

Yash Filter Press

SINCE 2005



FILTER PRESS

Your Solution Partner for Solid/Liquid Filtration Technology

www.yashfilterpress.com



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WHAT IS FILTER PRESS?

A filter press is a batch operation, fixed volume piece of equipment ranging from 01-600ft³ that separates liquids and solids using pressure filtration. A slurry is pumped into the filter press and dewatered under pressure. A filter press can be used for process, water and wastewater treatment in a variety of different industries and applications.

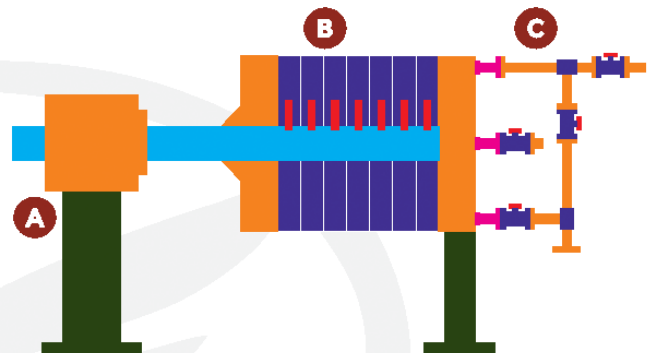
A filter press has four main components:

Frame: The steel frame acts as a clamping device for the filter plates. (A)

Filter Plates: A filter cake forms in the chambers between filter plates. (B)

Manifold: Our standard manifold consists of piping and valves which control the slurry inlet and connect the four corner filtrate discharge ports into a common discharge pipe. (C)

Filter Cloth: A cloth filter that is attached to both sides of a filter plate. Solids build up on cloth to form a filter cake, separating liquids from solids.

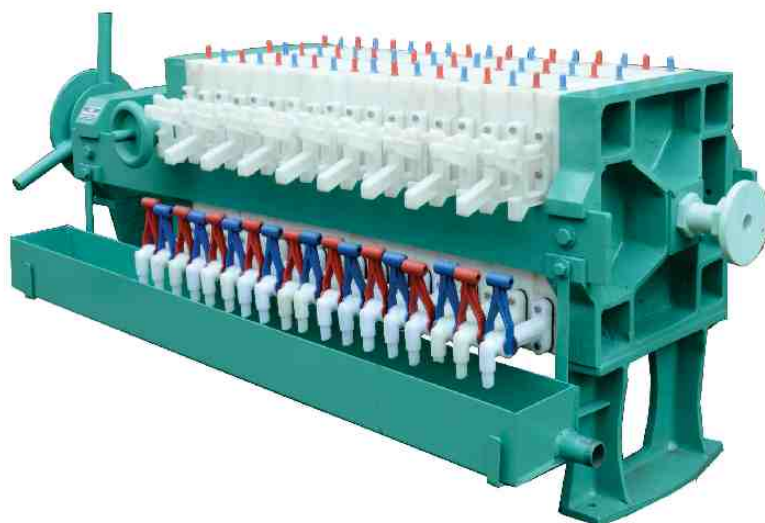


HOW DOES IT WORK?

Slurry is pumped into the filter press. The solids are distributed evenly on the filter cloths during the feed (fill) cycle.

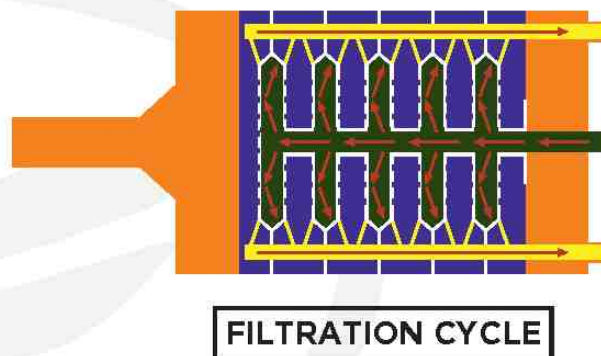


FILLING CYCLE



FILTRATION CYCLE

Solids start to deposit on the filter cloth, trapping the ensuing particles and building a filter cake. The filter cake acts as a depth filter for solid/liquid separation. Filtrate exit from the plates through the corner ports into the manifold. When the correct valves in the manifold are open, the filtrate exits the press through the filtrate outlet. As the filter press feed pump builds pressure, the solids build within the chambers until they are completely full of filter cake.



CAKE WASH/AIR CYCLE

It is useful for maintaining pH value of filter cake and decrease the moisture in filter cake. It is apply in diagonal direction as shown in Fig. 1.1 & 1.2.



CAKE DISCHARGE CYCLE

Once the chambers are full, the feeding cycle is complete and the filter press is ready to unload.





INFRASTRUCTURE & MANUFACTURING FACILITIES

Our products are all manufactured under one roof, our production department is well segregated into following sections,

Fabrication Section

Fabrication shop is equipped with MIG, TIG welding, grinding machines, Cutting machines, Honing machines.

Machining Section

Our Machine shop is highly equipped with the latest, state art of technologies such as CNC machining centres, Turning lathes, Vertical machining centers, Drilling machines, Horizontal Boring Machines, Milling machines for carrying out machining works.

Moulding Section

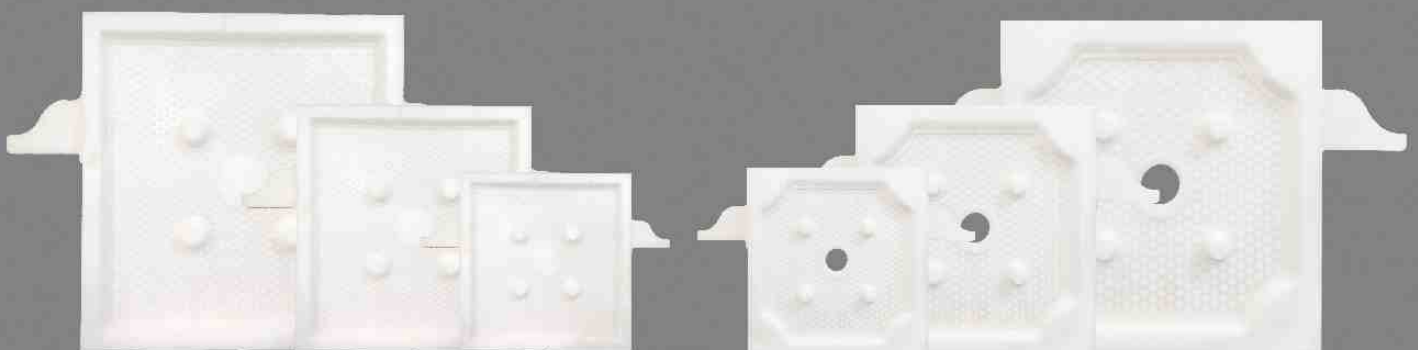
Our filter plates are moulded using compression moulding technique. Approximately, 10 plates can be moulded each day in each size which varies from 355x355 mm to 1500x 2000 mm.

Assembly Section

The assembly unit consist of 2 sections: Machine assembly unit & Hydraulic assembly unit. In hydraulic assembly section, the hydraulic power pack is assembled. The hydraulic cylinder is manufactured, honed and assembled to the Hydraulic head of the machine. They are available with mechanical locking as well as automatic pressure compensation system, with a stroke length ranging from 150 mm to 4000 mm. The Cylinder is designed for various sizes of Filter Press depending upon the Pressure ranging from 15 tons to 400 tons.

Inspection & Testing

PP plates and Filter press structure are dimensionally checked before dispatch to assure no deviations and the Filter press machine is subjected to a mechanical load test to a maximum pressure of 300 bar to check if any pressure drop or leakage.



FLEXIBLE PRODUCTS FOR EVERY MINING APPLICATION

Sustainable growth through smarter separation solutions

In many of the world's most important industries, separation is vital to sustainable growth. With the right solution, food producers can continuously improve their products while reducing waste. Cities can save energy and conserve millions of cubic meters of water. Mining companies can efficiently boost through out to meet fast-changing global demands. And chemical manufacturers can optimize for absolute product purity. When it comes to the separation technologies and services that maximize the value of your most precious resources, no one has broader capabilities than **NMP**.

NMP is the world's leading separation specialist, with the deepest knowledge, broadest technical resources, and most comprehensive service solutions. For more than 42 years, we have helped our customers respond to the world's environmental, energy - resource, health, and nutrition challenges by leveraging our extensive knowledge to create, develop, implement, and service innovative separation solutions. By solving these fundamental challenges, we create lasting value and drive growth across every industry we serve.

Improved Uptime, Efficiency and Costs

The driest cake - minimizes handling and processing costs.

The clearest liquid effluent - suitable for reuse, improves water conservation.

Reliable performance and very high uptime - reduces operating costs.

Durable robust design and construction - minimizes maintenance costs.

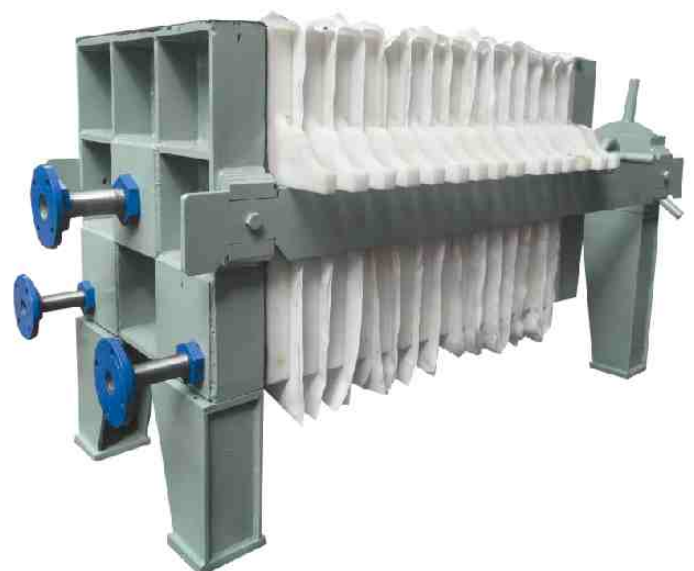
Industries We Serve

Environment Food Dyes & Intermediates

Chemicals Mining & minerals Ceramic

Edible oil Industries Textile Industries

Pharmaceutical Industries





PRESS SIZING FORMULAS

- Information needed to quote a press
- Type of slurry to be processed
- Amount of slurry to be processed in given amount of time expressed in either.
 - Liter per minute, per hour, per day, or per week
 - Kilogram of solids (100% dry basis) per time period
- Number of hours per day ,and days per week the process operates
- Percent solids (by weight) in slurry
- Specific gravity of slurry if available
- Process operating temperature
- Density of wet filter cake
- Chemical conditioning amounts, if required (D.E., etc.)
- Press location: Indoor or outdoor, temperature range
- Desired cake thickness (std. is 32mm - 1 1/4")
- Desired closure & control automation (Specify: Manual, Semi-Automatic or Automatic)
- Other (Please specify optional features required)

STANDARD SLURRIES

Volume of slurry In Liter.per cycle x %
solids x 8.34 x specific gravity of slurry

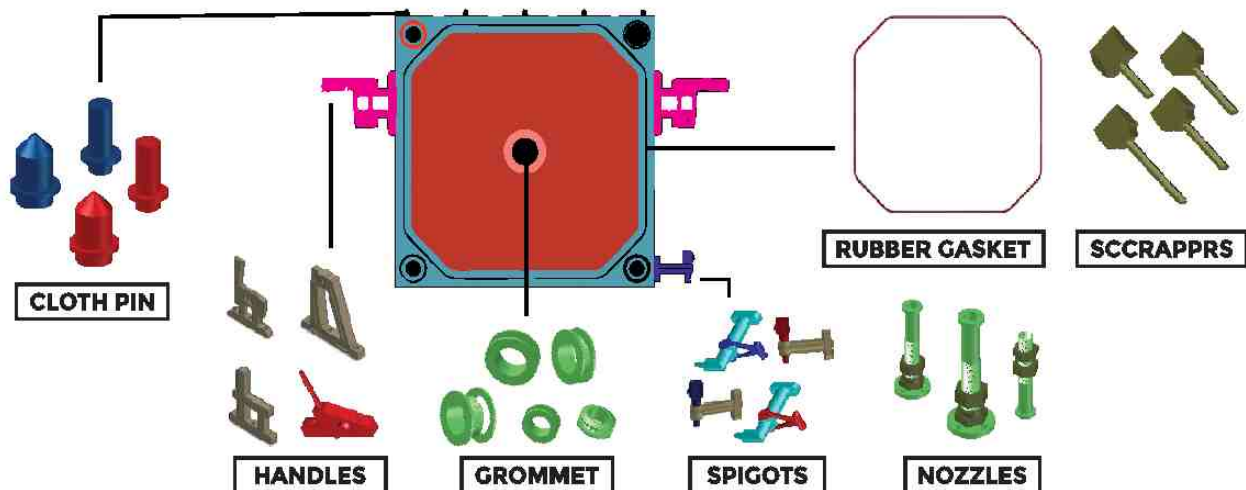
Density of wet cake in lb. per ft³ x (%) dry
solids in filter cake

METAL HYDROXIDE SLURRIES

Volume of slurry In Liter.per cycle x (%)
solids in feed

2.89

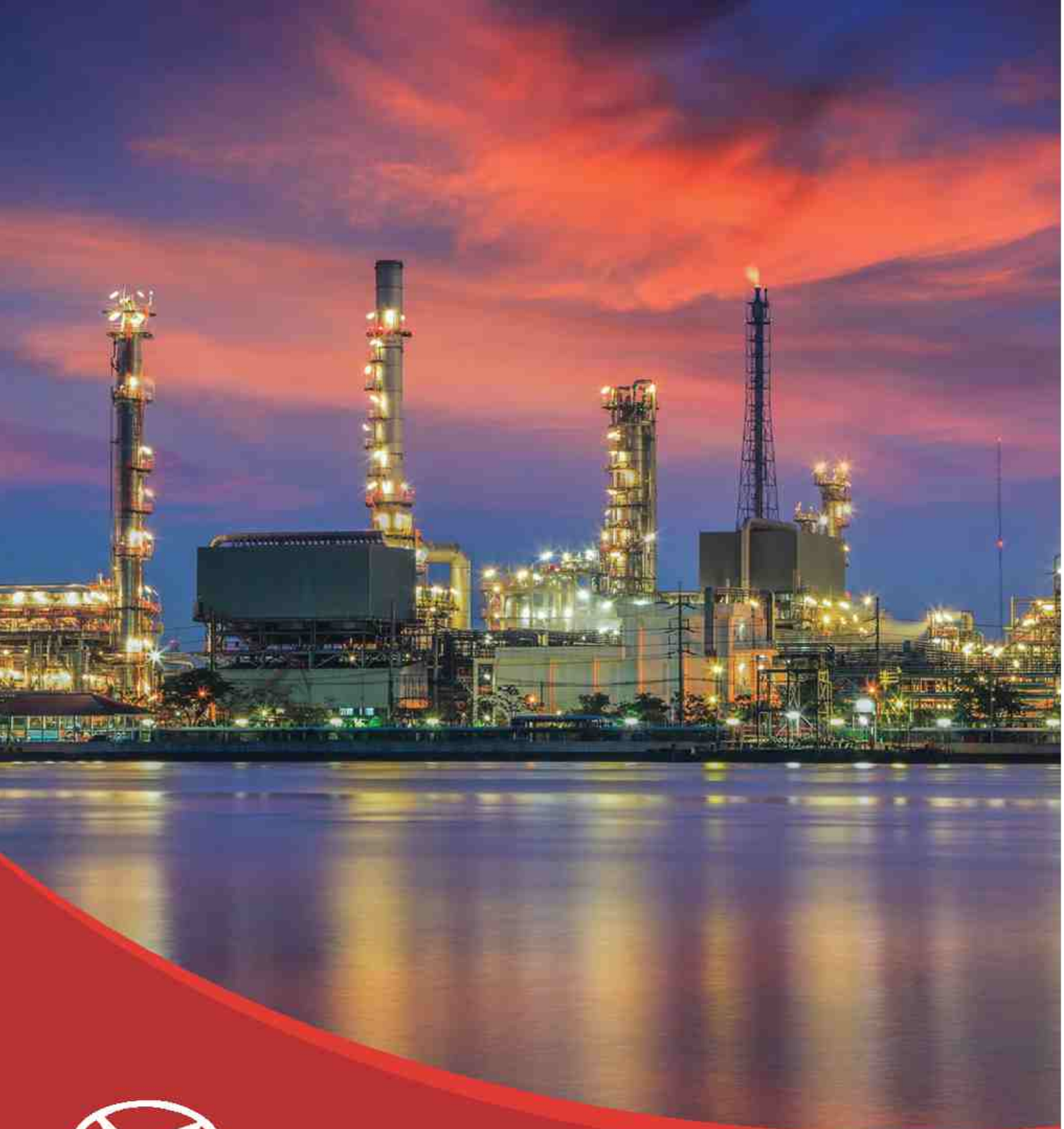
FILTER PLATE ACCESSORIES



FILTER PRESS SPECIFICATION

Filter Press Size	Recommended Chambers	Cake Thickness	Filtration Area(m ²)	Wet Cake Volume (Liters)	Dimensions		
					L	B	H
355	14	30	2.11	29.4	2450	720	850
470	18	32	6.12	93.24	3068	830	870
610	24	35	13.48	235.95	3749	980	1140
800	30	35	29.40	514.50	4580	1260	1450
915	36	40	48.60	972.00	5124	1360	1490
	36	50	49.32	1216.80	4630		
1000	40	40	65.60	1232.00	5865	1360	1476
	40	50	68.00	1500.64	6265		
1200	50	40	119.00	2000.00	6670	1670	1900
	50	50	124.00	2520.00	7170		
1500	60	40	224.40	4122.00	7820	2200	2275
	60	50	231.00	5250.00	8422		
1500 X 2000	70	40	347.20	6419.00	8530	2200	2790
	70	50	358.40	8176.00	9122		





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