Hydro Bard

OPERATING AND MAINTENANCE MANUAL

700 BAR HYDRAULIC CYLINDERS

HBS-GA · HBS-DP · HBS-DL · HBS-CT · HBS-LN · HBS-HT



Read this manual and the safety instructions before use.

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01 GENERAL SAFETY RULES

- Read this entire manual before using the product. The product must only be used by trained and authorised persons.
- Never exceed the maximum working pressure shown on the rating plate or label. Always monitor the system with a pressure gauge.
- All components in the system (pump, hose, coupler, valve, tool) must be rated for the same or higher pressure.
- Never disconnect, tighten or loosen fittings, couplers or hoses while they are under pressure.
- Pressurised hydraulic oil can penetrate the skin and cause serious injury. Never check for leaks by hand; seek medical help immediately after any oil injection.
- Wear safety glasses, work gloves and safety shoes. Do not stand in the line of movement of pressurised equipment.
- Do not use equipment that is damaged, leaking, deformed or has illegible labels; send it for service.
- Do not use the equipment for any other purpose or modify it. Use genuine spare parts only.

⚠ PRODUCT-SPECIFIC WARNINGS

- Use the cylinder only on a flat, solid surface able to carry the load.
- Load the cylinder centrally; avoid off-centre and side loading. The full saddle face must be in contact with the load.
- Before working under a lifted load, always support it with mechanical cribbing or the lock nut (HBS-LN). Never rely on hydraulic pressure alone.
- Do not hold the cylinder under load at full stroke; slow down when approaching the end of stroke.

Warning signs

DANGER	A situation that will result in death or serious injury if not avoided.
WARNING	A situation that could result in injury if not avoided.
CAUTION	A situation that could damage the product or give a wrong result.

02 PRODUCT DESCRIPTION

The HBS family consists of 700 bar hydraulic cylinders for lifting, pushing, pressing, pulling and supporting. Single-acting spring-return series (GA, DP, DL) retract by spring when pressure is released, the lock nut series (LN) retracts under the load, and the double-acting series (CT, HT) retract hydraulically.

03 TECHNICAL DATA

Max. working pressure	700 bar (10,153 psi)
Capacity range	10–1000 ton (by series)
Port	3/8″ NPT/F quick coupler (CT and HT: 2 ports)
Body (GA, DP, DL, CT)	7075-T6 aluminium alloy, hard anodised
Detailed dimensions	Datasheet of the relevant series

04 PREPARATION AND CONNECTION

1. Check that the cylinder, hose and pump have the same pressure rating (700 bar).
2. Clean the couplers, remove the dust caps and tighten the coupler fully by hand. A partly connected coupler blocks oil flow.
3. On double-acting cylinders (CT, HT) connect the advance line to the pump advance port and the retract line to the return port. Make sure both lines are connected.
4. Bleed air by extending and retracting the unloaded cylinder fully 2–3 times, with the cylinder positioned lower than the pump.
5. Check that the pressure gauge is fitted at the pump outlet and is easy to read.

05 OPERATION

1. Place the cylinder upright under the load with the saddle at the contact point.
2. Close the pump release valve and pump slowly while watching the gauge.
3. Stop at the required height. Support the load with cribbing; on HBS-LN turn the lock nut down by hand onto the cylinder top.
4. To lower, open the release valve slowly. Spring-return cylinders retract by themselves, HBS-LN retracts under the load; on double-acting cylinders pressurise the retract line.
5. HBS-LN: before loosening the nut, lift the load a few millimetres to take it off the nut, then back off the nut and lower.
6. When finished, release all pressure, disconnect the hoses and fit the dust caps.

06 MAINTENANCE AND PERIODIC CHECKS

Check	Interval
Body, plunger and saddle: dents, scratches, leaks	Before each use
Coupler threads and dust caps	Before each use
Wipe the plunger clean and protect with a light oil film	After each use
Clean and lubricate the lock nut threads (HBS-LN)	After each use
Seal check and pressure test	Yearly or every 250 operating hours

Check	Interval
Legibility of labels and rating plate	Every 6 months

07 TROUBLESHOOTING

Symptom	Possible cause	Remedy
Cylinder does not extend	Coupler not fully connected; low pump oil; release valve open	Tighten the coupler fully; top up pump oil; close the valve
Cylinder moves erratically	Air in the system	Extend and retract the unloaded cylinder fully several times
Pressure drops, load lowers	Worn seals; pump valve leaking; leaking connection	Stop, support the load; send for service
Cylinder does not retract or retracts slowly	Damaged spring; return line closed (CT/HT); kinked hose	Check connections; send for spring or seal replacement
Oil leaking from the body	Damaged seal or plunger surface	Do not use; send for service

08 STORAGE, TRANSPORT AND DISPOSAL

- Store the equipment clean, dry and depressurised, with dust caps fitted to the couplers.
- Do not lift or carry the equipment by its hoses or couplers; use suitable lifting gear for heavy parts.
- Dispose of used hydraulic oil and oily materials in line with local environmental regulations.

09 SERVICE AND CONTACT

Contact Hydro Bard for maintenance, repair, pressure testing and spare parts. Quote the model code and serial number of any product sent for service.

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PRODUCT PAGE
hydrobard.com/en/general-purpose-cylinder.html

Keep this manual with the product and accessible to the user. For technical values see the product datasheet and the rating plate. · Rev. 1.0 · October 2026