

FILTER PRESSES & SLUDGE DEWATERING SYSTEMS



260 Liter Automatic PLC Control Filter Press
Fertilizer Production Plant
Abu-Rawash, Giza



625 Liter Semi-Automatic Filter Press
Ceramic Industry Waste Treatment Plant
6th of October Industrial City



250 Liter Semi-Automatic Filter Press
Sludge Dewatering, Municipal Wastewater Treatment Plant
Gouna, Hurghada

SAT designs and builds its state-of-the-art filter presses for various applications and industries. Filter presses are a very efficient means of separating solids from liquids. They offer the highest flow rates, filtration areas and solids holding capacities possible in a compact design. Filter presses are becoming more popular every day due to the continuous development and innovation in design and materials of construction over the years. **SAT** offers versatility in terms of size, materials of construction, and level of automation - to meet the requirements of a variety of applications, including water and wastewater treatment, metal finishing, and oil & soap industries, among others. Filter presses are available in manual, semi-automatic, and fully automatic units incorporating PLC control and automatic cake dislodging systems. **SAT's** experience guarantees flexibility of design, prompt delivery, and competitive pricing - tailored to your specific needs, thus providing our clients the best quality product at an attractive price.

We have successfully built filter presses in various sizes and for a wide variety of applications. Today we have installations in almost every industrial area in Egypt, and we continue to develop our units to build filter presses that will compete internationally. We specialize in pumping and filtration equipment and have the expertise to design your waste treatment plants, especially for metal finishing applications.

FP - PRP		800	C	N4	PPH	- 8	- 36	- 32	- G	- XX
Design Code	Frame Size	Feed Port Location	Discharge Ports	Plate Material	Maximum Pressure	No. Of Plates	Cake Thickness	Gaskets	Options	
PRP	250 mm	C: Center	N1: 1 Corner	PPH	8 bars		15 mm	G: Gasketed	Standard	
AFI	470 mm	A: Corner	N3: 3 Corners	PPF	16 bars		20 mm	NG: Non-Gasketed	MH: Manual	
KFZ	630 mm	O: Off-Center	N4: 4 Corners	PVDF			25 mm		MA: Manual/Air	
	800 mm	E: External	NO: Open	CI			30 mm		EA: Electric/Air	
	1000 mm			SS304			32 mm		EE: Electric	
	1200 mm			SS316			38 mm		P: PLC	
	1500 mm						45 mm			
	2000 mm						50 mm			

Filter Structure

The body of the filter press consists of a head-stock, tail-stock, movable follower, side bars, and closure system. All framework is fabricated of epoxy coated structural steel, and the movable follower is mounted on rollers supported by the side bars that connect the head stock and tail stock.

Closure System

Closure is achieved by a hydraulic cylinder mounted in the tail-stock to maintain the required closure pressure during the filtration/dewatering cycle. A variety of closure systems are available to suit the individual requirements of each client. Our standard design incorporates a highly efficient semi-automatic air-powered hydraulic system, eliminating the need for electricity. This design is self-compensating and automatically responds to pressure and temperature changes that may affect the plate stack during operation. All high-pressure components and piping are rated for a maximum pressure of 5000 PSIG. Other closure systems are available upon request, such as manual hand-powered on small sizes, manual air-powered, electrically activated air-powered, and totally electric. The control console is conveniently located on the side of the press. Automatic systems with PLC control are also available upon request and are provided with a separate freestanding or wall-mounted control panel.

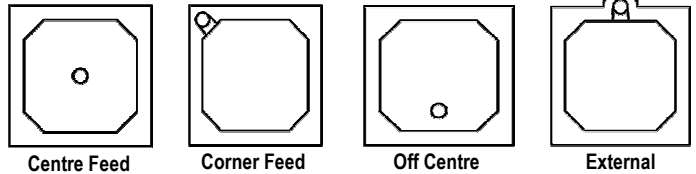
Filter Plates

Our standard design incorporates square high density polypropylene recessed plates with center feed and four-corner discharge at the feeding plate, or discharge spigots on each plate for open flow systems. Other materials and configurations are available to suit the specific requirements of your application.

Plate Sizes: Standard plate sizes are square plates in sizes of 250, 470, 630, 800, 1000, 1200, 1500, and 2000 mm. Other sizes can be custom built upon request if necessary.

Plate Materials: In addition to our standard high density polypropylene recessed plates (PPH), we can also offer High Temperature Polypropylene (PPF), PVDF, Cast Iron, Stainless Steel 304 and 316. The choice of materials depends on application details, operating temperatures, and filtration pressure desired.

Port Configurations: Standard feed ports are located in the center of the plates, but other porting options are available upon request to meet the demands of every specific application. The feed port may be located at one corner, or outside of the plate, or inside the plate but offset from the center of the plate. Not all porting options are available on all plate types, so please consult our sales department for specific requirements.



Standard discharge is via four-corner discharge ports collected at the feed plate for applications requiring pressurized discharge, or discharge spigots on each plate for open flow systems discharging to a drip tray on the side of the filter press. The open discharge system is most suitable for most sludge dewatering applications waste treatment applications or marble, granite, and ceramic industries.

Gaskets: We offer plates in both the non-gasketed, and the gasketed leak-free design. For applications such as the marble and granite industries, or sludge dewatering in waste treatment plants, the open flow plates with discharge spigots and drip trays are more popular. For applications where the filtrate is hazardous or valuable, pressurized corner discharge plates are available, with or without gaskets. The gasketed version of the plates is also available upon request for completely leak-free systems.

Cake Thickness: Most applications require a cake thickness ranging from 32-38 mm, but we are capable of providing the full range of cake thicknesses from 15 mm to 50 mm as per customer requirements.

Filtration Pressures: We offer filter plates rated for a range of filtration pressures from 6-16 bars. Our standard filter plates are rated for a maximum pressure of 8 bars, and an operating pressure of 7 bars at ambient temperature. For higher pressures and operating temperatures, please consult our sales department.

Sludge Feeding Pumps

Sludge feeding pumps are available upon request. These pumps are capable of pumping slurry and are available in a variety of configurations, sizes, and flow rates. The standard pumps supplied in SAT's sludge dewatering systems are the air operated diaphragm pumps. The main advantage of these pumps is that they gradually slow down in response to the pressure buildup in the filter and eventually come to a stall when the filter press has been fully compacted, thus provide trouble free operation without the need for any additional control. Shorter cycle times require high and near constant flow rates that are achievable by using an optional electric feeding pumps, which are controlled via sensors to de-energize the pump when the filter is compacted with sludge. Automatic pump control, pressure step-up control systems are also available upon request to achieve a denser, drier cake.

Send us your requirements or application details today for a free evaluation!



900 Liter Semi-Automatic Filter Press
 Hazardous Waste Treatment Plant
 Burg El-Arab, Alexandria



160 Liter Semi-Automatic Filter Press
 Metal Finishing Waste Treatment
 10th of Ramadan Industrial City



2 x 40 Liter Semi-Automatic Filter Press
 Waste Treatment Plant
 Hurghada Airport



2 x 87 Liter Semi-Automatic Filter Press
 Industrial Waste Treatment Plant
 Amreya - Alexandria

Systems and Technology Co.

61 Iran Street, Dokki - Giza
 Cairo - Egypt 12311
 Tel: +202-3335-3664 / +202-3761-4150
 Fax: +202-3337-0597
 email: sales@sat-eng.com

SAT Engineering Supplies FZE

PO Box 16111 Ras Al Khaimah
 BC4 - Ras Al Khaimah FTZ - UAE
 Tel: +971-7-2078640
 Fax: +971-7-2041010
 email: sales@sat-eng.com