

**Automatic Pressure Filters M Series** 



**SOLUTIONS** 



# Filtration Applications in Mining & Metallurgy

Larox automatic pressure filters are widely used in mining and metallurgical operations. In mining applications the trend towards finer grinding in concentrators has resulted in more difficult dewatering, requiring an increased use of pressure filtration.

## Larox Automatic Pressure Filter Applications

In metallurgical operations the increased use of hydrometallurgy requires pressure filtration to dewater and wash leach residues and precipitates. Since 1977, Larox pressure filters have earned a reputation for delivering better process performance, reliability and low operating costs.

#### **Product Description**

Larox automatic pressure filters are recessed plate membrane filters in which the chambers lie horizontally. The individual filter plates have either single-sided filtration areas of 1.6, 2.5 and 6 m<sup>2</sup> or double-sided filtration areas of 0.9, 2.1 and 4.7 m<sup>2</sup> depending on the filter model.

The plates are stacked vertically to give a total filtration area between 1.6 and 168 m². Filter capacity can be expanded by adding plates. A single filter cloth zigzags between the filter plates. Many types of filter cloth are available for different applications.

The plate pack is opened and closed by hydraulic cylinders. In the closed position the plates form sealed chambers with the filter cloth in between. The slurry to be dewatered is pumped into all chambers simultaneously through the distribution manifold and piping.

After a cake has formed, the plate pack is opened and the cloth is driven forward, discharging the cakes completely. Simultaneously, the cloth leaving the plate pack passes through high-pressure water sprays that maintain cloth permeability and extend cloth life.

Larox pressure filters are fully automatic in terms of both their mechanical operation and process optimization. All operations are controlled by the filter's programmable logic controller that also actuates ancillary equipment, such as pumps and conveyors.

Larox offers comprehensive technical sales, testing and maintenance services to select the optimum filter, assist with plant design, and ensure the filter runs efficiently and reliably.

## Thousands of filter installations worldwide

- Copper
- Zinc
- Lead
- Nickel
- Platinum group metals
- Iron ore pelletizing feed
- Zinc refineries
- · Leach residue
- · Jarosite precipitate
- Cu/Co precipitate
- · Cd precipitate
- Gypsum
- Nickel refineries
- Cobalt refineries

### **Benefits**

Larox automatic pressure filters for mining and metallurgical applications have been developed to meet the needs of industry.

#### Larox Automatic Pressure Filters Deliver Superior Process Results

- Exceptionally dry filter cakes to meet TML and reduce transport and drying costs.
- Ability to dewater fine and difficultto-dewater solids.
- Horizontal filter plates without staybosses produce homogenous cakes and provide efficient cake washing.
- Moving filter cloth guarantees complete cake discharge, and simultaneous cloth washing prolongs cloth life and performance.
- High unit capacity and vertical construction reduce both the number of filters required and the footprint for installation.

#### **Improved Process Economy**

Every Larox pressure filter features energy-efficient production technology, lowering energy costs and cutting emissions to the lowest level

- Fewer, larger filter plates reduce the number of components requiring maintenance.
- · Cloth management system
- Robust construction and materials for arduous operating conditions.

#### **Fully Automatic Operation**

Automatic operation saves manpower by eliminating the need for continuous supervision.

 Fully automatic operation, not just automated functions. The Larox automation system maintains consistent throughput and performance even with variable mineralogy or process conditions.

> Mineral concentrate dewatering for fine materials and large tonnages.

Tailings dewatering for water recovery, stable and environmentally acceptable storage.

Washing and dewatering of refinery precipitates.



# **Operating Principles**

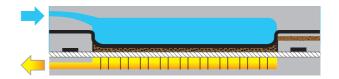
#### 1. Filtration

The process slurry is pumped into all filter chambers simultaneously. The solids begin to form as the filtrate is displaced by more slurry entering the chamber. As the solids build, the pumping pressure increases, and filtrate is forced through the cloth until the required solids thickness is achieved.



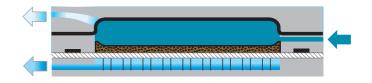
#### 2. Diaphragm Pressing I

High-pressure air or water automatically inflates the diaphragm located at the top of each chamber, reducing the chamber volume and squeezing the solids to remove more filtrate. The solids filtration process and tightly woven filter cloth produces exceptionally clear filtrate. The high pressure maximizes filtration efficiency. Diaphragm pressing produces homogenous dewatered solids of uniform thickness with minimal excess liquid, which assists the washing and air blowing steps.



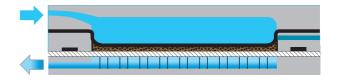
#### 3. Solids Washing

Larox pressure filters can wash dewatered solids in-situ to maximize solute removal or to recover the mother liquor with minimal dilution. The wash liquid is distributed evenly because the solids are homogenous and the filter plates lie horizontally. The wash liquid flows through the solids, displacing the mother liquid with minimal mixing.



#### 4. Diaphragm Pressing II

The diaphragms are re-inflated, forcing the wash liquid uniformly through the solids. This produces a washing efficiency of over 95 %, with consistent dry solids quality and minimum wash liquid consumption.



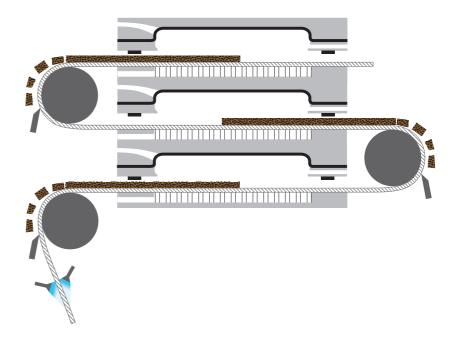
#### 5. Air Blowing

Compressed air is blown through the solids for final dewatering. The moisture content is minimized and can be controlled precisely by adjusting the pressure and duration of the air blow.



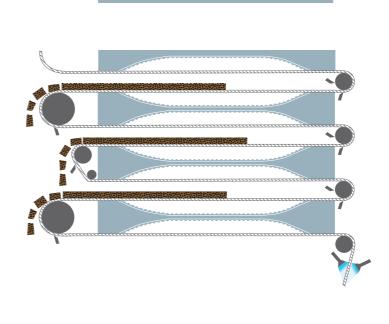
# 6. Solids Discharge and Cloth Washing

After the plate pack opens, the dewatered solids are conveyed out of each chamber on the moving filter cloth. The integrated wash unit sprays both sides of the cloth with high-pressure water, minimizing cloth blinding to ensure consistent filtration results.

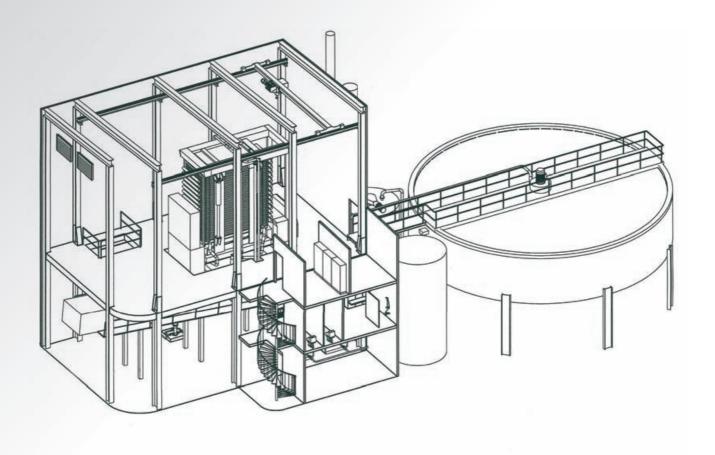


## Differences between Larox PF and DS

The Larox DS filter has two filter cloths and two diaphragms. This allows for double-side filtration, which provides advantages especially when operating slow filtering processes. The operational steps are similar to those described above. Extended cake washing performance can also be utilized. A detailed operating description is available on request.







Conceptual PF plant

# **Comprehensive Design Assistance**

Let Larox help you design the optimum filtration plant for your process.

#### Our services include:

- Application consultancy
- · Filtration testing
- Filter and ancillary sizing
- · Plant layout concepts

#### **Drawings:**

- GA
- Foundation
- P&ID
- Piping

WE CONTINUE
TO SUPPORT
YOU WITH OUR
COMPREHENSIVE
GLOBAL AFTER
SALES SERVICE.



Larox PF 60 Series cake discharge

## **Larox Automatic Pressure Filters**

## Maintenance Platforms and Filter Covers

All components can be reached from integrated maintenance platforms. A hand-held controller aids maintenance by enabling manual testing of the components being checked. During operation, interlocked covers ensure safety and assist housekeeping. Optional enhanced covers are available for increased levels of enclosure and fume extraction.

#### **Fully Automatic Operation**

Larox pressure filters operate fully automatically, either with stand alone panel and integral PLC or through a distributed control system. The automation extends beyond simple filter sequencing to process control to achieve consistent results under varying process conditions.

#### **Filter Plates**

The filter plates are manufactured in stainless steel or polypropylene for long life and corrosion resistance. They are available in a range of chamber depths from 30 to 75 mm to suit slurries with significantly different filterabilities. Cake compression diaphragms are available in a wide range of elastomers to suit different conditions. Heavy duty cloth rollers and bearings provide long life and low maintenance.



#### **Filter Cloth Washing**

In every cycle the filter cloth passes through high pressure water sprays to remove adhering and embedded solids. This maintains cloth permeability, ensures consistent filter performance and extends cloth life.



#### **Guaranteed Cake Discharge**

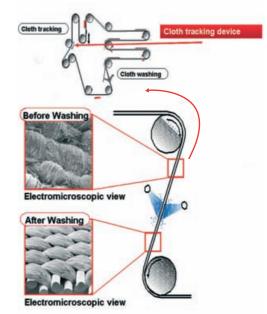
The moving filter cloth on Larox automatic pressure filters transports the cakes out of every chamber, completely, every cycle. This eliminates the need for manual assistance.

#### **Hydraulics**

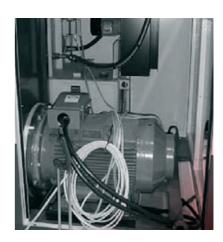
- Hydraulics components are located in a clean zone
- Layout designed to simplify maintenance
- · Gauges and test points
- · Dust proof cabinet

#### **Design Features**

- · Quality components
- Stainless steel tank
- Variable displacement piston pump with servo control









Larox PF 60 Series

## **Larox PF M1.6 Series Filters**

## Compact, Simple to Install Pressure Filter for Smaller Duties

Larox M1.6 Series automatic pressure filters offer filtration areas of 1.6 to 12.6 m<sup>2</sup> in a compact, easy-to-install unit. The filter is usually delivered fully assembled requiring minimal on-site assembly. This model has several corrosion protection options for demanding process conditions.

Base and precious metal concentrates at smaller plants

- By-product concentrates such as molybdenum
- Metallurgical leach residues and precipitates
- Electrolytic refinery anode slimes
- · Effluent treatment circuits

M1.6 Series filters use 1.6 m<sup>2</sup> filter plates with 45 mm and 60 mm deep chambers in stainless steel plates, or 40 mm deep chambers with optional polypropylene plates.



# Larox PF M12 Series Filters Mid Sized Eilter with a Long and the M12 Series has be

Mid-Sized Filter with a Long and Successful Track Record, Offering Advanced Features and Benefits at a Budget Price

The M12 Series has a long and successful track record in mining and metallurgical applications. It offers filtration areas ranging from 9.5 to 32 m<sup>2</sup>. Although technically superseded by the new M15 Series,

the M12 Series has been retained but rationalised, with an emphasis on cost reduction to make automatic pressure filtration viable for lower budget projects.

M12 Series filters use 1.6 m<sup>2</sup> filter plates with 45 mm and 60 mm deep chambers in stainless steel plates, or 40 mm deep chambers with optional polypropylene plates.



## **Larox PF M15 Series Filters**

Mid-Sized Filter Designed for Simple Maintenance and with Corrosion Protection Options for Extreme Refinery Conditions

M15 Series automatic pressure filters have filtration areas from 15 to 50 m<sup>2</sup>. They have been designed to minimise maintenance and have platforms to

provide access to all parts of the filter. The M15 Series has options for high levels of corrosion protection for metallurgical refinery applications.

M15 Series filters use 2.5 m<sup>2</sup> stainless steel filter plates with 45 mm and 60 mm deep chambers.



#### **Technical Data**

Larox M1.6		1.6	3.2	4.7	6	.3	7.9	9.5	11	12.6			
Filtration area	m <sup>2</sup>	1.6	3.2	4.7	6	5.3	7.9	9.5	11	12.6			
Filter plates	pcs	1	2	3		4	5	6	7	8			
Filter plate size	mm		_			900 x 1	750						
Main dimensions, length	mm					3 650	)						
Main dimensions, width	mm					2 500	)						
Main dimensions , height (60 mm chambers)	mm	2 300	2 300	2 400	) 2 !	500	2 600	2 700	2 900	_			
Weight	t	10.5	11	11.5		12	12.5	13	13.5	14			
Required floor area	m <sup>2</sup>		1	1112		36							
Maximum pressure	bar					16							
Filter cloths, width	mm	1 050											
Filter cloths, length	m		17		22		28	3	3	3			
Electric motors (400 V, 50 Hz)			.,							_			
Hydraulic unit	kW-r/min					18.5 - 1	500						
Pressing water pump	kW-r/min		4 -	3 000		10.5	300	11 - 3	000				
Pressing water tank				400				10					
	·												
Larox M12		9.5/9.5	12.5/16	16/16	16/19	19/19	22/2	5 25/25	28/32	32/3			
Filtration area	m <sup>2</sup>	9.45	12.6	15.75	15.75	18.9	22.0	5 25.2	28.35	31.5			
Filter plates	pcs	6	8	10	10	12	14	16	18	20			
Filter plate size	mm	900 x 1 750											
Main dimensions, length	mm					4 250	)						
Main dimensions, width	mm	3 600 3 800											
Main dimensions, height (60 mm chambers)	mm	2 600	3 10	00	3	600		4 100	4	600			
Weight	t	10.9	12.0	12.7	13.5	14.2	16.1	16.8	17.4	18.1			
Required floor area	m <sup>2</sup> 39.5												
Maximum pressure	bar		16										
Filter cloths, width	mm	1 050											
Filter cloths, length	m	21.5	27.5	33	34	38.5	44.5	49.5	55	60.5			
Electric motors (400 V, 50 Hz)													
Hydraulic unit	kW-r/min					18.5 - 1	500						
Cloth centering	kW-r/min					0.55 - 1	500						
Pressing water pump	kW-r/min	11 - 3 000 15 - 3 000											
Pressing water tank	I	1 500 2 500											
Larox M15		15	20	25		30	35	40	45	50			
Filtration area	m <sup>2</sup>	15*	20*	25*		30*	35	40*	45*	50			
Filter plates	pcs	6	8	10		12	14	16	18	20			
Filter plate size	m <sup>2</sup>					2,5							
Main dimensions, length	mm	5 100											
Main dimensions, width	mm					3 900							
Main dimensions, height (60 mm chambers)	mm	4 000	4 000	4 000/4	600	4 600	4 600	5 950	5 950	5 95			
Weight	t	28	29	30/32 33			34	38	39	40			
Required floor area	m <sup>2</sup>					0 (10 m x		1					
Maximum pressure					16	, ,							
Filter cloths, width	1 180												
Filter cloths, length	mm m	29	35			49	54	61	67	74			
Electric motors (400 V, 50 Hz)	111	27	- 55	71/4	_	1,7	J-T	01	- 0,	, +			
Hydraulic unit	kW-r/min					22 - 15	00						
Pressing water pump	kW-r/min			18.5 - 3	000	ZZ - 13	00		37 - 3 000				
r ressing water pullip	KVV-I/IIIII			10.5 - 3	000				37 - 3 000				

The technical data is subject to change without notice. \*Expandable

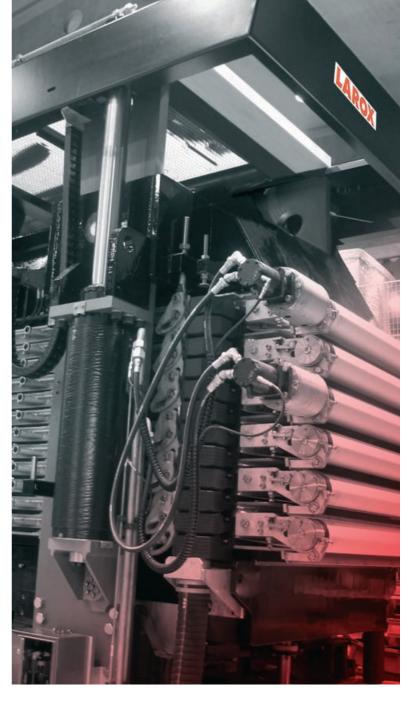
# Larox PF M48 Series Filters

## Mid to High Capacity Filter Designed for Simple Maintenance

M48 Series automatic pressure filters have filtration areas from 48 to 96 m² for concentrates and other high-density solids. A "lightweight" option is available up to 168 m² for low-density solids, such as certain metallurgical precipitates. The M48 Series has been designed to simplify maintenance.

M48 Series filters use 6 m<sup>2</sup> stainless steel filter plates with 45 mm, 60 mm and 75 mm deep chambers.

Note: The photograph shows the filter without covers, cake chutes or maintenance platforms.



Larox M48		48	60	72	84	96	108	120	132	144	156	168	
Filtration area	m <sup>2</sup>	48	60	72	84	96	108	120	132	144	156	168	
Filter plates	pcs	8	10	12	14	16	18	20	22	24	26	28	
Filter plate size	mm					1	500 x 4 010						
Main dimensions, length	mm												
Main dimensions, width	mm	5 040											
Main dimensions, height	mm		5 170		5.8	360	6	340	6 920		7 610		
Weight	t	59	62	65	72	74	81	84	90	93	99	102	
Required floor area	m²	110											
Maximum pressure	bar	16											
Filter cloth width	m	1.7											
Length	m	55	65	75	85.5	95.5	106	116	128	136	148	158	
Electric motors (400 V, 50 Hz)													
Hydraulic unit	kW-r/min	90 - 1 500 110 - 1 500											

The technical data is subject to change without notice.

# Larox PF M60 Series Filters

## High Capacity Filter for Concentrators

M60 Series automatic pressure filters have areas from 60 to 168 m² and are capable of dewatering 150 tonnes per hour of solids per filter in concentrate and iron ore applications. These filters are installed at many of the world's largest and best-known mines. They have a robust design for long life in tough conditions.

M60 Series filters use 6 m<sup>2</sup> stainless steel filter plates with 45 mm, 60 mm and 75 mm deep chambers.



Larox M60		60	72	84	96	108	120	132	144		
Filtration area	m²	60	72	84	96	108	120	132	144		
Filter plates	pcs	10	12	14	16	18	20	22	24		
Filter plate size	m²				1 500	) x 4 010					
Main dimensions, length	mm				6	800					
Main dimensions, width	mm	5 040									
Main dimensions, height	mm	5	120	5	820	6	520	7 220			
Weight	t	68.5	71.5	77.0	80.0	85.5	88.5	94.0	97.0		
Required floor area	m²				1	10					
Maximum pressure	bar					16					
Filter cloths, width	m				1	1.7					
Filter cloths, length	m	62.5	73.5	84.5	95	105.5	116.5	128	136		
Electric motors (400 V, 50 Hz)											
Hydraulic unit	kW-r/min		90 -	1 500		110 - 1 500					

The technical data is subject to change without notice.

### Larox DS 800

#### Compact Enclosed Filters for Extreme Refinery and Hydrometallurgy Applications

DS800 Series automatic pressure filters are fully enclosed for the safe handling of hazardous or corrosive processes that require containment. The fume-tight design provides vapor containment and a secure process. As an option the filter can be delivered as a gas-tight execution or upgraded for operation in explosive atmospheres. The filters have effective areas of 1.8 to 14.4 m² and offer very effective cake washing capabilities where required. The filters incorporate a unique double-

sided filtration system, making them especially suitable for slower filtering processes where more filtration area is required and typically thinner filter cakes are formed. Internal clean-in-place systems ensure total cleaning of the filter as needed.

DS800 Series filters use 800 mm all-polypropylene plates making them ideal for corrosive processes. 25, 40 or 50 mm chamber depths are available. Typical applications include:

- · Nickel leach residues
- Molybdenum refining
- Precious metals
- · Organic regeneration in SX





### Larox DS 1200

# Mid-Sized Enclosed Fume Tight Filters for Extreme Applications

DS1200 Series automatic pressure filters are also fully enclosed and fume tight for the safe handling of hazardous or corrosive processes that require containment. These filters have effective filtration areas of 10.75 to 73.1 m<sup>2</sup> and also

utilize the unique double-sided filtration system found in the smaller units. The filter plate is again all-polypropylene and is 1,075 m<sup>2</sup> on each side with 25, 40 and 50 mm chamber depths. Clean-in-place is again standard on all the units.

The applications are essentially the same as those for the DS800, but larger capacities can be handled.

## Larox DS 2400

## Large-Capacity Enclosed Filters suitable for Extreme Applications

DS2400 Series automatic pressure filters are the largest units in the DS line and are also fully enclosed and fume-tight. These filters have effective filtration areas of 56.9 to 169.2 m<sup>2</sup>. The filter plate has dimensions of 2.4 x 1.2 m with 25, 40

and 50 mm chamber depths. It is an all-polypropylene construction with the unique DS double-sided filtration system, and the units incorporate the clean-in-place capability.

The applications are the same as those for the DS800, but larger capacities can be handled.



#### **Technical Data**

Larox DS 800															
Frame size	DS	800-	4		DS	800-8			DS 8	300-12			DS 8	00-16	
Туре	4/2	4/3	4	8/5	8/6	8/7	8	12/9	12/10	12/11	12/12	16/13	16/14	16/15	16
Number of chambers	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Effective filter surface m <sup>2</sup>	1.8	2.7	3.6	4.5	5.4	6.3	7.2	8.1	9	9.9	10.8	11.7	12.6	13.5	14.4
Chamber depth 25 mm (I)	21	32	42	53	63	74	84	95	105	116	126	137	147	158	168
Chamber depth 40 mm (I)	33	50	66	83	99	116	132	149	165	182	198	215	231	248	264
Chamber depth 50 mm (I)	43	64	86	107	128	150	171	193	214	235	257	278	300	321	342
Filter plate size								800 x	800	1					
Max. Working pessure								161	oar						
Length (mm)								26	95						
Width (mm)		2 685													
Machine height (mm)		2 830 3 490 4 165 5 055													
Machine weight (t)		8				9				10				11	
Connecting line output															
Hydraulic unit		1 x 4.0 kW													
Belt drives	Depending on installed cloth drives max 6 kW with 16 chambers														
				<i>D</i> (	репа	ing on in	istanca	.iotii aii	vesinax	O KW WII	in ro cha	moers			
Larox DS 1200															
Frame size			1200-1					1200-16					S 1200-		
Туре	12/10	1	2/11	12		16/13	16/14	16,	/15	16	20/17	20/	18 2	0/19	20
Number of chambers	10		11	12		13	14	1	5	16	17	18		19	20
Effective filter surface m <sup>2</sup>	21.5		23.7	25.8		28	30.1	32	2.3	34.4	36.6	38.	7 4	40.9	43
Chamber depth 25 mm (I)	225		248	270		293	615	33	38	360	383	40.	5	428	450
Chamber depth 40 mm (I)	380		418	456		494	532	57	70	608	646	684	4	722	760
Chamber depth 50 mm (I)	490		539	588		637	686	73	35	784	833	883	2	931	980
Filter plate size								1 200 2	x 1 200						
Max. Working pessure								16	bar						
Length (mm)								3 43	30						
Width (mm)								3 2	10						
Machine height (mm)		4	220					1 940					5 660		
Machine weight (t)			20					23					26		
Connecting line output					'					'					
Hydraulic unit								1 x 15.	0 kW						
Belt drives				De	epend	ling on ir	nstalled	drives m	nax 14.25	5 kW with	n 34 chan	nbers			
Loroy DC 2400															
Larox DS 2400													• • • • •		
Frame size	10/10		400-12					2400-16			00/1=		5 2400-2		
Туре	12/10	1	2/11	12	1	16/13	16/14	16/		16	20/17	20/1		0/19	20
Number of chambers	10		11	12		13	14	1.		16	17	18		19	20
Effective filter surface m <sup>2</sup>	47		51.7	56.4		61.1	65.8	70		75.2	79.9	84.		39.3	94
Chamber depth 25 mm (I)	507	_	558	608		659	710	76		811	862	913		963	1014
Chamber depth 40 mm (I)	840		924	1 008		1 092	1 176	1 2		1 344	1 428	1 51		596	1 680
Chamber depth 50 mm (I)	1 065	1	172	1 278		1 385	1 491	1 5		1 704	1 811	1 91	7 2	024	2 130
Filter plate size								1 200 x							
Max. Working pessure								161							
Length (mm)								46							
Width (mm)								3 6	20						
Machine height (mm)		4	150				4	870					5 590		
Machine weight (t)			26					30					34		
Connecting line output															
Hydraulic unit							1 x 3	7.0 kW	+ 1 x 4.0	kW					
Belt drives				D	epend	ding on i	nstalled	drives n	nax 14.2	5 kW wit	h 34 char	mbers			

The technical data is subject to change without notice.



## **Performance for Life**

Larox provides its customers with an unrivalled combination of process expertise and service. Larox delivers complete filtration solutions, which exceed the customers' expectations. Larox offers a comprehensive Performance for Life service concept for its filtration solutions.

Larox's customer-centered services begin with strategic lifecycle planning already at the investment phase. A nominated customer support engineer handles each project together with the project manager, providing a familiar and reliable point of contact for the customer throughout the entire lifetime of the filtration solution. Start-up and training services ensure optimal performance, while reliability is maintained

through spare part services, service agreements and maintenance support. Filter performance can be further enhanced through process optimization and modernizations. Finally, Larox offers refurbishment and relocation/resale services that maximize the value of the original filtration investment.

Larox's mission is to work together with its customers on a day-to-day basis to achieve their system

- Safety
- Reliability
- Sustainability
- Process Results

and process objectives for the entire lifetime of the solution. To support customers in achieving competitiveness in their business, Larox helps them maximize availability, minimize operating cost and optimize process results. The Performance for Life service concept developed by Larox has proven to be an optimized, costeffective and high-quality approach that meets the individual needs of customers.

# Testing for Optimal Results

Larox offers a versatile range of test filtration services. After each test the client receives a detailed report, quantifying the technical and economic benefits of the Larox solution.



Our bench test pressure and vacuum filters are used for preliminary screening and when only a limited amount of slurry is available. These test filters are also available to clients who wish to perform regular tests on their slurry.

#### **Laboratory Filters**

Our laboratory pressure and vacuum filters simulate the process at the client's production site on a smaller scale. All process and cost benefits of the application are projected with reliable, repeatable test results that can be used for filter sizing.

#### **Pilot Filters**

Larox test engineers work closely with the client's personnel to conduct test filtration for full-scale process evaluations on site. Pilot units can be connected directly to the client's filtration process. Larox has a range of pilot filters for pressure, polishing, capillary action vacuum, and vacuum belt filtration to meet all possible process requirements. Pilot testing typically takes place after laboratory scale testing.

#### **Test Reports**

Larox testing produces dewatered solids and filtrate samples using slurry obtained directly from the client's process. Larox test reports indicate the most appropriate filter type and potential process improvements. Testing can be conducted at the Larox Research Center or at the client's facilities.

#### Research

The Larox Research Center evaluates test results and advises test engineers on the best methodology for each process. The Research Center continuously updates the testing equipment to ensure accurate results. It also maintains the Larox Databank, a source of information on over 10 000 filtration tests.







# **Larox Automation System**

With experience in designing fully automatic equipment for over 30 years, Larox is the undisputed leader in filtration automation. The Larox solution today goes far beyond the simple automation of functions.

## Complete Filtration Plant Control

The Larox automation system automates, optimizes and visualizes the entire filtration process, allowing filtration plant operators to achieve better filtration performance and cost-efficient operations with minimal intervention.

Larox automation solutions include plant floor level automation for all filter types, as well as corporate-wide visualization, real-time reporting and availability analysis of the filter plant. All Larox automation solutions are based on the same proven architecture with modular functions customized to each instalation.

The system provides plant operations, maintenance and management with the data, condition monitoring information, reporting and visualization needed to keep both equipment availability and production costs on target.

Modem or web-based remote support from Larox's experienced local or global service team helps ensure continuous automated operation.

- Fully automated filter plant control
- Electrical and instrumentation engineering
- Process control and optimization
- Real-time data acquisition, analysis and visualization
- Control room, local area network, and webbased reporting
- Seamless integration with office software
- Advanced real-time diagnostics
- Remote access for comprehensive support
- Continuous product improvement during product lifecycle







# The Larox Group Advantage Experience. Technology. Products. Service. People.

# Unrivalled Application Experience

With extensive application experience within the industry, Larox provides optimal solutions for clients' filtration needs. From bulk mined products and metal concentrates to metallurgy, the experience of Larox provides the assurance that every application will perform to specification and operate to budget.

#### **Leading Technologies**

All Larox members are technology leaders in their own right, with proven track records in translating research and development into solutions that deliver superior process results with increased capacity, system reliability and total cost-efficiency.

#### **World-Class Product Portfolio**

Larox brings together the innovative products of Larox, Hoesch, Pannevis, Ceramec and Scheibler. With this extensive range of filtration products, Larox can specify the optimum solution for virtually any mining or metallurgical application. The Larox portfolio extends beyond products to filtration plant design assistance and ancillary selection.

#### Larox Service -Performance for Life

Larox's global after-sales service ensures continuously high equipment and process performance. Process optimizations, preventive maintenance, operation and maintenance training, total productivity improvement and product-upgrade services are just a few ways in which Larox Service supports clients for the life of their solutions.

#### **Larox People**

Larox is built on the expertise, talent and skills of each employee. Many Larox employees have worked in the mining and metallurgical industries and understand their needs. Worldwide, the Larox personnel pool their experience and partner with the Larox clients to develop the optimal solution for their needs.

Further information on Larox and its products, downloadable brochures, data sheets and application case studies are available at www.larox. com and from your nearest Larox representative.

## Sisu People to People Progress



Ceramec
Hoesch
Larox
Pannevis
Scanmec
Scheibler

www.larox.com

Larox Corporation P.O. Box 29 Fl-53101 Lappeenranta Finland Phone +358 20 768 7200 Fax +358 20 768 7277 E-mail info@larox.com

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