

FILTER PRESSES



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FILTER PRESSES

General Description and Intended Use

Generally, it is used to dewater the chemical or biological treatment sludge occurred as a result of treatment of domestic or industrial wastewater in the wastewater treatment plants. It can also be preferred to remove the solid materials from the water in different sectors (food, oil, chemical, medicine, metal, mining, energy, other sectors).

It is the most preferred sludge dewatering equipment in filter press sludge dewatering because it is economical and easy to use.

Working Principle Of Equipment

The conditioned treatment sludge is fed to the plates pressed under high pressure with the help of the pump. The filtered water flowing from the plates are disposed of by plate taps and the sludge pressed under high pressure takes cake form. When the plate gaps are filled, the pump which feeds sludge to the plates and the valve at the inlet of the balancing tube are closed. A little bit of air is given to the plates according to the quality of the sludge in order to dehydrate the sludge cake in plate gaps and the sludge cake which is dehydrated is cleaned by opening the plates.



TECHNICAL SPECIFICATIONS

- Maximum feeding pressure of the filter press is 8 bars.
- Maximum pressure resistance of the filter press is 12-14 bars.
- The hydraulic piston pressure is 220 bars.
- Sludge cake thickness is 32 mm.
- The plates in chamber type which is suitable to open discharge and made of polypropylene material are used.
- Plate sizes compatible with its capacity (500x500, 650x650, 800x800 and 1000x1000 mm) and the option of positioning 10 and 70 polypropylene plates.
- Polypropylene plate cloths having different permeability are used according to the sludge structure.
- During filtration, the filtration water dripped from the plates is directed to drip water pan in order to prevent them to splash around.
- A waste pan or a waste container etc. is used to carry the sludge cake obtained as a result of filtration according to the sludge volume.
- The piston of manual pressing filter presses is manually lubricated by the hydraulic piston arm. When the pressure reaches 220 bars, the piston lock is manually closed and the plates are pressed.
- The piston of the automatic pressing filter presses is automatically ubricated by the hydraulic pump when the piston forward key on the electrical panel is pressed. When the pressure reaches around 220 bars, the piston lock is automatically closed and the plates are pressed.
- The filter press plates are manufactured as manual or automatic pressing filter presses according to the plate pressing.
- The automatic pressing filter presses are manufactured as manual or automatic shaking according to the cleaning type.
- Plates open and are cleaned manually after piston lock of manual pressing filter presses are manually opened and the oil in the piston is discharged with the aim of hydraulic pump arm.
- Automatic compressing filter presses, Plates open and are cleaned manually after the oil in the piston is discharged when piston rewind button is pressed on the electrical panel.
- Automatic shaking filter presses are automatically cleaned by shaking with the lead plate from the plates connected to each other with a chain.
- Automatic shaking filter presses are manufactured as having upper cover under safety of the employee and occupational health and safety.
- Plate dimensions, number and frame size of the filter presses manufactured by us are shown in the table below.

Advantages

- This Equipments Has the Highest Dewatering Efficiency Compared to Other Mechanical Dewatering Equipments (Sludge Cake with 20-25% Thickness),
- Low Sludge Disposal Cost,
- Low First Investment Cost,
- Alternative Designs for Various
 Industrial Sectors,
- Low Operation and Maintenance Costs,
- Easy to Use,
- Providing High Dewatering with Low Chemical Substance Use,
- Plate and Tyre Selection According to Sludge Chemical Structure,
- Long-Life Due to Durable
 Structure.

Accessories

- Sampling Plug
- Plate Scraping Spatula
- Manometer
- Pressure Switch
- Mechanical Switch**
- Emergency Button**
- Local Power and Control Panel**
- Drip Pan*
- Sludge Pan*
- Sludge Chute*
- Waste Container*
- Intervention and Maintenance Platform*
- * Optional accessories are defined.

**Standard equipment for automatic pressing and automatic shaking presses.



	DIATE			CAKE VOLUME	TOTAL CAKE	FILTER PRESS DIMENSIONS		
MODEL	DIMENSION	NUMBER	BETWEEN THE PLATES	BETWEEN THE PLATES (LITER)	VOLUME (LITER)	EN	LENGTH	HEIGHT
ATEK-MFP- 500*10	500*500 mm	10	32 mm	5,5	49,5	750 mm	2100 mm	1725 mm
ATEK-MFP- 500*15	500*500 mm	15	32 mm	5,5	77	750 mm	2380 mm	1725 mm
ATEK-MFP- 500*20	500*500 mm	20	32 mm	5,5	104,5	750 mm	2635 mm	1725 mm
ATEK-MFP- 500*25	500*500 mm	25	32 mm	5,5	132	750 mm	2920 mm	1725 mm
ATEK-MFP- 500*30	500*500 mm	30	32 mm	5,5	159,5	750 mm	3195 mm	1725 mm
ATEK-MFP- 630*10	650*650 mm	10	32 mm	8,5	76,5	880 mm	2095 mm	1725 mm
ATEK-MFP- 630*15	650*650 mm	15	32 mm	8,5	119	880 mm	2380 mm	1725 mm
ATEK-MFP- 630*20	650*650 mm	20	32 mm	8,5	161,5	880 mm	2665 mm	1725 mm
ATEK-MFP- 630*25	650*650 mm	25	32 mm	8,5	204	880 mm	2950 mm	1725 mm
ATEK-MFP- 630*30	650*650 mm	30	32 mm	8,5	246,5	880 mm	3235 mm	1725 mm
ATEK-MFP- 630*35	650*650 mm	35	32 mm	8,5	289	880 mm	3520 mm	1725 mm
ATEK-MFP- 630*40	650*650 mm	40	32 mm	8,5	331,5	880 mm	3805 mm	1725 mm
ATEK-MFP- 800*10	800*800 mm	10	32 mm	16	144	1030 mm	2175 mm	1860 mm
ATEK-MFP- 800*15	800*800 mm	15	32 mm	16	224	1030 mm	2485 mm	1860 mm
ATEK-MFP- 800*20	800*800 mm	20	32 mm	16	304	1030 mm	2795 mm	1860 mm
ATEK-MFP- 800*25	800*800 mm	25	32 mm	16	384	1030 mm	3105 mm	1860 mm
ATEK-MFP- 800*30	800*800 mm	30	32 mm	16	464	1030 mm	3415 mm	1860 mm
ATEK-MFP- 800*35	800*800 mm	35	32 mm	16	544	1030 mm	3725 mm	1860 mm
ATEK-MFP- 800*40	800*800 mm	40	32 mm	16	624	1030 mm	4035 mm	1860 mm
ATEK-MFP- 800*45	800*800 mm	45	32 mm	16	704	1030 mm	4345 mm	1860 mm
ATEK-MFP- 800*50	800*800 mm	50	32 mm	16	784	1030 mm	4655 mm	1860 mm
ATEK-MFP- 800*55	800*800 mm	55	32 mm	16	864	1030 mm	4965 mm	1860 mm
ATEK-MFP- 800*60	800*800 mm	60	32 mm	16	944	1030 mm	5275 mm	1860 mm
ATEK-MFP- 800*70	800*800 mm	70	32 mm	16	1104	1030 mm	5895 mm	1860 mm

			CAKE	CAKE VOLUME	TOTAL CAKE	FILTER	PRESS DIME	NSIONS
MODEL	DIMENSION	NUMBER	BETWEEN THE PLATES	BETWEEN THE PLATES (LITER)	VOLUME (LITER)	EN	LENGTH	HEIGHT
ATEK-OFP- 500*10	500*500 mm	10	32 mm	5,5	49,5	750 mm	2200 mm	1725 mm
ATEK-OFP- 500*15	500*500 mm	15	32 mm	5,5	77	750 mm	2490 mm	1725 mm
ATEK-OFP- 500*20	500*500 mm	20	32 mm	5,5	104,5	750 mm	2750 mm	1725 mm
ATEK-OFP- 500*25	500*500 mm	25	32 mm	5,5	132	750 mm	3030 mm	1725 mm
ATEK-OFP- 500*30	500*500 mm	30	32 mm	5,5	159,5	750 mm	3300 mm	1725 mm
ATEK-OFP- 630*10	650*650 mm	10	32 mm	8,5	76,5	880 mm	2150 mm	1725 mm
ATEK-OFP- 630*15	650*650 mm	15	32 mm	8,5	119	880 mm	2530 mm	1725 mm
ATEK-OFP- 630*20	650*650 mm	20	32 mm	8,5	161,5	880 mm	2720 mm	1725 mm
ATEK-OFP- 630*25	650*650 mm	25	32 mm	8,5	204	880 mm	3010 mm	1725 mm
ATEK-OFP- 630*30	650*650 mm	30	32 mm	8,5	246,5	880 mm	3360 mm	1725 mm
ATEK-OFP- 630*35	650*650 mm	35	32 mm	8,5	289	880 mm	3645 mm	1725 mm
ATEK-OFP- 630*40	650*650 mm	40	32 mm	8,5	331,5	880 mm	3900 mm	1725 mm
ATEK-OFP- 800*10	800*800 mm	10	32 mm	16	144	1030 mm	2265 mm	1860 mm
ATEK-OFP- 800*15	800*800 mm	15	32 mm	16	224	1030 mm	2575 mm	1860 mm
ATEK-OFP- 800*20	800*800 mm	20	32 mm	16	304	1030 mm	2885 mm	1860 mm
ATEK-OFP- 800*25	800*800 mm	25	32 mm	16	384	1030 mm	3135 mm	1860 mm
ATEK-OFP- 800*30	800*800 mm	30	32 mm	16	464	1030 mm	3585 mm	1860 mm
ATEK-OFP- 800*35	800*800 mm	35	32 mm	16	544	1030 mm	3885 mm	1860 mm
ATEK-OFP- 800*40	800*800 mm	40	32 mm	16	624	1030 mm	4235 mm	1860 mm
ATEK-OFP- 800*45	800*800 mm	45	32 mm	16	704	1030 mm	4550 mm	1860 mm
ATEK-OFP- 800*50	800*800 mm	50	32 mm	16	784	1030 mm	4745 mm	1860 mm
ATEK-OFP- 800*55	800*800 mm	55	32 mm	16	864	1030 mm	5055 mm	1860 mm
ATEK-OFP- 800*60	800*800 mm	60	32 mm	16	944	1030 mm	5365 mm	1860 mm
ATEK-OFP- 800*70	800*800 mm	70	32 mm	16	1104	1030 mm	6095 mm	1860 mm
ATEK-PFP- 800*20	800*800 mm	18	32 mm	16	272	1440 mm	4881 mm	2158 mm

MANUAL COMPRESSING FILTER PRESSES



No	Part Name
1	Manometer
2	Pressure Switch
3	Balancing Tube
4	Fixed Plate
5	Polypropylene Plate and Tyre
6	Moving Plate
7	Piston Lock
8	Hydraulic Oil Storage
9	Sampling Plug
10	Filtrate Plug
11	Sludge Pan
12	Polypropylene Plate Arm
13	Drip Water Groove
14	Hydraulic Piston Arm

AUTOMATIC COMPRESSING FILTER PRESSES

No	Part Name
1	Manometer
2	Pressure Switch
3	Balancing Tube
4	Fixed Plate
5	Polypropylene Plate and Tyre
6	Moving Plate
7	Mechanical Switch
8	Emergency Button
9	Electrical Panel
10	Hydraulic Oil Storage
11	Piston Engine
12	Polypropylene Plate Arm
13	Filtrate Plug
14	Sludge Pan
15	Drip Water Groove
16	Sampling Plug



AUTOMATIC SHAKING FILTER PRESSES



No	Part Name
1	Manometer
2	Pressure Switch
3	Balancing Tube
4	Upper Cover
5	Log
6	Mechanical Switch
7	Plate Shaking Reducer
8	Piston Engine
9	Emergency Button
10	Electrical Panel
11	Drip Pan Piston
12	Moving Plate
13	Polypropylene Plate and Tyre
14	Plate Chain
15	Drip Water Groove
16	Filtrate Plug
17	Fixed Plate
18	Sampling Plug
19	Drip Pan
20	Sludge Chute

Material Details

- Frame: They can be manufactured as S235JR + Epoxy Paint.
- Frame Side Arms: They can be manufactured to provide coating on S235JR + Epoxy Painted Side Arm with DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316) metal sheet.
- Drip Water Groove: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Drip Pan: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Sludge Pan: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Sludge Chute: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Plate and Tyre: They can be manufactured from polypropylene material.

"Different materials can be preferred in accordance with the request of the customer."



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