



eVOQUA
WATER TECHNOLOGIES



J-PRESS® SIDEBAR FILTER PRESS



1.5 m x 2.0 m Fully automatic with automatic cloth washer

J-PRESS® FILTER PRESS — THE INDUSTRY STANDARD

LIQUID/SOLID SEPARATION PROCESS

The J-Press® sidebar filter press is the cost-effective solution for producing high solids filter cake with extremely high clarity in the liquid effluent. Considered by industry professionals as the premier sidebar filter press, the J-Press filter press combines rugged construction, precision engineering, ease of operation and a wide range of features and options to tackle the most difficult dewatering problems.

The J-Press filter press is one of the most versatile dewatering devices on the market, being used in a wide variety of industrial and municipal applications. The J-Press filter press can be used to recover both solids and liquids from a waste or process stream. With superior materials of construction, the J-Press filter press is especially useful in the dewatering of aggressive acid and alkali suspensions.

Available in a wide range of sizes and styles, the J-Press filter press can be configured to provide a dewatering solution to most all process flows from as little as 25 gallons to 1,000,000 gallons per day. It produces consistent results under varying influent conditions.



1500 mm fully automatic with automatic cloth washer



The J-Press® filter press can be configured with highly sophisticated manifolds, controls and cake discharge systems, such as this 2.0 m x 2.0 m J-Press® filter press built for a prominent municipal wastewater treatment plant.

J-PRESS® FILTER PRESS, THE INDUSTRY LEADER

In 1978, JWI revolutionized the industry with the introduction of the J-Press® filter press. The J-Press filter press was the first to feature, in a single design, a self compensating air/hydraulic closure system for ease of maintenance, gasketed filter plates for virtually leak free dewatering, semi-automatic plate shifting for labor savings and safety, automatic pump controls for unattended operation and a superior paint system that provided the highest level of protection from corrosion. The J-Press filter press quickly set the benchmark for filter press performance.

In the ensuing years, the J-Press filter press evolved, offering options for fully automatic plate shifting, automatic cloth washing, PLC controls and a full complement of ancillary slurry processing and cake handling systems. Being the industry standard, the J-Press line of filter presses is now the most versatile on the market today, from a manual 250 mm pilot press that processes less than 2 lbs of dry solids per batch, to the monster 2.0 m fully automatic press that can produce over 10,000 lbs of dry solids per cycle.

Evoqua sidebar presses are available in sizes ranging from 250 mm to 2.0 m designs, with working pressure ratings of 100 psi (7 bar) and 225 psi (16 bar).

ISO 9001:2000 QMS

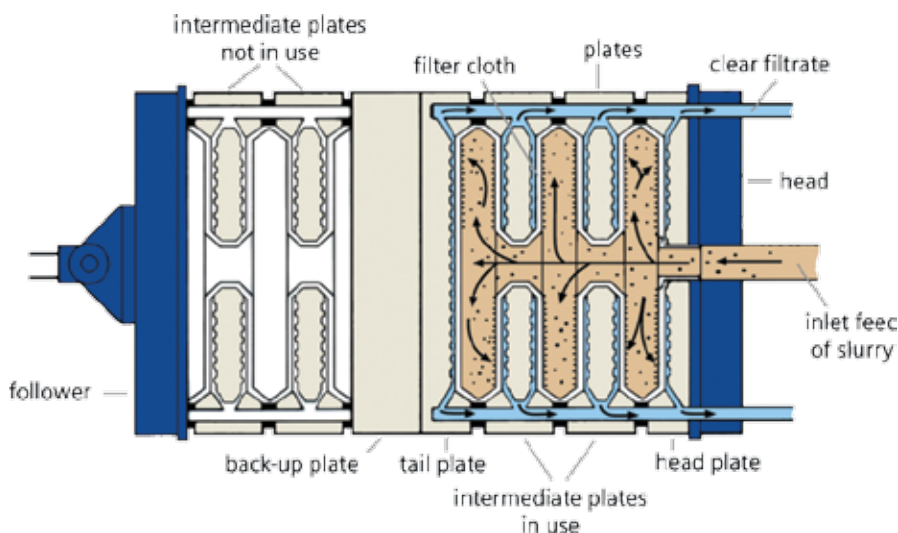
The quality management system governing the manufacture of the J-Press sidebar filter press is ISO 9001:2000 certified.



630 mm semi-automatic



470 mm manual



Because the J-Press® filter press is a batch dewatering system, the press capacity can be easily adjusted by changing the effective volume of the filter pack. A back-up plate, in conjunction with the tail plate, can be inserted to reduce the number of chambers used during dewatering.

UNIFORM, CONSISTENT CAKE SOLIDS

The J-Press® filter press is simple to operate. A single switch activates the pneumatic or electrically actuated hydraulic system. The plate stack forms a series of chambers, each covered with a filter cloth. With the plate stack clamped tightly in place, a solids-laden slurry is pumped, under pressure, into the plate chambers through a central feed connection.

The plate chambers fill uniformly with solids while the pump pressure and flow keep the solids deposited on the vertical surfaces of the plate chambers. Liquid passes through the filter cloths as clean filtrate flows to the end of the press where it is collected at a common manifold.

The solids continue to fill the plate chambers and are compacted in the press by the feed pump until the chambers are completely full. The feed cycle is discontinued and an air blow down is initiated for 5-15 minutes to remove any freestanding water within the cake and the press. The hydraulic closure of the press is then retracted, the individual filter elements are separated and the solids are discharged as "dry" filter cake to an appropriate receptacle or conveyance system.

The J-Press filter press may also be equipped with diaphragm (or membrane) squeeze plates that allow for a mechanical compression of the filter cake, yielding higher dry solids before the cake is discharged from the filter press.



Gasketed plates form a tight seal due to o-rings around the recessed chamber and filtrate discharge eyes, allowing for a virtually leak free operation.



Filter clothes are available for all gasketed and non-gasketed plates (above); material and weave pattern are selected for your specific performance requirements.



Diaphragm (or membrane) plates feature flexible drainage surfaces that expand to exert additional pressure on the filter cake, further reducing moisture.

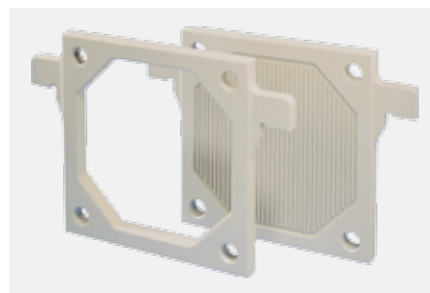
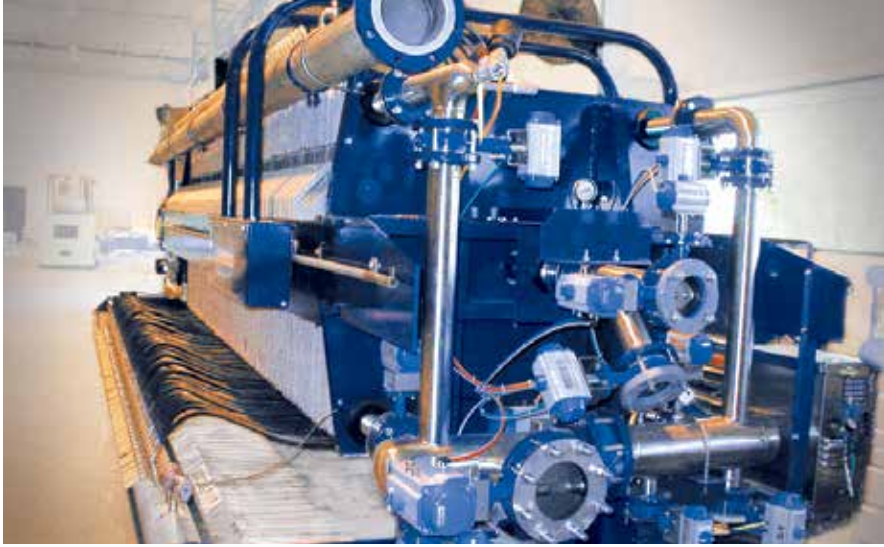


Plate and frame filter packs are available for polishing applications.



J-Press® feed and discharge manifolds are available in a variety of materials from PVC (above right) to stainless steel (above) to suit the application.



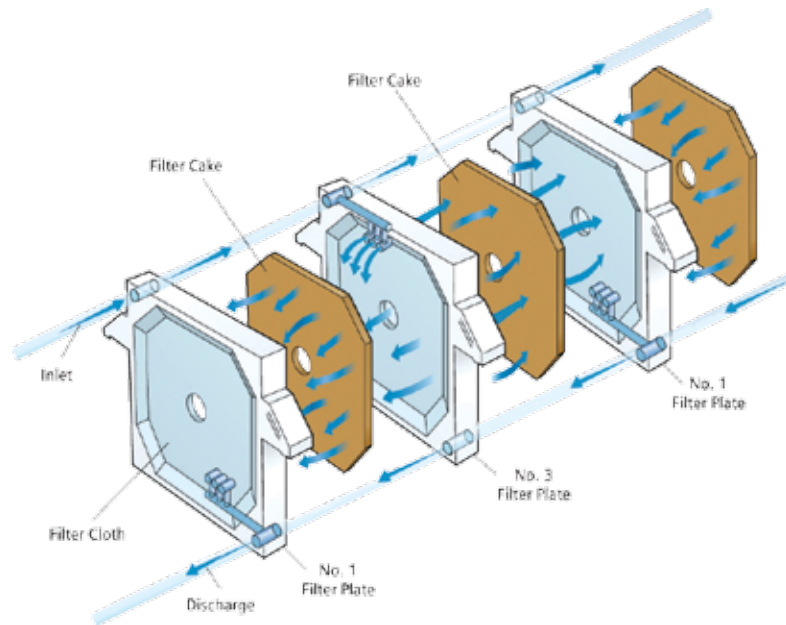
SUPERIOR FILTER PLATE TECHNOLOGY

Adding to the versatility of the J-Press® filter press is the large selection of filter plates available from Evoqua. Based upon the process operating demands, filter plates are selected for each specific application. Filter plates are available in corrosion resistant polypropylene, PVDF and nylon. Plates can be configured as gasketed or non-gasketed, diaphragm (membrane) squeeze, or plate and frame designs.

Like the J-Press filter press itself, the filter plates can be designed to withstand operating pressures up to 225 psi (16 bar).

CAKE WASH OR AIR BLOWDOWN

The inherent flexibility of the J-Press filter press makes it ideal for recovering solids, liquids or both. In processes where the filter cake may need treatment prior to discharge, the J-Press cake wash/air blowdown manifold can be used to force wash liquid through the cake. The manifold consists of piping and valves connecting the four corner filtrate ports into a common discharge pipe. By closing the appropriate valves, a wash liquid is pumped through the filter cake, and discharged out the diagonally opposed port. This can be followed by a compressed air blowdown, further removing moisture from the cake and filter plate drainage channels.



ENGINEERED PERFORMANCE AND OPERATING EFFICIENCY

1. MODULARIZED HYDRAULIC CLOSURE SYSTEMS

Available with either pneumatic or electric power, the modular power pack delivers up to 5,000 psi of hydraulic pressure to the hydraulic cylinder. The unit automatically compensates for thermal expansion and contraction of the filter pack due to changes in process temperature. Designed to minimize power consumption, the power pack features color coded connections for quick and easy removal and replacement during service and maintenance. The hydraulic pump and associated components are fully enclosed in a steel cabinet for protection from contamination and accidental damage, yet are easily accessible for maintenance through the full width cabinet door.

2. FUTURE EXPANDABILITY

The J-Press® filter press can be equipped with an optional expansion piece for future expansion of operating capacity with no need for costly sidebar replacements or frame exchanges. Expanding the capacity is as easy as adding additional filter plates.

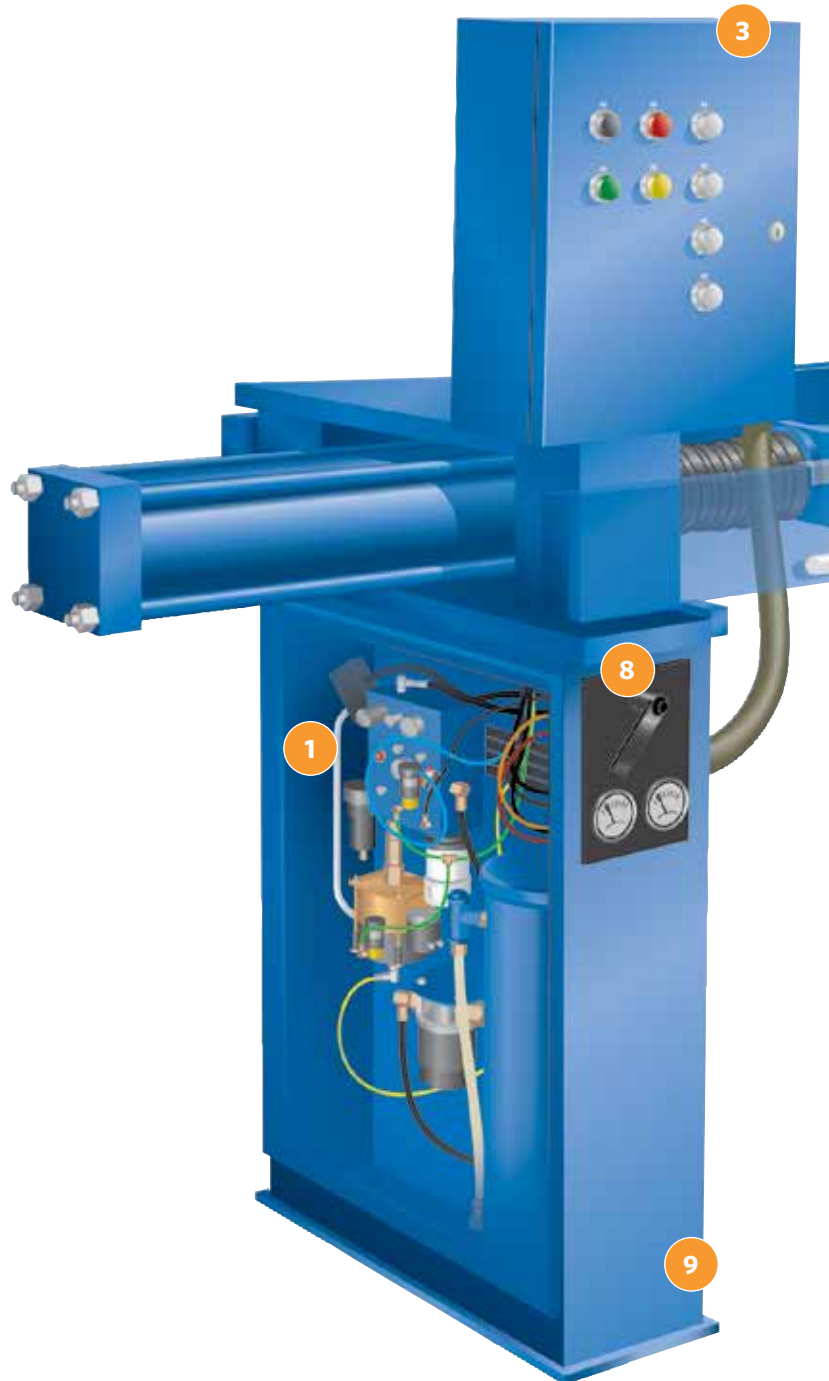
3. AUTOMATIC PUMP CONTROL SYSTEM (APCS)

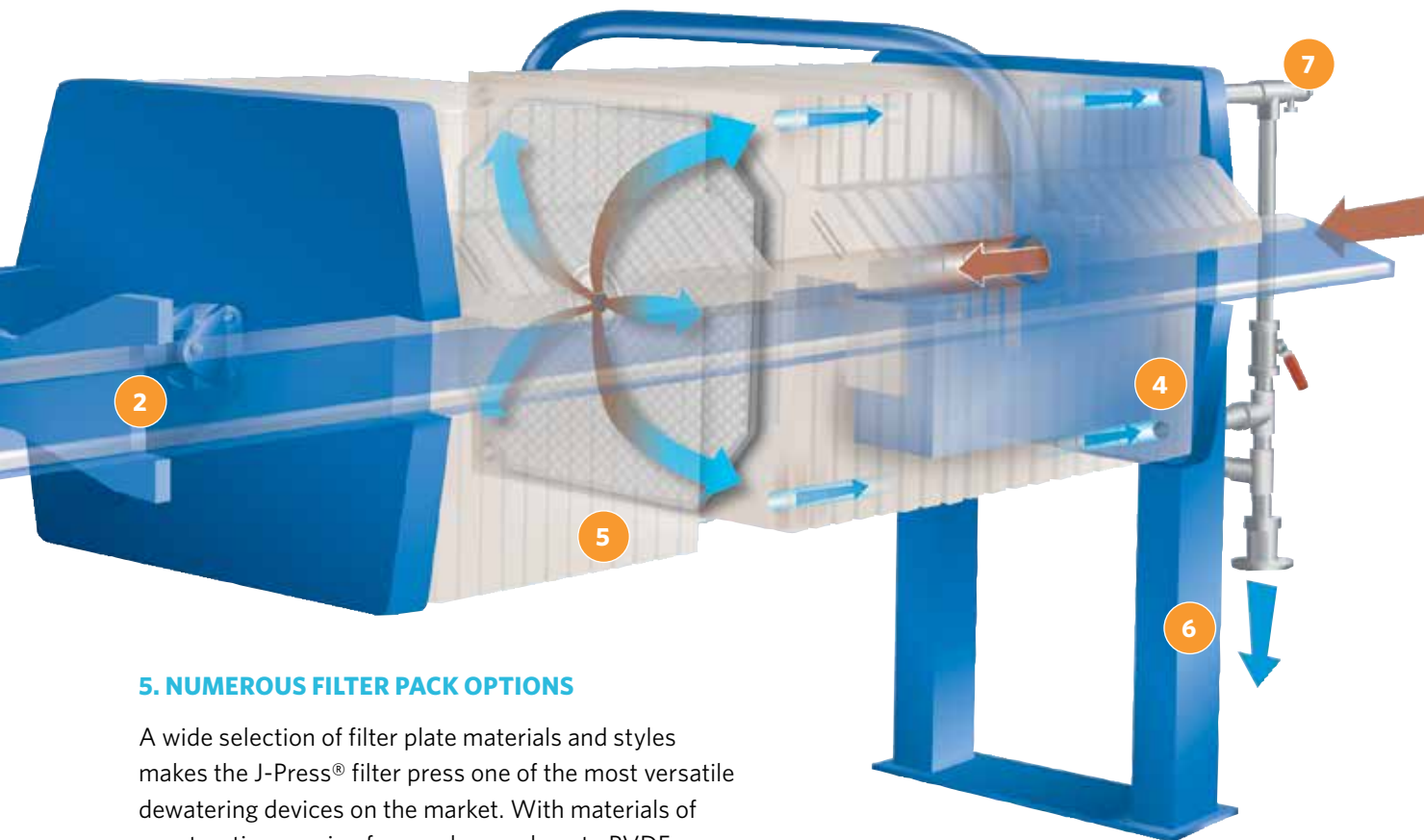
For smaller presses, the APCS automatically controls the filling cycle, gradually increasing the feed pressure of the slurry feed pump to ensure a uniform formation of filter cake in the filter plate chambers. The uniform cake formation enhances the dewaterability of the incoming slurry. The APCS includes a hydraulic pressure safety device that shuts down the feeding cycle if a loss in hydraulic pressure occurs. For larger presses, filter press filling is controlled by a PLC.

4. PLATE SHIFTER/CLOTH WASHING

The J-Press filter press is available with either semi-automatic or fully automatic plate shifting systems (depending on size). The semi-automatic plate shifter is an operator driven plate shifting device that reduces manpower requirements during cake discharge. Further reductions in manpower are available with fully automatic shifting systems. The patented Evoqua pry, bump and weigh system offers the additional advantage of positive cake discharge from each chamber further

reducing the requirement for operator interface with the filter press during cake discharge. A cloth washing system can also be added to the automatic plate shifting system to provide a periodic high pressure cleaning cycle for the filter cloths. Operating in as little as 20 seconds per plate, the automatic high pressure cloth washing system can restore the porosity of the filter cloths to like new condition. Washing the cloths at regular intervals not only improves performance but prolongs the working life of the cloth as well.





5. NUMEROUS FILTER PACK OPTIONS

A wide selection of filter plate materials and styles makes the J-Press® filter press one of the most versatile dewatering devices on the market. With materials of construction ranging from polypropylene to PVDF and nylon, the J-Press filter press can be designed to handle virtually any feed slurry no matter how corrosive or chemically aggressive. Filter plates are available in recessed gasketed, recessed non-gasketed and diaphragm (or membrane) squeeze designs that can dewater everything from the easiest metal hydroxide slurry to difficult organic solids. The J-Press filter press can readily adapt to changes in product and process applications by simply changing the filter cloths or the filter plates, giving the system great operational flexibility.

6. ROBUST FRAME CONSTRUCTION

The J-Press filter press is a ruggedly built unit made of fabricated steel plate. Precision alignment and machining of the structural components provide for even distribution of all pressures and stresses generated during operation. Frame strength is based upon the filter press operating pressure of either 100 psi (7 bar) or 225 psi (16 bar).

7. MANIFOLD PIPING

Like the filter plates, manifold piping is supplied in a variety of non-metallic and metallic materials suited to meet the rigors of the application. Manifolds can also be configured in a variety of inlet, discharge and

valve options to maximize the versatility of the filter press. With the appropriate manifold, a filter press can be designed to perform both pre and post dewatering operations that enhance both the dewaterability of the material and the quality of the final cake.

8. CONTROL SYSTEMS

Filter press control can be as simple as a single switch for opening and closing to as complex as a fully integrated PLC with Ethernet or wireless capabilities for remote monitoring and operation.



The PLC system provides the most advanced and complete press operation available, from automatic feed pressure adjustment, to cycle frequency, cake discharge, cloth wash and air blowdown.

9. SUPERIOR PAINT SYSTEM

Each J-Press filter press is sandblasted to an SSPC-10 near white finish before being primed and finished with a high quality, single coat aliphatic polyurea, fast clad DTM urethane paint system that results in a durable, chemically resistant finish averaging 6-9 mils in thickness (other paint systems are available on request).



1.5 m x 2.0 m Fully automatic with automatic cloth washer

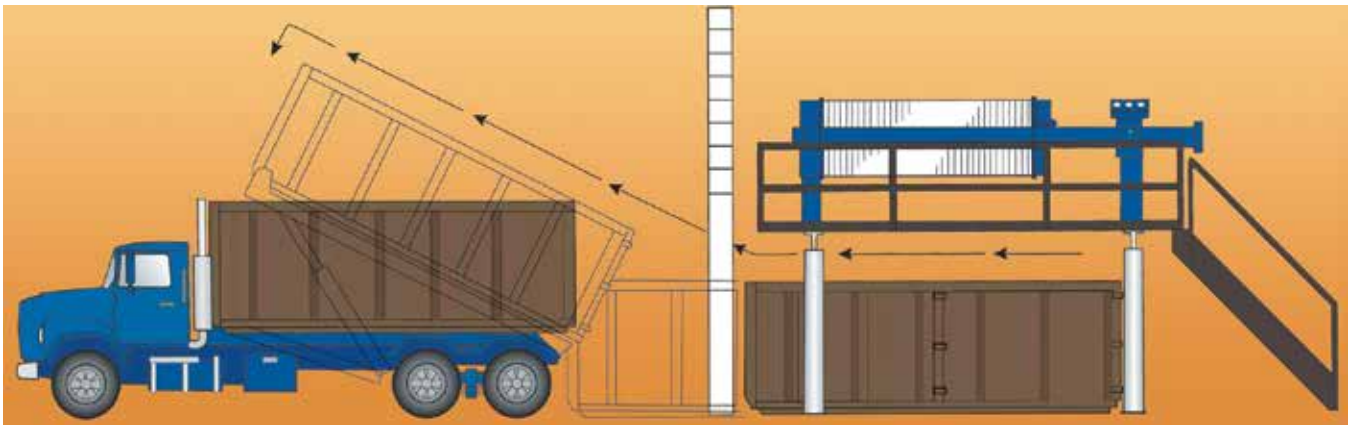
MATERIAL HANDLING SYSTEMS

The J-Press® filter press installation can be configured to accommodate a wide range of material handling systems for discharged cake. Dumpsters, equipped with casters and self-dumping forklift mounts are the most common method for smaller presses. The drum disposal system, also for smaller presses, allows easy removal of discharged cake. This system includes a series of chutes that catch the filter cake as it falls from the press and directs it into 55-gallon (200L) drums. The J-Press filter press is typically mounted on a platform, with catwalks, railings and stairs.

For larger presses, or presses that require transfer to downstream drying systems, Evoqua can engineer a belt or screw conveyance as an integrated component of your process configuration. Roll-off container and truck-loading systems are also available. Your Evoqua representative works closely with you to design, install and support the most efficient handling system for your specific needs.



Self-dumping dumpsters





Fully automatic cloth washer



Fully automatic plate shifter



Semi-automatic plate shifter

FULL RANGE OF FEATURES AND OPTIONS

Evoqua has the expertise and engineering capabilities to manufacture filter presses to meet the demands of your particular operation. Adaptability to applications, processes and capacities is the underlying value of J-Press® filter press. Features include:

- Full range of capacities: 250 mm to 2.0 m x 2.0 m
- Low and high pressure: 100 psi (7 bar), 225 psi (16 bar), higher pressure available — consult factory
- Standard plate packs: Non-Gasketed Plates, Gasketed Plates, Diaphragm Squeeze Plates, Plate and Frame
- Stainless Steel Sidebar Covers
- Closure Systems: Manual, Automatic Closure (Air/Hydraulic), Automatic Closure (Electric/Hydraulic)
- Control Systems: Standard Control Panel, Automatic Pump Control System, PLC Control
- Standard Manifolds: Air Blow Down Manifold, Double End Feed Manifold, Core Blow Down Manifold, Cake Wash Manifold, Precoat Manifold (other configurations available — consult factory)
- Expansion options available for future capacity
- Plate Shifting: Air Operated Semi-Auto Plate Shifter, Automatic Pry Shifter, Automatic Pry Shifter and Bump, Automatic Pry Shifter, Bump and Weigh (ACDDS), Multi-Plate Pull
- Automatic Cloth Washing
- Material handling: Filter Cake Dumpster, Extended Legs and Chute, Platform, Drum Disposal System, Platform, Roll-off Container System
- Cake Conveyors
- Drip Trays: Manual, Automatic
- Spread Leg Design
- Safety: Splash Curtain, Safety Guard, Safety Light Curtains, Deadman Control Button, Safety Tripwire, Hyd. Clamp Pressure/Feed Pump, Interlock, Hyd. Control System/Press, Pressure Interlock, Hyd. Clamp Pressure/Squeeze, System Interlock
- Custom Paint Systems: Nicklad® Coating



Optional expansion allows you to build your press to meet future needs, then increase capacity simply by adding additional filter plates.



Exclusive integrated hydraulic circuit technology automatically compensates for varying pressures and temperatures. The enclosed steel cabinet and leak-free design minimize maintenance.

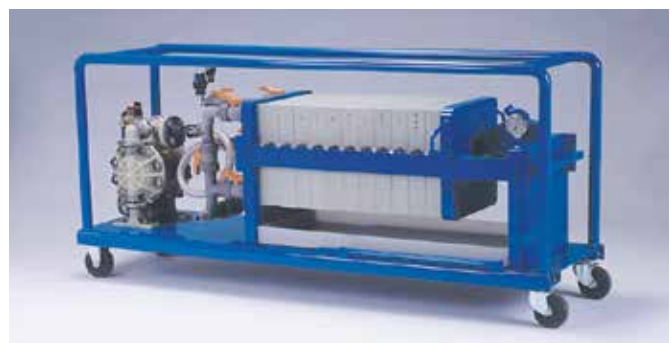


Our large parts distribution center ensures that many parts are available for same day shipment.

LABORATORY SERVICES—AN INFORMED DECISION IS THE BEST DECISION

Evoqua maintains a fully-staffed, state-of-the-art laboratory for determining the most effective liquid/solids separation techniques for your specific application. Capabilities range from feasibility testing of your materials to providing portable pilot units for on-site testing. This customer-focused resource produces tangible results. We can determine the most effective feed pressures, fill times, filter media and sludge conditioning.

In addition to ensuring a better informed equipment purchase, this valuable service is also available to help you maintain maximum performance of your J-Press® filter press.



Portable pilot filter press

AN ONGOING INVESTMENT IN YOUR SATISFACTION

Preventative Maintenance Services

We can customize a cost-effective program for your specific equipment, application, and environment that translates into lower maintenance cost and years of worry-free operation.

Parts Repair Service

Our professional service staff can quickly and reliably answer your technical questions and troubleshoot your specific requirements, schedule parts shipments, and arrange for an on-site service call. Our factory-trained and qualified service engineers travel throughout the world to help ensure equipment runs efficiently. From basic maintenance to complex Program Logic Control (PLC) interfaces and beyond, we have the experience and capability.

Refurbishment Services

We can provide a partial or complete rehabilitation of your equipment to a warranted like-new condition, at your site or ours.

Aftermarket Services

- Factory-based customer service support
- Expert technical consulting
- Same-day shipment on many service and spare parts
- Worldwide repair and preventative maintenance services
- Emergency support services
- Equipment retrofits, upgrades, and refurbishments
- Training
- Testing, evaluative and customized services

For more information on our Aftermarket Services, call 800.245.3006.

SPECIFICATION/SELECTION CHARTS

The following formula may be used for establishing J-Press® filter press volume (ft³) (L) for most dewatering applications:

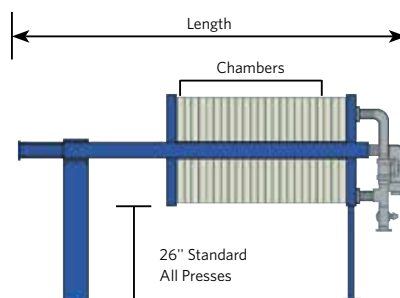
$$\begin{array}{ccccccc} \text{Total volume of product feed (gallons) (liters)} & \times & \text{\% solids concentration of product feed*} & \times & \text{8.34 (lbs per gallon of water) (1kg/L) (density of water)} & \times & \text{specific gravity of feed slurry} & = & \text{lbs (kg) dry solids} \\ \\ \text{Total Filter Press Volume (ft³) (L)} & = & \text{Density of wet filter cake** (lbs/ft³)(kg/L)} & \times & \text{\% dry solids content of filter cake*} & = & \text{cake density (lbs/ft³)(kg/L) x \% cake solids} \end{array}$$

* % concentration should be expressed in decimal form (e.g. 2% = .02).

**Density of wet filter cake = Specific gravity of wet filter cake x the density of water

For dewatering applications where feed solids are less than 1%, the dewatering area is the controlling parameter rather than volume. For such applications, contact Evoqua for size recommendations. Also, for advice on sizing for any application, contact Evoqua or our authorized representative.

PRESS	MEASUREMENT	MINIMUM	MAXIMUM	
250 mm	Volume (ft³)	0.1	0.4	
	Volume (L)	2.8	11.3	
	Height 15" (381 mm)	Length (in)	24.0	38.0
	Width 18.5" (470 mm)	Length (mm)	607.0	975.0
470 mm	Volume (ft³)	0.5	4.0	
	Volume (L)	14.2	113.0	
	Height 45.8" (1162 mm)	Length (in)	41.0	93.0
	Width 33.0" (838 mm)	Length (mm)	1041.0	2362.0
630 mm	Volume (ft³)	2.0	8.0	
	Volume (L)	57.0	227.0	
	Height 51.0" (1299 mm)	Length (in)	85.0	129.0
	Width 36.0" (916 mm)	Length (mm)	2168.0	3277.0
800 mm	Volume (ft³)	8.0	25.0	
	Volume (L)	227.0	708.0	
	Height 58.0" (1473 mm)	Length (in)	122.0	196.0
	Width 43.5" (1105 mm)	Length (mm)	3099.0	4978.0
1000 mm	Volume (ft³)	25.0	55.0	
	Volume (L)	708.0	1558.0	
	Height 66.5" (1689 mm)	Length (in)	175.0	260.0
	Width 51.5" (1308 mm)	Length (mm)	4445.0	6604.0
1200 mm	Volume (ft³)	50.0	125.0	
	Volume (L)	1416.0	3540.0	
	Height 74.5" (1892 mm)	Length (in)	217.0	356.0
	Width 60.0" (1524 mm)	Length (mm)	5512.0	9042.0
1500 mm	Volume (ft³)	130.0	270.0	
	Volume (L)	3682.0	7646.0	
	Height 95.7" (2432 mm)	Length (in)	313.0	500.0
	Width 74.9" (1903 mm)	Length (mm)	7950.0	12,700.0
1.5 x 2.0 M	Volume (ft³)	275.0	350.0	
	Volume (L)	7788.0	9912.0	
	Height 136.6" (3470 mm)	Length (in)	430.0	507.0
	Width 79.0" (2007 mm)	Length (mm)	10,922.0	14,097.0
2.0 x 2.0 M	Volume (ft³)	300.0	600.0	
	Volume (L)	8496.0	16,992.0	
	Height 106.0" (2692 mm)	Length (in)	405.0	562.0
	Width 137.0" (3480 mm)	Length (mm)	10,287.0	14,275.0



NOTES:

- Based on 32 mm cake thickness, 100 psi (7 bar)
- Additional sizes and capacities available — consult factory.
- All dimensions are approximate and should only be used for reference.
- Dimensions do not include optional equipment such as plate shifters, cloth washers or piping manifolds.



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Product is covered by U.S. patent no. 5674384.

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