

sismat

POWERFUL SOLID/LIQUID SEPARATION SYSTEMS

Filterpresses





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The filterpress is the most effective solid/liquid separation system and the most widely employed filtering system in all kinds of applications.

The systems are optimally designed to fit the requirements by making the appropriate selection among many accessory alternatives.

The systems are subjected to a series of tests in Sismat Laboratories. The optimal flocculant, filtration pressure and filter cloth are determined. In light of the same data, filterpress dimensions and number of plates are specified.

If requested, pilot plant applications can be carried out and turnkey solutions can be delivered.





Areas of Use

Filterpresses are not only used in water and wastewater treatment plants but also in the production processes of various industries:

- Sugar
- Mineral enrichment
- Marble and granite
- Ceramic and china
- Phosphate binding baths
- Chemicals
- Textile dyes
- Soap and detergent
- Liquid and solid fats
- Beer, liqueur, wine
- Yeast



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Advantages

- **High productivity:** Since filterpresses perform fine filtration under high pressure they provide the following benefits:
 - The solid matter content of the cake is high.
 - The cake has a smaller volume.
 - Product quality becomes higher in process usage.
 - Loss of material is prevented.
- **High capacity:** Filterpresses are designed to provide the highest capacity for the users. They also have other performance-boosting features:
 - Fast cake discharge by automatic plate shifting device
 - Time saving in cloth cleaning by automatic washing device
 - Fast closing and opening of the filterpress with the proper hydraulic system
 - Easy cake discharge and fast filtration by selecting the most appropriate cloth
 - Increased cycle speed with PLC's full automatic operation feature
- **Safe Operation:** Filterpresses are offered with various solution alternatives for thorough user safety:
 - Moving control panel
 - Steel spray guards
 - Folding splash windows
 - Light beam safety barrier
 - Safety pull rope



SYSTEM COMPONENTS

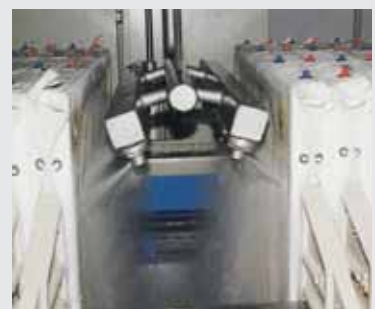
Main Components

- **Fixed Head Piece:** Firmly mounted on the foundation by headpiece support.
- **Moving End Piece:** Connected with the closing piston to transmit the closing force onto the set of plates.
- **Side Bars:** Laterally beside the filter pack, with stainless steel coating on the sliding surfaces.
- **Hydraulic Opening-Closing Device:** The filterpress can be opened and closed by manual or motor activated systems.
- **Plate Unit:** Set of plates consists of plate and frame, chamber, membrane or combination of membrane and chamber plates.
- **Filter Cloth:** The most appropriate cloth according to filtration period, filtrate and cake quality is used. Cake discharge type is also taken into consideration.



Optional Components

- **Plate Opening and Cake Discharge Systems:** Sismat offers several different plate opening methods either for one by one or full pack separation at once.
- **Shakeout System:** Used for easy and rapid cake discharge.
- **Drip Tray:** Placed below the filter pack to collect both wash water and droplets formed during the filtration period.
- **Filter Cloth Washing Unit:** The washing unit moves along with the plate package, and by spraying pressurized water, cleans the spaces between the plates.
- **Cake Transportation:** Cake is transported by containers and conveyors.
- **Cake Washing:** In some applications, cake washing is required after the filtration in order to recover valuable residual in the cake. In these cases, membrane plates are used.
- **Control Panel:** It is offered with PLC when full operation of the system is required.



PRE-TREATMENT EQUIPMENT

- Screens
- Screening Compactor
- Grit Classifier

TREATMENT EQUIPMENT

- Screw Pump
- Surface Aerators
- Scrapers
- Thickeners
- Flow Control Devices

DEWATERING EQUIPMENT

- Pre-dewatering Belt
- Beltpresses
- Filterpresses
- Chemical Preparation and Dosing Units

PACKAGE TYPE BIOLOGICAL TREATMENT PLANT

- BIOPAK

FILTRATION UNITS

- Pressure Sand Filter
- Ion Exchanger
- Activated Carbon Filter

OTHERS

- Screw Conveyor
- Belt Conveyor
- Double Shaft Mixer
- Container Station
- Oil and Grease Separators

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