BLADDER ACCUMULATORS

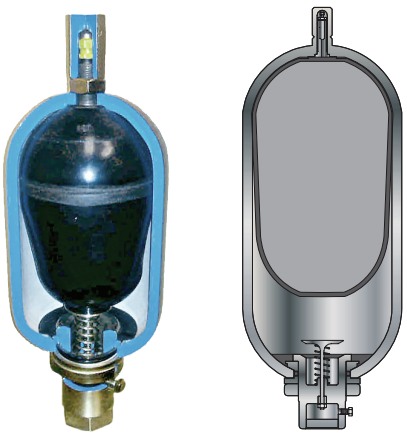
Freudenberg Sealing Technologies Bladder Accumulators are designed for industrial and commercial fluid power applications by making use of the relative compressibility of an inert gas versus a fluid, and are one of the most commonly used components in industrial and commercial fluid power systems worldwide. They are utilized for a wide variety of applications, including: energy storage, shock or pulsation dampening, leakage compensation, thermal expansion, energy conservation/supplement pump flows, noise reduction, and improved fluid system response times.

Our Bladder Accumulators are constructed of high strength seamless chrome moly carbon steel shells, with high grade elastomeric bladders, which are assembled in accordance with ASME pressure vessel standards. Available in a variety of industry standard capacities and pressures, the bladder type excels at absorbing system shocks and pulsations, especially those of high frequency/low modulation.

Widely used and accepted in global industry, the bladder type is available with a variety of optional port connections and anti-corrosive coatings, both externally and internally. Due to the internal membrane, the bladder-type accumulator is highly resistant to fluid contaminants, and can be assembled to function in lower temperature environments if necessary.

VALUES FOR THE CUSTOMER

- Widely accepted industry-standard design
- Quick response to fluid system demands
- Very contaminant tolerant
- Completely repairable
- A variety of models available, in stock and ready to ship

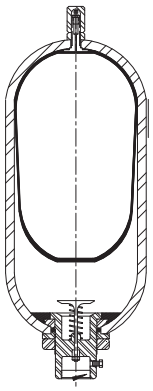


FREUDENBERG
SEALING TECHNOLOGIES

FREUDENBERG
INNOVATING TOGETHER

FEATURES AND BENEFITS

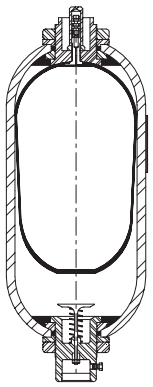
Bottom Repairable TBR SERIES
The TBR series, available in 3000 psi (207 bar), 4000 psi (276 bar), 5000 psi (345 bar), and 6600 psi (455 bar) models, are NAFTA industry standard volumes and designs. Completely repairable, the various units are offered with 22 mm carbon steel bladder stems as standard, with 51 mm bladder stems as optional. Bladder bags and seal components are available as Buna-Nitrile standard; Other elastomers (FKM, Butyl, EPR) are optional. Both internal and external anti-corrosion coatings are available on request, such as Water Service units with SS wetted components.



Model Number	Gas Capacity		Fluid Capacity		Dry Weight	
	In.³	Cm.³	Gallon	Liters	Lbs.	Kg.
TBR30-2.5NMFA*	600	9,832	2.5	10	80	36
TBR30-5NMFA*	1,203	19,714	5	19	120	54
TBR30-10NMFA*	2,259	37,018	10	38	220	100
TBR30-11NMFA*	2,535	41,541	11	42	240	109
TBR30-15NMFA*	3,440	56,372	15	57	305	138

* = Bladder/Seal Material Codes—Buna-N is standard
N = Buna-N B = Butyl E = EPR V =FKM

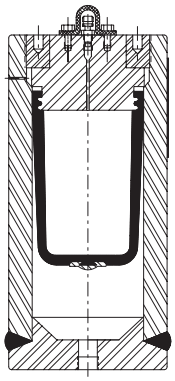
Top Repairable TBRT SERIES
The Top Repairable (TBRT SERIES) design is available in all pressures and all industry standard sizes (with exception of one quart/0.94 liters, and one gallon/3.8 liters sizes) and many of the same options as the TBR series. Top repairability allows a unit to be disassembled and the bladder bag replaced while still mounted to the hydraulic system, as long as it can be isolated from the system pressure. Additionally, a selection of TBRT models are available in stainless steel construction for corrosive or caustic applications.



Model Number	Gas Capacity		Fluid Capacity		Dry Weight	
	In.³	Cm.³	Gallon	Liters	Lbs.	Kg.
TBRT30-2.5NMFA*	600	9,832	2.5	10	80	36
TBRT30-5NMFA*	1,203	19,714	5	19	120	54
TBRT30-10NMFA*	2,259	37,018	10	38	220	100
TBRT30-11NMFA*	2,535	41,541	11	42	240	109
TBRT30-15NMFA*	3,440	56,372	15	57	305	138

* = Bladder/Seal Material Codes—Buna-N is standard
N = Buna-N B = Butyl E = EPR V =FKM

Open Top Repairable EBR SERIES EconoLator II®
The EconoLator II® repairable product is a transition from piston-type to bladder-/diaphragm-type accumulators, incorporating features of both types. The cylindrical steel body with threaded gas head is similar to piston-type, whereas the open top bladder is replaceable if necessary, and available in a variety of sizes and elastomer materials. Available in three sizes (one pint, quart, or gallon) (0.47, 0.94, or 3.8 liters), and three standard pressure ratings (2K, 3K, 5K), this model can be designed for higher pressure (up to 517 bar) with the use of a threaded, fluid end cap, and can be constructed of stainless steel if desired.



Model Number	Gas Capacity		Fluid Capacity		Dry Weight	
	In.³	Cm.³	Gallon	Liters	Lbs.	Kg.
EBR30-1NA9*	29	475	0.12	0.45	11	5
EBR30-2NAB*	58	950	0.25	1	28	13
EBR30-8NAD*	231	3,785	1	4	60	27

* = Bladder/Seal Material Codes—Buna-N is standard
N = Buna-N B = Butyl E = EPR V =FKM

Contact Freudenberg Sealing Technologies for more information about the variety of models and sizes available.

www.fst.com