FLOWPRESS

Water Recovery Solutions

Yuba City, California
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www.FlowPressUSA.com

FLOWPRESS

Liquid / Solids Separation
Impound Clean-up
Mud Handling

Applications

- **Drilling Mud:** FlowPress was originally established to address the problems that well drilling companies have handling drilling mud. FlowPress portable systems can significantly reduce mud handling costs.
- **Highway Grinding and Grooving:** For many highway and construction projects it is now possible to process slurry in a predictable manner. FlowPress systems can handle the incoming slurry from vacuum tankers, remove the solids and store the reclaimed water for return to the project.
- **Concrete reclamation:** Ready mix plants must handle the cement slurry generated from concrete reclaim systems and drum wash-out operations. FlowPress systems can reclaim the water for reuse and cake solids for easy handling.
- **Cattle Waste:** Waste lagoons can represent a significant environmental exposure and handling costs for the farmer. With calculated conditioning FlowPress systems have been able to dewater the sludge while retaining the ammonia in the cake.
- **Municipal Waste:** FlowPress membrane filter press systems can typically outperform belt presses and centrifuges when handling post-digester sludge.
- **Silt-Build up:** FlowPress is working to clean-out silt deposits in the irrigation channels using portable systems that can remove silt right where the problem is, returning the clean water to the ditch.
- **Food processing:** FlowPress systems have operated in the sugar-beet, tomato, carrot and potato industries for dewatering of waste solids during harvest time.
- **Mining Industry:** The mining industry is one of the largest users of filter press technology. FlowPress systems are well suited to handle the demanding flow rates and solid volumes associated with mining.
- **Other Applications:** FlowPress can clean out settling ponds generated from geothermal energy plants, power station ash ponds, dredging projects, food processing and any industrial slurry handling project. Chances are, that if you have a liquid/solid dewatering need, FlowPress can help!

1 Filter Press Technology

- A filter press provides an excellent means for separating liquids and solids on an industrial scale.
- In many cases, it is a better alternative to a belt press or centrifuge due to its energy efficiency and low maintenance characteristics.
- We custom design and fabricate portable, transportable and fixed systems sized and designed for our clients' specific needs.

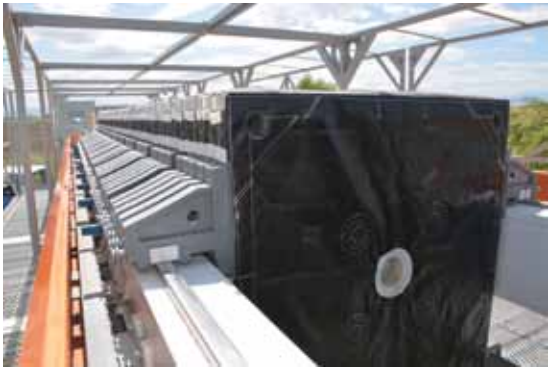
Membrane Filter Presses

- Although filter presses have been used in one form or another for hundreds of years, membrane filter presses are dramatically more efficient and effective than their predecessors.
- After the press is filled, alternate membrane plates are expanded from the inside to ”squeeze” the dewatered cake. This process allows for drier overall cake solids, quick cycle times and clean cake release from the press.
- Higher squeeze pressures and use of specifically engineered filter media allow this generation of press to maximize removal of suspended solids and production of clean filtrate.

2 Configuration, Set-up and Service

- Filter press sizing and associated equipment are selected after careful consideration of influent characteristic and the specific goals of each project.

- Systems are available to handle any size operation.
- The tables on the next page illustrate some general sizing considerations:



Press Sizing by sludge chamber volume:

		Press Volume (Ft^3)*														
		10	15	20	25	30	40	50	60	70	80	90	100	120	140	160
Number of Chambers	800 mm Press	16	24	33	41											
	1000 mm Press	10	15	20	25	31	42	52	62							
	1200 mm Press					19	25	32	38	44	51	58	66			
	1500 mm Press									30	34	38	42	50	59	68

*Note: This table is an estimate of the number of chambers for various press sizes. Actual press volumes vary depending upon the chamber depth and the membrane squeeze options. Consult with FlowPress for actual sizing data for a particular project.

Press Sizing by average feed flow:

Average Flow Rates*

800 mm Press	20 Chambers: 23,000 Gal/day
	30 Chambers: 34,000 Gal/day
	40 Chambers: 45,000 Gal/day
1000 mm Press	20 Chambers: 36,000 Gal/day
	40 Chambers: 70,000 Gal/day
	60 Chambers: 105,000 Gal/day
1200 mm Press	20 Chambers: 60,000 Gal/day
	40 Chambers: 118,000 Gal/day
	60 Chambers: 178,000 Gal/day
1500 mm Press	30 Chambers: 134,000 Gal/day
	45 Chambers: 200,000 Gal/day
	60 Chambers: 265,000 Gal/day

*Note: Flows estimated above assume 5% feed slurry pressed to 50% filter cake solids over a 16 hour daily cycle assuming 45 minute press cycles. Actual flow, solids concentration and feed cycles vary greatly. FlowPress has an automated program to determine optimal sizing based on the many parameters for a particular project.

3 Inorganic

FlowPress was originally established to address problems well drilling companies have handling drilling mud.

For many highway and construction projects, it is now possible to process slurry in a predictable manner. Filter presses require only a small footprint.

By thoroughly understanding the influent it is possible to develop a work flow that maximizes the speed and efficiency of filter press technology.

FlowPress is able to process well drilling mud on site. Using filter press technology, suspended solids are captured between filter plates and pressed into dry cake and clean effluent is produced.

By utilizing FlowPress portable filter press technology, drilling mud no longer needs to be removed by vacuum trucks and taken to hazardous waste dumps.

FlowPress offers the industry a reliable means of waste water processing which eliminates impound ponds.

As the awareness of FlowPress technology increases more applications are being realized. Examples are Waste Water clean-up, Bio Sludge impounds, Food Processing waste, Wash Plant mud handling, Concrete dump clean up, Concrete Groove and Grind slurry, Hydro blasting slurry, Creek cleanup, Food processing waste and more.

FlowPress has equipment that can be set up on-site to demonstrate and prove the applicability of filter press technology for those considering a permanent installation.

FlowPress portability provides a high production liquid/solid separation service at effluent quantity levels and production rates that have never before been available.

The FlowPress presses have been successful in handling on-site clean up of drilling mud, bio sludge, concrete dump sites and highway groove and grinding slurry.

4 Organic

FlowPress provides seamless installations incorporating all the components that make filter presses the logical solution in process water management.

FlowPress will match your requirements with installations of the right size, on budget, and on time.

Bio sludge liquid separation poses many challenges the FlowPress filter press installations address effectively.

Bio Sludge

FlowPress treatment is a welcome relief to industries maintaining bio sludge ponds.

FlowPress filter press installations benefit the environment.

Bio Sludge Cake

Sludge cake may be redirected to beneficial use.

FlowPress can reduce or eliminate the need for expensive polymers in processing liquid waste.

Low Moisture

Drier cake is easier to handle in most cases.

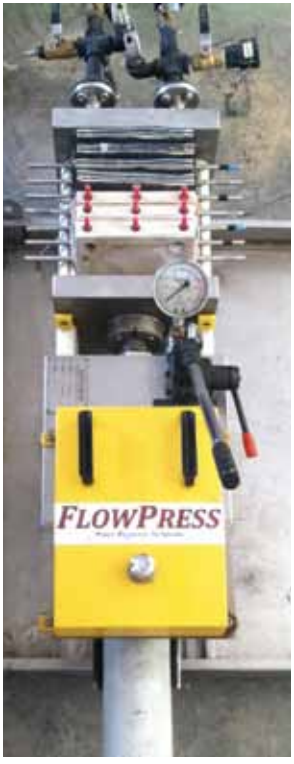
FlowPress processing results in excellent turbidity control.

Process Water

FlowPress installations help protect our ground water and water ways.

5 Testing Services

- Before making any major equipment investment, a certain level of confidence is needed to insure the right equipment is being purchased for the job.
- FlowPress takes the testing and sizing process very seriously and provides comprehensive testing and analysis services.



Step 1: Send a 20 gallon representative sample of slurry to the FlowPress lab

Step 2: FlowPress will use two styles of lab presses to determine solid/liquid separation characteristics. This will optimize dewatering pressure, cloth selection, and chemical conditioning needs.

Step 3: If further testing is required FlowPress can then ship a small portable press to the production site for onsite pilot testing. This mimics lab testing and allows for design decisions based on the actual site conditions.

Step 4: Based on lab and field testing, equipment can be sized for full-scale production with a high level of confidence it will perform to expectations.

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