

Instruction Manual

High-Bed Multimedia Filter Series 4000



General instructions:

This filter has been designed and made to meet the highest requirements as to quality and finish.

UDI® high-bed multimedia filters are suitable for various filter media.

When choosing or preparing a charge, pay attention to the minimum grain size (support layer) in view of the slot of the mushroom diffusers.

Do not use any aggressive charges, regenerations or processes which cause corrosion.

The maximum working pressure is 8 bar (standard version). The multimedia filter is designed to withstand a maximum pressure of 10 bar and a differential pressure of up to 1 bar.

A pressure relief valve must be installed before the filtering installation if the pressure is not sufficiently under control. A differential-pressure switch must be installed over the filter to prevent the filter bottom from being overloaded.

Installation:

Place the multimedia filter in an exactly horizontal position on a solid ground so that it is easily accessible for service and maintenance. Check the mushroom diffusers and manholes to ensure they are properly located for filling with the filter media.

Apply a film of grease on the thread of the bolts.

Install pressure gauges to check the working pressures and to be able to determine the differential pressure.

Do not open the filter cover and do not tighten it while the filter is being used or under pressure.

Flushing:

Backwashing, flushing or regeneration is determined by the charge of filter material used and the intended process. For this, consult the installation firm.

Changing the charge:

The high-bed multimedia filters are provided with enough manholes to conveniently carry out inspections or change charges.

Stop the flow to the filter and release the pressure in the filter before opening the filling hatch. Thoroughly clean the filter inside with clean water. Inspect the mushroom diffusers and the double bottom of the filter. Check the protective coating and repair any damage immediately.

Maintenance:

Each filter comes with these installation and maintenance instructions.

Any damage to the protective coating of the filter must be repaired immediately. Before applying the protective paint, the damaged spot must be cleaned properly using a steel wire brush.

In view of ongoing improvements, we reserve the right to change specifications without prior notice.

Type	Unit	K41615	K4202	K4242	K4303	K4363	K4423	K4484	K4604
Connection	Inch	1.5"	2"	2"	3"	3"	3"	4"	4"
Diameter	inch	16"	20"	24"	30"	36"	42"	48"	60"
Filter-bed height	mm	900	900	900	800	800	800	800	800
Charge	litres	110	175	250	350	500	700	900	1400



Subject to changes and/or improvements

Charging the filter:

First inspect the inside of the filter, the mushroom diffusers and the coating. Bring the layer of gravel (1.0-2.0 mm) into the filter, limiting the drop height to prevent damage, and spread it over the total surface. Then bring in the sand bed and also smooth it out over the surface. Thereupon, place the layer of anthracite. Fill the filter with water from below, air and dust particles will then be discharged. Backwash for ± 2 min. with a limited capacity. This is done because the layer of anthracite needs one day to become saturated. Using too high a capacity would flush anthracite out of the filter.

Setting the flushing operation:

Thereupon set backwashing to approx. 5-10 min. and adjust for the proper capacity. Too low a speed leads to insufficient expansion of the filter bed, which results in ineffective cleaning. At too high a speed there is the risk of the multimedia charge being flushed away.

Periodic check:

At least 1x a year. Observe a complete automatic flushing cycle. Pay attention to flushing time, flushing capacity and soiling of the flushing water. Stop the flow to the filter and release the pressure in the filter before opening the filling hatch;

- check the filling height.
- remove 1 to 2 cm of ooze if necessary.
- reach deep into the bed and feel the charge; "sandy" is good; if necessary, add anthracite and close the filter.

"Sticky/packed" points to inadequate flushing and/or growing soiling. Assess the need to change the charge.

Changing the charge:

Remove all covers to remove the charge from the filter. Thoroughly clean the filter inside with clean water. Inspect the mushroom diffusers and the double bottom of the filter. Check the protective coating and repair any damage immediately.

Type	Unit	M41615	M4202	M4242	M4303	M4363	M4423	M4484	M4604
Service	m ³ /h	1.5	2.0	3.0	5.0	7.0	9.0	11.0	18.0
Anthracite N 0.8-1.6	litres	40	50	100	100	150	250	300	500
Sand 0.5-1mm	kg	75	125	175	250	375	500	650	1000
Gravel 1-2 mm	kg	25	50	50	75	100	150	200	400
Backwashing approx.	m ³ /h	4.4	6.7	9.8	15.4	22.0	30.0	39.5	63.0