Piston Accumulators

- Piston Accumulators
- Gas Bottles
- Metric Accumulators & Bottles

Features:

- Heavy Duty Service with Operating Pressures to 5000 PSI
- 2" thru 12" Bores with Over Fifty Standard Capacities
- “Fatigue Tested” Designs, 2" thru 8" Bores
- Patented V-O-ring Piston Seals
- Serviceable Threaded End Construction
- ASME Certification and CE Marking available
- Five Standard Seal Options to Handle a Variety of Fluids and Temperatures

Parker Hannifin Corporation
Hydraulic Accumulator Division
Rockford, Illinois USA

Piston accumulators provide a means of regulating the performance of a hydraulic system. They are suitable for storing energy under pressure, absorbing hydraulic shocks, and dampening pump pulsation and flow fluctuations. The simple, compact, cylindrical design of piston accumulators ensures dependable performance, maximum efficiency, and long service life.

Why Use Piston Accumulators?

- improves system efficiency
- supplements pump flow
- supplies power in emergency
- compensates for leakage
- absorbs hydraulic shocks
- wide range of sizes
- extremely high flow rates
- high/low temperature tolerance
- high compression ratios
- can be used with remote gas bottles
- can be mounted in any position
- failure mode is gradual, predictable
- sensors can be fitted for performance monitoring

Parker Piston Accumulators… Your #1 Choice!

Parker is the leading manufacturer of piston accumulators in North America. Parker's broad offering includes:

- Piston Accumulators for 3000, 4000 & 5000 PSI
- Gas Bottles for 3000, 4000 & 5000 PSI
- Metric Piston Accumulators for 207, 276 and 345 Bar
- Metric Gas Bottles for 207, 276 and 345 Bar
- A Wide Array of Options and Accessories

Parker manufactures most of the components used in the construction of its piston accumulators in its own plants. Parker even finish skive and burnishes the majority of the tubing used to manufacture its piston accumulator shells – all processes internally controlled to Parker's high standards of quality and consistency. For your convenience, Parker offers the latest in accumulator sizing technology with its *inPHorm Accumulator Sizing and Selection Software.*

Our Wide Range of Piston Accumulators . . .

Our Piston Accumulator Series

Parker offers piston accumulators rated for 3000, 4000 and 5000 PSI. To make it easier for you to order, we have divided the piston accumulator section into *Series 3000, Series 4000* and *Series 5000* with separate technical and ordering information.

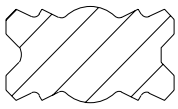
Series 3000 *7" and 8" Bore Now Available in Non-ASME*

ASME certification is a requirement of strength and material traceability (see page 4). Many states require ASME certification, but not all. It is the function of the system designer to specify whether ASME is or is not required.

We now offer true non-ASME accumulators in 7" and 8" bore sizes which meet ASME Section VIII, Division I design requirements while utilizing industry standard materials. When ASME certification is not required, specifying these accumulators can result in moderate savings. See pages 32-33.

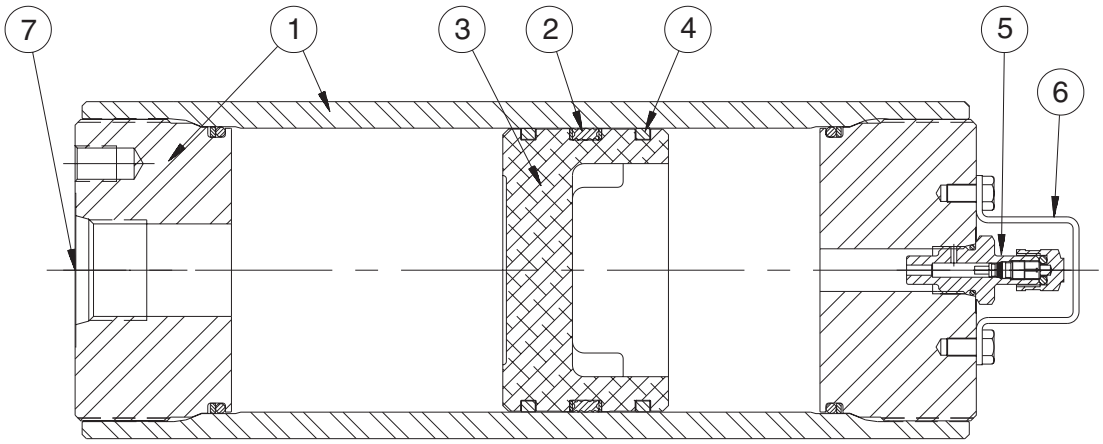
1. Piston type accumulators are designed with compact, rugged **steel shell and caps**. The steel shell allows heat to dissipate effectively. The bore is micro-finished for extended seal life. The threaded caps allow for easy repair and seal replacement.

2. The **piston seal** consists of a unique, patented five-bladed V-O-ring with back-up washers. This design eliminates seal roll-over and ensures total separation of fluid and gas under the most severe operating conditions.



The V-O-ring also holds full pressure throughout long idle periods between cycles, providing dependable, full pressure storage of hydraulic energy. It ensures safe, reliable absorption of pressure peaks. The piston seal design helps to prevent sudden failure of the accumulator.

The V-O-ring seals are available in a wide variety of compounds to cover a broad range of fluids and operating temperature ranges (see Options).



3. The **lightweight piston** design allows fast response to reduce shock in rapid cycling applications. The dished profile of the piston provides extra gas capacity and greater useable volume of fluid.

4. **PTFE glide rings** eliminate metal-to-metal contact between the tube and piston, reducing wear and extending service life.

5. All piston accumulators are fitted with a standard designed **gas valve** for ease of gas precharging. Series 3000, 2” thru 6” bores, are fitted with standard cored gas valve cartridges (ISO-4570-8V1). The Series 4000 and Series 5000, 2” thru 6” bores, have as standard a “Schrader” style valve with a 5000 psi high pressure valve cartridge. Offered as an option is a “military” poppet-style gas valve (Mil. Spec. MS28889-2). For 7” thru 12” bore sizes, the MS gas valve is standard.

6. The steel **gas valve protector** reduces the risk of damage to the gas valve from external impact.

7. A **wide range of port types and sizes** are available. SAE straight thread and SAE flange ports are fitted as standard. NPTF, SAE 4-bolt & special flanges, BSPP, Metric, and ISO 6149-1 ports are available options.