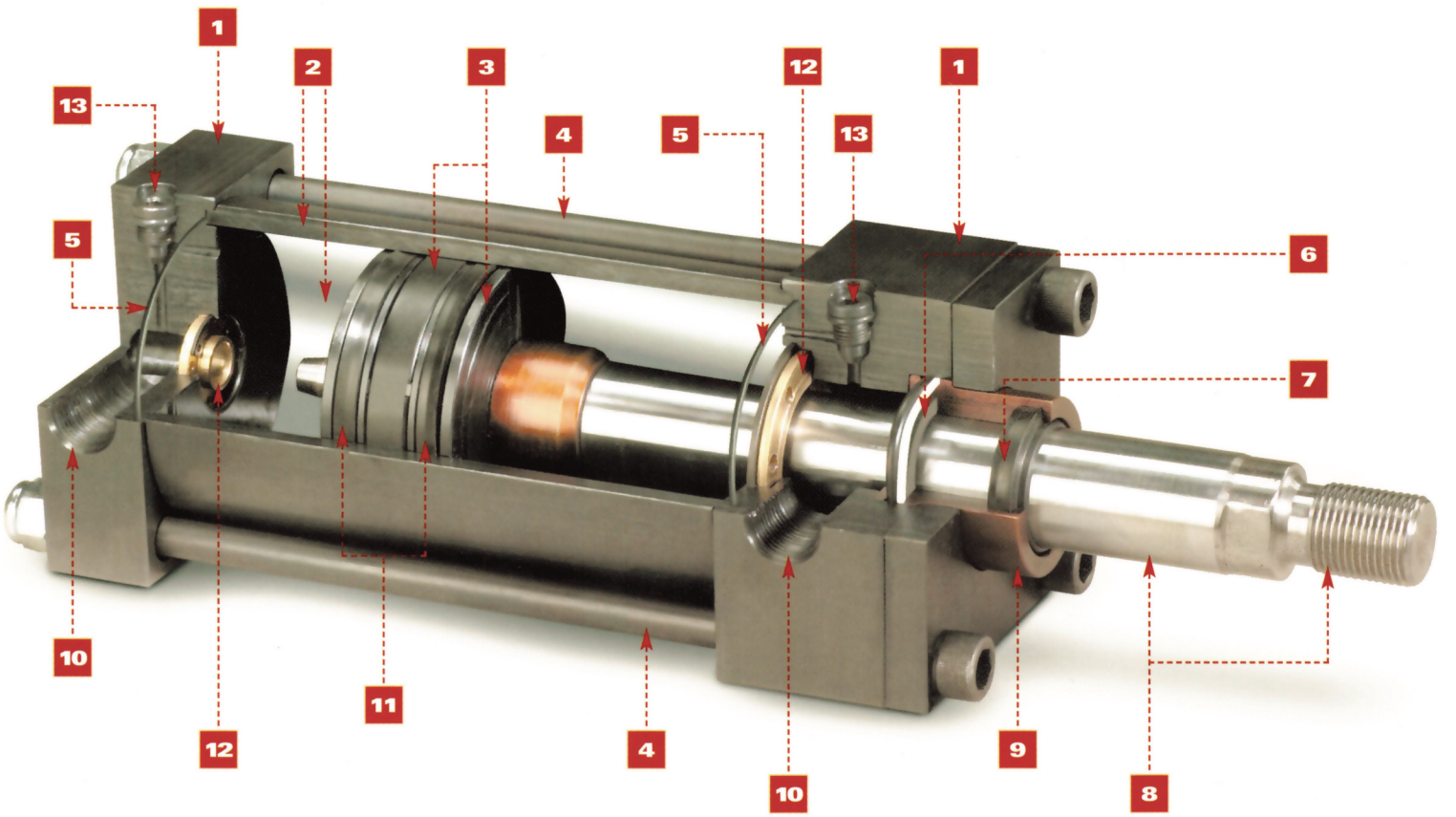
PENINSULAR®
CYLINDER CO.

Model LH - NFPA Low Pressure Hydraulic Cylinder



FEATURES	ADVANTAGES	BENEFITS
1. Heads & Caps	Square, precision-machined carbon steel to ± .002 all sides.	Assures concentricity of tube, bearing, cushion and piston rod. Can be modified to accommodate proximity switches.
2. Cylinder Tube	D.O.M. seamless 1020 to 1026 steel tube precision honed to 10/15 micro inch finish. Thicker wall tube than traditional low-pressure cylinders.	Thicker wall provides additional protection from leaks due to high-pressure spikes.

800-526-7968

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FEATURES	ADVANTAGES	BENEFITS
3. Piston	One-piece steel, black oxided, threaded onto piston rod, staked and secured with thread locker.	Prevents rusting and air leakage; anchored onto piston rod with minimum undercut providing maximum strength. Pinning onto the rod for added strength.
4. Tie Rods	Larger diameter tie rods are used and they are made from 100,000 psi minimum yield, stress-proof, medium carbon steel with rolled threads at each end.	Provides maximum strength for connecting cylinder mounts. Accurate torquing prevents leaks at tube seals.
5. Tube Seals	Buna-N Nitrile axial placed O-Rings.	When combined with accurately torqued larger diameter tie rods, prevents extrusion of seal and hydraulic leaks under normal operating pressures.
6. Rod Seal	95A durometer symmetrical pre-loaded urethane blend poly seal is positioned in a groove in the back end of the bearing cartridge ID.	Pre-loaded seal provides positive static and dynamic sealing of piston rod at both high and low pressures.
7. Rod Wiper	80 durometer, sharp double lip, prelubricated, carboxylated Nitrile seal provides additional sealing beyond rod seal.	Inside edge always lubricated extends life significantly, prevents dirt and grit from entering bearing and cylinder.
8. Piston Rod	100,000 psi minimum yield strength high carbon steel with core hardness of Rc 28-34. Case hardened to Rc 50-55. Rod is hard chrome-plated (.0003/.0005 thick) and polished to 12/15 micro inch finish.	Resists wear and provides positive connections to existing machine components. Solid male threads contain a radiused undercut to minimize rod end breakage.
9. Bearing Cartridge	Floating, self-aligning in either ductile iron or SAE 660 bronze. Optional “Slip Tuff” bearing is also available for heavy side loaded applications. Retained by plate with cap screws; strong and shock resistant. A Buna-N O-Ring with Teflon back-up ring located around the cartridge OD prevents leakage around the outside of bearing cartridge and seal extrusion.	Float condition minimizes piston rod misalignment and reduces side loading. Optional “Slip Tuff” bearing provides lubricated wear surface with hardness characteristics that significantly reduce galling and bearing cartridge failure under severe side loaded operating conditions. Easily removed for rod seal / wiper maintenance without requiring special tools to disassemble the cylinder.
10. Ports	NPT standard, SAE O-Ring optional. Metric and other thread size options.	Universally adaptable to any hose or fitting.

FEATURES	ADVANTAGES	BENEFITS
11. Piston Seals	95A durometer sharp lip, symmetrical preloaded urethane blend poly seals are standard. Step cut cast iron piston rings are available as an option.	Pre-loaded seal prevents oil leakage at low pressures. The optional cast iron rings help reduce the probability of seal failure during high shock operating conditions.
12. Cushion Seals	Floating 660 bronze, check type seal insert held in place by a snap type retaining ring. Ductile iron rod end cushion hub is polished to 8/12 microinch finish RMS, and black oxided. Tapered leading edge assures proper entry into bronze seal.	Low friction breakaway under lower hydraulic pressures because of holes drilled through the face of the bronze inserts. The bronze “Step” which seats against the inside of the cylinder head provides maximum cushion effectiveness, thus assuring a longer cylinder life.
13. Cushion Adjustment Screw	Steel needle valve with Buna-N O-Ring sealed screw is held captive with a snap ring.	Provides accurate fine adjustment of cushioning speed; no oil leakage and is safe for all users because it is held captive with snap ring.
14. Optional Air Bleed System *(Not Shown)*	Manual air bleed plug is located on the cylinder end caps.	Eliminates trapped air from inside the cylinder.
15. Optional Rod Drain Back System *(Not Shown)*	Drain feature is an additional groove cut into the front end of the bearing cartridge, between the rod wiper and rod seal, that drains off any accumulation of fluid between the seals. A cartridge drain port is located on the cartridge retainer plate for a user-installed drain line back to the reservoir.	Captures hydraulic fluid and drains it back to the reservoir. This minimizes the slow weepage of hydraulic fluid through the rod wiper onto the piston rod.

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