

EN

Original Instructions
Version 2 - June 2023

DRAPER[®]

20 TONNE
**FLOOR
PRESS**

70540



**UK
CA** **CE**

1. Preface

These are the original product instructions. This document is part of the product; retain it for the life of the product, passing it on to subsequent holders. Read this manual in full before attempting to assemble, operate or maintain this product.

This Draper Tools manual describes the purpose of the product and contains all the necessary information to ensure its correct and safe use. Following all the instructions and guidance in this manual will ensure the safety of both the product and the operator and increase the lifespan of the product.

All photographs and drawings within this manual are supplied by Draper Tools to help illustrate correct operation of the product.

Every effort has been made to ensure the information contained in this manual is accurate. However, Draper Tools reserves the right to amend this document without prior warning. Always use the latest version of the product manual.

1.1 Product Reference

User Manual for: 20 Tonne Floor Press

Stock No: 70540

Part No: HFP/20D

1.2 Revisions

Version 1: March 2020

First release

Version 2: June 2023

General formatting and content updates
Separation of original combined manual

As our manuals are continually updated, always ensure that the latest version is used.

Please visit drapertools.com/manuals for the latest version of this manual and the associated parts list, if applicable.

1.3 Understanding the Safety Content of This Manual



WARNING! – Situations or actions that may result in personal injury or death.



CAUTION! – Situations or actions that may result in damage to the product or surroundings.

Important: – Information or instructions of particular importance.

1.4 Copyright © Notice

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In all cases, this copyright notice must remain intact.

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3. Product Introduction

3.1 Intended Use

This product is designed to apply controlled force to press together and push apart components for assembly and dismantling procedures. Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

Part of our core range, this product is suitable for regular use by enthusiasts and tradespersons alike.



WARNING! This product is not a toy and must be respected.

Read this manual in full before attempting to assemble, operate or maintain the product, and retain it for later use.

3.2 Specification

Stock No.	70540
Part No.	HFP/20D
Capacity	20 tonnes
Ram stroke	185mm
Max. height (ram to table, approx.)	998mm
Min height (ram to table, approx.)	28mm
Working table width	550mm
Overall height	1,785mm
Weight	113.5kg

Important: Read all the Health and Safety instructions before attempting to operate, maintain or repair this product. Non-compliance with these instructions may result in serious injury or damage to the user, the product or the workpiece.

4.1 General Safety Instructions

Training

- **ONLY** authorised and competent personnel who have been sufficiently trained in the following aspects of the tool's use may use this product:
 - Press mechanisms
 - Protective devices
 - Accident causation and protection
 - The work of the tool-setter
 - Tool design
 - Use of closed tools and enclosed fixing guards
 - Maintenance of fluid quality and filter changes
- **DO NOT** allow untrained personnel or children to handle, adjust or operate this product.

Work area safety

- Keep your work area clean, well-lit and well-ventilated.
- Assess the workspace for potential obstacles and hazards before commencing operation.
- Keep children and bystanders at a safe distance and equipped with all necessary protective equipment.

Personal safety

- Use common sense and stay alert at all times; **DO NOT** use this tool while you are tired or under the influence of drugs, alcohol or medication.
- **ALWAYS** wear appropriate eye protection and protective gloves while using this tool.
- Maintain proper footing and keep your balance at all times; **DO NOT** overreach.
- **DO NOT** wear loose clothing or jewellery and keep long hair tied back.
- **DO NOT** allow familiarity gained from use of the tool to cause you to become complacent and ignore tool safety principles.

Tool use and care

- **DO NOT** force the tool to perform beyond its capability or intended purpose; the correct tool will do the job better and safer at the rate for which it was designed.
- Release any pressure in the tool before making any adjustments or changing accessories on the tool.
- Maintain the tool appropriately, checking for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the operation of the tool.
- If the tool becomes damaged, **DO NOT** use it until it has been repaired by a qualified and authorised service agent.
- Use this tool and its accessories in accordance with these instructions with consideration for the working conditions and the work to be performed.
- Keep all handles and grasping surfaces dry, clean and free from oil and grease.
- **NEVER** stand, climb, or store objects that are not intended to be operated upon on the tool.
- **DO NOT** modify this tool in any way and use only spare parts supplied by Draper Tools.

Service

- Have the tool serviced regularly by a qualified and authorised service agent.

4. Health and Safety Information

4.2 Additional Safety Instructions for this Machine

- This is **NOT** mobile apparatus and **MUST** be securely fastened to the floor to prevent the risk of it tipping or falling during use.
- **ALWAYS** ensure that the supporting surface is sufficiently strong and stable to permanently bear the weight of the machine, including when it exerts downward force during use.
 - The surface must be horizontal and level; **DO NOT** use this machine at an angle.
- **ALWAYS** ensure suitable clearance around the hose and pump to prevent damage during operation.
- **NEVER** work alone and ensure that someone is nearby to come to your assistance in the event of an emergency.
- **NEVER** allow anyone to position themselves or other obstructions in front of the press or beneath the ram during operation.
- Inspect the press for broken, cracked or corroded parts and leakages before **EVERY** use.

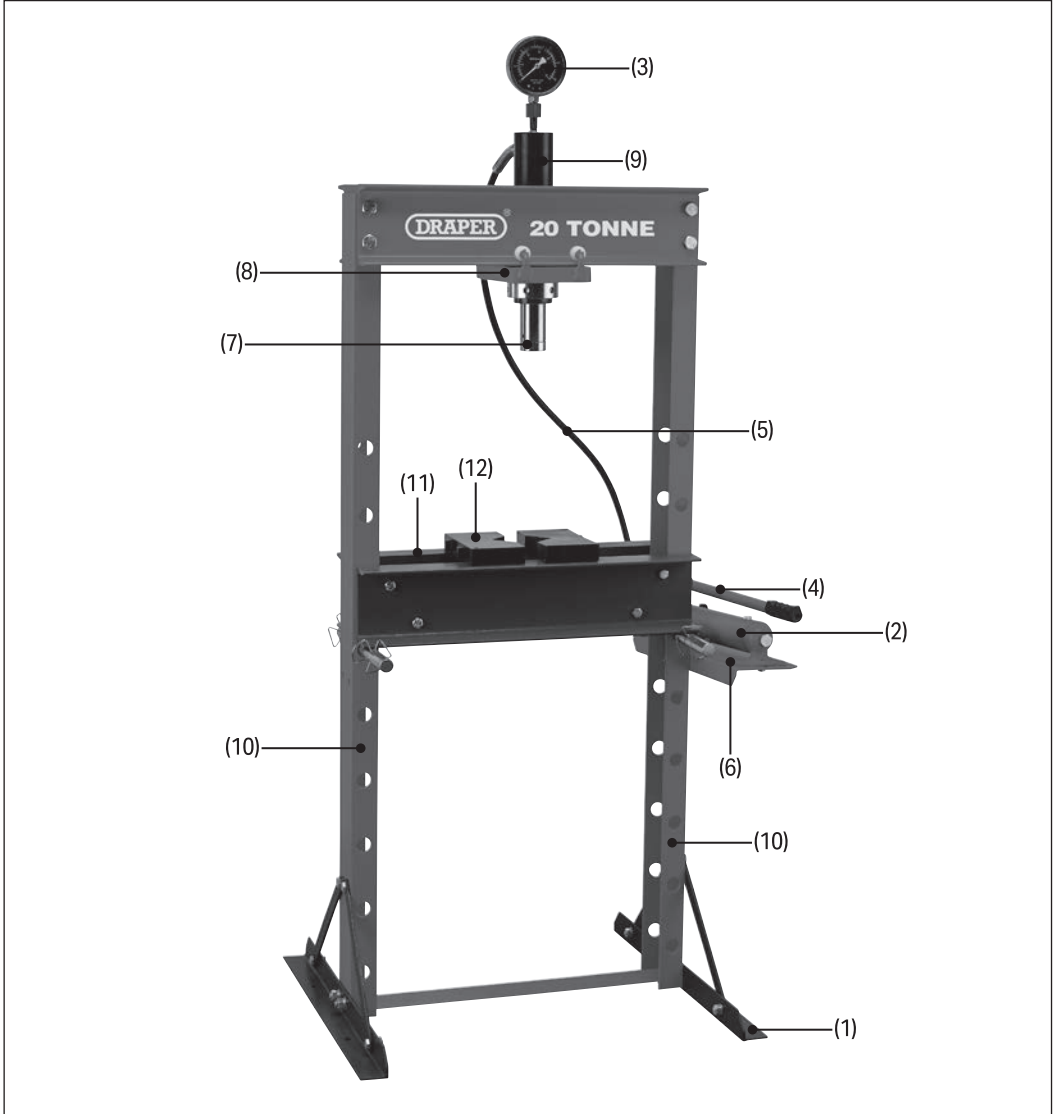


WARNING! DO NOT continue to use the press if it is damaged in any way and have it repaired by an authorised and suitably qualified technician.

- This machine and its parts are very heavy; **DO NOT** attempt to assemble, handle or transport its components without assistance.
- **NEVER** exceed the maximum load capacity of the ram.
- To prevent overloading, the pump is fitted with an overload valve set at the factory.
Important: The overload valve **MUST NOT** be adjusted under any circumstances. If the safe capacity of the pump is exceeded, the valve will prevent further operation.
- Bleed the hydraulic pump before **EVERY** use.
- When the coupler valves are disconnected, **ALWAYS** attach the dust cap to keep the oil lines clean.
- **ONLY** use the worktable plates in the manner intended and when they are flat against the worktable; they are not designed to accommodate the force of the ram over reduced surface areas.
- Take **all** precautions to prevent movement of the workpiece when operating the ram.

- **ONLY** use the ram to press centrally on the workpiece.
 - Workpieces that have been inserted incorrectly can be ejected with significant force and may cause significant injury or damage.
 - **ALWAYS** ensure that the workpiece is safely and securely positioned for the work and observe it throughout the operation.
 - Where the workpiece must be offset from the centre in any way, pump with extreme caution and care.
 - Where excessive pressure is required to pump the ram, stop the operation and adjust the setup to make the workpiece more central.
- **NEVER** hold the workpiece by hand when operating.
- Metals and other materials may shatter when under load; **ALWAYS** wear suitable eye protection and use any guards as appropriate during operation.
- **NEVER** use this product to compress springs or other components that may disengage from the ram and create a hazard.
- **DO NOT** use excessive force when opening and closing the release valve as this may damage the piston.
- **DO NOT** extend the pump handle.
- **DO NOT** over-extend the ram as this may force the plunger out of the top of the ram or create a hydraulic lock in the unit.
- **DO NOT** crush, pinch or cause kinks in the pump hose.
- Keep this tool and its components away from excessive heat and fire as it may damage or weaken the equipment.
- **ALWAYS** depressurise the ram and remove the workpiece from the worktable before adjusting the table or ram positions.

5.1 Product Overview



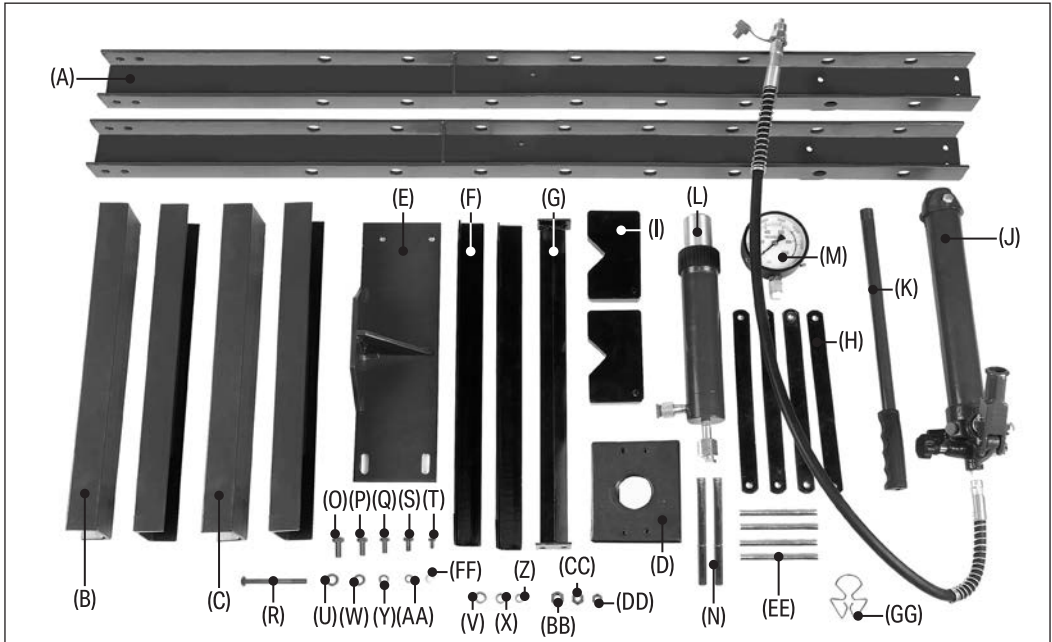
- | | |
|-------------------------|-------------------------|
| (1) Frame feet | (7) Ram pressure cap |
| (2) Hydraulic pump unit | (8) Ram slider |
| (3) Pressure gauge | (9) Ram unit |
| (4) Pump handle | (10) Upright stilts |
| (5) Pump hose | (11) Worktable aperture |
| (6) Pump plate | (12) Worktable plates |

5. Identification and Unpacking

5.2 What's in the Box?

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment.

Before assembling the product, lay the contents out and check them against the parts shown below. If any part is damaged or missing, do not attempt to use the product. Please contact the Draper Helpline; contact details can be found at the back of this manual.



- | | | |
|--------------------------------|-------------------------------|-----------------------------|
| (A) 2 x Vertical stilts | (L) 1 x Ram unit | (W) 6 x M12 washers |
| (B) 2 x Top crossbar frames | (M) 1 x Pressure gauge | (X) 6 x M12 spring washers |
| (C) 2 x Worktable frame panels | (N) 2 x Locking bars | (Y) 12 x M10 washers |
| (D) 1 x Slider plate | (O) 8 x M16 x 35mm hex bolts | (Z) 12 x M10 spring washers |
| (E) 1 x Pump plate | (P) 4 x M12 x 35mm hex bolts | (AA) 3 x M8 washers |
| (F) 2 x Frame feet | (Q) 2 x M12 x 30mm hex bolts | (BB) 8 x M16 nuts |
| (G) 1 x Crossbar base | (R) 4 x M10 x 140mm hex bolts | (CC) 6 x M12 nuts |
| (H) 4 x Stilt support brackets | (S) 8 x M10 x 25mm hex bolts | (DD) 12 x M10 nuts |
| (I) 2 x Worktable plates | (T) 3 x M8 x 16mm hex bolts | (EE) 4 x Spacers |
| (J) 1 x Hydraulic pump unit | (U) 8 x M16 washers | (FF) 1 x Nylon washer |
| (K) 1 x Pump handle | (V) 8 x M16 spring washers | (GG) 4 x Split pins |

5.3 Packaging

Keep the product packaging for the duration of the warranty period in case the product needs to be returned for repair.



WARNING! Keep packaging materials out of reach of children. Dispose of packaging correctly and responsibly and in accordance with local regulations.

Please visit drapertools.com for our full range of accessories and consumables.

6. Assembly Instructions

WARNING! Due to the size and weight of the components of this tool, assembly requires **AT LEAST two people** to be completed safely. **DO NOT** attempt to build this product on your own.

Important: Fasten all bolts so that they are finger tight **ONLY** during assembly. When assembly is complete, tighten all bolts securely.

1. Assemble the base:

- a. Insert one end of the crossbar base (G), with the point directed upwards, perpendicular into the end of a vertical stilt (A).

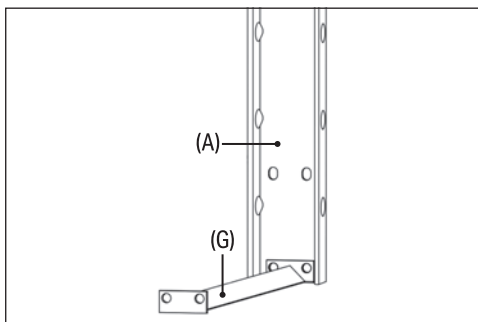


Fig. 1

- b. Align a frame foot (F) with the flat face of the vertical stilt and secure all three parts together using two M12 x 35mm hex bolts (P), M12 washers (W), M12 spring washers (X) and M12 nuts (CC).

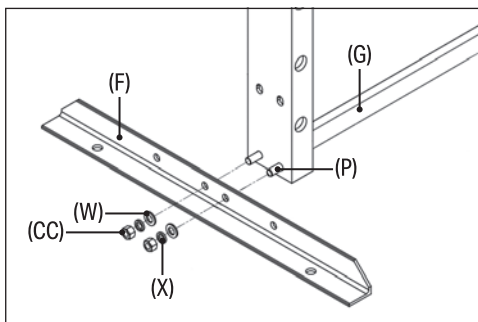


Fig. 2

- c. Position two stilt support brackets (H) from the frame foot to the vertical stilt.
- d. Secure the support brackets to the vertical stilt and foot using four M10 x 25mm hex bolts (S), M10 washers (Y), M10 spring washers (Z) and M10 nuts (DD) (Fig. 3).

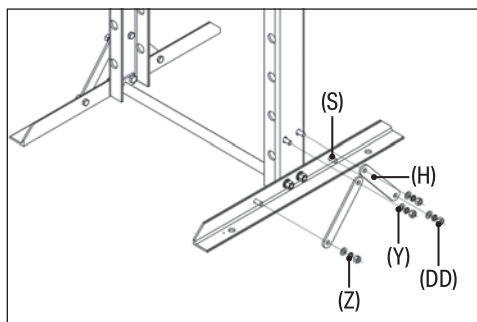


Fig. 3

- e. Repeat these steps for the second vertical stilt and frame foot.

2. Install the upper crossbar:

- a. Loosely fix both top crossbar frames (B) to the top of one vertical stilt using one M16 x 35mm hex bolt (O), M16 washer (U), M16 spring washer (V) and M16 nut (BB) for each frame.

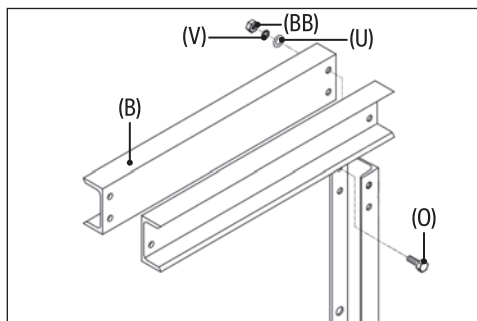


Fig. 4

- b. Carefully slide the slider plate (D) onto the crossbar frames (B) so that the wheels run along the top of the lower lips.

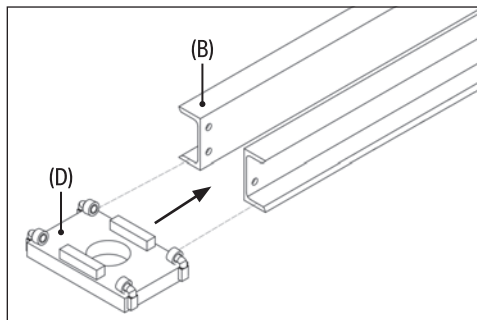


Fig. 5

6. Assembly Instructions

c. Using six M16 x 35mm hex bolts (O), M16 washers (U), M16 spring washers (V) and M16 nuts (BB), secure the fixed end of the crossbar frames and attach the free end of the frames to the other vertical stilt.

d. Tighten all crossbar fixing bolts.

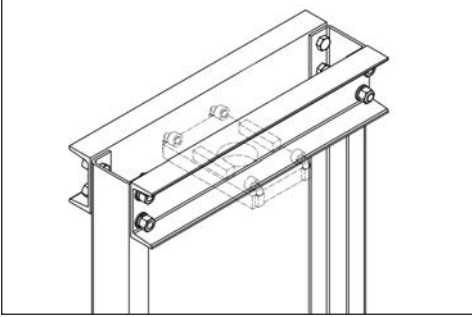


Fig. 6

3. Attach the hydraulic pump:

a. Attach the pump plate (E) to the side of a vertical stilt using two M12 x 30mm hex bolts (Q), M12 washers (W), M12 spring washers (X) and M12 nuts (CC).

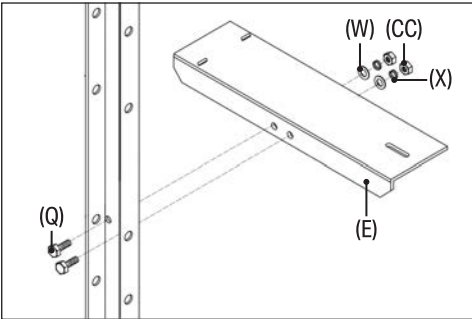


Fig. 7

b. Mount the hydraulic pump unit (J) onto the pump plate and pass three M8 x 16mm hex bolts (T) and M8 washers (AA) up through the bottom of the plate to secure it (Fig. 8).

Important: Ensure that the pump handle extends towards the front of the press frame.

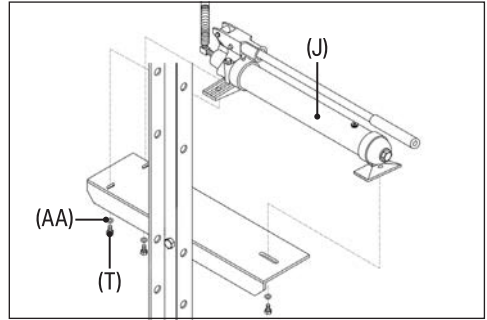


Fig. 8

4. Install the ram:

a. Remove the lower locking ring (13) from the ram thread, leaving the upper locking ring (14) in place.

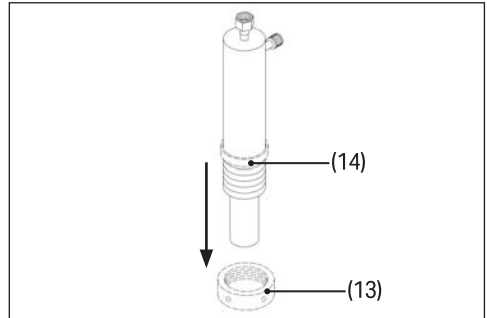


Fig. 9

b. Pass the ram down through the slider plate and firmly reinstall the lower locking ring.

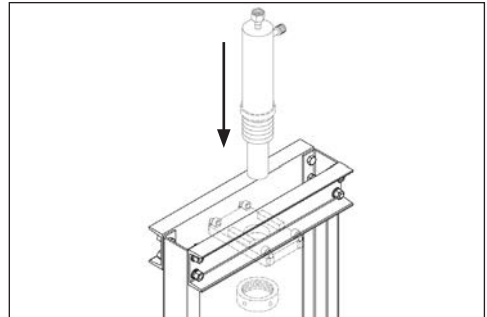


Fig. 10

6. Assembly Instructions

5. Install the pressure gauge and hose assembly:

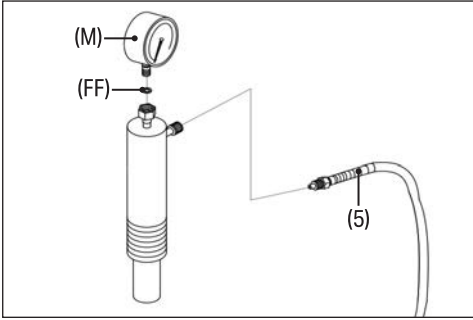


Fig. 11

a. Remove the caps from the top of the ram head and the pressure gauge (M).

b. Place the nylon washer (FF) into the ram coupling and screw the gauge into the ram, ensuring that the display is facing forward when tightened.

Important: Ensure that the nylon washer is fitted correctly before installing the gauge and that, when installed, the gauge can be easily read from the front of the press.

Important: Draper Tools recommends wrapping a length of PTFE tape around the gauge thread before attaching it to the ram. For best results, wrap the tape against the direction of the thread.

c. Remove the caps from the side of the ram and the pump hose and screw the hose (5) into the port at the side of the ram.

Important: Draper Tools recommends wrapping a length of PTFE tape around the hose thread before attaching it to the ram. Take care to prevent any oil from escaping when connecting the hose.

6. Ensure that the assembly is square and tighten all fixings securely.

7. Assemble and install the worktable:

a. Place the two worktable frame panels (C) parallel to each other with the larger flat sides facing and align the holes.

b. Place a spacer (EE) between the two worktable frame panels and pass an M10 x 140mm hex bolt (R) through both panels and the spacer.

c. Secure the bolt in place using an M10 washer (Y), M10 spring washer (Z) and M10 nut (DD).

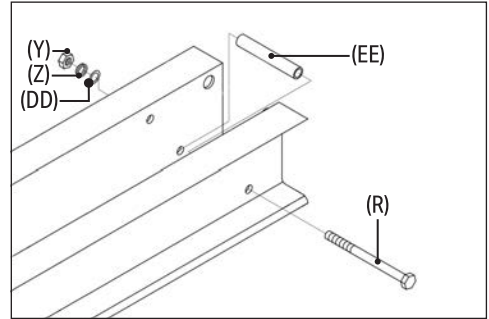


Fig. 12

d. Repeat these steps for the other three pairs of holes.

e. Install the worktable assembly around the vertical stilts and insert the locking bars (N) through the stilts beneath the desired table position to hold it in place.

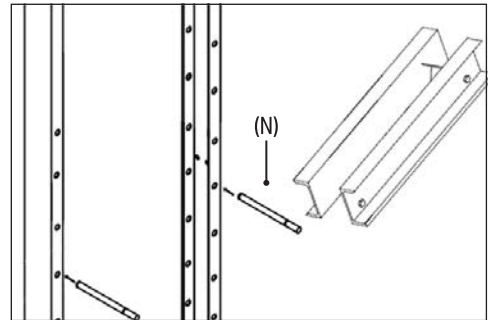


Fig. 13

Important: The worktable frame must be tilted at an angle to allow it to wrap around both stilts.

Important: The locking bars must both be positioned at the same level. **DO NOT** attempt to rest the worktable frame on the locking bars at an angle.

6. Assembly Instructions

- f. Install a split pin (GG) into the grooves at either end of each of the locking rods to secure them to the frame.

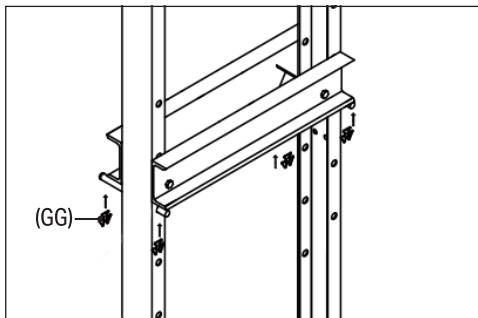


Fig. 14

- g. Place the worktable plates (I) onto the worktable frame so that the ridges sit downward between the frame between the panels.
8. Use suitable fixings (not supplied) through the holes in the frame feet to fix the press to a strong, stable and level surface.

Important: Before operating this product, read and understand all the safety instructions listed in this manual.

7.1 Bleeding the Pump

Important: The pump **MUST** be bled before **EVERY** use to purge residual air from the system and ensure that the mechanism is fully lubricated.

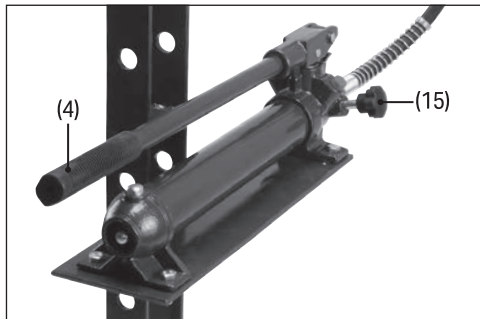


Fig. 15

1. Open the pump release valve by rotating the valve handle (15) anticlockwise.

Important: DO NOT rotate the release valve by any more than two full turns.

2. Using the full stroke, pump the pump handle (4) up and down at least 10 times.
3. Rotate the release valve handle clockwise to fully close the valve.

7.2 Positioning the Worktable and Ram

1. Set the vertical position of the worktable as appropriate:
 - a. Remove the locking bars (N) from beneath the worktable.
Important: The worktable is heavy. When removing the locking bars, support the worktable appropriately and brace yourself for the downward force.
 - b. Relocate the worktable to the desired position and insert the locking bars through the appropriate holes beneath the table frame.
 - c. Move the worktable plates (12) to the appropriate position along the tabletop.
Important: ALWAYS ensure that the worktable remains level.

2. Set the horizontal position of the ram as appropriate:
 - a. Loosen the retaining bolts on either side of the ram slider plate.
 - b. Move the slider plate to the required position and tighten the retaining bolts to secure it in place.
Important: The ram should **ALWAYS** be positioned over the centre of the workpiece.

7.3 Operating the Ram

Important: Bleed the pump before **EVERY** use; see 7.1 Bleeding the Pump.

1. Ensure that the hose couplings at the hydraulic pump (2) and ram (9) are securely fastened.
2. Ensure that the release valve is firmly closed by rotating the release valve handle (15) clockwise until strong resistance is felt.
Important: DO NOT overtighten the valve as this may damage it.
3. Using the full stroke, pump the pump handle (4) up and down to extend the ram and press against the workpiece.
4. To release the ram pressure, rotate the release valve handle anticlockwise no more than two full turns and allow the ram to withdraw.

8. Maintenance & Troubleshooting

Important: Maintenance and repair of the press must only be performed by qualified personnel with sufficient knowledge of the hydraulics systems used in these devices.

8.1 General Maintenance and Storage

- Check the oil before every use and replace it if necessary; see **8.2 Checking and Replacing the Oil**.
- Protect the press and its components from adverse environmental and weather conditions, both during use and when stored.
- When the press is not in use, ensure that the release valve is left open and the ram is fully retracted.
- Before storing the product, apply an anti-corrosion product to the pump pistons if appropriate.
- Store the product in a cool, clean and dry location, out of reach of children.

8.2 Checking and Replacing the Oil

To extend the working life of the product, keep the oil at an appropriate level and replace it after periods of prolonged intensive use.

Important: This product is shipped with oil and should not need to be filled before first use. However, Draper Tools recommends still checking the oil before use.



CAUTION! Use AW 22 hydraulic oil. NEVER use brake or engine oil.



Fig. 16

1. Detach the hydraulic pump unit from the press and position it upright with the rounded end directed upwards.
2. Remove the oil filler plug and dipstick (16) from the rounded end of the pump and clean it.
3. Reinsert, tighten and then remove the dipstick and remove it, then observe the oil level against the MIN and MAX markings.
4. If the oil is dirty or needs replacing:
 - a. Rotate the release valve handle (15) anticlockwise to open the valve.
 - b. Tip the pump unit upside-down and pour the oil into a suitable container.
 - c. Rotate the release valve handle clockwise to tighten it.
5. If required, top up the pump with hydraulic oil until the level reaches the MAX marking.



CAUTION! Excessive quantities of oil may render the pump inoperable.

6. Reinstall the dipstick and wipe away any excess oil.
7. Reattach the pump unit to the press.

8. Maintenance & Troubleshooting

8.3 Troubleshooting

Problem	Possible Cause	Remedy
The ram does not extend when the pump unit is operated.	The release valve is not fully closed.	Rotate the release valve handle clockwise until resistance is felt.
	The valve seats are dirty or the seals are worn.	Bleed the pump unit and replace the seals if necessary.
	There is an air block in the system.	Slightly open the oil filler plug and bleed the pump (see 7.1) then retighten the oil filler plug.
	The oil level is excessively high or excessively low.	Check and adjust the oil level as appropriate; see 8.2.
The pump handle cannot be operated or extends the ram slowly.	The piston system is not lubricated correctly.	Follow steps in 7.1.
The pump feels unsteady when under load.	There is an air block in the system.	Slightly open the oil filler plug and bleed the pump (see 7.1) then retighten the oil filler plug.
	The pump cup seal is worn out.	Have the cup seal replaced; contact Draper Tools for support.
The ram will not retract completely.	There is an air block in the system.	Slightly open the oil filler plug and bleed the pump (see 7.1) then retighten the oil filler plug.
	The release valve is not fully closed.	Rotate the release valve handle clockwise until resistance is felt.

9. Spares, Returns and Disposal

For spare parts, servicing, and repair and replacement options, please contact the Draper Tools Product Helpline for details of your nearest authorised agent.

Draper Tools will endeavour to hold any spare parts, if applicable, for seven years from the date that it sells the final matching stock item.

Any servicing or repairs carried out by unauthorised personnel or installation of spare parts not supplied by Draper Tools will invalidate your warranty.

Important: For safety, **ALWAYS** drain and clean the product of any oil, fuel, chemicals or other substances before returning it to Draper Tools or its authorised agent. Store these materials in suitable containers and dispose of them in accordance with local regulations. Draper Tools and its agents cannot be responsible for the disposal of these substances.

At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.

Dispose of oil separately and in accordance with local regulations; **DO NOT** abandon it in the environment.



Draper Tools products are carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, return the complete tool to your nearest distributor or contact Draper Tools directly. Contact information can be found at the back of this manual.

Proof of purchase must be provided.

If, upon inspection, it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty period covers parts and labour for 12 months from the date of purchase. Where tools have been hired out, the warranty period covers 90 days from the date of purchase.

This warranty does not apply to any consumable parts, batteries or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper Tools repair agent.

In all cases, to make a claim for faulty workmanship or materials within the standard warranty period, please contact or return the product to the place of purchase. Proof of purchase may be required.

If the place of purchase is no longer trading or if you experience any difficulties with your warranty, please contact Customer Services with the product details and your proof of purchase. Contact details can be found at the back of this manual.

If the tool is not covered by the terms of this warranty, repairs and carriage charges will be quoted and charged accordingly.

This warranty supersedes any other guarantees expressed or implied and variations of its terms are not authorised.

Your Draper Tools guarantee is not effective until you can produce, upon request, a dated receipt or invoice to verify your purchase within the guarantee period.

Please note that this warranty is an additional benefit and does not affect your statutory rights.

Draper Tools Limited

11. Explanation of Symbols



Read the instruction manual



Do not abandon in the environment



Warning!



European conformity



Ram stroke



UK Conformity Assessed



Min height (ram to table)



Max height (ram to table)



Keep the worktable level



Do not use the ram off centre to worktable



Do not place hands between worktable and ram



Weight

Contact Details

Draper Tools

Draper Tools Limited
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UK

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Telephone Sales Desk: +44 (0) 23 8049 4333

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Please contact the Draper Tools Product Helpline for repair and servicing enquiries.