



FILTER PRESS



M.W. WATERMARK

THE ULTIMATE SOURCE FOR
FILTER PRESSES, PARTS, AND SERVICE
MWWATERMARK.COM • 616.399.8850

**New, Used, &
Remanufactured Equipment**

OEM Parts

Custom Filter Cloths

Troubleshooting

Laboratory Testing

On-site Service & Support

**Complete Rebuild &
Upgrade Packages**



M.W. WATERMARK FILTER PRESS

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.

Highly efficient solid-liquid separation for the following industries:

- Metal Finishing
- Mining
- Power
- Industrial Wastewater
- Municipal Wastewater
- Lime Softening
- Chemical Processing
- Ready Mixed Concrete
- Car Washes



SERVICE • EXPERIENCE • EXPERTISE • SAVINGS



In-house treatability laboratory
Pilot presses available for rental

Plate Dimensions	250 mm x 250 mm (10" x 10")
Capacity	0.2 ft ³
Hydraulics	Manual
Std. Piping Connections	1/2" Feed x 1/2" Discharge
Plate Shifting	Manual

Options Shown:
Feed Pump
Skid





WHAT IS A FILTER PRESS?

Batch operation, fixed volume 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.

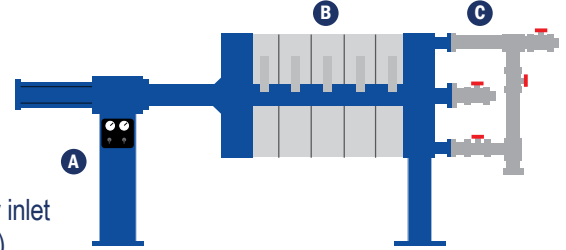
A filter press has four main components:

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

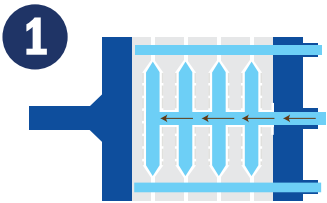
Filter Plates: A filter cake forms in the chambers between filter plates. (B)

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)

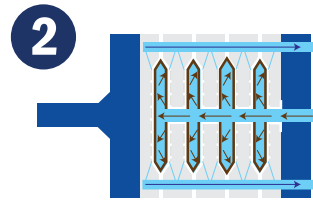
Filter Cloth: A cloth filter that is attached to both sides of a filter plate. Solids build up on cloth to form a filter cake, separating liquids from solids.



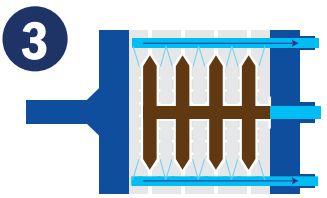
HOW DOES IT WORK?



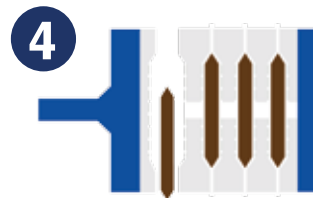
1 Slurry is pumped into the filter press. The solids are distributed evenly during the feed (fill) cycle.



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)

*Please obtain all possible slurry information as outlined below. If one or more criteria are not available, we can test a sample of the slurry, and/or use some standard data.

Standard Slurries

$$\frac{\text{Volume of slurry in gal. per cycle} * \% \text{ solids} * 8.34 * \text{specific gravity of slurry}}{\text{Density of wet cake in lb. per ft}^3 * \% \text{ dry solids in filter cake}}$$

Density of wet cake in lb. per ft³ * % dry solids in filter cake

Metal Hydroxide Slurries

$$\frac{\text{Volume of slurry in gal. per cycle} * \% \text{ solids in feed}}{\text{Density of wet cake in lb. per ft}^3 * \% \text{ dry solids in filter cake}}$$



M.W. WATERMARK FILTER PRESS PRODUCT RANGE

Plate Dimensions	470 mm x 470 mm (18" x 18")
Capacity Range	0.5 ft ³ to 4 ft ³
Hydraulics	Manual (std) or Air
Std. Piping Connections	1-1/2" Feed x 1" Discharge
Plate Shifting	Manual

Options Shown:
Air-Operated Diaphragm Feed Pump (on shelf)
Filter Cake Hopper



470mm

Plate Dimensions	630 mm x 630 mm (24" x 24")
Capacity Range	2 ft ³ to 12 ft ³
Hydraulics	Air (std) or Manual
Std. Piping Connections	2" Feed x 1-1/2" Discharge
Plate Shifting	Manual, Semi-Automatic, or Automatic

Options Shown:
Expansion Piece



630mm

Plate Dimensions	800 mm x 800 mm (32" x 32")
Capacity Range	8 ft ³ to 25 ft ³
Hydraulics	Air (std) or Electric
Std. Piping Connections	2" Feed x 1-1/2" Discharge
Plate Shifting	Manual, Semi-Automatic, or Automatic

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



800mm

Plate Dimensions	1000 mm x 1000 mm (39" x 39")
Capacity Range	20 ft ³ to 50 ft ³
Hydraulics	Air (std) or Electric
Std. Piping Connections	3" Feed x 2" Discharge
Plate Shifting	Manual, Semi-Automatic, or Automatic

Options Shown:
Automatic Plate Shifter with Cloth Washer Light Curtains
Full Automation Control System (FACS) Automatic Drip Trays
Electric Hydraulics



1000mm

Plate Dimensions	1200 mm x 1200 mm (48" x 48")
Capacity Range	40 ft ³ to 125 ft ³
Hydraulics	Electric (std) or Air
Std. Piping Connections	3" Feed x 2" Discharge
Plate Shifting	Manual, Semi-Automatic, or Automatic



1200mm

Options Shown:
 Semi-Automatic Plate Shifter
 Process Automation Control System (PACS)
 Non-Gasketed Filter Plates
 Enduroliner™ Coating
 Automatic Drip Trays
 UV Resistant Filter Cloths
 Core Blow Manifold
 Automated Valves

Plate Dimensions	1200 mm x 1200 mm (48" x 48")
Capacity Range	40 ft ³ to 60 ft ³
Hydraulics	Air (std)
Std. Piping Connections	4" Feed x 2.5" Discharge
Plate Shifting	Manual



1200mm - Portable

Options Shown:
 Integral Sluice Pan
 Lifting Lugs
 Integral Roll Bars

Plate Dimensions	1500 mm x 1500 mm (60" x 60")
Capacity Range	100 ft ³ to 275 ft ³
Hydraulics	Electric (std) or Air
Std. Piping Connections	4" Feed x 3" Discharge
Plate Shifting	Manual, Semi-Automatic, or Automatic



1500mm

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

Plate Dimensions	1500 mm x 2000 mm (60" x 79")
Capacity Range	250 ft ³ to 350 ft ³
Hydraulics	Electric
Std. Piping Connections	6" Feed x 4" Discharge
Plate Shifting	Automatic



1500mm x 2000mm

Options Shown:
 Automatic Drip Trays
 Double Air Blowdown, Even Fill Manifold

Plate Dimensions	2000 mm x 2000 mm (79" x 79")
Capacity Range	300 ft ³ to 600 ft ³
Hydraulics	Electric
Std. Piping Connections	6" Feed x 4" Discharge
Plate Shifting	Automatic



2000mm

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

FEATURES



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

CUSTOM OPTIONS

- Plates and Frames
- Non-Gasketed Filter Cloths
- 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
- Manual or Automatic Drip Trays
- Feed Pumps: Air-Operated Diaphragm (AOD), Progressive Cavity, and Centrifugal
- Cloth Washers
- Cake Wash Manifolding
- 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

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 Gates: Protects surrounding areas at all times
- 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 Light Curtains: Stops the press functions when any object crosses between the infrared light bars
- 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
- Full Automation Control System (FACS)
Automates the filter press and feed pump



OTHER PRODUCTS & SERVICES

Refurbished Equipment

Used equipment is refurbished at our factory, quality checked prior to shipment, and sold with a six month warranty. M.W. Watermark can also refurbish your current equipment.

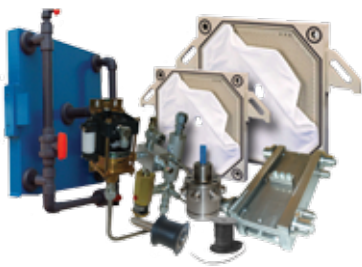
Rental Equipment

M.W. Watermark stocks filter presses and other equipment that is available for rent, including mobile units.



OEM Parts

Parts for many makes and models of filter presses are in-stock. Plate shifter and hydraulic retrofits are also available.



J-Press
JWI
US Filter
Pac Press
Siemens
Durco

Perrin
Parkson
Lanco
Sperry
R&B
Shriver

Netzsch
Hoesch
Avery
Edward & Jones
Komline Sanderson
and **MORE...**

Field Service

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

Troubleshooting

Technical sales and service employees are available to troubleshoot and answer service questions during regular business hours (24 hour availability upon request).

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.



PolyMark™ Polymer Blender



Slant-Plate Clarifier



Continuous Sludge Dryer



Chemical Feed Skids



Custom Filter Cloth
Cloth & Gasket Installation



M.W. Watermark/Porex® Tubular
Membrane Modules™

WHY M.W. WATERMARK?

All equipment is engineered and manufactured in Holland, Michigan, U.S.A.

We manufacture and stock custom filter cloths in-house.

A large inventory of in-stock parts are available for quick delivery, including filter plates.

We offer assistance with optimizing cycle times and productivity.

Experienced start-up assistance is available with every press.

CUSTOMER SERVICE

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.

Our decades of experience servicing water and wastewater treatment equipment means you can be sure you are getting the best equipment, service, and parts for the best price.



www.mwwatermark.com
4660 136th Avenue, Holland, MI 49424
(p) 616.399.8850 • (f) 616.399.8860