

DIAPHRAGM ACCUMULATOR

THE NEW VERSATILITY WITH OPERATING PRESSURES UP TO 350 BAR

Our new generation of Diaphragm Accumulators offer exceptional functional reliability and durability and open up versatile application areas with operating pressures up to 350 bar.

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 hydraulic accumulators. The hydraulic accumulator supports the oil-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 specified according to different design requirements. With the introduction of the new Diaphragm Accumulator range with operating pressures of up to 350 bar, Freudenberg Sealing Technologies offers onestop- solutions with a comprehensive range of first-class quality services.

Innovative solutions in material, design and functionality

Freudenberg Sealing Technologies, as the leading technology specialist have applied their innovative power to advance their Hydraulic Accumulators focusing on application specific developments. The outcome: excellent features for the application areas you require. For example, our hydraulic 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 distinguishes itself 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.

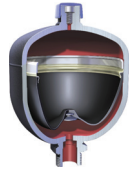
Convincing performance:

- Optimised 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

YOUR BENEFITS AT A GLANCE

- Higher performance spectrum
- Complete 350 bar product portfolio from one source
- Coverage of a wide temperature range using different membrane materials
- Wide range of applications
- Customer-specific solutions

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TECHNICAL DATA

A COMPREHENSIVE RANGE OF DIAPHRAGM ACCUMULATORS:

| type | article no.* | nominal volume [l] | permissible operating pressure [bar] | oil-port | | | gas-port | Ø [mm] | height [mm] | weight ca. [kg] | P0 : P2** max. permissible pressure ratio |
|---------------|------------------|-----------------------|---|----------|-------|---------|----------|-----------|----------------|--------------------|--|
| | | | | SW | IG | AG | | | | | |
| MBSP 0,07-250 | 007-1315-013-6X1 | 0.07 | 250 | 6kt32 | G1/2" | - | M28x1.5 | 64 | 118 | 0.7 | 1:8 |
| MBSP 0,07-250 | 007-1315-074-6X1 | 0.07 | 250 | 6kt19 | - | M14x1.5 | M28x1.5 | 64 | 119 | 0.7 | 1:8 |
| MBSP 0,16-250 | 016-1315-024-6X1 | 0.16 | 250 | 6kt32 | G1/2" | - | M28x1.5 | 75 | 126 | 1.0 | 1:6 |
| MBSP 0,32-210 | 032-1315-044-6X1 | 0.32 | 210 | 6kt32 | G1/2" | - | M28x1.5 | 92 | 141 | 1.5 | 1:8 |
| MBSP 0,50-210 | 050-1315-013-6X1 | 0.5 | 210 | 6kt41 | G1/2" | - | M28x1.5 | 107 | 159 | 2.0 | 1:8 |
| MBSP 0,50-210 | 050-1315-023-6X1 | 0.5 | 210 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 107 | 170 | 2.0 | 1:8 |
| MBSP 0,50-330 | 050-1315-033-7X1 | 0.5 | 330 | 6kt41 | G1/2" | - | M28x1.5 | 110 | 169 | 2.7 | 1:8 |
| MBSP 0,50-330 | 050-1315-013-7X1 | 0.5 | 330 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 110 | 180 | 2.7 | 1:8 |
| MBSP 0,60-330 | 060-1315-013-7X1 | 0.6 | 330 | 6kt41 | G1/2" | - | M28x1.5 | 110 | 178 | 3.0 | 1:4 |
| MBSP 0,60-330 | 060-1315-023-7X1 | 0.6 | 330 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 110 | 189 | 3.0 | 1:4 |
| MBSP 0,75-210 | 075-1315-043-6X1 | 0.75 | 210 | 6kt41 | G1/2" | - | M28x1.5 | 122 | 173 | 2.6 | 1:8 |
| MBSP 0,75-210 | 075-1315-053-6X1 | 0.75 | 210 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 122 | 184 | 2.6 | 1:8 |
| MBSP 0,75-250 | 075-1315-063-6X1 | 0.75 | 250 | 6kt41 | G1/2" | - | M28x1.5 | 124 | 176 | 3.2 | 1:8 |
| MBSP 0,75-250 | 075-1315-073-6X1 | 0.75 | 250 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 124 | 187 | 3.2 | 1:8 |
| MBSP 0,75-350 | 075-1315-012-7X1 | 0.75 | 350 | 6kt41 | G1/2" | - | M28x1.5 | 129 | 180 | 4.0 | 1:8 |
| MBSP 0,75-350 | 075-1315-022-7X1 | 0.75 | 350 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 129 | 191 | 4.0 | 1:8 |
| MBSP 1,0-210 | 100-1315-083-6X1 | 1.0 | 210 | 6kt41 | G1/2" | - | M28x1.5 | 136 | 187 | 3.7 | 1:8 |
| MBSP 1,0-210 | 100-1315-113-6X1 | 1.0 | 210 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 136 | 198 | 3.7 | 1:8 |
| MBSP 1,0-350 | 100-1315-043-7X1 | 1.0 | 350 | 6kt41 | G1/2" | - | M28x1.5 | 129 | 205 | 5.0 | 1:4 |
| MBSP 1,0-350 | 100-1315-053-7X1 | 1.0 | 350 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 129 | 217 | 5.0 | 1:4 |
| MBSP 1,4-140 | 140-1315-033-5X1 | 1.4 | 140 | 6kt41 | G1/2" | - | M28x1.5 | 147 | 198 | 4.5 | 1:8 |
| MBSP 1,4-140 | 140-1315-043-5X1 | 1.4 | 140 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 147 | 209 | 4.5 | 1:8 |
| MBSP 1,4-210 | 140-1315-143-6X1 | 1.4 | 210 | 6kt41 | G1/2" | - | M28x1.5 | 147 | 198 | 4.5 | 1:8 |
| MBSP 1,4-210 | 140-1315-153-6X1 | 1.4 | 210 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 147 | 209 | 4.5 | 1:8 |
| MBSP 1,4-250 | 140-1315-112-6X1 | 1.4 | 250 | 6kt41 | G1/2" | - | M28x1.5 | 152 | 202 | 5.5 | 1:8 |
| MBSP 1,4-250 | 140-1315-122-6X1 | 1.4 | 250 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 152 | 213 | 5.5 | 1:8 |
| MBSP 1,4-350 | 140-1315-012-7X1 | 1.4 | 350 | 6kt41 | G1/2" | - | M28x1.5 | 156 | 201 | 7.0 | 1:8 |
| MBSP 1,4-350 | 140-1315-022-7X1 | 1.4 | 350 | 6kt41 | G1/2" | M33x1.5 | M28x1.5 | 156 | 212 | 7.0 | 1:8 |
| MBSP 2,0-250 | 200-1315-142-6X1 | 2.0 | 250 | 6kt41 | G3/4" | - | M28x1.5 | 156 | 255 | 9.5 | 1:6 |
| MBSP 2,0-350 | 200-1315-042-7X1 | 2.0 | 350 | 6kt41 | G3/4" | - | M28x1.5 | 156 | 255 | 9.5 | 1:6 |
| MBSP 2,8-250 | 280-1315-032-6X1 | 2.8 | 250 | 6kt41 | G3/4" | - | M28x1.5 | 169 | 270 | 8.5 | 1:6 |
| MBSP 3,5-250 | 350-1315-072-6X1 | 3.5 | 250 | 6kt41 | G3/4" | - | M28x1.5 | 169 | 304 | 10.2 | 1:4 |

* X equates to identification figure at current diaphragm material:
standard material NBR = 1; material IIR = 2; material FKM = 3;
material ECO = 4; other materials on enquiry

** permissible pressure ratio for diaphragm = P0 (gas filling pressure) / P2 (working pressure)