

**PALMGREN**<sup>®</sup>  
a CH Hanson brand



## 50 Ton Electric Hydraulic Press

Model 9661616



**PLEASE READ AND SAVE  
THESE INSTRUCTIONS.  
READ CAREFULLY  
BEFORE ATTEMPTING  
TO ASSEMBLE, INSTALL,  
OPERATE OR MAINTAIN THE  
PRODUCT DESCRIBED.**

**PROTECT YOURSELF AND  
OTHERS BY OBSERVING ALL  
SAFETY INFORMATION. FAILURE  
TO COMPLY WITH INSTRUCTIONS  
COULD RESULT IN PERSONAL  
INJURY AND/OR PROPERTY  
DAMAGE! RETAIN INSTRUCTIONS  
FOR FUTURE REFERENCE.**

**PLEASE REFER TO BACK COVER  
FOR INFORMATION REGARDING  
PALMGREN'S WARRANTY  
AND OTHER IMPORTANT  
INFORMATION.**

**Model #:** \_\_\_\_\_

**Serial #:** \_\_\_\_\_

**Purch. Date:** \_\_\_\_\_

## GETTING STARTED

### Save this manual

You will need this manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts lists and diagrams. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

### Structural requirements



Make sure all supporting structures and load attaching devices are strong enough to hold your intended loads. If in doubt, consult a qualified structural engineer.

### Electrical Requirements

- Requires 230V at 60 Hz, with a standard deviation of 10%
- A plug, rated for 230V, 13A, and 2.2 KW, is required to be wired. Ensure the ground wire (yellow+green) is correctly wired to the ground of the plug. It does not matter which side of the plug the two black wires are wired to.

### Tools needed

Standard professional mechanic's hand tool set (i.e. hammer, screwdrivers, wrenches, socket wrenches, pliers, etc.).

## UNPACKING

When unpacking, check to make sure all parts listed below are included. If any parts are missing or broken, please contact your local retailer.

**IMPORTANT:** Many unpainted steel surfaces have been coated with a protectant. To ensure proper fit and operation, remove the coating. Coating can be easily removed with mild solvents, such as mineral spirits, and a soft cloth. Avoid getting solution on paint or any of the rubber/plastic parts. Solvents may deteriorate these finishes. Use soap and water on paint, plastic or rubber components. After cleaning, cover all exposed surfaces with a light coating of oil.

**CAUTION** *Never use highly volatile solvents. Avoid getting cleaning solution on paint as it may tend to deteriorate these finishes. Use soap and water on painted components.*

### Package Contents:

Pipe holders	2
Frame with cylinder	1
Hydraulic pump assembly	1
Replacement rubber o-rings and hardware	1
Ram cap	1
Manual	1

### Unpack



Remove all the over packing materials, but leave unit attached to its pallet. Do not discard packing materials until after the machine has been inspected for damage and completeness. Locate loose parts and set aside.

### Inspect



After unpacking the unit, carefully inspect for any damage that may have occurred during transit. Check for loose, missing or damaged parts. Shipping damage claims must be filed with the carrier.

All tools should be visually inspected before use, in addition to regular periodic maintenance inspections.

## SAFETY RULES

**▲ WARNING** *Completely read and understand this owner's manual before assembly or tool operation. Read and understand the warnings shown on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury or death.*



**PROPOSITION 65 WARNING:** Some dust created by using power tools contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Some Examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment. Always wear an **OSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

**▲ WARNING** *Always follow proper operating procedures as defined in this manual even if you are familiar with the use of this or similar tools. Remember that being careless for even a fraction of a second can result in severe personal injury.*

## PREPARING FOR YOUR JOB

- Wear proper apparel. Do not wear loose clothing, neckties, rings, bracelets or other jewelry which may get caught up in moving parts of machine. Do NOT wear gloves.
- Wear protective hair covering to contain long hair.
- Wear safety shoes with non-slip soles.
- Wear safety glasses complying with United States ANSI Z87.1. Everyday glasses have only impact resistant lenses. They are not safety glasses. Use guards and eye shields.
- Wear face mask or dust mask if operation is dusty.
- Wear ANSI approved ear protection for extended operation.
- Some coolants used for machining contain chemicals that may be hazardous to your health if not used properly. Read and understand all information on the coolant container and protect yourself accordingly.
- Be alert and think clearly. Never operate power tools when tired, intoxicated or when taking medications that cause drowsiness.
- Focus your attention completely on your work. Looking around, careless actions and other distractions can result in serious injury.

## Preparing the work area for your job

- Do not use this machine in dangerous environments. Do not use it in damp or wet locations. Do not expose it to rain.
- Keep the work area clean. Cluttered work areas and work benches invite accidents. Keep the area around the machine clean of scrap metal, oil and grease.
- Keep visitors at a safe distance from work area.
- Keep children out of workplace. Make workshop childproof. Use padlocks, master switches or remove switch keys to prevent any unintentional use of power tools.
- Provide adequate space around the hydraulic press and light the area properly with non-glare, overhead lighting.
- Make certain the hydraulic press is securely anchored before use.

## Maintaining your tool

- Failure to follow the guidelines in this manual can result in serious injury.
- Disconnect the tool completely from its power supply before performing any service, maintenance, repair or adjustments.
- Follow OSHA lock-out, tag-out procedures to prevent accidental machine starts.
- Consult this manual for the proper use, specific maintenance, and adjustment procedures.
- Keep tool lubricated and clean for safest operation.
- Read and understand warnings posted on the machine and in this manual. Replace the warning labels if they become obscured or removed. Failure to comply with all of these warnings can result in serious injury.
- Before turning on the machine, check for damaged parts. Check for alignment of moving parts, binding, breakage, mounting issues and any other conditions that may affect the tools operation. Replace any guard or damaged part that does not function properly before using the tool.
- Before cleaning, turn off the machine and disconnect it from its power source. Use compressed air or a suitable brush to clear chips or debris — do not use your hands.

## Know how to use your tool

**▲ WARNING** *The operation of any tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with United States ANSI Z87.1. before commencing power tool operation.*



**Think safety! Safety is a combination of operator common sense and alertness at all times when tool is being used.**

- The Model 9661616 Hydraulic Press is designed and intended for use by properly trained operators. You must be familiar with the proper and safe operation of a hydraulic press. Obtain proper training and knowledge before operating this machine.

- Do not use the Model 9661616 Hydraulic Press for any use other than its intended application. Improper use of this tool revokes and voids any real or implied warranty. The manufacturer is not responsible for any injury that may result from improper use of the machine.
- Do not force an attachment to do a job it was not intended or designed for.
- Never stand on the machine or work in an awkward position. Maintain your balance. Never lean against the machine, over reach or use excessive force when working. You could tip or fall into the machine causing serious injury.
- Know your tool. Learn the tool's operation, application and specific limitations. Never force the machine to do a task it was designed for.
- Use recommended accessories. Understand and obey all safety instructions supplied with accessories. The use of improper accessories may cause risk of injury to persons.
- Always use guards and eyeshields.

## SPECIFICATIONS

### Model 9661616 50 Ton Electric Hydraulic Press

Capacity (tons)	50
Stroke travel (inch)	8.7
Ram diameter (inch)	1.5 (or 2.25 with ram cap)
Table Size (inch)	16x20 with 4" dia. hole
Max distance ram to table (inch)	27
Head movement	No
Dimension (inch)	35x14x62
Weight (lbs)	705
RPM	3450
Volts	230
Amps	13
KW/HP	2.2/3
Phase	1
Operating temperature °F (°C)	50-122 (10-50)

## ASSEMBLY/INSTALLATION

### Power source

- The motor on this machine is designed for operation on the voltage and frequency specified. Normal loads will be handled safely on voltages not more than 10% above or below specified voltage.
- Running the unit on voltages which are not within the range may cause overheating and motor burn-out. Heavy loads require that the voltage at the motor terminals be no less than the voltage specified.

### Electrical connections

**▲ WARNING** *Make sure unit is turned off and disconnected from power before performing service or maintenance actions on the machine.*

**▲ WARNING** *This machine must be grounded. To avoid electrocution or fire, any repairs to electrical system should be done only by a qualified electrician, using genuine replacement parts.*

### Electrical safety

- This machine must be grounded in accordance with the National Electrical Code and local codes and ordinances. Any electrical work must be handled by a professional, qualified electrician. To help prevent and protect the user from shock, this machine must be properly grounded.
- Confirm that power supply matches power requirements of the machine before any electrical connection is made to the machine. Before connecting the machine to a power source, ensure that the switch is in the off position.

### Lifting and setting up your machine

**▲ WARNING** *Make certain that slings, cables, chains, forklifts or other load suspending gear or machines used to move this unit are properly rated to handle the weight. The machine is extremely heavy.*

**▲ CAUTION** *The machine must be properly secured and anchored before use. Make sure that it is supported equally on all four corners. Failure to comply may result in the machine twisting and causing binds in the working table.*

1. The machine arrives assembled and ready to us except that it requires proper electrical wiring to be installed. Have an authorized electrician prepare an electrical box near the machine's installation location.
2. Remove any crating or overpacking materials which may be covering the machine. Leave the machine attached to the pallet.

**NOTE:** The Model 9661616 Hydraulic Press weighs 507 lbs. Be certain any machine or devices used to lift the press are capable of handling this weight. If manually lifting, ensure that enough people are performing the lift.

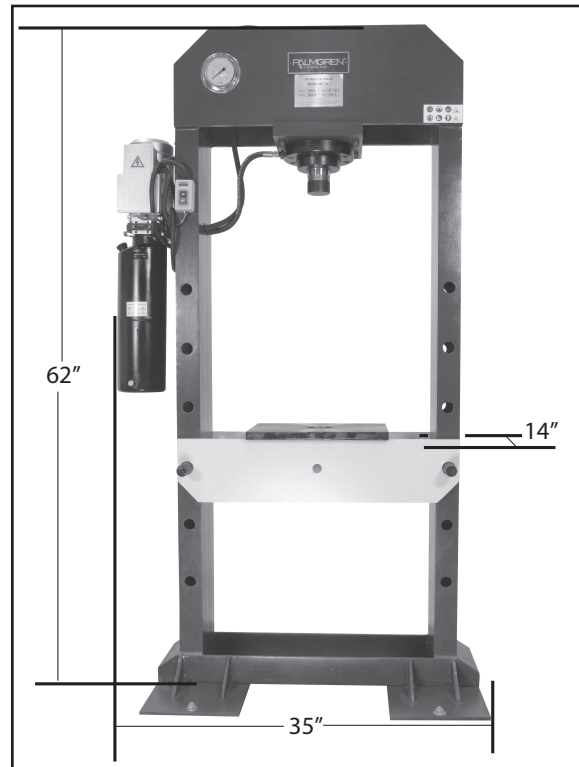
3. Ensure sufficient space is available for the press. See Machine Dimensions.
4. Remove all accessory items from the pallet or shipping carton. Compare these items with the listed on page 3.
5. Remove all the nuts and/or bolts securing the machine to the pallet.
6. Center an overhead crane or other suitable overhead lifting device and sling arrangement over the frame.
7. Carefully lift the machine off the pallet. Lift the machine no higher than necessary to clear the surface on which it is to be installed and pull the pallet out of the way. **DO NOT** get your hands or feet underneath the machine when removing the pallet.
8. Place the machine into its final location where it will be anchored to the table top. Anchor bolts of sufficient size and length must be fastened to the table top according to the footprint of the press.
9. While it is not recommended, the machine may be mounted to a wooden floor. The floor must be sturdy and properly braced to ensure a solid foundation for safety and machine accuracy.
10. When the machine is over its anchor location, level the machine using shims under the corners needing them. A highly accurate spirit or digital level should be used for leveling. Leveling should be done on the table top since it is the reference standard for both side-to-side and front-to-back leveling. It is very important that the machine be properly leveled for accurate performance.

Note: The diagrams to the right show the reasonable approximate dimensions of the machine and its parts. When determining a final location for your machine ensure there is enough clearance for both the operator and for technicians who will service the machine. Also, consider any larger workpieces that would extend beyond the machine's table and require extra space.

11. Have an authorized electrician connect the machine to the power source installed in step 1. If required, install a plug the machine's electrical cable if it is to be plugged in and not hard-wired.

Note: The direction of the motor will be shown as a large red arrow on the motor.

### Machine dimensions



### Lubrication

**⚠ CAUTION** *Do not operate this machine before lubrication and ensuring proper oil level. Failure to comply may damage the machine.*

Fill the pump with 32# or 46# hydraulic oil as shown by the fill indications.



## OPERATION

**▲ WARNING** Always wear safety glasses complying with U.S. ANSI Z87.1 before beginning any power tool operation.

**▲ CAUTION** Do not operate this machine before properly lubricating the machine. Failure to lubricate the machine before using can cause damage to the machine.

**▲ CAUTION** If the temperature exceeds the maximum operating temperature (see ) wait until cool.

**▲ CAUTION** Do not use the press with no load and when the piston rod is on the up dead position.

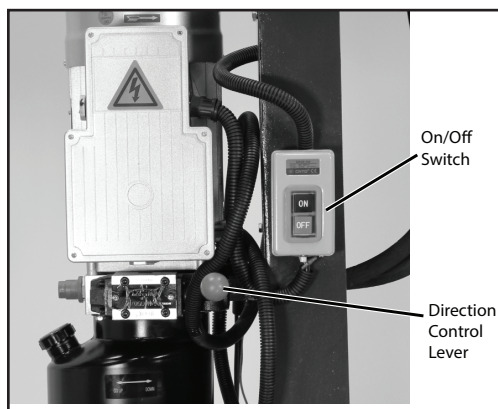
**NOTE:** The machine is adjusted to produce proper pressure at the factory.

### Using the press

1. Ensure that the piece to be pressed is centered on the table with respect to the piston.

**▲ WARNING** Pieces to be pressed must have a compact, solid structure and must not be subject to crumbling or other structural damage potential. And do not activate the press with no load.

2. Before starting the pump, ensure the direction valve handle is set to the center position.
3. Turn the motor on by pressing the "ON" button as shown below. Pressing the "OFF" button will shut the motor off.



4. The piston is controlled by a direction control lever (with a red ball handle) shown above. The lever has 3 states:

- Left : Up
- Middle: Stop
- Right: Down

**▲ WARNING** When using the press beware of any part that could be ejected out the front, by the force applied.

### Adjusting the table height

1. Unload the table of all extra items.
2. Lift the table support beam on one side. We recommend asking for assistance in holding the beam, although it is possible to do so only by oneself.

3. Extract the support pin as shown below.



4. Insert the pin into the next adjacent hole, either above or below the original hole. Make sure to insert the pin all the way through both the front and back of the hydraulic press frame.
5. Then ease the support beam back onto the pin. When done this way, only one person is required.
6. Repeat all previous steps for the opposite side.
7. Repeat until the desired height achieved.

## TROUBLESHOOTING GUIDE

Symptom	Possible Cause(s)	Corrective Action
Ram does not move	<ul style="list-style-type: none"> <li>• Low oil condition</li> <li>• Not enough pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Fill oil</li> <li>• Check motor</li> </ul>
Ram does not press	Cylinder valve not closed	Close cylinder valve
Motor does not run	Power disconnected	Check on/off switch and circuit breaker



## MAINTENANCE/REPAIR

Before any maintenance is performed, ensure all pressure has been released.

### Daily

- General visual inspection-check for any visible damage or missing parts
- Check that all labels are clearly visible- must be legible as well
- Check for any leaks in the hydraulic units
- Check the up/down lever is in the stop (middle) position when not in use

### Weekly

- Check oil level
- General cleaning

### Monthly

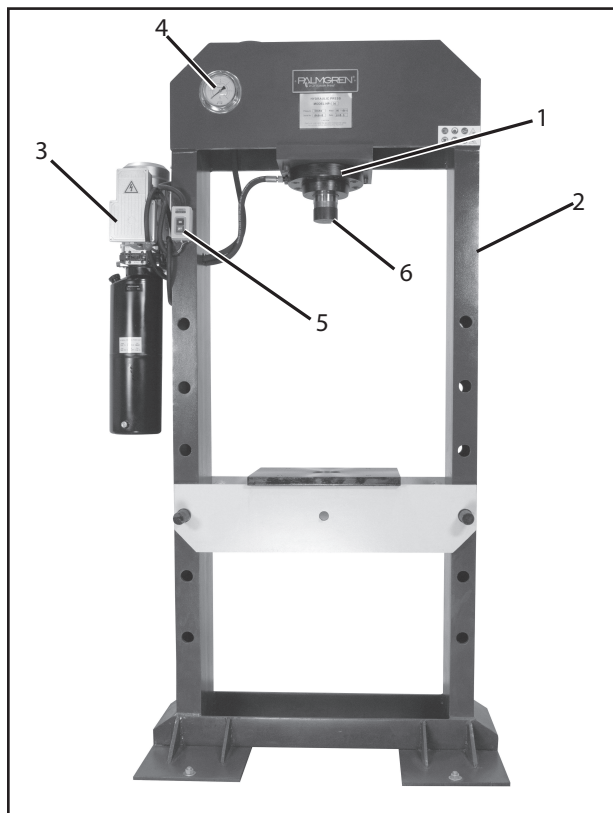
- Check wear on the hydraulic piston and station
- Check tightness of the bolts

### Half Year

- Refill with #32 or #46 Hydraulic oil every 6 months. After refilling, have the piston move up and down to remove the air from the inside the cylinder.

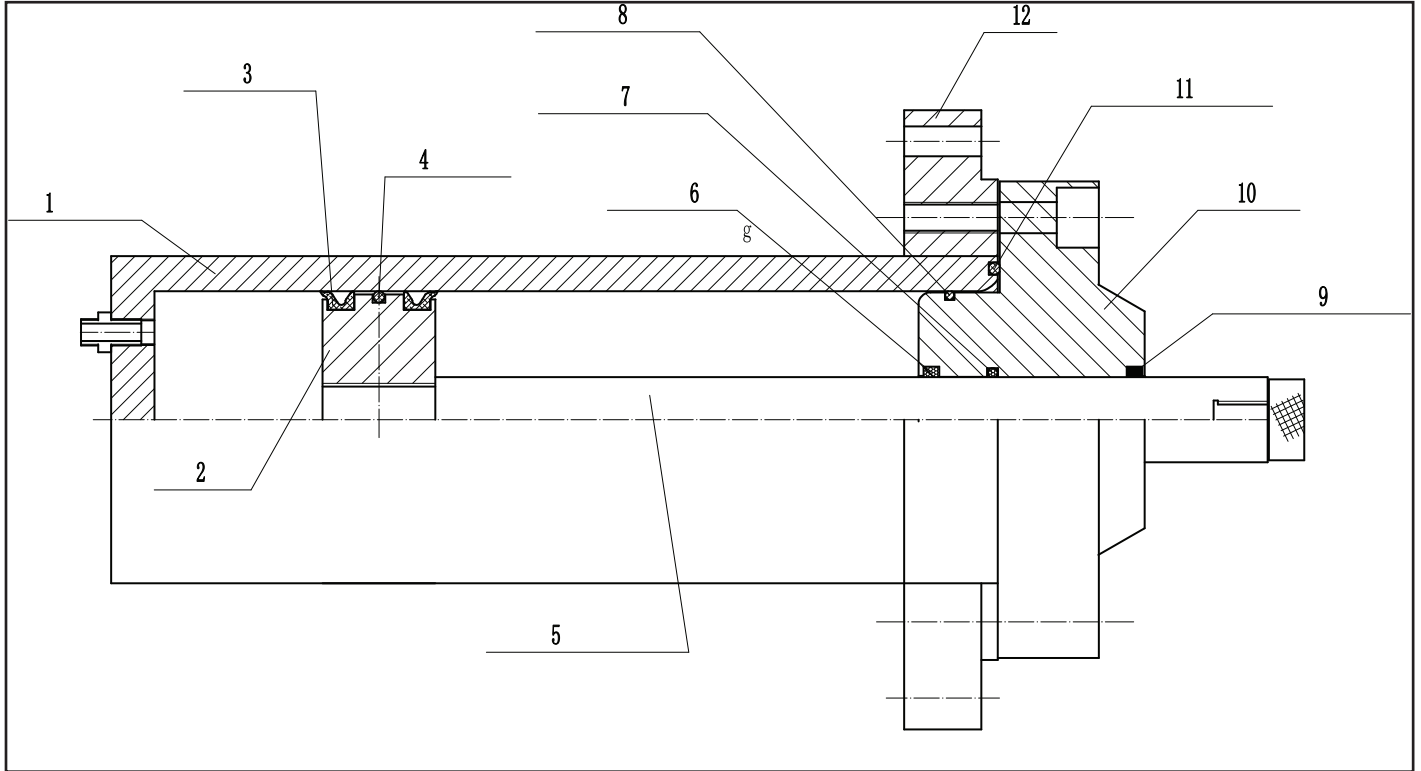
## The machine's functional parts

To properly operate the Model 9661616 Hydraulic Press, you must familiarize yourself with all of the machine's controls.



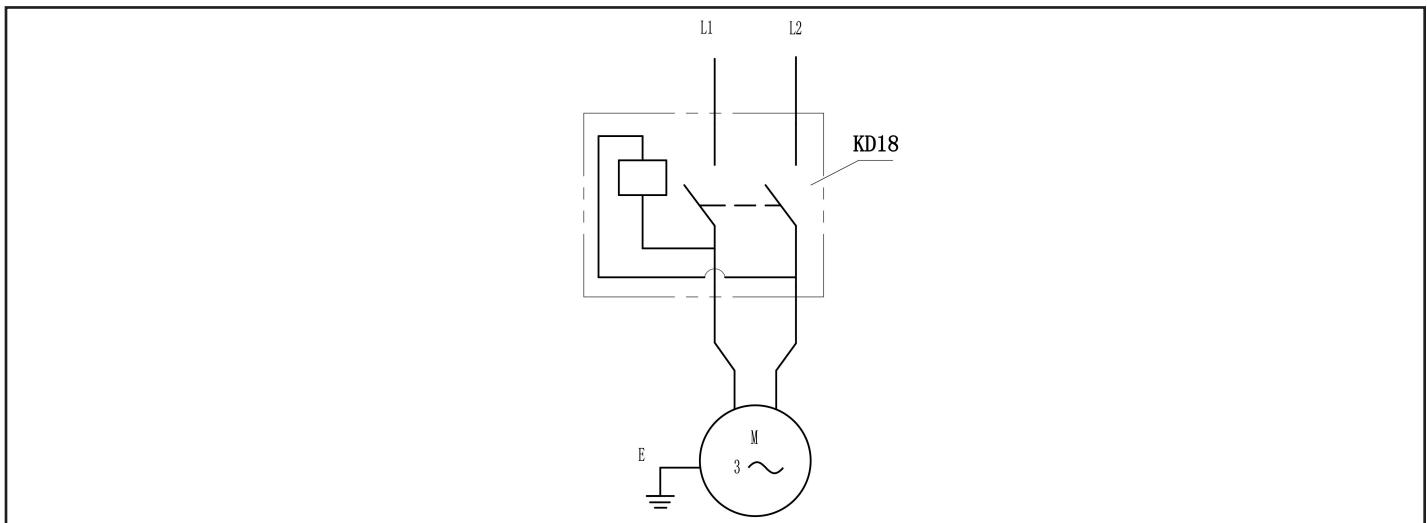
Item No.	Description	Part No.	Qty
1	Cylinder	9643620.01	1
2	Framework	NA	1
3	Motor	9643574.01	1
4	Hydraulic Gauge	9643622.01	1
5	On/Off Switch	9643576.01	1
6	Ram Cap	9643621.01	1

### MAINTENANCE/REPAIR - CROSS SECTION OF PISTON

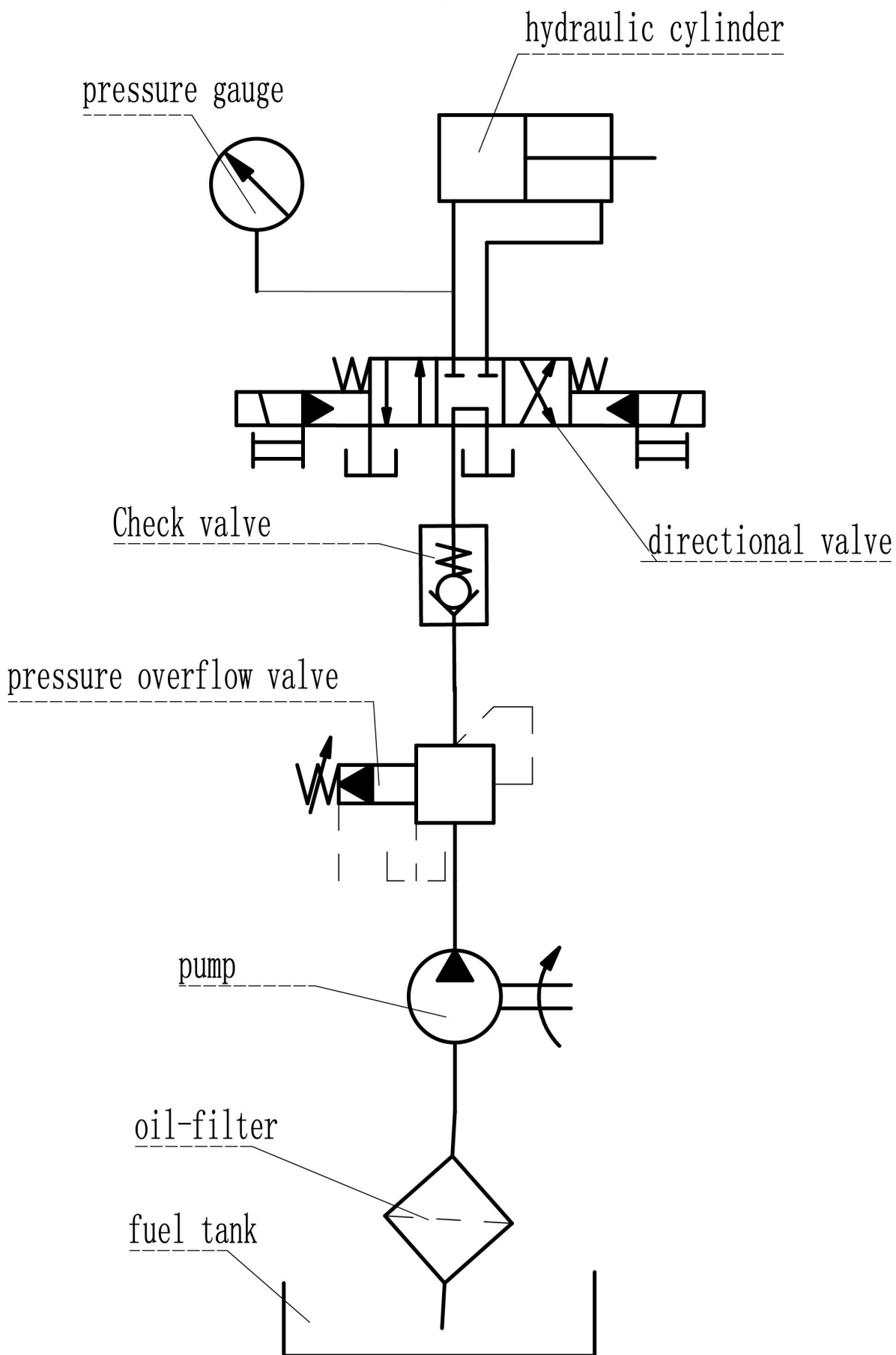


Item No.	Description	Qty	Item No.	Description	Qty
1	Oil Vat	1	7	Pressurize Ring	1
2	Stopcock	1	8	Pressurize Ring	1
3	Piston Ring	1	9	Pressurize Ring	1
4	Pressurize Ring	1	10	Vat Cover	1
5	Piston Shaft	1	11	Pressurize Ring	1
6	Pressurize Ring	1	12	Flange	1

### ELECTRICAL SCHEMATIC



**HYDRAULIC SCHEMATIC**



## **PALMGREN WARRANTY**

C.H. Hanson / Palmgren warrants their products to be free of defects in material or workmanship. This warranty does not cover defects due directly or indirectly to misuse, abuse, normal wear and tear, failure to properly maintain the product, heated, ground or otherwise altered, or used for a purpose other than that for which is was intended.

The warranty does not cover expendable and/or wear part (i.e. v-belts, screws, abrasives, jaws), damage to tools arising from alteration, abuse or use other than their intended purpose, packing and freight. The duration of this warranty is expressly limited to the terms noted below beginning from the date of delivery to the original user.

**The Palmgren branded items carry the following warranties on parts:**

**All vises, clamps, positioning tables, tombstones, jack screws and vise accessories - LIFETIME.**

**All bench grinders, drill presses, tapping machines, band saws, lathes, milling machines, arbor presses, abrasive finishing machines and work stands - 3 YEARS.**

The obligation of C.H. Hanson / Palmgren is limited solely to the repair or replacement, at our option, at its factory or authorized repair agent of any part that should prove inoperable. Purchaser must lubricate and maintain the product under normal operating conditions at all times. Prior to operation become familiar with product and the included materials, i.e. warnings, cautions and manuals.

**Failure to follow these instructions will void the warranty.**

This warranty is the purchaser's exclusive remedy against C.H. Hanson for any inoperable parts in its product. Under no circumstances is C.H. Hanson liable for any direct, indirect, incidental, special or consequential damages including loss of profits in any way elated to the use or inability to use our products. This warranty gives you specific legal rights which may vary from state to state.



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