

# Metso:Outotec

## Larox<sup>®</sup> PF filter

Metso Outotec Larox<sup>®</sup> PF (pressure filters) are fully automatic filters using recessed plates with diaphragms and have a horizontally oriented plate pack. We offer a range of models for various capacities, all designed for easy maintenance and consistent results under varying process conditions. We can help you to select the correct filter model, assist with plant design, and ensure efficient and reliable operation.

### Benefit

- Offers high capacity with proven efficiency and reliability
- Gives you low overall operating costs and competitive total cost of ownership
- Produces dry, consistent, and homogenous filter cake and efficient solids wash
- Offers fully automatic operation, self-diagnostics, and flexible operation
- Reduces floor space requirements



# Proven technology for reliable operation

With over 1,300 installations around the world, Metso Outotec Larox PF Filters are the benchmark for reliability and efficiency in a wide range of applications.

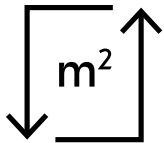
The individual filter plates have single-sided filtration areas of 1.6, 2.5 and 6 m<sup>2</sup> depending on the model and an operating pressure of up to 16 bar. The plates are stacked horizontally on the top of each other to give a total filtration area of 1.6–168 m<sup>2</sup>. A single filter cloth zigzags between the filter plates and both sides of the filter cloth are utilized for filtration. We can supply a range of different cloth types for different applications.

The filter cloth ensures efficient and complete cake discharge from each individual chamber at every cycle, eliminating the need for manual intervention.

## Consistent performance and simpler maintenance

Metso Outotec Larox PF filters are fully automatic, operating with a stand-alone panel and integrated soft PLC and can be connected through a distributed control system. Automation extends beyond simple filter sequencing to process control, ensuring consistent filtration results under varying process conditions.

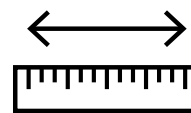
Every time filter cloth is moving, the filter cloth is passed through high-pressure water sprays to remove any remaining solids. This maintains cloth permeability and consistent filter performance by ensuring every chamber has equal cloth resistance, and also extends cloth life. Our single-cloth system makes maintenance simple and quick, with cloth changeover typically taking as little as 30 minutes and requiring only two technicians. Furthermore, a thorough cloth inspection can be carried out without the need for equipment shutdown.



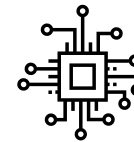
1,6 – 168 m<sup>2</sup> filtration area



Up to 16 bars operating pressure



33, 45, 60 and 75 mm chamber depth



Enhanced automation system

There is enormous demand for environmental efficiency in our mining and chemical process industry. By default, the mining industry is energy- and water-intensive. We provide our customers with durable, energy-efficient equipment and services for a long life-cycle.

To increase the size of our ecological handprint, we focus on the positive impact on the environment and people through further growing our sustainable offering. The Planet Positive portfolio focuses on the most impactful technologies (>100) in the company's current portfolio, specifically responding to the sustainability requirements of our customers in the aggregates, mining and metals refining industries.

The four focus areas of our sustainable offering and innovations are in energy and water efficiency and emissions, water efficiency, a leading offering in circularity and safe operations. This is where we can create the most value for our customers.

## Technical specifications

Please note that the figures below may vary depending on chamber height and plate type. Contact Metso Outotec for exact figures. Material selection for PF filter will be defined to meet the process requirements and MO has a wide selection of materials of construction. Polypropylene filter plates are available for Larox PF 1.6, 12 and 15 filters.

### Metso Outotec Larox PF 1.6 Series

45 and 60 mm chamber, steel plates



PF 1.6 SERIES		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	6.3	7.9	9.5	11	12.6
Chamber volume (45mm)	m <sup>3</sup>	0.07	0.14	0.21	0.28	0.35	0.43	0.50	0.57
Chamber volume (60mm)	m <sup>3</sup>	0.09	0.19	0.82	0.38	0.47	0.57	0.66	-
Filter plates	pes	1	2	3	4	5	6	7	8
Filter plate size	mm	900 x 1750							
Cloth width	m	1.05							
Cloth length	m	17		22		28		33	
Upper auxiliary cloth	m	8		13		18		23	
Lower auxiliary cloth	m	3							
Filter length	mm	3650							
Filter width	mm	2500							
Filter height (45mm)	mm	2300	2300	2400	2400	2500	2600	2700	2800
Filter height (60mm)	mm	2300	2300	2400	2500	2600	2700	2900	-
Filter weight	t	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0
Required floor area	m <sup>2</sup>	36							
Hydraulic unit	kW (rpm)	18.5 (1500)							
Pressing water pump	kW (rpm)	4 (3000)				11 (3000)			
Pressing water tank	l	500				1500			
Hydraulic unit oil tank	l	250							

Note! PP plates available from size 6.3 and up.

## Metso Outotec Larox PF 12 Series

45 and 60 mm chambers steel plates



PF 12 SERIES		9.5	12.5	16	19	22	25	28	32	35	38
Filtration area	m <sup>2</sup>	9.40	12.60	15.75	18.90	22.05	25.20	28.35	31.50	34.65	37.80
Filter plates	pcs	6	8	10	12	14	16	18	20	22	24
Filter plate size	mm	900 x 1750									
Cloth width	m	1.05									
Cloth length	m	21.5	26.0	32.0	37.0	42.5	47.0	53.0	57.0	63.5	68.5
Filter length	mm	4800									
Filter width	mm	3800									
Filter height (45 mm)	mm	3300	3300	3800	3800	4300	4300	4800	4800	5300	5300
Filter height (60 mm)	mm	3300	3800	3800	4300	4800	4800	5300	5300	--	--
Filter weight (45 mm)*	t	12.8	13.5	14.7	15.5	16.7	17.5	18.6	19.4	20.6	21.4
Filter weight (60 mm)*	t	13.4	14.3	15.6	16.5	17.8	18.6	19.9	20.8	--	--
Required floor area	m <sup>2</sup>	44.5									
Hydraulic unit motor	kW (rpm)	22 (1500)									
Water pump motor	kW (rpm)	11 (3000)					18.5 (3000)				
Pressing water tank	l	1500					3000				
Hydraulic unit oil tank	l	300									

\* = weight without auxiliary equipment

## Metso Outotec Larox PF 15 Series

45 and 60 mm chambers steel plates



PF 15 SERIES		25	30	35	40	45	50	55	60
Filtration area	m <sup>2</sup>	25	30	35	40	45	50	55	60
Filter plates	pcs	10	12	14	16	18	20	22	24
Filter plate size	mm	1050 x 2400							
Cloth width	m	1.21							
Cloth length	m	43	50	56	63	69	76	83	90
Filter length	mm	5150							
Filter width	mm	4760							
Filter height	mm	5450	5450	5450	6410	6410	6410	7050	7050
Filter weight	t	34	36	38	41	43	45	47	49
Required floor area	m <sup>2</sup>	84							
Hydraulic unit motor	kW (rpm)	30 (1500)							
Water pump motor	kW (rpm)	18.5 (3000)				37 (3000)			
Pressing water tank	l	3000				6000			
Hydraulic unit oil tank	l	300							

## Metso Outotec Larox PF 60 Series

Type/area	m <sup>2</sup>	60	72	84	96	108	120	132	144	156	168
Chamber volume											
• 33 mm	m <sup>3</sup>	1.98	2.38	2.77	3.17	3.56	3.96	4.36	4.75	5.15	5.54
• 45 mm	m <sup>3</sup>	2.70	3.24	3.78	4.32	4.86	5.40	5.94	6.48	7.02	-
• 60 mm	m <sup>3</sup>	3.60	4.32	5.04	5.76	6.48	7.20	7.92	8.64	9.36	-
• 75 mm	m <sup>3</sup>	4.50	5.40	6.30	7.20	8.10	9.00	9.90	-	-	-
Filter plates	pcs	10	12	14	16	18	20	22	24	26	28
Filter plate size	mm	1500 x 4010									
Filter cloths											
Cloths width	m	1,70									
Cloth length (lengths to be defined case by case)											
• 33 mm	m	63.5	73.5	85	95	105	117	127	138	148	158
• 45 and 60 mm	m	63.5	73.5	85	95	106.5	116.5	128	138	148	-
• 75 mm	m	63.5	75	85	96.5	106.5	118	128	-	-	-
Maximum Pressure	bar	16									
Main Dimensions (filter)											
Length	mm	8111									
Width	mm	5220									
Height											
• 33 mm	mm	5380	5380	6080	6080	6080	6780	6780	7480	7480	7480
• 45 and 60 mm	mm	5380	5380	6080	6080	6780	6780	7480	7480	7480	-
• 75 mm	mm	5380	6080	6080	6780	6780	7480	7480	-	-	-
Weight (without auxiliary equipment)											
• 33 mm	t	67	71	76	78	83	87	91	94	99	102
• 45 and 60 mm	t	69	73	78	81	86	90	95	98	103	-
• 75 mm	t	69	73	78	81	86	90	95	-	-	-
Required Floor Area	m <sup>2</sup>	148,5									
Hydraulic unit Electric Motors , (230 ...690 VAC)											
Main pump 50 Hz	kW-r/min	90 - 1500					110 - 1500				
60 Hz	HP-r/min	125 - 1800					150 - 1800				
Secondary pump 50 Hz	kW-r/min	15 - 1500									
60 Hz	HP-r/min	20 - 1800									
Oil Tank Volume	l	800									

The technical data is subject to change without notice.



Metso Outotec's filtration expertise is built on almost one hundred years of R&D and process knowledge, and is supported by the company's globally unique **Dewatering Technology Center (DTC)** in Lappeenranta, Finland. The DTC plays a crucial role in Metso Outotec's filtration solution innovations and acts as a hub for close university cooperation related to separation technology research. Metso Outotec has performed over 14,000 filtration tests and has delivered over 5,000 filters around the world.



## Get the most out of your filters Metso Outotec Services

At Metso Outotec we strive to deliver the best possible quality, availability, performance, and financial solutions for our beneficiation and dewatering customers. We are dedicated to the long-term journey throughout the equipment life cycle, creating win-win relationships for all stakeholders.

By combining the quality products and expertise, we possess the unique ability to partner with our end-users, provide services, reliability, innovation and results safely with sustainability at the core of all we do.



### Spare and wear parts

Rely on OEM experts because not all parts are created equal. Spare and wear parts built to perform.



### Maintenance, shutdowns and repairs

Trust those who know the equipment best to ensure that your production goals are met.



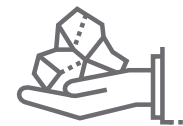
### Modernizations, upgrades and retrofits

Whether you aim to restore equipment to its original condition or upgrade it for increase performance, explore your options



### Process optimization and connected services

By understanding your business needs, we improve performance using technology and expertise



### Lifecycle services

Tailored service packages delivering performance outcomes. Your goals are our goals!

