FILTER PRESS

New, Used & Rebuilt Equipment
Parts & Retrofits
Custom Filter Cloths
Troubleshooting
Laboratory Testing
On-Site Service & Support
Complete Rebuild & Upgrade Packages
Highly efficient solid/liquid separation for the following industries:

• Stone Fabrication
• Metal Finishing
• Mining & Energy
• Power
• Industrial Wastewater
• Municipal Wastewater
• Lime Softening
• Chemical Processing
• Ready Mixed Concrete
• Car & Truck Washes
• CBD Oil Extraction

M.W. Watermark’s standard and customized filter presses incorporate designs developed through years of experience to provide superior reliability, durability, and ease of use.

Service • Experience • Expertise • Savings

In-house treatability laboratory. Two pilot models for rental or purchase.

<table>
<thead>
<tr>
<th>Model</th>
<th>FP250N25L-6-0.2MXX</th>
<th>FP320G32-6-0.3MXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Dimensions</td>
<td>250 mm x 250 mm (10” x 10”)</td>
<td>320 mm x 320 mm (12.5” x 12.5”)</td>
</tr>
<tr>
<td>Capacity</td>
<td>0.2 ft³</td>
<td>0.3 ft³</td>
</tr>
<tr>
<td>Plate Type</td>
<td>Non-Gasketed</td>
<td>Gasketed</td>
</tr>
<tr>
<td>Filter Cloths</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Manual</td>
<td>Manual</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>1/2” Feed x 1/2” Discharge</td>
<td>1” Feed x 1” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual</td>
<td>Manual</td>
</tr>
<tr>
<td>Skid Mounted</td>
<td>Standard - Included</td>
<td>Standard - Included</td>
</tr>
<tr>
<td>Feed Pump</td>
<td>Standard - Included</td>
<td>Standard - Included</td>
</tr>
</tbody>
</table>
What is a 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?

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

2. Solids begin to build 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 exits the plates through the corner ports into the manifold.

3. 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.

4. Once the chambers are full, the fill cycle is complete and the filter press is ready to be emptied.

Press Sizing Formulas*

Information Needed to Quote a Press

- Type of slurry to be processed
- Amount of slurry to be processed in a given amount of time expressed in either:
  - Gallons per minute, per hour, per day, or per week
  - Pounds 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 gal. per cycle * % solids * 8.34 * specific gravity of slurry |
| Density of wet cake in lb. per ft³ * % dry solids in filter cake |

Metal Hydroxide Slurries

| Volume of slurry in gal. per cycle * % solids in feed |

2.89
# M.W. Watermark™ Filter Press Product Range

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>470 mm x 470 mm (18” x 18”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>0.5 ft³ to 4 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Manual (Standard) or Air (Single Acting)</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>1-1/2” Feed x 1” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual</td>
</tr>
</tbody>
</table>

**Options Shown:**  
Air-Operated Diaphragm Feed Pump (On Shelf)  
Filter Cake Hopper

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>630 mm x 630 mm (24” x 24”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>2 ft³ to 12 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Air (Standard) or Manual</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>2” Feed x 1-1/2” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual, Semi-Automatic, or Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**  
Expansion Piece

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>800 mm x 800 mm (32” x 32”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>8 ft³ to 30 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Air (Standard) or Electric</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>2” Feed x 1-1/2” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual, Semi-Automatic, or Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**  
Semi-Automatic Plate Shifter  
Self-Dumping Filter Cake Hopper  
Air Hydraulics

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>1000 mm x 1000 mm (39” x 39”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>20 ft³ to 50 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Air (Standard) or Electric</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>3” Feed x 3” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual, Semi-Automatic, or Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**  
Automatic Plate Shifter with Cloth Washer  
Full Automation Control System (FACS)  
Electric Hydraulics  
Light Curtains  
Automatic Drip Trays  
Automated Valves
<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>1200 mm x 1200 mm (48” x 48”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>40 ft³ to 125 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Electric (Standard) or Air</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>3” Feed x 3” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual, Semi-Automatic, or Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**
- Semi-Automatic Plate Shifter
- Process Automation Control System (PACS)
- Non-Gasketed Filter Plates
- EnduroLiner™ Coating
- Electric (Standard) or Air
- Manual, Semi-Automatic, or Automatic

---

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>1500 mm x 1500 mm (60” x 60”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>100 ft³ to 275 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Electric (Standard) or Air</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>4” Feed x 3” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Manual, Semi-Automatic, or Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**
- Automatic Plate Shifter
- Full Automation Control System
- EnduroLiner™ Coating
- Automatic Plate Shifter
- Full Automation Control System
- EnduroLiner™ Coating

---

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>1500 mm x 2000 mm (60” x 79”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>250 ft³ to 350 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Electric</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>6” Feed x 4” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**
- Automatic Drip Trays
- Double Air Blowdown, Even Fill Manifold
- Overhead Plate Suspension
- Light Curtains
- Full Automation Control System
- Automated Valves
- Automatic Plate Shifter with Cloth Washer

---

<table>
<thead>
<tr>
<th>Plate Dimensions</th>
<th>2000 mm x 2000 mm (79” x 79”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Range</td>
<td>300 ft³ to 600 ft³</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>Electric</td>
</tr>
<tr>
<td>Std. Piping Connections</td>
<td>6” Feed x 4” Discharge</td>
</tr>
<tr>
<td>Plate Shifting</td>
<td>Automatic</td>
</tr>
</tbody>
</table>

**Options Shown:**
- Overhead Plate Suspension
- Light Curtains
- Full Automation Control System
- Automated Valves
- Automatic Plate Shifter with Cloth Washer

---

**Ask us about our full range of equipment rentals**

- 320mm Pilot Filter Press
- 630mm Filter Press
- ...And Other Models
- Trailer-Mounted Filter Presses

Rental Units
Features

Press Closure
With 100 psi and 225 psi designs, M.W. Watermark™ offers hydraulic press closure systems to fit a variety of requirements. Hydraulics range from hand-operated hydraulic pumps to standard air-operated hydraulics, to high-capacity electrically-powered hydraulics for large or automated filter presses.

Plate Shifter
M.W. Watermark’s mechanical plate shifters move each plate along the sidebar, allowing rapid discharge of the dewatered cake. A stainless steel sidebar cap is provided to facilitate plate shifting and protect the sidebar. Plate shifter designs include semi-automatic and automatic types. Our standard semi-automatic plate shifter includes a visible pressure gauge as well as easy access to the regulator. The automatic designs are available in shuttle and continuous chain drives. An automatic plate shifter with a cloth washer is also available.

Safety
M.W. Watermark offers many different safety features to help protect press operators and bystanders:

- **Safety Light Curtains**: Stops the press functions when any object crosses between the infrared light bars
- **Auto shut-off Safety Tripwire Cable**: Stops press functions with less than two pounds of pressure
- **Safety Splash Curtains**: Contains liquid that may, under certain conditions, squirt or splash from between the filter plates during the fill cycle or power washing of the filter plates and cloths
- **Safety Gates**: Protects surrounding areas at all times
- **2-Palm Safety Closure Switch**: Protects the operator during press closure

Controls
M.W. Watermark’s control options include the following models:

- **Automatic Feed Pump Control System (AFPCS)**: Increases feed pressure as the press fills
- **Electric Hydraulic Control System (EHCS)**: Controls the feed pump, electric-hydraulic closure, and automatic drip trays
- **Process Automation Control System (PACS)**: Controls the feed pump and automatic manifold valves on air-operated presses
- **Full Automation Control System (FACS)**: Automates the filter press and controls the feed pump

Custom Options

- Plates and Frames
- Non-Gasketed Filter Plates
- Diaphragm Squeeze Plates
- Diaphragm Squeeze System
- Various Plate Materials
- Filter Cake Hoppers
- Cake Chutes
- Plate Shifters
- Leg Extensions
- Elevated Platforms
- 2-Palm Safety Closure Switch
- Safety Gate
- Safety Tripwire
- Safety Light Curtains
- Splash Curtains
- Stainless, Carbon Steel, Polypropylene, FRP, and CPVC Manifold Piping
- Even Fill Manifold Piping
- Cake Wash Manifolding
- Manual or Automatic Drip Trays
- Feed Pumps: Air-Operated Diaphragm (AOD), Progressive Cavity, and Centrifugal
- Cloth Washers
- Blanking Plate
- Expansion Piece
- EnduroLiner™ NSF-61 Polyurethane Abrasion and Chemical Resistant Coating
- Electric Hydraulic Closure with PLC Controls
- Cake Thicknesses from 20 to 50mm
- Wide Selection of Filter Media
- Automatic Feed Pump Control System

Standard Features

- High-Strength Carbon Steel Frame Blasted to SSPC-SP6
- Epoxy-Coated Framework
- 304 Stainless Steel Side Bar Wear Caps
- Schedule 80 PVC Piping Connections
- Four Corner Discharge Piping
- Caulked & Gasketed Recessed Polypropylene Plates
- Manual, Air, or Electric Hydraulic Closure Systems
Other M.W. Watermark™
Products & Services

Rebuilt Equipment
Used equipment is rebuilt in our facility and quality checked prior to shipment. A six month warranty is available on rebuilt equipment. M.W. Watermark can also rebuild your current equipment.

Other Rental Equipment
In addition to filter presses, M.W. Watermark stocks other equipment available for rental including Slant-Plate Clarifiers and OCS pilot units.

Parts and Retrofits for Your Existing Press
M.W. Watermark offers parts and retrofits for many makes and models of filter presses including legacy brands. Plate shifters, hydraulic retrofits and custom filter cloths are available. Cloth and gasket installation services are also available.

Field Service
Factory-trained professionals are available to visit jobsites to assist with start-ups, training, installation supervision, mechanical repairs and troubleshooting, PLC programming, process review, engineering, and rebuilds.

Troubleshooting
Technical sales and service employees are available by phone to troubleshoot and answer service questions during regular business hours.

Laboratory Testing
M.W. Watermark maintains an in-house laboratory for determining the most effective equipment, equipment sizing, filtration media, and dewatering techniques for your specific application.

About M.W. Watermark
M.W. Watermark’s top priority is customer satisfaction. We treat our customers the way we want to be treated. We offer prompt, courteous service and truly enjoy helping our customers.

The M.W. Watermark team has decades of experience designing, building, and servicing water and wastewater treatment equipment. Our experience in the field has given us insight into ways in which to better solve your water problems and improve your equipment.

Our mission is to provide advanced solutions to our customers while setting the standard for quality and value. We strive to create and provide products and services to meet and exceed expectations in quality, reliability, delivery and cost.
**Why M.W. Watermark™?**

M.W. Watermark wants to make a difference. We are passionate about the world’s water. We are innovative, focused on customer service and always try to exceed expectations. We are an environmentally conscious company with people who are energized, encouraged and inspired to make a difference on our planet by helping to keep our shared, finite water supply clean and usable for generations to come.

We build amazing, custom water and wastewater treatment equipment.

**Together, we can make a difference.**

**OUR MISSION**

M.W. Watermark’s mission is to provide advanced solutions to our customers while setting the standard for quality and value. We strive to create and provide products and services to meet and exceed expectations in quality, reliability, delivery and cost.