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FOR HELP OR ADVICE ON THIS PRODUCT PLEASE CONTACT YOUR DISTRIBUTOR, OR SIP DIRECTLY ON:
TEL: 01509500400

EMAIL: sales@sip-group.com or technical@sip-group.com www.sip-group.com

## 100 Ton Shop Press

(Pneumatic/Hydraulic)



03686

Please read and fully understand the instructions in this manual before operation. Keep this manual safe for future reference.

## **EU - DECLARATION OF CONFORMITY**

## **Declaration of Conformity**

We

SIP (Industrial Products) Ltd Gelders Hall Road Shepshed Loughborough Leicestershire LE12 9NH England

As the manufacturer's authorised representative within the EC declare that the

100 Ton Shop Press - SIP Part No. 03686

Conforms to the requirements of the following directive(s), as indicated.

Machinery Directive 2006/42/EC

And the relevant harmonised standard(s), including:

EN ISO 12100:2010 EN 1494:2000+A1:2008

Signed: .

Mr P. Ippaso - Director - SIP (Industrial Products) Ltd

Date: 01/02/2021.



## **CONTENTS**

## **Declaration of Conformity**

We

SIP (Industrial Products) Ltd Gelders Hall Road Shepshed Loughborough Leicestershire LE12 9NH England

As the manufacturer within the UK, England, Scotland & Wales, declare that the

100 Ton Shop Press - SIP Part No. 03686

Conforms to the requirements of the following directive(s), as indicated.

Supply of Machinery (Safety) Regulations 2008

And the relevant harmonized standard(s), including:

BS EN ISO 12100:2010 BS EN 1494:2000+A1:2008

Signed: .

Mr P. Ippaso - Director - SIP (Industrial Products) Ltd

Date: 01/02/2021



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## SAFETY SYMBOLS USED THROUGHOUT THIS MANUAL



Danger / Caution: Indicates risk of personal injury and/or the possibility of damage.



Note: Supplementary information.

## **SAFETY INSTRUCTIONS**



*IMPORTANT:* Please read the following instructions carefully, failure to do so could lead to serious personal injury and / or damage to the Shop press.

When using your Shop press, basic safety precautions should always be followed to reduce the risk of personal injury and / or damage to the Shop press or load.

Read all of these instructions before operating the Shop press and save this user manual for future reference.

The Shop press should *not* be modified or used for any application other than that for which it was designed.

It was designed for the removal or installation of bearings, universal joints, pulleys, etc. If you are unsure of its relative applications do not hesitate to contact us and we will be more than happy to advise you.

Before operating the Shop press always check no parts are broken, that no oil is leaking and that no parts are missing.

Always operate the Shop press safely and correctly.

KNOW YOUR SHOP PRESS: Read and understand the owner's manual and labels affixed to the Shop press. Learn its applications and limitations, as well as the potential hazards specific to it.

KEEP CHILDREN AND UNTRAINED PERSONNEL AWAY FROM THE WORK AREA: All visitors should be kept at a safe distance from the work area; never allow untrained persons to operate the Shop press. .

STAY ALERT: Always watch what you are doing and use common sense.

NEVER LEAVE THE SHOP PRESS UNATTENDED: When in use / under load.

HAVE YOUR SHOP PRESS REPAIRED BY A QUALIFIED PERSON: The Shop press is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user and void the warranty.

*DANGER!* Check that the shop press is in sound condition and good working order; Take immediate action to repair or replace damaged parts.

#### **NOTES**

## SAFETY INSTRUCTIONS....cont

WARNING! Only operate on a level and stable surface and never use on soft ground where the Shop press is likely to "sink" whilst in operation.

Ensure that the shop press is securely bolted to the ground before putting into service. NEVER STAND ON THE SHOP PRESS: The Shop press is not designed for this purpose. DO NOT dismantle or tamper with the Shop press, as this may be dangerous and will invalidate the warranty.

- If a problem with the Shop press is experienced or suspected stop using the Shop press *immediately* and contact your distributor for repair.
- Do not attempt to press a load that exceeds the rated capacity of the shop press. Never work under the Shop press whilst in operation.
- Regularly inspect, clean and lubricate the Shop press, ensuring that it is in good working order and condition.
- Always ensure that the work area is clean and tidy, free from unrelated materials and has adequate lighting.
- Keep hands, limbs etc. clear of moving parts during operation of the ram.
- DO NOT top-up the Shop press with brake fluid, or other oil types; use hydraulic oil only.
- DO NOT adjust the safety overload valves.
- Ensure that there are no persons or obstructions beneath the Shop press whilst its in operation.
- Clean the Shop press correctly, with the ram in the retracted position, DO NOT leave it extended.
- Failure to follow the warnings in this manual, may result in personal injury and/or property damage.
- Prior to applying the load, be sure that the hydraulic ram collar threads are fully enGaged to the head assembly.
- Components of this Shop press are specially designed to withstand the rated capacity.
- Do not substitute bolts, pins, or any other components.
- Always press the load on the centre of the ram. Offset loads can damage the ram, and may cause a workpiece to eject.
- Before operating, check for signs of cracked welds, bent bed support pins, loose or missing bolts, or any other structural damage. Do not operate if any of these conditions exist.
- Have repairs made only by authorised service centre.
- Remove all loads and arbor plates from the bed before attempting to adjust the bed height.
- Press only on the workpiece supported by the bed and arbor plates.
- When using accessories, such as arbor plates, be sure that they are centered on the bed, and are in full contact with the bed.
- Parts being pressed may splinter, shatter or eject from the press. Due to various applications, it is your responsibility to always use adequate guards, such as eye pro-tection and heavy protective clothing, when operating this Shop press.
- Do not stand in front of work area where the load is applied.

## **SAFETY INSTRUCTIONS....cont**

- If the Shop press appears to be damaged in any way, is found to be badly worn, or operates abnormally *IT SHOULD BE REMOVED FROM SERVICE* until necessary repairs are made by an authorised service centre.
- DO NOT use the Shop press to compress springs or any other item that could disengage and cause a potential hazard.
- Understand the operating environment; Before each use the operator should assess, understand and where possible reduce the specific risks and dangers associated with the operating environment. Bystanders should also be made aware of any risks associated with the operating environment.

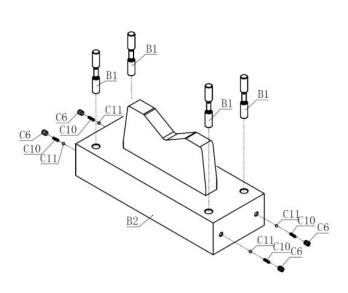


Danger / Caution: Never exceed the maximum capacity of 100 tons, overloading can lead to personal injury or damage to the Shop press.



*CAUTION:* The warnings and cautions mentioned in this user manual can not cover all possible conditions and situations that may occur. It must be understood by the oper-ator that common sense and caution are factors which cannot be built into this prod-uct, but must be applied.

## **EXPLODED DIAGRAM - ARBOR PLATE / HEEL BLOCKS**



## PARTS LIST - ARBOR PLATE / HEEL BLOCKS

No	Description	Qty.
B1	Limit Screw	8
B2	Heel Block	2
C6	Hexagon Screw	8
C10	Spring	8
C11	Steel Ball	8

## **GUARANTEE**

This SIP Shop press is covered by a 12 month parts and labour warranty covering failure due to manufacturers defects. This does not cover failure due to misuse or operating the Shop press outside the scope of this manual - any claims deemed to be outside the scope of the warranty may be subject to charges Including, but not limited to parts, labour and carriage costs.

This guarantee does not cover consumables such as oil, arbor plates etc.

In the unlikely event of warranty claims, contact your distributor as soon as possible.



*Note:* Proof of purchase will be required before any warranty can be honoured.

## **CONTENTS & ACCESSORIES**

- 1. Unpacking the plywood case.
- 2. To avoid any damage to the machine or personal injury, remove the small parts packed in case first.
- 3. Remove the polybag covering the press.
- 4. Use a fork lift to take the press out of case.
- 5. Double check parts to ensure they are all there. The parts should include press body frame, pump, base, support, hardware kits, etc. (Detail refer to the following sheet).

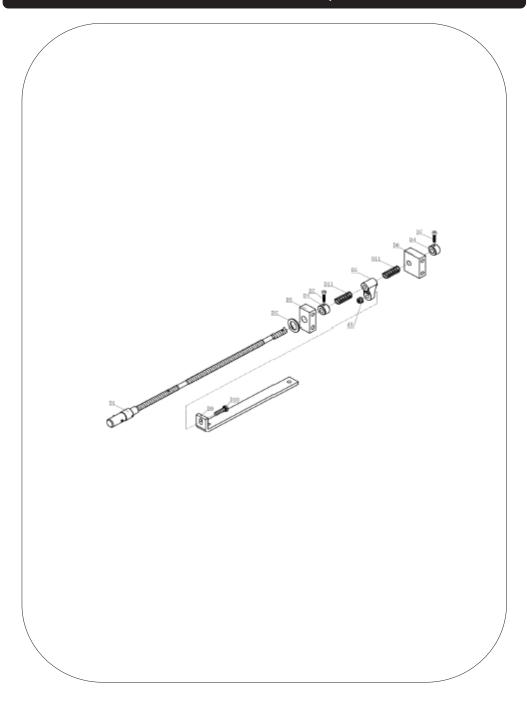


No	Description	No	Description
1.	Arbor / Heel plate x2	5.	Air Pedal
2.	Base / Base Supports x2 (c/w Fixings)	6.	Bed Pin x4 inc. Clips x 8
3.	Pump Handle	7.	Cranking Handle
4.	Pump Assembly	8.	Pneumatic Control Handle



*Note:* If any of the above are missing or damaged, contact your distributor immediately.

## **EXPLODED DIAGRAM - RAM MOVING EQUIPMENT**



## PARTS LIST - RAM MOVING EQUIPMENT

No	Description	Qty.	No	Description	Qty.
D1	Worm Connecting Shaft	1	D7	Screw	2
D2	Washer	1	D8	Damping Nut	1
D3	Support Base	1	D9	Connecting Bar	1
D4	Locking Nut	2	D10	Bolt	1
D5	Nut	1	D11	Spring	2
D6	Screw Base	1			

## TECHNICAL SPECIFICATIONS



Rated Capacity	100 Ton
Working Range	93-933mm
Air Inert Fitting	1/4"
Ram Sideward Movement Range	250mm
Stroke	300mm
Bed Dimensions	Internal Width 787mm -External Depth 340mm - Internal Depth 310mm
Air Pressure Range	120-200PSI

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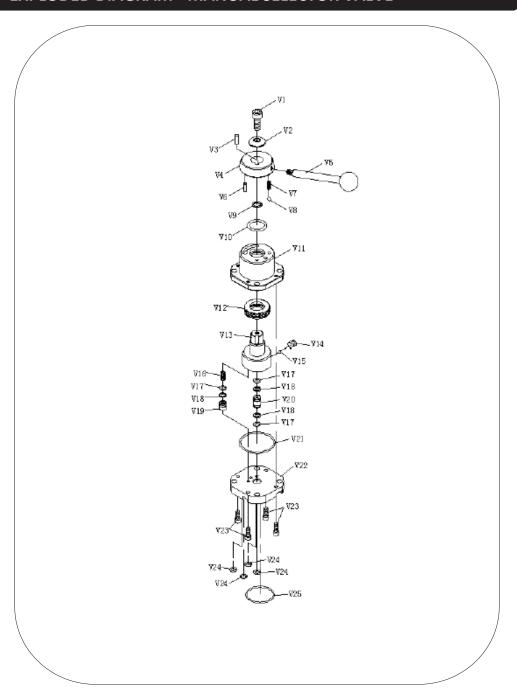
## **GETTING TO KNOW YOUR SHOP PRESS**

## **EXPLODED DIAGRAM - MANUAL SELECTOR VALVE**



Ref No.	Description	Ref No.	Description
1.	Base Rails	6.	Hydraulic Ram
2.	Rail Supports	7.	Manometer (gauge)
3.	Bed Pin	8.	Pump Aseembly
4.	Bed	9.	Pneumatic Foot Pedal Valve
5.	Arbor / Heel Plate		

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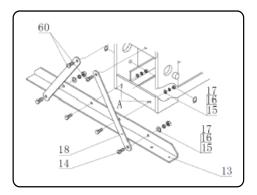
## PARTS LIST - MANUAL SELECTOR VALVE

No.	Description	Qty.
V1	Hexagon Screw	1
V2	T Washer	1
V3	Key	1
V4	Moving Cover	1
V5	Handle	1
V6	Pin	1
V7	Spring	1
V8	Steel Ball	1
V9	Copper Washer	1
V10	O-Ring	1
V11	Valve Jacket	1
V12	Ball Bearing	1
V13	Valve Plug	1
V14 Hexagon Socket Set Screw		1
V15 Steel Ball		1
V16	Spring	1
V17	O-Ring	3
V18	PTFE Washer	3
V19	Slide Valve	1
V20	Connector	1
V21	O-Ring	1
V22	Valve Plate	1
V23	Hexagon Screw	4
V24	O-Ring	4
V25	O-Ring	1

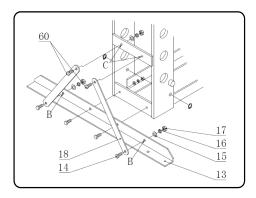
## **ASSEMBLY INSTRUCTIONS**

## 1. Base

1.1 Disassemble the hex bolt (14), washer (15), spring washer (16), hex nut (17) from part A of the press frame body. Then assemble the base to the body frame by the above parts.



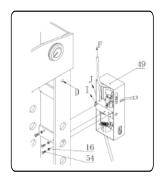
1.2 Fix the 4pcs supports (18) to the body frame part B and C by using hex bolt (14), washer (15), spring washer (16), and hex nut (17).

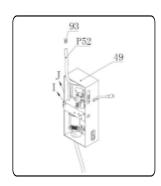


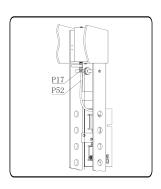
## **EXPLODED DIAGRAM - WORKING BED LIFTING EQUIPMENT**

#### 2. Pump

- 2.1 Fix the pump assy. (49) to the body frame by using hex bolt (54) and spring washer (16).
- 2.2 To avoid oil spillage from the oil hose, a plug (93) has been added in the oil hose when packing. Remove the plug.
- 2.3 Then connect the oil hose (P52) to 1/2" connector (P17). Once the oil supply hose is connected, open the oil tank lever valve (located above P17) to allow the flow of oil and check for leaks.

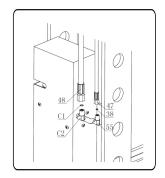


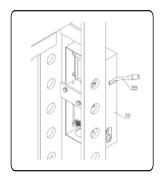


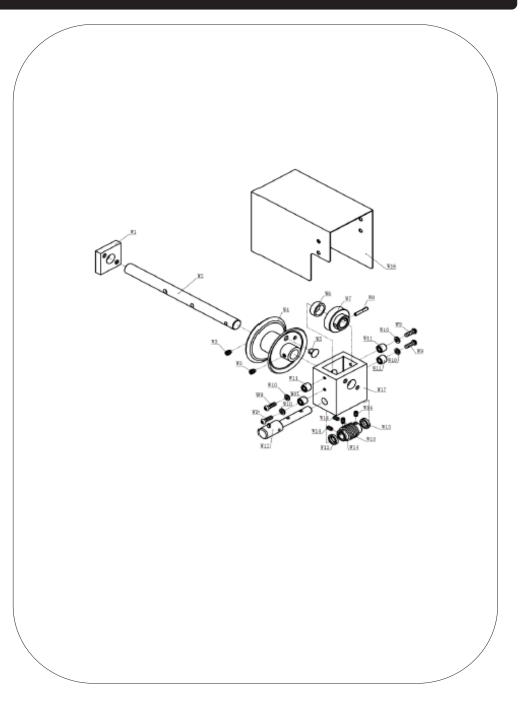


- 2.4 Remove the plug of connector (C2, 55) and oil hose (47, 48), then connect the oil hose 1 (47) and oil hose 2 (48) to connector (55) and connector (C2) and tighten it.

  Note: make sure the o-rings are in the grooves of connector (C2) & (55) before assembling the two oil hoses.
- 2.5 Fix the selector lever (99) on the selector valve on the pump (49).







## PARTS LIST - WORKING BED LIFTING EQUIPMENT

No	Description	Qty.	No	Description	Qty.
W1	Support Plate	1	W10	Washer	4
W2	Worm	1	W11	Washer	4
W3	Hexagon Screw	2	W12	Worm	1
W4	Winch	1	W13	Worm Washer	2
W5	Rivet	1	W14	Hexagon Socket Set Screw	4
W6	Worm Pad	1	W15	Worm	1
W7	Worm	1	W16	Winch Cover	1
W8	Spring Pinφ 6*30	1	W17	Reduction Gearbox	1
W9	Hexagon Screw	4			

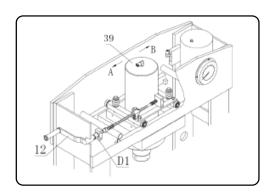
## **ASSEMBLY INSTRUCTIONS....cont**



*Note:* Take care when removing the transit bungs as there is oil in the system that could leak if the hose is not handled carefully.

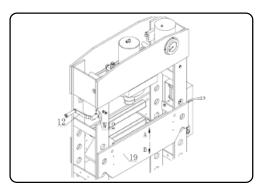
#### 3. RAM Moving

- 3.1.Insert the handle (12) to the worm connecting shaft (D1).
- 3.2. Turn the handle clockwise, and the ram moves left (Direction A).
- 3.3. Turn the handle (12) anti-clockwise, and the ram moves right (Direction B) assembling.



## 4. Bed Adjustment

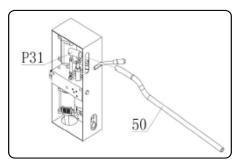
- 4.1. Insert the handle (12) to the worm shaft (W12).
- 4.2. Turn the handle (12) clockwise, the working bed will lift (direction A).
- 4.3. Turn the handle (12) anti-clockwise, the working bed be lowered (direction B).

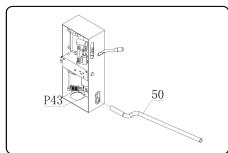


## 5. Handle Tube

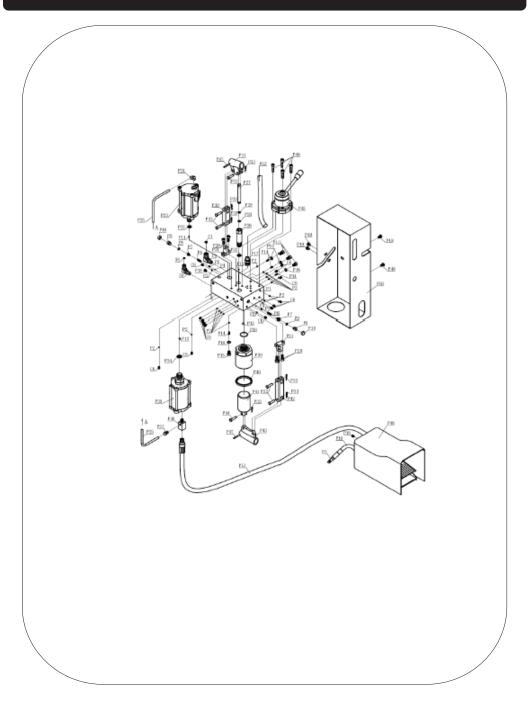
There are 2 handle sockets, one on top and one on the bottom of the pump, the upper one is for high pressure and low speed; and the lower one is for low pressure and faster speed. The same handle tube is used for both pumps.

- 14.1. When operating the high pressure pump, insert the handle tube (50) into the handle socket (31) as shown in above fig.
- 14.2. When operating the low pressure pump, please insert the handle tube (50) into the socket (43).





## **EXPLODED DIAGRAM - PUMP**



## **PARTS LIST - PUMP**

No.	Description	Qty.	No.	Description	Qty.
P1	Pump	1	P29	PTFE Washer	1
P2	Steel Ball	18	P30	Connecting Bar	1
Р3	Air Hose Joint	1	P31	Handle Socket	1
P4	Steel Ball	2	P32	Pin	5
P5	Steel Ball Base	2	P33	R-Pin	6
Р6	Spring	2	P34	Copper Washer	1
P7	Screw	2	P35	Air Motor	1
P8	Plug Screw	2	P36	Branch Joint	1
Р9	O-ring	2	P37	Connector	1
P10	Cover	2	P38	O-Ring	1
P11	Steel Ball	2	P39	Big Pump Core Base	1
P12	Steel Ball	1	P40	U-Ring	1
P13	Steel Ball	1	P41	Big Pump Core	1
P14	Spring	4	P42	Big Connecting Bar	1
P15	Plug Screw	4	P43	Handle Socket For Low Pressure	1
P16	Copper Washer	4	P44	Pin	1
P17	NPT1/2" Connector	1	P45	Manual selector valve	1
P18	NPT1/4"Plug	2	P46	Hexagon Screw	4
P19	Air Hose	1	P47	Spring Pin	2
P20	Hexagon Bolt M8*20	4	P48	Air Valve	1
P21	Connecting Rod Base	2	P49	Flat-head Screw	4
P22	Copper Washer	2	P50	Pump Cover	1
P23	Air Motor	1	P51	Air Hose 1	1
P24	NPT1/4"-8 Connector	1	P52	PU Hose 16*12	1
P25	PU Tube 8*6	1	38	O-ring	1
P26	Pump Core Base	1	55	Elbow	1
P27	Pump Core	1	C2	Connector	1
P28	O-ring	1	C6	Hexagon Screw	14

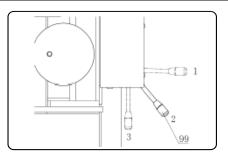
## **ASSEMBLY INSTRUCTIONS....cont**

#### 6. Air Purge

#### 6.1. Air Purge Manually

6.1.1. Turn the handle lever of selector valve to position 2.

1	When the handle lever (99) is in position 1, the ram piston returns / reverses.
2	When the lever (99) in position 2, the ram piston does not move.
3	When the handle lever (99) in position 3,the ram piston extends.



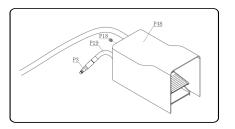
- 6.1.2 Insert the handle tube (50) to the socket as process 14.2, quick pump the handle tube (50) no less than twenty cycles.
- 6.1.3Turn the handle lever (99) of socket valve to position 3, and check if the ram is working properly; If the ram working properly, air purge is finished.

#### 6.2. Air purge by manual high pressure valve

- 6.2.1 Turn the handle lever of selector valve to position 2.
- 6.2.2 Insert the handle tube (50) to the socket as process 14.1, quick pump the handle tube (50) no less than twenty cycles.
- 6.2.3 Turn the handle lever (99) of socket valve to position 3 , and check if the ram is working properly; If the ram is working properly, air purge is finished.

## 6.3. Air purge by air.

6.3.1 Connect the air hose (P3) of the air foot valve (P48) to the compressor.



- 6.3.2 Place the handle lever (99) of selector valve to position 2, then depress the air foot valve (P48), keeping the air motor working no less than two minutes.
- 6.3.3 Place the handle lever (99) to position 3, then depress the air foot valve (P48), keeping the air motor working and check if the ram is working properly. If the ram is working properly, the air purging is finished.

#### 7. Piston's extension & retraction

7.1 Extending the Ram can be operated either manually or by air.

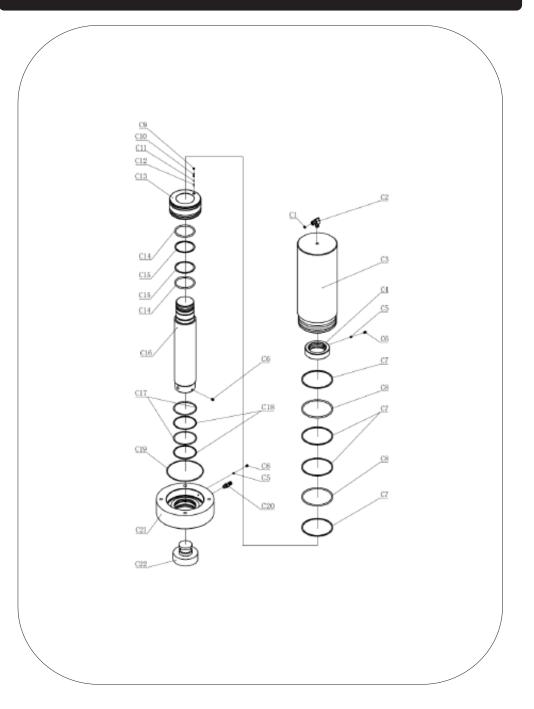
#### 7.1.1 Operating by air:

- 7.1.1.1 Connecting the air hose (P3) of air foot valve to the compressor.
- 7.1.1.2 Place the handle lever (99) of socket valve to position 3.
- 7.1.1.3 Depress the air foot valve (P48), when the piston rod is not under load, the air motor (P23) and air motor (P35) will work together, then the ram piston extends quickly. When the ram piston is under load, the air motor (P35) stops working, and only the air motor (P23) works, then the piston rod will extend slowly.

#### 7.1.2 Operating manually

- 7.1.2.1 Insert the handle tube (50) to the low pressure socket as process 5.2, then pump the handle and extend the ram piston for quicker operation of the ram.
- 7.1.2.2 Insert the handle tube (50) to the high pressure socket as process 5.1, then pump the handle and extend the ram piston for slower operation of the ram.
- 7.1.3 The operator can extend the ram piston either by air according to process 7.1.1 or manually according to process 7.1.2.

## **EXPLODED DIAGRAM - RAM**



#### PARTS LIST - RAM

No.	Description	Qty.	No.	Description	Qty.
C1	O-ring 8*2	1	C12	Valve Core	1
C2	Fitting	1	C13	Piston	1
C3	Cylinder	1	C14	O-ring	2
C4	Nut	1	C15	PTFE Washer	2
C5	Nylon Block	2	C16	Piston Rod	1
<b>C</b> 6	Hexagon Socket Set Screw	3	C17	O-ring	2
<b>C7</b>	PTFE Washer	4	C18	PTFE Washer	2
C8	O-ring	2	C19	O-ring	1
<b>C</b> 9	Screw	1	C20	Connector I	1
C10	Spring	1	C21	Ring For Ram	1
C11	Steel Ball	1	C22	Serrated Saddle	1

## **ASSEMBLY INSTRUCTIONS....cont**

Please note that when you operate by air, NEVER operate manually according to process 7.1.2.1 (Manual Low Pressure) at the same time.

7.2 Retracting the ram can be operated manually or by air.

#### 7.2.1 Operated by air

- 7.2.1.1 Connect the air hose (P3) of air foot pedal valve to the compressor.
- 7.2.1.2 Turn the handle lever (99) of socket valve to position 1.
- 7.2.1.3 Depress the air foot pedal valve (48), then the air motor (23) and air motor (P35) will work together, and the ram piston returns quickly.

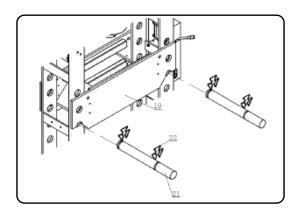
#### 7.2.2 Operating manually

- 7.2.2.1 Insert the handle tube (50) to the low pressure socket as process 5.2, pumping the handle returns the ram piston quickly.
- 7.2.2.2 Insert the handle tube (50) to the high pressure socket as process 5.1, pumping the handle returns the ram piston slowly.
- 7.2.3.1 The operator can retract the piston rod either by air according to process 7.2.1 or manually according to process.
- 7.2.3.2. Please note that when you operate by air, NEVER operate manually according to process 7.2.2.1 (Manual Low Pressure) at the same time.
- 7.3. To stop the movement of the ram piston: stop pumping the handle tube (50) or release the air foot valve (P48), the ram piston will stop moving. Then turn the handle lever (99) of selector valve to position 2.

#### 8. Press Setup

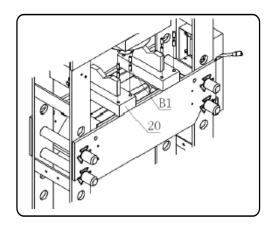
- 8.1 Position Piston according to Section 12 so that it is centered to the workpiece.
- 8.2 Adjust the bed (19) according to Section 13 to the appropriate height, then insert the pins (21) to the holes of body frame and lock the circlips (22).

# EXPLODED DIAGRAM - SHOP PRESS

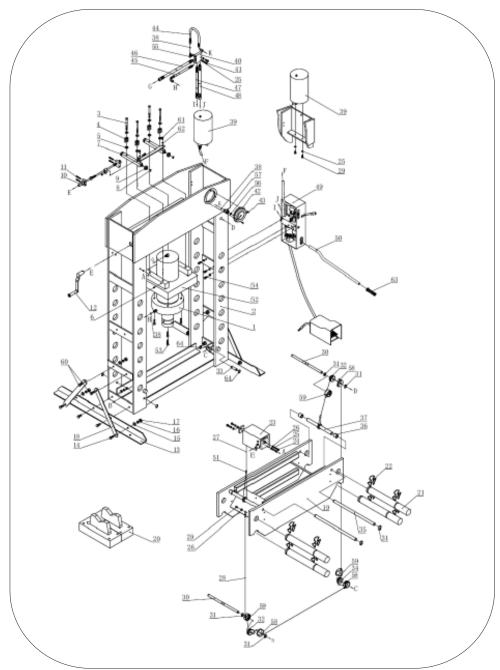


8.3 According to the working conditions, the operator can decide which side of the arbor plate / heel block is required, and the spacing required.

Note: to prevent the arbor plate / heel blocks from slipping off of the press bed, press down on the four limiting pins of the block.



8.4 Put the workpiece on the arbor plate / heel blocks (20).



## **PARTS LIST - SHOP PRESS**

Ram Assy	Qty.	Description	No.	Qty.	Description	No.
3   Bolt	1	Roller Pin 2	33	1	Ram Assy	1
4       Spring Cover       4       36       Tube 2         5       Spring       8       37       Bushing         6       Set Screw       4       38       O-ring 9*1.9         7       Steel Tube II       2       39       Oil Tank         8       Circlip       4       40       Adapter         9       Ball Bearing       4       41       Hex Screw         10       Ram Moving Equipment       1       42       Pressure Gauge         11       Hexagon Screw       4       43       Screw         12       Handle Part       1       44       Oil Hose 1         13       Base       2       45       Oil Hose 1         14       Hex Bolt       8       46       Oil Hose 3         15       Washer       12       47       Oil Hose 1         16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Hex Bolt       2	1	Roller With Cover	34	1	Body Frame	2
5 Spring         8         37         Bushing           6 Set Screw         4         38         O-ring 9*1.9           7 Steel Tube II         2         39         Oil Tank           8 Circlip         4         40         Adapter           9 Ball Bearing         4         41         Hex Screw           10 Ram Moving Equipment         1         42         Pressure Gauge           11 Hexagon Screw         4         43         Screw           12 Handle Part         1         44         Oil Hose 1           13 Base         2         45         Oil Hose (Down)           14 Hex Bolt         8         46         Oil Hose 3           15 Washer         12         47         Oil Hose 1           16 Spring Washer         15         48         Oil Hose 2           17 Nut         12         49         Pump Assy           18 Support         4         50         Handle Tube           19 Working Bed         1         51         Cable sheath           20 Heel Block         2         52         Under Plate           21 Pin         4         53         Hex Bolt           23 Working Bed Moving Equipment         1 </td <td>2</td> <td>Lifting Bar</td> <td>35</td> <td>4</td> <td>Bolt</td> <td></td>	2	Lifting Bar	35	4	Bolt	
6 Set Screw	4	Tube 2	36	4	Spring Cover	4
7         Steel Tube II         2         39         Oil Tank           8         Circlip         4         40         Adapter           9         Ball Bearing         4         41         Hex Screw           10         Ram Moving Equipment         1         42         Pressure Gauge           11         Hex agon Screw         4         43         Screw           12         Handle Part         1         44         Oil Hose 1           13         Base         2         45         Oil Hose 1           14         Hex Bolt         8         46         Oil Hose (Down)           14         Hex Bolt         8         46         Oil Hose 1           15         Washer         12         47         Oil Hose 3           15         Washer         12         47         Oil Hose 1           16         Spring Washer         15         48         Oil Hose 1           17         Nut         12         49         Pump Assy           18         Support         4         50         Handle Tube           19         Working Bed         1         51         Cable sheath           20 <td< td=""><td>2</td><td>Bushing</td><td>37</td><td>8</td><td>Spring</td><td>5</td></td<>	2	Bushing	37	8	Spring	5
8         Circlip         4         40         Adapter           9         Ball Bearing         4         41         Hex Screw           10         Ram Moving Equipment         1         42         Pressure Gauge           11         Hexagon Screw         4         43         Screw           12         Handle Part         1         44         Oil Hose 1           13         Base         2         45         Oil Hose (Down)           14         Hex Bolt         8         46         Oil Hose 1           15         Washer         12         47         Oil Hose 1           16         Spring Washer         15         48         Oil Hose 1           16         Spring Washer         15         48         Oil Hose 1           16         Spring Washer         15         48         Oil Hose 2           17         Nut         12         49         Pump Assy           18         Support         4         50         Handle Tube           19         Working Bed         1         51         Cable sheath           20         Heel Block         2         52         Under Plate           21 <td>3</td> <td>O-ring 9*1.9</td> <td>38</td> <td>4</td> <td>Set Screw</td> <td>6</td>	3	O-ring 9*1.9	38	4	Set Screw	6
9 Ball Bearing	1	Oil Tank	39	2	Steel Tube II	7
10         Ram Moving Equipment         1         42         Pressure Gauge           11         Hexagon Screw         4         43         Screw           12         Handle Part         1         44         Oil Hose 1           13         Base         2         45         Oil Hose (Down)           14         Hex Bolt         8         46         Oil Hose 3           15         Washer         12         47         Oil Hose 1           16         Spring Washer         15         48         Oil Hose 2           17         Nut         12         49         Pump Assy           18         Support         4         50         Handle Tube           19         Working Bed         1         51         Cable sheath           20         Heel Block         2         52         Under Plate           21         Pin         4         53         Hexagon Screw           22         Circlip         8         54         Hex Bolt           23         Working Bed Moving Equipment         1         55         Fitting           24         Hex Screw         4         56         Nylon Ring           25	1	Adapter	40	4	Circlip	8
11       Hexagon Screw       4       43       Screw         12       Handle Part       1       44       Oil Hose 1         13       Base       2       45       Oil Hose (Down)         14       Hex Bolt       8       46       Oil Hose 3         15       Washer       12       47       Oil Hose 1         16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       5       58       Shield1         26       Washer       5       58       Shield2         28       Cable       1<	2	Hex Screw	41	4	Ball Bearing	9
12       Handle Part       1       44       Oil Hose 1         13       Base       2       45       Oil Hose (Down)         14       Hex Bolt       8       46       Oil Hose 3         15       Washer       12       47       Oil Hose 1         16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1	1	Pressure Gauge	42	1	Ram Moving Equipment	10
13       Base       2       45       Oil Hose (Down)         14       Hex Bolt       8       46       Oil Hose 3         15       Washer       12       47       Oil Hose 1         16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3 <td>3</td> <td>Screw</td> <td>43</td> <td>4</td> <td>Hexagon Screw</td> <td>11</td>	3	Screw	43	4	Hexagon Screw	11
14       Hex Bolt       8       46       Oil Hose 3         15       Washer       12       47       Oil Hose 1         16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Oil Hose 1	44	1	Handle Part	12
15       Washer       12       47       Oil Hose 1         16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       8       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Oil Hose (Down)	45	2	Base	13
16       Spring Washer       15       48       Oil Hose 2         17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Oil Hose 3	46	8	Hex Bolt	14
17       Nut       12       49       Pump Assy         18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Oil Hose 1	47	12	Washer	15
18       Support       4       50       Handle Tube         19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       8       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Oil Hose 2	48	15	Spring Washer	16
19       Working Bed       1       51       Cable sheath         20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       8       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Pump Assy	49	12	Nut	17
20       Heel Block       2       52       Under Plate         21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Handle Tube	50	4	Support	18
21       Pin       4       53       Hexagon Screw         22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	3	Cable sheath	51	1	Working Bed	19
22       Circlip       8       54       Hex Bolt         23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Under Plate	52	2	Heel Block	20
23       Working Bed Moving Equipment       1       55       Fitting         24       Hex Screw       4       56       Nylon Ring         25       Spring Washer       8       57       Connecting Nut         26       Washer       5       58       Shield1         27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	4	Hexagon Screw	53	4	Pin	21
24     Hex Screw     4     56     Nylon Ring       25     Spring Washer     8     57     Connecting Nut       26     Washer     5     58     Shield1       27     Cable     1     59     Shield2       28     Cable     1     60     Hex Screw       29     Hex Bolt     3     61     Hex Screw	3	Hex Bolt	54	8	Circlip	22
25         Spring Washer         8         57         Connecting Nut           26         Washer         5         58         Shield1           27         Cable         1         59         Shield2           28         Cable         1         60         Hex Screw           29         Hex Bolt         3         61         Hex Screw	1	Fitting	55	1	Working Bed Moving Equipment	23
26     Washer     5     58     Shield1       27     Cable     1     59     Shield2       28     Cable     1     60     Hex Screw       29     Hex Bolt     3     61     Hex Screw	1	Nylon Ring	56	4	Hex Screw	24
27       Cable       1       59       Shield2         28       Cable       1       60       Hex Screw         29       Hex Bolt       3       61       Hex Screw	1	Connecting Nut	57	8	Spring Washer	25
28         Cable         1         60         Hex Screw           29         Hex Bolt         3         61         Hex Screw	3	Shield1	58	5	Washer	26
29 Hex Bolt 3 61 Hex Screw	3	Shield2	59	1	Cable	27
	4	Hex Screw	60	1	Cable	28
30 Roller Pin 2 62 Spring Washer	2	Hex Screw	61	3	Hex Bolt	29
	2	Spring Washer	62	2	Roller Pin	30
31 Circlip 12 63 Cover for handle	1	Cover for handle	63	12	Circlip	31
32 Roller With Cover III 1 64 Circlip	2	Circlip	64	1	Roller With Cover III	32

## **OPERATING INSTRUCTIONS**



Note: Refer to Section 7 on pages 17 & 18

- ⇒ Place the bed to your desired height; Turn the winch clockwise to raise the bed and anticlockwise to lower.
- ⇒ Use the bed support pin (x4) and bed support pin clips (x8) to secure in place. Place the
- ⇒ arbor plate on the bed, then place the workpiece onto the arbor plate.



Danger / Caution: At all times use all 8 bed support pin clips to secure the bed support pins, using without the bed support pin clips is dangerous, this could cause injury to you or any one in the vicinity, this will also damage the Shop press and void your warranty.

- $\Rightarrow$  Turn the handle lever (99) of the selector valve unit to position 3.
- ⇒ Depress the air foot pedal valve (P54), the hydraulic ram piston extend downwards quickly. When the saddle gets close to the workpiece change to manual operation. Place the handle into the control unit and pump. The ram piston will move slowly enabling you to align the workpiece and ram piston correctly.
- ⇒ After alignment you can continue with either the air foot pedal or manual operation, as described in section 7 Page 17 & 18.
- ⇒ Once you have complete the pressing operation put the handle lever (99) into position
   2. This will release the hydraulic pressure.
- Now by placing the handle lever (99) in to position 1 the ram piston can be reversed back towards the hydraulic ram unit. This can be achieved in manual or air foot pedal operation.
- $\Rightarrow$  The workpiece can now be removed.
- ⇒ Once you have finished using the press disconnect the air hose from the compressor and clean the machine.

## **MAINTENANCE**

- ⇒ Periodically check the press frame to make sure all bolts are tight and inspect for cracked welds, bent, loose, or missing parts.
- ⇒ Periodically check hydraulic connections for possible leaks, replace or properly repair damaged or leaking hydraulic components before use.
- ⇒ Change hydraulic oil in the hydraulic system every 100 working hours, or more frequently in unusual dirty or dusty areas.
- ⇒ If the paint becomes badly chipped, it is suggested to repaint the press. This will prevent rusting.
- ⇒ Always ensure that ram is in the fully retracted position if the press is not used for extended periods.

#### ADDING OIL

- ⇒ Make sure the ram is fully retracted.
- ⇒ Remove the air vent / oil fill screw.
- ⇒ Fill with hydraulic oil (#22 ISO6743) through the oil fill hole, until the oil reaches the top of the oil chamber.
- ⇒ Refit the air vent / oil fill screw.

#### BLEEDING

- ⇒ Loosen the air vent / oil fill screw.
- ⇒ Insert the handle into the handle base.
- ⇒ Pump the handle about 10 times, this will purge the air out of the system.
- $\Rightarrow$  retighten the air screw.

#### CLEANING

Periodically check the ram and ram piston for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.



Note: Never use sandpaper or abrasive material on these surfaces.

## **TROUBLESHOOTING**

The following form lists the common operating issues with problems and solutions. Please read the form carefully and follow it.



If any of the following symptoms occurs during your operation, stop using the Shop press immediately, or serious personal injury could result. Only a qualified person or an authorised service centre should perform repairs on the Shop press. Disconnect from the air supply before attempting repairs or adjustments. When replacing parts etc.

FAULT	POSSIBLE CAUSES	POSSIBLE REMEDIES
Loses pressure under load.	<ul><li>Release valve is open.</li><li>Pump or piston fault.</li></ul>	<ul><li>Close release valve.</li><li>Replace pump.</li></ul>
Pump feels spongy during pumping, or lever has lost stroke.	<ul><li>Pump low on oil.</li><li>Air trapped in pump.</li><li>Pump or ram fault.</li></ul>	<ul><li>Top up with oil.</li><li>Bleed air out of system.</li><li>Replace pump/ram.</li></ul>
Ram is weak or does not reach rated pressing capacity.	<ul> <li>Pump low on oil.</li> <li>Air trapped in pump.</li> <li>Release valve is open.</li> <li>Pump or piston fault.</li> </ul>	<ul> <li>Top up with oil.</li> <li>Bleed air out of system.</li> <li>Close release valve.</li> <li>Replace pump.</li> </ul>



Note: Repairs should be carried out by a qualified person.