



**OVERHEAD FILTER
PRESSES**

**SIDEBAR FILTER
PRESSES**

**PRESSURE BELT
FILTERS**



**POLYMER PREPARATION
UNITS**

VACUUM BELT FILTERS

VACUUM DRUM FILTERS

**NUTSCHE AND LEAF
FILTERS**

SELF CLEANING FILTERS

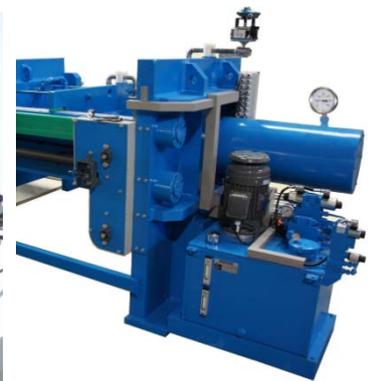
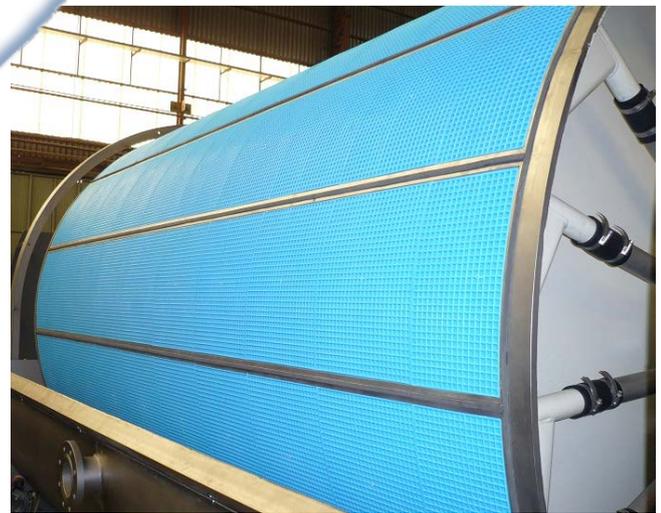
**BASKET, BAG AND
CARTRIDGE FILTERS**



THICKENERS

**PNEUMATIC AND
CENTRIFUGAL PUMPS**

**TECHNICAL ASSISTANCE
AND PROCESS ADVISORY**



TEFSA's origins date back to 1974 with the idea of studying and solving any solid/liquid separation problem on any type of industry.

In this sense, **TEFSA** has developed specific projects for specific situations and products. Our extensive manufacturing program allows us to choose the best solution for each case, offering the most suitable type of equipment with the latest technology.

The main headquarters are located in Barcelona. Its facilities are composed of three storeys, which are divided into different departments; commercial office, design and technical office, production and spare parts, shipping, warehouse, filtration testing room, electrical workshop, manufacturing workshop and equipment's final assembly.

Our company has agents in over 60 countries on 5 continents, with more than 14,000 successful references. Based on our long experience in the world of solid/liquid separation, we introduce to you our manufacturing program.

Welcome to the **TEFSA** world.





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OVERHEAD FILTER PRESSES

PEH - Chain overhead system

The PEH type overhead filter is designed for fast filtration cycles, using plates of big size in order to achieve bigger production rates. They are highly recommended for the mining industry, metallic concentrates, coal, kaolin... They are also widely used in aggregate plants. As abrasion is a usual problem in this kind of sites, the PEH filter is also available with external filtrate outlets. Moreover, the filter can be lined with special protective materials in order to avoid corrosion or abrasiveness.

The filtration pressure can be from 1 up to 16 bar, including special versions of up to 60 bar when using membrane plates.

PEH filters can include a wide range of accessories, as cloth washing devices, drip trays, among others.



PSEH - Cable overhead System



The cable overhead PSEH filter presses have been designed with a transport system which does not require any greasing. This makes them highly suitable for very corrosive environments such as acid industry, metal refineries and clean environments such as food industry, pharmaceuticals, oil refining, greases, agar and carrageenan, among others.



Obviously, the parts in contact with the product can be lined with several protective materials in order to avoid any product contamination or any corrosion on the filter frame.

On the other hand, the transport system can be isolated by means of a tarpaulin and plate hangers system.

PEH filters can work with filtration pressures up to 16 bar, with special versions of up to 60 bar when using membrane plates.

They can also include a wide range of accessories, as cloth washing devices, drip trays, among others

SIDEBAR FILTER PRESSES

EHPT - Four rods sidebar automatic filter press



EHPT is a sidebar filter with reciprocating plate transport system. Its design with four rods to join the two frames gives it a very high resistance and avoids the filter pack deformation, which is a very usual effect on automatic sidebar filters when the pressure is high, especially with membrane plates.

If required, the parts of the filters which are in contact with the product can be lined with special materials in order to avoid corrosion or contamination of the products.

The EHPT filters can work with filtration pressures up to 16 bar, with special versions up to 30 bar if necessary.

They can also include a wide range of accessories, such as washing devices and drip trays.



EHC, EHR and PFO – Fast discharge filters

EHC, EHR and PFO filters have been designed with a very fast cake discharge on order to use the minimum amount of time for this stage of the cycle. They are usually used for products which are fast to dehydrate.

This filters can include external water sprayers for a cloth surface wash. This action is included in the automatic filtration sequence.

If required, the parts of the filter in direct contact with the product can be lined with special materials, whether it's a corrosion protection or to avoid the contamination of the product itself.



PRESSURE BELT FILTERS

BS - BSPP - OS - OSC – MS types



Pressure belt filters BS - BSPP - OS - OSC - MS are continuous cycle filters, which press the sludge by means of two belts which are entrained by a drive with adjustable speed. Each cloth comes with a spraying tube which washes the cloth in a continuous way.

If the product to dehydrate has low solids content, the filters can include a dewatering table over them. With that, the solids content will be increased without adding more polymers.

The belt widths available vary from 0,5m up to 3 m.

VACUUM BELT FILTERS

FBGV and FBRT types



Rubber belt vacuum filters (FBGV) and tray vacuum filters (FBRT) are designed to work continuously, by means of liquid ring vacuum pumps or blowing pumps. One of their greatest advantages is the efficiency of the counter current cake wash, which allows doing several cake washes and separating the liquid obtained into different tanks according to the washing stage. This high quality cake wash makes them suitable for chemical industries. Other uses include the mining industry, as it can easily work with high size particles such as salts like halite and potash.



VACUUM DRUM FILTERS

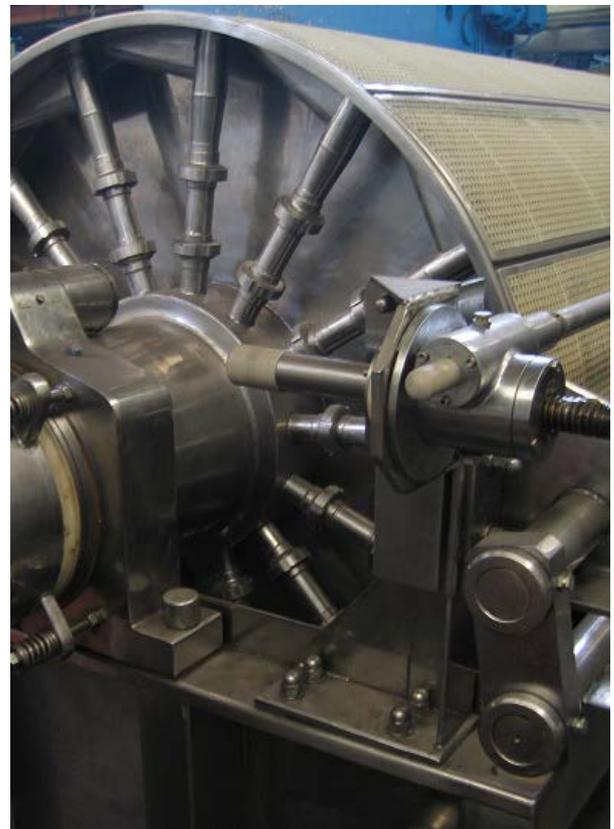
FTV type



The drum filter is another type of continuous operation filter. The main difference in this case is that it allows different types of discharge systems according to the filtrated product.

For products which require precoat whether its diatomaceous earth, starch or the product itself, the most suitable discharge system is the scrapping system.

If the product does not require any kind of filter aids, the discharge will be done by means of scrapping + blow or external belt discharge.



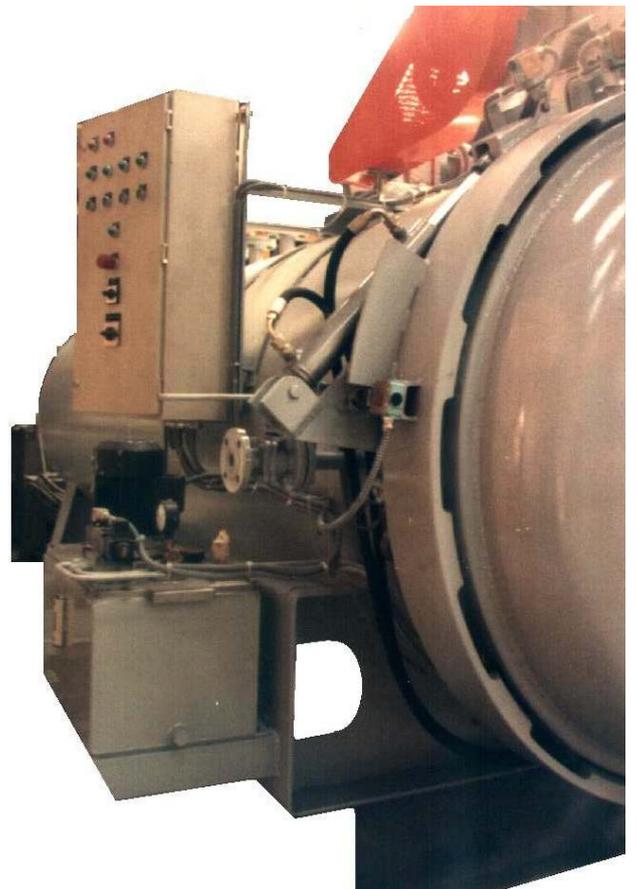
LEAF FILTERS



Leaf filters are suitable for low solid concentration products, high temperatures, easily oxidizable products, dangerous or polishing filtrations with precoat.

This type of filter is used in many industries, such as food vegetal oils, food greases, pharmaceuticals and chemistry.

Leaf filters can be vertical or horizontal, depending on the quantity of plates required and the quality of the discharge.



SELF CLEANING FILTERS



Self cleaning filters are easy to place and install. They can be placed in any section of horizontal pipe with liquid impulsion.

Their inner cartridges have different porosity (25 up to 1000 microns) and they can be perforated or made of threaded wire.

Flows: 5 m³/h up to 100 m³/h
Temperature: 100 °C up to 180 °C
Pressure: 1 bar up to 35 bar

They are completely automatic and continuous. Their cleaning is made by means of a differential pressure switch and evacuating the retained solids through their lower part.



BASKET, BAG AND CARTRIDGE FILTERS



BASKET FILTERS: These can use one or two baskets and their use is mainly for retaining big particles.

BAG FILTERS: Their main purpose is to retain fine particles by using a cloth bag. One of their main uses is during the loading of tanker trucks.

CARTRIDGE FILTERS: These filters are used to retain very fine particles, usually for polishing low solids concentration products.



THICKENERS



The **TEFSA THICKENERS** can be delivered with two types of tanks; with concrete panels or with a metallic tank. These tanks can be protected with different materials according to the product characteristics.

The drive mechanism consists on a drive head with a very high effort resistance, with mechanical, electrical and hydraulic automatization due to the PLC control. This PLC controls the effort, lifting and purge of the whole system. This purge is made with a pump, which is also controlled by the PLC.



TEFLOC polymer preparation units



The TEFLOC polymer preparation units can be manual or automatic. Manual ones consist on a single tank. The automatic series consist on the following:

TEFLOC A1 - One single tank for every batch

TEFLOC A2- Two tanks, one for preparation and one for maturation and storage

TEFLOC A3 - Three tanks, one for maturation, one for preparation and one as reservoir. These are intended for high consumption continuous use.



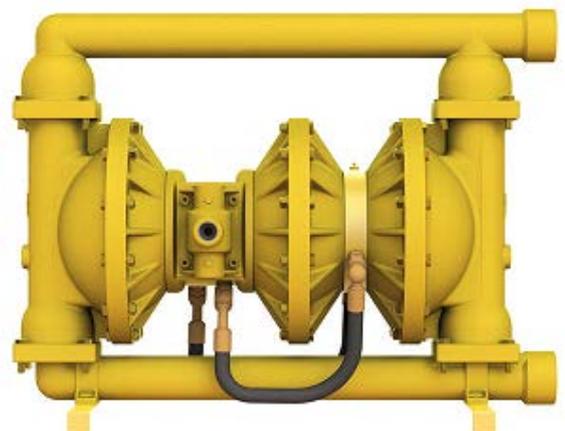
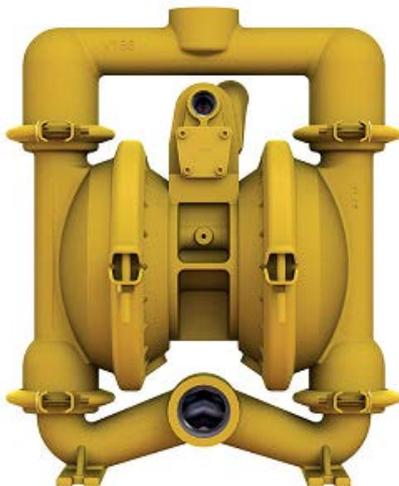
PNEUMATIC AND CENTRIFUGAL PUMPS



TEFSA can provide high quality pumps for high solid's concentration sludges and products. The main types (but not limited to) are centrifugal and pneumatic pumps:

CENTRIFUGES: Flows from 10m³ up to 250 m³/h and pressure range from 3 bar up to 16 bar.

PNEUMATIC: Flows range from 3 m³/h up to 40 m³/h and pressures from 3 bar up to 16 bar.



TECHNICAL ASSISTANCE AND PROCESS CONTROL



TEFSA makes available to its customers its **technical assistance** and **experienced and qualified technicians**

- Process consulting
- Manifolds design
- Assistance in the setup of TEFSA control panels, PLC and instrumentation. Advice on entry maneuvers and location of the filters.





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