



HIGH YIELD FILTER PRESSES

TEFSA USA

TEFSA

TÉCNICAS DE FILTRACIÓN S.A.

Advanced technology in the Filter Presses for mining applications



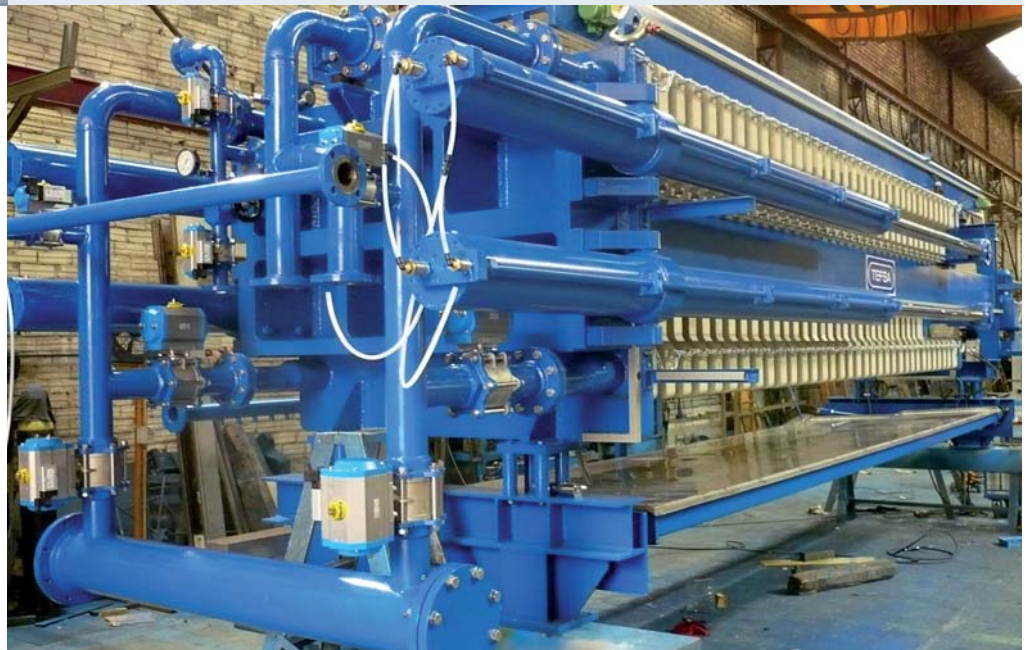
The application of filter presses in the solid-liquid separation processes, is a preferred present solution used in a broad variation of industries due to the high yield results, key factor in the heavy duty and mining applications where effective results are demanded with special high technology equipment. These type of filter presses offer the following guarantees:

- Maximum reliability.
- Optimum and most adjusted results.
- Simple mechanical design with great robustness and special features.
- Minimum maintenance due to design and clean operation.



TEFSA is nowadays one of the leading filtration companies Worldwide in most industries due to our development in the last 40 years.

With the **PFO** filter press we reach into the mining industry where demanding expectations are requested, mainly in the metal concentrates, industrial minerals, coal and tailings plants, among others, in order to guarantee the best results based on:



- Complete automatic and programable equipment.
- Fast opening process in order to achieve the maximum number of cycles.
- Filter cloth washing and moving processes at every discharge process and within seconds.
- Dead times elimination.
- Operation by four side pulling cylinders.
- High adjustment capacity and sealed recessed and membrane plates in polypropylene material with outer feeding and filtrate ports.



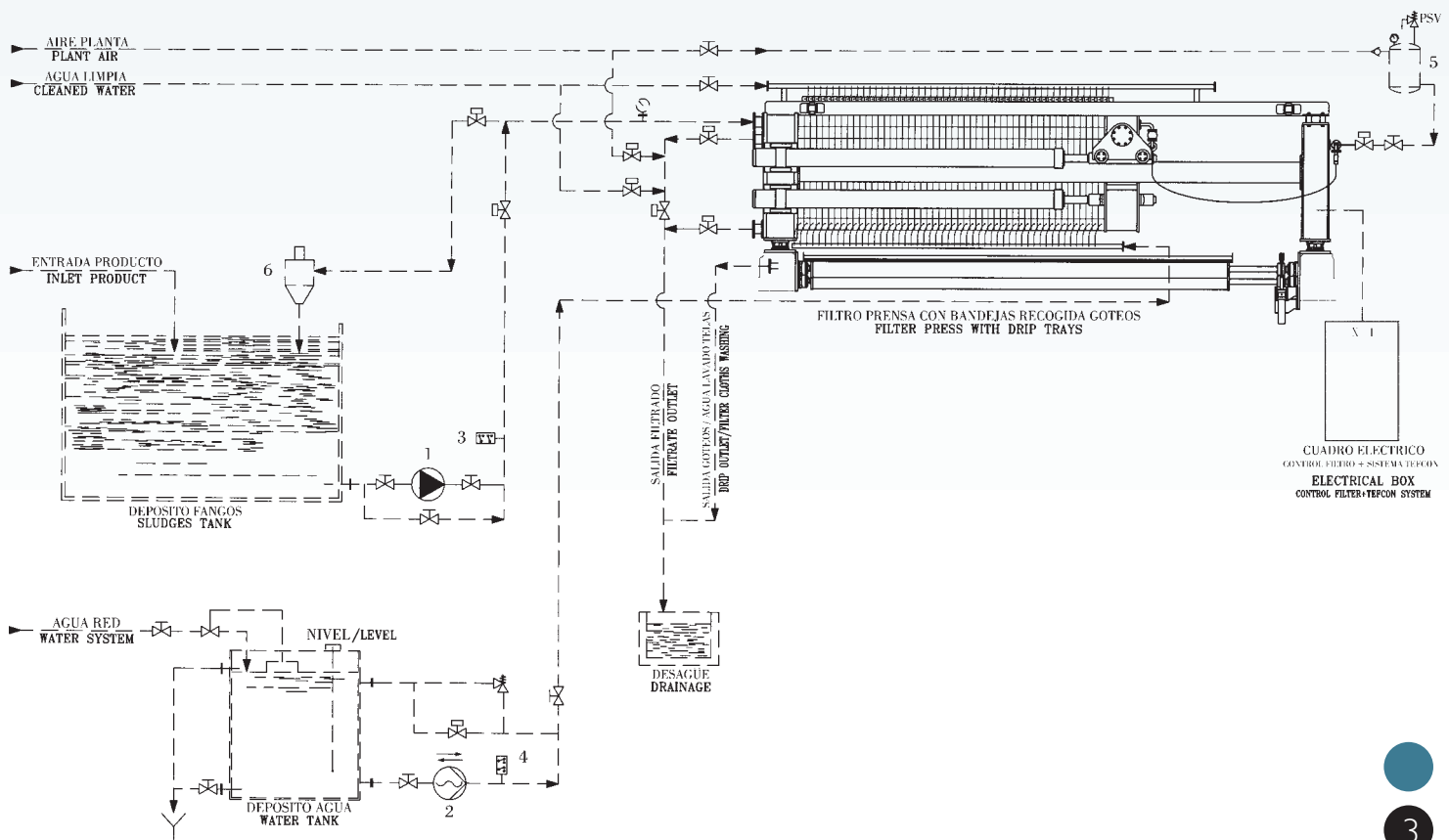
The **TEFSA PFO model filter press** avoids as well the complexity, inconveniences and high costs of the standard vertical filter presses.

The PFO filter press takes all the advantages of the standard horizontal filter press.

The filtration cycle and the stages of operation in these units is quite conventional, highlighting the following additional features:

- The pulp feeding is placed on the upper central part of the filter plate with an external port, and the filtrate evacuation is in closed execution and also with external ports.
- The filter press detects the cycle evolution by means of the corresponding weight cells, controlling the exact production.
- Before the plate opening and consequent cakes discharge, the process includes the cake and core blowing processes with compressed air in order to evacuate the retained liquid.
- The Standard PFO filter press is equipped with a mixed membrane-recessed plate pack in order to provide the relevant cake membrane squeezing, generating a maximum dryness level and a minimum cycle time, resulting in a maximum capacity and production unit.
- Filter cloth washing process after every discharge by means of washing pipes with high pressure nozzles placed on top of every plate, washing the entire plate pack simultaneously and within seconds.
- Additional filter cloth moving system during the washing stage in order to assure that the filter cloth surface is particle free and ready for operating the next cycle under perfect conditions.

The different functions carried out in the **PFO filter press**, compensates the product variations treated by the unit, for instance in the sludge density, and is as well very much appropriated to correct washing defects, neutralization and cake uniformities versus other filter press models.



The PFO Filter Press: A solid and simple construction

Supported by heavy duty and oversized robust frames, the inlet frame and hydraulic frame. Both frames are linked by the side tension rods where the pressure piece and the entire plate pack is supported. The hydraulic cylinders are also placed alongside both sides of the filter press, two cylinders per side, whose opening produces the spacing between plates by means of the hauling system with distancers.

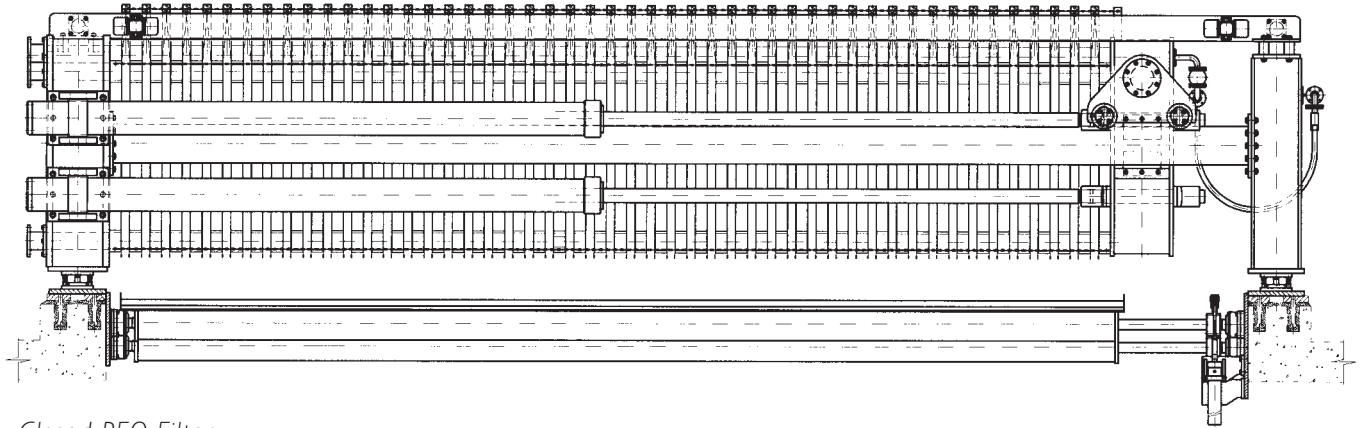
The filter press includes the hydraulic double door drip trays under the plate pack in order to collect the eventual dripping and wash water.

The hydraulic power pack has been specially designed in order to comply with the fast and demanding necessities of the filter, placed on the upper side of the frame and accessible by the characteristic filter press platform of the PFO models, standard included in the supply.

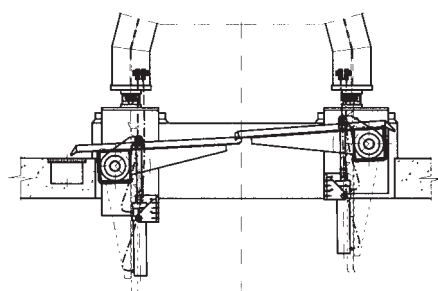
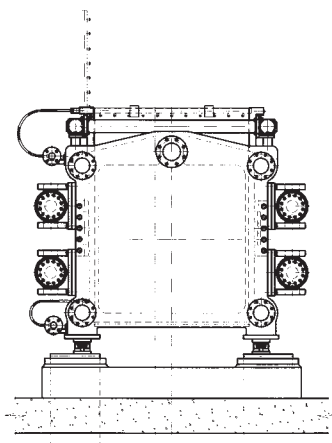
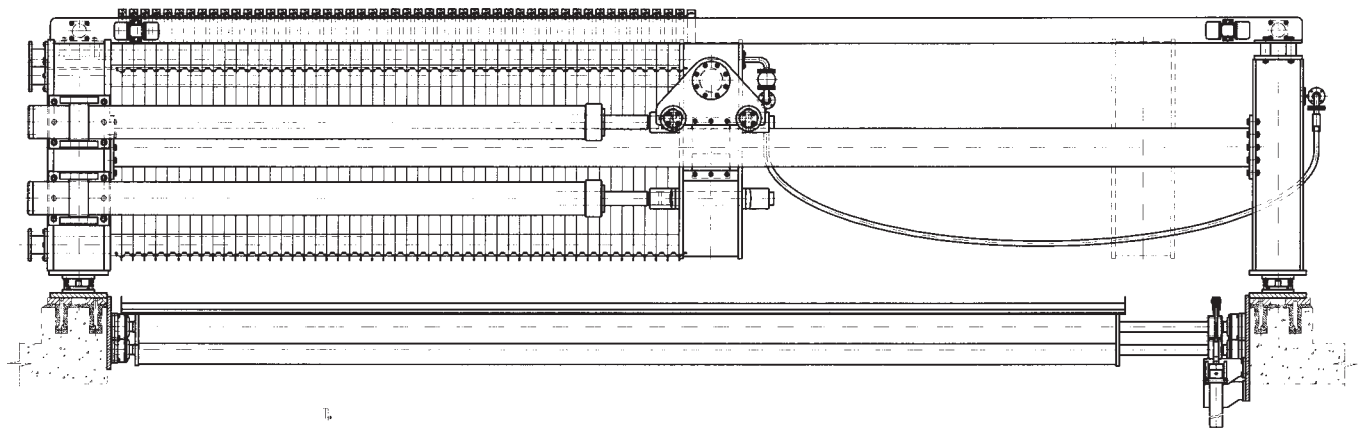


PFO FILTER SKETCH

Open PFO Filter



Closed PFO Filter



Detail sketches available in www.gruptefsa.com

The PFO models are based on normalized plate sizing:

- 1000 x 1000 mm
- 1200 x 1200 mm
- 1500 x 1500 mm
- 2000 x 2000 mm

The requested filter area will be adjusted in the adequate selection and combination of plate size and number.

The PFO filter press allows as well a future expansion of the plate pack, involving minimum structural and economic costs.



The following table indicates, as orientation, the filter press dimensions according the indicated plate size, number of plates and requested filter area / cake volume:

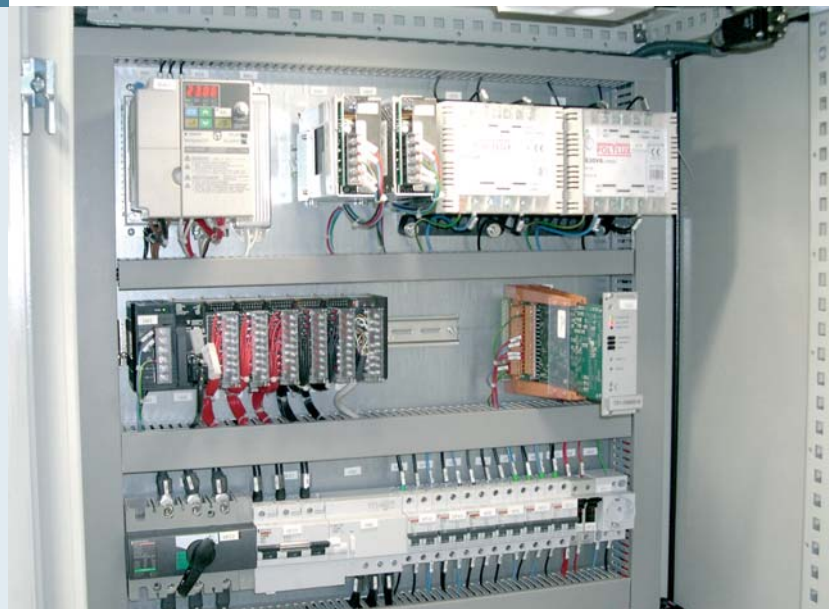
Model	Filter Area (m ²)	Cake volume (lit)	Dimensions L x W x H (mm)
PFO-1000	15 a 65	300 a 1.400	6800 x 1600 x 3400 mm
PFO-1200	35 a 120	700 a 2.600	8000 x 1800 x 3800 mm
PFO-1500	70 a 220	1.500 a 5.000	10100 x 2100 x 4500 mm
PFO-2000	125 a 400	2.800 a 9.000	13200 x 2600 x 5500 mm



The **PFO series filter presses** can be automated by controlling all variables and parameters which influence on the filtration cycle, adapting by themselves according the frequent changes in the characteristics of the product to be treated.

The control reaches from the sludge feeding pump up to the cake discharge and evacuation, influencing as well on the compressed air blowing, membrane squeezing, filter cloth washing and filter cloth moving processes, all in a easy operation and control procedure through the LCD screens on the panels.

The **TEFSA power and control panels** are designed and manufactured by our own electrical department, achieving the ideal performance and requirements.

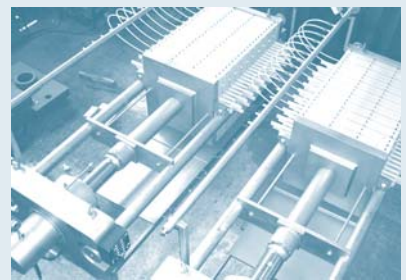


TEFSA offers a wide range of filter presses in the production program, as well as other filtration technologies in order to guarantee the best performance and best process within every application and industry:

- **Sidebar Filter Presses:** units with plate sizes up to 1500 x 1500 mm, manual, semiautomatic and full-automatic executions.
- **Overhead Filter Presses:** units with plate sizes up to 2000 x 2000 mm, semiautomatic and full-automatic executions.
- **Further filtration equipment:** belt filter presses, vacuum filters (drum and belt types) and pressure filters (candle, leaf, cartridge, bag & mesh types).

Application fields:

- Waste and potable water plants.
- Mining industry.
- Chemical industry.
- Food industry.
- Further special applications.





High Yield Filter Presses



TÉCNICAS DE FILTRACIÓN S.A.

FILTER PRESSES
BELT FILTER PRESSES
VACUUM BELT AND VACUUM DRUM FILTERS
PRESSURE LEAF AND PRESSURE CANDLE FILTERS
THERMAL SLUDGE DRYING



COMERCIAL LASMERT S.L.

THICKENERS / DECANTERS
SLUDGE CONDITIONERS
PNEUMATIC AND DOSING PUMPS
HEAT EXCHANGERS



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BELT PRESS BELTS
SELF CLEANING FILTERS
BAG FILTERS
CARTRIDGE FILTERS
PAPER FILTERS
BASKET FILTERS
PLATES
POLYELECTROLYTES
POLYMER PREPARATION UNITS



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North American Offices:

TefsaUSA, LLC
1759 Avenida Alta Mira
Oceanside, CA 92056
T 760 536 3373 sales@tefsausa.com
www.tefsausa.com

Josep Argemí, 59-61
08950 Esplugues de Llobregat (BCN)
T +34 934702400 F +34 934734553
www.gruptefsa.com
tefsa@gruptefsa.com