

Bladder Accumulators



Bladder

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Features

- Operating Pressures to 6600 PSI
- Ten Different Capacities from 10 cu in to 15 gallons
- Eight Different Configurations
- Highest Quality In-House Manufactured Bladders
- ASME Certification Standard, 1 Gallon & Up
- Water/Chemical Service Available, with Stainless Steel Ports
- Five Bladder Compounds to Suit a Variety of Fluids & Temperatures
- Certifications Available: CE, CRN, AS1210, SELO, ABS, DNV, GOST
- Temperatures -40° to 250° F



Specifications

Bladder accumulators are suitable for storing energy under pressure, absorbing hydraulic shocks, and dampening pump pulsation and flow fluctuations. Bladder accumulators provide excellent gas and fluid separation ensuring dependable performance, maximum efficiency, and long service life.

Why Use Bladder Accumulators?

- improves system efficiency
- supplements pump flow
- supplies power in emergency
- compensates for leakage
- absorbs hydraulic shocks
- highly contaminant tolerant
- universal application
- high/low temperature tolerance
- safety, cannot be disassembled under pressure
- very quick response
- works well with water, low lubricity fluids
- wide range of compounds for a variety of fluids

**Bladder Accumulators
Introduction**

**GRB Bladder Products...
The Original and still the Best!**

The Greer bladder style accumulator is the industry's original, and still the best! For years this style of accumulator has served both the industrial and mobile hydraulic markets, providing a proven design for many hydraulic system applications.

The Greer bladder product line offers the broadest line of quality products, including:

- 3000 & 5000 PSI Bottom Repairable
- 3000 & 5000 PSI Top Repairable
- 3000 PSI High-flow
- 3000 PSI Transfer Barrier
- 3000 & 5000 PSI Gas Bottles
- A Wide Array of Options and Accessories

Greer bladder products maintain the highest quality because of our **in-house** bladder molding operations. The heart of the bladder accumulator is the actual bladder, and all Greer bladders are engineered and manufactured in our own facility and subjected to our own high quality inspection standards.

Specifications

Materials

- Shell – high strength alloy steel (SA372, all sizes comply with ASME material specifications, 1 gal. & larger supplied with ASME Certification as standard)
- Ports – all oil service ports, high strength alloy steel
 - water & chemical service:
 - 3000 PSI, 304 stainless steel
 - 5000 PSI, 17-4 PH stainless steel
- Poppet & Spring – 304 stainless steel
- Gas Valve Cartridge – steel
- Gas Valve Protector – steel
- Gas Valve Stem – steel
- Bladders – various elastomers, see Standard and Optional Bladders in this section.

Maximum Flow Rates

| Size (gallon) | Max. Recommended Flow for Standard Mineral Oils | |
|--------------------------|---|------|
| | GPM | LPM |
| 10 cu in | 23 | 87 |
| 1 pt & 1 qt | 40 | 151 |
| 150 cu in | 60 | 227 |
| 1 | 150 | 568 |
| 2 1/2 thru 15 | 220 | 833 |
| 2 1/2 thru 15, High-flow | 600 | 2271 |

Pressure Ratings – 3000 and 5000 PSI bladder accumulators are rated at minimum 4 to 1 design factors as standard. 4000 and 6600 PSI (ASME Appendix 22) bladder accumulators are available as an option at minimum 3 to 1 design factors. For pressures over 6600 PSI, consult the factory.

Max. Recommended Compression Ratio (max. working pressure/precharge pressure): 4 to 1.

Certifications – ASME Certification (Section VIII-Div. 1) is available as standard on bladder accumulators (1 gallon & up) and ASME Appendix 22 Certification as an option. See page 6 for a complete certification summary.

| Size | Std. ASME Cert. | | | ASME Appendix 22 | |
|---|-----------------|----------|--------|------------------|--------|
| | Status | Rating | D.F.* | Rating | D.F.* |
| 10 thru 150 in ³ 3000 PSI | Option | 3000 PSI | 4 to 1 | Consult Factory | |
| 1 thru 15 gal. 3000 PSI | Std. | 3000 PSI | 4 to 1 | 4000 PSI | 3 to 1 |
| 1 thru 15 gal. 5000 PSI | Std. | 5000 PSI | 4 to 1 | 6600 PSI | 3 to 1 |

*Design Factor.

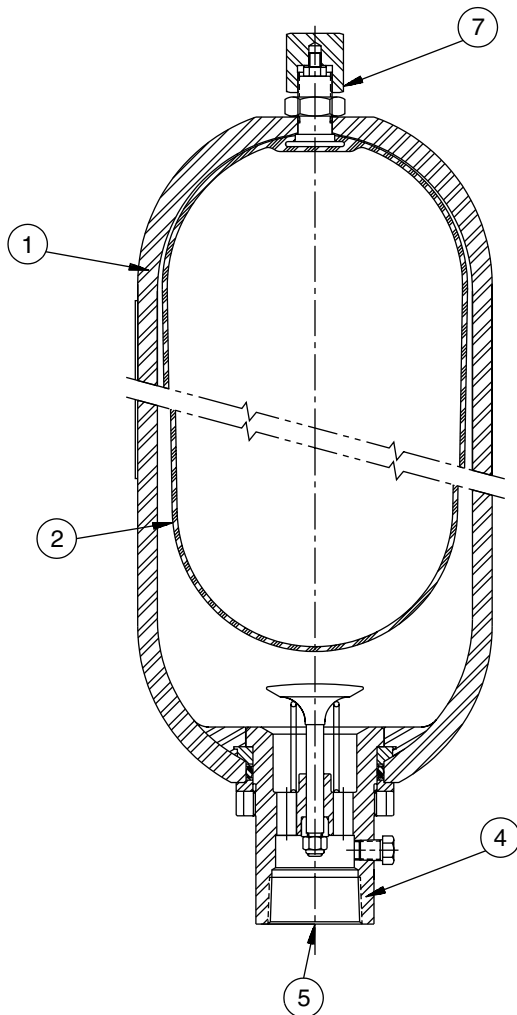
Fluids – Greer bladder accumulators are compatible with a wide variety of fluids. The standard accumulator may be used with petroleum-based industrial or water-based flame resistant fluids. Bladders compatible with most industrial fluids can be furnished on special orders with temperature ranges from -40°F to 250°F (-40°C to 121°C).

Precharge – Units are shipped with a nominal nitrogen precharge as standard. For specific precharge pressures, specify at the time of order.

Available Options – a wide variety of options are available on Greer bladder accumulators including:

- Bladder Compounds (see Standard and Optional Bladders in this section).
- Ports (see Options in this section)
- Water & Chemical Service (see Options in this section)
- Gas Valves (see Options in this section)
- Fuse Plugs Assemblies (see Options in this section)
- Fixed Gauge Adapters (see Accumulator Accessories)





1 Shell

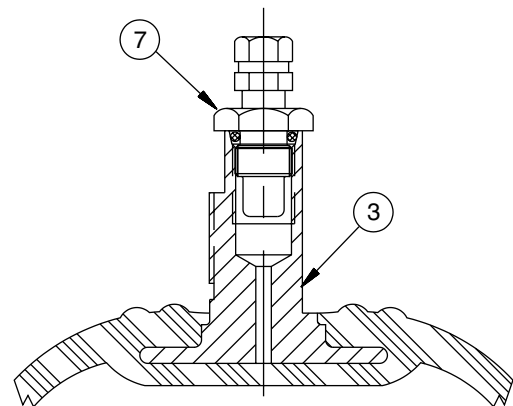
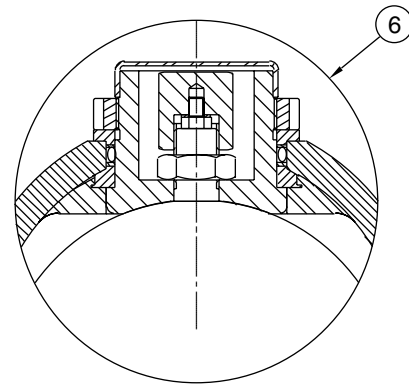
Bladder accumulator shells are made from chrome-molybdenum alloy steel (SA372) with forged ends. All sizes comply with ASME material and design specifications. One gallon and larger supplied with ASME Certification as standard.

2 Bladder

Greer bladders, the heart and soul of a bladder accumulator, are manufactured in-house to control the material blending, molding, critical seam assembly, and curing processes. It is widely accepted that Greer bladders are the highest quality bladders in the industry. Bladders are offered in five different standard compounds to suit a wide variety of fluids and operating temperatures. Special compounds are available for unusual or severe applications.

3 Bladder Stems

All bladder accumulators, sizes 1 gallon and larger, are fitted as standard with two-piece bladder stems with replaceable gas valve cartridge for ease of serviceability. Also, the two-piece stem will accept high-flow poppet type gas valves and permanent mount gauge adapters.



4 Port Assemblies

Standard oil service ports are made from high-strength alloy steel for maximum durability. Chemical and water service port assemblies are made from stainless steel for maximum corrosion resistance.

5 Fluid Ports

SAE straight thread, NPTF, SAE Code 61 and SAE Code 62 4-bolt split flange, and High-flow ports are available (See page 60 for details). Bleed ports are included as standard on sizes 1 gallon and larger; not available on flange ports.

6 Top Repairable

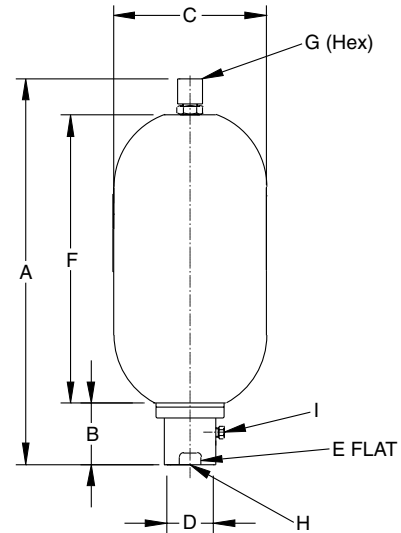
The top repairable design permits easy checking and maintenance of the bladder without removing the accumulator from the system, saving time and money.

7 Gas Valve

All accumulators are fitted with a gas valve for ease of gas precharging. One-gallon and larger 3000 PSI units are equipped with a cored gas valve cartridge (ISO-4570-8V1) for ease of maintenance. 5000 PSI units are equipped with a high-pressure cored gas valve cartridge (ISO-4570-8V1) with an option of a high-flow poppet gas valve cartridge (L07689000K). For safety, the gas valve vents if unscrewed.

Bladder

The simplicity and cost effectiveness of the bottom repairable design has made it the "Industry Standard" bladder accumulator. Sizes range from 10 cu in to 15 gallons.



3000 PSI (207 Bar)¹

| Models Oil Service Water Service | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | Hydraulic Ports | | Weight lbs. (Kg.) |
|--|------------------------------------|---------------------------------|-----------------------|--------------|---------------|--------------|--------------|-----------------|--------------|-------------------------|-----------------------|-------------------------|
| | | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | |
| BAC10B3T01A1 BAC10B3T01WA1 | 10 cu in (0.16) | 12 (0.21) | 11.18 (284) | 1.89 (48) | 2.00 (51) | 1.03 (26) | 0.94 (24) | 7.75 (197) | 0.94 (24) | SAE#8 (3/4 - 16) | N/A | 3.5 (1.6) |
| BA001B3T01A1 BA001B3T01WA1 | 1 Pt. (0.47) | 31 (0.51) | 10.75 (273) | 2.00 (51) | 3.40 (86) | 1.39 (35) | 1.31 (33) | 6.87 (174) | 0.94 (24) | SAE #12 (1-1/16 -12) | N/A | 8 (3.6) |
| BA002B3T01A1 BA002B3T01WA1 | 1 Qt. (0.95) | 66 (1.08) | 11.12 (282) | 2.00 (51) | 4.50 (114) | 1.62 (41) | 1.50 (38) | 7.63 (194) | 0.94 (24) | SAE #12 (1-1/16 -12) | N/A | 10 (4.5) |
| BA005B3T01A1 BA005B3T01WA1 | 150 cu in (2.5) | 156 (2.56) | 19.56 (497) | 2.08 (53) | 4.50 (114) | 1.62 (41) | 1.50 (38) | 15.50 (394) | 0.94 (24) | SAE #16 (1-5/16 -12) | N/A | 20 (9.1) |
| BA01B3T01A1 BA01B3T01WA1 | 1 (3.79) | 231 (3.79) | 17.00 (432) | 3.50 (89) | 6.75 (171) | 2.37 (60) | 2.13 (54) | 11.36 (289) | 1.25 (32) | SAE #20 (1-5/8 - 12) | SAE #6 (9/16 - 18) | 34 (15) |
| BA02B3T01A1 BA02B3T01WA1 | 2.5 (9.46) | 556 (9.11) | 21.38 (543) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 15.50 (394) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 80 (36) |
| BA05B3T01A1 BA05B3T01WA1 | 5 (18.9) | 1124 (18.42) | 33.38 (848) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 27.50 (700) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 120 (55) |
| BA10B3T01A1 BA10B3T01WA1 | 10 (37.9) | 2097 (34.36) | 54.38 (1382) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 48.50 (1231) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 220 (100) |
| BA11B3T01A1 BA11B3T01WA1 | 11 (41.6) | 2400 (39.33) | 59.88 (1520) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 54.00 (1371) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 240 (109) |
| BA15B3T01A1 BA15B3T01WA1 | 15 (56.8) | 3267 (53.54) | 77.88 (1978) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 72.00 (1830) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 305 (139) |

1) Note: 1 thru 15 gallon sizes available with 4000 PSI (275 Bar) Appendix 22 Approval.

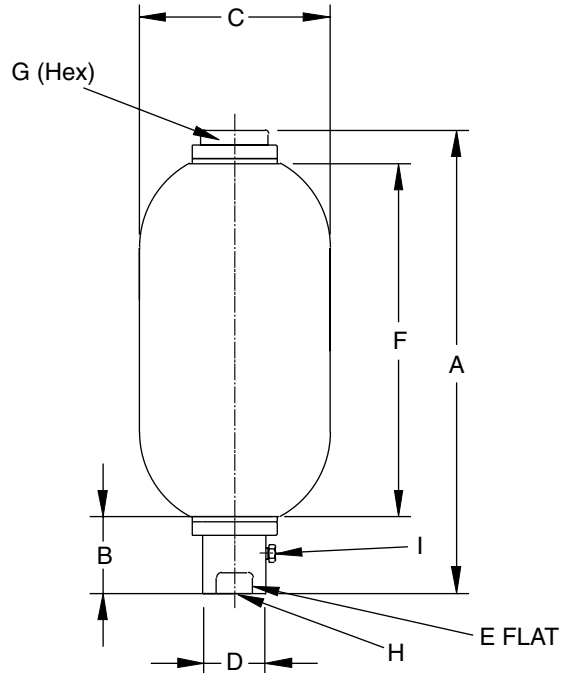
5000 PSI (345 Bar)²

| Models Oil Service Water Service | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | Hydraulic Ports | | Weight lbs. (Kg.) |
|--|------------------------------------|---------------------------------|-----------------------|--------------|---------------|--------------|--------------|-----------------|--------------|-------------------------|-----------------------|-------------------------|
| | | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | |
| BA01B5T01A1 BA01B5T01WA1 | 1 (3.79) | 231 (3.79) | 17.25 (438) | 3.25 (83) | 7.14 (181) | 2.25 (57) | N/A | 11.44 (291) | 1.44 (37) | SAE #20 (1-5/8 - 12) | SAE #6 (9/16 - 18) | 50 (23) |
| BA02B5T01A1 BA02B5T01WA1 | 2.5 (9.46) | 556 (9.11) | 22.55 (573) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 16.12 (409) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 120 (55) |
| BA05B5T01A1 BA05B5T01WA1 | 5 (18.9) | 1124 (18.42) | 34.80 (884) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 28.36 (720) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 200 (91) |
| BA10B5T01A1 BA10B5T01WA1 | 10 (37.9) | 2097 (34.36) | 55.30 (1405) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 48.88 (1242) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 335 (152) |
| BA15B5T01A1 BA15B5T01WA1 | 15 (56.8) | 3267 (53.54) | 76.80 (1951) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 70.38 (1788) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 485 (220) |

2) Note: Available with 6600 PSI (455 Bar) Appendix 22 Approval.



The Top Repairable Accumulator permits easy checking and maintenance of the bladder without removing the accumulator from the service line, saving time and money. Sizes range from 2-1/2 to 15 gallons.



Bladder

3000 PSI (207 Bar)¹

| Models Oil Service Water Service | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | Hydraulic Ports | | Weight lbs. (Kg.) |
|--|------------------------------------|---------------------------------|-----------------------|--------------|---------------|--------------|--------------|-----------------|--------------|-------------------------|-----------------------|-------------------------|
| | | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | |
| BA02T3T01A1 BA02T3T01WA1 | 2.5 (9.45) | 541 (8.87) | 20.50 (521) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 15.38 (391) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 80 (36) |
| BA05T3T01A1 BA05T3T01WA1 | 5 (18.9) | 1110 (18.19) | 32.75 (832) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 27.63 (702) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 120 (55) |
| BA10T3T01A1 BA10T3T01WA1 | 10 (37.8) | 2083 (34.13) | 53.25 (1353) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 48.13 (1223) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 220 (100) |
| BA11T3T01A1 BA11T3T01WA1 | 11 (41.6) | 2386 (39.1) | 59.00 (1499) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 53.88 (1369) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 240 (109) |
| BA15T3T01A1 BA15T3T01WA1 | 15 (56.7) | 3253 (53.31) | 77.38 (1965) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 71.75 (1822) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 305 (139) |

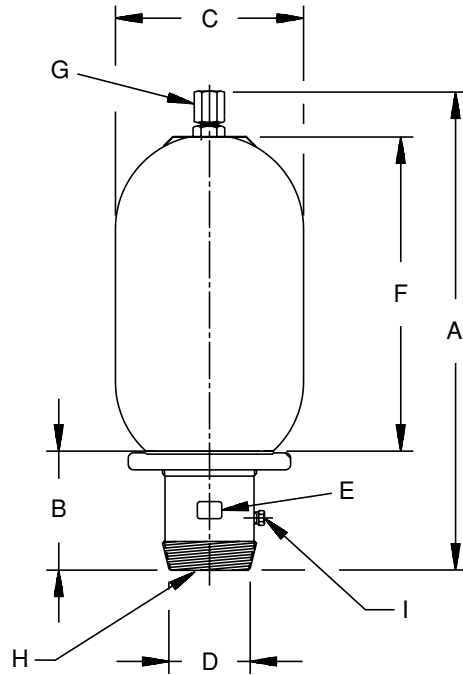
1) Note: Available with 4000 PSI (275 Bar) Appendix 22

5000 PSI (345 Bar)²

| Models Oil Service Water Service | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | Hydraulic Ports | | Weight lbs. (Kg.) |
|--|------------------------------------|---------------------------------|-----------------------|--------------|---------------|--------------|--------------|-----------------|--------------|-------------------------|-----------------------|-------------------------|
| | | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | |
| BA02T5T01A1 BA02T5T01WA1 | 2.5 (9.46) | 541 (8.87) | 21.68 (551) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 15.88 (403) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 120 (55) |
| BA05T5T01A1 BA05T5T01WA1 | 5 (18.9) | 1110 (18.19) | 33.92 (862) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 23.13 (715) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 220 (100) |
| BA10T5T01A1 BA10T5T01WA1 | 10 (37.8) | 2083 (34.13) | 54.42 (1382) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 48.63 (1235) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 335 (152) |
| BA15T5T01A1 BA15T5T01WA1 | 15 (56.8) | 3253 (53.31) | 75.92 (1928) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 70.13 (1781) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 485 (220) |

2) Note: Available with 6600 PSI (455 Bar) Appendix 22

For systems requiring a fast “dumping” rate, the High-flow accumulator incorporates a large port assembly capable of flows up to 600 GPM (2270 LPM). Sizes range from 2-1/2 to 15 gallons.



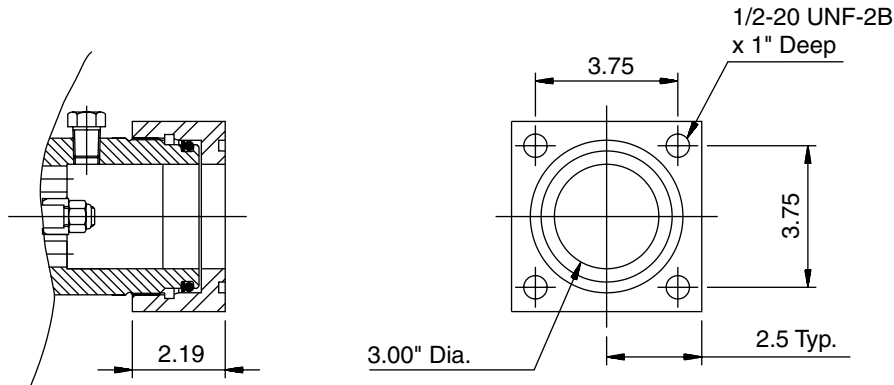
3000 PSI (207 Bar)

| Models Male Str. Thd Male NPT | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | H Hydraulic Port | Port I (Thread) | Weight lbs. (Kg.) |
|-------------------------------------|---------------------------------------|------------------------------------|-----------------------|---------------|---------------|---------------|--------------|-----------------|--------------|------------------------------|-----------------------|-------------------------|
| | | | A | B | C | D | E | F | G | | | |
| BA02B3A01A1 BA02B3H01A1 | 2.5 (9.46) | 556 (9.11) | 22.88 (581) | 5.62 (143) | 9.06 (230) | 4.00 (102) | 3.85 (98) | 15.25 (387) | 1.25 (32) | 4-1/4"-8 Str. Thd. 4 NPTF | SAE #6 (9/16-18) | 90 (41) |
| BA05B3A01A1 BA05B3H01A1 | 5 (18.9) | 1124 (18.42) | 35.12 (892) | 5.62 (143) | 9.06 (230) | 4.00 (102) | 3.85 (98) | 27.50 (699) | 1.25 (32) | 4-1/4"-8 Str. Thd. 4 NPTF | SAE #6 (9/16-18) | 130 (59) |
| BA10B3A01A1 BA10B3H01A1 | 10 (37.9) | 2097 (34.36) | 55.62 (1413) | 5.62 (143) | 9.06 (230) | 4.00 (102) | 3.85 (98) | 48.00 (1219) | 1.25 (32) | 4-1/4"-8 Str. Thd. 4 NPTF | SAE #6 (9/16-18) | 230 (105) |
| BA11B3A01A1 BA11B3H01A1 | 11 (41.6) | 2400 (39.33) | 61.38 (1559) | 5.62 (143) | 9.06 (230) | 4.00 (102) | 3.85 (98) | 53.75 (1365) | 1.25 (32) | 4-1/4"-8 Str. Thd. 4 NPTF | SAE #6 (9/16-18) | 250 (114) |
| BA15B3A01A1 BA15B3H01A1 | 15 (56.8) | 3267 (53.54) | 79.62 (2022) | 5.62 (143) | 9.06 (230) | 4.00 (102) | 3.85 (98) | 69.50 (1765) | 1.25 (32) | 4-1/4"-8 Str. Thd. 4 NPTF | SAE #6 (9/16-18) | 315 (143) |

NOTE: High-flow bladder accumulators not available with Appendix 22 option.

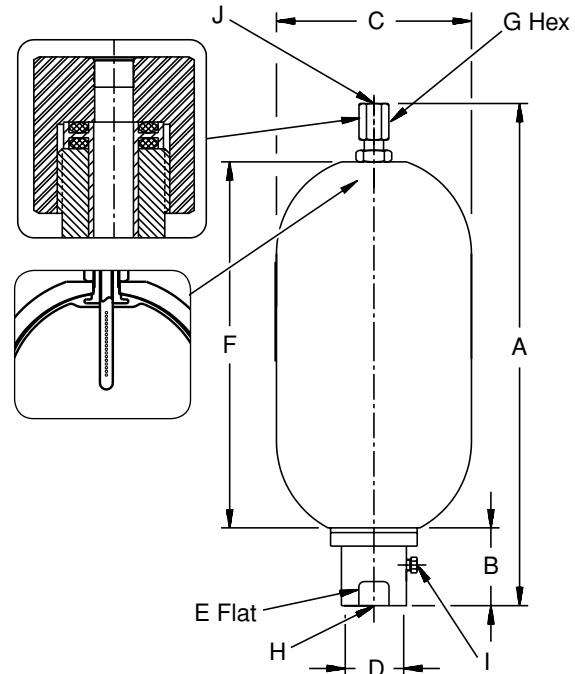
Optional Flange Port

For Model “A”
 Hydraulic Port only



Note: Accumulator assembly does not include flange (part number 1467990000).

The Transfer Barrier accumulator provides positive separation between two different medias or can be used with gas bottles. Sizes range from 2-1/2 to 15 gallons.



Bladder

3000 PSI (207 Bar)¹

| Models Oil Service Water Service | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | Hydraulic Ports | | | Weight lbs. (Kg.) |
|--|------------------------------------|---------------------------------|-----------------------|--------------|---------------|--------------|--------------|-----------------|--------------|-------------------------|-----------------------|--------------------------|-------------------------|
| | | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | J (Thread) | |
| BT02B3TT01A1 BT02B3TT01WA1 | 2.5 (9.45) | 556 (9.11) | 21.25 (540) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 15.62 (397) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 80 (36) |
| BT05B3TT01A1 BT05B3TT01WA1 | 5 (18.9) | 1124 (18.42) | 33.50 (851) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 27.88 (708) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 120 (55) |
| BT10B3TT01A1 BT10B3TT01WA1 | 10 (37.8) | 2097 (34.36) | 54.00 (1372) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 48.50 (1231) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 220 (100) |
| BT11B3TT01A1 BT11B3TT01WA1 | 11 (41.6) | 2400 (39.33) | 59.75 (1518) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 54.12 (1375) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 240 (109) |
| BT15B3TT01A1 BT15B3TT01WA1 | 15 (56.7) | 3267 (53.54) | 77.62 (1972) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 72.00 (1829) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 305 (139) |

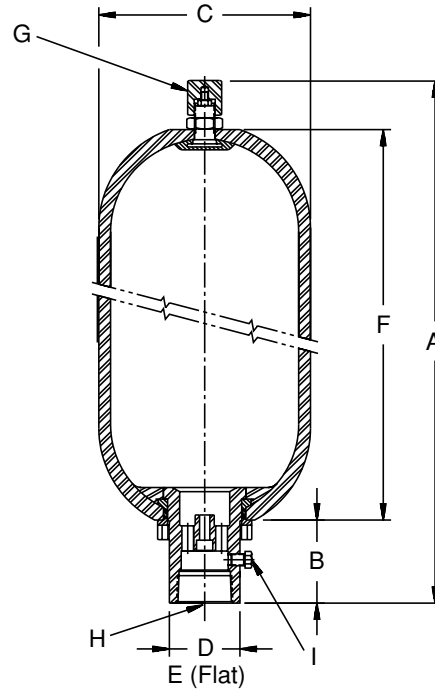
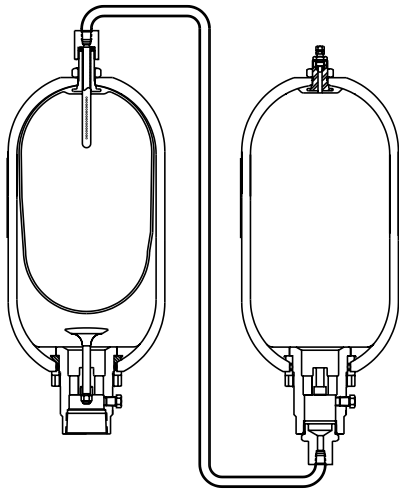
¹ Note: Available with 4000 PSI (275 Bar) Appendix 22

5000 PSI (345 Bar)²

| Models Oil Service Water Service | Nominal Size Gallon (Liters) | Gas Volume cu in (Liters) | Dimensions, inch (mm) | | | | | | | Hydraulic Ports | | | Weight lbs. (Kg.) |
|--|------------------------------------|---------------------------------|-----------------------|--------------|---------------|--------------|--------------|-----------------|--------------|-------------------------|-----------------------|--------------------------|-------------------------|
| | | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | J (Thread) | |
| BT02B5TT01A1 BT02B5TT01WA1 | 2.5 (9.45) | 556 (9.11) | 22.55 (573) | 3.62 (92) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 16.12 (409) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 120 (55) |
| BT05B5TT01A1 BT05B5TT01WA1 | 5 (18.9) | 1124 (18.42) | 34.80 (884) | 3.62 (92) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 28.36 (720) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 200 (91) |
| BT10B5TT01A1 BT10B5TT01WA1 | 10 (37.8) | 2097 (34.36) | 55.30 (1405) | 3.62 (92) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 48.88 (1242) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 335 (152) |
| BT15B5TT01A1 BT15B5TT01WA1 | 15 (56.7) | 3267 (53.54) | 76.80 (1951) | 3.62 (92) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 70.38 (1788) | 2.00 (51) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | SAE #12 (1-1/16 - 12) | 485 (220) |

² Note: Available with 6600 PSI (455 Bar) Appendix 22

Where space does not permit the installation of the required accumulator, a smaller accumulator may be used by connecting it to an auxiliary gas bottle(s) that may be located in some nearby spot where space is available. (See Large Gas Bottles for additional offerings and page 84 for sizing information.) Sizes range from 1 to 15 gallons.



3000 PSI (207 Bar)¹

| Models | Nominal Size Gallon (Liters) | Dimensions, inch (mm) | | | | | | | Ports | | Weight lbs. (Kg.) |
|-------------|------------------------------|-----------------------|-----------|------------|-----------|-----------|--------------|-----------|----------------------|--------------------|-------------------|
| | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | |
| BG01B3T01A1 | 1 (3.79) | 17.00 (432) | 3.50 (89) | 6.75 (171) | 2.37 (60) | 2.13 (54) | 11.36 (289) | 1.25 (32) | SAE #20 (1-5/8 - 12) | SAE #6 (9/16 - 18) | 34 (15) |
| BG02B3T01A1 | 2.5 (9.46) | 21.25 (540) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 15.62 (397) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 80 (36) |
| BG05B3T01A1 | 5 (18.9) | 33.50 (851) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 27.88 (708) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 120 (55) |
| BG10B3T01A1 | 10 (37.9) | 54.00 (1372) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 43.38 (1102) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 220 (100) |
| BG11B3T01A1 | 11 (41.6) | 59.75 (1518) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 54.12 (1375) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 240 (109) |
| BG15B3T01A1 | 15 (56.8) | 77.62 (1972) | 3.62 (92) | 9.06 (230) | 3.00 (76) | 2.88 (73) | 72.00 (1829) | 1.25 (32) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 305 (139) |

1) Note: Available with 4000 PSI (275 Bar) Appendix 22

5000 PSI (345 Bar)²

| Models | Nominal Size Gallon (Liters) | Dimensions, inch (mm) | | | | | | | Ports | | Weight lbs. (Kg.) |
|------------|------------------------------|-----------------------|-----------|------------|-----------|-----------|--------------|-----------|----------------------|--------------------|-------------------|
| | | A | B | C | D | E | F | G | H (Thread) | I (Thread) | |
| BG01B5T1A1 | 1 (3.79) | 17.25 (438) | 3.25 (83) | 7.14 (181) | 2.25 (57) | N/A | 11.44 (291) | 1.44 (37) | SAE #20 (1-5/8 - 12) | SAE #6 (9/16 - 18) | 50 (23) |
| BG02B5T1A1 | 2.5 (9.46) | 22.55 (573) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 16.12 (409) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 120 (55) |
| BG05B5T1A1 | 5 (18.9) | 34.80 (884) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 28.36 (720) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 200 (91) |
| BG10B5T1A1 | 10 (37.9) | 55.30 (1405) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 48.88 (1242) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 335 (152) |
| BG15B5T1A1 | 15 (56.8) | 76.80 (1951) | 3.88 (99) | 9.63 (245) | 3.00 (76) | 2.88 (73) | 70.38 (1788) | 2.50 (64) | SAE #24 (1-7/8 - 12) | SAE #6 (9/16 - 18) | 485 (220) |

2) Note: Available with 6600 PSI (455 Bar) Appendix 22

Standard and Optional Bladders

A variety of bladders are offered to suit a wide range of fluids and operating temperatures. The following table lists the optional bladders available, their recommended operating temperature ranges, and the types of fluids that are generally compatible.

| Seal Code | Polymer | **Recommended Operating Temperature Range | Maximum Temperature with Reduced Life | General Application & Compatibility* |
|-----------|------------------------|---|---------------------------------------|---|
| 01 | Buna-Nitrile | -20°F to 200°F -29°C to 93°C | 225°F 107°C | Standard Compound – Compatible with most mineral oil-based fluids |
| 04 | Hydrin (Lo-Temp.) | -40°F to 225°F -40°C to 107°C | 250°F 121°C | Compatible with most mineral oil-based fluids with enhanced low temperature performance |
| 06 | Butyl | -40°F to 200°F -40°C to 93°C | 300°F 149°C | Compatible with most phosphate ester fluids and some synthetic fluids |
| 08 | Ethylene Propylene | -40°F to 200°F -40°C to 93°C | 300°F 149°C | Compatible with some synthetic fluids and water |
| 28 | Fluorocarbon Elastomer | -10°F to 250°F -23°C to 121°C | 400°F 204°C | Compatible with most mineral oil-based fluids at higher temperatures and some exotic fluids |

* Consult your local distributor or the factory for fluid compatibility information.
** Temperature ranges may vary depending upon the fluid used in the hydraulic system.

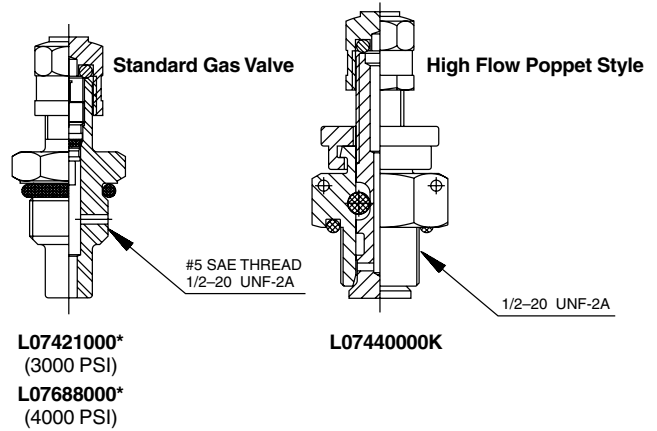
Water & Chemical Service Options (W)

Bladder accumulators are available with a water and chemical resistance option. The (W) designation includes an internally Scotchkoted shell and stainless steel or electroless nickel plated port assembly. The Scotchkote offers added protection against more corrosive fluids.

Gas Valves

Two types of gas valves are available on bladder accumulators. 3000 PSI rated models are offered with a cored gas valve cartridge (cartridge type, 1 gal. & up, ISO-4570-8V1) as standard. 5000 PSI units are equipped with a high-pressure cored gas valve cartridge (ISO-4570-8V1) with an option of a heavy-duty poppet type gas valve cartridge (L07689000K).

A high-flow poppet style gas valve is available upon request, but must be approved by a Parker accumulator engineer. Please contact the division for assistance.



Bladder

Diaphragm

Inline Pulse-Tone™

Gas Bottles

Standard and Optional Fluid Ports

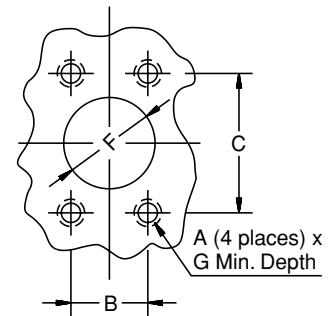
The following standard and optional fluid ports are offered on all Bottom Repairable, Top Repairable, and Transfer Barrier accumulators (for high-flow ports, see High-flow). See How to Order at the end of this section for complete ordering instructions.

| Sizes | Standard Port | Optional Ports | | | | |
|----------------------------------|------------------------|---------------------------------|-------------|-----------------------|-------------|-------------------|
| | SAE Str. Thread Code T | SAE 4-Bolt Split Flange* Code F | NPTF Code U | Undersize NPTF Code X | BSPP Code R | ISO 6149-1 Code Y |
| 3000 PSI (207 Bar) Models | | | | | | |
| 10 cu in | SAE #8 | – | 3/4" Male | – | – | M 8x1.5 |
| 1 pt., 1 qt. | SAE #12 | – | 3/4" | – | G 3/4" | M 27x2 |
| 150 cu in | SAE #16 | – | 1" | – | G 1" | M 33x2 |
| 1 gal. | SAE #20 | 1-1/4", Code 61 | 1-1/4" | – | G 1-1/4" | M 42x2 |
| 2½ to 15 gal. | SAE #24 | 2", Code 61 | 2" | 1-1/4" | G 2" | M 48x2 |
| 5000 PSI (345 Bar) Models | | | | | | |
| 1 gal. | SAE #20 | 1-1/4", Code 62 | 1-1/4" | – | G 1-1/4" | M 42x2 |
| 2½ to 15 gal. | SAE #24 | 1-1/2", Code 62 | 2" | – | G 2" | M 48x2 |

SAE 4-Bolt Flange Port Dimensions

Standard Pressure – Code 61 (ISO 6162) – 3000 PSI (207 Bar)

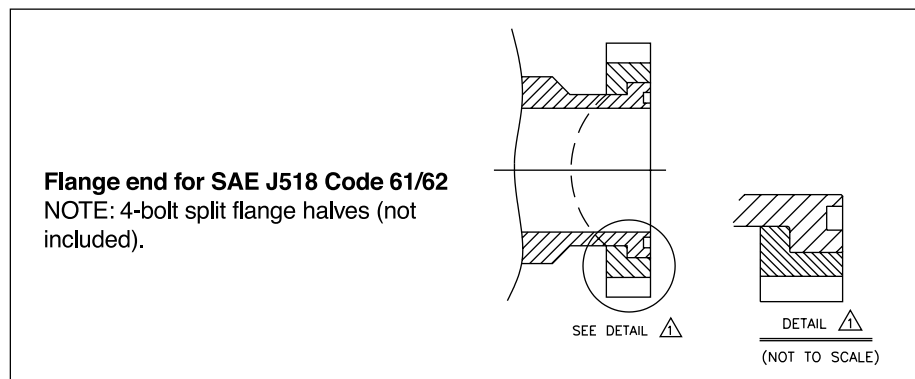
| Flange Size | SAE Flange Dimensions (in.) | | | | | ISO 6162 Flange Dimensions (mm) | | | | |
|-------------|-----------------------------|-------|-------|-------|-------|---------------------------------|------|------|----|------|
| | A | B | C | F | G | A | B | C | F | G |
| 1-1/4" | 7/16 - 4 | 1.188 | 2.312 | 1-1/2 | 1.000 | M10 | 30.2 | 58.7 | 32 | 25.4 |
| 2" | 1/2 - 13 | 1.688 | 3.062 | 2 | 1.062 | M12 | 42.9 | 77.8 | 51 | 26.9 |



High Pressure – Code 62 (ISO 6162) – 6000 PSI (410 Bar)

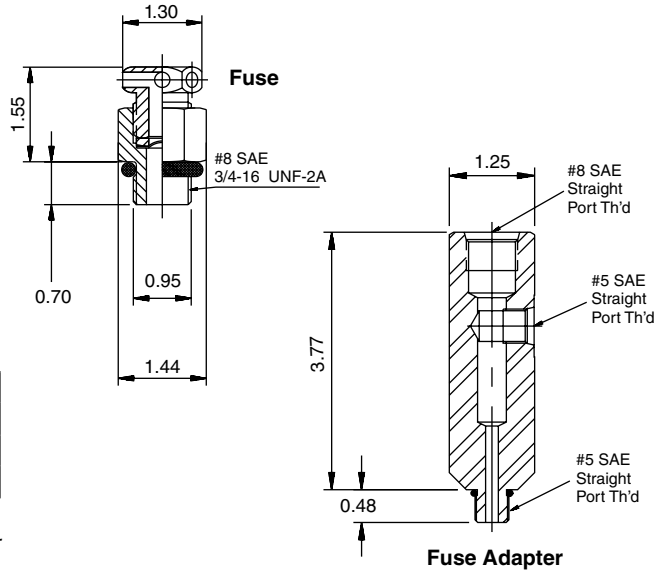
| Flange Size | SAE Flange Dimensions (in.) | | | | | ISO 6162 Flange Dimensions (mm) | | | | |
|-------------|-----------------------------|-------|-------|-------|-------|---------------------------------|------|------|----|------|
| | A | B | C | F | G | A | B | C | F | G |
| 1-1/4" | 1/2 - 13 | 1.250 | 2.625 | 1-1/4 | 1.000 | M16 | 31.8 | 66.7 | 32 | 25.4 |
| 1-1/2" | 5/8 - 11 | 1.438 | 3.125 | 1-1/2 | 1.375 | M16 | 36.5 | 79.4 | 38 | 34.9 |

Note: The dimensions shown on this chart are for the mating manifold. The flange halves are not supplied with the accumulator.



Safety Fuse Options

Safety Fuses are used as a safety device on accumulators and gas bottles to prevent over-pressurization of gas due to external heat or hydraulic pressure (set at 140% of maximum system pressure to avoid rupture disk fatigue and premature failure). The rupture disks are calibrated to rupture at a pre-determined pressure. Safety fuses are available on most sizes of piston and bladder accumulators and gas bottles. Safety fuses can be installed on 1 gallon & larger accumulators by using the “Fuse Adapter” as shown to the right. The safety fuse assembly and/or fuse adapter must be ordered separately.



| Description | Part Number |
|-----------------------------------|-------------|
| Safety Fuse Assembly ¹ | 086471xxxx |
| Replacement Rupture Disks | 756003xxxx |
| Fuse Adapter | 1468970002 |

¹ Assembly includes housing and rupture disk, xxxx = pressure setting in 100 PSI increments, i.e., for an assembly with a 2000 PSI setting, order P/N 0864712000.

Note: ASME and CRN units available upon request.

Mounting, Charging & Gauging Accessories

See Accessories page 97.

Special Options

If your application requires a bladder accumulator or special option that falls outside of our broad offering, consult your local distributor, Greer representative, or the factory with your specific requirements. We have the manufacturing and engineering expertise to design and build bladder accumulators to your exacting requirements, from simple modifications to standard units to complete designs from scratch. Some example of our past special designs include:

- Special and Stainless Steel Materials
- Special Bladder Compounds
- Suction Stabilizer
- Pulsation Dampener
- Special Certifications

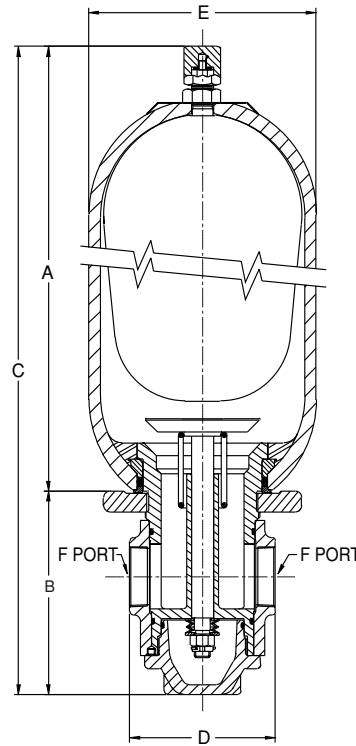
Consult our experts with your next bladder accumulator requirement!

Specifications & Dimensions

There have been many attempts to solve the problems caused by high transient flow conditions inherent with pulsations and shocks. All attempts have had one thing in common: they never quite solved the problem. Then came Greer's Pulse-Tone concept, a patented breakthrough in pulsation control. The trouble with the previous devices was that most of the pulsations and shocks never got near the shock absorber. Pulse-Tone puts a flow diversion baffle into the line. Fluid traveling through the hydraulic line bends around the baffle, but pulsation and shock energy waves take the path of least resistance right into the nitrogen precharged bladder. The bladder absorbs up to 98% of the waves' potentially destructive force.

Why Use Pulse-Tones?

- improves system efficiency
- absorbs hydraulic shocks
- very contamination tolerant
- very quick response
- works well with water, low lubricity fluids



Specifications

Maximum Operating Pressure - 3000 PSI (207 Bar)

Materials

- Shell – high strength alloy steel (SA372, 1 gallon & up comply with all ASME material specifications as std.)
- Ports – all oil service ports, high strength alloy steel – water and chemical service, 3000 PSI, 304 stainless steel
- Poppet & Spring – 304 stainless steel
- Gas Valve Cartridge – steel
- Gas Valve Protector – steel
- Gas Valve Stem – steel
- Bladders – Various polymers, see Standard and Optional Bladders in Bladder Accumulators section.

Maximum Compression Ratio (max. working pressure/precharge pressure) 4-1

Pulse-Tone Flow Rates

| Size (cu in) | Max. Recommended Flow | |
|--------------|-----------------------|-----|
| | GPM | LPM |
| 1 quart | 28.0 | 106 |
| 1 gal. | 38.0 | 145 |
| 2.5-15 gal. | 190.0 | 720 |

Models, Capacities & Dimensions

| Size | Bladder Material (Code) | Part No. | Repair Kit Part No. | Capacity cu in (liters) | A | B | C | D | E | F | Weight lbs. (kg.) |
|------------|-------------------------|----------|---------------------|-------------------------|-------------|------------|-------------|------------|------------|-------------|-------------------|
| | | | | | in (mm) | | | | | | |
| 1 quart | Nitrile (-1) | 834340 | 703040 | 60 (0.98) | 7.38 (187) | 3.03 (77) | 12.16 (309) | 2.00 (51) | 4.50 (114) | 1" NPTF | 17 (7.7) |
| 1 gal. | Nitrile (-1) | 810381 | 703047 | 226 (3.70) | 11.25 (286) | 5.06 (129) | 18.56 (471) | 4.50 (114) | 6.81 (173) | 1-1/4" NPTF | 46 (21) |
| 2-1/2 gal. | Nitrile (-1) | 810829 | 703054 | 555 (9.10) | 15.50 (394) | 8.50 (216) | 26.23 (666) | 6.75 (171) | 9.00 (229) | 2" NPTF | 125 (57) |
| 5 gal. | Nitrile (-1) | 800290 | 703061 | 1095 (17.9) | 27.94 (710) | 8.50 (216) | 38.69 (983) | 6.75 (171) | 9.00 (229) | 2" NPTF | 155 (70) |



A full range of genuine Greer replacement bladder kits are available to bring your accumulator back to original condition should replacement become necessary. All bladder kits include port o-ring, backup seals and gas valves with secondary seals.

NOTE: Part numbers shaded in gray will be phased out.

| Bladder & Seal Compound | | | | | | |
|---|--------|---------------------------|--------------------|-------------------|-----------------|--------------------------|
| Size | Brand | Group 01 Nitrile (NBR) | Group 04 Hydrin | Group 06 Butyl | Group 08 EPR | Group 28 Fluorocarbon |
| 3,000 PSI Standard Bladder Kits (Top & Bottom Repairable) | | | | | | |
| 10 Cu. In. | Greer | 702900 | 702902 | 702903 | 702904 | 702906 |
| | Parker | 0850693C10 | 0856663C10 | 0850703C10 | 0851053C10 | 0851043C10 |
| 1 Pt. | Greer | 702914 | 702916 | 702917 | 702918 | 702920 |
| | Parker | 0850693001 | 0856663001 | 0850703001 | 0851053001 | 0851043001 |
| 1 Qt. | Greer | 702928 | 702930 | 702931 | 702932 | 702934 |
| | Parker | 0850693002 | 0856663002 | 0850703002 | 0851053002 | 0851043002 |
| 150 Cu. In. | Greer | 702942 | 702944 | 702945 | 702946 | 702948 |
| | Parker | 0850693006 | 0856663006 | 0850703006 | 0851053006 | 0851043006 |
| 1 Gal. | Greer | 702956 | 702958 | 702959 | 702960 | 702962 |
| | Parker | 0850693010 | 0856663010 | 0850703010 | 0851053010 | 0851043010 |
| 2 1/2 Gal. | Greer | 702970 | 702972 | 702973 | 702974 | 702976 |
| | Parker | 0850693025 | 0856663025 | 0850703025 | 0851053025 | 0851043025 |
| 5 Gal. | Greer | 702984 | 702986 | 702987 | 702988 | 702990 |
| | Parker | 0850693050 | 0856663050 | 0850703050 | 0851053050 | 0851043050 |
| 10 Gal. | Greer | 702998 | 703000 | 703001 | 703002 | 703004 |
| | Parker | 0850693100 | 0856663100 | 0850703100 | 0851053100 | 0851043100 |
| 11 Gal. | Greer | 703012 | 703014 | 703015 | 703016 | 703018 |
| | Parker | 0850693110 | 0856663110 | 0850703110 | 0851053110 | 0851043110 |
| 15 Gal. | Greer | 703026 | 703028 | 703029 | 703030 | 703032 |
| | Parker | 0850693150 | 0856663150 | 0850703150 | 0851053150 | 0851043150 |
| 25 Gal. | Greer | 703340 | 704008 | 704009 | 703341 | 703342 |
| | Parker | 0850693250 | 0856663250 | 0850703250 | 0851053250 | 0851043250 |
| 40 Gal. | Greer | 703346 | 704014 | 704015 | 703347 | 703348 |
| | Parker | 0850693400 | 0856663400 | 0850703400 | 0851053400 | 0851043400 |
| 5,000 PSI Bottom Repairable Bladder Kits (2" Valve Stem - New Style) | | | | | | |
| 1 Gal. 7/8" ø Stem | Greer | 8706135010 | 8706175010 | 8706145010 | 8706145010 | 8706155010 |
| | Parker | 8706135010 | 8706175010 | 8706145010 | 8706145010 | 8706155010 |
| 1 Gal. 1" ø Stem | Greer | 704060 | 704062 | 704063 | 704064 | 704066 |
| | Parker | 0850695010 | 0856665010 | 080705010 | 0851055010 | 0851045010 |
| 2 1/2 Gal. | Greer | 706000 | 706002 | 706003 | 706004 | 706006 |
| | Parker | 0861905025 | 0861945025 | 0861915025 | 0861935025 | 0861925025 |
| 5 Gal. | Greer | 706010 | 706012 | 706013 | 706014 | 706016 |
| | Parker | 0861905050 | 0861945050 | 0861915050 | 0861935050 | 0861925050 |
| 10 Gal. | Greer | 706020 | 706022 | 706023 | 706024 | 706026 |
| | Parker | 0861905100 | 0861945100 | 0861915100 | 0861935100 | 0861925100 |
| 15 Gal. | Greer | 706030 | 706032 | 706033 | 706034 | 706036 |
| | Parker | 0861905150 | 0861945150 | 0861915150 | 0861935150 | 0861925150 |
| 5,000 PSI Bottom Repairable Bladder Kits (7/8" Valve Stem - Old Style) | | | | | | |
| 2 1/2 Gal. | Parker | 0850695025 | 0856665025 | 0850705025 | 0851055025 | 0851045025 |
| 5 Gal. | Parker | 0850695050 | 0856665050 | 0850705050 | 0851055050 | 0851045050 |
| 10 Gal. | Parker | 0850695100 | 0856665100 | 0850705100 | 0851055100 | 0851045100 |
| 15 Gal. | Parker | 0850695150 | 0856665150 | 0850705150 | 0851055150 | 0851045150 |

Bladder

How to Order Bladder Accumulators

Bladder accumulators and gas bottles can be specified by using the symbols in the chart below to develop a model number. Select only those symbols that represent the features desired, and place them in the sequence indicated by the example at the top of the chart.

Series Size Construction Gas Pressure Hyd. Port¹ Bladder/Seal Compound Design Modification Design Code

BA 001 B 3 T 01 -A 1

Series

| | |
|-----------|------------------|
| BA | Accumulator |
| BG | Gas Bottle |
| BT | Transfer Barrier |

Size

| Size | Available | |
|------------|-----------|----------|
| | 3000 PSI | 5000 PSI |
| C10 | 10 Cl | . |
| 001 | 1 Pint | . |
| 002 | 1 Quart | . |
| 005 | 150 Cl | . |
| 01 | 1 Gallon | . |
| 02 | 2½ Gallon | . |
| 05 | 5 Gallon | . |
| 10 | 10 Gallon | . |
| 11 | 11 Gallon | . |
| 15 | 15 Gallon | . |

Construction

| Hydraulic Port | | |
|----------------|---|---------------------------|
| T | SAE Straight Thread O-Ring (Standard) | |
| | 10 Cl | SAE #8 |
| | 1 Pint & 1 Quart | SAE #12 |
| | 150 Cl | SAE #16 |
| | 1 Gallon | SAE #20 |
| | 2½ Gallon thru 15 Gallon | SAE #24 |
| U | NPT Pipe (No Cost Option) | |
| | 10 Cl | 3/4" NPT Male |
| | 1 Pint & 1 Quart | 3/4" NPTF |
| | 150 Cl | 1" NPTF |
| | 1 Gallon | 1 1/4" NPTF |
| | 2½ Gallon thru 15 Gallon | 2" NPTF |
| F | SAE 4-Bolt Split Flange (No Cost Option) | |
| | 10 Cl thru 150 Cl (3K) | N/A |
| | 1 Gallon (3K) | 1 1/4" Code 61 (3000 PSI) |
| | 1 Gallon (5K) | 1 1/4" Code 62 (6000 PSI) |
| | 2½ Gal. thru 15 Gal. (3K) | 2" Code 61 (3000 PSI) |
| | 2½ Gal. thru 15 Gal. (4K) | 1 1/2" Code 62 (6000 PSI) |
| | 2½ Gal. thru 15 Gal. (5K) | 1 1/2" Code 62 (6000 PSI) |
| L | CE 2" Flange | |
| H | High Flow 4" NPT Male (Extra Cost Option) | |
| | Available on 2½ Gallon thru 15 Gallon Sizes only (3000 PSI) | |
| A | High Flow 4¼-8 UN-2 Straight Thread Male (Extra Cost Option) | |
| | Available on 2½ Gallon thru 15 Gallon Sizes only (3000 PSI) | |
| C | Medium Flow M95x2 Straight Thread Male (Extra Cost Option) | |
| | Available on 2½ Gallon thru 15 Gallon Sizes only (3000 PSI) | |
| X | NPT Pipe Undersized (No Cost Option) | |
| | 2½ Gallon thru 15 Gallon Sizes only (3000 PSI) | 1-1/4" NPT |
| R | BSPP | |
| | 10 Cl | N/A |
| | 1 Pint & 1 Quart | 3/4-14 |
| | 150 Cl | 1-11 |
| | 1 Gallon | 1 1/4-11 |
| | 2½ Gallon thru 15 Gallon | 2-11 |
| Y | ISO 6149-1 | |
| | 10 Cl | M18 x 1.5 |
| | 1 Pint & 1 Quart | M27 x 2 |
| | 150 Cl | M33 x 2 |
| | 1 Gallon | M42 x 2 |
| | 2½ Gallon thru 15 Gallon | M48 x 2 |
| G | Metric | |
| | 10 Cl | M18 x 1.5 |
| | 1 Pint & 1 Quart | M27 x 2 |
| | 150 Cl | M33 x 2 |
| | 1 Gallon | M42 x 2 |
| | 2½ Gallon thru 15 Gallon | M48 x 2 |
| S | Special | |

Type of Construction

| | |
|----------|---|
| B | Bottom Repairable Standard on all sizes |
| T | Top Repairable Optional for 2½ Gallon and up |

Working Pressure

| | |
|----------|-----------------------------|
| 3 | 3,000 PSI (330 bar CE only) |
| 4 | 4,000 PSI |
| 5 | 5,000 PSI |
| 6 | 6,600 PSI |
| Y | Special |

Design Code

| | |
|----------|--------------|
| 1 | Standard |
| * | Number given |

Design Modification (1st Digit)

| | |
|--------------|-------------------------|
| Blank | Standard |
| W | Water/Chemical Service▲ |
| M | Poppet Type L0789000K |

Design (2nd Digit)

| | |
|----------|-------------------------------|
| A | Standard ASME (1 Gallon & up) |
| C | SELO |
| D | ASME (< 1 Gallon) |
| E | CE Marking |
| G | Appendix 22 Shell |
| S | Special |

▲ Consult factory when using water/chemical service with any port other than the standard SAE.

Bladder/Seal Compound

| | |
|-----------|----------------------------|
| 01 | Buna-Nitrile (Std.) |
| 04 | Hydrin (Optional) |
| 06 | Butyl (Optional) |
| 08 | EPR (Optional) |
| 28 | Fluoroelastomer (Optional) |

* 1 Gal. through 15 gal. – A.S.M.E. design with "U" stamp.
 1 Pt., 1 Qt. and 150 C.I. – A.S.M.E. design, available with "U" stamp.
 If "U" stamp is required, it must be specified at time of order.
 NOTE: A.S.M.E. documentation or any other certification must be requested at time of order.

