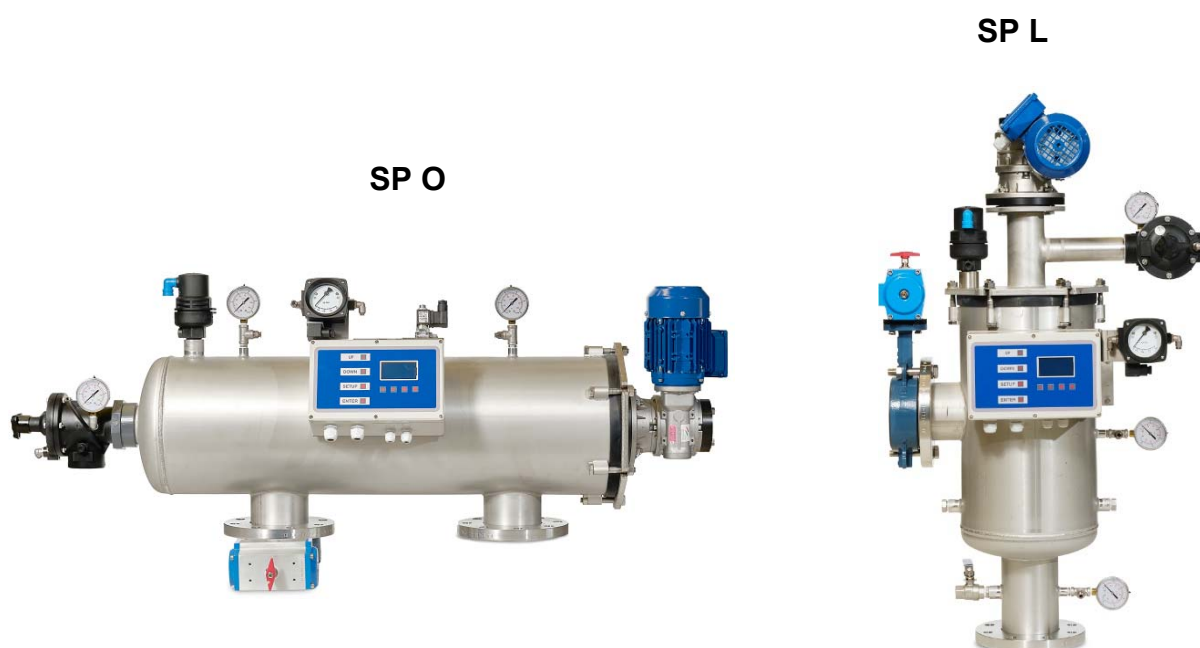




## BRUSHLESS SELF CLEANING FILTER SERIES SP



### MAIN TECHNICAL CHARACTERISTICS:

- Filtration degree from 2000 to 80  $\mu\text{m}$  on polyester mesh/ AISI316
- Maximum flow rate 1000  $\text{m}^3/\text{h}$  with a single filter
- Minimum quantity of water at discharge

### APPLICATIONS

- Pre-filtration in UF systems
- Evaporation towers
- Spray nozzle protection
- Heat exchangers
- Irrigation
- Sea water

Ver.2022 Rev00

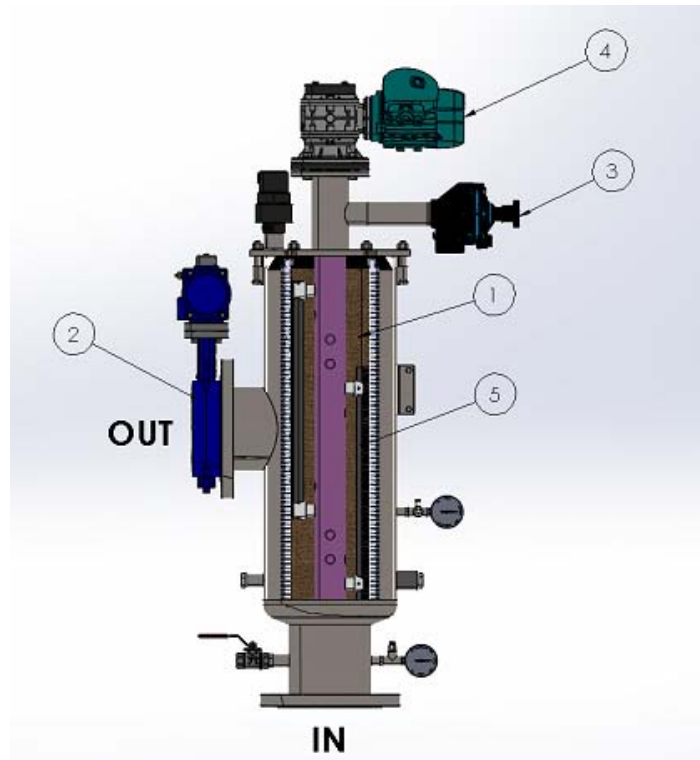
## OPERATION

### WORK

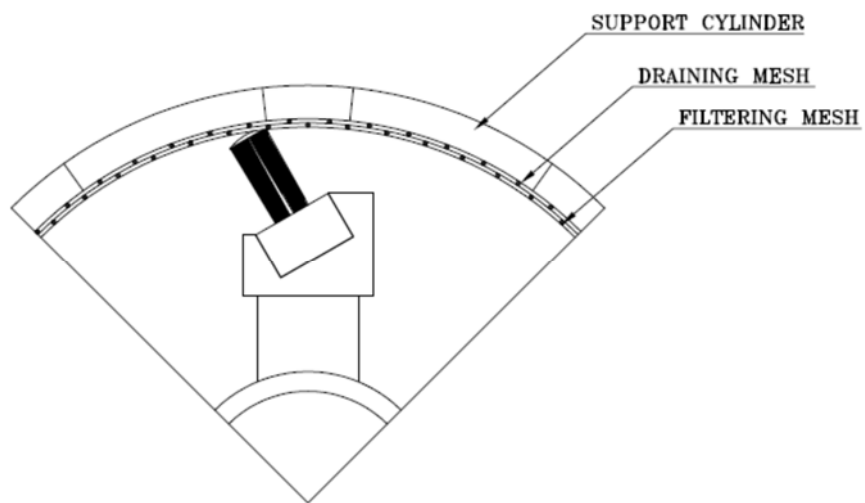
Water enters the filter through the inlet (IN), it goes through the filtering cylinder (1) from inside out, which retains the suspended filters to be filtered; it retains all suspended solids with size larger or equal to the filtration degree installed. Filtered water leaves through the master valve (2).

### REGENERATION

The continuous settling of suspended solids obstructs the passage of water which results in a pressure difference ( $\Delta P$ ). At a preset value of  $\Delta P$  (range 0.3 ÷ 1 Bar) an automatic cycle will start to clean the filter cylinder (1). This operation starts with a signal that closes the outlet valve, (2) which clears the  $\Delta P$ , and opens the discharge valve (3). At the same time the electric motor (4) rotates the brushes (5) in the filtering cylinder to clear away the contaminant that is ejected through the discharge valve (3). The cleaning cycle lasts approximately 20 seconds.



## FILTER ELEMENT AND CLEANING SYSTEM



## IMAGE OF FILTER INTERIOR



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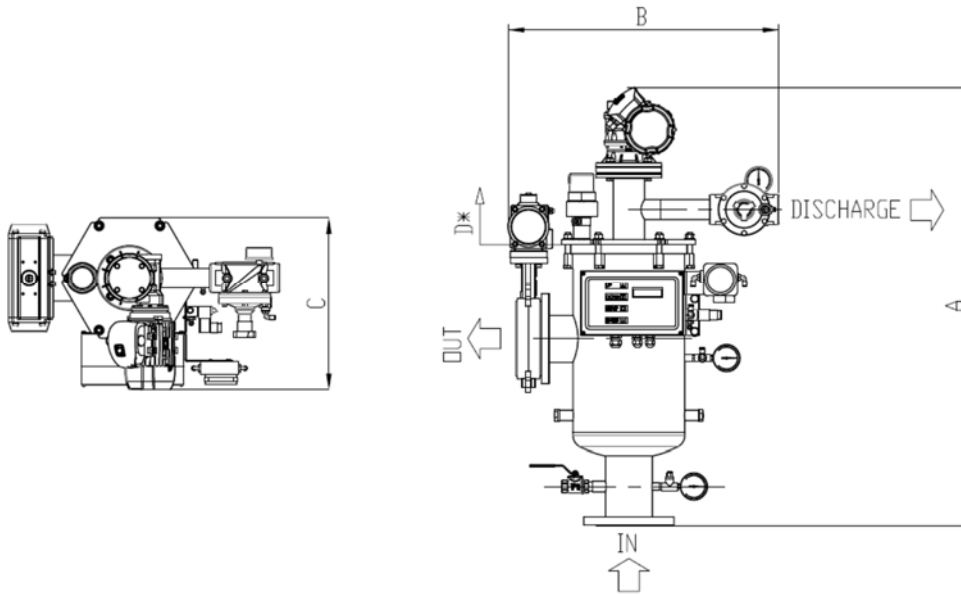
Via Scodoncello 41/E 43044 Collecchio (PR)

## CONTROL

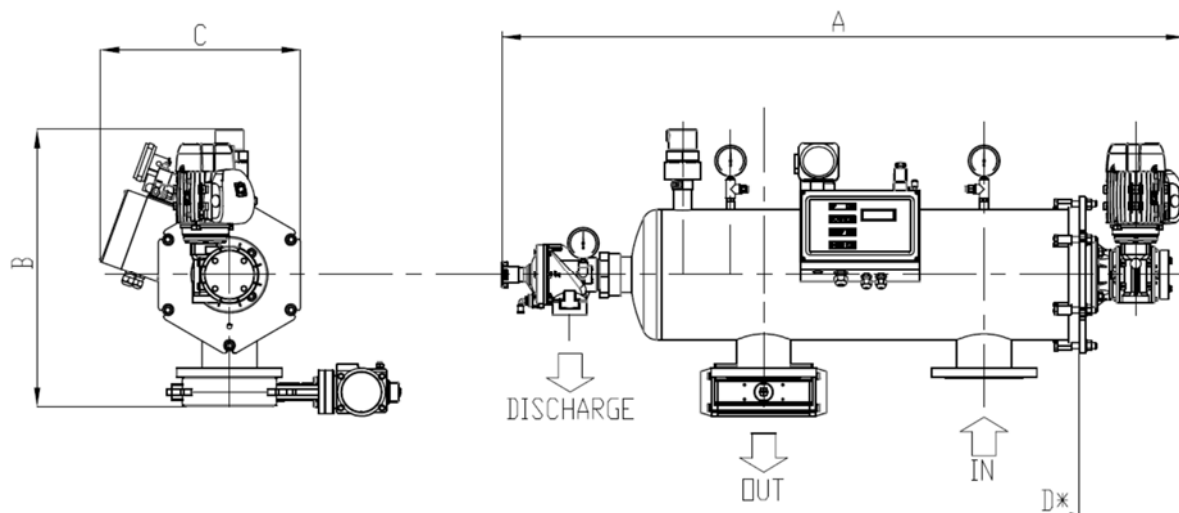
A switchboard controls the washing phases. The signal that starts the cleaning cycle is given by a differential pressure switch or by time. The switchboard gives an "alarm" signal in case of problems in the washing system. These signals can be sent to a pre-existing control centre. The washing phase can also be controlled manually. The solenoid controlling the valve is pneumatic.



## DIMENSIONS AND TECHNICAL DATA



MODEL	SP L 10	SP L 15	SP L 30	SP L 45	SP L 60	SP L 75	SP L 90	SP L 130
Filtering area (cm <sup>2</sup> )	1000	1500	3000	4500	6000	7500	9000	13000
Connections- In/Out	2"-3"	2-3" DN100	3" DN100D N150	DN100 DN150	DN100 DN150 DN200	DN150D N200DN 250	DN150 DN200 DN250	DN200D N250DN 350
Discharge connection	1" F	1" F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	2" F
Draining connections	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	1" F	1" F
Extra flow rate required during washing at 1 Bar with mesh from 800 to 80 micron - m <sup>3</sup> /h	2	3	4	7	9	9	9	15
Wash duration - Sec.	20	20	20	20	20	20	20	20
Min-max pressure - Bar	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10
Max Temperature - °C	40	40	40	40	40	40	40	40
Power supply - Volt	400 50/60 Hz	400 50/60 Hz	400 50/60 Hz	400 50/60 Hz	400 50/60 Hz	400 50/60 Hz	400 50/60 Hz	400 50/60 Hz
Power required - Watt	90	90	180	180	180	180	370	370
Solenoid valve - Volt/Watt	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6
Pneumatic supply - Bar	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8
Construction certificates	CE	CE	CE	CE	CE	CE	CE	CE
Maximum size of inlet particles - mm	10	10	10	10	10	10	10	10
Max total suspended solids at inlet - 125 micron - mg/l	30	30	30	30	30	30	30	30
<b>A (mm)</b>	720	870	970	1220	1470	1750	1865	2180
<b>B (mm)</b>	485	485	705	705	705	790	970	1120
<b>C (mm)</b>	310	310	430	430	430	490	590	700
<b>D (mm) Cartridge extraction</b>	450	600	640	885	1130	1160	1160	1690
<b>WEIGHT when empty Kg</b>	34	40	59	72	85	127	223	305
<b>WEIGHT in operation Kg</b>	42	51	91	116	143	214	361	618



MODEL	SP O 10	SP O 15	SP O 30	SP O 45	SP O 60	SP O 75	SP O 90	SP O 130
Filtering area (cm <sup>2</sup> )	1000	1500	3000	4500	6000	7500	9000	13000
Connections- In/Out	2"	3" - DN80	DN100	DN150	DN200	DN250	DN300	DN350
Discharge connection	1"1/2"F	1"1/2F	2"F	2"F	2"F	2" F	2" F	2" F
Washing flow rate_ mc/h	5	5	10	15	20	24	35	45
Wash duration - Sec.	20	20	20	20	20	20	20	20
Min-max pressure - Bar	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10	0,5-10
Max Temperature - °C	60	60	60	60	60	60	60	60
Power supply - Volt	400	400	400	400	400	400	400	400
	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz
Power required - Watt	90	90	180	180	180	180	370	550
Solenoid valve - Volt/Watt	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6	24 AC / 6
Pneumatic supply - Bar	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8	2 - 8
Construction certificates	CE	CE	CE	CE	CE	CE	CE	CE
Maximum size of inlet particles - mm	10	10	10	10	10	10	10	10
Max total suspended solids at inlet - 125 micron - mg/l	30	30	30	30	30	30	30	30
<b>A (mm)</b>	940	1185	1430	1675	1920	2055	2200	2700
<b>B (mm)</b>	425	530	530	530	565	790	970	1120
<b>C (mm)</b>	200	400	400	400	400	460	640	640
<b>D (mm) * Cartridge extraction</b>	250	300	460	585	710	770	800	800
<b>WEIGHT when empty Kg</b>	33	42	72	91	116	222	370	628
<b>WEIGHT in operation Kg</b>	500	650	900	1150	1400	1600	1700	2200

These technical data are indicative and subject to changing without notice.  
**The max suspended solids at inlet is an important factor, because depending on their size distribution and their specific weight they can clog up the filter in a different way.**

## DESCRIPTION OF PARTS

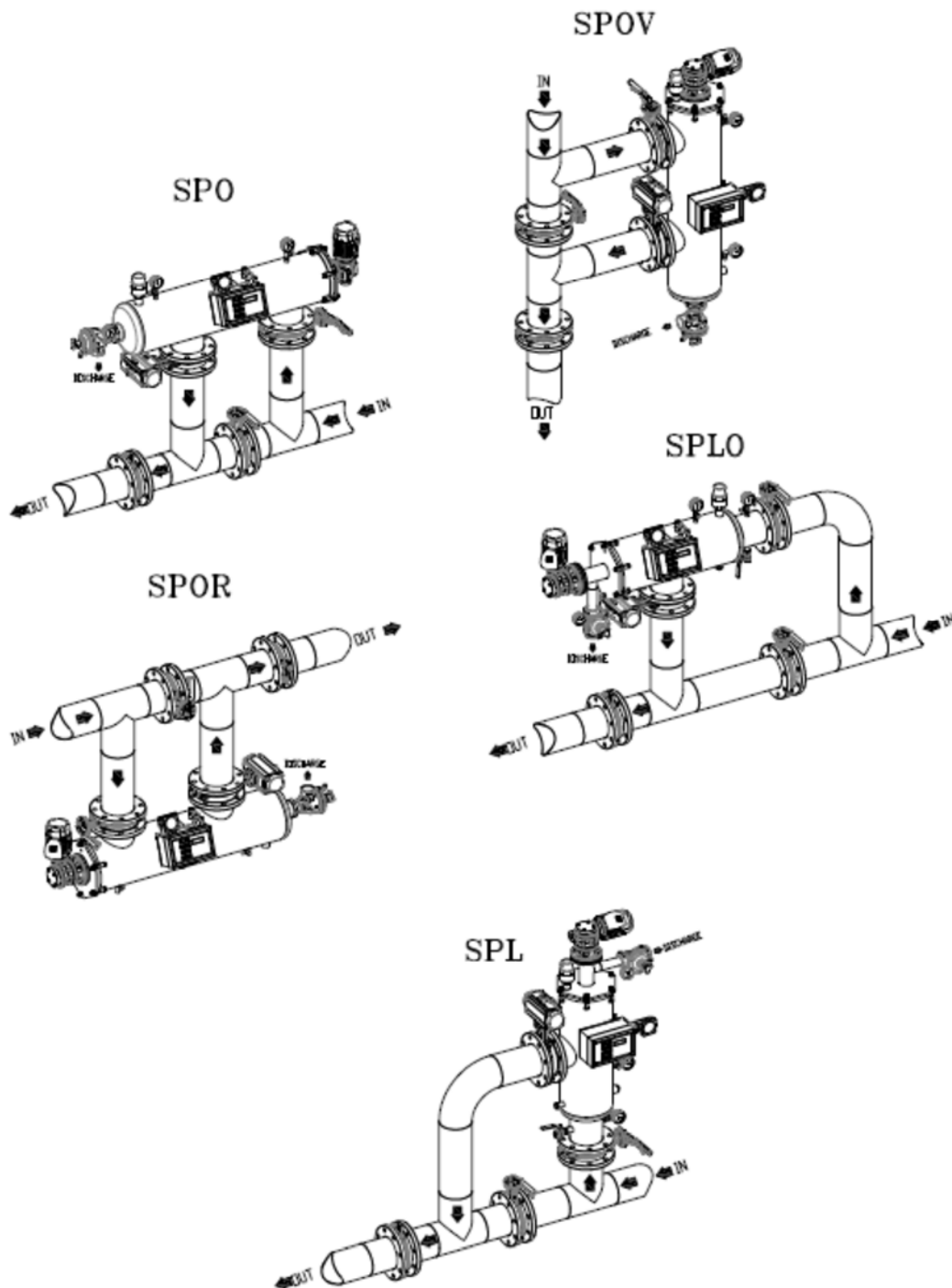
PART	DESCRIPTION
Body	AISI316 – SAF2205 – SAF2507
Cover	AISI316 – SAF2205 – SAF2507
Connection threading	Cylindrical GAS UNI338-66
Mesh support strainer	PVC
Filtering mesh	Polyester/AISI316: 800,500,300,200,125,80 µm
Brushes	PP
Brush support	PVC
Brush pipe	PVC
Internal seals	NBR
Reduction unit	Aluminium and carbon steel
Electric motor	Hot-painted aluminium
Solenoid valve	Five-way aluminium
Switchboard	ABS IP65 with front display
Differential pressure switch	Aluminium with parts in contact with liquid made of AISI 316
Discharge valve	PP diaphragm with flow rate regulation
Outlet valves	Butterfly with AISI316 disc and double-acting pneumatic actuator
Pressure gauges	Stainless steel with 2"1/2 dial, radial connection and 0-10 Bar indication
Accessories (Plugs and adapters)	PP – PVC – AISI316

### FILTERING MESH FLOW RATE TABLE FOR SP FILTERS (m<sup>3</sup>/h)

MODEL	800 µm PES AISI316	500 µm PES AISI316	300 µm PES AISI316	200 µm PES AISI316	125 µm PES AISI316	80 µm PES AISI316
<b>SP 10</b>	50	50	50	50	50	37
<b>SP 15</b>	80	80	80	80	80	55
<b>SP 30</b>	140	140	140	140	140	95
<b>SP 45</b>	205	205	205	205	205	145
<b>SP 60</b>	275	275	275	275	275	193
<b>SP 75</b>	360	360	360	360	360	250
<b>SP 90</b>	685	685	685	685	455	319
<b>SP 130</b>	1030	1030	1030	1030	685	480

The flow rates indicated refer to a load loss of 0.2 Bar with clean, filtered water.

## SUGGESTED INTALLATION



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## FILTER CODING TABLE

1 SHAPE / INSTALLATION FILTER	CODE
L / VERTICAL	SPL
L / HORIZONTAL	SPLO
O / HORIZONTAL	SPO
O / REVERSE HORIZONTAL	SPOR
O / VERTICAL	SPOV

4 CONNECTION IN/OUT	CODE
2" BSP	002
3"BSP	003
DN80 PN10	080
DN100 PN10	100
DN150 PN10	150
DN200 PN10	200
DN250 PN10	250
DN300 PN10	300
DN350 PN10	350

6 BASKET MATERIAL	CODE
PVC-U	1
AISI316	2

8 BRUSH SUPPORT MATERIAL	CODE
POM-C (10-15-30-45)	1
AISI316 (60-75-90-130)	2
SAF2205 (DUPLEX)	3
SAF2507 (SUPERDUPLEX)	4

10 PILOT DISCHARGE VALVE	CODE
PNEUMATICA	1
IDRAULICA	2

12 AUTOMATION	CODE
CONTROL PANEL + DIFF. SWITCH	C
NONE	0

**STANDARD VERSION**

2 APPLICATION	CODE
INDUSTRIAL	I

3 BODY / COVER MATERIAL	CODE
AISI 316	0316
SAF2205 (DUPLEX)	2205
SAF2507 (SUPERDUPLEX)	2507

5 FILTER ELEMENT SIZE	CODE
10	010
15	015
30	030
45	045
60	060
75	075
90	090
130	130

7 FILTERING FABRIC MATERIAL	CODE
POLYESTERE	1
AISI316	2

9 BRUSH PIPE MATERIAL	CODE
PVC-U (10-15-30-45)	1
AISI316 (60-75-90-130)	2
PVC-C	3
SAF2205 (DUPLEX)	4
SAF2507 (SUPERDUPLEX)	5

11 FILTRATION DEGREE	CODE
2000	2000
1500	1500
800	0800
500	0500
400	0400
300	0300
200	0200
120	0120
80	0080