



Bladder Accumulators

SB Series

Description

The bladder accumulator consists of a fluid section and a gas section, with the bladder acting as a gas-proof screen. The fluid around the bladder is connected with the hydraulic circuit, so that the bladder accumulator draws in fluid when the pressure increases thus compressing the gas. When the pressure drops, the compressed gas expands and forces the stored fluid into the circuit.

Construction

HYDAC bladder accumulators consist of a welded or forged pressure vessel (shell), a bladder and ports for gas and fluid inlet. The gas and fluid sides are separated by the bladder.



Bladder Materials

Not all fluids are compatible with every elastomer at all temperatures. Therefore, **HYDAC** offers the following choice of elastomers:

- NBR (Standard Nitrile)
- IIR (Butyl)
- LT-NBR (Low Temp. Nitrile)
- FPM (Fluorelastomer)
- ECO (Epichlorohydrin)
- Others (available upon request)

To determine which material is appropriate . . . **Always Refer To Fluid Manufacturer's Recommendation.**

Corrosion Protection

For use with certain aggressive or corrosive fluids, or in a corrosive environment, **HYDAC** offers protective coatings and corrosive resistant materials (i.e. stainless steel) for the accumulator parts that come in contact with the fluid, or are exposed to the hostile environment.

Mounting Position

HYDAC bladder accumulators can be installed vertically, at any angle, or horizontally depending upon the application. When installing vertically or at an angle, the fluid port must be at the bottom. On certain applications listed below, specific positions are preferable:

- **Energy Storage:** vertical
- **Pulsation Damping:** any position from vertical to horizontal
- **Maintaining Constant Pressure:** any position from vertical to horizontal
- **Volume Compensation:** any position from vertical to horizontal

System Mounting

HYDAC bladder accumulators are designed to be screwed directly onto the system. We also recommend the use of our mounting components to minimize risk of failure due to system vibrations.



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SB Series (Continued)

Applications

Some common applications of bladder accumulators are:

- Agricultural Machinery & Equip.
- Mining Machinery & Equipment
- Forestry Equipment
- Mobile & Construction Equipment
- Oil Field & Offshore
- Off- Road Equipment
- Machine Tools

Bottom Repairable – SB 330 . . . (3000 psi)

Size	Nominal Volume (gal)	Eff. Gas Volume (in ³)	Weight (lbs.)	Diameter (Inches)	Inlet (SAE NPTF)	Flow (gpm)
1	0.25	66	10	4.6	1 $\frac{1}{4}$ -12 UN	60
4	1	226	30	6.6	1 $\frac{5}{8}$ -12 UN	160
6	1.5	340	33	6.6	1 $\frac{5}{8}$ -12 UN	160
10	2.5	566	86	9.1	1 $\frac{7}{8}$ -12 UN	240
20	5	1125	140	9.1	1 $\frac{7}{8}$ -12 UN	240
32	10	2080	226	9.1	1 $\frac{7}{8}$ -12 UN	240
42	11	2320	270	9.1	1 $\frac{7}{8}$ -12 UN	240
54	15	3205	330	9.1	1 $\frac{7}{8}$ -12 UN	240

Bottom Repairable – SB 600 . . . (5000 psi)

Series	Nominal Volume (gal)	Eff. Gas Volume (in ³)	Weight (lbs.)	Diameter (Inches)	Inlet (SAE)	Flow (gpm)
1	0.25	66	17	4.8	1 $\frac{5}{8}$ -12 UN	160
4	1	226	33	6.8	1 $\frac{5}{8}$ -12 UN	160
10	2.5	566	114	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240
20	5	1125	162	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240
32	10	2080	250	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240
54	15	3180	370	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240

Top Repairable – SB 330 TR . . . (3000 psi)

Series	Nominal Volume (gal)	Eff. Gas Volume (in ³)	Weight (lbs.)	Diameter (Inches)	Inlet (SAE)	Flow (gpm)
10	2.5	566	94	9.1	1 $\frac{7}{8}$ -12 UN	240
20	5	1125	140	9.1	1 $\frac{7}{8}$ -12 UN	240
32	10	2080	226	9.1	1 $\frac{7}{8}$ -12 UN	240
42	11	2320	270	9.1	1 $\frac{7}{8}$ -12 UN	240
54	15	3205	330	9.1	1 $\frac{7}{8}$ -12 UN	240

Top Repairable – SB 600 TR . . . (5000 psi)

Series	Nominal Volume (gal)	Eff. Gas Volume (in ³)	Weight (lbs.)	Diameter (Inches)	Inlet (SAE)	Flow (gpm)
20	5	1125	172	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240
32	10	2080	260	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240
54	15	3205	380	9.1 - 9.7	1 $\frac{7}{8}$ -12 UN	240

Top Repairable and High Flow – SB 330 NTR . . . (3000 psi)

Series	Nominal Volume (gal)	Eff. Gas Volume (in ³)	Weight (lbs.)	Diameter (Inches)	Inlet (SAE)	Flow (gpm)
20	5	1125	161	9.1	1 $\frac{7}{8}$ -12 UN	396
32	10	2080	247	9.1	1 $\frac{7}{8}$ -12 UN	396
54	15	3205	352	9.1	1 $\frac{7}{8}$ -12 UN	396