

# Instruction Manual

## Compact Automatic Filter



### General instructions:

The S.K. filter has been designed and made to meet the highest requirements as to quality and finish. The uniqueness of this filter is the combination of the excellent filtration properties of the disc pack with a flushing mechanism that opens up the filter element during the flushing cycle. This results in rapid fully-automatic cleaning in a very efficient manner. An UDI® compact automatic filter unit is compact while having small filter contents, needs a minimum of flushing water, enables continuous service (multi version only) and provides deep filtration due to the filter element being composed of crosswise grooved discs.

### Installation:

The ideal position of the S.K. filter is with the filter cover directed upwards. Pay attention to the correct direction of flow as indicated on the filter. Use teflon tape on the threaded connections. When installing more than one unit, allow enough room between the units to facilitate maintenance. The minimum working pressure is 0.8 bar. The minimum backwashing pressure is 3 bar. The maximum working pressure is 10 bar. A pressure relief valve must be installed before the unit if the pressure is not sufficiently under control.

### CAF 1 operation:

The 2" valves are open during operation. The water passes the compressed disc pack, coarse dirt parts remain on the outside while finer dirt parts are trapped in the disc pack. The 1½" valves are closed. Flushing can be started, for instance, by a timer, computer and/or differential-pressure switch (external devices). When activating the flush valves, the 2" valves are closed and the 1½" valves are opened. The water then flows from the (auxiliary) flushing filter through the bypass into the S.K. filter. The filter element is pushed open, relieving the pressure from the discs so that they can freely rotate. This rotation is caused by a powerful jet from the nozzles positioned tangentially on the inside of the element. To this effect the flushing pressure must be 3 bar or higher to ensure efficient cleaning lasting approx. 20 sec. The flushing water is discharged through the 1½" drain valve.

### CAF Multi operation:

Provided with two or more S.K. units, they are assembled in parallel with identical piping. The backwash valves are normally open and carry the water identically into the filter. The flushing cycle can be started by "external devices". For each filter, flushing proceeds step by step for approx. 10-20 seconds. Upon activation of one flush valve, the backwash valve concerned is closed, i.e. the flow to the filter is stopped, and the discharge from the filter to the drain is opened. Via the coupled service line, filtered water flows into the filter to be backwashed so as to bring about effective cleaning of the filter discs. This flushing pressure must be at least 3 bar. Sufficient pressure is required to enable continuous service of the CAF Multi unit.

If the flushing pressure is too low, a pressure-sustaining valve is to be mounted after the unit.

### Maintenance:

The disc pack must be cleaned by hand once a year or more frequently if necessary. Shut off the flow to the filter.

**Do not open the filter while in operation or under pressure.** Open a valve to release the pressure.

Remove the filter cover(s) by taking off the clamp. Loosen the wing nut on the element and remove the pressure cover. Then remove the discs, hold them as a pack together with a cord and clean them with a powerful water jet. If this proves insufficient, the disc pack can be soaked in a diluted hydrochloric acid solution or a sodium hydroxide solution. Thereupon, rinse them off thoroughly with water again. To inhibit the growth of algae, plankton etc., the discs can be immersed in a diluted chlorine bleaching liquor. All O-rings and other rubbers must be greased regularly with silicone grease for optimal filter performance. Place the discs back on the holder, making sure the number of discs is correct. The pack length is important, this should be 235-240mm. To this end, the point to which the element must be filled with the compressed discs is marked on the element. The pack length can also be determined by placing the cover on the empty holder. The pack height is then the length measured + 10 mm. Fit the pressure cover and tighten the wing nut snugly. Place the filter cover with sealing ring (holes down) and the clamp.



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### Notes:

It is advisable to familiarize yourself with the automatic filter by regularly checking the inflow and outflow pressures and observing a flushing cycle. This will enable optimizing the correct frequency of flushing operations. Take into account seasonal influences and any discs becoming encrusted. Pressure loss caused by soiling must not exceed  $\pm 0.5$  bar.

**NB:** when using a transparent cover, fully protect it with a light-tight cover/sleeve against algal growth and damage caused by light (UV).

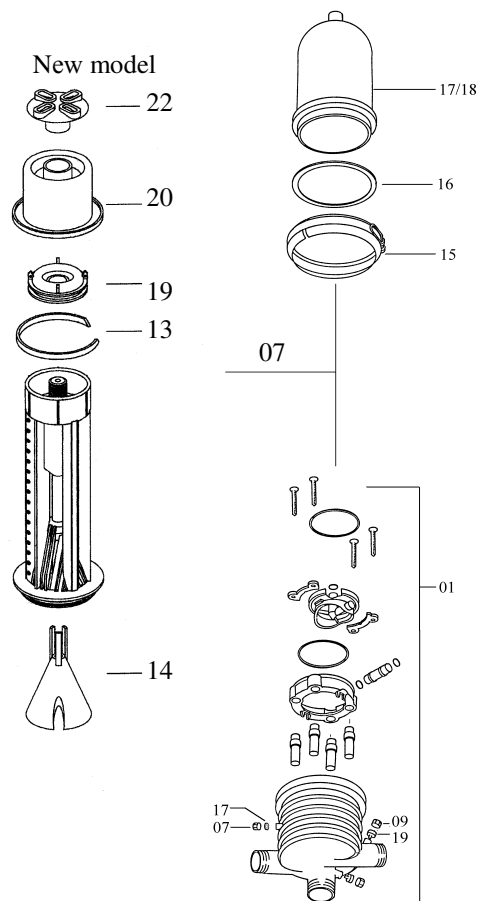
### Maintenance:

Each filter comes with these installation, operating and maintenance instructions.

Every 2-3 weeks, check the filter for proper functioning, differential pressure and/or leaks.

Replace any defective part(s) immediately. Apply

each year a film of non-aggressive grease on rubber parts. In view of ongoing improvements, we reserve the right to change specifications without prior notice.



### Pressure loss in mwc at:

Colour	Micron	5m <sup>3</sup> /h	10m <sup>3</sup> /h	15m <sup>3</sup> /h	20m <sup>3</sup> /h	25m <sup>3</sup> /h
Yellow	200	0.3	0.7	1.1	1.7	2.2
Red	130	0.3	0.8	1.2	1.9	2.6
Black	100	0.3	0.9	1.5	2.2	3.0
Green	50	1.1	2.4	3.5		
Grey	20	1.9	4.0			

