Manual
Automatic filter 863R

General instructions:
This filter is designed and manufactured to meet the highest standards of quality and workmanship. The **UDI** automatic filter 863R is an automatic self-cleaning filter for use in medium to large-sized processing, cooling, recirculation, and irrigation systems. The automatic cleaning allows for a continuous supply of high-quality water.

Operation:
In the pre-filter coarse particles are caught in order to protect the fine filter and guarantee the cleaning process. A filter 'cake' of accumulated dirt will form on the fine filter. The filter element will will then be cleaned by the dirt collector assembly in the flushing phase. The differential pressure increases until it reaches the preset value (usually 0.5 bar) or a timer starts the flushing cycle while the drain valve is opened and the flushing rotor with nozzles moves in a spiral motion along the entire filter surface. The filter process is not interrupted during this action.

Installation:
The filter may be installed in any position, although for ease of maintenance, a horizontal installation is recommended. Ensure that the filter is mounted in the proper flow direction, as indicated by the arrows on the filter body. The filter is designed to withstand a maximum pressure of 10 bar. A pressure relief valve must be installed upstream of the filter if the pressure is not sufficiently under control. The feed pipe from the pump to the filter must be larger than or the same as the filter inlet. Inlet/outlet and by-pass valves can be installed in situations where a constant supply of water is required downstream during filter servicing.

Ensure that sufficient space is provided around the filter for maintenance.
Provide each drain valve with a drain pipe, ensure that no more than 0.3 bar of back pressure arises. Piping should be installed level or pitch down to avoid back-pressure and must be firmly fixed. A pressure gauge on the inlet and the outlet will provide a quick visual check of the operational pressure and the differential pressure.

Putting the filter into operation:
Slowly open the inlet valve to the filter allowing the filter to pressurize gradually. Check for any external leakage and eliminate. Slowly open the outlet valve of the filter. When the inlet pressure exceeds 2 bar, the outlet valve may be opened slowly. Initiate a manual flushing cycle by pressing the button on the electrical control box and check the motion of the dirt collector assembly by checking the work pressures and the quantity of drain water. The flushing frequency will be determined by the time that is needed to reach the maximum differential pressure of 0.5 bar. Normal operating conditions are achieved when the pressure loss across a clean filter is less than 0.2

Acid injection:
The filter is suitable for water with pH values 5 to 9. In the case of acid injection into the system, it is recommended to inject the acid after the filter to prevent acid accumulation in case of system failure.
It is also advisable to install a check valve after the filter before the acid injection pot.

Type	Unit	7863R02	7863R03	7863R04	7863R06	7863R86	7863R08	7863R10	7863R12	7863R14
Connection	inch	2"	3"	4"	6"	6"	8"	10"	12"	14"
Capacity *	m³/h	25	40	80	150	150	300	400	470	550
Max pressure.	bar	10	10	10	10	10	10	10	10	10
Flush. press. min.	bar	2	2	2	2	2	2	2	2	2
Flushing capacity appr.	m³/h	8	8	10	10	12	12	12	14	14

* See the application guideline for the 863R later on. Indicated flow is based on 200 microns
1) When ordering, state the desired micron spec: 400, 300, 200, 130, 100, 80 or 50, 40, 30, 25 microns (10 microns on request)

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Maintenance:
Any damage to the protective coating of the filter must be repaired immediately. Before applying the protective paint, the damaged spot must be cleaned thoroughly using a steel wire brush.
Do not open the filter cover and do not tighten it while the filter is being used or under pressure!

Preventive Maintenance & Inspections:
Before filter shut down or draining, perform two cycles of manual flush, verify that head loss on the filter does not exceed 0.1-0.2 bar (1-2 meters).
Following is a schedule of preventive maintenance and inspections based on average filtration duty, and should be used as a guideline only. For best results, a maintenance schedule should be compiled based on experience gained from using the filter.

Notes:
1. (articlenr…) refers to the breakdown drawings
2. before installing bolts back to their places spread the bolts treads with ´Molykote G-n Plus Paste´ or equivalent.
3. Before installing seals and O-rings back to their places, apply silicone grease 'OKS 1110/0' or equivalent grease (unless otherwise noted)**.**

Bi Weekly:
Every two weeks when the filter is not in operation dismantle the external disc filter (24) and rinse the discs thoroughly using clean water.

Monthly:
On units equipped with by-pass valve, the by-pass should be engaged at least once a month. This will clean the valve seat of any accumulated dirt, as well as ensuring proper by-pass operation.

Quarterly:
When the filter is stopped, drain the filter from water and visually check coarse screen (7)
⚠ Make shure the drive shaft is inserted into the shaft guide.

Annual maintenance:
It is recommended to remove the filter screen annually for cleaning and inspection, or when the pressure drop does not decrease after three successive flushing cycles using the differential pressure switch.
Disassemble the filter and visually inspect the surfaces on the inside and outside of the coarse screen (7) and fine screen (8/1).
Disassemble the reversing unit (13) and the collector (9) and check the nozzles (9/2). Check the drive pawl (14/4) and the reversible drive screw (14/1) for wear and damage. Apply new grease (Ocean 7W) when mounting to the moving metal parts and Molykote G-n Plus Paste to the bolts. Apply OKS 1110/0 compound or an equivalent lubricant to the gaskets and O-rings.

Bi-annual maintenance:
Perform the annual maintenance and replace the gaskets and rubber rings. We advice to replace the driver rod every 2 or 3 years depending on the use of the filter.
Follow the **installation, operations and maintenance** instructions and have this done by trained technicians.

Conditions and control of 863R:
Electric terminals:
- 1 x delta P switch (potential free contact) max 0.5 bar – after +/- 10 sec steady → activate
- pump starter if needed
- Start flushing motor: 220-0.25 kW - flush time approx 30 sec
- 1x drain valve 24 V AC (simultaneously with flush motor)

Optional: A different command can influence installation, as needed: interrupt, controlling cq. as desired.

Note:
In view of on-going improvements, we reserve the right to change specifications at any time without prior notice.

Each filter comes with this manual which includes the installation, operating, and maintenance instructions.

Automatic filter 863R - application guideline

Application guideline for the UDI Automatic filter 863R

For selecting the right automatic filter it is important to take a number of variables into account. The origin of the water to be used, the degree of contamination and the application for the filtered water. A pre-filter can sometimes be necessary.
For any questions or other micronages starting at 10 microns feel free to contact your supplier.

All our recommendations are without obligation, and we cannot be held liable for any adverse consequences resulting from these recommendations.

maximum flow in m³/h							
filter micron	**water quality**	**25**	**50**	**80**	**100**	**130**	**≥ 200**
2" (2500 cm²)	good	25	25	25	25	25	25
	fair	17	25	25	25	25	25
	contaminated	13	20	25	25	25	25
3" (2500 cm²)	good	25	40	40	40	40	40
	fair	17	25	40	40	40	40
	contaminated	13	20	33	40	40	40
4" (4000 cm²)	good	40	67	80	80	80	80
	fair	27	40	67	80	80	80
	contaminated	20	32	53	67	80	80
6" (4000 cm²)	good	40	67	94	120	133	150
	fair	27	40	67	80	94	134
	contaminated	20	32	53	67	80	120
6" (6000 cm²)	good	60	100	140	150	150	150
	fair	40	60	100	120	141	150
	contaminated	30	48	80	100	120	150
8" (6000 cm²)	good	60	100	140	180	200	240
	fair	40	60	100	120	141	200
	contaminated	30	48	80	100	120	180
10" (6000 cm²)	good	60	100	140	180	200	240
	fair	40	60	100	120	141	200
	contaminated	30	48	80	100	120	180
12" (8000 cm²)	good	80	133	188	240	267	320
	fair	53	80	134	160	188	267
	contaminated	40	60	107	134	160	240
14" (8000 cm²)	good	80	133	188	240	267	320
	fair	53	80	134	160	188	267
	contaminated	40	60	107	134	160	240

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Automatic filter 863R - parts drawing