
# MC Press™ Filter Press

## The Fully Automatic Filter Press

Water Technologies

SIEMENS


# Applied Technology in Liquid/Solid Separation for the Mining Industry

The MC Press™ filter press from Siemens Water Technologies is one of the most versatile dewatering devices for use in high solids filtration applications. With unique design features and a simplified operation, it can achieve the driest filter cakes with or without diaphragm squeeze. The MC Press™ filter press provides high cake discharge consistency, low cake moisture content and superior reliability coupled with greatly reduced maintenance requirements.

## Unique Design Features

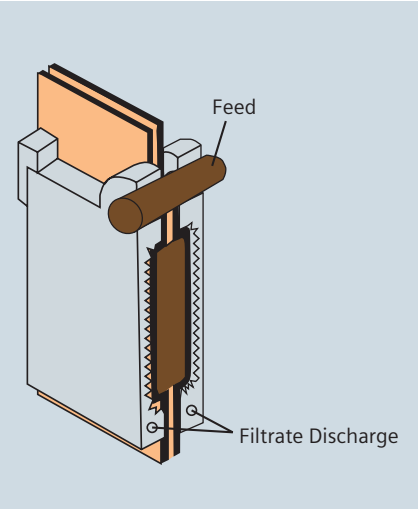
- Cycle compensation feature designed to maintain optimum performance during fluctuations in feed density.
- High filtration rates achieved by directing filtrate through both plates of each chamber.
- Diaphragm plates can be applied where required to dewater compressible slurries.
- Highly efficient cake washing can be conducted.
- Plate opening and closing through either an electric or hydraulic operating system.
- Cake is discharged as the press opens.
- Positive sealing achieved through press overlapping wash water design.
- Polypropylene filter plates with built-in individual cloth monitoring feature.

## Design Advantages

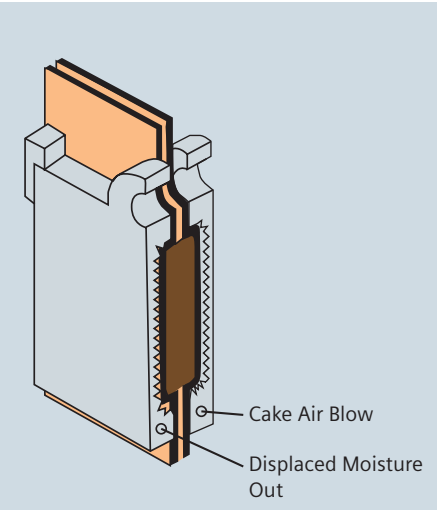
- Mechanically Simple – Few moving parts.
- Drier Cake – Presses are capable of dewatering concentrates as low as 6% moisture content.
- High Productivity Capacity – Press design provides high capacity, short cycle time and low operating costs.
- Labor Saving – Fully automatic operation dramatically reduces labor required.
- Large Press Capacity – Frame size can be selected from a wide range of chambers installed, with built-in flexibility for accepting additional chambers for future expansion.

## IPM is now Siemens

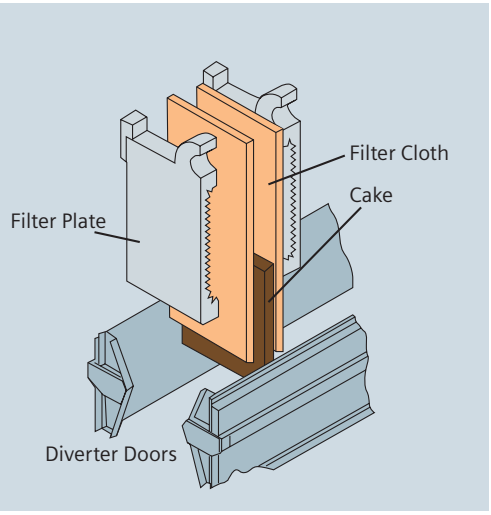
Now a part of Siemens Water Technologies, Industrial Process Machinery (IPM) has been a world leader in providing filter press technology for the mining industry for more than 20 years. Based on years of experience and practical know-how, IPM has developed a robust line of filter presses that are highly automated, offering shorter filter press cycle times and high speed plate opening, resulting in reduced cost. The MC Press™ filter press was specifically designed for mineral concentrate applications but has found acceptance in a number of other mining related and high solids applications.




*Feed Cycle*




*Cake Blow*




*Cake Discharge*

## Operation

**Feed Cycle** – When plates are clamped together, a feed channel is formed by the plate cores. Slurry is pumped through the core, directing it between the two filter cloths that form each chamber.

**Cake Blow** – Compressed air is fed into one side of each chamber, displacing the cake moisture.

**Cake Discharge** – As the press opens, the cake discharges via the open diverter doors onto the cake conveyor. The weight of cake adhering to the cloths overcomes the spring force, creating the rapid compression of the spring, driving the cloth support assembly and cake downward. As the assembly comes to a sudden stop, the cake shears from the cloth and discharges. Upon release, the cloth and support assembly returns to the original upper position. This system reduces cycle time and increases production.

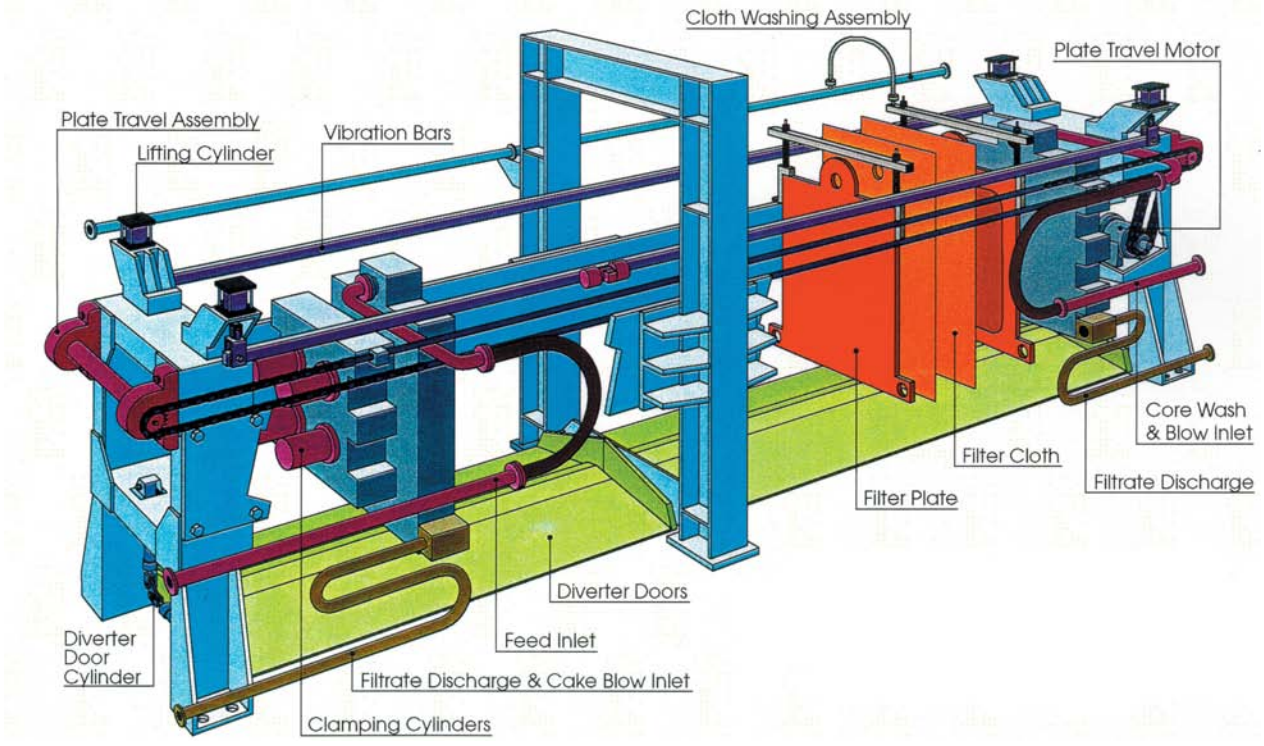
**Cloth Support Assembly** – The cloths, which are hung from support bars at the top of each plate, can be readily and individually changed by one person in a few minutes, requiring no special tools. The support bars are suspended by springs that are designed to compress under cake load. No adjustments are required during cloth installation.

**Efficient Cloth Wash** – One of the keys to high press availability and low cloth maintenance lies in the ability to wash the filter cloth efficiently. With the diverter doors closed and the press open, the stationary showers are actuated, washing the exposed cloths. The wash water flows down the face of the cloths effecting a total and efficient cleaning. The shower headers and nozzles are positioned above the chambers to eliminate the potential for clogging from the cake and do not in any way obstruct cloth replacement.

# You'll take comfort in its simplicity...

**Discharge Monitoring System and Backup Mechanism**
If abnormalities in the operating process arise and result in incomplete cake release after press opening, a photo-electric beam will detect its presence and a backup discharge mechanism will be automatically activated. Two vibration rails running the full length of the press are mounted to lifting cylinders.

Upon activating the mechanism, the rails are raised coming into contact with the lowered cloth support assembly and its attached cake. A vibration force is transmitted to dislodge the sticky cake. After a preset time, the vibrators are turned off and the rails returned to their "down" position.



| General Dimensions and Press Weights | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Model | Chambers | Chamber Depth (mm) | Chamber Volume (L) | Filtering Area ($M^2$) | Length (Overall) (mm) | Width (Overall) (mm) | Height (Overall) (mm) | Weight (Kg) With Diaphragm | Weight (Kg) No Diaphragm |
| H | 12 | 40 | 747 | 44 | 5,835 | 3,400 | 4,600 | 28,600 | 24,900 |
| | 18 | 40 | 1,120 | 66 | 6,960 | 3,400 | 4,600 | 30,800 | 27,100 |
| | 24 | 40 | 1,493 | 88 | 7,875 | 3,400 | 4,600 | 33,000 | 29,300 |
| | 30 | 40 | 1,867 | 109 | 9,250 | 3,400 | 4,600 | 36,300 | 32,600 |
| | 36 | 40 | 2,240 | 131 | 11,070 | 3,400 | 4,600 | 37,800 | 34,100 |
| | 42 | 40 | 2,613 | 153 | 12,890 | 3,400 | 4,600 | 41,100 | 37,400 |
| | 48 | 40 | 2,987 | 175 | 14,710 | 3,400 | 4,600 | 43,400 | 39,700 |
| | 54 | 40 | 3,360 | 197 | 16,530 | 3,400 | 4,600 | 45,700 | 42,000 |
| | 60 | 40 | 3,733 | 219 | 18,350 | 3,400 | 4,600 | 48,000 | 44,300 |
| A | 50 | 40 | 3,111 | 182 | 12,020 | 3,860 | 4,600 | 55,200 | 51,500 |
| | 60 | 40 | 3,733 | 219 | 12,990 | 3,860 | 4,600 | 60,200 | 54,500 |
| | 68 | 40 | 4,231 | 248 | 14,540 | 3,860 | 4,600 | 62,200 | 58,500 |
| G | 76 | 40 | 4,729 | 277 | 16,505 | 4,260 | 5,540 | 78,000 | 71,000 |
| | 84 | 40 | 5,226 | 306 | 17,545 | 4,260 | 5,400 | 82,000 | 75,000 |
| | 92 | 40 | 5,724 | 335 | 18,400 | 4,260 | 5,400 | 85,000 | 78,000 |
| | 100 | 40 | 6,222 | 364 | 19,955 | 4,260 | 5,400 | 88,000 | 81,000 |
| | 120 | 40 | 7,466 | 437 | 23,110 | 4,260 | 5,400 | 92,000 | 89,000 |

# Aftermarket Services

**Laboratory Services**
Siemens Water Technologies maintains a fully-staffed, state-of-the-art laboratory for determining the most effective liquid/solids separation techniques for your specific application.

- Feasibility testing of your materials
- Portable pilot units for on-site testing
- Determination of the most effective feed pressures, fill times, filter media and sludge conditioning
- Data help you maintain maximum performance of your MC Press™ filter press

**Preventative Maintenance Services**

- Customized for your specific equipment, application, and environment
- Lower maintenance cost and years of worry-free operation

**Parts and Service**

- Quick and reliable answers to your technical questions
- Troubleshoot your specific requirements
- Fast parts shipments
- On-site service calls
- Service engineers located throughout the world

**Refurbishment Services**

- Partial or complete rehabilitation of your equipment to a warranted like-new condition
- Available 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 1.603.666.0726.

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Subject to change without prior notice.