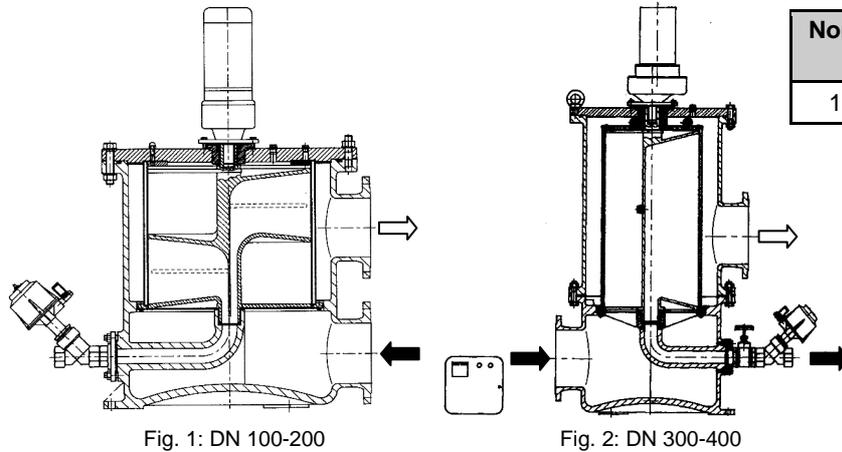


Autom. Backflush Filter F440/F440G

SAB-A-MAT DN 100 - 400

Wir filtern, regeln, sichern Flüssigkeiten und Gase
We filter, regulate and secure liquids and gases

SCHÜNEMANN



Nominal width DN	Nominal pressure PN
100 - 400	10

Field of Application

The automatically operating filter SAB-A-MAT, type F440/F440G, is a multi-purpose, self-cleaning and - to the greatest possible extent - maintenance-free filter for liquid media. The most remarkable features of this filter are its high efficiency, its low weight, space-saving design, as well as its continuous filter operation during the cleaning phase. As compared to the area of the connecting piece, the area of the filter has been designed to be fairly large in order to comply with the growing demand regarding filter finenesses and the possible loading of the filter areas hence involved. In order to filter fluffings, fibres, coarse, gluey, slime or film generating contaminations, we would like to recommend the types F410 or F420.

Abstract

The filter type F440 consists of a welded housing, and the filter type F440G consists of a casted housing. The flanges can be arranged in such a manner that they are staggering by steps of 22.5° in case of nominal widths of DN 300 - 400, whereas in case of the nominal widths DN 100 and 200, the connecting flanges of the welded version can be arranged according to the customer's requirements. The connecting flanges of the cast version DN 200 can be arranged in such a manner that they are staggering by steps of 90°. The connecting flanges of the cast version DN 100 can be arranged staggered opposite or one under the other on the same side. The filter cover has been fixed by means of bolts and nuts. The venting device has been provided within the cover and the draining device is located within the case. The backwashing line has been off-set by 180° with regard to the inlet. The strainer insert of the filter can be equipped with a flat or a pleated mesh cylinder. This mesh cylinder is exchangeable and available in different mesh widths.

Function

The contaminated medium will flow into the filter via the lower flange identified as the inlet. It will flow through the filter insert from the inside to the outside and will emerge in a purified state out of the upper flange identified as the outlet. During this process, the electronic SAB control device will monitor the differential pressure occurring at the strainer by means of a differential pressure switch. As soon as the pre-set differential pressure of 0.2 to 2 bar (depending on the design) has been achieved, the backflushing will be released. Moreover, depending on the operating conditions, the backflushing can equally be released by a timing control or manually by pressing a button. The backwashing jet will travel along the internal part of the strainer insert, and the waste valve will simultaneously be opened, so that there will be a pressure drop with regard to the atmosphere, which will induce the dedusting of the strainer. The filter is designed in that way, that the pressure loss while the backflushing is relatively low, when the dedusting is optimized. In case of a closed system, the filtration will not be interrupted during the backflushing procedure. At the end of the flushing time the dirt release valve will be closed automatically. In case of an open system, a throttle valve or a shut-off fitting should be provided at the filter outlet. These devices will be operated during the cleaning procedure via the SAB control. In any case, larger particles of solid matter should be prevented from entering into the filter, possibly by using a suitable preliminary filter. The required working pressure will depend on the filter fineness. In order to measure the operating pressure, it will be necessary to install a manometer at the side of the filter outlet.

Installation

The installation into pipings will be effected by means of flanges. Please ensure that the filter of the standard design is vertically installed - without any additional loads -, and mechanically stress-free. The medium should flow in the flow direction indicated at the housing. A wrong installation will cause functional disturbances of the filter. The waste discharge line should be installed in an unpressurized state, without a cross sectional reduction, without an ascending gradient, but, if possible, by providing a descending gradient to the waste collecting tank instead.

Autom. Backflush Filter F440/F440G

SAB-A-MAT DN 100 - 400

Wir filtern, regeln, sichern Flüssigkeiten und Gase
We filter, regulate and secure liquids and gases

SCHÜNEMANN



	Standard design	Special designs resp. supplementary equipment
Mesh cylinder	Pleated, flat	-
Filter fineness	20 - 1000 µm	10 µm
Filter lock	Cover with bolts/stud bolts and nuts	-
Venting device	Locking screw	Ball valve
Drain device	Locking screw	Ball valve
Connection	F 440 : DIN 2632/33 flange , form C F440G : DIN 2532/33 flange , form C Filter inlet and outlet arranged in various steps and at different heights Dirt outlet valve: internal pipe thread	acc. customer's specification
Materials:		
Body and cover	F440 : St 35.8/P265GH, 1.4541/1.4571 F440G : GGG-40/P265GH	1.4571
Sealings	Buna N	PTFE/FPM
Strainer insert/perforated plate/cloth	1.4541/1.4301/1.4401	acc. customer's specification
Cleaning nozzle	GGG-40 with corrosion protection paint	Gunmetal, stainless steel
Venting screw	A 4	-
Venting ball valve	-	Steel , brass, stainless steel
Drain plug	A 4	-
Drain ball valve	-	Steel , brass, stainless steel
Dirt release valve	Gunmetal/PTFE, Stainless steel/PTFE	-
Differential pressure indicator	Alloy/brass/1.4310 (type 5.02), Alloy/1.4448/1.4435/1.4310 (type 5.01)	1.4435/1.4439/1.4310 (type 5.04)
Surface treatment inside		
Body steel	Conservation oil	Epoxy resin
Body ductile graphite iron	Primer	Epoxy resin
Body stainless steel	glass bead blasted	pickled and passivated
Surface treatment outside		
Body steel / ductile graphite iron	Synthetic enamel RAL 5018, turquoise	-
Body stainless steel	glass bead blasted	pickled and passivated
Specification of components:		
Differential pressure indicator	Opto-electrical, protection class IP65 with 1. contact (F1) for cleaning start and 2. contact (F2) for alarm/emergency stop	-
Electric motor	3x400V – 50/60Hz, protection class IP55	acc. customer's specification
Control box	Electronic, supplied separately Input voltage 3x500V/400V/230V – 50/60Hz with neutral wire, control voltage 24VDC Protection class IP65, programmable	mounted on the filter acc. customer's specification
Dirt release valve	Electropneumatic (24VDC - 6 bar) Protection class IP65	electrical

On customer's request, further design and material variants will be manufactured and supplied.

Autom. Backflush Filter F440/F440G

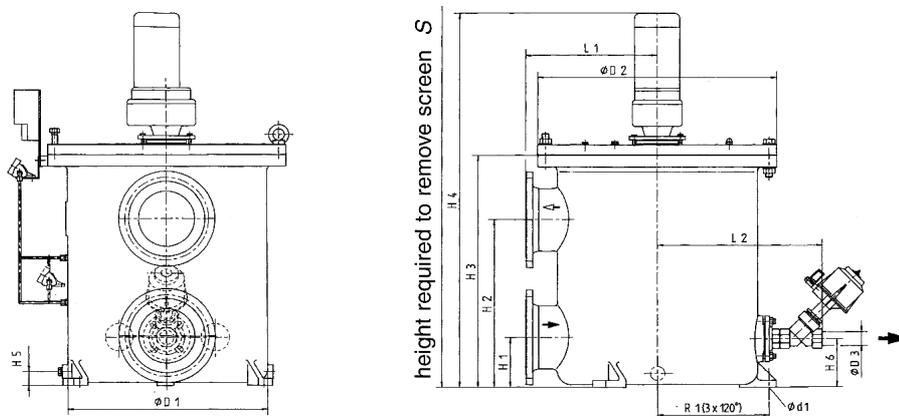
SAB-A-MAT DN 100 - 400

Wir filtern, regeln, sichern Flüssigkeiten und Gase
We filter, regulate and secure liquids and gases

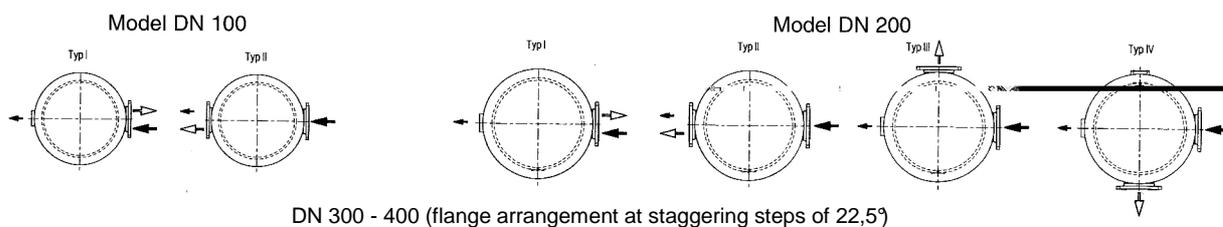
SCHÜNEMANN



Technical data and dimensions



Flange arrangement



DN	PN	D1	D2	D3	H1	H2	H3	H4	H5	H6 ca.	L1	L2 ca.	R1	d1	S	Volume appr. dm ³	Weight appr. kg
100	10	508	630	1 ¼	125	365	537	895	62	103	672	468	294	23	1050	90	270
200	10	711	850	2	180	600	830	1400	70	175	946	605	396	23	1550	275	750
300-400	10	711	850	2 ½	290	930	1565	2124	70	290	985	725	396	23	2820	545	1100

The measurements for ancillary and special equipment are available on request.

Autom. Backflush Filter F440/F440G

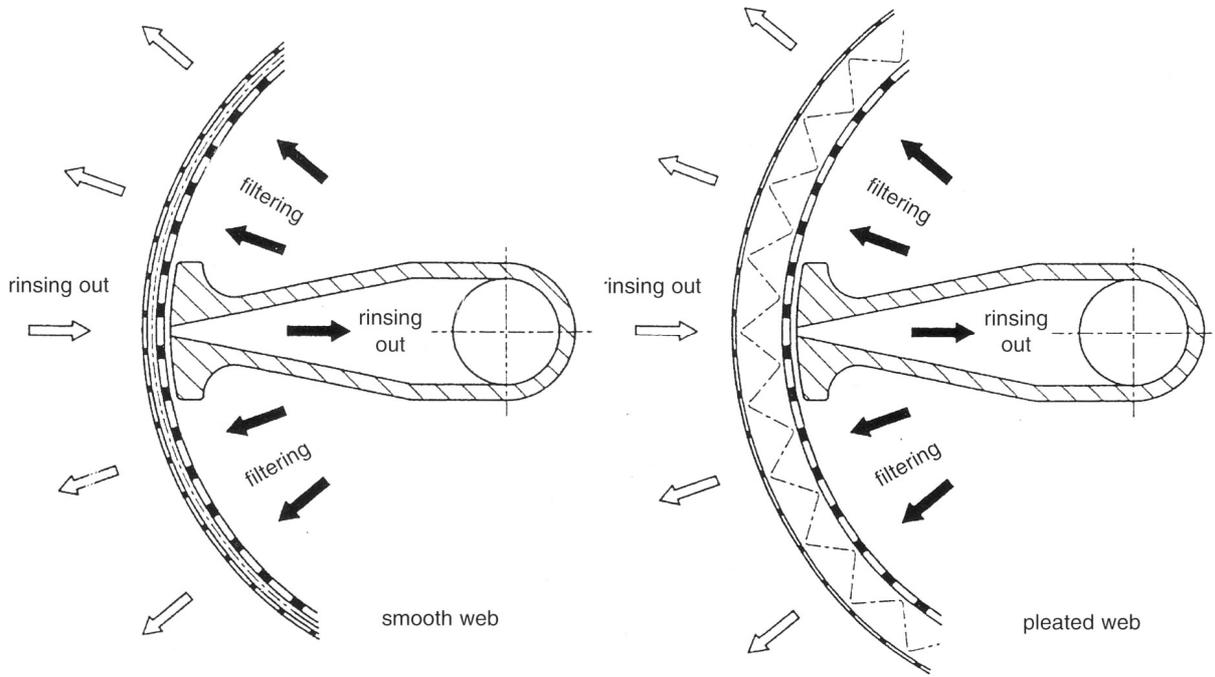
SAB-A-MAT DN 100 - 400

Wir filtern, regeln, sichern Flüssigkeiten und Gase
We filter, regulate and secure liquids and gases

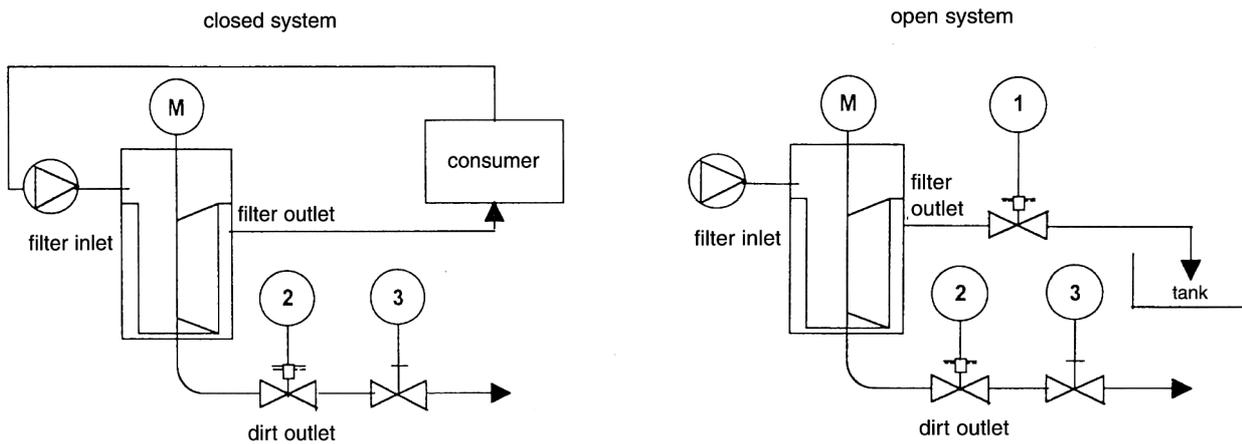
SCHÜNEMANN



Functional principle filtration and backflushing



System design



Our quality assurance system
conforms to ISO 9001:2008

