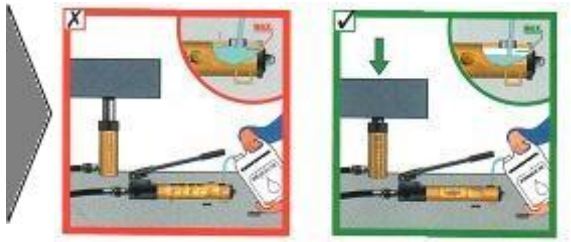
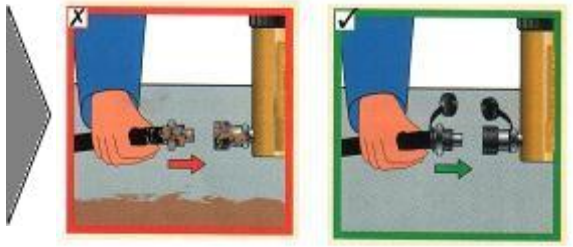
Fill pump only to recommended level.Fill only when connected cylinder is fully retracted.

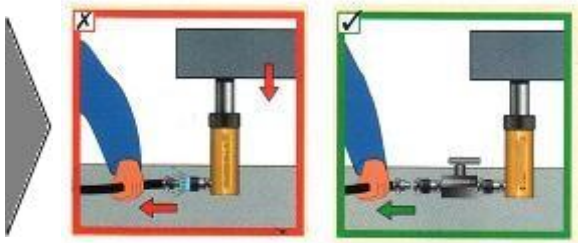
Use only genuine Kashon hydraulic oil. Wrong fluid can destroy seals and pump and will tender your warranty null and void your guarantee.



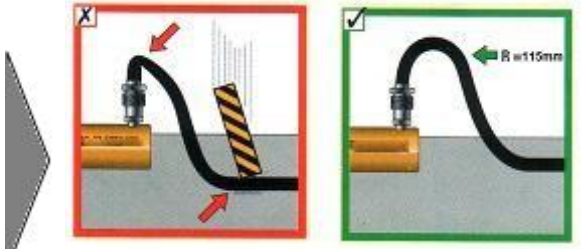
Clean both coupler parts before connecting.
Use dust caps when coupler parts are not connected.



Detach cylinder only when fully retracted or use shut-off valves to lock-in cylinder pressure.



Don't kink hoses.
Bending radius should be at least 115mm.
Don't drive over or drop heavy objects on hoses.



Don't lift hydraulic equipment by the hoses.

KASHON EQUIPMENT

Instruction Sheet

Hydraulic Cylinder

PLEASE READ AND FOLLOW THIS INSTRUCTION BEFORE YOU USE HYDRAULIC CYLINDERS.

Carefully inspect all components for shipping damage, if shipping damage is found. Please notify carrier at once. The carrier is responsible for any damage resulting from shipment.

1. SAFETY

To avoid personal injury or property damage, please follow all safety precautions. Seller cannot be responsible for injury or damage resulting from unsafe and incorrect products use or system operation, or lack of maintenance.

DANGER is only used when your action or lack of action may cause serious injury or even death.

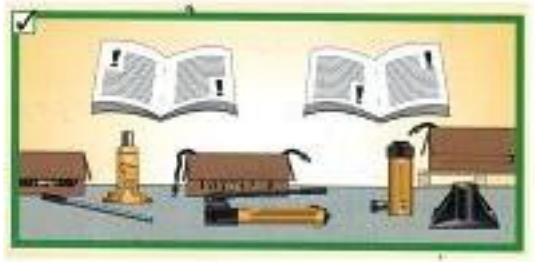
WARNING indicates a potential danger that requires correct action to avoid personal injury.

IMPORTANT indicates correct action to prevent damage or equipment failure.

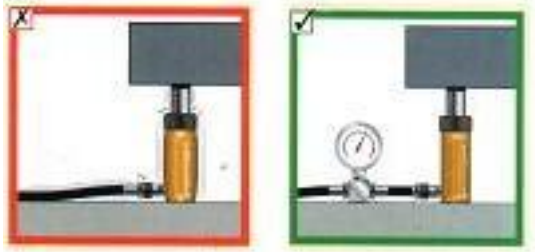
DANGER

- The hydraulic equipment operator must be a qualified operator familiar with correct training and work experience of hydraulic equipment. Lack of knowledge in any of these areas can lead to equipment damage or personal injury.
- Please carefully inspect cylinder(s), coupler(s) and hose(s) before use hydraulic equipment, if you find any damage on the cylinder(s), coupler(s), and hose(s), please stop using your equipment and contact with your seller. These damages may cause equipment failure and possible personal injury.
- To avoid personal injury, please do not modify or weld hydraulic equipment without approved by the seller.
- Please never lift a load more than the capacity of the cylinder(s), overloading will cause equipment failure and possible personal injury.
- The operating pressure of cylinder(s) are designed for a max pressure of 700 bar (10,000 psi), please do not use a pump or relief valve with a higher pressure rating to connect the cylinder(s). Higher pressure pump or relief valve may cause equipment failure and possible personal injury.
- Cylinder is a load lifting device, not a load holding device. After the load has been raised or lowered, it must always be held mechanically, please never work under a load supported by hydraulic.
- To avoid personal injury, please keep hands and feet away from cylinder(s) and workplace during operation.
- Please do not put poor-balanced or off-center loads on cylinder(s). The incorrect load can result in equipment failure and possible personal injury.

Always read instructions and Safety warnings that come with your Kashon hydraulic equipment.



Don't override the factory setting of relief valves.
Always use a gauge to check system pressure.



Don't use handle extenders.
Hand pumps should be easy to operate when used correctly.

Close release valve flinger tight.
Using force will ruin the valve.

5 TROUBLESHOOTING GUIDE

The following information is intended as an aid in determining if a problem exists. For repair service, contact the Authorized Kashon Service Center in your area.

Problem	Cause	Solution
Cylinder will not extend or fully extend	1.Pump release valve open 2.Couplers not fully tightened 3.Oil level in pump reservoir is low 4.Pump or valve malfunctioning 5.Overload for cylinder 6.Cylinder piston rod binding	1.Fully tighten pump release valve 2.Fully tighten couplers 3.Fill oil in pump 4.Repair or use another pump and valve 5.Change another cylinder with appropriate capacity 6.Check for dirt or leaks, change the damage parts
Cylinder can not maintain pressure	1.Leaky connection 2.Cylinder seals leaking 3.Release valve not fully closed 4.Pump or valve malfunctioning	1.Clean and reseal thread, tighten connection 2. Replace worn seals. Clean inside cylinder and use clean hydraulic oil 3. Fully tightening the release valve 3. Repair, or use another pump and valve
Cylinder extends slower than normal	1. Leaky connection 2. Coupler not fully tightened 3. Pump malfunctioning	1.Clean and reseal thread, tighten connection 2. Fully tighten couplers 3. Repair or use another pump and valve
Cylinder extend in dithering	1. Air in cylinder 2. Cylinder piston rod binding	1.Bleed air (see chapter 2.2) 2. Check for dirt or leaks. Check for bent, misaligned and worn parts
Cylinder leaks hydraulic oil	1. Leaky connection 2. Worn or damaged seals 3. Cylinder damage	1.Clean and reseal thread, tighten connection 2.Replace worn seals, clean inside cylinder and use clean hydraulic oil 3.Use new cylinder or contact with the seller
Cylinder will not retract or Retracts slower than normal	1. Pump release valve closed 2. Couplers are not fully tightened 3. Pump reservoir is full 4. Hose is blocked 5. Return spring is damaged 6. Cylinder damaged	1. Open release valve 2.Tightening the couplers 3. Drain hydraulic oil to correct level 4. Clean or change hose 5. Change return spring 6. Use new cylinder or contact the seller

WARNING

- Please wear safety glasses, safety cap and other necessary personal protective equipment when operating hydraulic equipment.
- Use cylinder to lift load should have solid lifting surface for correct support. Please select steel or wood blocks that are capable of supporting the load.
- Please install pressure gauge in the system to monitor the operating pressure. The gauge must have same pressure rating as the pump and cylinder(s) in the system. The wrong gauge may cause equipment failure and possible personal injury.
- Please carefully inspect the cylinder(s) and coupler(s) before use cylinder(s) or shift coupler(s). Never connect the cylinder(s) with damaged coupler(s) or damaged port threads. The damaged coupler(s) or damaged port thread(s) may cause equipment failure and possible personal injury.
- To prevent dust or other small waste into cylinder body or tube, please shift coupler(s) in a clean place. Dust or other small waste will damage the cylinder and result in equipment failure and possible personal injury.
- Cylinder must be placed on a flat base, please use cylinder base for added stability.
- Before removing or tightening hose(s) or coupler(s), please release hydraulic pressure in system.
- For hydraulic technical helps or repair service. Please contact the seller. The seller is not responsible for any injury and property damage if you repair your equipment in other hydraulic service centers which does not related to the seller.
- Hydraulic cylinders must use special hydraulic oil, please use specified oil or other approved hydraulic oil.

IMPORTANT

- Please keep the cylinder clean all the time.
- When the cylinder is not in use, please keep the piston rod fully retracts, remove hose and use rubber cap(s) to recover the coupler. If you use collar threads, please use the thread protector to recover it.
- Please do not drop heavy duty on hose.
- Please do not lift and carry hydraulic cylinders by the hose(s) or coupler(s), use the handle or other safe way.
- Please use hydraulic equipment in normal temperature, do not use equipment in temperatures of 65 ℃ (150℉) or higher. Overheating will soften seals and weakens hose materials, resulting in oil leaking or other equipment failure.
- Before load, Please fix a saddle into piston rod, saddle will protect the piston rod.

1.OPERATION

Before use cylinder, please visually check all units, to make sure there are no damage on cylinder(s), port threads, coupler(s) and hose(s). No oil leaking and shortage of parts. If you find any problem please stop using your equipment and contact with your supplier immediately.

2.1 Connection

- **Single Acting Cylinders**

Use a pump with a release valve or a 3-way valve and one hose to connect with Single Acting Cylinder (Figure 1). After connected all parts, please fully hand-tighten all couplers. If not, oil will be leaked when you operate the equipment.

- **Double Acting Cylinders**

Use a pump with a 4-way valve and two hoses to connect with Double Acting Cylinder. After connected all parts, please fully hand-tighten all couplers. If not, oil will be leaked when you operate the equipment.

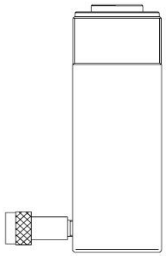


Figure 1

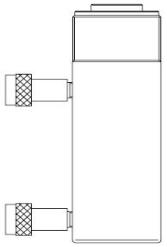


Figure 2

2.2 Bleeding Air from the cylinder

Air may accumulate within a cylinder during shipment or after prolonged use; this air can cause the piston rod to respond “dithering.” Please use the steps below to bleed the air from cylinder.

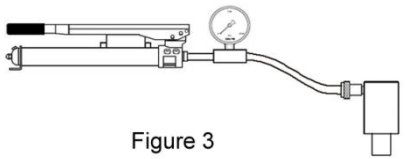


Figure 3

- **Single-acting cylinders:**

Position the cylinder as figure 3 shows, the piston rod is extended down and the cylinder lower than the pump. Fully extend and retract the cylinder 1 or 2 times. It may be necessary to repeat the above steps several times.

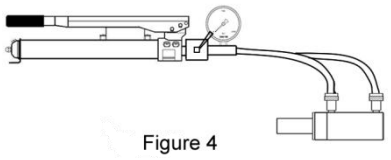


Figure 4

- **Double-acting cylinders:**

Lay the cylinder as figure 4 shows, to make sure the couplers facing up. Fully extend and retract the cylinder 1 or 2 times. It may be necessary to repeat the above steps several times.

2.3 Operation

- After finish the above steps, operate hydraulic pump to advance and retract the cylinder.
- Single acting cylinders use both spring-return and load return.

- Double-acting cylinders use hydraulic return.
- Do not allow piston rod to rotate when installing adaptors or during the work. Rotating piston rod may damage the return spring.
- To reduce the wear, please use less than full stroke and full capacity when possible.
- After finish the work, please fully return the piston rod, remove hose and use rubber cap(s) to recover the coupler. If you use collar threads, please use the thread protector to recover it.

3.HOISTING CYLINDER

WARNING: To avoid equipment failure and possible personal injury, please always use all of the eye bolts when hoisting cylinder, Lifting straps must be at a 45 degree or greater angle (≥45°) from horizontal (See Figure 5).

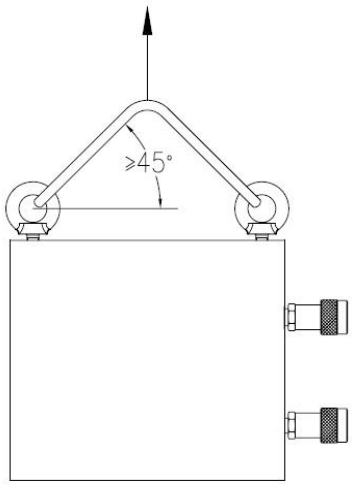


Figure 5

4. MAINTENANCE

4.1 Please always use clean oil or other approved hydraulic oil with these cylinders. Use other unapproved oil or dirty oil will damage the cylinders.

4.2 Always keep cylinder clean, use thread proctor and dust cap to protect collar thread and couplers.

4.3 After finish work, Cylinder must be fully retracted, cleaned and stored in ventilation, moist-proof, corrosion-proof place.