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HYDAC Process Inline Filter PLF1

Description
The HYDAC Process Inline Filter series PLF1 is suitable for the continuous removal of particles from low viscosity fluids, e.g. different kinds of water from a wide variety of sources as well as cooling lubricants, washing emulsions and machining oils.

The core of this filter series is the specially developed inline filter element PELF1. This element features a high dirt holding capacity as well as unique handling compared to other disposable elements available on the market. Due to the optimized design of the filter housing there will be no transfer of dirt to the clean side during the element change. No risk of contamination during the element change due to the optimized design of the filter housing.

Features and Advantages
• Filtration rating from 3 μm to 90 μm
• Compact design with high flow rates
• Protection of “clean” side for element exchange due to fixed support tube
• No risk of contamination during the element change due to the optimized design of the filter housing
• Modular design makes for a perfect fit for every application
• Low pressure drops due to large flow paths and filtration areas
• Significantly easier handling than standard disposable elements → shorter maintenance times
• Reliable sealing of filter elements in the filter housing
• High dirt holding capacity
• High filtration performance
• High fluid compatibility
HYDAC Process Technology
Process Duplex Filter PFMD - PFHD

Description
HYDAC stainless steel inline duplex filters, types PFMD and PFHD are designed for use in process engineering and chemical plants. They are suitable for removing contamination from low and high viscosity fluids. The range of different sizes, filters and sealing materials means that the filters can be adapted to the particular application conditions.

Depending on the required cleanliness level, the following stainless steel filter elements can be used: Chemicron®, pleated wire mesh or slotted tube. Contamination of the filter elements can be monitored by means of a clogging indicator (differential pressure monitoring) fitted to the filter.

The direction of flow through the filter elements is from the outside to the inside. They can be cleaned several times, thereby saving the costs of disposal and re-purchase.

Features and Advantages
- Filtration rating from 1 μm to 2000 μm
- Compact design with high flow rates
- Low pressure drops due to optimized change over design
- Easy handling quick element change without specific tools*
- High dirt holding capacity
- High filtration performance
- High fluid compatibility

Applications
- All applications requiring a high level of cleanliness
- Protective filter before spray nozzles
- Process water treatment
- Pure and ultrapure water production
- To extend service life of circulating fluids
- Filtration of cooling lubricants and washing fluids

Markets
- Pulp & paper industry
- Industrial water treatment
- Power plants
- Chemical of petrochemical industry
- Automotive industry

* depending on seal material
Description
HYDAC Gas Filters GCF are high-performance change-over duplex coalescing filters in stainless steel which have been specially developed for use in dry gas seals in turbo compressors.

All the filter components, including the filter housings are made of stainless steel machined parts without weld connections and comply with the requirements of API.

There are basically two different standard versions of the Gas Filter GCF:
- A simple coalescer version preferably for “dry” gases
- A coalescer version with integrated cyclone preseparator for applications using wet gases which may also contain aerosols, oil mists and/or condensates.

The modular filter design means that a cyclone pre-separator can also be retrofitted to an existing standard filter – by replacing individual filter housing parts.

Filter Elements
- Material: 100 % stainless steel
- Filtration rating: 0,5 μm to 25 μm
- Crimped endcaps
HYDAC Process Technology
SuperFlush Filter Elements

Initial Situation:
In all process fluids as well as open or closed water circuits, micro-organisms and “sticky” particles develop and cling to surfaces in a thin layer. This often results in the clogging of components in systems.
Similarly, this type of contamination is not always removed from back flush filter elements during back-flushing which reduces efficiency.

The new HYDAC Solution: SuperFlushFilter Elements
Therefore HYDAC has developed a SuperFlush element coating for these special applications. The SuperFlush technology element prevents adhesion of the particles on the filter element and thus contributes to increase the performance of the automatic backflushing Filters of the AutoFilt® series.
The technology is used in conical slotted tube filter elements and is an option for optimum adaptation of the filter elements to special customer and industry requirements.
HYDAC Process Technology
Conical SuperMesh Filter Elements

SuperMesh Filter Elements

Application
The new conical SuperMesh 3-layer filter element material is designed for AutoFilt® RF3 and AutoFilt® RF4 applications with extreme demands such as coolant, washing fluid or ballast water filtration. The 3-layer technique provides an outstanding cleaning efficiency and robustness.

Technique
The inside of the element is formed by the filtration layer, followed by the middle and the outside layer. The middle layer is sintered with the filtration and with the outside layer. Its main function is to support the filtration layer. The outside layer provides the stability of element structure. Filtration layer can be provided in different mesh weaves for optimal performance for various applications. The support layers are made from square mesh.

Advantages
• Outstanding robustness due to sintering technology
• High cleaning efficiency due to optimal velocity through the filtration layer
• No risk of particles to get stuck in support structures
• Reliable filtration rate ensured by fixed pore openings due to sintered filtration layer construction

Technical Data
• Filtration rate: 20 μm – 120 μm
• Free filtration area: up to 40 %
• No. of backflush cycles: min. 15,000
HYDAC Process Technology

AutoFilt® RF4

Description
The automatic backflushing filter RF4 is the extension of our product range for small flow rates.
The AutoFilt® RF4 is a self-cleaning system for extracting particles from low viscosity fluids, and is designed for continuous filtration.

Features
- Flow rate: 40 – 220 l/min
- Operating temperature: up to 80 °C
- Filtration rating: 25 μm to 3 mm
- Connection size: G1, G1 ½

Filtration

Backflushing
HYDAC Process Technology
AutoFilt® System Solutions

Description
For the different filtration tasks HYDAC Process Technology GmbH also offers:

• filter stations comprised of several filters
• filters including supply pump,
• filters including back flush quantity treatment plants (BTU)
• customer specific solutions
• and much more…
HYDAC Process Technology
AutoFilt® Twist Flow Strainer ATF

**Description**

HYDAC AutoFilt® Twist Flow Strainers ATF are suitable for intermittently separating solid particles from water and water-like media. The fluid flows tangentially into the housing. Due to the tangential flow within a tapered housing crosssection, a helical downward flow is obtained. The centrifugal forces thus generated separate the particles of a higher density (e.g. sand, glass, metal particles,..) to the outer edge of the housing.

The particles then settle in the lower section of the reservoir and can be removed periodically. The rest of the particles of a lower density, which are not separated downward by centrifugal force, are separated by means of the tapered slotted tube with a defined filtration rating.

**2-stage Separation:**
- **1st stage:** Cyclone effect
- **2nd stage:** Secured filtrate quality (200 μm – 3 mm)

**Filtration**

**Cleaning**

**Skid-Solution**
HYDAC Process Technology
Stainless Steel Filter Elements

Description
The product range includes filtration components for low to high viscosity media for the process engineering, chemical and plastics processing industry.

Technical Specifications
• Standard executions
• Customer specific executions
• Standard Material: stainless steel
• T max. 400 °C
• Δp max. 210 bar
HYDAC Process Technology
Element Technology AutoFilt® Series

Isokinetic filtering and backflushing
The special conical shape and configuration of the filter elements allows even flow, resulting in low pressure drops and complete cleaning of the elements.

Features and advantages of conical Elements
• fewer backflushing cycles
• reduced loss of backflushing fluid
→ higher efficiency compared to cylindrical elements

Filter Materials
- Slotted tube
- Stainless steel: 50 μm – 3 mm
- Wire mesh / SuperMesh
- Stainless steel: 25 μm – ≤ 60 μm
### HYDAC Process Technology

**AutoFilt® Element Technology**

**Magnetic Technology**

#### Description

In coolant and in water treatment applications downstream components are affected by ferritic fine particles, that cannot be caught by filters, because of their small size.

Magnetic bars placed on the upstream side of the filter elements can help to reduce the problems, i.e. magnetic fine particles are separated during the filtration process.

The retained particles are stripped off during back flushing by an additional wiper ring and are removed with the back flushing volume via the back flushing arm. This configuration assures a maintenance free separation of magnetic particles.

#### Before Backflushing

![Before Backflushing](image1)

#### After Backflushing

![After Backflushing](image2)

#### Magnetic Technology for Backflushing Filters

![Magnetic Technology](image3)
Application

In municipal or industrial water treatment plants, costly drinking water is often used for general cleaning and maintenance procedures in the system. By the simple action of treating and using the water from the final clarifier, drinking water can be saved.

The effluent in both dry and wet weather is almost clear and contains only low levels of suspended matter. Nevertheless by implication it is not suitable for use as process water because the insoluble organic matter can cause blockages in the system.

HYDAC automatic filters are ideally suited to the treatment of clarifier effluent.

Use of the Filtrate

- Seal water for slide ring seals
- Process water for preparation of flocculants
- Cooling water, irrigation, cleaning
- Flushing water for belt filter presses
- Pre-filtrate for microfiltration systems
- Spray water to suppress foam
Advantages

- Smooth operation of flow indicators, solenoid valves and injection nozzles
- Increased operating safety
- No spare part requirement, ensuring continuous operation
- No maintenance requirement, ensuring continuous operation
- "Man hours" saved in filter maintenance
- Drinking water saved when preparing flocculant treatment
- Drinking water saved when dewatering the sludge
- Compact and space-saving equipment
- Continuous operation because of automatic regeneration of the filter
- Ecological and at the same time economical system operation

Success in the Field

HYDAC filters have been used successfully for years. The filter systems are in continuous operation and function independently without maintenance and without breaking down. Apart from the purchase and installation costs there are annual power costs which amount to just a few euros. If one compares the investment and operating costs to the cost of drinking water, then the filter pays for itself in a very short time.

Summary of References

- Association of Disposal Companies Saar (D,14 installed filters)
- KA (Treatment Works) Freystadt (D)
- City of Norrköping (SE)
- ARA (Wastewater Treatment Works) Aadorf, ARA Oberes Kissenthal, ARA Oftringen (CH)
- KA (Treatment Works) Graz (AT)
- KA (Treatment Works) Bayreuth (D)
- KA (Treatment Works) Emschermündung (D)
- KA (Treatment Works) Seefeld (D)
- SMW (Municipal Utilities) Magdeburg, KA (Treatment Works) Gerwisch (D)
- RWZI Hellevoetsluis (NL)

... Over 50 successful installations
HYDAC Automatic Filters

Automatic filters are self-cleaning systems for extracting particles from nearly all types of media. The filtration is suitable both for main-line and offline applications.

HYDAC automatic filters AutoFilt® RF3, RF4 and ATF are used in the treatment of water effluent from the final clarifier. The back-flush fluid is fed back into the primary clarifier.

Technical specifications:
- Temperature: max. 90 °C
- Pressure: up to max. 100 bar
- Connection: G 1” to DN 900
- Flow rate: up to 10,000 m³/h
- Filtration rating: 25 µm to 3 mm

Advantages of the Automatic Filter
- Space-saving and compact with excellent filtration performance and low pressure drop
- Ready-to-operate unit
- Self-cleaning, robust stainless steel filter elements
- Reduced maintenance costs and energy consumption
- Cost-effective, economical, reliable
- Can be retrofitted

AutoFilt® RF3 and RF4

The automatic backflush filter AutoFilt® RF3 and RF4 are suitable for extracting particles from low-viscosity fluids. Automatic cleaning starts as soon as the elements become contaminated. The filtrate flow is not interrupted during the back-flushing procedure.

Special features:
- The isokinetic filtration and back-flushing of the filter elements allows even flow
- Pulse-aided back-flushing with individually adjustable control parameters
AutoFilt® ATF

HYDAC AutoFilt® TwistFlow Strainer ATF is suitable for separating particles from water and media similar to water.

The Strainer is principally a hybrid of centrifuge separator and an inline filter which, as a result of its special flow characteristics, ensures that higher particle loads are also filtered reliably.

During the cleaning phase – depending on how the Strainer is installed – some of the untreated water flow is used for a few seconds to clean the element and to flush out the filter housing.

The remaining particles of lower densities which are not forced down by the centrifugal force, are retained by the tapered slotted tube to a defined filtration rating.

Since only some of the flow is used for flushing, filtration can continue almost uninterrupted. In addition the unit is of course ideally suited to offline applications which can easily manage without part of the flow for a short period. Depending on the application and incoming particle loads, the sludge-removal intervals can be individually adjusted to suit the treatment process via a timer control.
The HYDAC Solution: AutoFilt® RF10
The Pressure makes the difference!

The efficiency of automatic filters as well as automatic strainers based on cartridge and basket technologies is strongly determined by the $\Delta p$ between filtrate side and backflush line. The new HYDAC AutoFilt® RF10 only depends on the inlet pressure. There is no minimum filtrate pressure at the filter outlet required!

**AutoFilt® RF10:**
- Highest reliability
- Independent of filtrate pressure
- Highly efficient backwash due to conical jet flush technology
- High dirt load ability
- Ability to handle high fluctuations in pressure and volume flows
- Optimised filtration area
- Adjustable trigger point to start the backflushing
New HYDAC AutoFilt® RF10

Backwashing Filter for Ballast Water Treatment Systems

Backwashing of the filter elements

1. Main-wash / Jet-flush cycle
   - Forward flushing inside conical element (free jet effect)
   - Removal of adhesive dirt

2. Post-wash cycle
   - Reversed flow through filter material
   - Residual dirt is flushed out of the element

Advantages of the AutoFilt® RF10

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<tr>
<td>+ SuperMesh</td>
<td>→ High mesh stability</td>
<td>→ Instable as conventional meshes are not sintered</td>
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<tr>
<td>+ SuperFlush</td>
<td>→ unique anti stick layer</td>
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<tr>
<td>+ Open area</td>
<td>→ High and optimised</td>
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<tr>
<td>+ Conical elements</td>
<td>→ highly efficient cleaning</td>
<td>→ Cylindrical elements with weakness in backflush ability</td>
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<tr>
<td>+ Filtration area</td>
<td>→ High and optimised</td>
<td>→ Worse cleaning in comparison to HYDAC</td>
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<tr>
<td>+ Pressure conditions</td>
<td>→ Independent of pressure at filter outlet side</td>
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<td>→ Must be defined with order</td>
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<tr>
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<td>→ Bigger filters for same flow rates in comparison with HYDAC</td>
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<tr>
<td>+ Start- up</td>
<td>→ Plug &amp; Play</td>
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<td>+ Life cycle cost</td>
<td>→ Low life cycle cost</td>
<td>→ Time-consuming</td>
</tr>
<tr>
<td>+ Servicing</td>
<td>→ Easy maintenance</td>
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<tr>
<td>+ Performance</td>
<td>→ Long term performance</td>
<td>→ More wear parts needed</td>
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HYDAC ELECTRONIC
Pressure Sensors with flush Membrane

Description
The flush membrane version of our pressure sensors has been developed especially for applications where the sensor element must be reliably separated from the process medium. Clogging and gumming-up of the pressure port is thus reliably prevented. Even with difficult process media, is the susceptibility to failure reduced.

The electronic pressure transmitter types HDA 4000 and HDA 7000 as well as the electronic pressure switch type EDS 3000 are currently available with a flush membrane. Sensors with fluid port connections generally used in the relevant field of applications are available. Furthermore, connection variants with a cooling body designed for special applications, also standard applications, with high fluid temperature up to 150 °C have been developed.

Product Advantages
• Accuracy ≤ ± 1.0 % FS max.
• Analogue and switching outputs
• Most commonly used mechanical connection variants
• Fluid temperature up to 150 °C possible using devices with cooling body.
• ATEX approval possible depending on the model type.
HYDAC ELECTRONIC

Sensors for potentially explosive Atmospheres

Description
For several years, HYDAC ELECTRONIC has been working systematically on the development of a portfolio of products certificated for the use in potentially explosive atmospheres. The most recent approval we have implemented is for devices with protection class “Explosionproof Enclosure”. These devices have three approvals at a time which makes them globally applicable.

HYDAC ELECTRONIC currently offers pressure and temperature transmitters as well as electronic pressure switches as an explosionproof enclosure version with ATEX, CSA and IECEx approval.

The total scope of supply includes a variety of devices with different ignition protection types and other approvals.

Product Advantages
• Applications on the international market thanks to multiple approvals
• Versions for ignition protection types
  - Explosion proof enclosure
  - Intrinsically safe
  - and many others
• Approvals ATEX, IECEx, CSA
• High number of standard process and electric connectors
HYDAC ELECTRONIC
Level Sensors
capacitive, magnetostrictive, ultrasonic

Description
In industry, level sensors are used for the most diverse variety of tasks. The sensors used are mainly
• capacitive
• magnetostrictive or
• based on ultrasonic measurement.

Each measuring principle has its individual advantages and disadvantages.

HYDAC ELECTRONIC offers a level sensor for each of the three measuring principles and thus, can offer their customers an optimal solution to the most common applications.

• capacitive ENS 3000
• magnetostrictive HNT 1000 and
• based on ultrasonic measurement HNS 526

Product Advantages
• Optimised solutions for the most common industrial applications
• Large range of variants regarding measuring length and output functions.
• With menu navigation according to VDMA (depends on the model type)
• Simultaneous detection of temperature as an option (depends on the model type)
HYDAC ELECTRONIC

Linear Position Sensors
HLT 1000 and HLT 2000

Description
In line with the increasing automation of production processes and the continuously growing requirements regarding accuracy, the energy efficiency of machines and the increased safety, the distance measurement applications are facing a rising demand.
To meet these growing requirements, HYDAC ELECTRONIC have extended their product portfolio by linear position sensors.

Linear position sensors operate on the physical principle of magnetostriction. These robust distance measurement systems, suited for industrial use, work precise, reliable, contact-free and wear-free.

To be able to offer position sensors for different sectors and fields of application, a variety of designs are available.
Partly integrated, fully integrated or suitable for integration from the outside. Provided with different measuring lengths from 50 to 4000 mm, these distance measurement systems are universally applicable.

Product Advantages
• High degree of accuracy
• Very robust housing
• High shock and vibration resistance
• Excellent EMC characteristics
• Contact-free and wear-free
HYDAC Accumulators:

**ASPlight** - as Download and on the Web

### DESCRIPTION:

- **ASPlight** is new, simplified software from HYDAC Accumulator Technology which enables you to calculate all the necessary parameters such as pressure, volume and temperature for the isothermal or adiabatic charging and discharging processes of an accumulator.
- **ASPlight** is aimed at the user who is tasked with determining the essential accumulator parameters within a short time. The software will be a particularly useful tool in your role as sales consultant in the field, by providing quick, straightforward calculations for hydraulic accumulators.
- **ASPlight** is operated via a single window and is language neutral. The design is comparable to a pocket calculator. Simulation curves are not shown.
- **ASPlight** is an intelligent application which takes into account real gas behaviour, calculates in different units of measurement for pressure, volume and temperature and permits you to select different gases such as nitrogen or helium. The maximum input for pressure is 2500 bar. Additional information fields help to evaluate the result and to determine the type of accumulator.
- **ASPlight** has a program help section which explains its operation and includes three calculation examples with which to practise.

### Installation requirements:
- Windows XP or higher
- Microsoft .NET Framework 3.5

### Access:
- Online access via the HYDAC website to calculate the accumulator parameters, also for when you are on the road and have internet access.
- Offline access also possible without internet connection by first downloading the **ASPlight** program onto your computer.

**Download version**

[www.hydac.com](http://www.hydac.com) → download

**Web-Version**

[www.hydac.com](http://www.hydac.com) → Products
HYDAC Accumulators:

Gas Safety Block GSB450

**Description**

The gas safety block GSB450 is fitted to the gas side of the hydraulic accumulator.

It consists of a brass block* with integrated bleed and shut-off valve, and is designed to optimize the effort and expense of maintaining and monitoring hydraulic accumulators:

- For testing and charging the gas pre-charge pressure in the accumulator
- For protecting the gas side of the hydraulic accumulator since it can be equipped with safety devices (e.g. GSV6)

Other connections are available as options, for example, for:
- Gas charging valve (e.g. Minimess test point)
- Pressure transducer or pressure switch
- Burst disc
- Temperature fuse

Turning the GSB450 into an individual accessory for accumulators,

**Product advantages**

- Compact design
- Direct charging and testing via the Minimess valve
- Flexible connections possible
- Pressure display can be turned to optimum position
- Various display options: analogue/digital option, and in either bar, MPa, psi

* Alternative available on request
HYDAC Accumulators:

Safety devices
New Fuse plug also with CE-marking

HYDAC manufactures different oil and gas side safety devices for the protection of hydraulic accumulators against exceeding pressure levels. To protect the fluid-side, the pressure relief valve, DB12 integrated in a Safety and Shut-off block SAF is available. Beside of the Gas safety valve, GSV6, the burst disc and the proven fuse plug in carbon steel, HYDAC now offers for the gas-side protection a new stainless steel fuse plug with CE-marking.

FUNCTION:
The new fuse plug, GMP6 is "devices with safety function" and is used to release the gas pressure completely, when the temperature rises in unacceptable levels.

PROVEN FUSE PLUG

TECHNICAL SPECIFICATIONS:
- Permitted operating pressure: ≤ 645 bar
- Temperature range: -10 °C ... +80 °C
- Melting point: between +160 °C and +170 °C
- Accumulator connection: 7/8-14UNF
- Material: carbon steel
- Part no.: 363501

ADVANTAGES:
- quickly and easily retrofitted
- suitable for diaphragm and bladder accumulators
- particularly suitable for indoor applications (e.g. on presses)

NEW FUSE PLUG GMP6

with CE

TECHNICAL SPECIFICATIONS:
- Permitted operating pressure: 50 ... 350 bar (other on request)
- Temperature range: -40 °C ... +80 °C
- Melting point: between +160 °C and +180 °C
- Accumulator connection: G1/4-ISO228
- Material: stainless steel
- Part no.: 3517438

ADVANTAGES:
- safety device approved according to PED 97/23/EC with CE-marking and Declaration of Conformity
- variable capability of connecting for bladder, piston und diaphragm accumulators
- suitable for large volume accumulators
- particularly suitable for outdoor applications (e.g. Offshore)
**HYDAC Accumulators:**

**Full-PTFE-diaphragm**

---

### Problem: agressive media

Diaphragm accumulators usually fail when used in process applications if the elastomer material selected is not compatible with applications using aggressive fluids.

### Solution: Full-PTFE-diaphragm

To meet the requirements of mostly of the Process technology markets HYDAC has developed a full-PTFE-corrugated diaphragm, and has also patented its design and as well its application. The new diaphragm is resistant against almost all fluids in hydraulic systems.

### Application: Diaphragm accumulators

Material and design of the hemispherical diaphragm are flexible in their applications. Beside of the very good resistance against aggressive operation medias, the hemispherical diaphragm can be fitted in almost every standard diaphragm accumulator. The array of products includes weld- as well as screw-type accumulators and therefore it fulfills the requirements of the market of Process technology and at the same time the customer concerns.

### Product advantages

- High media resistance
- Applicable in weld- and screw-type diaphragm accumulators as well as in corresponding pulsation damper versions possible
- Instantly replaceable (screw-type versions), e.g. in case of repair or due to changed operating conditions
- Flexible application

### Branches

- Oil & gas
- Chemicals
- Process technology
- Water applications

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### Technical data

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<th>Series *</th>
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<td>Weld-type construction</td>
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<tr>
<td>SBO210(P)</td>
<td>-</td>
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</tr>
<tr>
<td>SBO500(P)</td>
<td>0.25</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>SBO450(P)</td>
<td>0.6</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>SBO400(P)</td>
<td>1.3</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>SBO250(P)</td>
<td>2.0</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>SBO400(P)</td>
<td>2.8</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>SBO400(P)</td>
<td>4.0</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

* max. working pressure see brochure  
max. pressure ratio: 2 : 1 \((p_{\text{max}} : p_0)\)  
max. pre-charge pressure \((p_0) = 100\) bar higher on request
HYDAC Accumulators:

The 4th Series – Metal Bellows Accumulators

Features

The metal bellows accumulators have the following special features:

- Gas tightness
- Maintenance-free
- Fluid resistant in temperature ranges of -65 °C to above +160 °C

and complement the proven characteristics of bladder, piston and diaphragm accumulators.

HYDAC can therefore supply all four types of accumulator and is your expert partner for all industry sectors and applications.

Description

Alongside bladder, piston and diaphragm accumulators, the accumulator department can now offer a fourth series – metal bellows accumulators.

A metal separating element is used between the fluid and gas side of the metal bellows accumulator. This makes it virtually gas-tight.

Comparison

<table>
<thead>
<tr>
<th>Convoluted bellows (formed)</th>
<th>Diaphragm bellows (welded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• low pressure</td>
<td>• very suitable for</td>
</tr>
<tr>
<td>• very good damping features</td>
<td>high pressures</td>
</tr>
<tr>
<td>• resistant to contamination</td>
<td>• very good energy</td>
</tr>
<tr>
<td></td>
<td>storage features</td>
</tr>
<tr>
<td></td>
<td>• high displacement volume</td>
</tr>
<tr>
<td></td>
<td>• compact</td>
</tr>
</tbody>
</table>

Areas of application

- Pulsation damping
- Volume compensation

Industry sectors

- Heavy diesel engines (e.g. power plants and ships)
- Process technology
- Wind energy
- Aviation

See brochure:

- Heavy Diesel Engines – Metal Bellows Accumulators
- No. 10.129.1
HYDAC Accumulators:
Bladder accumulator

Description:
QHP stands for “Quality Hydraulic Products” and is a HYDAC subsidiary. Since many years QHP is specialized in manufacturing of hydraulic accumulators for the Oil & Gas industry. For example to prevent leakage of dangerous gas or process fluids into the atmosphere, hydraulic accumulators are to be installed. They support the seal in the rotating shafts within mechanical sealing systems. The QHP stainless steel bladder accumulator meets these special market requirements, thus it prevents environmental pollution.

Technical data*:
QHP bladder accumulators are available as standard and are characterized by the following features:
- Volume range: 10 ... 50 litres
- Design pressure: up to 400 bar
- Materials: Stainless steel
- Approvals: PED 97/23/EC with CE marking, ASME with and without U-Stamp, meets the requirements of API 682 and/or 21049

Branch examples:
Mechanical seals in the following branches:
- Onshore / Offshore
- Refineries
- Chemical industry

* others on request