

# **20 TON AIR/MANUAL SHOP PRESS**



## **Instruction Manual**

**Please read this instruction manual carefully before use.**

## **IMPORTANT**

**PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFETY INSTRUCTIONS N WARNINGS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE TO PROPERTY AND/OR SERIOUS PERSONAL INJURY. PLEASE KEEP THIS INSTRUCTION MANUAL SAFE FOR FUTURE USE.**

# **1. SAFETY INSTRUCTIONS AND WARNINGS**

- 1.1 Use a qualified person to maintain the press in good condition. Keep it clean for best and safest performance.
- 1.2 The maximum load is 20tons. **DO NOT** exceed this rated capacity. Never apply excessive force to a work piece and always use the pressure gauge to accurately determine the applied load.
- 1.3 Use this press for the purpose for which it is intended. **DO NOT** use it for any other purpose it is not designed to perform.
- 1.4 Keep children and unauthorized persons away from the work area.
- 1.5 Remove ill fitting clothing. Remove ties, watches, rings and other loose jewelry, and contain long hair.
- 1.6 Wear ANSI approved impact safety goggles, full-face impact safety shield and heavy-duty work gloves when operating the press.
- 1.7 Keep proper balance and footing, do not overreach and wear nonslip footwear.
- 1.8 Only use this press on a surface that is stable, level, dry and not slippery, and capable of sustaining the load.
- 1.9 Keep the surface clean, tidy and free from unrelated materials and ensure that there is adequate lighting.
- 1.10 Inspect the press before each use. **DO NOT** use if bent, broken, cracked, leaking or otherwise damaged , any suspect parts are noted or it has been subjected to a shock load.
- 1.11 Check to ensure that all applicable bolts and nuts are firmly tightened.
- 1.12 Ensure that workpiece is center-loaded and secure.
- 1.13 Keep hands and feet away from bed area at all times.
- 1.14 **DO NOT** use the shop press to compress spring or any other item that could disengage and cause a potential hazard. Never stand directly in front of loaded press and never leave loaded press unattended.
- 1.15 **DO NOT** operate the press when you are tired or under the influence of alcohol, drugs or any intoxicating medication.
  - a) **DO NOT** allow untrained persons to operate the press.
  - b) **DO NOT** make any modifications to the press.
  - c) **DO NOT** use brake fluid or any other improper fluid and avoid mixing different types of oil when adding hydraulic oil. Only a good quality hydraulic jack oil can be used.
- 1.16 **DO NOT** expose the press to rain or any other kind of bad weather.
- 1.17 If the press need repairing and/or there are any parts that need to be replaced, have it repaired by authorized technicians and only use the replacement parts supplied by the manufacturer.
- 1.18 **WARNING:** the warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be

supplied by the operator.

## 2. SPECIFICATIONS

|                   |               |              |            |
|-------------------|---------------|--------------|------------|
| Capacity          | 20ton         | Stroke       | 185mm      |
| Working Range     | 68.5-1028.5mm | Bed Width    | 542mm      |
| Air Inlet Fitting | 1/4" NPT      | Air Pressure | 110-120PSI |

## 3. ASSEMBLY

Use the exploded drawing as your guide to assemble the press. Lay all parts and assemblies out in front of you before beginning. The following procedure is recommended:

- 3.1 Attach one base to left upright and connect bar by using bolts, washers, lock washers and nuts. Repeat the same step for the right upright.
- 3.2 Put the press frame in an upright position, attach one upper crossbeam to left and right upright by using bolts, washers, lock washers and nuts.
- 3.3 Put another upper crossbeam into position and insert the under plate to the two upper crossbeams at the same time, then secure this crossbeam to the posts with bolts, washers, lock washers and nuts.
- 3.4 Screw the upper round nut onto the ram, insert the ram into the hole in the under plate, then screw the under round nut onto the ram and attach the saddle to the ram.
- 3.5 Join the tow working table together by inserting the four bolts through the bushings and the holes in the bed frames, then secure the four bolts by tighten the washers, lock washers and nuts on it.
- 3.6 Insert bed frame pins into the holes of upright, then put the joined press bed frame onto the press frame and bed frame pin.
- 3.7 Attach the pump a to the right post by using bolts and washers, then insert the handle tube into the handle base.
- 3.8 Connect the hose connector to the connection nut and assemble the pressure gauge to the pressure gauge connector which is on the top of the ram.
- 3.8 Tighten all bolts and nuts.

## 4. BEFORE FIRST USE

- 4.1 Before first use of this product, pour a teaspoon of good quality, air tool lubricant into the air supply inlet of the lift control valve, connect to air supply to air supply and operate for 3 seconds to evenly distribute lubricant.
- 4.2 Purge away air from the hydraulic system.

**Manual operation system:** open the release valve by turning it counterclockwise. Pump several full stokes to eliminate any air in the system.

**Air operating system:** open the release valve by turning it counterclockwise. Connect the air inlet fitting into the air supply hose lock fitting, then turn on the air valve letting the pump work for several

times to eliminate any air in the system.

- 4.3 Check all parts and conditions, if there is any part broken, stop using it and contact your supplier immediately.

## 5. OPERATING INSTRUCTIONS

**WARNING! Ensure that you read, understand and apply the safety instructions and warnings before use.**

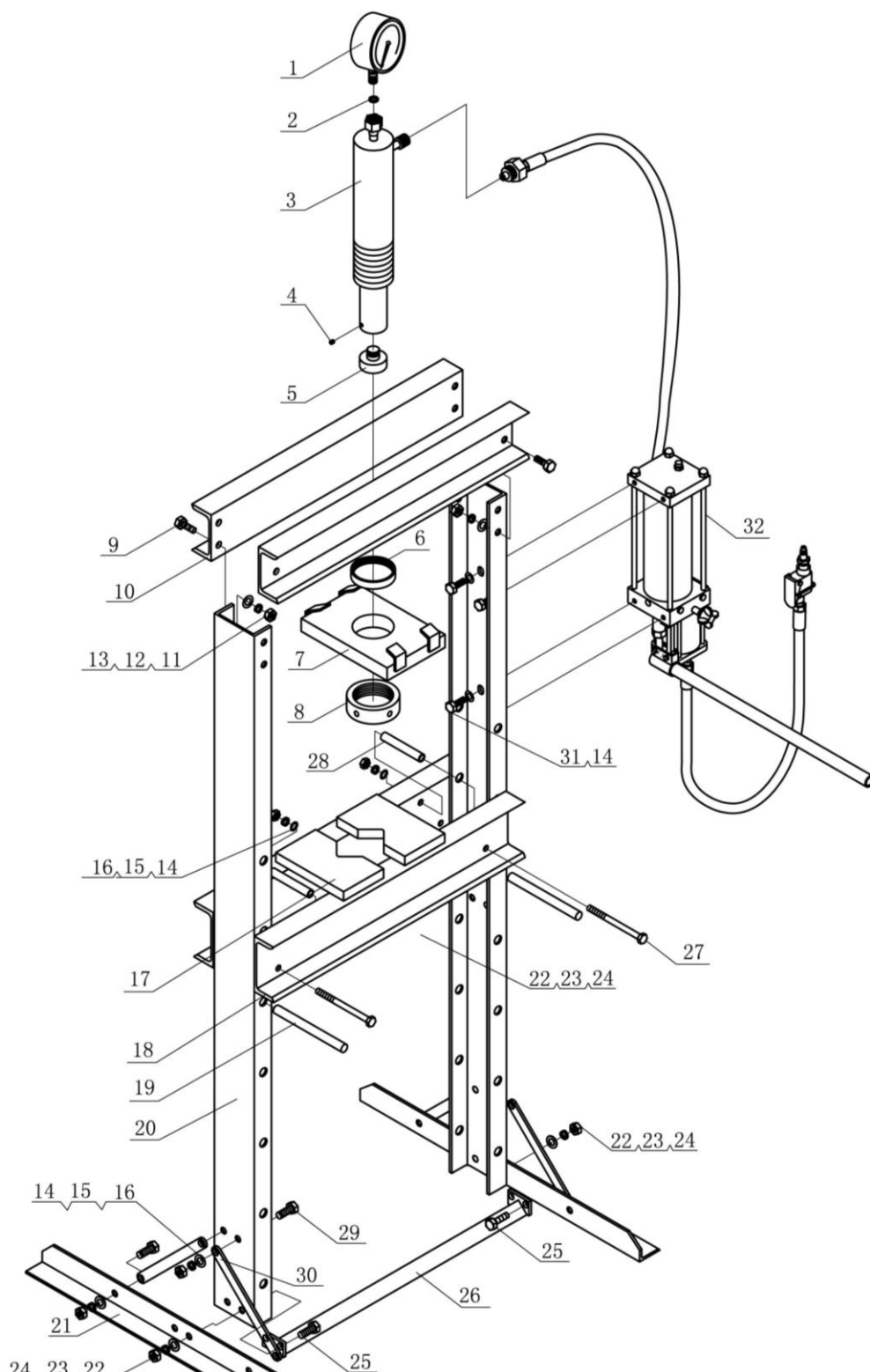
**WARNING! Ensure that you have familiarized yourself thoroughly with the product and the hazards associated with its improper use.**

- 5.1 Place the block onto the press bed frame, then insert work piece onto the heel block.
- 5.2 Close the release valve by turning it clockwise until it is firmly closed.
- 5.3 Connect the air inlet fitting into the shop air supply hose lock fitting, turn on the air valve to let the pump work until serrated saddle nears work piece, then turn off the air valve. When air source is unavailable, pump the handle until serrated saddle nears work piece.
- 5.4 Align work piece and ram to ensure center-loading.
- 5.5 Turn on the air valve (or pump the handle) to apply load onto the work piece.
- 5.6 When work is done, turn off the air valve (or stop pumping handle), slowly and carefully remove load from work piece by turning the release valve counterclockwise in small increments.
- 5.7 Once ram has fully retracted, remove work piece from the press bed frame.
- 5.8 Disconnect the air inlet fitting from the air source.

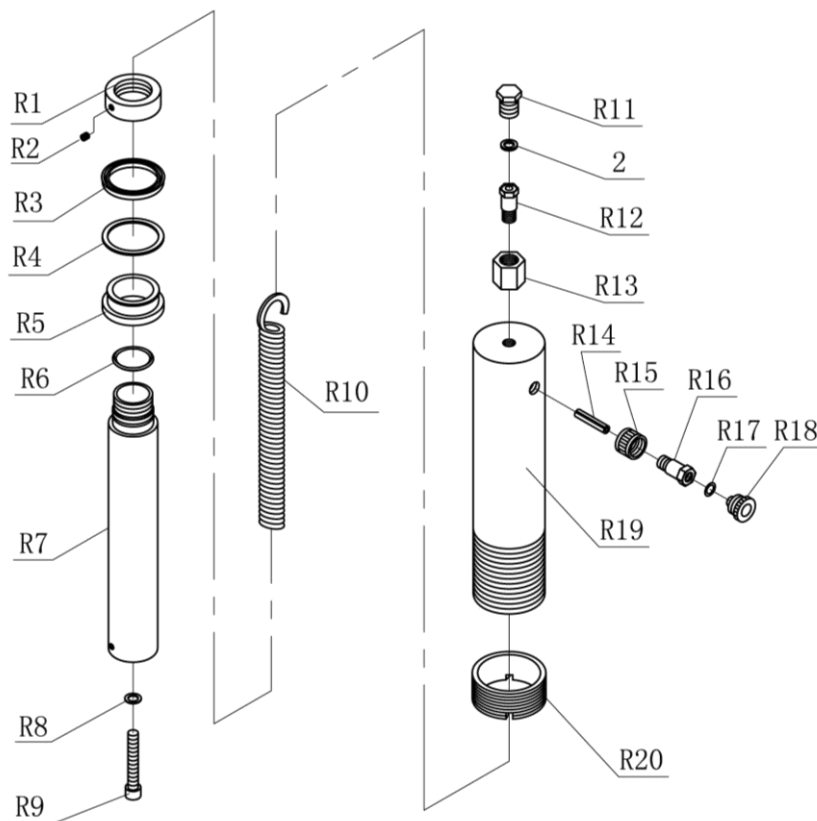
## 6. MAINTENANCE

- 6.1 Clean the outside of the press with dry, clean and soft cloth and periodically lubricate the joints and all moving parts with a light oil as needed.
- 6.2 When not in use, store the press in a dry location with ram and piston fully retracted..
- 6.3 When press efficiency drops, purge away air from hydraulic system as described in 4.2.
- 6.4 Check the hydraulic oil level: remove the filler nut on the top of the reservoir, if the oil is not adequate, fill with high quality hydraulic jack oil as necessary, then replace the oil filler nut, purge away air from the hydraulic system as described in 4.2.

## 7. EXPLODED DRAWING AND PARTS LIST



| Part No.  | Description     | Qty. | Part No.  | Description   | Qty. |
|-----------|-----------------|------|-----------|---------------|------|
| <b>1</b>  | Pressure Gauge  | 1    | <b>17</b> | Block         | 2    |
| <b>2</b>  | Nylon Washer    | 1    | <b>18</b> | Working Table | 2    |
| <b>3</b>  | Ram             | 1    | <b>19</b> | Pin           | 2    |
| <b>4</b>  | Screw           | 1    | <b>20</b> | Upright       | 2    |
| <b>5</b>  | Adaptor         | 1    | <b>21</b> | Base          | 2    |
| <b>6</b>  | Upper Round Nut | 1    | <b>22</b> | Flat Washer   | 4    |
| <b>7</b>  | Ram Plate       | 1    | <b>23</b> | Lock Washer   | 4    |
| <b>8</b>  | Under Round Nut | 1    | <b>24</b> | Nut           | 4    |
| <b>9</b>  | Bolt            | 8    | <b>25</b> | Bolt          | 4    |
| <b>10</b> | Upper Beam      | 2    | <b>26</b> | Connect Bar   | 1    |
| <b>11</b> | Flat Washer     | 8    | <b>27</b> | Bolt          | 4    |
| <b>12</b> | Lock Washer     | 8    | <b>28</b> | Tube          | 4    |
| <b>13</b> | Nut             | 8    | <b>29</b> | Bolt          | 8    |
| <b>14</b> | Flat Washer     | 16   | <b>30</b> | Support Bar   | 4    |
| <b>15</b> | Lock Washer     | 12   | <b>31</b> | Bolt          | 4    |
| <b>16</b> | Nut             | 12   | <b>32</b> | Pump          | 1    |



| Part No. | Description | Qty. | Part No.  | Description              | Qty. |
|----------|-------------|------|-----------|--------------------------|------|
| <b>1</b> | Nut         | 1    | <b>12</b> | Pressure Gauge Connector | 1    |
| <b>2</b> | Screw       | 1    | <b>13</b> | Nut                      | 1    |
| <b>3</b> | U Ring      | 1    | <b>14</b> | Pin                      | 1    |
| <b>4</b> | PTFE Washer | 1    | <b>15</b> | Nut                      | 1    |
| <b>5</b> | Piston      | 1    | <b>16</b> | Ram Connector            | 1    |





| Part No. | Description            | Qty. | Part No. | Description        | Qty. |
|----------|------------------------|------|----------|--------------------|------|
| P1       | Cotter Pin             | 2    | P25      | O Ring             | 2    |
| P2       | Handle Base            | 1    | P26      | Screw              | 2    |
| P3       | Pump Core              | 1    | P27      | Cap                | 2    |
| P4       | PTFE Washer            | 1    | P28      | Screw              | 3    |
| P5       | O Ring                 | 1    | P29      | Washer             | 3    |
| P6       | Base for Pump Core     | 1    | P30      | Spring             | 2    |
| P7       | Copper Washer          | 2    | P31      | Spring             | 1    |
| P8       | Pin                    | 3    | P32      | Pump Base          | 1    |
| P9       | Bar                    | 1    | P33      | Filter             | 2    |
| P10      | R Pin                  | 1    | P34      | Washer             | 2    |
| P11      | Air Pump               | 1    | P35      | Oil Tank           | 1    |
| P12      | Steel Ball             | 4    | P36      | Bar                | 4    |
| P13      | U Limit                | 1    | P37      | Cover              | 1    |
| P14      | Lock Washer            | 1    | P38      | Nut                | 4    |
| P15      | Screw                  | 1    | P39      | Screw              | 1    |
| P16      | Washer                 | 1    | P40      | Air-inlet hose     | 1    |
| P17      | Base for release valve | 1    | P41      | Air Valve          | 1    |
| P18      | Steel Ball             | 1    | P42      | Air hose connector | 1    |
| P19      | O Ring                 | 1    | P43      | Hose               | 1    |
| P20      | Release Valve          | 1    | P44      | Connector          | 1    |
| P21      | Steel Ball             | 2    | P45      | Dust Cap           | 1    |
| P22      | Base for steel ball    | 2    | P46      | Handle Tube        | 1    |
| P23      | Spring                 | 2    | 2        | Nylon Washer       | 1    |
| P24      | Screw                  | 2    |          |                    |      |

