

# METALMASTER

## MOVABLE HEAD PRESS OPERATION MANUAL



**Model  
HP100T**

*Edition No* : MHP-100

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## MACHINE DETAILS

MACHINE	<input type="text" value="MOVABLE HEAD PRESS"/>
MODEL NO.	<input type="text" value="HP-100T"/>
SERIAL NO.	<input type="text"/>
DATE OF MANF.	<input type="text"/>

Distributed by

[www.machineryhouse.com.au](http://www.machineryhouse.com.au)[www.machineryhouse.co.nz](http://www.machineryhouse.co.nz)**Note:**

This manual is only for your reference. Owing to the continuous improvement of the 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 this electric machine.

**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)

A rectangular specification plate with a red header containing the "METALMASTER" logo. Below the header, the text "PRODUCT SPECIFICATION" is centered. The plate contains several fields for technical data: MODEL, CAPACITY, SER. NO., MFG DATE, WEIGHT, VOLTS, and MOTOR Kw. Each field is followed by a rectangular input box. At the bottom of the plate, the website "www.machineryhouse.com.au" and "Made in China" are printed.

<b>METALMASTER</b>	
PRODUCT SPECIFICATION	
MODEL:	<input type="text"/>
CAPACITY:	<input type="text"/>
SER. NO:	<input type="text"/>
MFG DATE:	<input type="text"/>
WEIGHT:	<input type="text"/>
VOLTS:	<input type="text"/>
MOTOR Kw:	<input type="text"/>
<a href="http://www.machineryhouse.com.au">www.machineryhouse.com.au</a>	
Made in China	

Fig.1

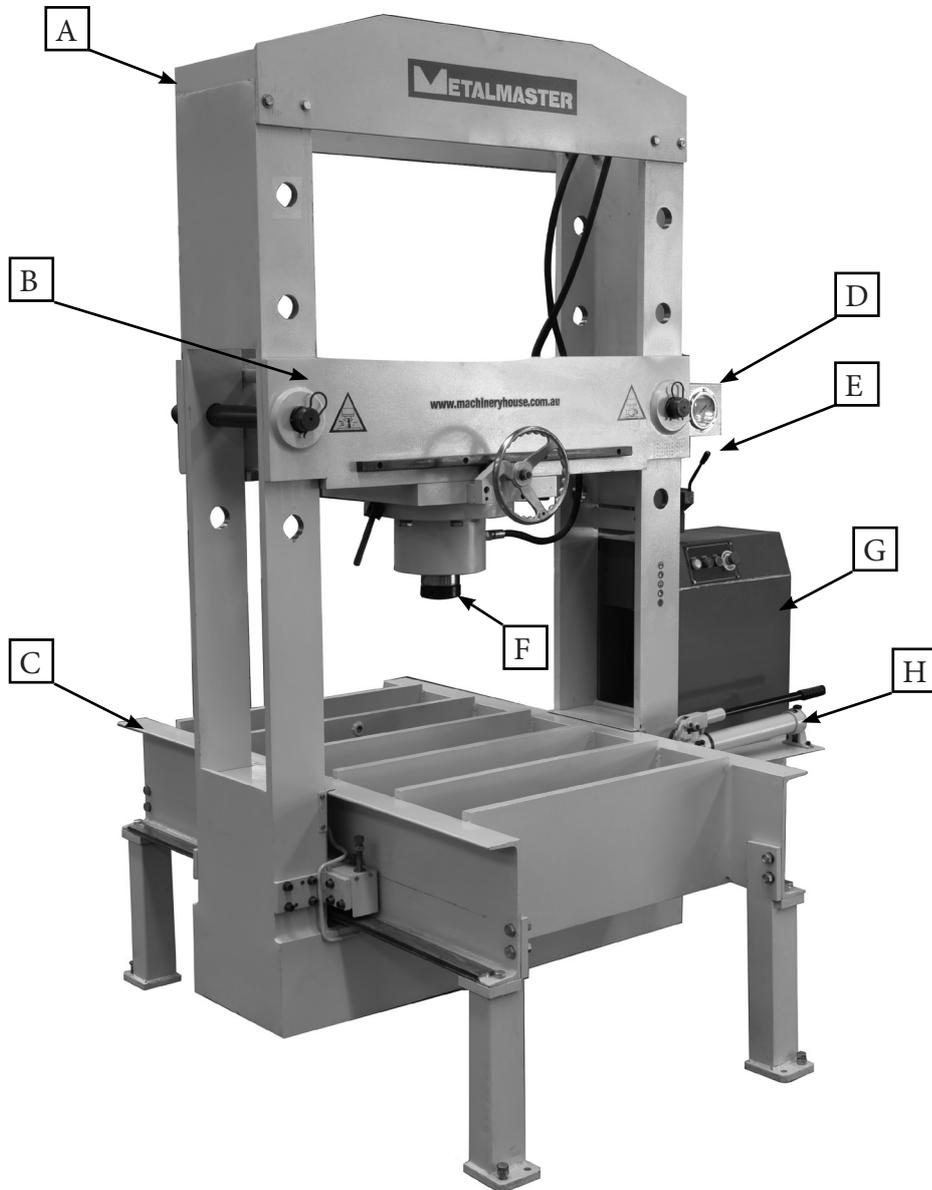
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**1.1 SPECIFICATIONS**

Model	<b>HP-100T</b>
Capacity	<b>100ton</b>
Ram Stroke	<b>350mm</b>
Width Between Front Posts	<b>1050mm</b>
Ram to Table (Min - Max)	<b>150 - 910mm</b>
Ram Side Movement	<b>550mm</b>
Table Size (L x W)	<b>1680 x 1040mm</b>
Head over Table Travel	<b>1050mm</b>
Motor Power	<b>3 Phase 7.5kW 415V 50Hz</b>
Dimensions (H x W x L)	<b>2700 x 1860 x 1680</b>
Weight	<b>1980kgs</b>

## 1.2 IDENTIFICATION



A	Press Frame	E	Operating Lever
B	Bolster	F	Cylinder Ram
C	Press Table	G	Electric Hydraulic Pump
D	Pressure Gauge	H	Hydraulic Hand Pump

## 2. IMPORTANT INFORMATION

### 2.1 SAFETY REQUIREMENTS.

Before operating the press read this manual, the instructions and safety warnings. The safety precautions are to help the operator to avoid personal injury or machine damage when operating the machine. Operators should be trained in the use of high pressure hydraulic machines.

Metalmaster cannot be responsible for any injury or damage to the machine resulting from unsafe product maintenance or incorrect operation.

Failure to comply with the following cautions and warnings could cause equipment damage and personal injury.



# WARNING



**DO NOT** exceed the equipment ratings. Never attempt to press more than the capacity of the cylinder. Overloading causes equipment failure and possible personal injury.

**DO NOT** set the relief valve to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage or personal injury.

**DO NOT** use the machine with faulty parts or damaged hydraulic hoses. Notify the supervisor and wait for the machine to be repaired. Immediately replace worn or damaged parts

**WARNING:** be sure the setup is stable before pressing the workpiece. The workpiece should be placed on a flat surface that can support the load. Do not weld or otherwise modify the press.

Avoid pressing loads that are not directly centered on the cylinder ram. Off-center loads produce considerable strain on cylinders and ram and could cause the load to slip or fall, potentially causing a dangerous hazard. Distribute the load evenly across the entire surface.

To avoid personal injury keep hands and arms away from cylinder and workpiece during operation.

**2.1 SAFETY REQUIREMENTS. Cont.**

# WARNING

## PINCH POINT DANGER

This machine has a high risk of fingers, hands or arms being caught in a pinch point. Make sure that you are aware of where your arms and hands are at all times when operating the machine.



**WARNING :** Material under pressure has been known to shatter. It is advised to wear a full face mask.



Appropriate footwear and clothing should be worn around and while operating the press



Gloves should be worn when handling components that have sharp edges



Before operating this press operators should have read and understood the manual. Store the manual in a safe place so it can be used for future reference.

**Before Operating**

- Make sure any trip or slip hazards around the machine have been removed.
- Make sure the task that is to be done is clearly understood by operator.
- Ensure press is in good working order without visible damage to structure or hydraulic fluid leaks.
- Ensure work piece is placed squarely on the plate.
- Clamp work piece (if appropriate).

**Operation:**

- Keep hands and body clear of the press mechanism when lowering the ram.
- Lower ram until it contacts the work piece.
- Adjust pressure of ram to desired setting.
- Identify ON/OFF switch and emergency stop button

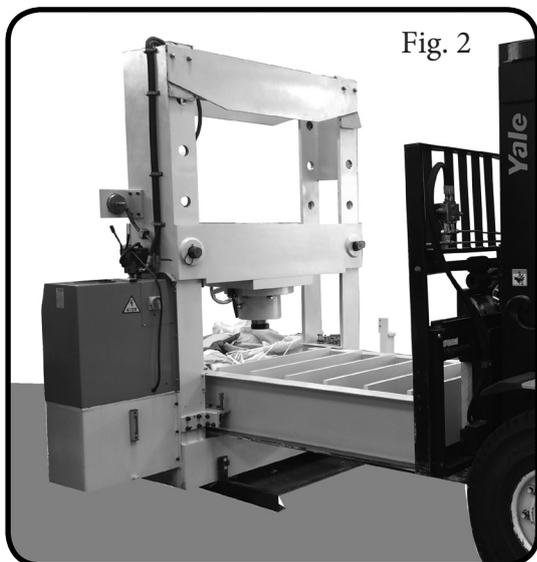
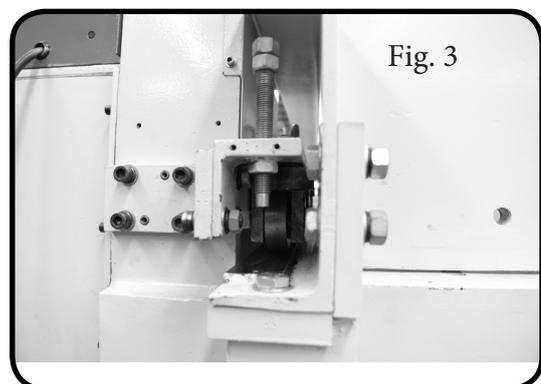
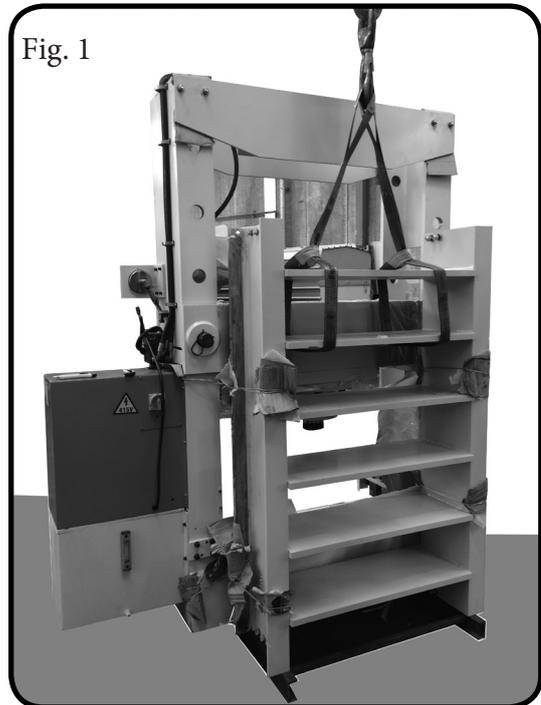
**After Operation**

- Ensure the area is clear of other people.
- Release pressure on hydraulic press.
- Slowly raise ram and remove work piece from plate.
- Return work pieces and other items to storage area as appropriate

## 2.2 PRESS ASSEMBLY

The Metalmaster press may be supplied in pack configuration for ease of transport. The pack comes mounted on a metal skid for stability and should not be removed until the table has been attached to the main frame. When lifting, a crane suitable to handle the load should be used. The use of certified web slings must be used and care should be taken at all times.

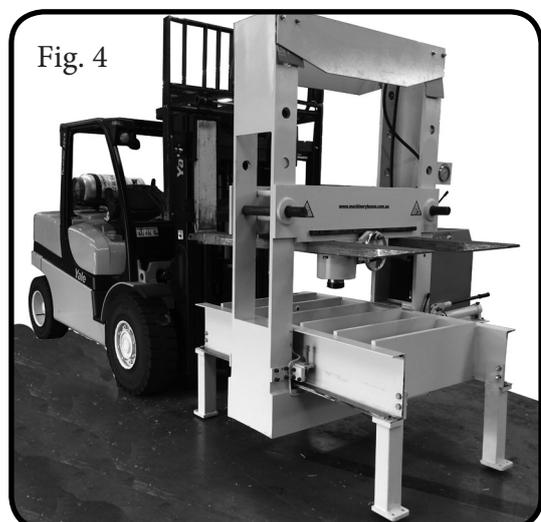
Before releasing the strapping, sling the table (Fig. 1) Once the slings are safely attached, lift the table off the pack and lay it down on wooded beams to prevent damage.



Using a forklift, lift the table (Fig. 2) and slide it between the main frame making sure that bottom web of the table frame is mounted under the rollers. (Fig. 3) Care should be taken not to damage the rollers during the assembly.

Once the table has been mounted to the main frame the legs can now be assembled. To do this lift the press as (Fig. 4) and attach the legs and remove the main frame from the metal skid.

**WARNING!** The table and main frame should be clamped to ensure that it does not move during this operation.



### 3 INSTALLATION

#### 3.1 PLACEMENT & LEVELING

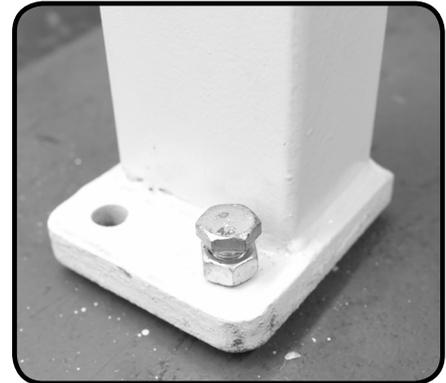
Position the press assembly in a suitable location. The dimensions can be found in the specifications list on page 4. The base of the press should sit on a concrete floor at least 150mm thick.

**NOTE !** The press must be permanently mounted to the floor with bolts through the four legs.

Fig. 5

The press should be level and stable. Place a level across the and along the table and adjust until the table is level.

The table legs are fitted with an adjusting screw and a hole for the hold down bolt



#### **WARNING**

The machine is top heavy when the bolster is in the top position

#### 3.2 ELECTRICAL CONNECTION

The press needs to be connected to the power supplied. The power requirements are listed below

VOLTAGE.....415 Volts 3 Phase 50 Hz

AMPS.....15 Amps

The press is supplied without any lead and requires a qualified electrician to connect the machine to the power supply. If a plug and lead is to be fitted then either a service engineer or qualified electrician should be used.



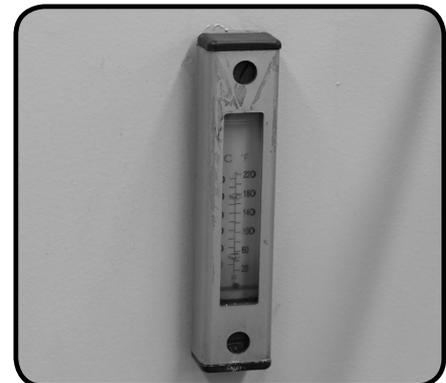
#### **WARNING**

This machine has an electrical hazard.  
Electrical cabinets must not be opened except by a qualified electrician.

#### 3.3 HYDRAULIC OIL TANK

Once the press has been installed and bolted to the floor the hydraulic oil level needs to be checked in the 40 ltr tank before operating. The oil level should be half way up the sight glass on the side of the tank (Fig. 6) Check all hydraulic hoses to be sure the fittings and couplers are tight and leak free. Check the hose positions to be sure the hoses are located in an area where they will avoid damage during press operations.

Fig. 6



**4. CONTROLS AND OPERATION.**

**4.1 CONTROLS**

- A. Power Light - This light illuminates when the power is turned on at the main isolating switch. (Fig. 7)
- B. Start Button - The hydraulic pump motor is started when this button is pressed (Fig. 7)
- C. Stop Button - This button when pressed switches off the hydraulic pump. (Fig. 7)
- D. Emergency Stop/RESET Button: Stops all machine functions. Twist clockwise to reset. (Fig. 7)
- E. Operating Lever - Moves the ram up or down (Fig. 8)
- F. Pressure Gauge - Records the amount of pressure being used. (Fig. 9)
- G. Moving Head Handwheel - Moves the head right or left. (Fig.10)
- H. Moving Head Lock - Locks the head after it has been moved. (Fig.10)
- I. Tonnage Chart - Displays the tonnage at listed pressure (Fig.11)
- J Hand Pump Release - Releases the pressure in the hand pump.
- K. Hand Pump - Locks the main frame to the table. (Fig.12)

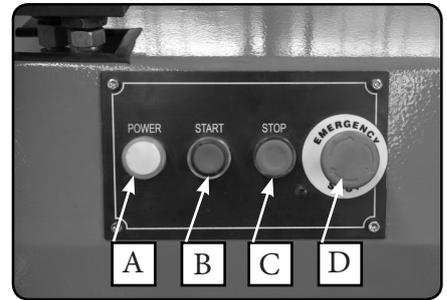


Fig. 7

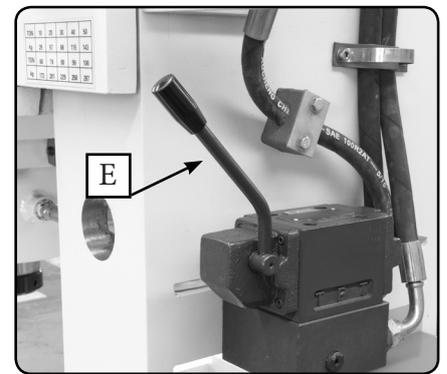


Fig. 8

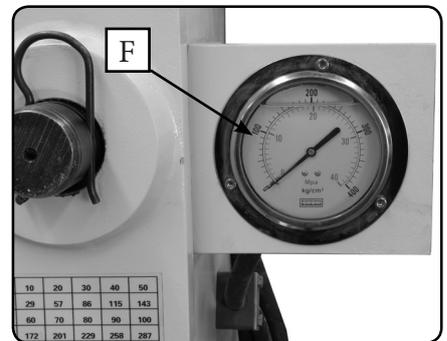


Fig. 9

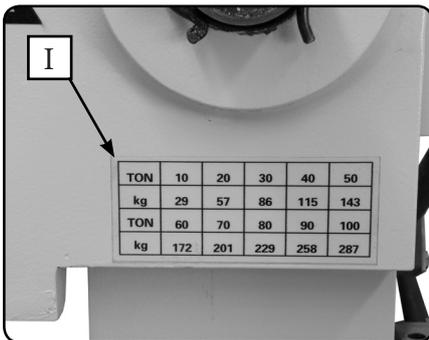


Fig. 11

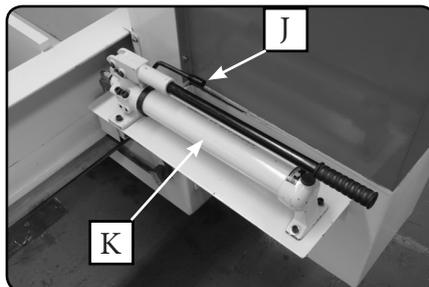


Fig. 12

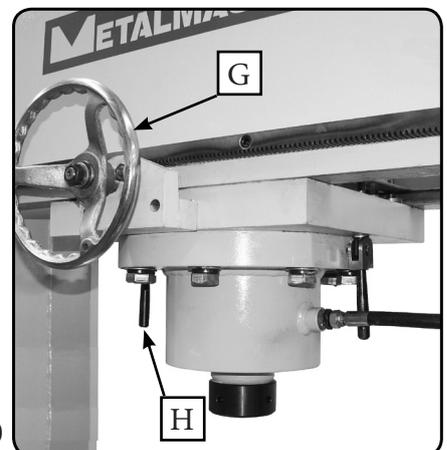


Fig. 10

#### 4.2 RAISING THE BOLSTER

Raising and lowering the bolster is done by using a combination of the ram and two tubes supplied with the machine. The following process is used to raise or lower the bolster.

1. Place the tube "L" (Fig. 13) on the table and secure with the pin supplied (Fig. 14)
2. Move the head so the ram is sitting over the top of the tube. When in place lock the main frame with the hand pump
3. Carefully apply pressure to the ram until the pins (Fig. 15) become loose. Remove the safety retainer and slide the pins out.
4. Using the ram raise the bolster until the next set of holes line up. Place **both** pins in the holes and then retract the ram.
5. Add part "M" extension to the part "L" (Fig. 16) and repeat step 4.
6. When the bolster is in the desired place and both the large pins are in place, make sure that the safety retainers have been placed back on the pins.

Use the same process to lower the bolster.



Fig. 13

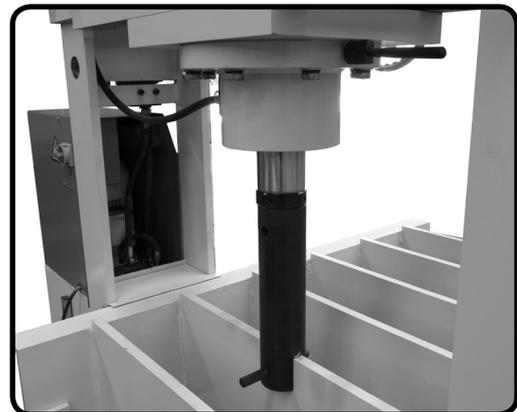


Fig. 14

**WARNING**  
**WHEN THE PINS ARE REMOVED DO NOT**  
**PLACE HANDS OR ARMS UNDER THE**  
**BOLSTER UNTIL THE PINS ARE IN PLACE.**

Fig. 15

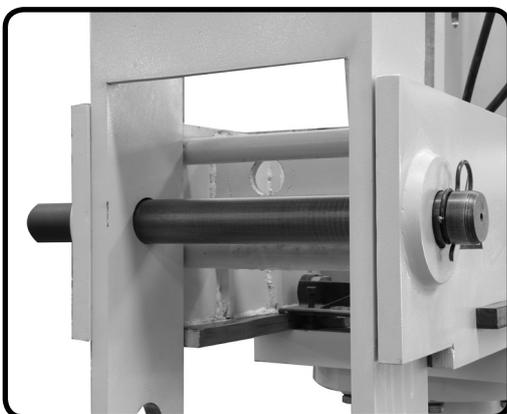


Fig. 16

