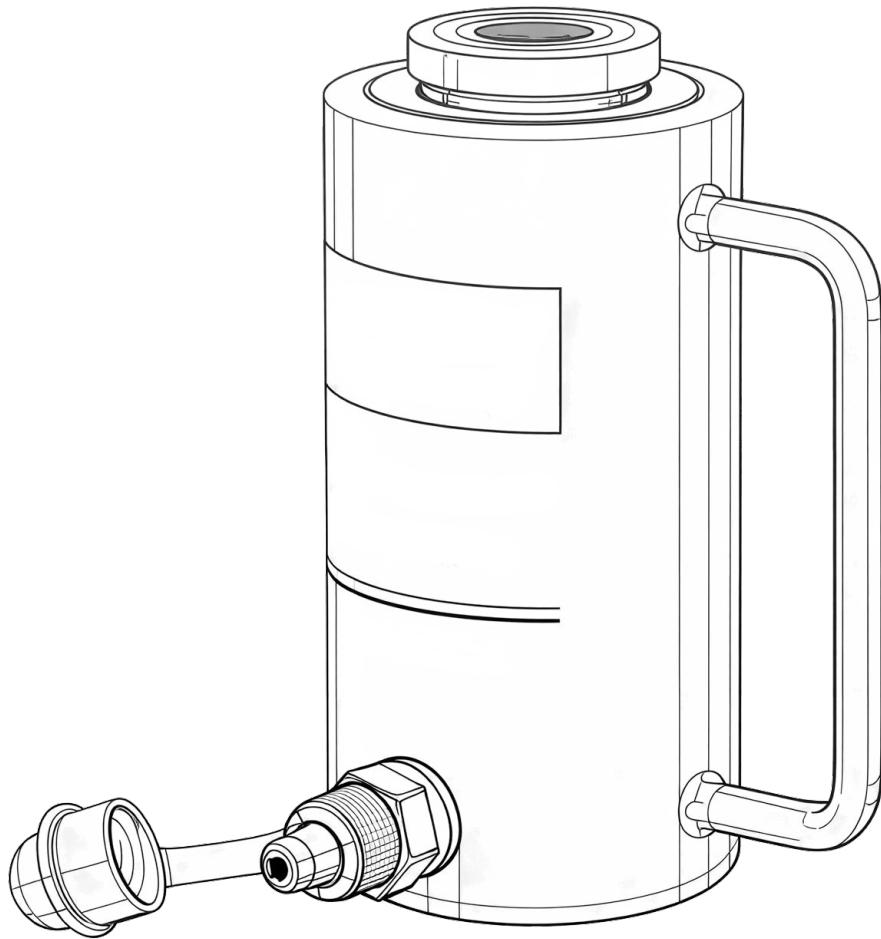


# Instruction Manual

# **Hollow Plunger**

# **Hydraulic Cylinder**



**RCH Series**

For your safety, please read and understand this instruction carefully before you use it. Please keep this instruction in good order. Please give the instruction to the new user when the product is changed.

# Introduction

Thank you for choosing our hydraulic cylinder product. This manual provides essential information for safe installation, operation, maintenance, and troubleshooting of single-acting and double-acting hydraulic cylinders. Read this manual carefully before using the equipment. Proper use will ensure maximum performance, long service life, and safe operation. This manual is intended for technicians, operators, and maintenance personnel who are familiar with basic hydraulic systems.

## General Safety



**CAUTION** – Indicates a potentially hazardous situation which may result in minor or moderate injury or equipment damage.



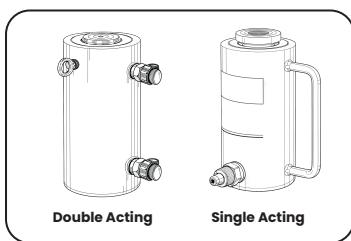
**WARNING** – Indicates a potentially hazardous situation which could result in serious injury or death.



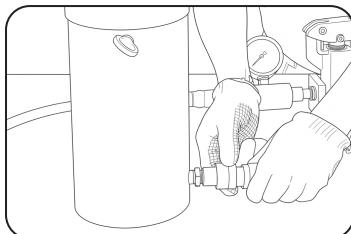
**DANGER** – Indicates an immediate hazardous situation which will result in serious injury or death if not avoided.

- Always wear proper personal protective equipment (PPE) such as safety glasses, gloves, and safety shoes.
- Never stand under or near a load supported by a hydraulic cylinder.
- Do not use a hydraulic cylinder as a permanent load-holding device. Always support the load mechanically after lifting.
- Never exceed the rated capacity or maximum operating pressure of the cylinder or any system component.
- Do not connect the cylinder to a pump with a higher pressure rating.
- Keep hands and feet away from the cylinder and workpiece during operation.
- Do not modify the cylinder or its components.
- Use only rigid steel or hardwood blocks to support loads. Never use another hydraulic cylinder as a spacer.
- Do not bend, kink, crush, or expose hoses to sharp edges or high heat.
- Never handle pressurized hoses. Escaping oil under pressure can penetrate the skin and cause serious injury.
- Replace damaged or worn parts immediately using genuine parts only.

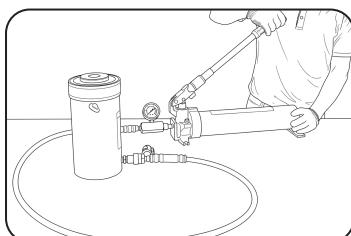
# Installation and Operation



Identify the cylinder type (single-acting or double-acting) before making any hydraulic connections.



Connect the hydraulic hose(s) to the cylinder port(s). Fully hand-tighten all hydraulic couplers and ensure they are clean and free from dirt or debris.



Verify that all attachments are securely installed and forces will be applied directly to the face of the plunger. Perform a low-pressure test run to confirm smooth operation and check for oil leaks.

## ⚠ Warning ⚠

- Place the cylinder on a stable, flat surface before applying pressure.
- Never operate a double-acting cylinder with only one hose connected.

# Relieving Trapped Pressure

Pressure may remain trapped in the cylinder if hoses are disconnected before pressure is fully released.

- Use an approved coupler bleed tool to safely release residual pressure.
- Never loosen couplers to relieve pressure.

## ⚠ Danger ⚠

Sudden release of trapped pressure can cause couplers to become projectiles and result in serious injury or death.

# Maintenance

- Use only recommended hydraulic oil.
- Keep the cylinder clean at all times.
- Install dust caps when the cylinder is disconnected from hoses.
- Inspect hoses, seals, and fittings regularly.
- Replace damaged components immediately.

## Storage (single-acting cylinders):

- Fully extend and retract the plunger once before long-term storage.
- Store the cylinder upside-down to reduce corrosion.

All repairs must be performed by qualified hydraulic technicians only.

# Troubleshooting (Basic Guide)

Problem	Possible Cause	Solution
Cylinder does not extend	No hydraulic pressure	Check pump and connections
Slow movement	Air in system	Bleed air from cylinder
Oil leakage	Damaged seals or hose	Replace damaged parts
Uneven movement	Off-center load	Reposition load

The logo for Barton Tools features the company name in a large, bold, sans-serif font. The letters 'B' and 'T' are stylized with a series of diagonal lines extending from the top and bottom, giving them a winged or dynamic appearance.