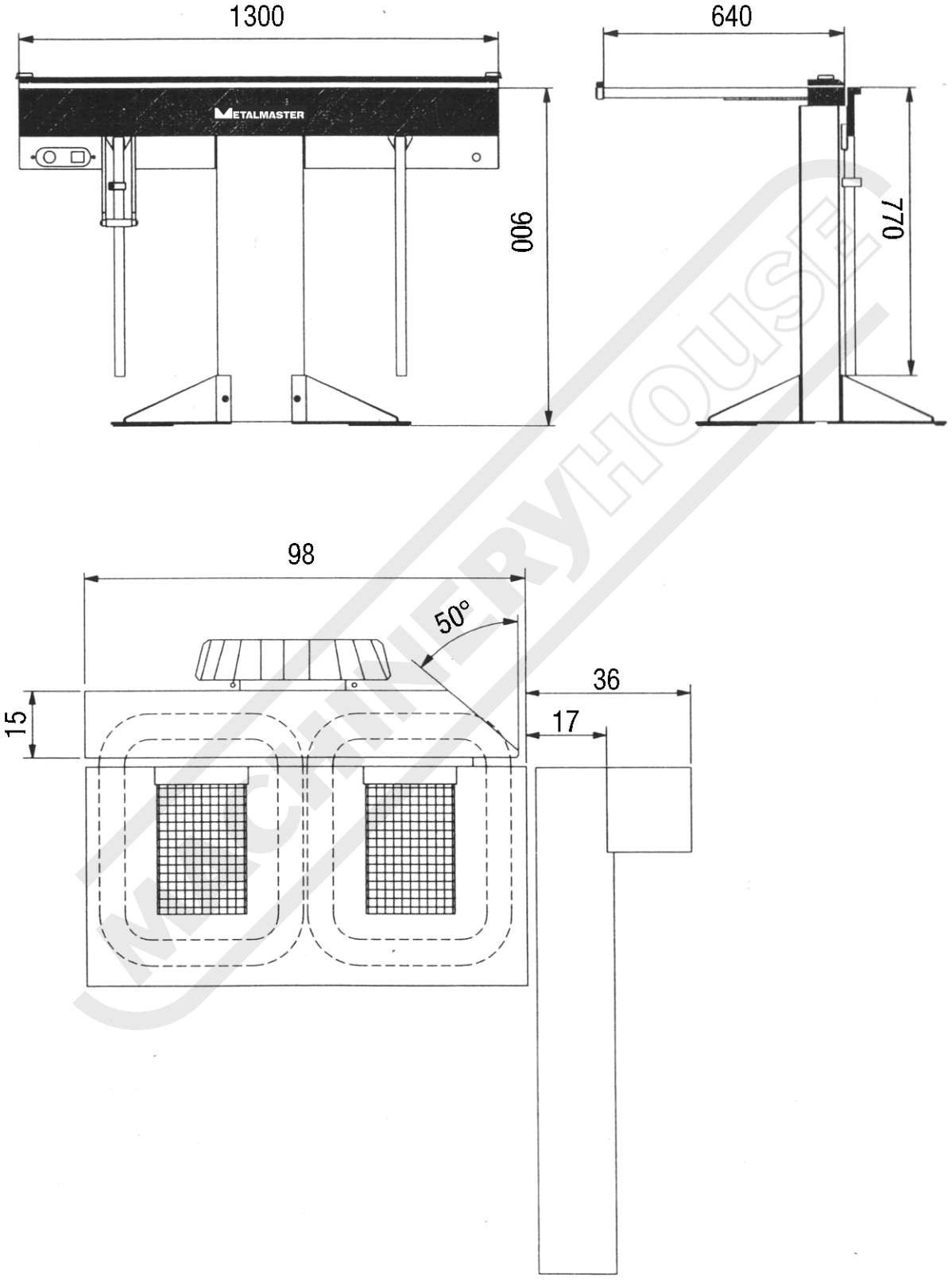
WARNING

Always check the capacity of the machine. Exceeding the capacity of the machine may result in sudden breakage that ejects dangerous metal debris at the operator or bystanders

1.2 PACKING LIST

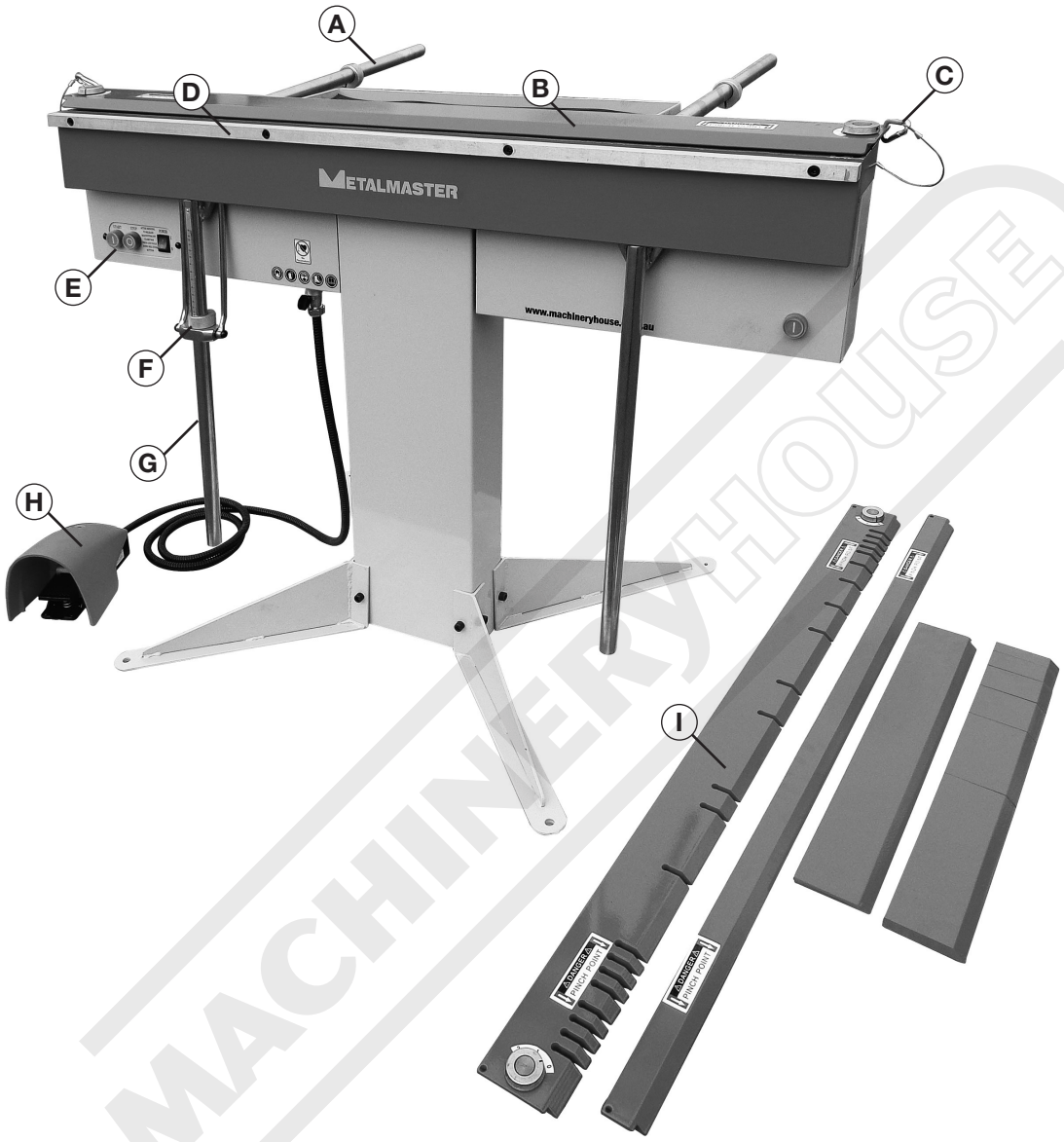
- Adjustable backstops,
- Storage tray,
- Full length clamp bar,
- Full length narrow clamp bar,
- Full length slotted clamp bar for forming shallow boxes more quickly,
- Short 580mm clamp bar,
- Complete set of segmented clamp-bars 25, 38, 52, 70, 140, 280mm,

1.3 DIMENSIONAL SPECIFICATION



1.4 IDENTIFICATION

Become familiar with the names and locations of the controls and features shown below to better understand the instructions when mentioned later in this manual.



	Description		Description
A	Back Gauge	**F**	Angle Stop
B	Clamp Bar	**G**	Operating Handles
C	Clamp Bar Lifters	**H**	Foot Controller
D	Bending Beam	**I**	Slotted Clamp Bar
E	Control Panel		

2. IMPORTANT INFORMATION

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 proper 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.
- ✓ DISCONNECT 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 SAFETY REQUIREMENTS 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

- × Distract an operator. Horseplay can lead to injuries and should be strictly prohibited.
- × Wear loose clothing, gloves, neckties, rings, bracelets or other jewelery that can become entangled in moving parts. Confine long hair.
- × 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.
- × Use rags or wear gloves near moving parts of machines.
- × Use compressed air to blow debris from machines or to clean dirt from clothes.
- × Force the machine. It will do the job safer and better at the rate for which it was designed.

2.1 GENERAL SAFETY REQUIREMENTS 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)

- Chemicals 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 on a work site)

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!

Machines are safeguarded to protect the operator from injury or death with the placement of guards. Machines must not be operated with the guards removed or damaged.

2.2 ADDITIONAL SAFETY FOR MAGNETIC FOLDERS

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


Rings and jewelery must not be worn.


Safety footwear must be worn when operating this equipment


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

WARNING!

People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.

PRE-OPERATIONAL SAFETY CHECKS

1. Guards or safety devices must never be removed or adjusted, except by an authorized person for maintenance purposes.
2. Working parts (i.e. hinges) should be lubricated and working surfaces kept free of rust.
3. Ensure no slip/trip hazards are present in workspaces and walkways.
4. Be aware of other personnel in the immediate vicinity and ensure the area is clear before using equipment – operators with pacemakers should not use this item and remain approximately two meters away unless cleared by a doctor.
5. Familiarize yourself with all machine operations and controls – refer to 'user manual'.
6. Faulty equipment must not be used. Immediately report suspect machinery.

OPERATIONAL SAFETY CHECKS

1. Never use this machine for bending metal that is beyond the machine's capacity with respect to thickness, shape, or type. Refer to the manufacturer 'user manual'.
2. Never attempt to bend rod, wire, strap, or spring steel sheets in this machine.
3. Adjust for thickness of work piece – rotate adjusters either end of clamp bar.
4. Insert work piece and align bending edge of clamp bar & bending-beam with the bend line.
5. Press and hold the 'START' button (this applies pre-clamping pressure to the work piece).
6. Using other hand lift handle (this applies full clamping) and continue bend to required angle.
7. Keep clear of moving handles and bending-beam.
8. Slotted or short clamp bars should be used for bending box shapes – refer to 'user manual'.

ENDING OPERATIONS AND CLEANING UP

1. Ensure machine is turned off after use.
2. Ensure the handle is left in a safe position after use.
3. Leave the work area in a safe, clean and tidy state.

POTENTIAL RISKS AND HAZARDS

Hazards that may arise when folding sheetmetal with a Magnetic bender include:

- Electric shock from faulty electrical equipment
- Cuts from sheetmetal
- Finger damage from the clamp bar
- Crush and pinch points.

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.....10 Amps

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

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 circuit, the full load current is the amperage drawn by the largest circuit or a total of all the circuits and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating for these machine at 240V is 10 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 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. SET-UP

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.

⚠ WARNING

4.4 LIFTING INSTRUCTIONS

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.

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment.

When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

4.5 ANCHORING TO THE FLOOR

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. 4.1)

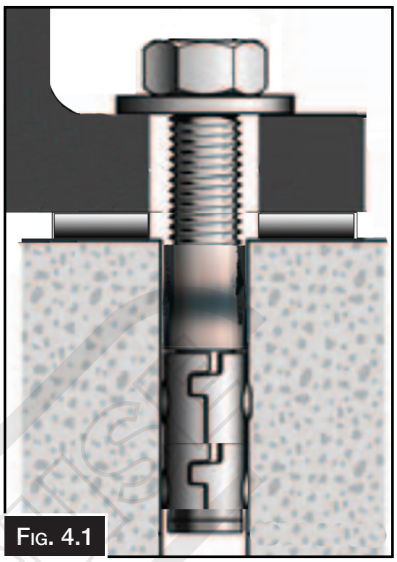


Fig. 4.1

MACHINE MOUNTING OPTIONS

Although it is not required HAFCO recommends that you secure your machine to the floor. 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. 4.3) Other methods of mounting is the use of machine mounts which also help with the levelling of the machine and isolating vibration. (Fig. 4.2)


Fig. 4.2


Fig. 4.3

4.6 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.

Note: The machine is supplied upside down for assembly purposes.

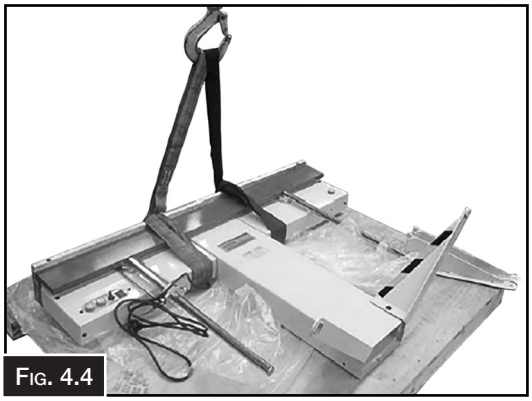


Fig. 4.4

1. Remove all parts from the package with the exception of magnet body assembly.

2. Use web slings to lift and remove the magnet body from the crate. While the body is suspended attach the feet. (Fig. 4.4)

3. Attach the feet to column by using the M10x16 button-head screws provided. Point the pair of feet forward ensuring that the safety tape is facing the front. Ensure that the joining seam on the column faces is to the back. (Fig. 4.5)


Fig. 4.5

4.6 ASSEMBLY CONT.

5. Make sure to handle this operation with a lifting device capable of handling the weight.

6. Connect the electromagnet to the electrical unit by pluging the three pin connector together. Make sure the mains cable is not placed in a traffic area or in a place where it could be damaged.

7. Use the M8 x 12 cap head screws and attach the tray to the rear of the machine. Place the rubber mat inside the tray. Use two M8x16 cap head screws to attach the two back stop bars. Slide the stop collars onto each back stop bar. (Fig. 4.6)

8. Attach the operating handles to the bending beam using the M8x16 cap head screws.

9. Move the bending beam 180 degrees, then slide the angle indicator unit on to the left side handle. The handle should be slipped down through the indicator ring before attaching the handle. Slip the stop collar onto the handle and clamp it up near the top of the handle. (Fig. 4.7)

10. Attach the foot controller to the bayonet connector under the left hand side of the machine.

11. Place the clamp bar on the magnet body and ensure the Safety Clips are installed in holes provided. (Fig. 4.8)

    To engage the heads of the lifter pins, push the lifter handle back and then pull the handle forward.

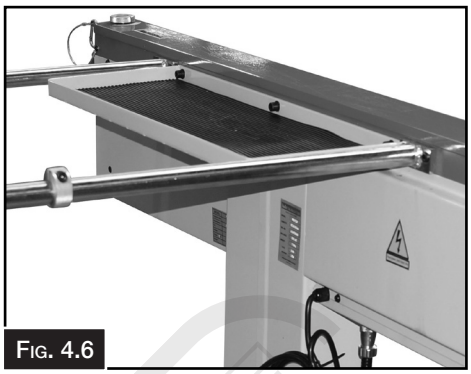


FIG. 4.6

FIG. 4.7

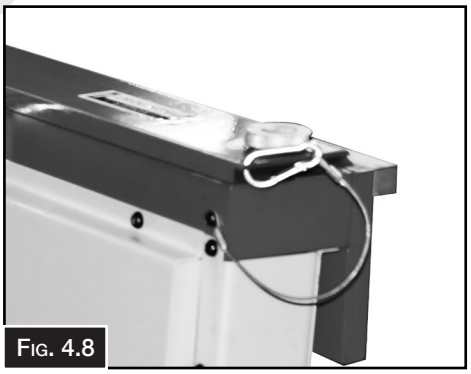


FIG. 4.8

WARNING!

People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.

5. OPERATION

5.1 GENERAL IMPORTANT WARNINGS

Electromagnetic sheet metal bending machines are designed to be used by ONE operator only, which includes the inserting of the sheet metal and operating of the switches.

See specifications for clamping strength (page 4). Please note that the force are listed in tonnes. All units are fitted with a two-handed interlocking system to prevent hands being accidentally trapped when clamping.

Safety procedures:

1. Check that safe pre-clamping is engaged.
2. Ensure full clamping is activated.
3. Lower the clamping bar to 5 mm off the bed.
4. Make sure that the magnet has engaged.

5.2 OPERATION OVERVIEW

The purpose of an operation overview is to provide a novice machine operator with a basic understanding of how to operate the machine and the process, so the machine controls and its components if discussed later in this manual will be understood.

This overview is not intended to be an instructional guide. If specific instructions in the operation is required, then read this entire manual, seek additional training from an experienced operator, and do additional research by looking at websites or reading “how-to” books.

STANDARD BENDING

1. Switch on the power then check that the clamp bar is correctly positioned and that lifting pins have engaged the holes at each end of the clamp bar. Should the lifting pins be locked, push hard back and then forward to release and lift the clamp bar slightly.

2 Set the machine to suit the sheet metal thickness by rotating the 2 clamp bar lifter screws situated on the back edge of the clamp bar. Check the clearance by lifting the bending beam at 90 deg. and examine the gap. To achieve a perfect bend, set a fractionally larger gap, than the thickness of the sheet metal between the edge of the clamp bar and the face of the bending beam.

3. Place the sheet metal under the clamp bar and set the backstop if needed.

4 Push down the clamp bar onto the sheet metal. The machine will not turn ON until the clamp bar is within 5 mm above the surface bed due to the interlock.

NOTE: The interlock can be operated by locking down the lifting system if the clamp bar is unable to be lowered to 5 mm. This can occur when sheet metal is buckled.

5. To apply pre-clamping force, depress the foot-switch and hold any of the green start buttons.

6. To activate the micro-switch for full clamping, pull one of the bending handles with your free hand. Release the foot switch or start button.

STANDARD BENDING Cont.

7. Lift both operating handle and begin bending until the angle required is achieved. Assistance will be necessary when carrying out heavy duty bending. The right handle has a beam angle gauge which graduates continuously. To allow for spring back of the sheet metal, bend a few degrees more than the angle that is required.

8. The electrical circuit of the machine releases a reverse pulse at the OFF stage allowing the clamp bar to release immediately.

9. To release the sheet metal, lift the material upwards, which will also lift the clamp bar to make it ready for the next bend. It may be necessary to lift the clamp bar by using one of the lifting handles.

CAUTION.

Do not insert small items under the clamp bar. A minimum bend of 15mm is essential except when bending very lightweight soft metal. This will prevent damage to the clamp bar. Do not clamp longer than is necessary due to the magnet having less clamping force when hot.

5.3 HOW TO USE THE BACKSTOPS

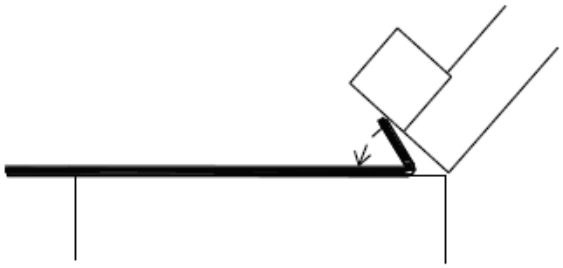
Make use of the backstops when handling volume bends that are all the same size. Set the backstops at the size required. Backstops can be used with a bar (not supplied) laid across them, making a long surface to use as a reference. The extension piece from the bending beam could be used. Use a strip of sheet metal of the same thickness as the work piece if a backstop is required under the clamp bar.

5.4 HOW TO FOLD A LIP

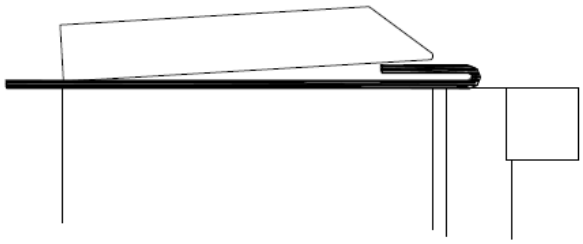
Folding the lip will depend on the sheet metal thickness and the length and width of Lightweight sheet metal up to 0.8 mm.

1. Carry out instruction for standard bending and continue to bend as far as possible.

2. Take away the clamp bar, leave the sheet metal on the machine and move 10 mm backwards, bring over the bending beam and compress the lip. No clamping is required. Thick sheet metal is not suitable for this application.



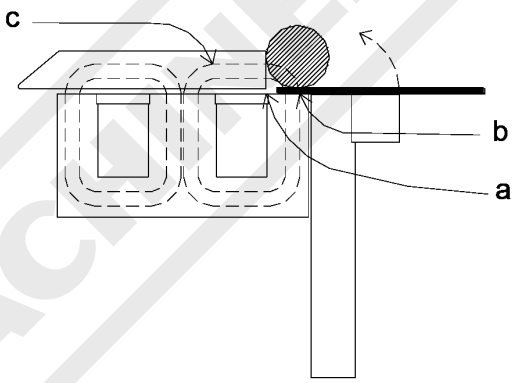
3. Further flattening of the lip can be accomplished when using thin lightweight material by following up with magnetic clamping.



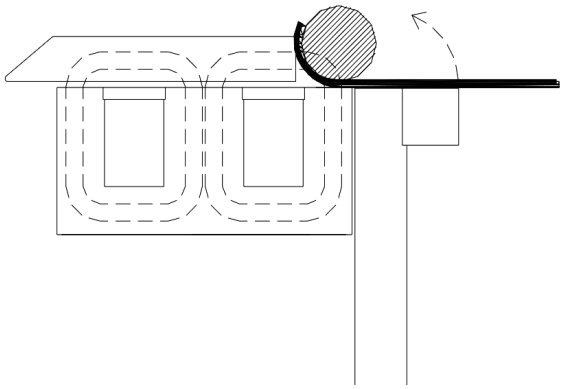
5.5 MAKING A ROLLED EDGE

Example: Wrap sheet metal around a round steel bar or pipe.

1. Position the sheet metal clamp bar and round pipe or bar as indicated on drawing below.
   (1) To avoid weak clamping make sure that the clamp bar does not overlap the machines front pole (A).
   (2) Ensure that the rolling pipe is resting on the front pole of the machine (B), it must not sit on the aluminum surface of the machine.
   (3) The clamp bar provides a magnetic pathway (C) for the rolling bar.



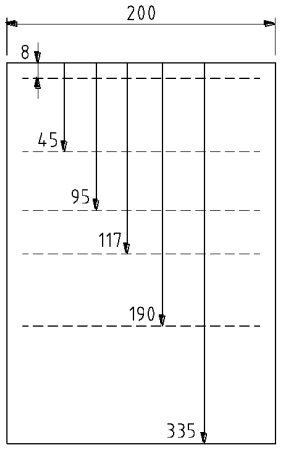
2. Wrap the sheet metal around the rolling bar as far as possible



5.6 HOW TO FORM A TEST PIECE

To learn how to work the machine with confidence it is recommended that test pieces are made.

Use a piece of 0.8 mm thick x 320 x 200 mm aluminum or mild steel sheet. Mark sheet as per drawing.



Bend 1 180°

Bend 2 90° reversed bend (mark this line on the reverse side of the sheet)

Bend 3 90°

Bend 4 90°

Bend 5 90°

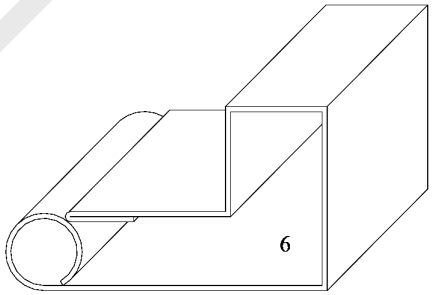
This section to be rolled around ¢ 25mm round bar

Form a lip on the edge of the sheet metal (see: How to fold a lip Page 16)

Turn the sheet metal over and insert under the clamp bar with the folded lip end toward you. Tilt the clamp bar and line up the bend marked 2. Bend to 90 degrees as shown in drawing below

Turn the sheet metal over and continue with steps marked 3, 4 and 5. Bent to 90 degrees.

Roll the remaining piece around a 25 mm diameter round bar (see How to make a rolled edge) see drawing below for the completed job.



WARNING!

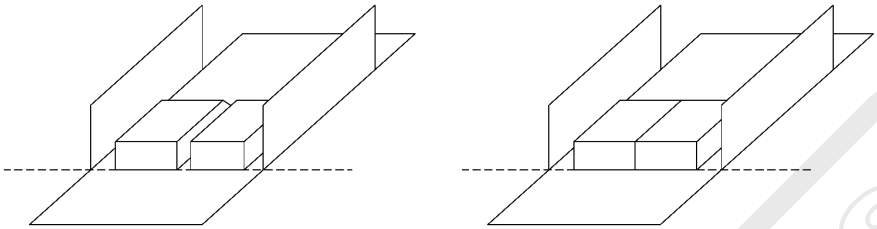
People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.

5.7 MAKING BOXES WITH SHORT CLAMPS

For ease of folding, make use of the short clamp bars to shape folds into each other. The machine is designed to assist you in the manufacture of a vast variety of box shapes.

5.7.1 BASIC BOXES

Use the long bar clamp to make the first two bends. Choose and insert one or two of the short clamp bars as indicated on drawing.

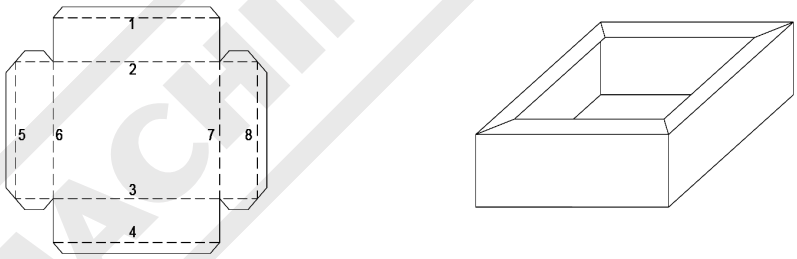


Select the largest clamp piece for bends up to 70 mm and for longer lengths use several clamp pieces to fit the required length.

Clamp pieces can be plugged together for repeat bending when making a single unit. A slotted clamp bar must be used for boxes or trays with shallow sides.

5.7.2 LIPPED BOXES

1. Use the set of standard short clamp bars to make rectangular lipped boxes i.e. 98 mm.
2. Choose the short clamp bar with at least a lip-width shorter than that of the box (Two or three may be necessary-depending on length). Make folds 5, 6, 7 and 8. take care to guide the corner tabs on the inside or the outside of the box.



5.7.3 BOXES WITH INDIVIDUAL ENDS

Advantages:

- Material saving
- No corner notching
- Cut without a guillotine
- Fold with the regular full length clamp bar.

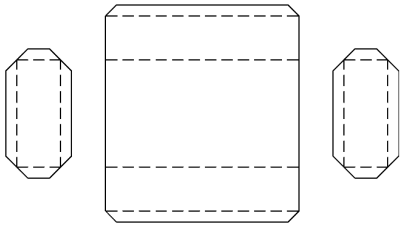
Disadvantages:

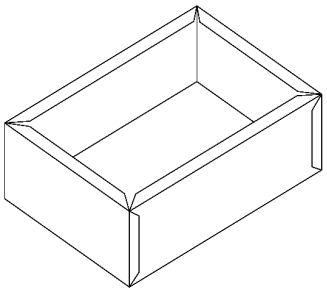
- Extra folds to be carried out.
- Extra corners to join.
- The finished product shows more joins.

Use the full length clamp bar for all folding.

1. Set up sheet metal as per drawing below.
2. Form four folds in the sheet metal as shown on drawing.
3. For folds on side panels, as per drawing, use the narrow flange of the end piece of the clamp bar.
4. Join the box.

5.7.3 BOXES WITH INDIVIDUAL ENDS Cont.

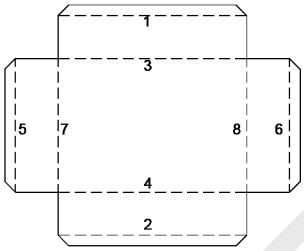


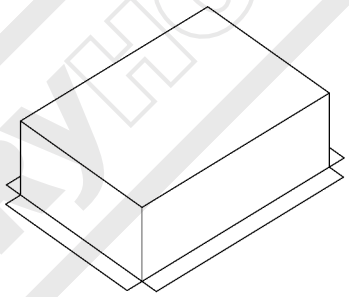


5.7.4 FLANGED BOXES WITH PLAIN CORNERS

To make plain cornered boxes, the length and width should not exceed the clamp bar width of 98mm. Outside flanges are used when making top hat sections.

1. Mark up the sheet metal as per the drawing below.
2. Use the full length clamp bar and fold sections marked 1, 2, 3 & 4.
3. Form fold 5 by inserting the flange under clamp bar follow by folding 6.
4. Use the slotted clamp bar to form folds 3, 4, 7 and 8.

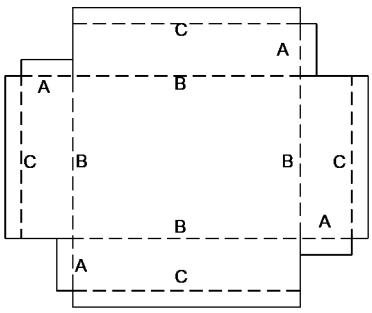


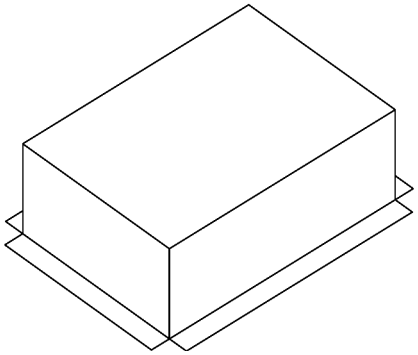


5.7.5 FLANGED BOX WITH CORNER TABS

Important Note: Folds must be formed in the correct sequence using one piece of sheet metal. It is suggested that deep boxes are manufactured with separate end pieces.

1. Mark up the sheet metal as the drawing below.
2. Form all tab folds to 90 degrees, mark A at the one end of the full length clamp bar by inserting the tab under the clamp bar.
3. Use the same end of the clamp bar and fold B to 45 degree. Insert the side of the box instead of the bottom under the clamp bar.
4. Form the flange fold C to 90 degrees, at the other end of the clamp bar.
5. Complete folds B to 90 degrees by using suitable short clamp bars.
6. Complete the box by joining the corners.





5.8 FORMING TRAYS USING SLOTTED CLAMP BAR

The slotted clamp bar is perfect for manufacturing shallow trays and pans.

Advantages:

The bending edges are aligned automatically to the front edge of the magnet body. The clamp bar automatically lifts to facilitate insertion and removal of the sheet metal.

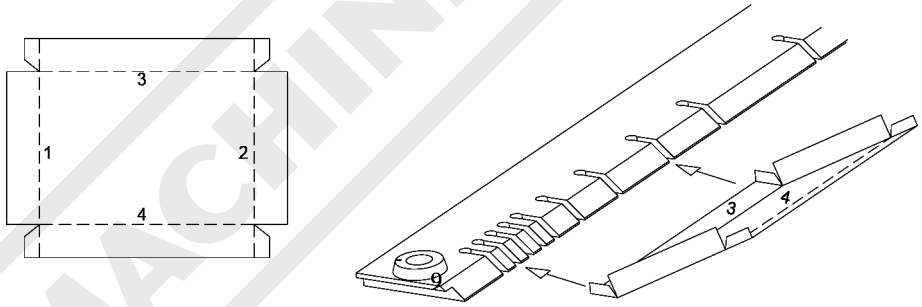
The slotted clamp bar folds shallow trays, however trays of unlimited depth and complex shapes can be manufactured with a short clamp bar.

The pitch of the slots has been calculated to enable the folding of various sizes of trays. Specification sheet indicate shortest and longest tray size that can be accommodated by the slotted clamp bar.

To fold shallow tray:

1. First fold the two opposite sides and the corner tabs by using the slotted clamp bar. Ignore the slots they will have no effect on the finished folds.
2. Select two slots in the clamp bar to fold the remaining two sides. Line up the left side of the tray with the left slot and check if there is a slot for the right side. Slide the tray to the left and try the next slot until a suitable slot is found. The edge of the tray should be under the clamp bar and between the two chosen slots.
3. To complete, fold the remaining sides.

Note: Trays that are almost as long as the clamp bar may need to use the end of the clamp bar in lieu of a slot.



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.

6. MAINTENANCE

It is very important that regular maintenance of the equipment is carried out. The operators need to follow the daily maintenance procedures.

For optimum performance from this machine, the maintenance schedule listed below and in this section must be followed.

6.1 ADJUSTER

The adjuster screws at the end of the clamp bar controls the thickness of the sheet metal between the bending beam and its edge. The heads for the screws are divided into 3 by centre pop marks. Use these marks as a reference for repeat setting of the clamp bar. The bending gap will be approx 1 mm, if the adjuster screws are both set so that the single pop mark is uppermost.

6.2 LUBRICATION

Hinges11

Grease all hinges once per month.

Working Surfaces

Bare working surface may become rusty or tarnished. Recondition by filing off and clean up surfaces with emery paper. Use an anti-rust spray.

6.3 TROUBLE SHOOTING

Prior to ordering a replacement electrical unit from the manufacturer please check the following:

- ❒ If the machine does not operate at all, check the pilot light in the ON/OFF switch.
- ❒ If the machine is hot and power is available, leave the machine to cool and try again.
- ❒ Do not pull the handle prior to starting – the start button must be pressed first.
- ❒ If the bending beam is moved prior to pressing, the start button must be pressed again. Ensure the handle is pushed fully back.
- ❒ Should the problem continue, the micro switch actuator may need to be adjusted.
- ❒ To check if the start button is faulty, try to start the machine with the foot switch.
- ❒ Check the connector and magnet at the electrical module.
- ❒ If the clamp bar snaps down on the release of the start button, this indicates that the 15 micro-farad capacitor needs to be replaced.
- ❒ Should the machine cause blown fuses or trip your circuit breakers, it is likely that the bridge rectifier is blown.

Full Clamping Not Operating

If you are not achieving a full clamp, the angle micro switch may not be fully actuated. How to check that the angle micro switch is being fully actuated.

- ❒ The micro switch can be found on the electrical panel located at the end of the square brass section. The brass section is attached to the angle indicating mechanism.
- ❒ To access the electrical panel, the rear cover must be removed.
- ❒ When the bending beam is lifted this rotates the brass section which in turn depresses the micro switch. You should be able to hear the micro switch click on and off.
- ❒ Failing this, adjust the clutching force. This can be done by ensuring that two M8 cap head screws at either end of the actuator shaft are secured.

6. MAINTENANCE Cont.

- ❒ This adjustment should ensure that the actuator rotates and clutches, however, if you are still unable to hear the click, the micro switch may need adjusting.
- ❒ The actuator can be adjusted by loosening the screw that secures it, making the adjustment, followed by re-tightening the screw.
- ❒ If the micro switch does not click on and off after you have made the above adjustments and rotated the bending beam to the maximum stops, then the switch may be fused and would need to be replaced. Call or email your distributor.

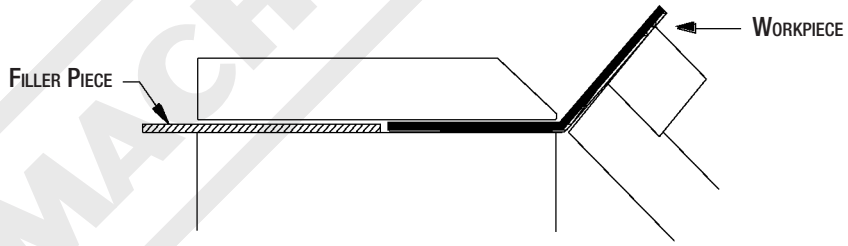
Clamp Bar Not Being Released

This is caused by the failure of the reverse pulse de-magnetizing circuit. Check for sticky contacts on the relay and clean.

The 6.8 power resistor or diodes could be faulty which will need to be replaced.

Problem with the bending of heavy gauge sheet metal.

- ❒ Ensure that sheet metal thickness is within the specifications of the machine.
- ❒ It may occur if narrow lips are being bent over the full length of the machine, please note that the machine is not equipped to do this.
- ❒ Should the work piece not be level (i.e. have a welded seam or a join) it may not be possible to bend the work piece. Ensure that all spaces under the clamp bar are filled with flat pieces of scrap metal.



WARNING

Disconnect all power from the machine before servicing. There may be multiple power sources present. Remove the plug from the power point or remove the fuse if hardwired. Failure to do may cause death or injury.

MAGNETIC PANBRAKE
MB1250

Order Code: (S542)

Edition : 2.0
Date: (02/25)

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 anytime 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.

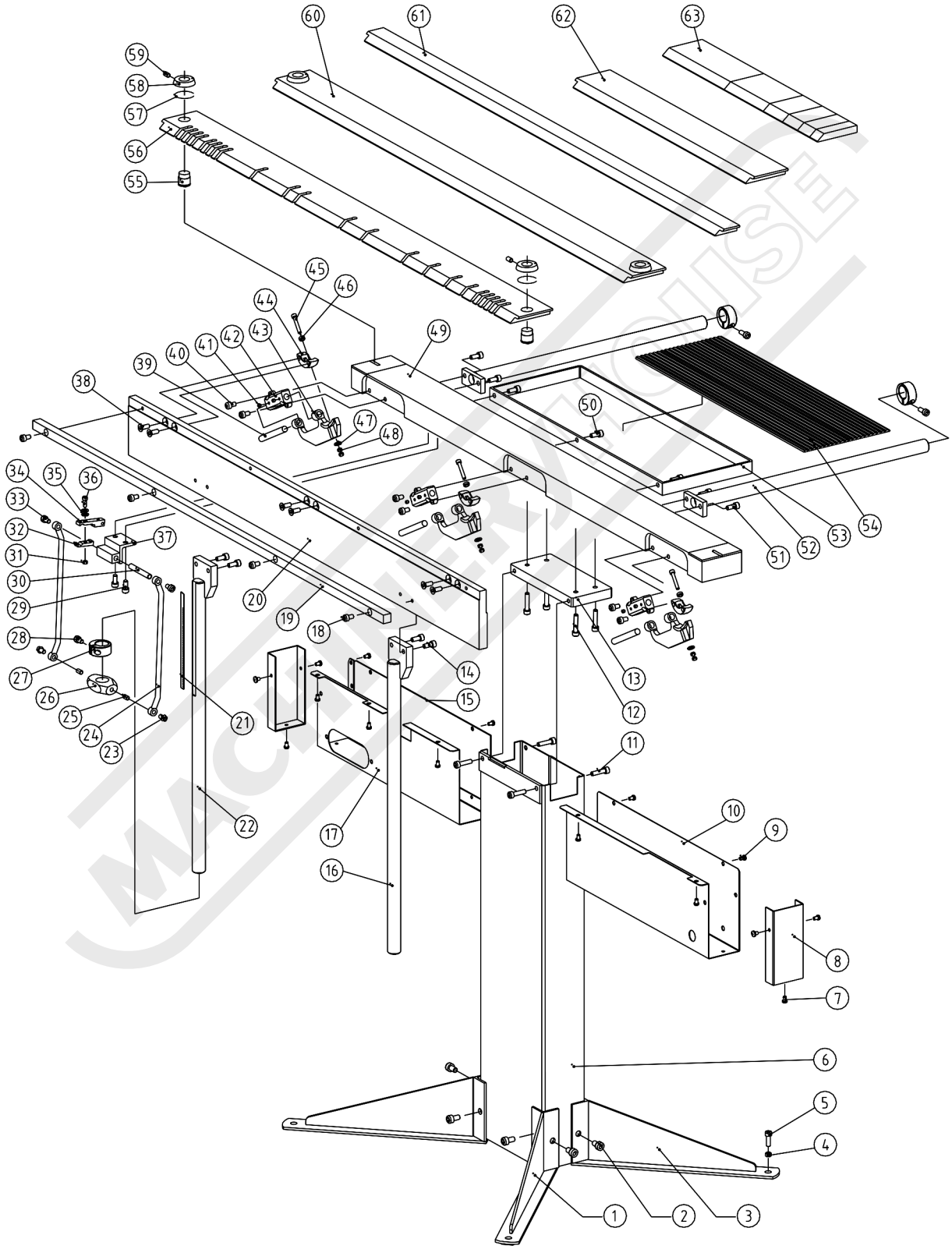
NOTE: SOME PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

3. Go to www.machineryhouse.com.au/contactus and fill out the inquiry form attaching a copy of scanned parts list.

WARNING!
Electricity is dangerous and could cause death
All electrical work must be carried out by a qualified electrician.

CAUTION
It is impossible to cover all possible hazards Every workshop environment is different. These are designed as a guide to be used to compliment training and as a reminder to users prior to equipment use. Always consider safety first, as it applies to the individual working conditions.

SPARE PARTS DIAGRAM



SPARE PARTS LIST

ITEM	FIG. NO.	DESCRIPTION	QTY	ITEM	FIG. NO.	DESCRIPTION	QTY.
1	EB1250-011	Front feet	2	33	GB/T70.1	Screw M8X20	2
2	GB/T70.2	Screw M10X20	8	34	EB1250-028	Block	1
3	EB1250-012	Back feet	2	35	GB/T1972	Disc spring 6.2X12.5	2
4	GB/T6170	Nut M8	2	36	GB/T818	Screw M6X25	1
5	GB/T70.1	Screw M8X25	2	37	EB1250-027	Angle iron	1
6	EB1250-013	Stand	1	38	GB/T70.3	Screw M8X20	6
7	GB/T818	Screw M6X12	6	39	GB/T119.2	Straight pin 12X100	3
8	EB1250-037	Plate	2	40	GB/T70.1	Screw M8X20	6
9	GB/T818	Screw M6X12	4	41	GB/T77	Screw M5X4	6
10	EB1250-016	Right Shield	1	42	EB1250-021	Fixed set	3
11	GB/T70.1	Screw M8X20	4	43	EB1250-022	Hinge body	3
12	GB/T70.1	Screw M8X30	4	44	EB1250-023	Tee	3
13	EB1250-015	Connect plate	1	45	EB1250-025	Bolt	3
14	GB/T70.1	Screw M8X16	4	46	EB1250-024	Ball seat	3
15	EB1250-30	Cover	1	47	GB/T6170	Disc spring 6.2x12.5	1
16	EB1250-014	Right clamp handle	1	48	GB/T6170	Nut M6	2
17	EB1250-031	Left Shield	1	49	EB1250-009	Workbench	1
18	GB/T70.1	Screw M8X20	4	50	GB/T70.1	Screw M8X16	3
19	EB1250-010	Spoke	1	51	GB/T70.1	Screw M8X16	4
20	EB1250-006	Bending plate	1	52	EB1250-026	Back stop bar	2
21	EB1250-035	Graduated scale	1	53	EB1250-007	Tray	1
22	EB1250-017	Left clamp handle	1	54	EB1250-008	Rubber mat	1
23	GB/T70.2	Screw M8X20	2	55	EB1250-018	Fix shaft	4
24	EB1250-032	Connect plate	2	56	EB1250-001	Clamp bar 1	1
25	GB/T77	Screw M8X6	2	57	EB1250-020	Spring	4
26	EB1250-036	Slider	1	58	EB1250-019	Indicator dial	4
27	EB1250-034	Stop Block	3	59	GB/T77	Screw M6X8	4
28	GB/T70.1	Screw M8X20	3	60	EB1250-002	Clamp bar 2	1
29	GB/T70.1	Screw M8X20	2	61	EB1250-003	Clamp bar 3	1
30	EB1250-033	Shaft	1	62	EB1250-004	Clamp bar 4	1
31	GB/T6170	Nut M6	1	63	EB1250-005	Clamp bar 5	1
32	EB1250-029	Block	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 ellergic 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

Magnetic Panbrake Safety Instructions

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

1. **Maintenance.** Make sure the Panbrake is turned off and disconnect from the main power supply.

2. **Panbrake Condition.** Panbrake must be maintained for a proper working condition. Never operate a Panbrake that has damaged or worn parts. Scheduled routine maintenance should performed on a scheduled basis.

3. **Tooling Condition.** Never operate a Panbrake with damaged or badly worn tooling. Replace if required.

4. **Hand Hazard.** Do not insert or extend your hands in between bending tools, under any circumstances, while the machine is in operation mode. Serious injury can occur.

5. **Gloves & Glasses.** Always wear leather gloves and approved safety glasses when using this machine.

6. **Authorized and trained personnel.** The machine must be operated by authorized and trained personnel. The machine is designed to be operated be a single user. Using the machine with more than one operator is forbidden, except for certain maintenance situations.

7. **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.

8. **Work area hazards.** Keep the area around the Panbrake clean from oil, tools, objects & chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents. Do not access the rear of machine, while the machine is working

9. **Guards.** Operate machine only with all protective devices and guarding.

10. **Overloading Panbrake.** Do not exceed the rated capacity of the machine. Refer to the manual for correct capacities.

11. **Warning Labels.** Take note of any warning labels on the machine and do not remove them.

12. **Support arms.** Do not use support arms for intermediate storage of workpieces.

13. **Operation.** During the bending process, the workpiece may leap up. Therefore, the material must be handled carefully.

14. **Emergency stop.** Use the emergency stop button in case of any emergency.

15. **Level machine.** Level the machine on a flat concrete surface by using a spirit level.

16. **Secure Panbrake.** Make sure you bolt and the machine down so it is secure when in operation.

17. **Floor load for Installation.** The permissible floor load, where the machine is to be installed, must be accounted for.

18. **Hearing protection and hazards.** Always wear hearing protection as noise generated from machine and workpiece can cause permanent hearing loss over time.

19. **Heating Material.** Heating metal with a torch while the metal is in the bending brake will weaken the fingers.

20. **Pinching.** Prevent pinching by lowering the clamp beam when not in use.

21. **Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

22. **Pacemaker Protection.** Please note: no person with a pacemaker should be closer than 6 foot or 1.828 metres to an Electromagnetic machine or anything that has an electrical field.
    1. Strong electromagnetic fields can cause electromagnetic interference.
    2. EMI can stop the pacemaker from sensing your heart's rhythm.

PLANT SAFETY PROGRAM

NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

Magnetic Panbrake

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)
B	CRUSHING	MEDIUM	Secure & support work material. Keep hands clear of folder blades when clamping.
C	CUTTING, STABBING, PUNCTURING	MEDIUM	Wear gloves to prevent cuts from sharp material offcuts. Care must be taken when handling folder blades.
F	STRIKING	MEDIUM	Ensure guards are secured properly. Wear safety glasses. Ensure clamp beam is correctly adjusted. Keep clear of bending material.
H	ELECTRICAL	MEDIUM	Machine should be installed & checked by a Licensed Electrician. All electrical enclosures should only be opened with a tool that is not to be kept with the machine.
O	OTHER HAZARDS, NOISE.	LOW HIGH	Wear hearing protection as required. Pacemaker Protection. Please note: no person with a pacemaker should be closer than 6 foot or 1.828 metres to an Electromagnetic machine or anything that has an electrical field. 1. Strong electromagnetic fields can cause electromagnetic interference. 2. EMI can stop the pacemaker from sensing your heart's rhythm.
Plant Safety Program to be read in conjunction with manufactures instructions			

HARE&FORBES MACHINERYHOUSE

www.machineryhouse.com.au

MACHINERYHOUSE

www.machineryhouse.co.nz

Authorised and signed by:
Safety officer: .....
Manager: .....

Revised Date: 12th March 2012

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

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