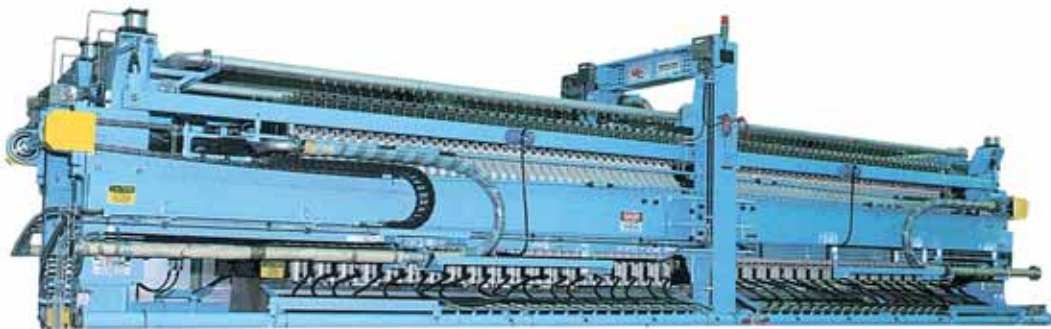


The Automatic Filter
Press
mineral concentrates



ISHIGAKI

An Automatic Horizontal Recessed Plate Filter Press, designed for use, with or without diaphragms, to achieve high-dryness dewatering.

Unique Design Features

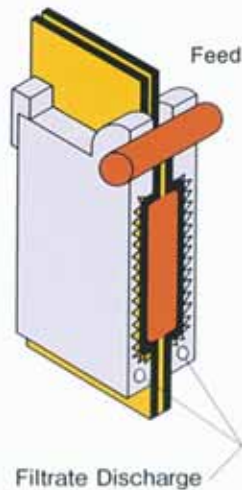
- ❑ **Cycle compensation** feature designed to maintain optimum performance during fluctuations in feed density.
- ❑ **Filtrate** flows through both plates of each chamber to achieve high filtration rates.
- ❑ **Diaphragm plates** can be applied where required to dewater compressible slurries.
- ❑ **Highly efficient** cake washing can be conducted.
- ❑ **Plate opening and closing** motor eliminates the need for large hydraulic cylinder(s) for such function.
- ❑ **Cake** is discharged as the press opens.
- ❑ **Press** overlapping wash water Diverter Door design provides positive sealing.
- ❑ **Polypropylene filter plates** with built-in individual cloth monitoring feature.

Design Advantages

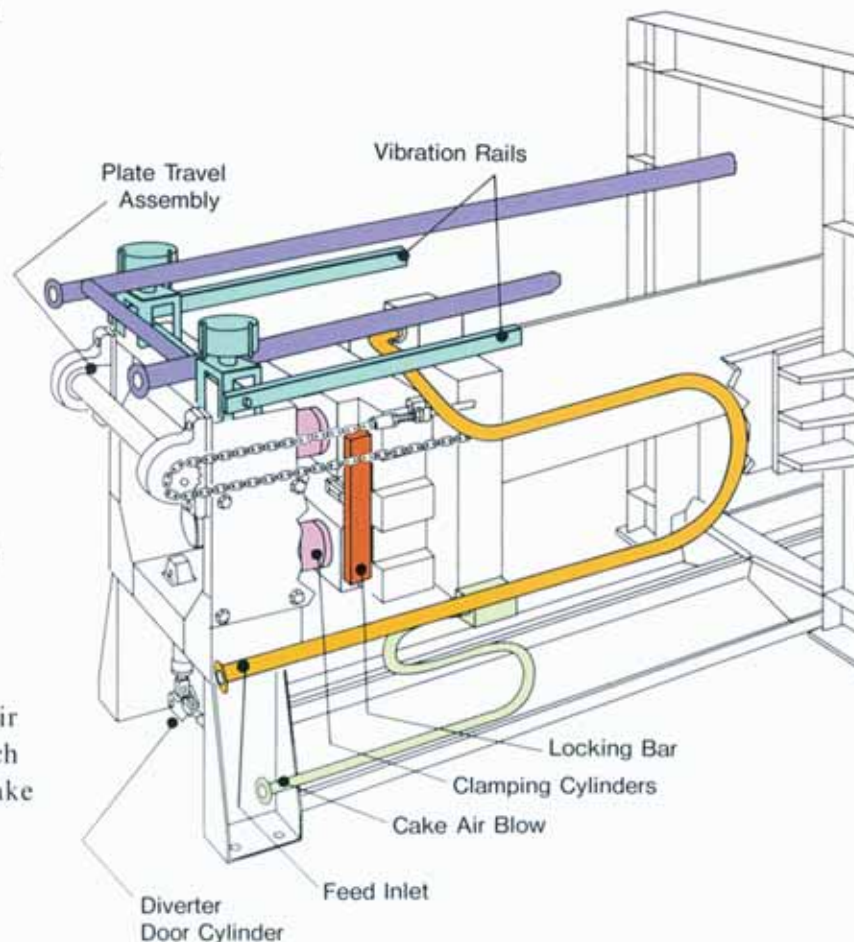
- ❑ **Mechanically Simplified** – Fewer moving parts.
- ❑ **Drier Cake** – I-R presses are capable of dewatering concentrates to a 6% moisture content.
- ❑ **High Production Capacity** – I-R press design enjoys high capacity, short cycle time and low operating costs.
- ❑ **Labor Saving** – Fully automatic operation drastically reduces manpower requirements.
- ❑ **Large Press Capacity** – Frame size can be selected from a substantial range of chambers installed, with built-in flexibility for accepting additional chambers for future expansion.

Operation

Feed Cycle – When the 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, which form each chamber.



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



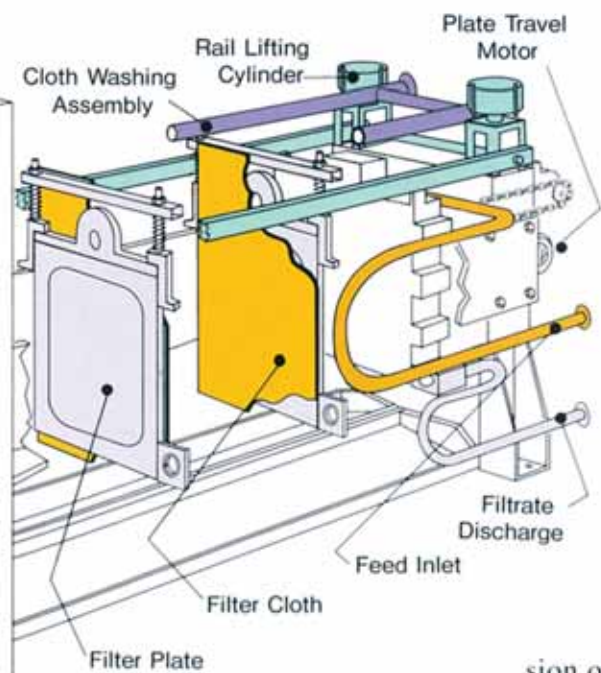
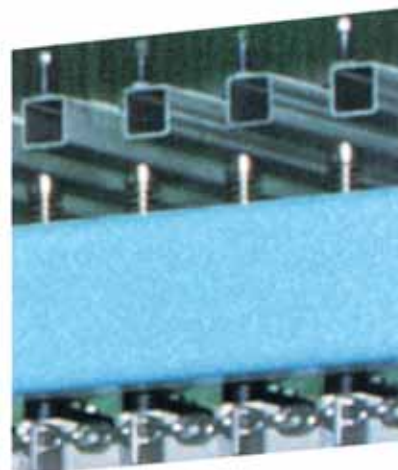
You'll take comfort in its simplicity...

**APPLIED TECHNOLOGY
 IN LIQUID/SOLID SEPARATION
 FOR THE MINING INDUSTRY...**

To meet the increasing demands of mining industry slurry dewatering applications, Ishigaki, based on years of experience, and practical know-how, developed a press to provide high discharge consistency, reliability and performance, coupled with a greatly reduced maintenance requirement.

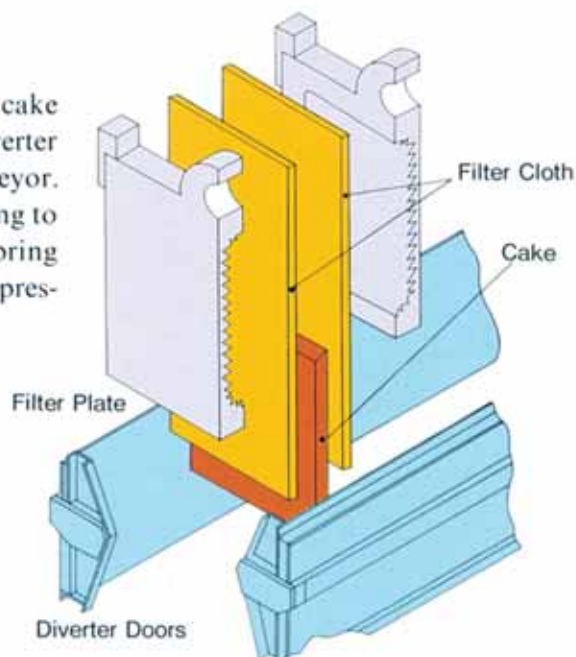
Cloth Support Assembly

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 skills or tools. The support bars are suspended by springs which are designed to compress under cake load. No adjustments are required during cloth installation.

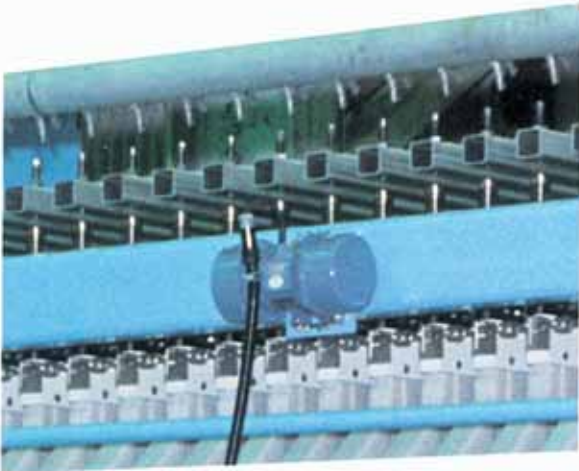


Cake Discharge

As the press opens, the cake discharge 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 downwards. 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 the cycle time, with a resultant increased in production.



Discharge Monitoring System and Back-Up Mechanism



If, abnormalities in the operating process arise, and result in incomplete cake release after press opening, a photoelectric beam will detect its presence, and a back-up 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 return to their "down" position.

Efficient Cloth Wash

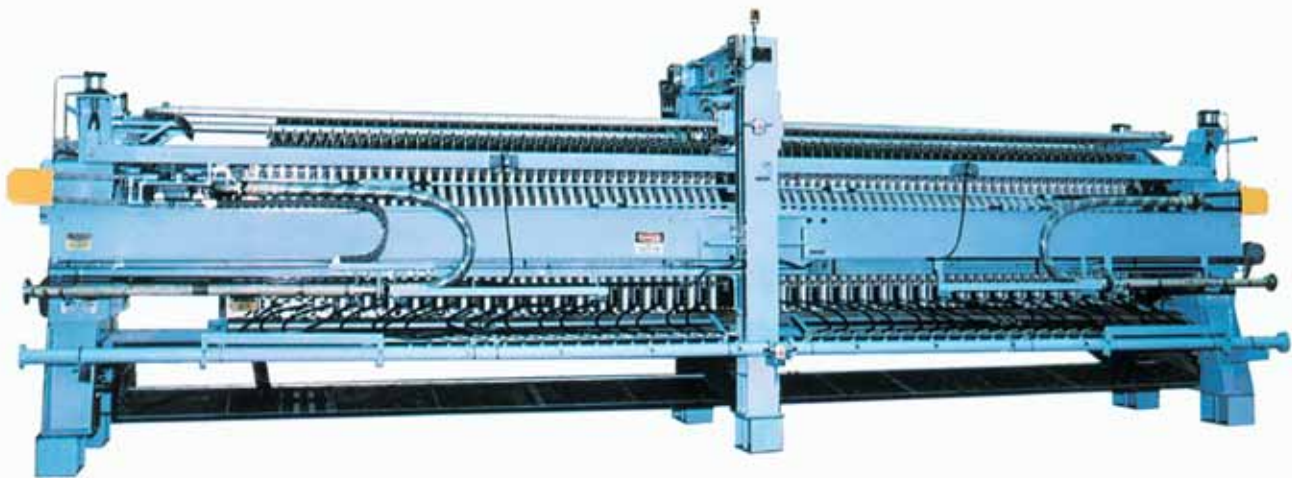
One of the keys to high press availability and low cloth maintenance lies in the ability to wash the filter cloth efficiently.

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 of clogging from the cake and do not in anyway obstruct cloth replacement.



CUSTOMER SUPPORT SERVICES... ..

- Lab and Demo Testing
- Feasibility Studies
- Systems Engineering
- Quality Control Testing
- Installation Supervision
- Process Development
- Start-up Support
- Operator Training
- Preventive Maintenance
- Spare Parts Support



■ Standard Specification

Plate Size (mm)	Number of Chambers	Filtering Area (m ²)	Approximate Dimension (mm)		
			A	B	C
1,500□	50	182	10,190	3,860	4,200
	60	218	11,590		
	70	255	13,750		
	80	291	15,150	3,860	4,550
	90	327	16,550		
	100	364	17,950		
2,100□	60	480	14,305	4,650	5,550
	70	560	15,905		
	80	640	17,505		
	90	720	19,105		
	100	800	20,705		

* The numerical values in this table apply in cases where the materials of filter plates are Polypropylene.

