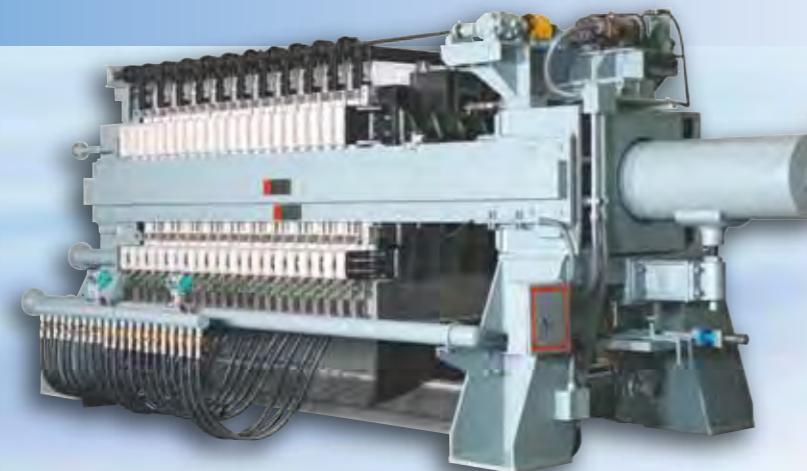




Lasta
LFilter

 **ISHIGAKI COMPANY, LTD.**

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LASTA SD is a horizontal filter press, designed to meet the customer's requests for 24 hrs fully automatic operation in production process of various industries. To meet the ever increasing demands of various customers for slurry dewatering, ISHIGAKI, based on years of experience and practical know-how, developed a unique press to provide perfect cake discharge, efficient cloth wash and short cycle time.

Features

1. Fully Automatic Operation, Perfect Cake Discharge

LASTA SD is designed for 24 hrs operation with our Cloth Travelling System for Fully Automatic Operation, even thin Cake, 3mm, can be easily discharged automatically.

2. High Production Capacity

LASTA SD is designed for high production capacity. All functions including Simultaneous Open & Close, Simultaneous Cloth Washing and Double-End Feeding Design lead to short cycle time and subsequent high production capability of LASTA SD.

3. Excellent Performance

All filter cloths are washed simultaneously at the lower edge of the plate pack, leaving no cake residue. The efficient cloth wash helps contribute to high and consistent performance of LASTA SD. In addition, effective Cake wash and Air blow are possible due to the Top Feed Port.

4. Superior High Dryness Dewatering Performance

LASTA SD is designed to process the slurry effectively and produce filter cake with higher dry solids.

Application

Agricultural Products

Fermentation

Gypsum

Kaolin

Oil Extraction

Chemical processes

Talc

Pigments

Resins

Cement

Coal

Sludge

- Municipal
- Industrial
- Alum
- Blast Furnace

Mineral Concentrates, Tailing, Residue & Leaching

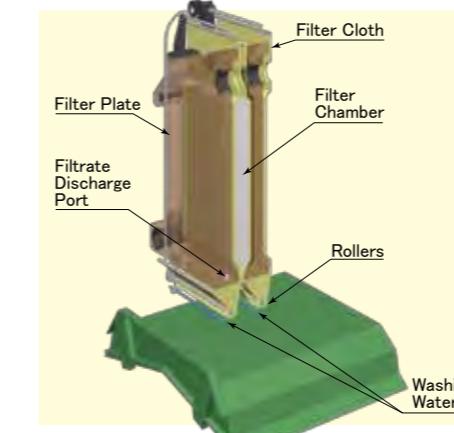
Metallic Compounds

- Oxide
- Hydroxides
- Carbonates
- Sulphates

Operation Sequence

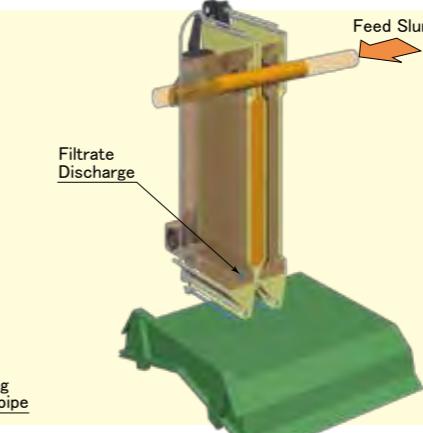
1 Plate Closing

When the start switch is activated, the hydraulic pump operates. The hydraulic cylinder clamps the filter plates, thus forming a filter chamber.



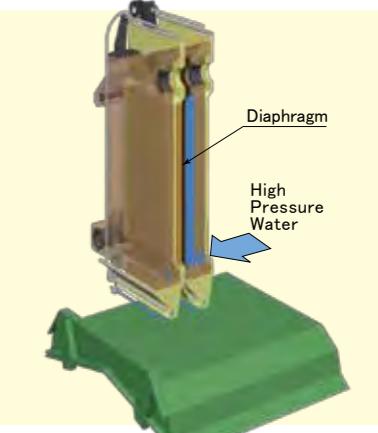
2 Feeding

The slurry is fed via the feed port at the top of the filter plate. The solids in the feed build up as dry cake while the filtrate exits through the filtrate ports.



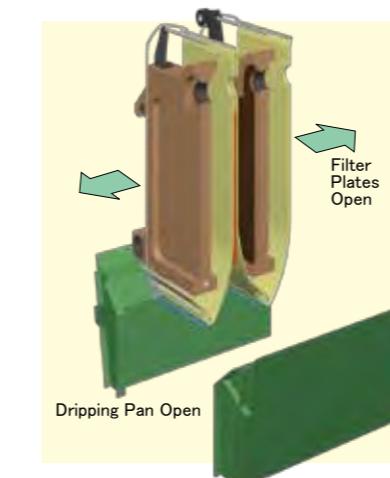
3 Compression

Upon completion of the feeding process, pressurized water or air is injected into the diaphragm. The filter cake is further compressed and dewatered.



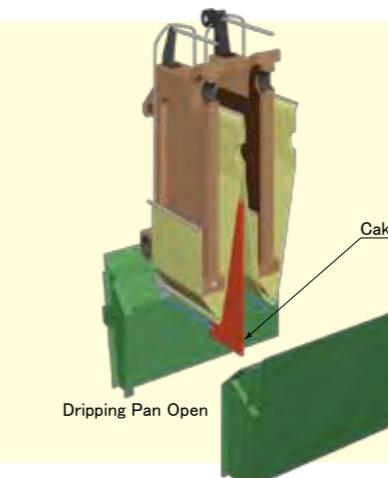
4 Plate Opening

After the compression process ends, the hydraulic pump automatically operates, driving the hydraulic cylinder and opening the filter plates.



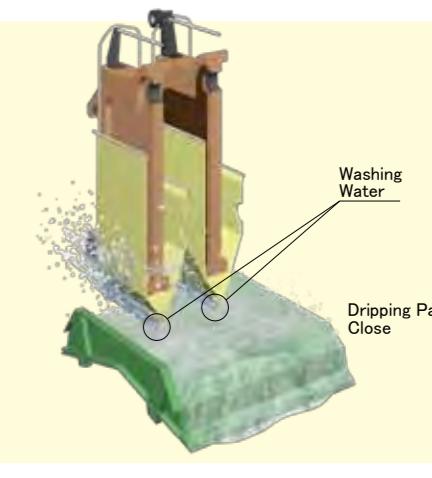
5 Cake Discharge

When the filter plates are fully opened, all the filter cloths automatically travel down, around the lower plate roller and discharge the filter cake.

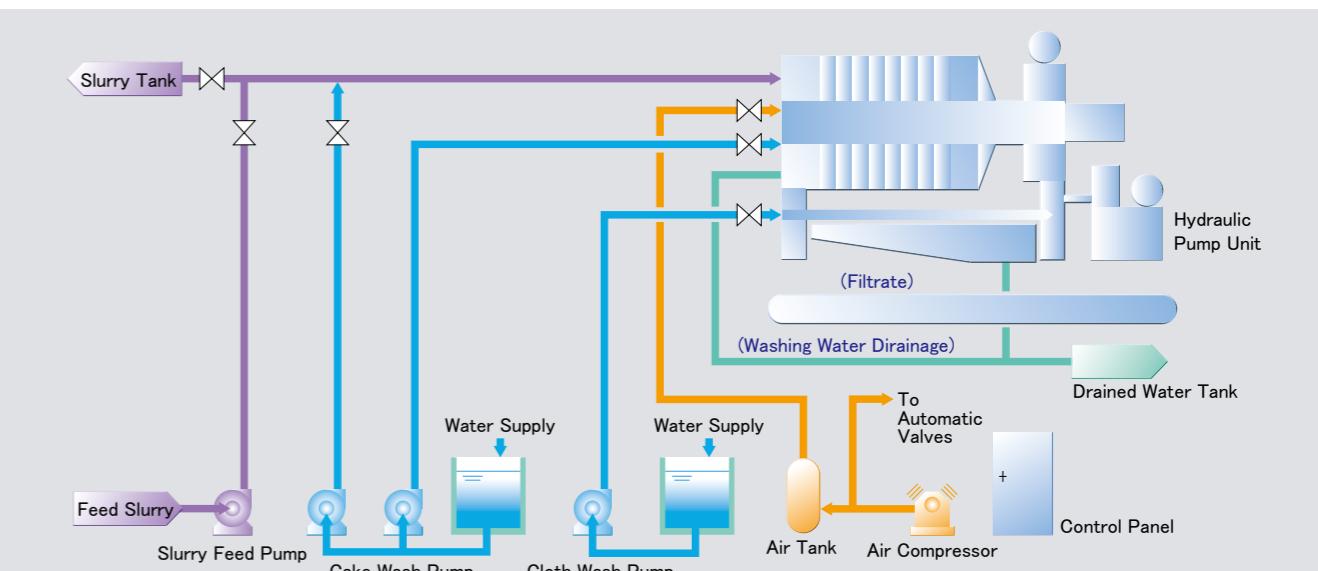


6 Cloth Wash

After the cake discharge is complete, the filter cloth returns to its original position. A cloth wash can then take place with the automatic cloth travel system.



Flow Sheet



※1. This flowsheet includes the cake wash process.

※2. Air blow is an option for the process.



LASTA MC is a horizontal Filter Press, which has been designed for relatively easy to discharge filter cakes as with Mineral Applications.

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.

Features

1. Fully Automatic Operation

LASTA MC is designed for 24 hrs operation, with a Cake Discharge Monitoring System and a Back-Up Mechanism for Fully Automatic Operation. In the event some cakes remain in the chambers, this System activates automatically for perfect Cake Discharge.

2. High Production Capacity

LASTA MC is designed for high production capacity. All functions including Simultaneous Open & Close, Simultaneous Washing and Double-End Feeding Design lead to short cycle time and subsequent high production capability of LASTA MC.

3. Excellent Performance

All filter cloths are washed simultaneously from above the plate pack, leaving no cake residue. The efficient cloth wash helps contribute to high and consistent performance of LASTA MC. In addition, Cake wash and Air blow are possible due to the Top Feed Port.

4. Robust and Simple Design

LASTA MC is mechanically simplified and has been designed with fewer moving parts, which leads to easy maintenance even under severe conditions. Especially the filter cloth for each individual chamber can be quickly and easily replaced.

Application

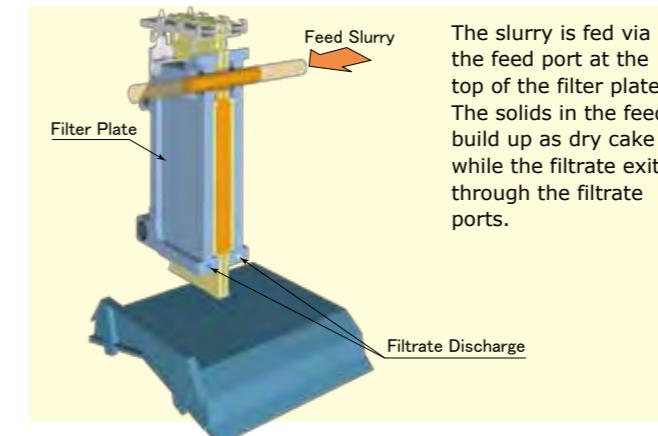
Mineral Concentrates, Residue, Tailing & Leaching

- Copper
- Zinc
- Iron
- Nickel
- Silver
- Gold

Cement
Coal

Operation Sequence

1 Feeding



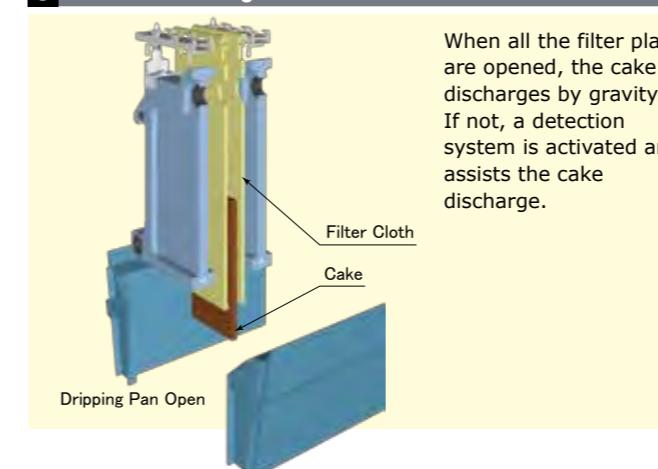
The slurry is fed via the feed port at the top of the filter plate. The solids in the feed build up as dry cake while the filtrate exits through the filtrate ports.

2 Compression and Air Blow



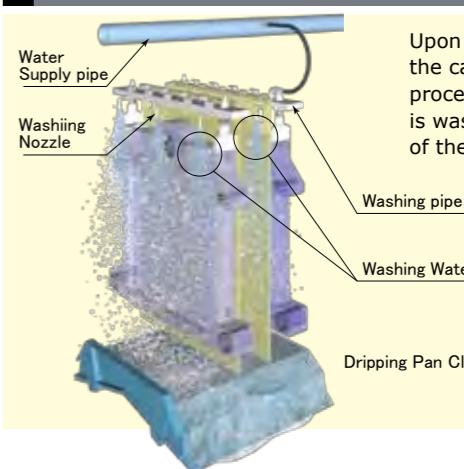
Air is fed from one side of the chamber, displacing cake moisture and exits through the next chamber.

3 Cake Discharge



When all the filter plates are opened, the cake discharges by gravity. If not, a detection system is activated and assists the cake discharge.

4 Cloth Wash



Upon completion of the cake discharge process, the filter cloth is washed from the top of the plate pack.

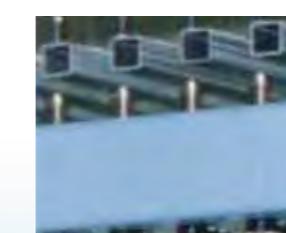
Efficient Filter Cloth Wash System

One of the key factors to high press availability and low cloth maintenance lies in the ability to wash the filter cloth efficiently. With the cake doors closed and the press open, the stationary shower bars are actuated, washing the exposed cloths. The wash water flows down the face of the cloths efficiently cleaning. The shower bars and nozzles are positioned above the chambers to eliminate the potential of clogging from filter cake and do not obstruct filter cloth replacement.



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 located by springs which are designed to compress under cake load. No adjustments are required during cloth installation.



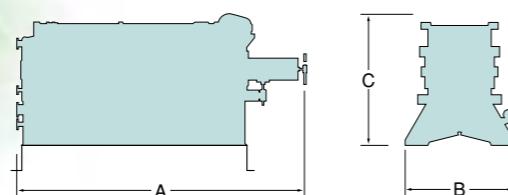
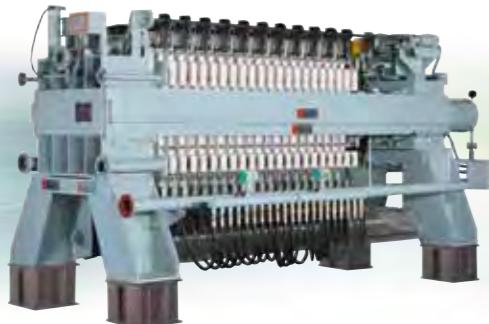
Discharge Monitoring System and Back-Up Mechanism

If abnormalities in the operating process arise and result in incomplete cake discharge after press opening, a photo-electric 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 filter cake. After a preset time the vibrators are turned off and the rails return to their "down" position.

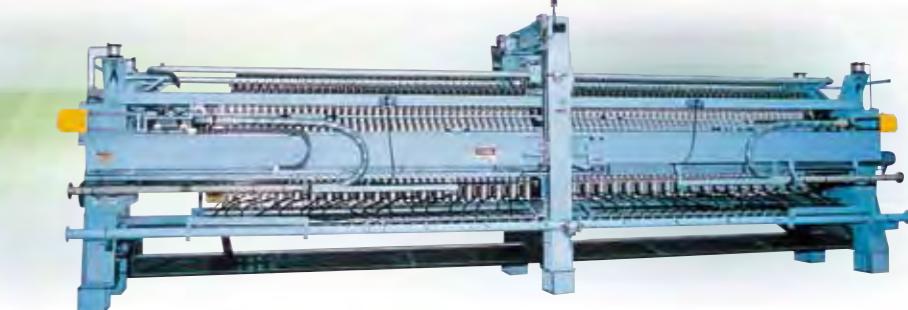


MACHINE SPECIFICATION



STANDARD SPECIFICATION OF ISD "LASTA SD"

PLATE SIZE (mm)	NUMBER OF CHAMBERS	FILTER AREA (m ²)	GENERAL DIMENSION (mm)		
			A	B	C
1,000□	8	12	4,087	2,530	2,945
	12	18	4,637		
	16	24	5,187		
	20	30	5,792		
	24	36	6,542		
	28	42	7,292		
	34	51	8,417		
	40	60	9,542		
1,500□	18	65	6,555	3,300	3,760
	24	87	7,590		
	26	94	8,015		
	30	109	8,865		
	34	123	9,715		
	38	138	10,565		
	42	157	11,415		
	46	167	12,265		
	50	182	13,115		
	32	215	11,430		
2,000□	40	269	13,490	4,800	4,655

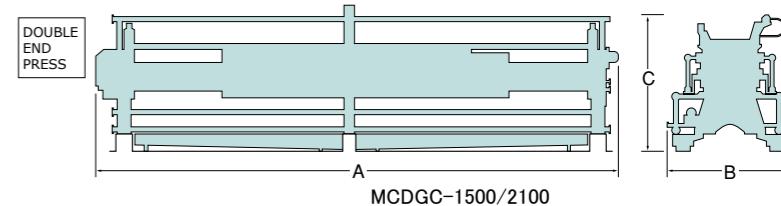
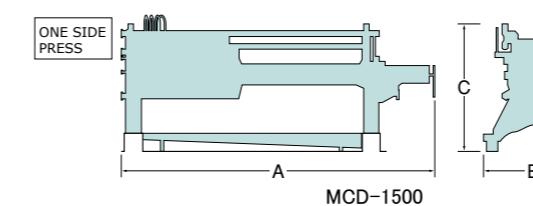


STANDARD SPECIFICATION OF MCF/MCD "LASTA MC"

PLATE SIZE (mm)	NUMBER OF CHAMBERS	FILTER AREA (m ²)	GENERAL DIMENSION (mm)		
			A	B	C
1,500□	18	65	6,620	3,400	3,730
	24	87	8,010		
	26	94	8,470		
	30	109	9,400		
	34	123	10,330		
	38	138	11,250		
	42	153	12,180		
	46	167	13,110		
50	182	14,030			

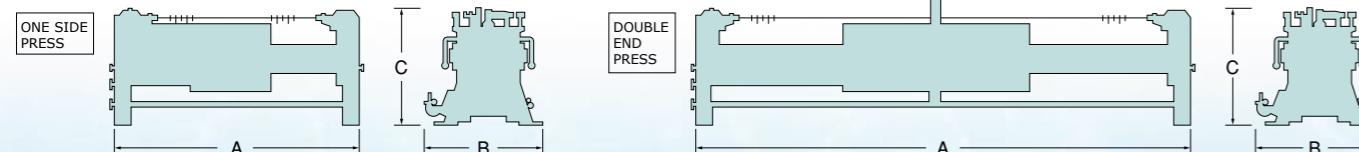
STANDARD SPECIFICATION OF MCFGC/MCDGC "LASTA MC GIANT"

PLATE SIZE (mm)	NUMBER OF CHAMBERS	FILTER AREA (m ²)	GENERAL DIMENSION (mm)		
			A	B	C
1,500□	40	145	9,195	3,860	4,200
	50	182	10,695		
	60	218	12,195		
	68	247	14,355		
	76	276	15,555		
	84	306	16,755		
	92	335	17,955		
	100	364	19,155		
2,100□	40	320	10,265	4,650	5,000
	50	400	11,865		
	60	480	14,515		
	68	544	15,795		
	76	608	17,075		
	84	672	18,355		
	92	736	19,635		
	100	800	20,915		



STANDARD SPECIFICATION OF ISDG "LASTA SD GIANT"

PLATE SIZE (mm)	NUMBER OF CHAMBERS	FILTER AREA (m ²)	GENERAL DIMENSION (mm)		
			A	B	C
1,500□	30	109	7,040	3,650	3,300
	40	145	8,440		
	50	182	9,990		
	60	218	11,390		
	70	255	14,550		
	80	291	15,950		
	90	327	17,450		
	100	364	18,850		
2,100□	60	480	15,130	4,800	5,500
	70	560	16,730		
	80	640	18,430		
	90	720	20,030		
	100	800	21,630		



OPTION

● DIAPHRAGM PRESSURE

MODEL	PRESSURE
L	0.7MPa (7kgf/cm ²)
H	1.5MPa (15kgf/cm ²)
R	2.0MPa (20kgf/cm ²)
S	2.9MPa (30kgf/cm ²)

● MATERIAL OPTION

Standard LASTA's consists of mild steel and stainless steel frame, PP filter plate and rubber diaphragm. Other materials are available to suit customer's requests.



● CAKE WASH SYSTEM

Wash water passes through the filter cake, foreign substances in cake are removed or precious substances in cake are extracted.

• Normal Cake wash

Wash water is fed into each chamber from the top feeding port, passing through the cake and discharged via the filtrate port.

• Back Cake wash

The wash water is fed from filtrate port of one plate; it passes through the cake and then discharged from the filtrate port of the next plate.