

Filter system filtraliQ:LA

Intended use

The filter system filtraliQ:LA is used for the filtration of impurities in cases where fine filtration by means of cartridge filters would be too costly due to an exceptionally high amount of impurities.

The filter material hydro-anthracite H used in addition to quartz gravel is a filter material composed of carefully sieved, thermally treated carbon for the treatment of drinking and industrial water. The abrasion-resistant filter material has a rough surface by which a finer filtrate is achieved compared to filtration by gravel alone.

The multi-layer filter only retains substances in undissolved form such as sand.

The activated carbon filter of the filtraliQ:LA dechlorinates the water to be treated.

Function

Filtration

The raw water flows through the raw water inlet of the filter's front piping into the filter tank and then through the filter material from top to bottom whereby the polluted water is filtered.

Via the lower distributor nozzle, the filtered pure water is directed through the pure water outlet into the on-site pipe network.

Backwash

The filter material must be backwashed if there is an accumulation of dirt particles and a pressure drop by approx. 0.3 bar. During the backwash process, the filter bed is forcibly flushed from bottom to top and thus loosened. The impurities retained during the filtration process are washed out via the drain outlet in the front piping of the filter. In addition, an optional scavenging air blower can be used to improve the flushing result by adding air in the counterflow. The filter system must be backwashed every 6 days at the latest.

First filtrate

By an automatic switch-over of the air-operated valves, the filter bed is forcibly flushed from top to bottom. The first filtrate is discharged to the drain. Afterwards, the filter system is ready for operation again.

Control unit (optional)

The automatic backwashing of the filter system filtraliQ:LA is controlled

by a differential pressure switch. The times for the individual process steps can be set freely in the control unit. The pneumatic fittings are operated by means of pilot valves.

Design

- Front piping of the filter installed on aluminium rack
- Flanged pneumatic fittings for water flow control in the filter system
- Sampling valve and pressure gauges
- Differential pressure measurement raw water/filtrate
- Variable area flow meter in filtrate to visually check the flow meter
- Electric pilot valves to activate the pneumatic fittings
- Exchanger tank made of pressure-resistant plastic with aeration/ventilation valve and fixtures for water flow control and retention of filter material

Installation requirements

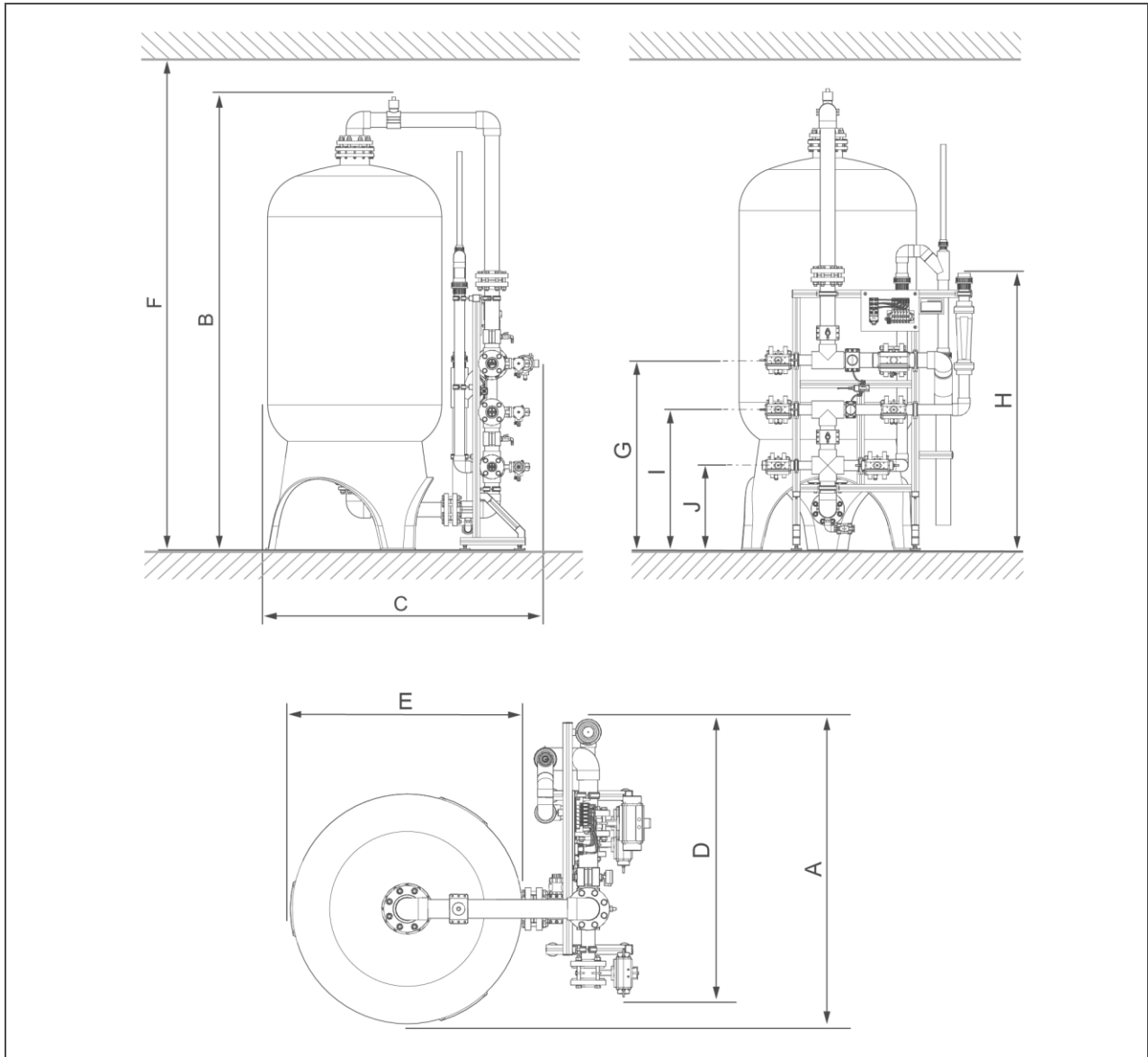
- Power supply: Schuko socket, 230 V/ 50 Hz (cable length of filter system: 5 m)
- Operating aisle/operating height required (to be kept free in addition to the depth/width of the entire system and the height of the filter tank):
 - Depth: 800 millimeters
 - Width: 1000 millimeters
 - Height: 400 millimeters

- The installation site must protect the system from the following impacts:
 - Damp, moisture, environmental impacts such as wind, rain, snow, etc.
 - Frost, direct sunlight, severe heat exposure
 - Chemicals, dyes, solvents and their vapours
- The installation site must be sufficiently ventilated

Scope of supply

- Filter system filtraliQ:LA with respective filling of filter material
- Operation manual

Technical specifications I



Dimensions and weights			5600	10000	16000	24000	30000	40000
A	System width	mm	1350	1400	1500	1650	1750	1900
B	System depth	mm	1300	1500	1700	1900	2200	2950
C	System height	mm	2700	2800	2800	2900	3450	3900
D	Width of system rack	mm	1200	1250	1300	1500	1600	1750
E	Diameter of filter tank	mm	610	816	1074	1226	1429	1623
F	Room/installation height	mm	3000	3050	3050	3100	3650	4100
G	Connection height of raw water	mm	1150	1150	1200	1300	1500	1550
H	Connection height of filtrate	mm	1650	1620	1675	1760	1950	2080
I	Connection height of flushing water pump	mm	850	850	900	950	975	1025
J	Connection height of scavenging air	mm	490	420	470	470	500	550
Operating weight		kg	761	1243	1365	3216	5650	8249

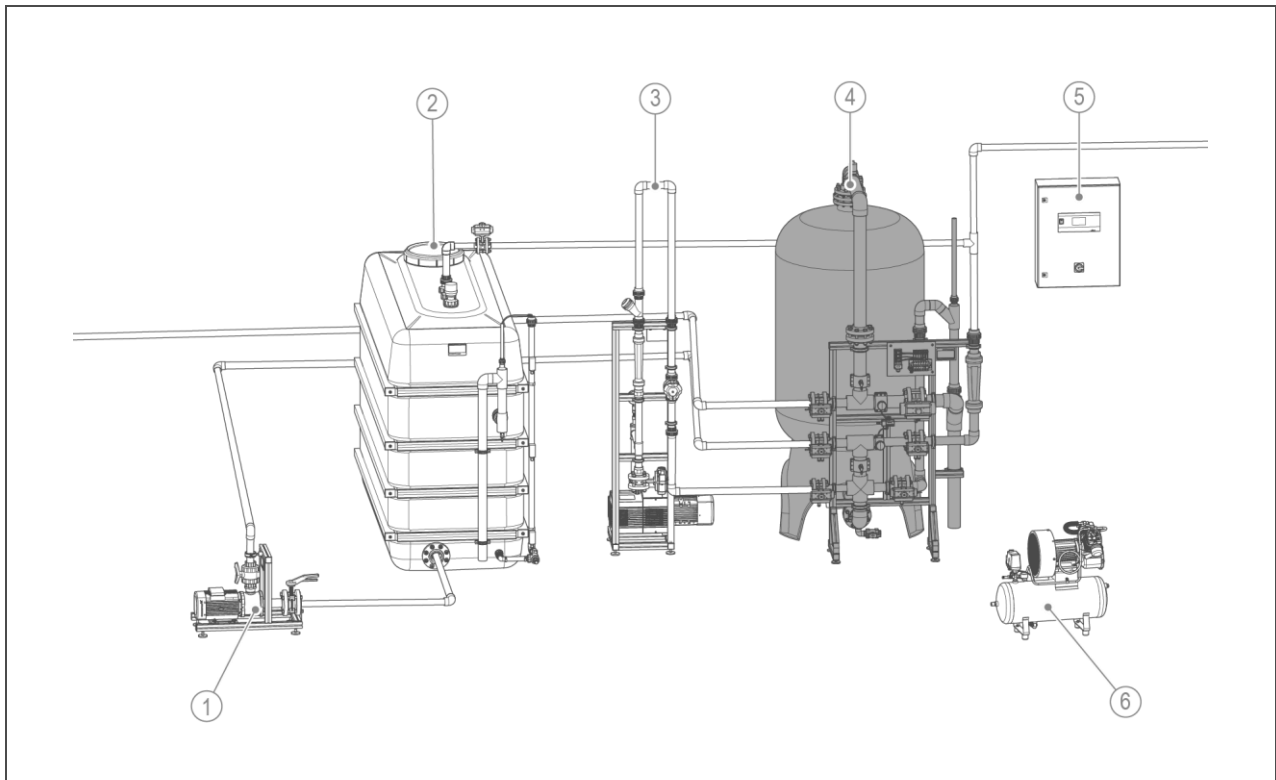
Technical specifications II

Connection data		5600	10000	16000	24000	30000	40000
Nominal connection diameter raw water		DN 32	DN 40	DN 65	DN 65	DN 80	DN 100
Nominal connection diameter filtrate		DN 32	DN 40	DN 65	DN 65	DN 80	DN 100
Nominal connection diameter flushing water		DN 32	DN 50	DN 50	DN 80	DN 100	DN 100
Nominal connection diameter waste water		DN 40	DN 50	DN 80	DN 100	DN 125	DN 125
Nominal connection diameter scavenging air		DN 25	DN 25	DN 40	DN 40	DN 50	DN 65
Drain connection		DN 100	DN 100	DN 125	DN 150	DN 200	DN 200
Power supply	V/Hz	230/50 (system operation with protective low voltage 24/50)					
Connected load	VA	10					
Protection/protection class		IP 54/□					

Performance data		5600	10000	16000	24000	30000	40000
Nominal flow	m ³ /h	≤ 5.6	≤ 10.0	≤ 16.0	≤ 24.0	≤ 30.0	≤ 40.0
Backwash capacity	m ³ /h	8.4	15.0	24.0	36.0	48.0	60.0
Nominal pressure		PN 10					
Operating pressure	bar	2.5 – 6.0					
Duration of backwash	min	12					
Scavenging air demand	Nm ³ /h	16.0	40.0	60.0	80.0	100.0	140.0

General		5600	10000	16000	24000	30000	40000
Water temperature	°C	5 – 30					
Ambient temperature	°C	5 – 40					
Humidity (non-condensing)	%	≤ 75					
Order no.		246 500	246 510	246 520	246 530	246 540	246 550

Installation example



Item	Designation	Item	Designation
1	Backwash water pump	2	Pure water tank
3	Scavenging air blower	4	Filter system filtraliQ:LA
5	Electrical switch cabinet	6	Compressor for pneumatic valves

Accessories

Filter filling Multi-layer filter

Filter filling filtraliQ:LA5600
Order no.: 246 501

Filter filling filtraliQ:LA10000
Order no.: 246 511

Filter filling filtraliQ:LA16000
Order no.: 246 521

Filter filling filtraliQ:LA24000
Order no.: 246 531

Filter filling filtraliQ:LA30000
Order no.: 246 541

Filter filling filtraliQ:LA40000
Order no.: 246 551

Filter filling Activated carbon filter

Filter filling filtraliQ:LA5600
Order no.: 246 502

Filter filling filtraliQ:LA10000
Order no.: 246 512

Filter filling filtraliQ:LA16000
Order no.: 246 522

Filter filling filtraliQ:LA24000
Order no.: 246 532

Filter filling filtraliQ:LA30000
Order no.: 246 542

Filter filling filtraliQ:LA40000
Order no.: 246 552

Scavenging air blower

For top flushing result by adding additional air during backwash

Scavenging air blower
filtraliQ:LA5600
Order no.: 246 505

Scavenging air blower
filtraliQ:LA10000
Order no.: 246 515

Scavenging air blower
filtraliQ:LA16000
Order no.: 246 525

Scavenging air blower
filtraliQ:LA24000
Order no.: 246 535

Scavenging air blower
filtraliQ:LA30000
Order no.: 246 545

Scavenging air blower
filtraliQ:LA40000
Order no.: 246 555

Backwash water pump

To improve the flushing result in case of low primary pressure, including power unit in switch cabinet, flow meter and adjusting valve

Flushing water pump
filtraliQ:LA5600
Order no.: 246 506

Flushing water pump
filtraliQ:LA10000
Order no.: 246 516

Flushing water pump
filtraliQ:LA16000
Order no.: 246 526

Flushing water pump
filtraliQ:LA24000
Order no.: 246 536

Flushing water pump
filtraliQ:LA30000
Order no.: 246 546

Flushing water pump
filtraliQ:LA40000
Order no.: 246 556

Compressor for pneumatic valves
Order no. 246 503

Compressor, oil-free, for compressed air generation of control air for pneumatic fittings

166 l/min suction capacity
40 l pressure vessel
230V/50Hz

Group of fittings for compressor
Order no. 246 504

Non-return valve, 3/2-way valve for maintenance purposes, condensate trap with pressure control, pressure gauge and pressure monitoring

Electrical switch cabinet

Electrical switch cabinet with control electronics and display for fully automatic control of the filter system as well as indication of the operating state

Electrical switch cabinet for 1 filter system
Order no.: 246 560

Electrical switch cabinet for 2 filter systems
Order no.: 246 565

Electrical switch cabinet for 4 filter systems
Order no.: 246 570

Contact

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