

Food Beverages

Chamber and Membrane Filter Press



Water Power Technology Corp.



www.waterpower.com.tw

FOOD BEVERAGES

Chamber and Membrane Filter Press - Clean System

Design

Filter Press are pressure filter in which a filter package formed by filter plates and filter frames or chamber plates is installed in a stand between a “fixed cover” and a “loose cover”. These elements are plane- parallel to each other and are pressed together by the fixed cover and the loose cover. The fixed cover is connected to the traverse via connecting and tie bars. Together they form the press stand. The filter package is pressed together by the a pressure unit which is incorporated in the traverse and acts on the loose cover.

Between the individual filter plates or chamber plates there are filter cloths which have an outward sealing function under the pressure applied. The unfiltrate is conveyed into the chambers via a pump. The filtrate passes through the filter medium, leaves the filter via internal or external outlet channels and is conveyed further according to its intended usage.

Benefits from the use of membrane plates:

- Higher yield, virtually no loss.
- Drier filter cake.
- Filtration cycle shortened by approx. 50%

Materials

The filter stand is made of nonrust stainless steel.

The filter plates are of polypropylene although other materials are also possible as required.

Filter materials include PP filter cloth and depth filter sheets.

Application and options for use

Filter presses are used in all branches: foodstuffs and drinks, chemistry, pharmaceutical or in the environmental sector.

Filtration with filter aids

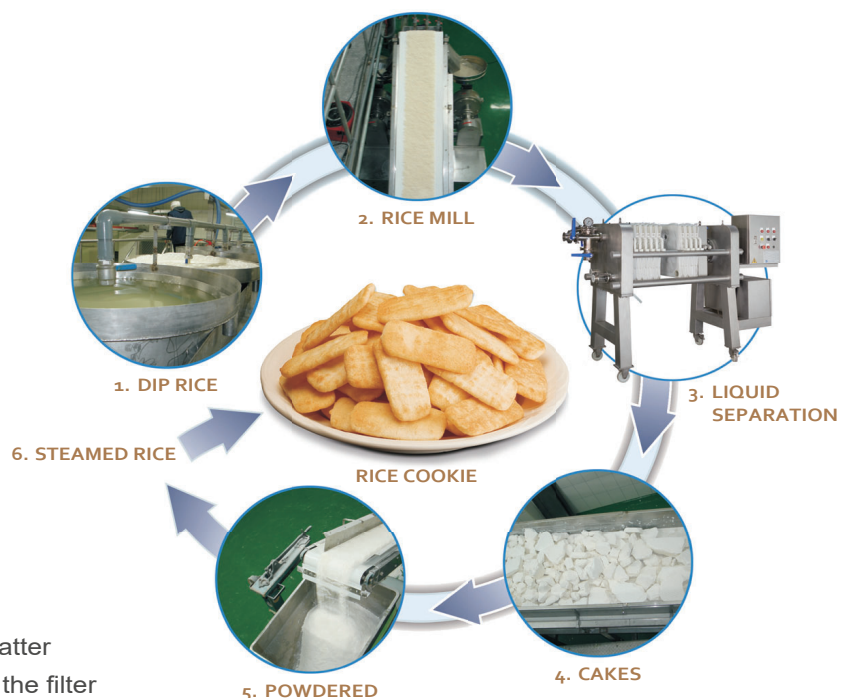
As filter aids kieselguhr or perlite are generally added to facilitate filtration.

Precoating

Before the start of actual filtration the filter cloth is coated with a layer of the filter aid. This prevents bleeding and protects the filter cloth from blockage. We recommend the doing unit for precoating and subsequent metered addition of the filter aid to ensure optimum mixing and dosing of necessary quantity of filter aids.

Drainage of solid matter

In the case of products with a high solid matter content this is retained in the chambers of the filter until solid cake has formed.



Washing and drying of filter cake

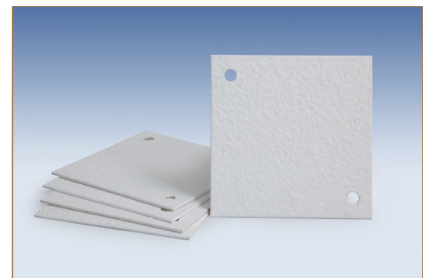
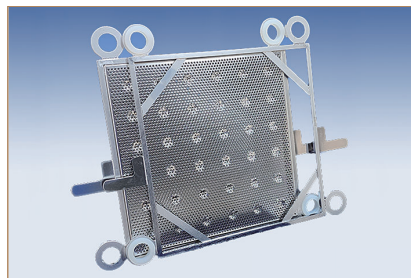
Substances to be recovered or removed can be washed out from the previously drained solid matter by adding certain solvents. The plates and frames used for this purpose are equipped with special washing channels. The filter cake can be additionally dehydrated using membrane plates followed by compressed air blown through the filter cake.

Model	Filtrate area (m ²)	Plate size (mm)	Plate thickness T (mm)	Quantity N	Capacity (Liter/cycle)
SF300	0.13×(N-1)	300	50	N	1.35×(N-1)
SF500	0.36×(N-1)	500	50	N	4.28×(N-1)
SF630	0.55×(N-1)	630	50	N	7.40×(N-1)
SF800	0.91×(N-1)	800	60	N	15×(N-1)
SF1000	1.56×(N-1)	1000	60	N	25×(N-1)

1. The filter plates and filter clothes are made of high-pressure- and heat-resistant materials.
2. A hygienic-class connector is used.

Depth sheets filter press

Model	Filtrate area (m ²)	Plate size (mm)	Plate thickness T (mm)	Quantity N
AF200	0.03×(N-1)	200	10	N
AF400	0.125×(N-1)	400	10	N



Applications

The broad variety of available porosities allow for their use in wide range of applications.

Porosity grades are available from coarse over fine to germ reducing and germ removing filtration (sterile filtration) Examples of industries:

- Biotech
- Beverage
- Cosmetics
- Herbal or other natural extracts
- Process water
- Pharmaceutical intermediates



SQUEEZER FILTER

Design

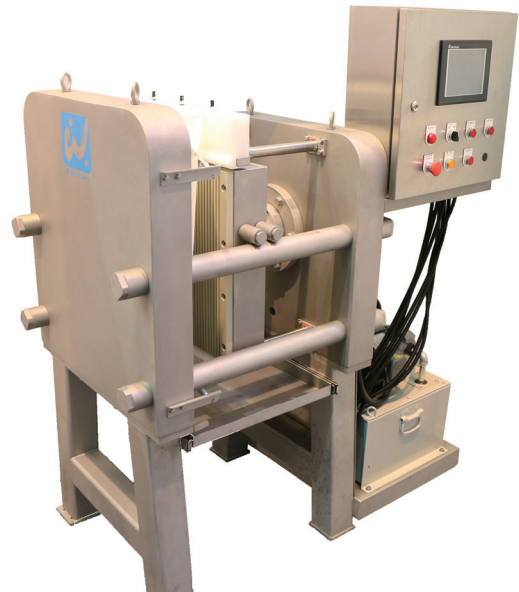
For raw materials with low fluidity or no flow, it is impossible to transport the designed press with PUMP.

Characteristic

- According to the different materials, replace the filter cloth or filter.
- Moisture can be fully squeezed to reduce losses.
- Press pressure, time can be set according to different material properties.
- No conveyor No PUMP simple to operate.

Model	Filtrate area (m ²)	Plate size (mm)	Capacity (Liter/cycle)
SQ500	0.441	500x500	12
SQ600	0.539	500x600	15

Note: Special specifications accept custom made.



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