HI-POWER®

HI-POWER® HYDRUALIC CYLINDER

HI-POWER MANUAL

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Intruction Sheet Manual

HIPOWER HYDRAULIC CYLINDER 700 BAR

HI-POWER CYLINDER MANUAL & Warranty

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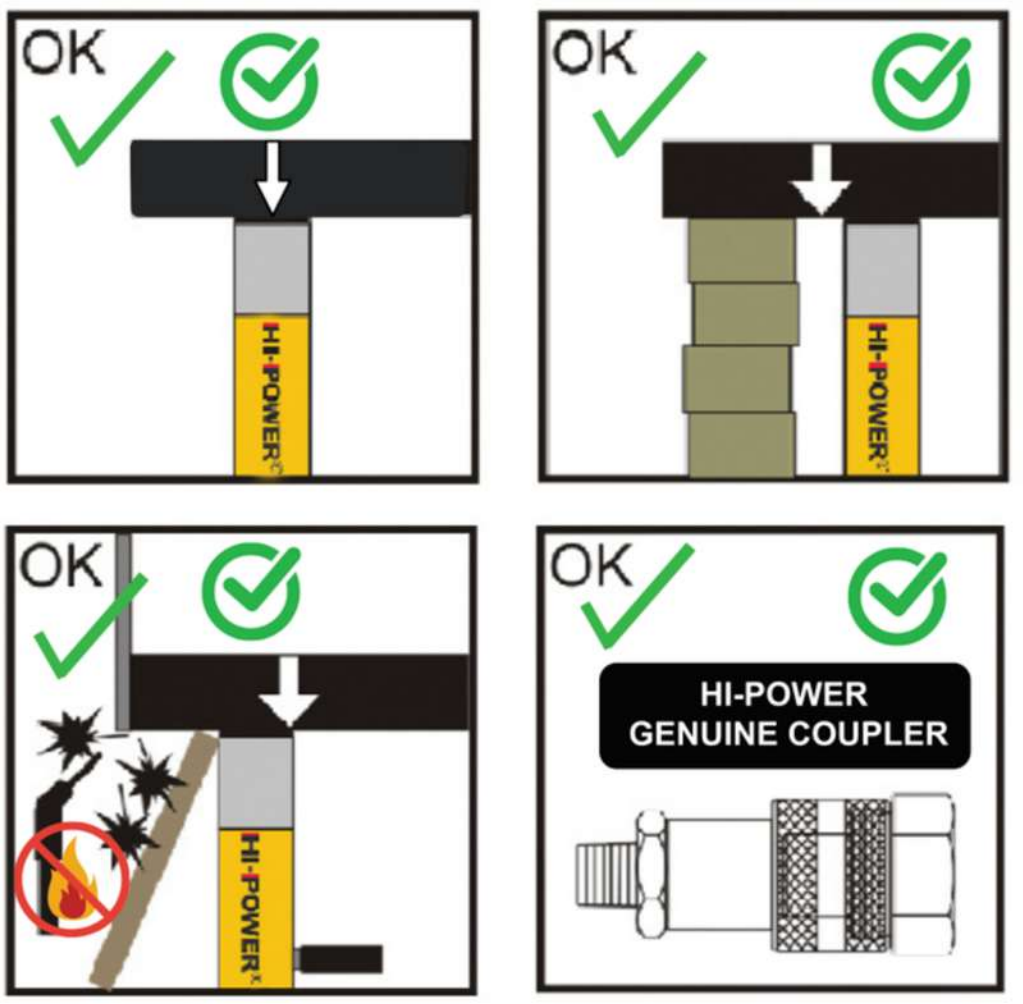
SAFETY FIRST

IMPORTANT—USER SAFETY AND PROTECTION: In setting up systems to fit your operations, care must be taken to select the proper components and design to insure appropriate integration with your operations and existing equipment and that all safety measures have been taken to avoid the risk of personal injury and property damage from your application or system.

WARNING: BE SURE SETUP IS STABLE BERORE LIFTING LOAD



⚠ CAUTION Seal tape is an excellent thread sealer. If it is not properly applied, however, pieces may enter the hydraulic system and cause malfunctions and damage. Use 1 1/2 wraps of tape on each thread. Cut off all loose tape ends.

- All connections should be snug and leak-free.

⚠ CAUTION Excessive tightening will strain threads and castings which could cause fitting failure at pressures below rated capacity. DO NOT over-tighten any connections.

- Fully tighten hydraulic couplers (avoid excessive force).

PUMP SELECTION HI-POWER®

All hydraulic cylinders must be properly connected to the source of hydraulic oil to operate. This source is generally a hand-operated or power-operated pump. The choice of pump will depend upon the requirements of your application. GB has pumps to match cylinders for your applications.

Use the correct pump for the cylinder you have.

RECOMMENDATION: Use hydraulic gauges which indicate safe operating loads in each hydraulic system. Gauges are available for use with all hydraulic components (some gauges have a colored band to indicate load ranges for each cylinder.) DO NOT exceed the safe limit of the lowest rated component used within your system.

DO NOT DROP HEAVY OBJECTS ON HOSE

A sharp impact may bend or break internal hose wire strands. Applying pressure to the damaged hose will cause internal flexing which will eventually break the hose strands, rupturing the hose.

DO NOT use the hydraulic hose to carry a hydraulic component (pumps, cylinders, and valves).

DO NOT OVERLOAD CYLINDER

Never attempt to lift a load which exceeds the capacity of a cylinder or jack. Overloading causes equipment failure and possible personal injury.

OFF-CENTER LOADS

Avoid situations where loads are not directly centered on the cylinder plunger. Off-center loads produce considerable strain on cylinder plungers and may slip or fall, causing potentially dangerous results. Avoid point loading–distribute loads evenly across the entire saddle surface.

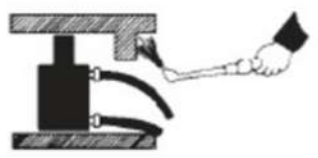
DO NOT OVEREXTEND CYLINDER

The cylinder will take full load on the plunger stop ring. However, using the full stroke does not supply power and only adds unnecessary strain to the cylinder.

AVOID SHARP BENDS AND KINKS IN HOSE

Avoid sharp bends and kinks when routing hydraulic hoses. If pressure is applied to a bent or kinked hose, the oil flow will be restricted, causing sever back-pressure. Also, the sharp bends and kinks will internally damage the hose, leading to premature failure.

KEEP HYDRAULIC EQUIPMENT AWAY FROM FLAMES AND HEAT



Excessive heat (above 150° F) will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance DO NOT expose equipment to temperatures of 150° F or higher.

PROVIDE ADEQUATE CLEARANCE

Always provide clearance for hoses and couplers to avoid moving objects, abrasion, or sharp objects.

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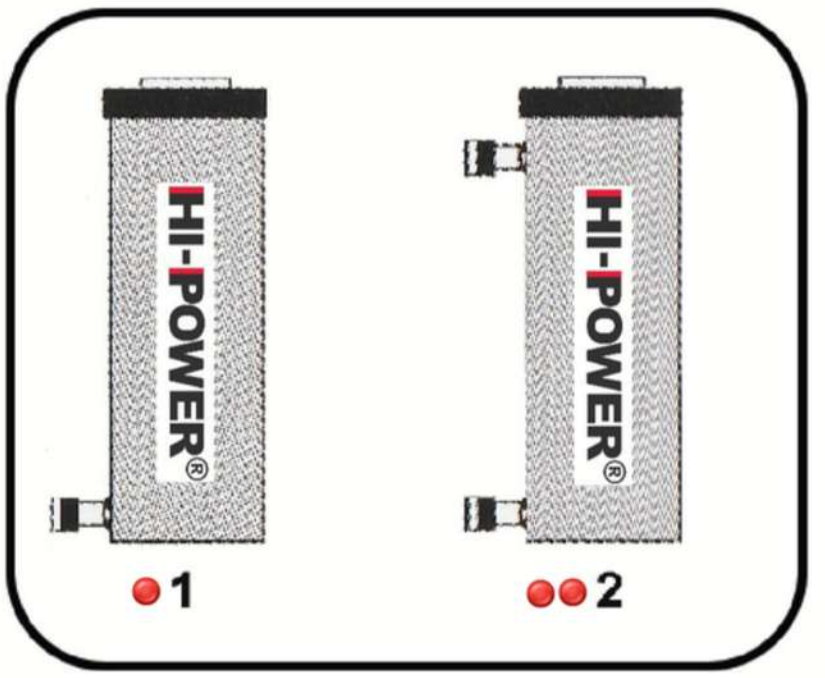
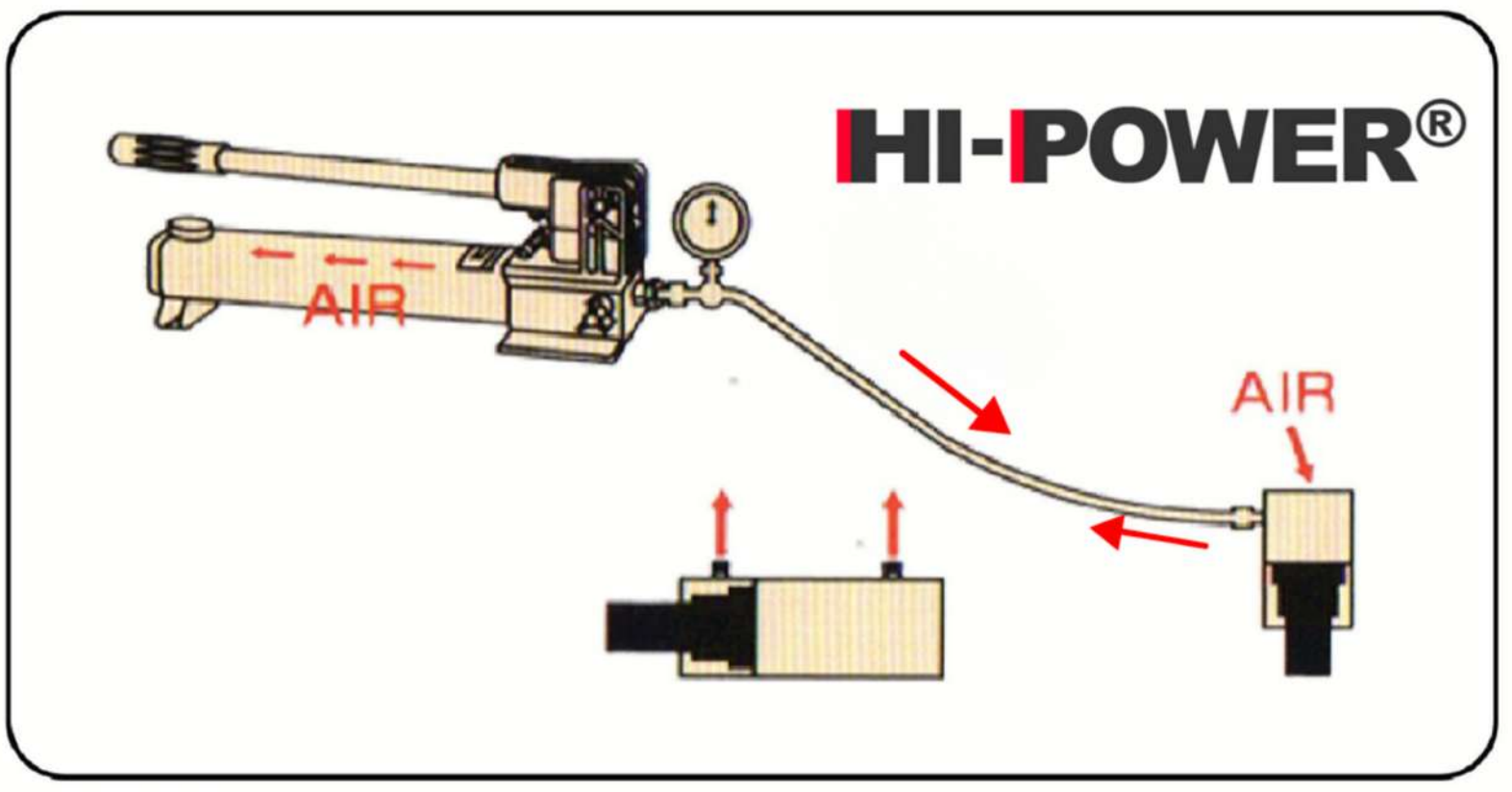
HI-POWER INSTALLATION & CONNECTION

- 1. Connect SINGLE ACTING hydraulic cylinders to pump one hose by turning Relief Valve clockwise direction from left to right to start for lifting.
- 2. IF Using DOUBLE ACTION, two hose w/ 4-way valve pull Port A hold & return by Port B



IMPORTANT: Single-acting & Double-acting cylinders must use HIPOWER couplers 700 Bar Fully hand-tighten all couplers. Loose coupler connections will block the flow of oil between the pump and cylinder.

**Remove air from the cylinder as shown below. Single-acting cylinders: Position the cylinder so that the plunger is pointed down and the cylinder lower than the pump. Fully extend and retract the cylinder 2 or 3 times.



MAKE EASY

HIPOWER , Single-Acting Cylinder up by HI-POWER High Quality Hand Pump 700 Bar
HIPOWER RC, RCH, RCS, RSM , RCB , RCM series are SPRING RETURN
the lenght of of hose and all fittings are important . The Cylinder stop ring is suit
full load & full stroke , CKECK & SURE ALL SETUP IS STABLE BEFORE LIFTING LOAD

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TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Action Unevenly.	1. Air in system or pump AIR RELEASE. 2. Internal leakage cylinders. 3. Cylinder sticking or not advance.	1. Add fluid, bleed air and check for leaks. 2. Replace worn packings. Check for excessive contamination or wear. 3. Check for dirt or leaks. parts defective.
Cylinder. / does not move.	1. Loose couplers. 2. Faulty coupler. 3. Improper valve position 4. Low or no hydraulic fluid in pump. 5.Pump not operating 6. Load is above the capacity of the system. 8. Fluid leaks out ofrodend relief valve.	1. Tighten couplers / checking. 2. Verifi that female coupler is not locked up (ball wedged into seat). Replace bot female and male couplers. 3. Close release valve or shift to new position. 4.Check pump's operating instructions. 5. Use the correctylinder. 6. Make sure all coulers are fully coupled.
Cylinder. / extends only partially.	1. Pump tank is low on hydraulicfluid. 2. Load is above the capacity of the system. 3. Cylinder piston rod binding.	1. Fill oil and bleed the system. 2. Use the correct cylinder. 3. Check for dirt or leaks Check for bent. misaligned, worn parts or defective packings.
Cylinder. / Ram moves slower than normal.	1. Loose connection or coupler. 2. Restricted hydraulic line or fitting. 3. Pump not working correctly. 4. Cylinder seals leaking.	1. Tighten 2. Clean and replace if damaged. 3. Ceck pump operating instructions REPAIR KIT FOR EACH MODEL. 4. Replace or CONTACT TO HI-POWER SERVICE CENTER.

Attention to ensure safety and most efficiency operation.
If any quiries for usage or repairs kit are necessary, contact to **HI-POWER SERVICE CENTER** for service according to the manufacturer's standards and use genuine "HI-POWER" parts & components.
Recommend **"HIPOWER" Hydraulic Oil** for your hand pump

For ultimate performance do not expose equipment over 65°C (150°F)
Be careful and protect cylinders & hose from weld spatter or fire.

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Warranty Standard
Warranty period Warranty for all HI-POWER Hydraulic Products and Equipments shall be 1 year from the shipment date to our customer, limited to new units

Warranty Condition
In the event that any problem or damage to the product arises during the"Warranty Period" from defects in the product whenever the product is properly installed and combined with theBuyer's equipment or machines, maintained as specified in the maintenance manual, and properly operated under the conditions described in the catalog or as otherwise agree upon inwriting between the Seller and the Buyer or its customers; the Seller will provide, at its sole discretion, appropriate repair or replacement of the product without charge at a designted facility, except as simpulated in the"Warranty Exclusions" as described below. However, if the product is installed or integrated into the Buyer's equipment or machines, the Seller shall not reimburse the cost of: removal or reinstallation of the product or other incidental costs related thereto, any lost opportunity, any profit loss or other incidental or consequential losses or damages incurred by the Buyer or its customers. the warranty covers only the main components and electronics excluding parts of consumable nature and wear and tear from normal use.
In addition, the warranty is completely void if the product is overused,misused,abused and/or damaged by user.

Warranty Exclusions
Notwithstanding the above warranty, the warranty herein shall not apply to any problem or damage to the Product that is caused by:
1). installation, connection, combination or integration of the product in or to the other equipment or machine that is rendered by any personor entity other than the seller;
2). insufficient maintenance or improper operation by the buyer or its customers, such that the Product is not maintained in accordance with the maintenance manual provided or designated by the seller;
3). improper use or operation of the product by the buyer or its customers that is not informed to the seller, including, without limitation, the buyer's or its customers, operation of the product not in conformity with the specifications, or use of lubricating oil in the Product that is not recommended by the seller;
4). any problem or damage on any equipment or machine to which the product is installed,connected or combined or on any specifications particular to the buyer or its customers;
5). any changes, modifications, improvements or alterations to the product or those functions that are rendered on the product by any person or entity other than the seller;
6). any parts in the product that are supplied or designated by the buyer or its customers;
7). earthquake, fire, flood, seabreeze, gas, thunder, acts of god or any other reasons beyond control of seller;
8). normal wear and tear, or deterioration of the product's parts, such as bearings, oil-seals;
9). any other troubles, problems or damages to the product that are not attributable to the seller.

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HI-POWER HI-QUALITY PROFESSIONAL TOOLS
Excellent Solutions for All Industries

HI-POWER RC ENERPAC RC

HI-POWER RSM HI-POWER RCH

HI-POWER RC-mm

HI-POWER RCH