

# 3000

## **Series 3000 Piston Accumulators**

- Heavy Duty Service with 3000 PSI Operating Pressure
- 2" thru 12" Bores with Over 50 Standard Capacities
- Patented V-O-ring Piston Seals
- Serviceable Threaded End Construction
- Five Standard Seal Options to Handle a Variety of Fluids and Temperatures
- ASME Certification and CE Marking Available



**Materials**

- Shell – high strength alloy steel
- Caps – steel
- Pistons – aluminum (2" thru 8"), ductile iron (9" & 12")
- Gas Valve Cartridge – steel
- Gas Valve Protector – steel
- Piston Glide Rings – PTFE
- Piston & End Seals – various polymers
- Piston Seal Backups – PTFE

**Actual Bore Sizes & Maximum Flow Rates****Pressure Ratings**

| Nominal<br>Bore Size (in.) | Actual Bore Size |       | Max. Recommended Flow* |       |
|----------------------------|------------------|-------|------------------------|-------|
|                            | (in.)            | (mm)  | GPM                    | LPM   |
| 2                          | 2.02             | 51.44 | 100                    | 380   |
| 3                          | 3.00             | 76.20 | 220                    | 834   |
| 4                          | 4.03             | 102.4 | 397                    | 1504  |
| 6                          | 5.78             | 146.9 | 818                    | 3096  |
| 7                          | 7.00             | 177.8 | 1199                   | 4538  |
| 8                          | 7.87             | 200   | 1199                   | 4538  |
| 9                          | 9.00             | 228.6 | 1982                   | 7502  |
| 12                         | 11.88            | 301.6 | 3450                   | 13061 |

\*Note: Based on 120 in/sec maximum piston speed, port & fitting size will become limiting factors for most applications.

Parker Series 3000 piston accumulators are rated at 3000 psi and a minimum 4 to 1 design factor. For pressures over 3000 psi, see Series 4000 and Series 5000 accumulators.

**Fluids**

Parker's piston accumulators are compatible with a wide variety of fluids. Standard accumulators (with nitrile seals) may be used with petroleum-based industrial oils or water-based flame resistant fluids. Optional seals compatible with most industrial fluids are available with temperature ranges from -45°F to 325°F (-43°C to 162°C).

**Precharge**

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

**Auxiliary Gas Bottles**

When space does not permit the installation of the required piston accumulator, a smaller accumulator may be used by connecting it to an auxiliary gas bottle(s) that can be located in a nearby spot where space is available. In some cases, a piston accumulator and gas bottle combination may be more economical, especially large capacity sizes. Piston travel, confined to the accumulator, must be calculated with ample margins to store the required fluid.

**Standard Ports**

The following ports are supplied as standard on all fluid ends and on the gas end of accumulators ordered for use with gas bottles:

**Notes:**

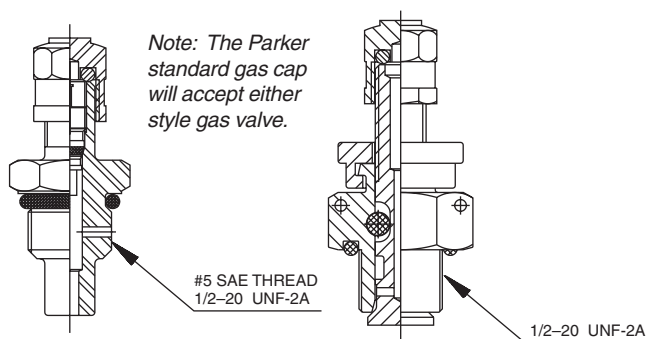
- 1) For flange dimensions, see tables below.
- 2) On standard 7", 8" & 9" bore accumulators, both SAE Straight Thread and Flange ports are available as standard. Omit port code for SAE #32 Straight Thread, specify "PL" port code for 2" Code 61 Flange when ordering. Flange ports are recommended at operating pressures above 2000 PSI due to pressure limitations of most #32 SAE Straight Thread fittings.

| Bore<br>Size | Standard Ports  |                         |                |                                |
|--------------|-----------------|-------------------------|----------------|--------------------------------|
|              | Standard Models |                         | Metric Models  |                                |
|              | SAE Port        | SAE Flange <sup>1</sup> | BSPP Port (in) | Metric SAE Flange <sup>1</sup> |
| 2            | #12             | —                       | 3/4            | —                              |
| 3            | #12             | —                       | 1              | —                              |
| 4            | #20             | —                       | 1              | —                              |
| 6            | #24             | —                       | 1-1/2          | —                              |
| 7            | #32             | 2" Code 61              | —              | 2" Code 61                     |
| 8            | #32             | 2" Code 61              | —              | 2" Code 61                     |
| 9            | #32             | 2" Code 61              | —              | 2" Code 61                     |
| 12           | —               | 3" Code 61              | —              | 3" Code 61                     |

- 1) See flange dimensions in Port Options.

**Gas Valves**

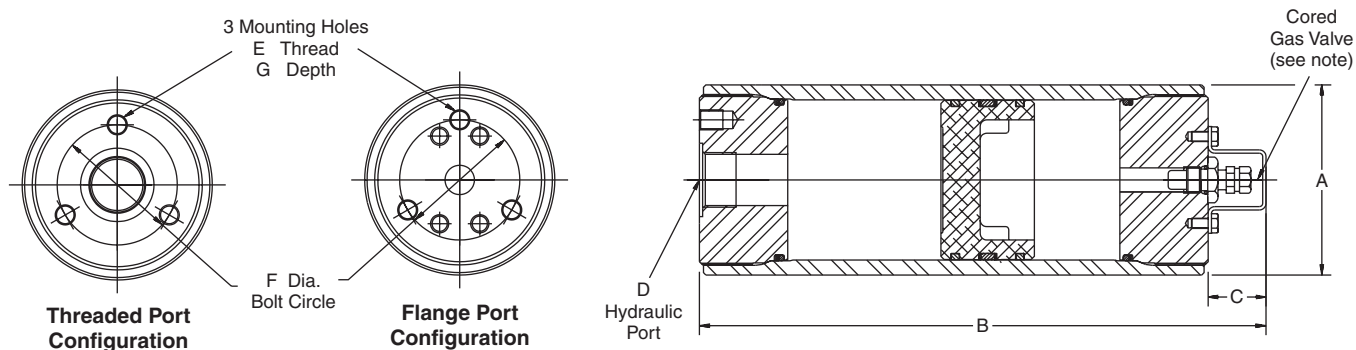
Two types of gas valves are available on Series 3000 piston accumulators and gas bottles. Units with 2" thru 6" bores, are offered with a cored gas valve cartridge (ISO-4570-8V1) as standard. All 7" thru 12" bore units are supplied with a heavy duty (military) poppet-type gas valve cartridge (MS28889-2) as standard.

**Available Options**

If your application requires a piston accumulator, gas bottle, or special option that falls outside of Parker's broad offering, consult your local distributor, Parker representative, or the factory with your specific requirements. Parker has the manufacturing and engineering expertise to design and build piston accumulators to your exacting requirements, from simple modifications of standard units to complete designs. Some example of Parker's past special designs include:

- Special and Stainless Steel Materials
- Piston Position and Velocity Sensors and Switches
- Water Service
- Non-Standard Capacities

## 3000 PSI Piston Accumulators for Oil and Water Service

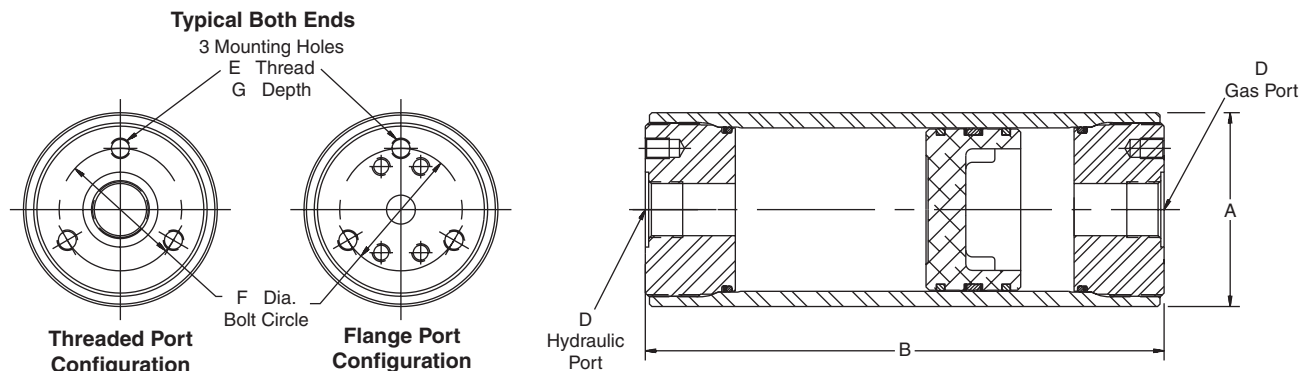


| Model No. <sup>1</sup> | Fluid Volume |                | Gas Volume (cu in) | A (in) | B (in) | C (in) | D-Hydraulic Port |                  |           | E (in)   | F (in) | G (in) | Weight (lbs) |
|------------------------|--------------|----------------|--------------------|--------|--------|--------|------------------|------------------|-----------|----------|--------|--------|--------------|
|                        |              |                |                    |        |        |        | SAE No.          | Thread Size (in) | Tube Size |          |        |        |              |
| <b>Oil Service</b>     | <b>(gal)</b> | <b>(cu in)</b> |                    |        |        |        |                  |                  |           |          |        |        |              |
| A2N0005D1K             | —            | 5              | 6                  |        | 6.76   |        |                  |                  |           |          |        |        | 5            |
| A2N0010D1K             | —            | 10             | 11                 |        | 8.31   |        |                  |                  |           |          |        |        | 5            |
| A2N0015D1K             | —            | 15             | 16                 | 2.38   | 9.78   | 1.06   | 12               | 1-1/16 - 12      | 3/4       | —        | —      | —      | 6            |
| A2N0029D1K             | 1 Pint       | 29             | 30                 |        | 14.19  |        |                  |                  |           |          |        |        | 7            |
| A2N0058D1K             | 1 Quart      | 58             | 59                 |        | 23.19  |        |                  |                  |           |          |        |        | 10           |
| A3N0029D1K             | 1 Pint       | 29             | 34                 |        | 10.25  |        |                  |                  |           |          |        |        | 14           |
| A3N0058D1K             | 1 Quart      | 58             | 63                 |        | 14.34  |        |                  |                  |           |          |        |        | 18           |
| A3N0090D1K             | 1.5 Liter    | 90             | 95                 | 3.56   | 18.94  | 1.13   | 12               | 1-1/16 - 12      | 3/4       | 3/8 - 24 | 2.25   | 0.56   | 22           |
| A3N0116D1K             | 1/2 Gal.     | 116            | 121                |        | 22.56  |        |                  |                  |           |          |        |        | 25           |
| A3N0183D1K             | 3 Liter      | 183            | 188                |        | 32.06  |        |                  |                  |           |          |        |        | 32           |
| A4N0058D1K             | 1 Quart      | 58             | 68                 |        | 11.63  |        |                  |                  |           |          |        |        | 29           |
| A4N0116D1K             | 1/2 Gal.     | 116            | 126                |        | 16.19  |        |                  |                  |           |          |        |        | 35           |
| A4N0231D1K             | 1 Gal.       | 231            | 241                | 4.75   | 25.19  | 1.13   | 20               | 1-5/8 - 12       | 1-1/4     | 1/2 - 20 | 3.25   | 0.75   | 48           |
| A4N0347D1K             | 1-1/2 Gal.   | 347            | 357                |        | 34.31  |        |                  |                  |           |          |        |        | 61           |
| A4N0578D1K             | 2-1/2 Gal.   | 578            | 588                |        | 52.38  |        |                  |                  |           |          |        |        | 87           |
| A6N0231D1K             | 1 Gal.       | 231            | 266                |        | 17.38  |        |                  |                  |           |          |        |        | 83           |
| A6N0347D1K             | 1-1/2 Gal.   | 347            | 382                |        | 21.81  |        |                  |                  |           |          |        |        | 97           |
| A6N0578D1K             | 2-1/2 Gal.   | 578            | 613                |        | 30.63  |        |                  |                  |           |          |        |        | 124          |
| A6N0924D1K             | 4 Gal.       | 924            | 959                | 6.88   | 43.81  | 1.13   | 24               | 1-7/8 - 12       | 1-1/2     | 1/2 - 20 | 4.38   | 0.75   | 165          |
| A6N1155D1K             | 5 Gal.       | 1155           | 1190               |        | 52.63  |        |                  |                  |           |          |        |        | 192          |
| A6N1733D1K             | 7-1/2 Gal.   | 1733           | 1768               |        | 74.63  |        |                  |                  |           |          |        |        | 260          |
| A6N2310D1K             | 10 Gal.      | 2310           | 2345               |        | 96.63  |        |                  |                  |           |          |        |        | 327          |

## Notes:

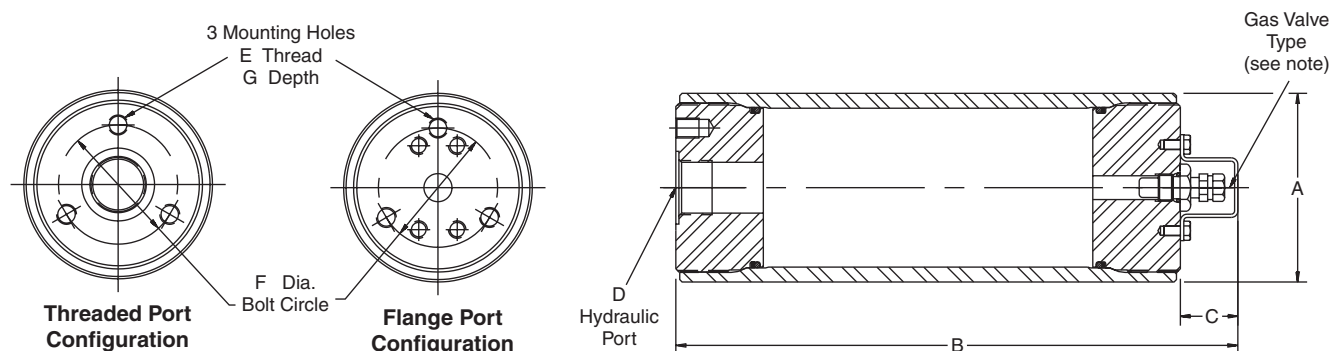
- 1) For Water Service add "W" after construction code, see "How to Order" information.
- 2) See Port Options for complete listing of optional ports.
- 3) ASME Certified and CE marked accumulators and gas bottles are available.
- 4) When accumulators are to be used with gas bottles, order "Accumulators for Use with Gas Bottles."
- 5) 2", 3", 4" & 6" bores standard with cored gas valves. Poppet type (MS28889-2) gas valve available as an option.

## 3000 PSI Accumulators for Use with Gas Bottles



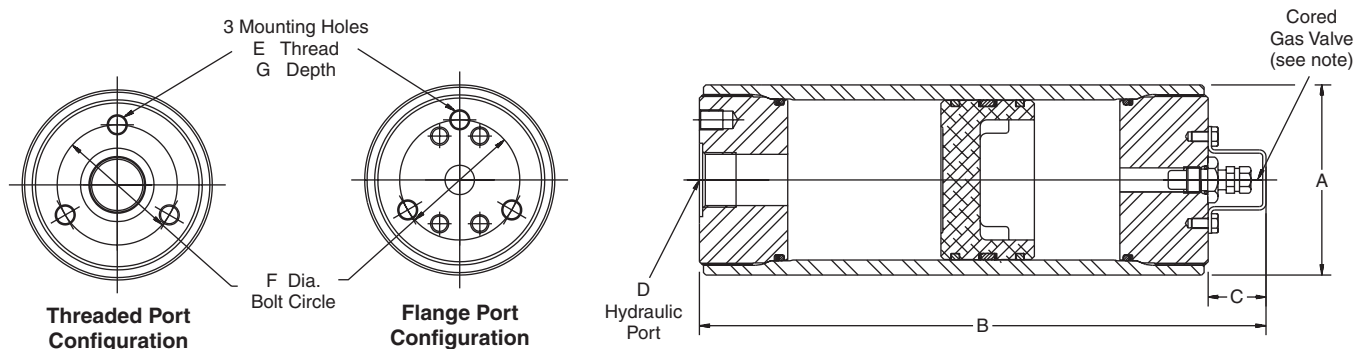
| Accumulator<br>Model No. | Fluid Volume |         | Gas Volume<br>(cu in) | A<br>(in) | B<br>(in) | D Port (Both Ends) |                  |           | E<br>(in) | F<br>(in) | G<br>(in) | Weight<br>(lbs) |
|--------------------------|--------------|---------|-----------------------|-----------|-----------|--------------------|------------------|-----------|-----------|-----------|-----------|-----------------|
|                          | (gal)        | (cu in) |                       |           |           | SAE No.            | Thread Size (in) | Tube Size |           |           |           |                 |
| A4N0058D3KTFTF           | 1 Quart      | 58      | 68                    | 4.75      | 10.50     | 20                 | 1-5/8 - 12       | 1-1/4     | 1/2 - 20  | 3.25      | 0.75      | 29              |
| A4N0116D3KTFTF           | 1/2 Gal.     | 116     | 126                   |           | 15.06     |                    |                  |           |           |           |           | 35              |
| A4N0231D3KTFTF           | 1 Gal.       | 231     | 241                   |           | 24.06     |                    |                  |           |           |           |           | 48              |
| A4N0347D3KTFTF           | 1-1/2 Gal.   | 347     | 357                   |           | 33.19     |                    |                  |           |           |           |           | 61              |
| A4N0578D3KTFTF           | 2-1/2 Gal.   | 578     | 588                   |           | 51.25     |                    |                  |           |           |           |           | 87              |
| A6N0231D3KTGTG           | 1 Gal.       | 231     | 266                   | 6.88      | 16.25     | 24                 | 1-7/8 - 12       | 1-1/2     | 1/2 - 20  | 4.38      | 0.75      | 83              |
| A6N0347D3KTGTG           | 1-1/2 Gal.   | 347     | 382                   |           | 20.68     |                    |                  |           |           |           |           | 97              |
| A6N0578D3KTGTG           | 2-1/2 Gal.   | 578     | 613                   |           | 29.50     |                    |                  |           |           |           |           | 124             |
| A6N0924D3KTGTG           | 4 Gal.       | 924     | 959                   |           | 42.68     |                    |                  |           |           |           |           | 165             |
| A6N1155D3KTGTG           | 5 Gal.       | 1155    | 1190                  |           | 51.50     |                    |                  |           |           |           |           | 192             |
| A6N1733D3KTGTG           | 7-1/2 Gal.   | 1733    | 1768                  |           | 73.50     |                    |                  |           |           |           |           | 260             |
| A6N2310D3KTGTG           | 10 Gal.      | 2310    | 2345                  |           | 95.50     |                    |                  |           |           |           |           | 327             |

## 3000 PSI Auxiliary Gas Bottles



| Model No.  | Gas Volume       |                   | A<br>(in) | B<br>(in) | C<br>(in) | D Port  |                  |           | E<br>(in) | F<br>(in) | G<br>(in) | Weight<br>(lbs) |
|------------|------------------|-------------------|-----------|-----------|-----------|---------|------------------|-----------|-----------|-----------|-----------|-----------------|
|            | Nominal<br>(gal) | Actual<br>(cu in) |           |           |           | SAE No. | Thread Size (in) | Tube Size |           |           |           |                 |
| B4N0058D1K | 1 Quart          | 86                | 4.75      | 11.63     | 1.13      | 20      | 1-5/8 - 12       | 1-1/4     | 1/2 - 20  | 3.25      | 0.75      | 27              |
| B4N0116D1K | 1/2 Gal.         | 144               |           | 16.19     |           |         |                  |           |           |           |           | 33              |
| B4N0231D1K | 1 Gal.           | 259               |           | 25.19     |           |         |                  |           |           |           |           | 46              |
| B4N0347D1K | 1-1/2 Gal.       | 375               |           | 34.31     |           |         |                  |           |           |           |           | 59              |
| B4N0578D1K | 2-1/2 Gal.       | 606               |           | 52.38     |           |         |                  |           |           |           |           | 85              |
| B6N0231D1K | 1 Gal.           | 319               | 6.88      | 17.38     | 1.13      | 24      | 1-7/8 - 12       | 1-1/2     | 1/2 - 20  | 4.38      | 0.75      | 68              |
| B6N0347D1K | 1-1/2 Gal.       | 435               |           | 21.81     |           |         |                  |           |           |           |           | 82              |
| B6N0578D1K | 2-1/2 Gal.       | 666               |           | 30.63     |           |         |                  |           |           |           |           | 111             |
| B6N0924D1K | 4 Gal.           | 1012              |           | 43.81     |           |         |                  |           |           |           |           | 154             |
| B6N1155D1K | 5 Gal.           | 1243              |           | 52.63     |           |         |                  |           |           |           |           | 182             |
| B6N1733D1K | 7-1/2 Gal.       | 1821              |           | 74.63     |           |         |                  |           |           |           |           | 254             |
| B6N2310D1K | 10 Gal.          | 2398              |           | 96.63     |           |         |                  |           |           |           |           | 325             |

## 207 Bar Metric Accumulators for Oil and Water Service

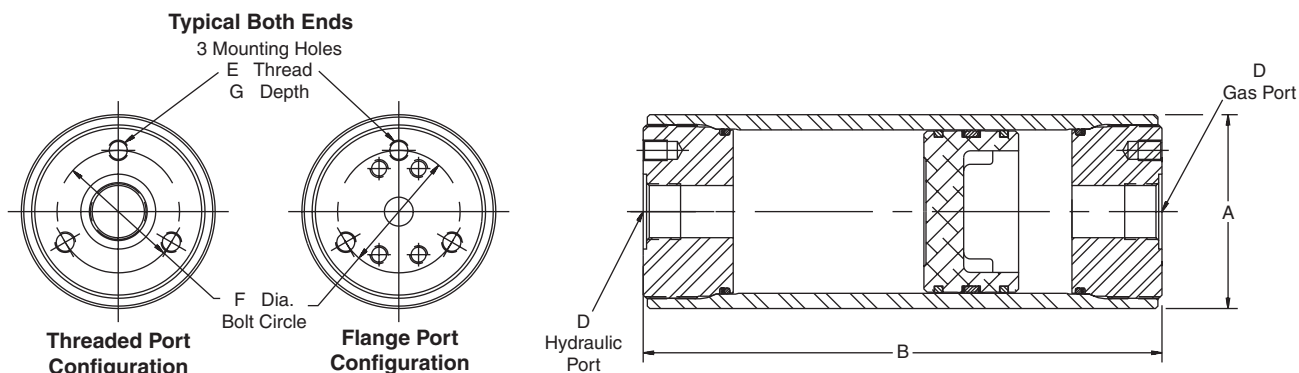


| Model No. <sup>1</sup> | Fluid Volume |      | Gas Volume (Liters) | A (mm) | B (mm) | C (mm) | D-Hydraulic Port |            | E (mm) | F (mm) | G (mm) | Weight (Kg) |
|------------------------|--------------|------|---------------------|--------|--------|--------|------------------|------------|--------|--------|--------|-------------|
|                        |              |      |                     |        |        |        | BSPP/G (in)      | SAE Flange |        |        |        |             |
| A2N0005D2K             | 0.08         | 5    | 0.11                | 60     | 172    | 27     | 3/4              | —          | —      | —      | —      | 2.1         |
| A2N0010D2K             | 0.16         | 10   | 0.19                |        | 211    |        |                  |            |        |        |        | 2.3         |
| A2N0015D2K             | 0.25         | 15   | 0.24                |        | 250    |        |                  |            |        |        |        | 2.6         |
| A2N0029D2K             | 0.48         | 29   | 0.50                |        | 360    |        |                  |            |        |        |        | 3.3         |
| A2N0058D2K             | 0.95         | 58   | 0.98                |        | 589    |        |                  |            |        |        |        | 4.7         |
| A3N0029D2K             | 0.48         | 29   | 0.56                | 90     | 260    | 29     | 1                | —          | M10    | 60     | 15     | 6.5         |
| A3N0058D2K             | 0.95         | 58   | 1.03                |        | 364    |        |                  |            |        |        |        | 8.1         |
| A3N0090D2K             | 1.47         | 90   | 1.56                |        | 481    |        |                  |            |        |        |        | 9.8         |
| A3N0116D2K             | 1.90         | 116  | 1.98                |        | 573    |        |                  |            |        |        |        | 11.1        |
| A3N0183D2K             | 3.00         | 183  | 3.08                |        | 814    |        |                  |            |        |        |        | 14.6        |
| A4N0058D2K             | 0.95         | 58   | 1.11                | 121    | 295    | 29     | 1                | —          | M12    | 82     | 18     | 13.0        |
| A4N0116D2K             | 1.90         | 116  | 2.06                |        | 411    |        |                  |            |        |        |        | 15.9        |
| A4N0231D2K             | 3.79         | 231  | 3.95                |        | 640    |        |                  |            |        |        |        | 21.8        |
| A4N0347D2K             | 5.69         | 347  | 5.85                |        | 871    |        |                  |            |        |        |        | 27.6        |
| A4N0578D2K             | 9.47         | 578  | 9.64                |        | 1330   |        |                  |            |        |        |        | 39.3        |
| A6N0231D2K             | 3.79         | 231  | 4.36                | 175    | 441    | 29     | 1-1/2            | —          | M12    | 110    | 18     | 37.8        |
| A6N0347D2K             | 5.69         | 347  | 6.26                |        | 554    |        |                  |            |        |        |        | 44.0        |
| A6N0578D2K             | 9.47         | 578  | 10.0                |        | 778    |        |                  |            |        |        |        | 56.3        |
| A6N0924D2K             | 15.1         | 924  | 15.7                |        | 1113   |        |                  |            |        |        |        | 74.7        |
| A6N1155D2K             | 18.9         | 1155 | 19.5                |        | 1337   |        |                  |            |        |        |        | 87.0        |
| A6N1733D2K             | 28.4         | 1733 | 29.0                |        | 1896   |        |                  |            |        |        |        | 117.8       |
| A6N2310D2K             | 37.9         | 2310 | 38.4                |        | 2454   |        |                  |            |        |        |        | 148.5       |

### Notes:

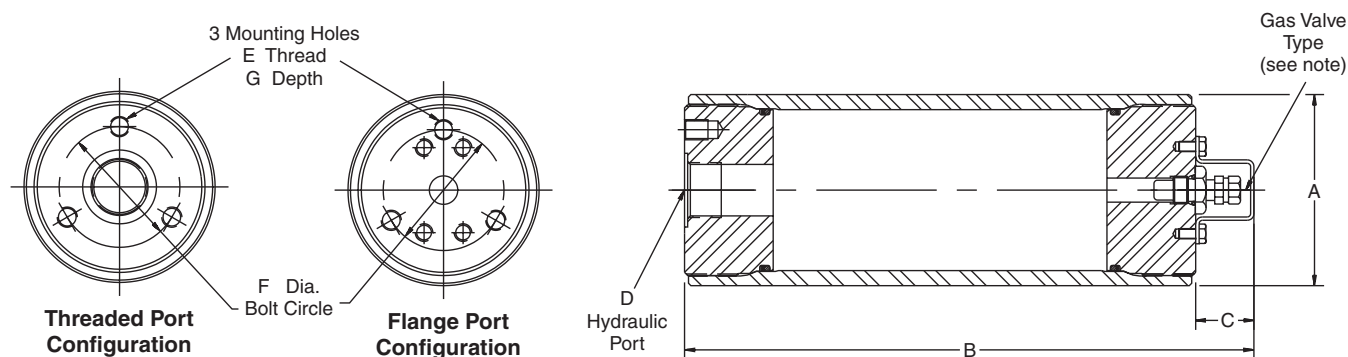
- 1) For Water Service add "W" after construction code, see "How to Order" information.
- 2) See [Port Options](#) for complete listing of port options.
- 3) ASME Certified and CE marked accumulators and gas bottles are available.
- 4) When accumulators are to be used with gas bottles, order "Accumulators for Use with Gas Bottles."
- 5) 2", 3", 4" & 6" bores standard with cored gas valves. Poppet type (MS28889-2) gas valves available as an option.

## 207 Bar Metric Accumulators for Use with Gas Bottles



| Accumulator<br>Model No. | Fluid<br>Volume |         | Gas<br>Volume<br>(Liters) | A<br>(mm) | B<br>(mm) | D - Port (Both Ends) |               | E<br>(mm) | F<br>(mm) | G<br>(mm) | Weight<br>(Kg) |
|--------------------------|-----------------|---------|---------------------------|-----------|-----------|----------------------|---------------|-----------|-----------|-----------|----------------|
|                          | (Liters)        | (cu in) |                           |           |           | BSPP/G<br>(in)       | SAE<br>Flange |           |           |           |                |
| A4N0058D2KRDRD           | 0.95            | 58      | 1.11                      | 121       | 267       | 1                    | —             | M12       | 82        | 18        | 13             |
| A4N0116D2KRDRD           | 1.90            | 116     | 2.06                      |           | 383       |                      |               |           |           |           | 16             |
| A4N0231D2KRDRD           | 3.79            | 231     | 3.95                      |           | 611       |                      |               |           |           |           | 22             |
| A4N0347D2KRDRD           | 5.69            | 347     | 5.85                      |           | 843       |                      |               |           |           |           | 28             |
| A4N0578D2KRDRD           | 9.47            | 578     | 9.64                      |           | 1302      |                      |               |           |           |           | 39             |
| A6N0231D2KRFRF           | 3.79            | 231     | 4.36                      | 175       | 413       | 1-1/2                | —             | M12       | 110       | 18        | 38             |
| A6N0347D2KRFRF           | 5.69            | 347     | 6.26                      |           | 525       |                      |               |           |           |           | 44             |
| A6N0578D2KRFRF           | 9.47            | 578     | 10.0                      |           | 749       |                      |               |           |           |           | 56             |
| A6N0924D2KRFRF           | 15.1            | 924     | 15.7                      |           | 1084      |                      |               |           |           |           | 75             |
| A6N1155D2KRFRF           | 18.9            | 1155    | 19.5                      |           | 1308      |                      |               |           |           |           | 87             |
| A6N1733D2KRFRF           | 28.4            | 1733    | 29.0                      |           | 1867      |                      |               |           |           |           | 118            |
| A6N2310D2KRFRF           | 37.9            | 2310    | 38.4                      |           | 2426      |                      |               |           |           |           | 149            |

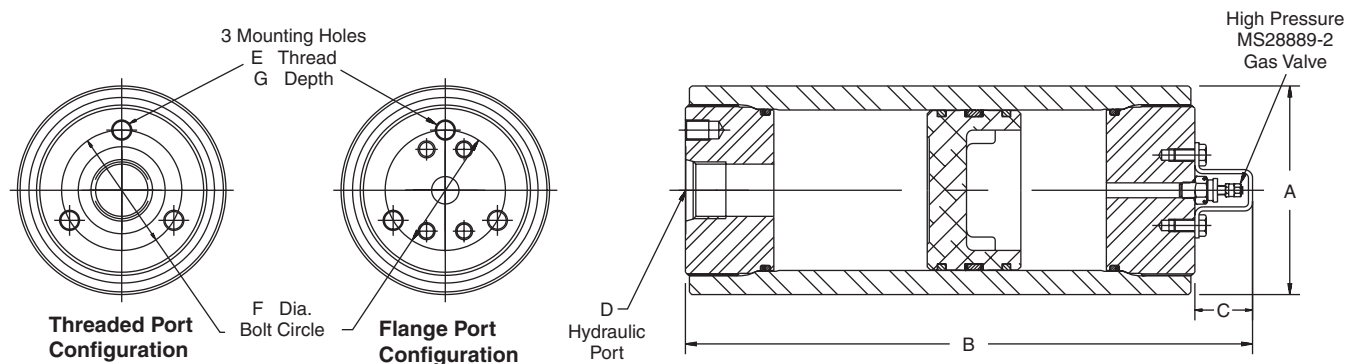
## 207 Bar Metric Auxiliary Gas Bottles



| Model No.  | Gas Volume       |                    | A<br>(mm) | B<br>(mm) | C<br>(mm) | D-Hydraulic Port |               | E<br>(mm) | F<br>(mm) | G<br>(mm) | Weight<br>(Kg) |
|------------|------------------|--------------------|-----------|-----------|-----------|------------------|---------------|-----------|-----------|-----------|----------------|
|            | Nominal<br>(gal) | Actual<br>(liters) |           |           |           | BSPP/G<br>(in)   | SAE<br>Flange |           |           |           |                |
| B4N0058D2K | 1 Quart          | 1.41               | 121       | 295       | 29        | 1                | —             | M12       | 82        | 18        | 12             |
| B4N0116D2K | 1/2 Gal.         | 2.36               |           | 411       |           |                  |               |           |           |           | 15             |
| B4N0231D2K | 1 Gal.           | 4.24               |           | 640       |           |                  |               |           |           |           | 21             |
| B4N0347D2K | 1-1/2 Gal.       | 6.15               |           | 871       |           |                  |               |           |           |           | 27             |
| B4N0578D2K | 2-1/2 Gal.       | 9.93               |           | 1330      |           |                  |               |           |           |           | 39             |
| B6N0231D2K | 1 Gal.           | 5.23               | 175       | 441       | 29        | 1-1/2            | —             | M12       | 110       | 18        | 36             |
| B6N0347D2K | 1-1/2 Gal.       | 7.13               |           | 554       |           |                  |               |           |           |           | 42             |
| B6N0578D2K | 2-1/2 Gal.       | 10.9               |           | 778       |           |                  |               |           |           |           | 54             |
| B6N0924D2K | 4 Gal.           | 16.6               |           | 1113      |           |                  |               |           |           |           | 72             |
| B6N1155D2K | 5 Gal.           | 20.4               |           | 1337      |           |                  |               |           |           |           | 85             |
| B6N1733D2K | 7-1/2 Gal.       | 29.8               |           | 1896      |           |                  |               |           |           |           | 116            |
| B6N2310D2K | 10 Gal.          | 39.3               |           | 2454      |           |                  |               |           |           |           | 146            |



## 3000 PSI Piston Accumulators for Oil and Water Service



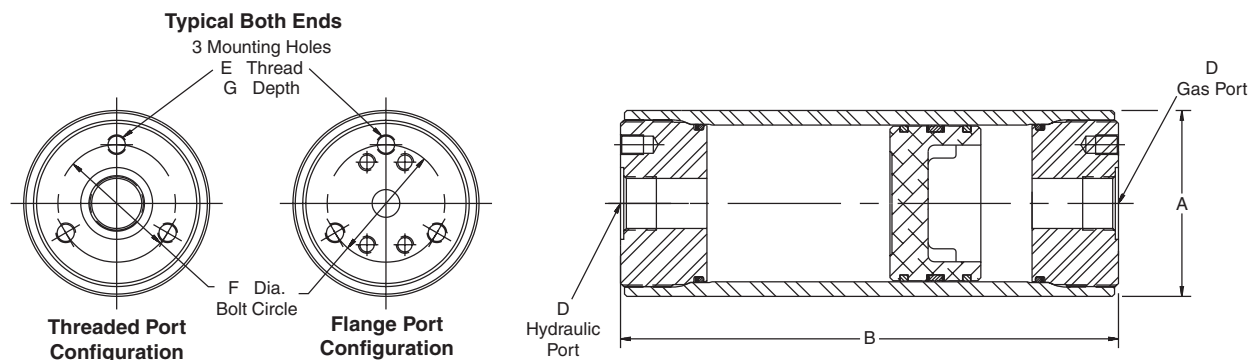
| Model No. <sup>1</sup> | Fluid Volume |       | Gas Volume<br>(cu in) | A<br>(in)      | B<br>(in) | C<br>(in) | D-Hydraulic Port                                                 |                  |           | E<br>(in)     | F<br>(in) | G<br>(in) | Weight<br>(lbs) |
|------------------------|--------------|-------|-----------------------|----------------|-----------|-----------|------------------------------------------------------------------|------------------|-----------|---------------|-----------|-----------|-----------------|
|                        |              |       |                       |                |           |           | SAE No.                                                          | Thread Size (in) | Tube Size |               |           |           |                 |
|                        | Oil Service  | (gal) |                       |                |           |           |                                                                  |                  |           |               |           |           |                 |
| A7K0578D3KPL           | 2-1/2 Gal    | 578   | 633                   | 8.13<br>±0.06  | 27.25     | 1.63      | 32                                                               | 2-1/2 - 12       | 2         | 5/8 - 18      | 5.75      | 0.94      | 170             |
| A7K1155D3KPL           | 5 Gal.       | 1155  | 1210                  |                | 42.25     |           | or<br>2" Code 61<br>Flange (PL) <sup>2</sup>                     |                  |           |               |           |           |                 |
| A7K1733D3KPL           | 7-1/2 Gal.   | 1733  | 1788                  |                | 57.25     |           |                                                                  |                  |           |               |           |           |                 |
| A7K2310D3KPL           | 10 Gal.      | 2310  | 2365                  |                | 72.25     |           |                                                                  |                  |           |               |           |           |                 |
| A7K3465D3KPL           | 15 Gal.      | 3465  | 3520                  |                | 102.25    |           |                                                                  |                  |           |               |           |           |                 |
| A7K5775D3KPL           | 25 Gal.      | 5775  | 5830                  | 162.25         |           |           |                                                                  |                  |           |               |           |           | 682             |
| A9K2310D3KPL           | 10 Gal.      | 2310  | 2400                  | 11.02<br>±0.09 | 48.75     | 1.63      | 32                                                               | 2-1/2 - 12       | 2         | 3/4 - 16      | 7.00      | 1.13      | 595             |
| A9K3465D3KPL           | 15 Gal.      | 3465  | 3555                  |                | 66.94     |           | or<br>2" Code 61<br>Flange (PL) <sup>2</sup>                     |                  |           |               |           |           |                 |
| A9K4620D3KPL           | 20 Gal.      | 4620  | 4710                  |                | 85.06     |           |                                                                  |                  |           |               |           |           |                 |
| A9K5775D3KPL           | 25 Gal.      | 5775  | 5865                  |                | 103.18    |           |                                                                  |                  |           |               |           |           |                 |
| A9K6930D3KPL           | 30 Gal.      | 6930  | 7020                  |                | 121.37    |           |                                                                  |                  |           |               |           |           |                 |
| A12K5775D1K            | 25 Gal.      | 5775  | 5975                  | 14.41<br>±0.09 | 67.50     | 1.63      | 3" SAE Flange Ports (Code 61)<br>See Port Options for Dimensions |                  |           | 7/8-9<br>(6X) | 9.00      | 1.50      | 1336            |
| A12K6930D1K            | 30 Gal.      | 6930  | 7130                  |                | 76.31     |           |                                                                  |                  |           |               |           |           | 1490            |
| A12K9240D1K            | 40 Gal.      | 9240  | 9440                  |                | 98.88     |           |                                                                  |                  |           |               |           |           | 1799            |
| A12K11550D1K           | 50 Gal.      | 11550 | 11750                 |                | 119.62    |           |                                                                  |                  |           |               |           |           | 2108            |

The Minimum Design Metal Temperature (MDMT) for ASME certified 7" and 9" piston accumulators presented in this section is 20°F (-7°C).  
The Minimum Design Metal Temperature (MDMT) for ASME certified 12" piston accumulators presented in this section is 32°F (0°C).

## Notes:

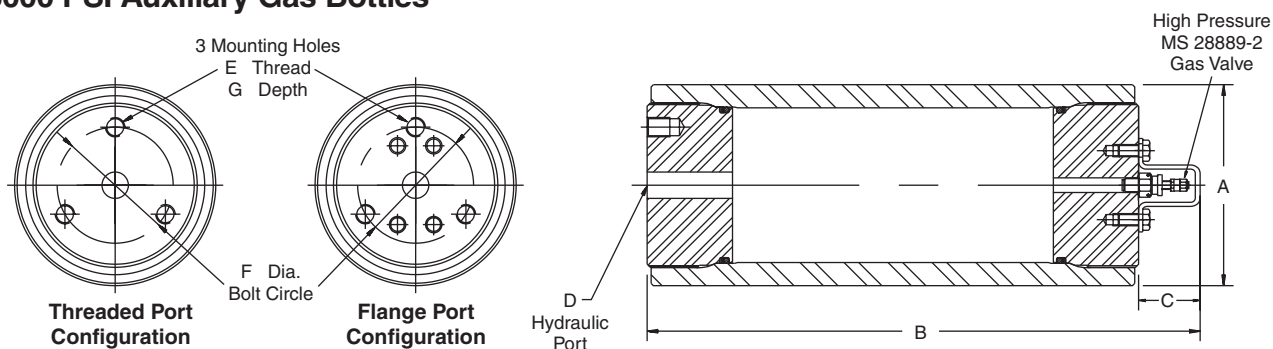
- 1) For Water Service add "W" after construction code, see "How to Order" information.
- 2) Most SAE #32 fittings are rated for 2000 PSI. If 2000 to 3000 PSI service is required, two options are available; order accumulator with optional standard 2" SAE Code 61 4-bolt flange port by specifying "PL" code when ordering or order the accumulator with a SAE #24 port or smaller, see "Port Options" for dimensions and "How to Order".
- 3) See Port Options for complete listing of optional ports.
- 4) ASME Certified and CE marked accumulators and gas bottles are available.
- 5) When accumulators are to be used with gas bottles, order "Accumulators for Use with Gas Bottles."
- 6) Poppet type (MS28889-2) gas valve standard.

## 3000 PSI Accumulators for Use with Gas Bottles



| Accumulator<br>Model No. | Fluid Volume |         | Gas Volume<br>(cu in) | A<br>(in) | B<br>(in) | D Port (Both Ends)(in)                                                 | E<br>(in)       | F<br>(in) | G<br>(lbs) | Weight |
|--------------------------|--------------|---------|-----------------------|-----------|-----------|------------------------------------------------------------------------|-----------------|-----------|------------|--------|
|                          | (gal)        | (cu in) |                       |           |           |                                                                        |                 |           |            |        |
| A7K0578D3KPLPL           | 2-1/2 Gal.   | 578     | 633                   |           | 25.63     | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread   | 5/8 - 18        | 5.75      | 0.94       | 170    |
| A7K1155D3KPLPL           | 5 Gal.       | 1155    | 1210                  |           | 40.63     |                                                                        |                 |           |            | 226    |
| A7K1733D3KPLPL           | 7-1/2 Gal.   | 1733    | 1788                  | 8.13      | 55.63     |                                                                        |                 |           |            | 283    |
| A7K2310D3KPLPL           | 10 Gal.      | 2310    | 2365                  | ±0.06     | 70.63     |                                                                        |                 |           |            | 340    |
| A7K3465D3KPLPL           | 15 Gal.      | 3465    | 3520                  |           | 100.63    |                                                                        |                 |           |            | 454    |
| A9K2310D3KPLPL           | 10 Gal.      | 2310    | 2400                  |           | 47.00     | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread   | 3/4 - 16        | 7.00      | 1.13       | 595    |
| A9K3465D3KPLPL           | 15 Gal.      | 3465    | 3555                  |           | 65.25     |                                                                        |                 |           |            | 758    |
| A9K4620D3KPLPL           | 20 Gal.      | 4620    | 4710                  | 11.02     | 101.50    |                                                                        |                 |           |            | 920    |
| A9K5775D3KPLPL           | 25 Gal.      | 5775    | 5865                  | ±0.09     | 119.62    |                                                                        |                 |           |            | 1083   |
| A9K6930D3KPLPL           | 30 Gal.      | 6930    | 7020                  |           | 137.75    |                                                                        |                 |           |            | 1246   |
| A12K5775D3KPNPN          | 25 Gal.      | 5775    | 5975                  |           | 65.88     | 3" SAE Flange<br>Ports (Code 61)<br>See Port Options<br>for Dimensions | 7/8 - 9<br>(6X) | 9.00      | 1.50       | 1336   |
| A12K6930D3KPNPN          | 30 Gal.      | 6930    | 7130                  | 14.41     | 74.69     |                                                                        |                 |           |            | 1490   |
| A12K9240D3KPNPN          | 40 Gal.      | 9240    | 9440                  | ±0.09     | 97.25     |                                                                        |                 |           |            | 1799   |
| A12K11550D3KPNPN         | 50 Gal.      | 11550   | 11750                 |           | 118.00    |                                                                        |                 |           |            | 2108   |

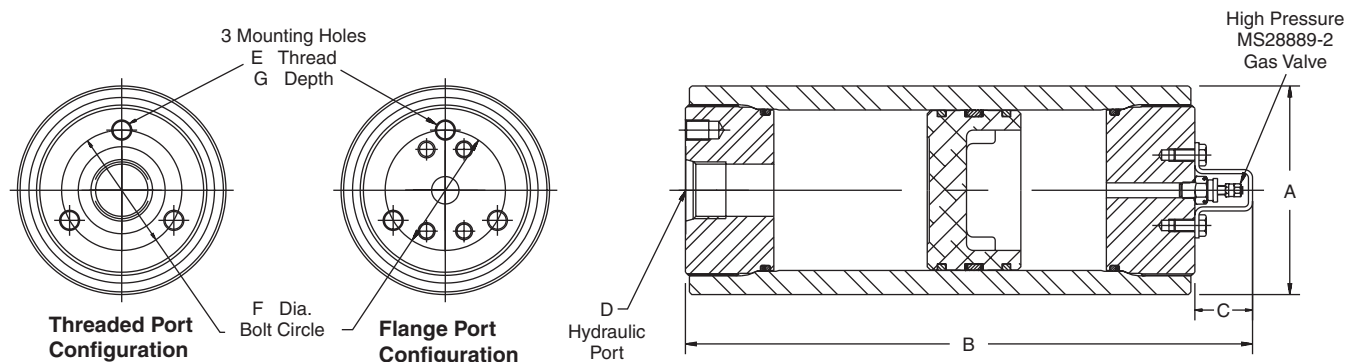
## 3000 PSI Auxiliary Gas Bottles



| Model No.      | Gas Volume       |                   | A<br>(in) | B<br>(in) | C<br>(in) | D Port                                                                 | E<br>(in)       | F<br>(in) | G<br>(in) | Weight<br>(lbs) |
|----------------|------------------|-------------------|-----------|-----------|-----------|------------------------------------------------------------------------|-----------------|-----------|-----------|-----------------|
|                | Nominal<br>(gal) | Actual<br>(cu in) |           |           |           |                                                                        |                 |           |           |                 |
| B7K0578D3K(PL) | 2-1/2 Gal.       | 677               |           | 27.25     |           | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread   | 5/8 - 18        | 5.75      | 0.94      | 160             |
| B7K1155D3K(PL) | 5 Gal.           | 1254              |           | 42.25     |           |                                                                        |                 |           |           | 217             |
| B7K1733D3K(PL) | 7-1/2 Gal.       | 1832              | 8.13      | 57.25     | 1.63      |                                                                        |                 |           |           | 274             |
| B7K2310D3K(PL) | 10 Gal.          | 2401              | ±0.06     | 72.25     |           |                                                                        |                 |           |           | 331             |
| B7K3465D3K(PL) | 15 Gal.          | 3556              |           | 102.25    |           |                                                                        |                 |           |           | 445             |
| B9K2310D3K(PL) | 10 Gal.          | 2474              |           | 48.75     |           | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread   | 3/4 - 16        | 7.00      | 1.13      | 546             |
| B9K3465D3K(PL) | 15 Gal.          | 3629              |           | 66.94     |           |                                                                        |                 |           |           | 709             |
| B9K4620D3K(PL) | 20 Gal.          | 4620              | 11.02     | 85.06     | 1.63      |                                                                        |                 |           |           | 872             |
| B9K5775D3K(PL) | 25 Gal.          | 5775              | ±0.09     | 103.25    |           |                                                                        |                 |           |           | 1035            |
| B9K6930D3K(PL) | 30 Gal.          | 6930              |           | 121.37    |           |                                                                        |                 |           |           | 1197            |
| B12K5775D1K    | 25 Gal.          | 6288              |           | 67.50     |           | 3" SAE Flange<br>Ports (Code 61)<br>See Port Options<br>for Dimensions | 7/8 - 9<br>(6X) | 9.00      | 1.50      | 1246            |
| B12K6930D1K    | 30 Gal.          | 7443              | 14.41     | 76.31     | 1.63      |                                                                        |                 |           |           | 1400            |
| B12K9240D1K    | 40 Gal.          | 9783              | ±0.09     | 98.88     |           |                                                                        |                 |           |           | 1709            |
| B12K11550D1K   | 50 Gal.          | 12093             |           | 119.62    |           |                                                                        |                 |           |           | 2017            |



## 207 Bar Metric Accumulators for Oil and Water Service

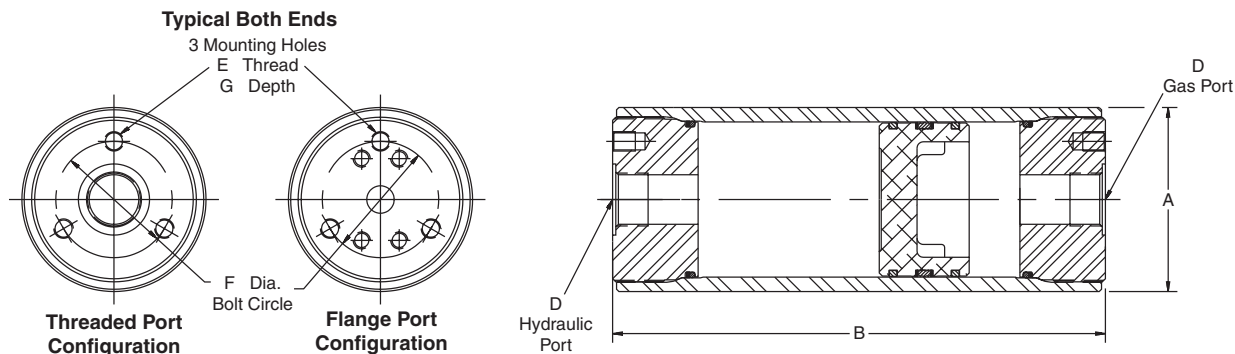


| Model No. <sup>1</sup> | Fluid Volume |       | Gas Volume (Liters) | A (mm) | B (mm) | C (mm) | D-Hydraulic Port |                          | E (mm)   | F (mm) | G (mm) | Weight (Kg) |
|------------------------|--------------|-------|---------------------|--------|--------|--------|------------------|--------------------------|----------|--------|--------|-------------|
|                        |              |       |                     |        |        |        | BSPP/G (in)      | SAE Flange               |          |        |        |             |
| A7K0578D2K             | 9.47         | 578   | 10.4                |        | 692    |        |                  |                          |          |        |        | 76.9        |
| A7K1155D2K             | 18.9         | 1155  | 19.8                |        | 1073   |        |                  |                          |          |        |        | 103         |
| A7K1733D2K             | 28.4         | 1733  | 29.3                | 206.5  | 1454   | 41     | —                | 2" Metric Code 61 Flange | M16      | 150    | 24     | 129         |
| A7K2310D2K             | 37.9         | 2310  | 38.8                | ±1.52  | 1835   |        |                  |                          |          |        |        | 154         |
| A7K3465D2K             | 56.8         | 3465  | 57.7                |        | 2597   |        |                  |                          |          |        |        | 206         |
| A9K2310D2K             | 37.9         | 2310  | 39.3                |        | 1238   |        |                  |                          |          |        |        | 270         |
| A9K3465D2K             | 56.8         | 3465  | 58.3                |        | 1700   |        |                  |                          |          |        |        | 344         |
| A9K4620D2K             | 75.7         | 4620  | 77.2                | 279.9  | 2161   | 41     | —                | 2" Metric Code 61 Flange | M20      | 182    | 30     | 417         |
| A9K5775D2K             | 94.7         | 5775  | 96.2                | ±2.29  | 2622   |        |                  |                          |          |        |        | 491         |
| A9K6930D2K             | 113.6        | 6930  | 115.1               |        | 3083   |        |                  |                          |          |        |        | 565         |
| A12K5775D2K            | 94.6         | 5775  | 97.9                |        | 1715   |        |                  |                          |          |        |        | 606         |
| A12K6930D2K            | 114          | 6930  | 117                 | 365.9  | 1938   | 41     | —                | 3" Metric Code 61 Flange | M20 (6X) | 230    | 30     | 676         |
| A12K9240D2K            | 151          | 9240  | 155                 | ±2.29  | 2512   |        |                  |                          |          |        |        | 816         |
| A12K11550D2K           | 189          | 11550 | 193                 |        | 3038   |        |                  |                          |          |        |        | 956         |

## Notes:

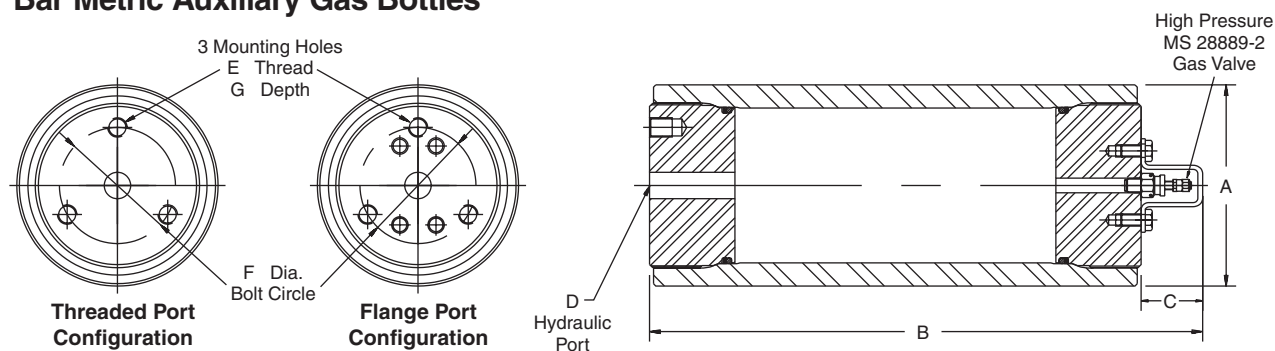
- 1) For Water Service add "W" after construction code, see "How to Order" information.
- 2) Most SAE #32 fittings are rated for 2000 PSI. If 2000 to 3000 PSI service is required, two options are available; order accumulator with optional standard 2" SAE Code 61 4-bolt flange port by specifying "PL" code when ordering or order the accumulator with a SAE #24 port or smaller, see "Port Options" for dimensions and "How to Order".
- 3) See Port Options for complete listing of optional ports.
- 4) ASME Certified and CE marked accumulators and gas bottles are available.
- 5) When accumulators are to be used with gas bottles, order "Accumulators for Use with Gas Bottles."
- 6) Poppet type (MS28889-2) gas valve standard.

## 207 Bar Metric Accumulators for Use with Gas Bottles



| Accumulator<br>Model No. | Fluid<br>Volume |         | Gas<br>Volume<br>(Liters) | A<br>(mm) | B<br>(mm) | D-Port (Both Ends) |                                | E<br>(mm)   | F<br>(mm) | G<br>(mm) | Weight<br>(Kg) |
|--------------------------|-----------------|---------|---------------------------|-----------|-----------|--------------------|--------------------------------|-------------|-----------|-----------|----------------|
|                          | (Liters)        | (cu in) |                           |           |           | BSPP/G<br>(in)     | SAE<br>Flange                  |             |           |           |                |
| A7K0578D2KMLML           | 9.47            | 578     | 10.4                      |           | 651       |                    |                                |             |           |           | 77             |
| A7K1155D2KMLML           | 18.9            | 1155    | 19.8                      |           | 1032      |                    |                                |             |           |           | 103            |
| A7K1733D2KMLML           | 28.4            | 1733    | 29.3                      |           | 1413      | —                  | 2" Metric<br>Code 61<br>Flange | M16         | 150       | 24        | 129            |
| A7K2310D2KMLML           | 37.9            | 2310    | 38.8                      | ±1.52     | 1794      |                    |                                |             |           |           | 154            |
| A7K3465D2KMLML           | 56.8            | 3465    | 57.7                      |           | 2556      |                    |                                |             |           |           | 206            |
| A9K2310D2KMLML           | 37.9            | 2310    | 39.3                      |           | 1194      |                    |                                |             |           |           | 270            |
| A9K3465D2KMLML           | 56.8            | 3465    | 58.3                      |           | 1657      |                    | 2" Metric<br>Code 61<br>Flange | M20         | 182       | 30        | 344            |
| A9K4620D2KMLML           | 75.7            | 4620    | 77.2                      | 279.9     | 2118      | —                  |                                |             |           |           | 417            |
| A9K3465D2KMLML           | 94.6            | 5775    | 96.1                      | ±2.29     | 2581      |                    |                                |             |           |           | 419            |
| A9K4620D2KMLML           | 113.6           | 6930    | 115.1                     |           | 3044      |                    |                                |             |           |           | 565            |
| A12K5775D2KMMNMN         | 94.6            | 5775    | 97.9                      |           | 1673      |                    |                                |             |           |           | 606            |
| A12K6930D2KMMNMN         | 114             | 6930    | 117                       | 365.9     | 1897      | —                  | 3" Metric<br>Code 61<br>Flange | M20<br>(6X) | 230       | 30        | 676            |
| A12K9240D2KMMNMN         | 151             | 9240    | 155                       | ±2.29     | 2470      |                    |                                |             |           |           | 816            |
| A12K11550D2KMMNMN        | 189             | 11550   | 193                       |           | 2997      |                    |                                |             |           |           | 956            |

## 207 Bar Metric Auxiliary Gas Bottles



| Model No.    | Gas Volume       |                    | A<br>(mm) | B<br>(mm) | C<br>(mm) | D-Hydraulic Port |                                | E<br>(mm)   | F<br>(mm) | G<br>(mm) | Weight<br>(Kg) |
|--------------|------------------|--------------------|-----------|-----------|-----------|------------------|--------------------------------|-------------|-----------|-----------|----------------|
|              | Nominal<br>(gal) | Actual<br>(liters) |           |           |           | BSPP/G<br>(in)   | SAE<br>Flange                  |             |           |           |                |
| B7K0578D2K   | 2-1/2 Gal.       | 11.1               |           | 692       |           |                  |                                |             |           |           | 73             |
| B7K1155D2K   | 5 Gal.           | 20.5               |           | 1073      |           |                  |                                |             |           |           | 99             |
| B7K1733D2K   | 7-1/2 Gal.       | 30.0               | 206.5     | 1454      | 41        | —                | 2" Metric<br>Code 61<br>Flange | M16         | 150       | 24        | 125            |
| B7K2310D2K   | 10 Gal.          | 39.3               | ±1.52     | 1835      |           |                  |                                |             |           |           | 150            |
| B7K3465D2K   | 15 Gal.          | 58.3               |           | 2597      |           |                  |                                |             |           |           | 202            |
| B9K2310D2K   | 10 Gal.          | 40.5               |           | 1238      |           |                  |                                |             |           |           | 248            |
| B9K3465D2K   | 15 Gal.          | 59.5               |           | 1700      |           |                  | 2" Metric<br>Code 61<br>Flange | M20         | 182       | 30        | 322            |
| B9K4620D2K   | 20 Gal.          | 78.4               | 279.9     | 2161      | 41        | —                |                                |             |           |           | 396            |
| B9K5775D2K   | 25 Gal.          | 98.0               | ±2.29     | 2623      |           |                  |                                |             |           |           | 469            |
| B9K6930D2K   | 30 Gal.          | 117.6              |           | 3085      |           |                  |                                |             |           |           | 543            |
| B12K5775D2K  | 25 Gal.          | 103                |           | 1715      |           |                  |                                |             |           |           | 565            |
| B12K6930D2K  | 30 Gal.          | 122                | 365.9     | 1938      | 41        | —                | 3" Metric<br>Code 61<br>Flange | M20<br>(6X) | 230       | 30        | 635            |
| B12K9240D2K  | 40 Gal.          | 160                | ±2.29     | 2512      |           |                  |                                |             |           |           | 775            |
| B12K11550D2K | 50 Gal.          | 198                |           | 3038      |           |                  |                                |             |           |           | 915            |

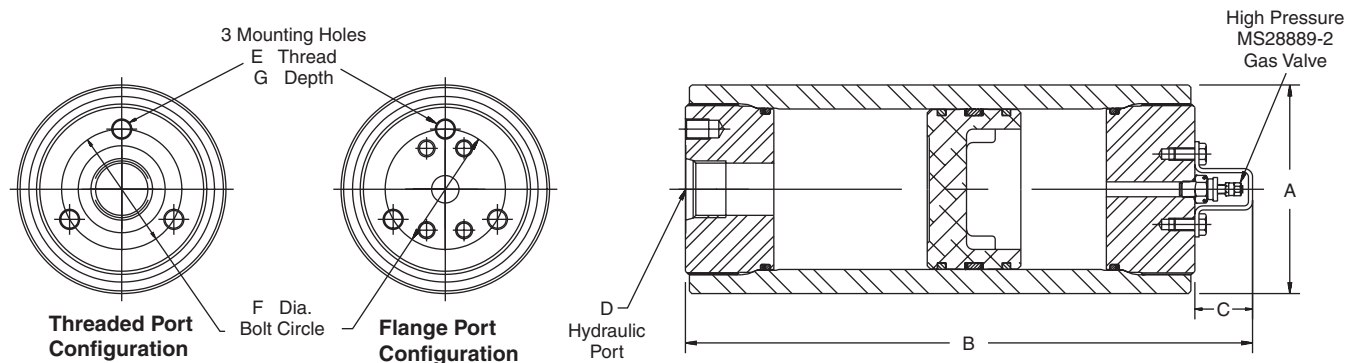
### 3000 PSI Non-ASME Piston Accumulators for Oil and Water Service

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 carry a full 4:1 design factor and utilize industry

standard materials. When ASME certification is not required, specifying these accumulators can result in significant savings.

Local rules and regulations should be followed. However, the accumulators listed on these two pages can be used with confidence when ASME certification is not required.

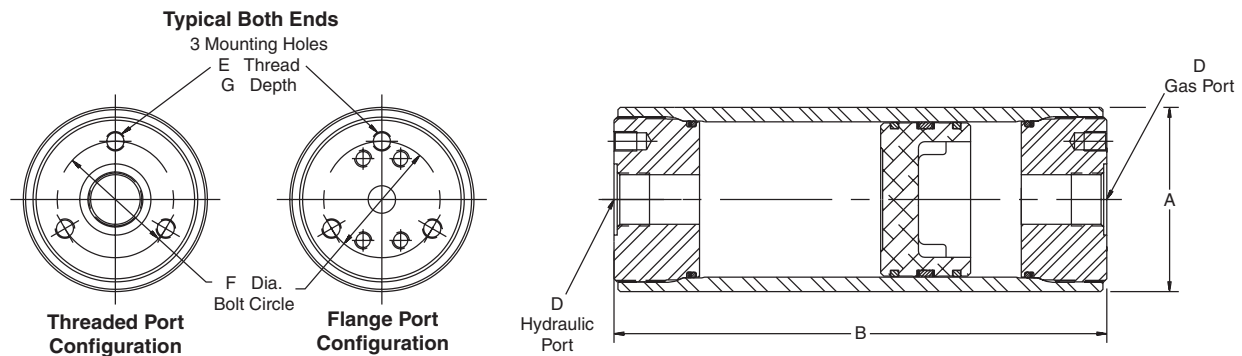


| Model No. <sup>1</sup> | Fluid Volume |         | Gas Volume (cu in) | A (in)        | B (in) | C (in) | D-Hydraulic Port                             |                  |           | E (in)   | F (in) | G (in) | Weight (lbs) |     |
|------------------------|--------------|---------|--------------------|---------------|--------|--------|----------------------------------------------|------------------|-----------|----------|--------|--------|--------------|-----|
| Oil Service            |              |         |                    |               |        |        | SAE No.                                      | Thread Size (in) | Tube Size |          |        |        |              |     |
|                        | (gal)        | (cu in) |                    |               |        |        |                                              |                  |           |          |        |        |              |     |
| A7N0578D3KPL           | 2½           | 578     | 633                | 8.13<br>±0.06 | 27.25  | 1.63   | 32                                           | 2½ - 12          | 2         | 5/8 - 18 | 5.75   | 0.94   | 170          |     |
| A7N1155D3KPL           | 5            | 1155    | 1210               |               | 42.25  |        | or<br>2" Code 61<br>Flange (PL) <sup>2</sup> |                  |           |          |        |        |              | 226 |
| A7N1733D3KPL           | 7½           | 1733    | 1788               |               | 57.25  |        |                                              |                  |           |          |        |        |              | 283 |
| A7N2310D3KPL           | 10           | 2310    | 2365               |               | 72.25  |        |                                              |                  |           |          |        |        |              | 340 |
| A7N3465D3KPL           | 15           | 3465    | 3520               |               | 102.25 |        |                                              |                  |           |          |        |        |              | 454 |
| A7N5775D3KPL           | 25           | 5775    | 5830               |               | 162.25 |        |                                              |                  |           |          |        |        | 682          |     |
| A8N0578D3KPL           | 2½           | 578     | 655                | 9.06<br>±0.06 | 22.94  | 1.63   | 32                                           | 2½-12            | 2         | 5/8-18   | 6.75   | 0.94   | 216          |     |
| A8N1155D3KPL           | 5            | 1155    | 1232               |               | 34.81  |        | or<br>2" Code 61<br>Flange (PL) <sup>2</sup> |                  |           |          |        |        |              | 268 |
| A8N1733D3KPL           | 7½           | 1733    | 1810               |               | 46.68  |        |                                              |                  |           |          |        |        |              | 321 |
| A8N2310D3KPL           | 10           | 2310    | 2387               |               | 58.50  |        |                                              |                  |           |          |        |        |              | 374 |
| A8N3465D3KPL           | 15           | 3465    | 3542               |               | 82.28  |        |                                              |                  |           |          |        |        |              | 479 |
| A8N5775D3KPL           | 25           | 5775    | 5852               |               | 129.68 |        |                                              |                  |           |          |        |        | 690          |     |

**Notes:**

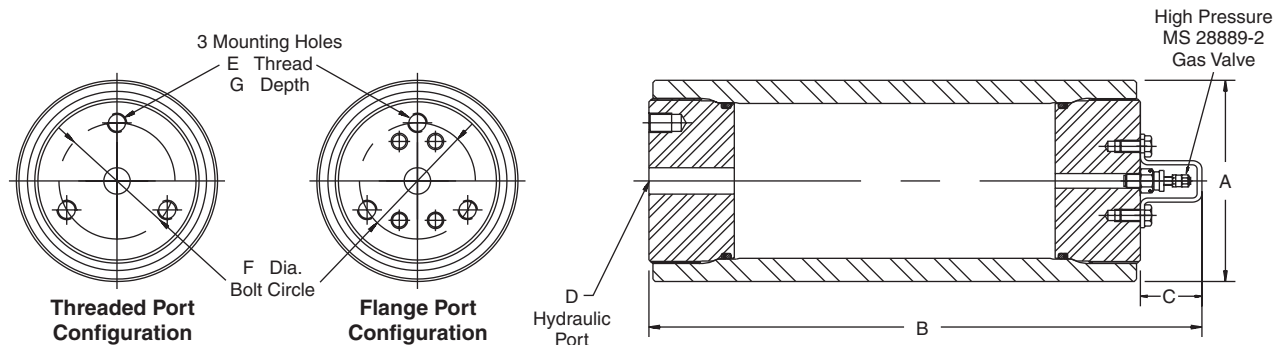
- 1) For Water Service add "W" after construction code, see "How to Order" information.
- 2) Most SAE #32 fittings are rated for 2000 PSI. If 2000 to 3000 PSI service is required, two options are available; order accumulator with optional standard 2" SAE Code 61 4-bolt flange port by specifying "PL" code when ordering or order the accumulator with a SAE #24 port or smaller, see "Port Options" for dimensions and "How to Order".
- 3) See Port Options for complete listing of optional ports.
- 4) ASME Certified and CE marked accumulators and gas bottles are available.
- 5) When accumulators are to be used with gas bottles, order "Accumulators for Use with Gas Bottles."
- 6) Poppet type (MS28889-2) gas valve standard.

## 3000 PSI Non-ASME Accumulators for Use with Gas Bottles



| Accumulator<br>Model No. | Fluid Volume |         | Gas Volume<br>(cu in) | A<br>(in)     | B<br>(in) | D Port (Both Ends)(in)                                               | E<br>(in) | F<br>(in) | G<br>(lbs) | Weight |
|--------------------------|--------------|---------|-----------------------|---------------|-----------|----------------------------------------------------------------------|-----------|-----------|------------|--------|
|                          | (gal)        | (cu in) |                       |               |           |                                                                      |           |           |            |        |
| A7N0578D3KPLPL           | 2½           | 578     | 633                   | 8.13<br>±0.06 | 25.63     | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread | 5/8 - 18  | 5.75      | 0.94       | 170    |
| A7N1155D3KPLPL           | 5            | 1155    | 1210                  |               | 40.63     |                                                                      |           |           |            | 226    |
| A7N1733D3KPLPL           | 7½           | 1733    | 1788                  |               | 55.63     |                                                                      |           |           |            | 283    |
| A7N2310D3KPLPL           | 10           | 2310    | 2365                  |               | 70.63     |                                                                      |           |           |            | 340    |
| A7N3465D3KPLPL           | 15           | 3465    | 3520                  |               | 100.63    |                                                                      |           |           |            | 454    |
| A7N5775D3KPLPL           | 25           | 5775    | 5830                  |               | 160.50    |                                                                      |           |           |            | 682    |
| A8N0578D3KPLPL           | 2½           | 578     | 650                   | 9.06<br>±0.06 | 21.31     | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread | 5/8 - 18  | 6.75      | 0.94       | 216    |
| A8N1155D3KPLPL           | 5            | 1155    | 1228                  |               | 33.18     |                                                                      |           |           |            | 268    |
| A8N1733D3KPLPL           | 7½           | 1733    | 1806                  |               | 45.06     |                                                                      |           |           |            | 321    |
| A8N2310D3KPLPL           | 10           | 2310    | 2381                  |               | 56.88     |                                                                      |           |           |            | 374    |
| A8N3465D3KPLPL           | 15           | 3465    | 3537                  |               | 80.63     |                                                                      |           |           |            | 479    |
| A8N5775D3KPLPL           | 25           | 5775    | 5847                  |               | 128.06    |                                                                      |           |           |            | 690    |

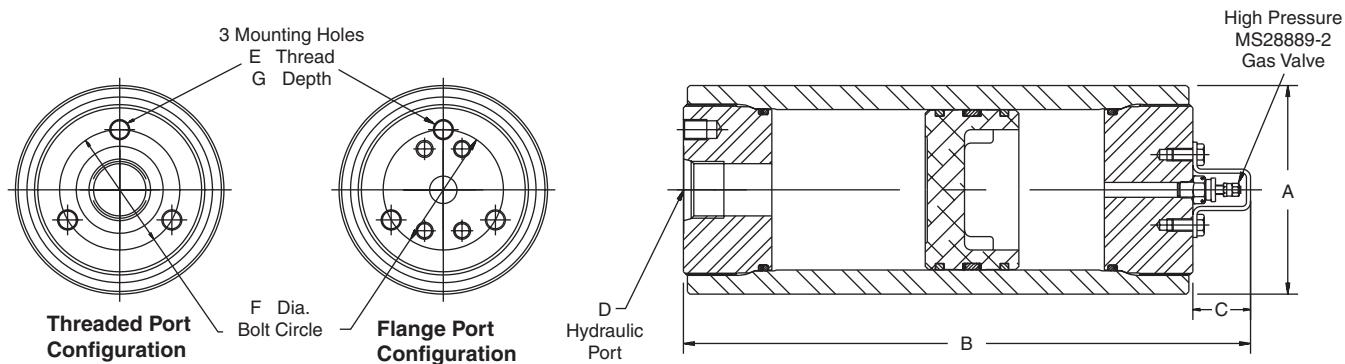
## 3000 PSI Non-ASME Auxiliary Gas Bottles



| Model No.      | Gas Volume       |                   | A<br>(in)     | B<br>(in) | C<br>(in) | D Port                                                               | E<br>(in) | F<br>(in) | G<br>(in) | Weight<br>(lbs) |
|----------------|------------------|-------------------|---------------|-----------|-----------|----------------------------------------------------------------------|-----------|-----------|-----------|-----------------|
|                | Nominal<br>(gal) | Actual<br>(cu in) |               |           |           |                                                                      |           |           |           |                 |
| B7N0578D3K(PL) | 2½               | 787               | 8.13<br>±0.06 | 27.25     | 1.63      | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread | 5/8 - 18  | 5.75      | 0.94      | 160             |
| B7N1155D3K(PL) | 5                | 1309              |               | 42.25     |           |                                                                      |           |           |           | 217             |
| B7N1733D3K(PL) | 7½               | 1942              |               | 57.25     |           |                                                                      |           |           |           | 274             |
| B7N2310D3K(PL) | 10               | 2464              |               | 72.25     |           |                                                                      |           |           |           | 331             |
| B7N3465D3K(PL) | 15               | 3619              |               | 102.25    |           |                                                                      |           |           |           | 445             |
| B7N5775D3K(PL) | 25               | 5929              |               | 162.13    |           |                                                                      |           |           |           | 673             |
| B8N0578D3K(PL) | 2½               | 772               | 9.06<br>±0.06 | 22.94     | 1.63      | 2" Code 61 Flange (PL) <sup>2</sup><br>or<br>#32 SAE Straight Thread | 5/8 - 18  | 6.75      | 0.94      | 205             |
| B8N1155D3K(PL) | 5                | 1350              |               | 34.81     |           |                                                                      |           |           |           | 257             |
| B8N1733D3K(PL) | 7½               | 1928              |               | 46.68     |           |                                                                      |           |           |           | 310             |
| B8N2310D3K(PL) | 10               | 2503              |               | 58.50     |           |                                                                      |           |           |           | 363             |
| B8N3465D3K(PL) | 15               | 3659              |               | 82.25     |           |                                                                      |           |           |           | 468             |
| B8N5775D3K(PL) | 25               | 5969              |               | 129.68    |           |                                                                      |           |           |           | 679             |

**2000 PSI Piston Accumulators for Oil and Water Service**

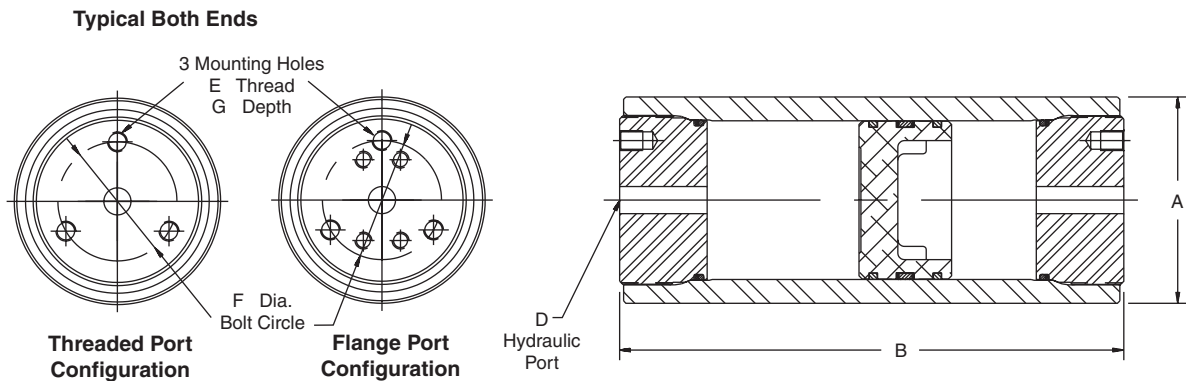
The aluminum die casting industry has been the primary user of our 2000 PSI accumulators. We offer a 2000 PSI accumulator in 12" bore size and a variety of capacities for industries where lower pressure ratings can be used.



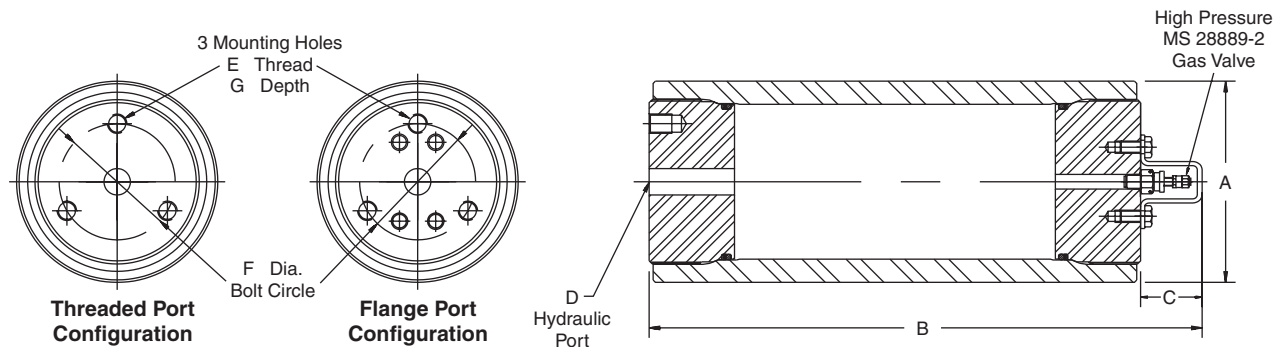
| Model No. <sup>1</sup> | Fluid Volume |         | Gas Volume (cu in) | A (in) | B (in) | C (in) | D-Hydraulic Port                                                 |                  |           | E (in)     | F (in) | G (in) | Weight (lbs) |
|------------------------|--------------|---------|--------------------|--------|--------|--------|------------------------------------------------------------------|------------------|-----------|------------|--------|--------|--------------|
|                        |              |         |                    |        |        |        | SAE No.                                                          | Thread Size (in) | Tube Size |            |        |        |              |
| Oil Service            | (gal)        | (cu in) | (cu in)            |        |        |        |                                                                  |                  |           |            |        |        |              |
| A12K4620K1K            | 20           | 4620    | 4820               |        | 55.75  |        |                                                                  |                  |           |            |        |        | 1048         |
| A12K5775K1K            | 25           | 5775    | 5975               |        | 66.19  |        |                                                                  |                  |           |            |        |        | 1193         |
| A12K6930K1K            | 30           | 6930    | 7130               | 14.02  | 76.62  | 1.62   | 3" SAE Flange Ports (Code 61)<br>See Port Options for Dimensions |                  |           | 7/8-9 (6X) | 9.00   | 1.50   | 1338         |
| A12K9240K1K            | 40           | 9240    | 9440               | ±0.09  | 97.50  |        |                                                                  |                  |           |            |        |        | 1628         |
| A12K11550K1K           | 50           | 11550   | 11750              |        | 118.37 |        |                                                                  |                  |           |            |        |        | 1918         |

**Notes:**

- 1) For Water Service add "W" after construction code, see ["How to Order"](#) information.
- 2) Most SAE #32 fittings are rated for 2000 PSI. If 2000 to 3000 PSI service is required, two options are available; order accumulator with optional standard 2" SAE Code 61 4-bolt flange port by specifying "PL" code when ordering or order the accumulator with a SAE #24 port or smaller, see ["Port Options"](#) for dimensions and ["How to Order"](#).
- 3) See [Port Options](#) for complete listing of optional ports.
- 4) ASME Certified and CE marked accumulators and gas bottles are available.
- 5) When accumulators are to be used with gas bottles, order "Accumulators for Use with Gas Bottles."
- 6) Poppet type (MS28889-2) gas valve standard.

**2000 PSI Accumulators for Use with Gas Bottles**

| Accumulator<br>Model No. | Fluid Volume |         | Gas Volume<br>(cu in) | A<br>(in) | B<br>(in) | D Port (Both Ends)(in)                                           | E<br>(in)       | F<br>(in) | G<br>(lbs) | Weight |
|--------------------------|--------------|---------|-----------------------|-----------|-----------|------------------------------------------------------------------|-----------------|-----------|------------|--------|
|                          | (gal)        | (cu in) |                       |           |           |                                                                  |                 |           |            |        |
| A12K4620K3KPNPN          | 20           | 4620    | 4820                  |           | 54.13     | 3" SAE Flange Ports (Code 61)<br>See Port Options for Dimensions | 7/8 - 9<br>(6X) | 9.00      | 1.50       | 1048   |
| A12K5775K3KPNPN          | 25           | 5775    | 5975                  |           | 64.56     |                                                                  |                 |           |            | 1193   |
| A12K6930K3KPNPN          | 30           | 6930    | 7130                  | 14.02     | 75.00     |                                                                  |                 |           |            | 1338   |
| A12K9240K3KPNPN          | 40           | 9240    | 9440                  | ±0.09     | 95.88     |                                                                  |                 |           |            | 1628   |
| A12K11550K3KPNPN         | 50           | 11550   | 11750                 |           | 116.75    |                                                                  |                 |           |            | 1918   |

**2000 PSI Auxiliary Gas Bottles**

| Model No.    | Gas Volume       |                   | A<br>(in) | B<br>(in) | C<br>(in) | D Port                                                           | E<br>(in)       | F<br>(in) | G<br>(in) | Weight<br>(lbs) |
|--------------|------------------|-------------------|-----------|-----------|-----------|------------------------------------------------------------------|-----------------|-----------|-----------|-----------------|
| Gas Bottle   | Nominal<br>(gal) | Actual<br>(cu in) |           |           |           |                                                                  |                 |           |           |                 |
| B12K4620K1K  | 20               | 4620              |           | 55.75     |           | 3" SAE Flange Ports (Code 61)<br>See Port Options for Dimensions | 7/8 - 9<br>(6X) | 9.00      | 1.50      | 957             |
| B12K5775K1K  | 25               | 6288              |           | 66.19     |           |                                                                  |                 |           |           | 1167            |
| B12K6930K1K  | 30               | 7443              | 14.02     | 76.62     | 1.62      |                                                                  |                 |           |           | 1312            |
| B12K9240K1K  | 40               | 9783              | ±0.09     | 97.50     |           |                                                                  |                 |           |           | 1606            |
| B12K11550K1K | 50               | 12093             |           | 118.37    |           |                                                                  |                 |           |           | 1896            |



## Water Service Option (W)

Piston accumulators are available for use with water as the fluid media. Modifications include electroless nickel plating all surfaces and metal parts. Consult factory for details.

## Seals

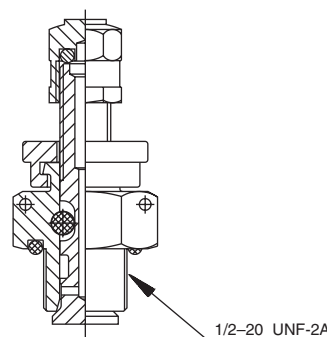
| Seal Code | Polymer                | **Recommended Operating Temperature Range | Maximum Temperature with Reduced Life | General Application and Compatibility*                                                                                   |
|-----------|------------------------|-------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| K         | Buna-Nitrile           | -20°F to 165°F<br>-29°C to 74°C           | 200°F<br>93°C                         | Parker's Standard Compound – Compatible with most mineral oil-based fluids                                               |
| E         | Fluorocarbon Elastomer | -10°F to 250°F<br>-23°C to 121°C          | 400°F<br>204°C                        | Compatible with most mineral oil-based fluids at higher temperatures and some exotic fluids                              |
| D         | Ethylene Propylene     | -40°F to 250°F<br>-40°C to 121°C          | 300°F<br>149°C                        | Compatible with most phosphate ester fluids and some synthetic fluids                                                    |
| H         | Hydrogenated Nitrile   | -45°F to 325°F<br>-43°C to 162°C          | 350°F<br>177°C                        | Compatible with most oil-based and biodegradable fluids, maintains sealing effectiveness at a wide range of temperatures |
| Q         | Low Temp. Nitrile      | -45°F to 160°F<br>-43°C to 71°C           | 200°F<br>93°C                         | Compatible with most mineral oil-based fluids and maintains sealing effectiveness at low temperatures                    |

\*Note: Consult local distributor or factory for fluid compatibility information.

\*\* The temperatures listed indicate the operating temperature range of the seals, not the accumulator. For the Minimum Design Metal Temperature (MDMT) of ASME certified accumulators, [refer to page 28](#).

## Gas Valve Option (M)

The military style (MS) gas valve is available on 2" thru 6" bores as an option (M). Specify when ordering.

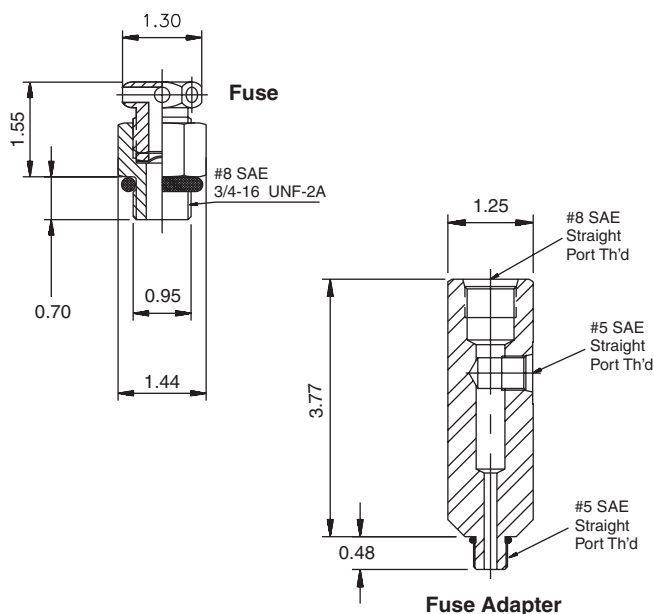


## Safety Fuse Options (F)

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 all piston accumulators by using the "Fuse Adapter" as shown to the right. 4" bore units and above can be equipped with a fuse port machined in the gas cap by specifying the "Safety Fuse Option" (F) at the time of order in the model code, [see "How to Order."](#) The safety fuse assembly and/or fuse adapter must be ordered separately.

| Description                       | Part Number |
|-----------------------------------|-------------|
| Safety Fuse Assembly <sup>1</sup> | 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.



## Optional Ports

The following ports are available as options on all Series 3000 piston accumulators

| SAE Straight Thd. |           |           | Code 61 Flange |           |    |           | NPT       |           |           | BSPP      |           |           | ISO 6149-1 |           |           |
|-------------------|-----------|-----------|----------------|-----------|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Port Size         | Port Code | Min. Bore | Port Size      | Port Code |    | Min. Bore | Port Size | Port Code | Min. Bore | Port Size | Port Code | Min. Bore | Port Size  | Port Code | Min. Bore |
| #5                | TA        | 2"        | 1/2"           | PT        | MT | 3"        | 3/8"      | UT        | 2"        | 3/8"      | RA        | 2"        | M14        | YA        | 2"        |
| #6                | TB        | 2"        | 3/4"           | PU        | MU | 3"        | 1/2"      | UU        | 2"        | 1/2"      | RB        | 2"        | M18        | YB        | 2"        |
| #8                | TC        | 2"        | 1"             | PV        | MV | 3"        | 3/4"      | UV        | 2"        | 3/4"      | RC        | 2"        | M22        | YC        | 2"        |
| #10               | TI        | 2"        | 1 1/4"         | PW        | MW | 3"        | 1"        | UW        | 3"        | 1"        | RD        | 3"        | M27        | YD        | 2"        |
| #12               | TD        | 2"        | 1 1/2"         | PJ        | MJ | 4"        | 1 1/4"    | UX        | 3"        | 1 1/4"    | RE        | 3"        | M33        | YE        | 3"        |
| #16               | TE        | 3"        | 2"             | PL        | ML | 6"        | 1 1/2"    | UY        | 4"        | 1 1/2"    | RF        | 4"        | M42        | YF        | 3"        |
| #20               | TF        | 3"        | 2 1/2"         | PM        | MM | 6"        | 2"        | UZ        | 4"        | 2"        | RG        | 4"        | —          | —         | —         |
| #24               | TG        | 4"        | 3"             | PN        | MN | 7"        | —         | —         | —         | —         | —         | —         | —          | —         | —         |

### Note:

- 1) 3000 PSI SAE Code 61 (ISO 6162) Flange dimensions are shown below.
- 2) BSPT and Metric ports available, consult factory.

## SAE 4-Bolt Flange Port Dimensions

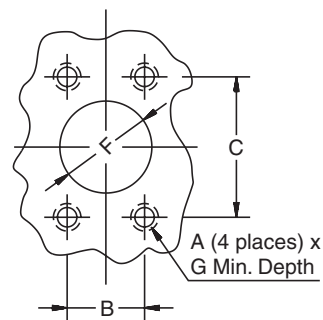
Standard Pressure – 3000 PSI (207 Bar)

| Flange Size | SAE Code 61 Flange Dimensions (in.) |       |       |       |       |
|-------------|-------------------------------------|-------|-------|-------|-------|
| in          | A                                   | B     | C     | F     | G     |
| 1 1/2"      | 1/2 - 13                            | 1.406 | 2.750 | 1 1/2 | 1.062 |
| 2"          | 1/2 - 13                            | 1.688 | 3.062 | 2     | 1.062 |
| 2 1/2"      | 1/2 - 13                            | 2.000 | 3.500 | 2 1/2 | 1.188 |
| 3"          | 5/8 - 11                            | 2.438 | 4.188 | 3     | 1.188 |

**Note:** Some flanges using this bolt pattern are not rated for 3000 PSI.

| Flange Size | Metric ISO6162 Flange Dimensions (mm) |      |       |    |      |
|-------------|---------------------------------------|------|-------|----|------|
| mm          | A                                     | B    | C     | F  | G    |
| 38          | M12                                   | 35.7 | 69.9  | 38 | 26.9 |
| 51          | M12                                   | 42.9 | 77.8  | 51 | 26.9 |
| 64          | M12                                   | 50.8 | 88.9  | 64 | 30.1 |
| 76          | M16                                   | 61.9 | 106.4 | 76 | 30.1 |

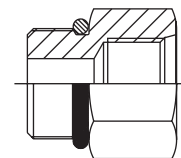
**Note:** Some flanges using this bolt pattern are not rated for 3000 PSI.



## Port Adapters

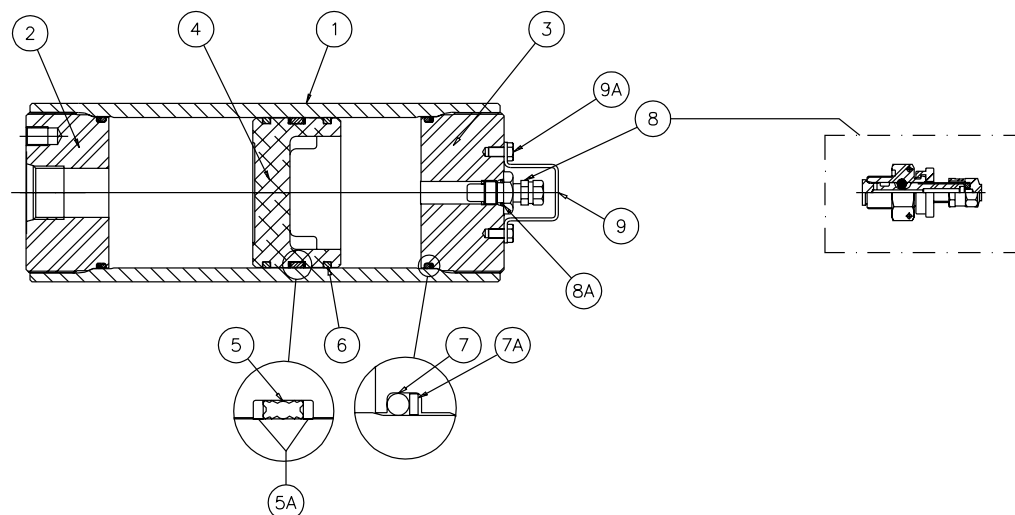
A wide variety of port adapters are offered for those that wish to convert Parker's standard SAE port offerings to NPTF or smaller SAE port sizes.

For a complete listing, [see Accumulator Accessories](#).



## Seal Kits

Seal Kits are available for all piston accumulator models. When ordering seal kits, please supply the complete model and serial numbers from the name plate and specify fluid type and operating temperature.



## Parts List

- 1 Body
- 2 Hydraulic Cap
- 3 Gas Cap
- 4 Piston
- 5 V-O-ring Piston Seal
- 5A V-O-ring Backups
- 6 PTFE Glide Rings
- 7 O-ring
- 7A O-ring Backup
- 8 Gas Valve
- 8A Gas Valve O-ring
- 9 Gas Valve Guard
- 9A Screw

### 3000 PSI Seal Kit Numbers (Includes items 5, 5A, 6, 7, 7A, 8A)

| Material             | Bore Size  |            |            |            |            |            |            |
|----------------------|------------|------------|------------|------------|------------|------------|------------|
|                      | 2"         | 3"         | 4"         | 6"         | 7"         | 9"         | 12"        |
| Buna-Nitrile (Std.)  | RK0200K000 | RK0300K000 | RK0400K000 | RK0600K000 | RK0700K000 | RK0900K000 | RK1200K000 |
| Fluorocarbon         | RK0200E000 | RK0300E000 | RK0400E000 | RK0600E000 | RK0700E000 | RK0900E000 | RK1200E000 |
| EPR                  | RK0200D000 | RK0300D000 | RK0400D000 | RK0600D000 | RK0700D000 | RK0900D000 | CF*        |
| Hydrogenated Nitrile | RK0200H000 | RK0300H000 | RK0400H000 | RK0600H000 | RK0700H000 | CF*        | CF*        |
| Low Temp Nitrile     | RK0200Q000 | RK0300Q000 | RK0400Q000 | RK0600Q000 | RK0700Q000 | RK0900Q000 | CF*        |

\*CF = Consult Factory

## Mounting, Charging & Gauging Accessories

Parker offers a wide variety of mounting, charging and gauging accessories. See ["Accumulator Accessories."](#)



## Special Options

If your application requires a piston accumulator, gas bottle, or special option that falls outside of Parker's broad offering, consult your local distributor, Parker representative, or the factory with your specific requirements. Parker has the manufacturing and engineering expertise to design and build piston accumulators to your exacting requirements, from simple modifications of standard units to complete designs. Some example of Parker's past special designs include:

- Special and Stainless Steel Materials
- Piston Position and Velocity Sensors and Switches
- Special Seals
- Non-Standard Capacities
- Tie Rod Construction
- Special Certifications
- Spring & Weight Loaded

***Consult the experts at Parker with your next piston accumulator requirement!***

## How to Order Piston Accumulators

Piston 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   | Nominal Bore Size | Type of Construction | Options  | Capacity    | Design Pressure | Design Number | Seal Compound | Hyd. Port Modification | Gas Port Modification |
|----------|-------------------|----------------------|----------|-------------|-----------------|---------------|---------------|------------------------|-----------------------|
| <b>A</b> | <b>7</b>          | <b>K</b>             | <b>-</b> | <b>2310</b> | <b>D</b>        | <b>1</b>      | <b>K</b>      | <b>-</b>               | <b>-</b>              |

| Series   |             |
|----------|-------------|
| <b>A</b> | Accumulator |
| <b>B</b> | Gas Bottle  |

| Nominal Bore Size |           |
|-------------------|-----------|
| <b>2</b>          | 2 inches  |
| <b>3</b>          | 3 inches  |
| <b>4</b>          | 4 inches  |
| <b>6</b>          | 6 inches  |
| <b>7</b>          | 7 inches  |
| <b>8</b>          | 8 inches  |
| <b>9</b>          | 9 inches  |
| <b>12</b>         | 12 inches |

| Type of Construction |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|
| <b>N</b>             | Threaded both ends non-ASME mat'l standard on 2", 4", 6", 7" & 8" (3000 PSI fatigue design tested) |
| <b>K</b>             | Threaded both ends A.S.M.E. mat'l standard on 7" & up                                              |
| <b>L</b>             | Same as K with A.S.M.E. approval stamp 7" & up. Available as special on smaller sizes              |
| <b>E</b>             | Threaded both ends, CE marked (1 liter and above) or SEP marked (under 1 liter)                    |

| Options      |                                    |
|--------------|------------------------------------|
| <b>Blank</b> | Standard Gas Cap                   |
| <b>W</b>     | Water Service                      |
| <b>F</b>     | SAE Fuse Port *                    |
| <b>G</b>     | SAE Fuse Port *, Water Service     |
| <b>M</b>     | MS28889-2 Gas Valve                |
| <b>L</b>     | MS28889-2 Gas Valve, Water Service |
| <b>P</b>     | Fuse* and MS28889-2                |
| <b>R</b>     | Fuse* and MS28889-2, Water Service |

| Bore Size/Capacity |                           |
|--------------------|---------------------------|
| <b>0005</b>        | 5 cu. in. (0.08 liters)   |
| <b>0010</b>        | 10 cu. in. (0.16 liters)  |
| <b>0029</b>        | 29 cu. in. (0.48 liters)  |
| <b>0058</b>        | 58 cu. in. (0.95 liters)  |
| <b>0029</b>        | 29 cu. in. (0.48 liters)  |
| <b>0058</b>        | 58 cu. in. (0.95 liters)  |
| <b>0090</b>        | 90 cu. in. (1.47 liters)  |
| <b>0116</b>        | 116 cu. in. (1.90 liters) |
| <b>0183</b>        | 183 cu. in. (3.00 liters) |
| <b>0058</b>        | 58 cu. in. (0.95 liters)  |
| <b>0116</b>        | 116 cu. in. (1.90 liters) |
| <b>0231</b>        | 1 gal. (3.79 liters)      |
| <b>0347</b>        | 1½ gal. (5.69 liters)     |
| <b>0578</b>        | 2½ gal. (9.47 liters)     |
| <b>0231</b>        | 1 gal. (3.79 liters)      |
| <b>0347</b>        | 1½ gal. (5.69 liters)     |
| <b>0578</b>        | 2½ gal. (9.47 liters)     |
| <b>0924</b>        | 4 gal. (15.1 liters)      |
| <b>1155</b>        | 5 gal. (18.9 liters)      |
| <b>1733</b>        | 7½ gal. (28.4 liters)     |
| <b>2310</b>        | 10 gal. (37.9 liters)     |
| <b>0578</b>        | 2½ gal. (9.47 liters)     |
| <b>1155</b>        | 5 gal. (18.9 liters)      |
| <b>1733</b>        | 7½ gal. (28.4 liters)     |
| <b>2310</b>        | 10 gal. (37.9 liters)     |
| <b>3465</b>        | 15 gal. (56.8 liters)     |
| <b>5775</b>        | 25 gal. (94.6 liters)     |
| <b>0578</b>        | 2½ gal. (9.47 liters)     |
| <b>1155</b>        | 5 gal. (18.9 liters)      |
| <b>1733</b>        | 7½ gal. (28.4 liters)     |
| <b>2310</b>        | 10 gal. (37.9 liters)     |
| <b>3465</b>        | 15 gal. (56.8 liters)     |
| <b>4620</b>        | 20 gal. (75.7 liters)     |
| <b>5775</b>        | 25 gal. (94.6 liters)     |
| <b>6930</b>        | 30 gal. (113.6 liters)    |
| <b>5775</b>        | 25 gal. (94.6 liters)     |
| <b>6930</b>        | 30 gal. (114 liters)      |
| <b>9240</b>        | 40 gal. (151 liters)      |
| <b>11550</b>       | 50 gal. (189 liters)      |

*Consult factory for other available sizes.*

| Design Pressure    |                           |
|--------------------|---------------------------|
| <b>D</b>           | 3000 PSI (All Bore Sizes) |
| <b>K</b>           | 2000 PSI (12" Bore only)  |
| <b>X</b>           | Other                     |
| For CE Marked Only |                           |
| <b>L</b>           | 250 Bar (All Bore Sizes)  |
| <b>H</b>           | 350 Bar (See page 63)     |

| Design Number |                                                                          |
|---------------|--------------------------------------------------------------------------|
| <b>1</b>      | Standard                                                                 |
| <b>2</b>      | Metric Mounting Holes & Hyd. Port (BSPP Standard) Specify Optional Ports |
| <b>3</b>      | Optional Port (Hyd. or Gas, See Port Table)                              |
| <b>***</b>    | Special Design                                                           |

| Hydraulic and Gas Port Modifications Designated by 2 Digits |                            |              |                       |
|-------------------------------------------------------------|----------------------------|--------------|-----------------------|
| 1st Digit                                                   | Style                      | 2nd Digit    | Description           |
| <b>Blank</b>                                                | <b>Std.</b>                | <b>Blank</b> | <b>Std.</b>           |
| <b>T</b>                                                    | SAE Straight Thread Ports  | <b>A</b>     | SAE #5 (1/2 - 20)     |
|                                                             |                            | <b>B</b>     | SAE #6 (9/16 - 18)    |
|                                                             |                            | <b>C</b>     | SAE #8 (3/4 - 16)     |
|                                                             |                            | <b>D</b>     | SAE #12 (1 1/16 - 12) |
|                                                             |                            | <b>E</b>     | SAE #16 (1 5/16 - 12) |
|                                                             |                            | <b>F</b>     | SAE #20 (1 5/8 - 12)  |
|                                                             |                            | <b>G</b>     | SAE #24 (1 7/8 - 12)  |
|                                                             |                            | <b>H</b>     | SAE #32 (2 1/2 - 12)  |
|                                                             |                            | <b>I</b>     | SAE #10 (7/8 - 14)    |
| <b>P</b>                                                    | Flange (Code 61)           | <b>J</b>     | 1 1/2"                |
|                                                             |                            | <b>L</b>     | 2"                    |
|                                                             |                            | <b>M</b>     | 2 1/2"                |
| <b>M</b>                                                    | Metric Flange per ISO 6162 | <b>N</b>     | 3"                    |
|                                                             |                            | <b>T</b>     | 1/2"                  |
|                                                             |                            | <b>U</b>     | 3/4"                  |
|                                                             |                            | <b>V</b>     | 1"                    |
|                                                             |                            | <b>W</b>     | 1 1/4"                |
| <b>U</b>                                                    | NPTF (Not Recommended)     | <b>T</b>     | 3/8"                  |
|                                                             |                            | <b>U</b>     | 1/2"                  |
|                                                             |                            | <b>V</b>     | 3/4"                  |
|                                                             |                            | <b>W</b>     | 1"                    |
|                                                             |                            | <b>X</b>     | 1 1/4"                |
|                                                             |                            | <b>Y</b>     | 1 1/2"                |
|                                                             |                            | <b>Z</b>     | 2"                    |
| <b>R</b>                                                    | BSPP                       | <b>A</b>     | 3/8 - 19              |
| <b>B</b>                                                    | Parallel BSPT              | <b>B</b>     | 1/2 - 14              |
| <b>G</b>                                                    | Taper Port                 | <b>C</b>     | 3/4 - 14              |
| <b>Y</b>                                                    | Metric ISO 6149-1          | <b>D</b>     | 1 - 11                |
|                                                             |                            | <b>E</b>     | 1 1/4 - 11            |
|                                                             |                            | <b>F</b>     | 1 1/2 - 11            |
|                                                             |                            | <b>G</b>     | 2 - 11                |
|                                                             |                            | <b>A</b>     | M14 x 1.5             |
|                                                             |                            | <b>B</b>     | M18 x 1.5             |
|                                                             |                            | <b>C</b>     | M22 x 1.5             |
|                                                             |                            | <b>D</b>     | M27 x 2               |
|                                                             |                            | <b>E</b>     | M33 x 2               |
|                                                             |                            | <b>F</b>     | M42 x 2               |
|                                                             |                            | <b>G</b>     | M48 x 2               |

**Example of Optional Port Accumulator**

**A 4 N 0231 D 3 K T C U V**

Non-std. Port      SAE #8 Hyd. Port      NPT 3/4" Gas Port

| Standard Ports Available (See Port Modifications Table if Using Other Than Standard Ports Shown Below) |                       |                   |
|--------------------------------------------------------------------------------------------------------|-----------------------|-------------------|
| Bore Size                                                                                              | Standard Port Sizes   | Metric Port Sizes |
| 2"                                                                                                     | SAE #12               | 3/4               |
| 3"                                                                                                     | SAE #12               | 3/4               |
| 4"                                                                                                     | SAE #20               | 1                 |
| 6"                                                                                                     | SAE #24               | 1                 |
| 7"                                                                                                     | SAE #32               | ISO 6162          |
| 8"                                                                                                     | SAE #32               | ISO 6162          |
| 9"                                                                                                     | SAE #32               | ISO 6162          |
| 12"                                                                                                    | 3" SAE Flange Code 61 | ISO 6162          |

| Seal Compound (See Catalog for Temperature Settings) |                           |
|------------------------------------------------------|---------------------------|
| <b>K</b>                                             | Buna-Nitrile (Std)        |
| <b>E</b>                                             | Fluoroelastomer           |
| <b>D</b>                                             | EPR                       |
| <b>H</b>                                             | Hydrogenated Nitrile      |
| <b>Q</b>                                             | Low Temp.                 |
| <b>S</b>                                             | Special (to be specified) |