



PLATE AND FRAME FILTERS
HERMETIX

COMPLEXITY FOR EXCELLENT FILTRATION RESULTS



HERMETIX 800 P



Sheet, plate and frame filter as an enclosed system

HERMETIX is an enclosed filtration system designed for the special demands of the pharmaceutical industry. The filter frame consists of a fixed front cover and two support bars connected to the crosshead. It functions as a pressure filter with vertically arranged filter plates and frames. Filter aids are arranged between the individual filter plates, which also have a sealing function when under outside pressure. The plate pack is pressed and sealed over the movable lid.

Enclosed system

The enclosed **multilayer filter** uses **depth filter sheets** (alternatively filter cloths or paper) for filtration. The filter plates are sealed by circumferential **O-ring gaskets** on the filter plates and the internal filter layers – or alternatively by a gasket integrated into the filter frame. This results in 100 percent sealing without leaks. All contact with the product's surrounding environment is eliminated. This system distinguishes itself by easy handling and the possibility of **CIP cleaning**.

The required filter area can be flexibly adjusted by the size and number of filter plates. A large selection of filter aids enables the safe separation of solids and microorganisms.

Fields of application

Pharma

High yields and drip losses are of utmost importance for the economic efficiency of processes in the pharmaceutical sector. The highest demands are also placed on cleaning and hygiene. The **HERMETIX filter press** was designed with a hermetically sealed filter plate package to meet these requirements. Without drip losses and with maximum yield. The special design allows the **HERMETIX filtration system** to be completely emptied.

This is used for the fractionation of blood plasma, the separation of precipitates and at every clarification stage. Filter presses and plate and frame filters play an important role in basic fractionation and the production of albumin and immunoglobulin. Other areas of application are the cell harvesting of proteins and the clarification filtration of vaccines and antibiotics. CIP cleaning processes are necessary and possible with HERMETIX to automate cleaning to the greatest extent.

Chemical industry

In the production of silicone oils for the cosmetics industry, catalysts are produced which are separated by filtration. Dry blowing the filter cake with compressed air is not possible with flammable products. The cake can be pressed with a membrane to a low residual moisture content. Solvent-containing silicone resins require emission-free systems that reliably separate

high salt loads and achieve a reduction in turbidity. This ultimately enables CIP cleaning in an enclosed system.

Implementation

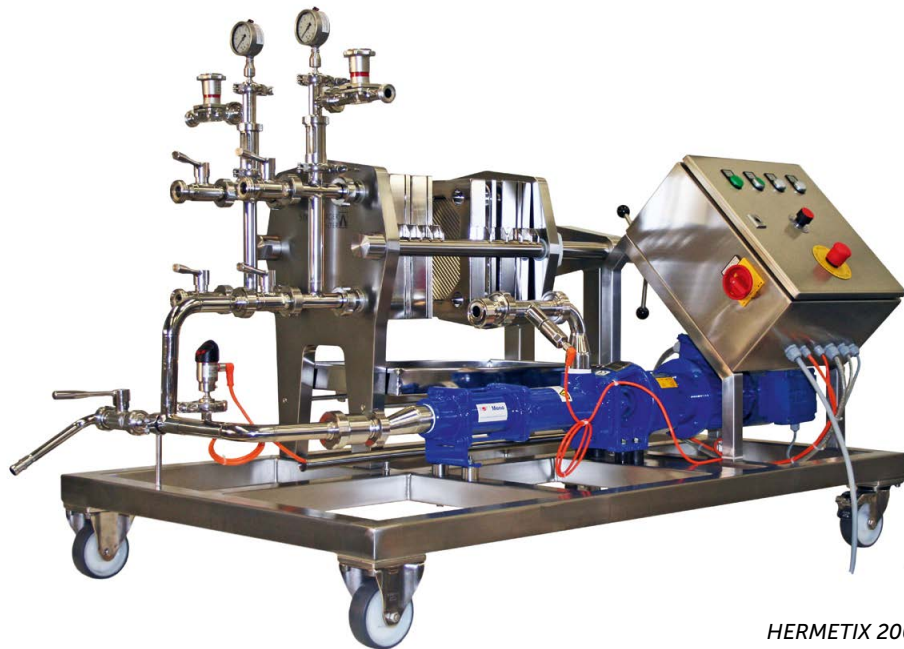
Depending on the application and requirements, filter plates are available in AISI 316 L stainless steel or plastic (polypropylene).

Whatever your demands may be, we offer you tailor-made solutions for individual requirements.



Circumferential O-ring gaskets integrated into the filter frame

SHEET FILTERS AT A GLANCE



HERMETIX 200 S



HERMETIX 200 P

HERMETIX 200 P/S

Application and field of use

For **solid/liquid separation** on a laboratory or pilot plant scale in the pharmaceutical or cosmetics sector. This system meets all requirements for an enclosed filtration system, enabling test filtration in the laboratory or pilot plant as a basis for up-scale production.

Construction

Filter plate dimensions: 200 x 200 mm

The **filter frame** is equipped with **central spindle pressing**, with manual hydraulics on request

The **available size** of the filter rack is suitable for up to 15-30 filter sheets

The **filter frame** and fittings are made of AISI 316 L stainless steel

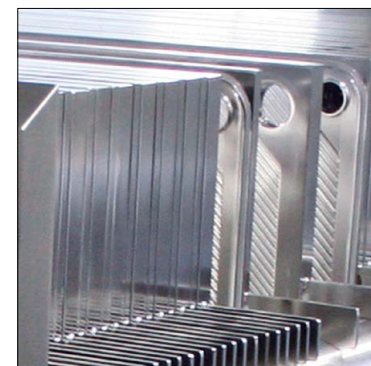
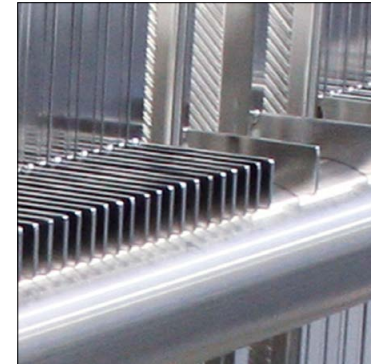
The **filter plates** are made of polypropylene or alternatively AISI 316 L stainless steel

The **filter frame** can be mounted on a mobile frame complete with pump





HERMETIX 600 S



HERMETIX 400 P/S; 600 P/S; 800 P/S; 1200 P/S

Application and field of use

The models in **sizes 400, 600, 800 and 1200** are used in production.

Construction

High flexibility due to various filter plate dimensions:

200 x 200 mm

400 x 400 mm

600 x 600 mm

800 x 800 mm

1000 x 1000 mm

1200 x 1200 mm

The filter plates are available in **plastic (polypropylene)** or **AISI 316 L stainless steel** (up to size 800 x 800 mm)

The sheet filter consists of a self-supporting **filter frame**

Solid construction of the fixed and movable lid; forced guidance prevents the lid from tipping over

Parts in contact with the product such as filter plates, filter frames and connections are made of **AISI 316 L stainless steel or polypropylene**

Pressure by double-acting **hydraulic cylinder**; high security with automatic pressure recovery and mechanical cylinder locking, which prevents the cylinder from opening in the event of a sudden pressure drop

The hydraulics, either **electric or hydraulic**, and the control system are integrated into the crosshead

The **layer filter** has connections on the fixed cover (optionally with a complete set of fittings)

The in- and outlet can be fixed



Filter elements HERMETIX P and S

The **filter plates** are provided with a circumferential **O-ring seal** which enables the filter layer to seal inside the filter plate. This **filtration system** is 100% drip-tight and seals to the outside even without a filter layer (operating pressure 6 bar).

In the case of the **polypropylene** filter plates, the **studded drainage profile** ensures optimal flow distribution while maintaining the highest surface quality. The optimal design of the inlet and outlet channels ensures an even cake structure and thus an efficient filtration result.

A special feature of the stainless steel filter elements is the corrugated drainage profile, which is particularly easy to clean.

Small rings on the product channels on the filter plates make it easy to handle and hang or position the filter sheets. Another advantage is that the filtrate no longer comes into contact with the filter layer.

Special features

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- Hermetically sealed with internal filter sheets

 - CIP-/SIP-compatible

 - Complete draining/venting due to CIP design

 - Turbidity frames without any dead spaces

 - Flexibility due to various turbidity frame widths

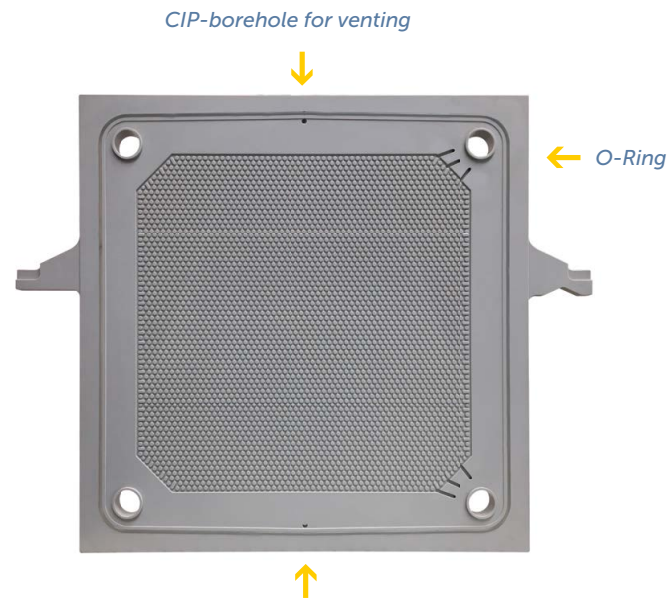
 - Easy to clean thanks to hygienic GMP-compliant design

 - Highest surface quality and processing

Filter plates HERMETIX P



Filter plate with filter sheet inside



Filter plate with nub drainage profile

Filter plate HERMETIX S



Filter plate made of stainless steel with wave drainage profile

Membrane plates (mechanical dehumidification)

For a significantly higher product yield

For more gentle processing of the product than by blow-drying with gas

Filtering (optional)

Suitable for filter sheets as well as filter cloths

Possibility of cake washing for maximum product yield

CIP-compatible

Welded membrane

No liquid behind the diaphragm

Dimpled waste water pipe for improved liquid distribution

High surface quality

More filter area with a constant number of elements

The membrane plate with an integrated membrane was designed for special demands that require a high yield and effective filter cake washing.

Please note: The frame must be completely filled with the product before the membrane function can be used. Do not use the membrane function without filter cloths!



Membrane plate HERMETIX 800 P

OUR SERVICES

Basic and detail engineering

Production of components and assembly in our own production facility in Westhofen

Factory acceptance test of the system by the manufacturer in our own production (FAT)

On-site assembly, also in existing production facilities

Acceptance of the system at its place of installation directly at the customer's site (SAT)

Installation qualification (IQ) to document the correct implementation of the previously defined requirements (Design Qualification, DQ) while the delivered system is installed. IQ ensures that the system is designed in accordance with the user's requirements and thus with the specifications.

The functional qualification is carried out to check the correct functioning of the individual system components (OQ)

Training and commissioning

Support during cleaning validation

Service, maintenance and repair

All plastics used have FDA approvals, of course, as well as food approval according to 21 CFR 177.2600. On request, the USP Class VI certificate is also available for plastics.



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