



DIAPHRAGM ACCUMULATORS

NEW VERSATILITY WITH OPERATING PRESSURES UP TO 250 BAR

Our new generation of Diaphragm Accumulators offers exceptional functional reliability and durability to open up versatile application areas with operating pressures up to 250 bar (with higher mwp upon request).

In modern accumulators the hydraulic fluid is separated from the gas by a membrane, a rubber bladder or a piston. Today, machines with hydraulic drives would be unthinkable without these diaphragm accumulators. The hydraulic accumulator supports the hydraulics within an exceptionally wide spectrum of applications, from presses to construction and agricultural machinery, to modern wind turbines. It is particularly important to ensure that the correct configuration of hydraulic accumulator is chosen according to specific design requirements. With the introduction of the new diaphragm accumulator range with operating pressures of up to 250 bar, Freudenberg Sealing Technologies offers one-stop solutions with a comprehensive range of first-class quality services.

Innovative solutions in material, design and functionality— Freudenberg Sealing Technologies has focused on application specific developments in advancing diaphragm accumulators technology. For example, our diaphragm accumulators for electro-hydraulic controlled brake systems fundamentally differ from conventional membrane and piston accumulators. Based on the requirements of an electro-hydraulic brake, a metal bellow accumulator was developed, which is distinguished by absolute gas leak-tightness and durability. This innovative accumulator principle is the first time that a flexible metal bellow has been successfully implemented as a separating element.

VALUES TO THE CUSTOMER

- Higher performance spectrum
- Complete 250 bar product portfolio from one source
- Coverage of a wide temperature range using different membrane materials
- Wide range of applications
- Customer-specific solutions

CONVINCING PERFORMANCE

- Optimized design
- High performance
- A comprehensive range of oil and gas connections
- A comprehensive range of membranes and housing materials
- Alternative materials: acrylonitrile butadiene rubber (NBR), ethylenoxide epichlorhydrin rubber (ECO), butyl rubber (IIR), fluororubber (FKM)
- High tensile strength and high permissible dynamic load of the accumulator housing

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TECHNICAL DATA

Freudenberg Sealing Technologies Type	Part Number	Nominal Volume V [L]	Permissible Operating Pressure PS [bar]	Test Pressure (1.5 x PS) PT [bar]	Permissible Working Pressure Range (*) DP [bar]	Working Temperature Range TS [°C]	Max. Permissible Pressure Ratio P0 : P2	Weight kg	Ø+3 mm	H mm	Fluid Port		Hex mm	
											IG			
MBSP 0,07-250	49338274	0.07	250	375	140	-35 / 80	1 : 8	0.8	64	118	9/16-18 UNF-2B	SAE 6	32	
	49338273													-10 / 80
MBSP 0,16-250	49338272	0.16	250	375	140	-35 / 80	1 : 6	1.0	75	126	9/16-18 UNF-2B	SAE 6	32	
	49338271													-10 / 80
MBSP 0,32-210	49338276	0.32	210	315	120	-35 / 80	1 : 8	1.8	95	148	3/4-16 UNF-2B	SAE 8	41	
	49338275													-10 / 80
MBSP 0,50- 210	49338278	0.5	210	315	100	-35 / 80	1 : 8	2.1	107	158	3/4-16 UNF-2B	SAE 8	41	
	49338277													-10 / 80
MBSP 0,75- 210	49338292	0.75	210	315	93	-35 / 80	1 : 8	2.7	122	173	3/4-16 UNF-2B	SAE 8	41	
	49338291													-10 / 80
MBSP 0,75-250	49338279	0.75	250	375	140	-35 / 80	1 : 8	3.0	124	176	3/4-16 UNF-2B	SAE 8	41	
	49338290													-10 / 80
MBSP 1,0-210	49338363	1.0	210	315	115	-35 / 80	1 : 8	4.0	136	187	3/4-16 UNF-2B	SAE 8	41	
	49338355													-10 / 80
MBSP 1,4-210	49338259	1.4	210	315	140	-35 / 80	1 : 8	4.2	147	198	3/4-16 UNF-2B	SAE 8	41	
	49338258													-10 / 80
MBSP 1,4-250	49338341	1.4	250	375	140	-35 / 80	1 : 8	5.5	152	197	3/4-16 UNF-2B	SAE 8	41	
	49338340													-10 / 80
MBSP 2,0-250	49338344	2.0	250	375	140	-35 / 80	1 : 6	8.7	156	253	3/4-16 UNF-2B	SAE 8	41	
	49338345													-10 / 80
	49338346										-35 / 80	1 1/16-12 UNF-2B	SAE 12	41
	49338342										-10 / 80			
MBSP 2,8-250	49338348	2.8	250	375	140	-35 / 80	1 : 6	8.4	169	268	3/4-16 UNF-2B	SAE 8	41	
	49338347													-10 / 80
	49338360										-35 / 80	1 1/16-12 UNF-2B	SAE 12	41
	49338349										-10 / 80			
MBSP 3,5-250	49338362	3.5	250	375	140	-35 / 80	1 : 4	10.2	169	316	1 1/16-12 UNF-2B	SAE 12	41	
	49338361													-10 / 80

NOTES:

- (1) Working fluid: mineral oil qualified for diaphragm material ECO, fluid group II according to PED 97/23/EC
(2) Gas port: M28 x 1.5—charging valve
(3) Maximum permissible nitrogen pressure: P0 max. = 130 bar
(4) All accumulators are designed, manufactured and tested according to the requirements of PED
(*) Permissible working pressure range represents dynamic housing fatigue 2 mio. pressure cycles