



## Filter, Compressed Air

### SF Series

Reliable & Durable, Four filtration grades  
 Simple to install & trouble free maintenance  
 Easy filter element replacement design  
 Differential Pressure Indication  
 Integral Automatic Drain Valve  
 Quality of Air as per ISO 8573, Part-1, Table 2 & 5

Capacity	-	15 to 18,000 cfm
Working Pressure	-	1 to 400 bar g
Particle Removal	-	5 to 0.01 micron
Oil Removal	-	5 to 0.003 mg/ m <sup>3</sup>
Inlet Air Temperature	-	5 to 80°C



## Particulate & Coalescing Filters

The Solid, Liquid and Oil contaminants available in atmospheric air, after compression pollutes the compressed air to a considerable degree. These contaminants added with further substances originating from the Compressor, Pipelines, Receivers and air hoses further affects the quality of air. This creates abrasive mixture cause damage and user end application machinery/ tools can go wrong.

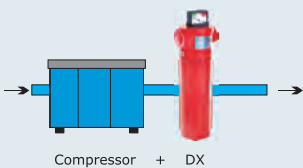
Compressed air quality is fundamental to reliable and uninterrupted operation of any industrial processes and to the quality of finished product. Summits can offer Compressed Air Filters in accordance with ISO specified norms of required quality of air for different application by combination of air filters.

### Product Features

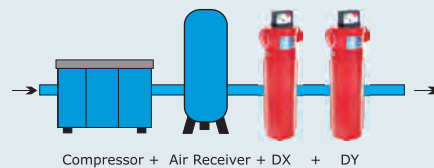
- Coalescing filters with borosilicate glass fiber media has more than 95% void volume, gives long life with minimum energy
- Larger filtration area
- High filter efficiency with very low pressure drop
- High strength silicon free PVC impregnated open cell foam for effective coalescence
- Stainless steel support screens in cartridge withstand up to 10 bar differential pressure
- Corrosion Resistant, Epoxy Resin treated Aluminium/ Carbon Steel Housing
- Tough non-corrosive Polyamide end caps prevent oxidation
- Differential pressure gauge (except Grade A) indicates the time of cartridge replacement

### Where to use

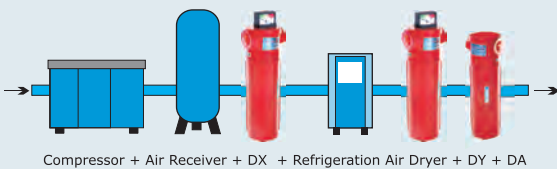
General purpose protection system -  
After Compressor



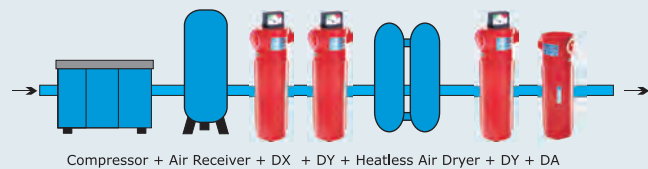
General purpose protection & reduced oil concentration system -  
After Compressor & Air Receiver



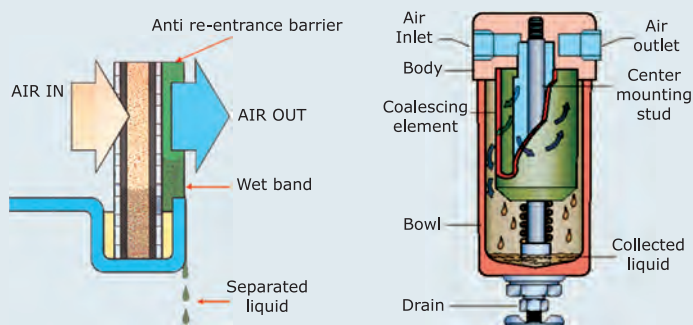
Reduced Dew Point System -  
Before & after Refrigeration air dryer



Low Dew Point System -  
Before & after desiccant air dryer



### How filtration takes place?



The air travels through the filter media gradually slowing down. Particles are retained through 4 different process and held within the filter. Liquids are caught in the "wet band" and drain away into the filter bowl

### Facts and guidelines

#### Benefits of Compressed Air Filtration

- Protect Machinery/ Tools at user location
- Increase Productivity
- Minimize manufacturing cost
- Prolong desiccant life in heatless dryers
- Protect from corrosion the pipelines/ storage system
- Supplies quality air to process and thus product
- Air quality accordance with ISO 8573.1 international standard

#### Maintaining quality of air in CAS

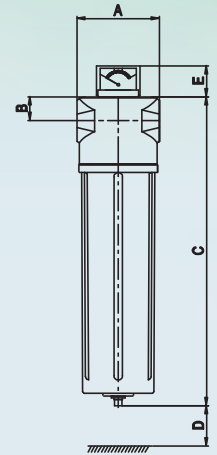
- Replace filter element once in 12 months or earlier based on DPG indication
- Use always genuine filter element
- Whenever using activated carbon filter (A), always proceed with Submicron Filter (Y)

## Technical Data

### Aluminium Housing

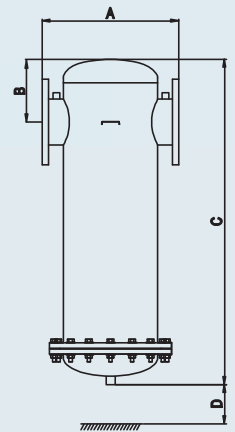
Base Model	Model Variance				End connection BSP (F)	Flow Rate, max, cfm	Element Qty	Housing Dimension, mm				
	DP	DX	DY	DA				A	B	C	D	E
SF 002*	✓	✓	✓	✓	3/8"	20	1	70	20	195	275	45
SF 004	✓	✓	✓	✓	1/2"	40	1	95	21	240	275	45
SF 006	✓	✓	✓	✓	1/2"	60	1	95	21	240	275	45
SF 012	✓	✓	✓	✓	1"	120	1	122	35	405	275	45
SF 020	✓	✓	✓	✓	1 1/2"	200	1	122	35	465	450	45
SF 035	✓	✓	✓	✓	1 1/2"	350	1	122	35	565	450	45
SF 050	✓	✓	✓	✓	2"	500	1	158	42	690	500	45
SF 070	✓	✓	✓	✓	2"	700	1	158	42	690	575	45
SF 100	✓	✓	✓	✓	3"	1,000	1	230	73	765	600	45
SF 125	✓	✓	✓	✓	3"	1,250	1	230	73	765	600	45

\*DP Gauge is not a standard scope of supply in SF 002 Filters



### Carbon Steel Housing

Base Model	Model Variance				End connection NB	Flow Rate, max, cfm	Element Qty	Housing Dimension, mm			
	DP	DX	DY	DA				A	B	C	D
SF 175	✓	✓	✓	✓	4"	1,750	3	440	190	1130	250
SF 250	✓	✓	✓	✓	4"	2,500	4	440	190	1130	250
SF 350	✓	✓	✓	✓	6"	3,500	6	580	275	1350	250
SF 500	✓	✓	✓	✓	6"	5,000	8	650	325	1450	250
SF 650	✓	✓	✓	✓	8"	6,500	10	650	299	1550	250
SF 800	✓	✓	✓	✓	8"	8,000	14	875	425	1650	250
SF 999	✓	✓	✓	✓	10"	10,000	16	875	425	1800	250
SF 12K	✓	✓	✓	✓	10"	12,000	18	1000	525	1900	250
SF 15K	✓	✓	✓	✓	12"	15,000	24	1000	525	1900	250



### Correction Factor (CF) & Model Framing

When the working pressure changes, to frame right size of filter model divide the real flow rate using the corresponding correction factor.

Ideal Condition: Pressure 7 bar g (100 psi g)

bar g	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
psi g	15	29	44	58	73	87	100	116	131	145	160	174	189	203	218	232
CF	0.25	0.38	0.50	0.65	0.76	0.88	1.00	1.12	1.25	1.39	1.51	1.65	1.74	1.90	2.02	2.18

Note : For above 16 bar g working pressure, please contact factory for model framing

To frame a correct model filter for an air flow rate of 450 cfm with a working pressure of 5 bar g,

$$\begin{aligned} \text{Size of Filter} &= \text{Real Flow Rate} / \text{CF} \\ &= 450 / 0.76 = 592.11 \end{aligned}$$

Thus the filter model to be selected is SF 060 and based on the air quality requirement, the corresponding filter elements are to be chosen.

To frame a correct model filter for an air flow rate of 450 cfm with a working pressure of 7 bar g,

$$\begin{aligned} \text{Size of Filter} &= \text{Real Flow Rate} / \text{CF} \\ &= 450 / 1.00 = 450 \end{aligned}$$

Thus the filter model to be selected is SF 060 and based on the air quality requirement, the corresponding filter elements are to be chosen.





To frame a correct model filter for an air flow rate of 450 cfm with a working pressure of 10 bar g,

$$\begin{aligned} \text{Size of Filter} &= \text{Real Flow Rate} / \text{CF} \\ &= 450 / 1.39 = 323.74 \end{aligned}$$

Thus the filter model to be selected is SF 040 and based on the air quality requirement, the corresponding filter elements are to be chosen.

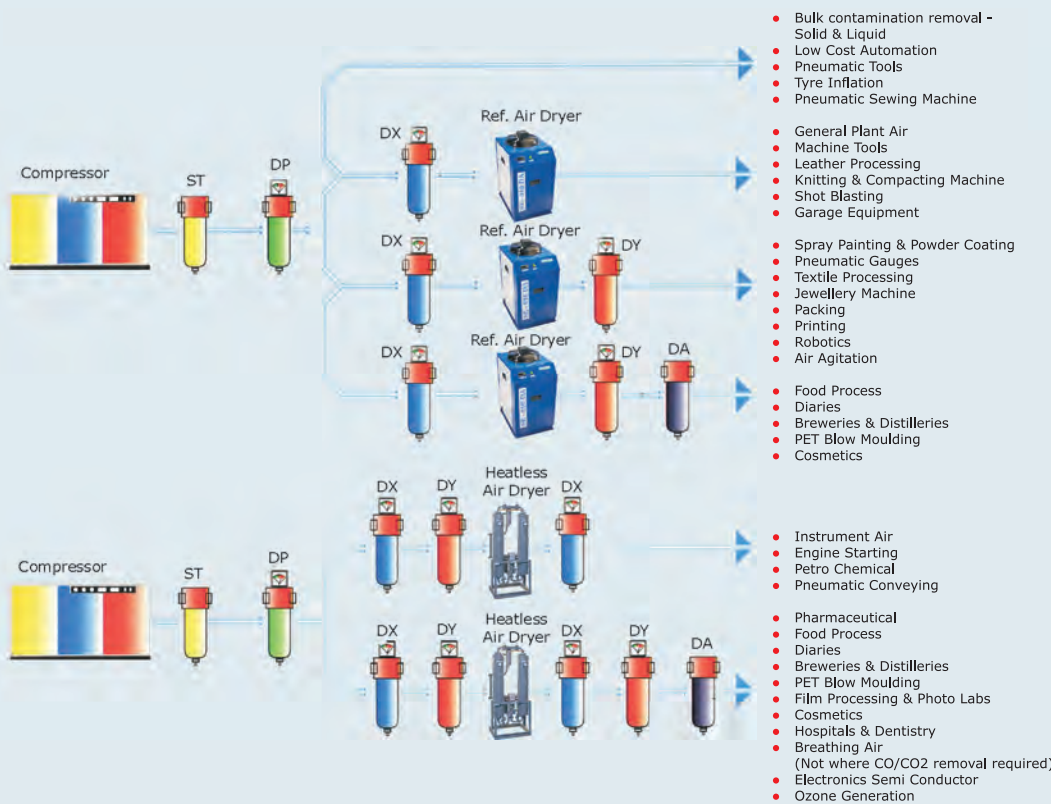


## Element Specification

Filter Type	UoM	Pre Filter	Micron Filter	Submicron Filter	Activated Carbon
					
Element Grade		P	X	Y	A
Particle Removal	micron	5	1	0.01	0.01
As per ISO 8543-1, Table 2		Class 3	Class 2	Class 1	Class 1
Max. Oil carryover @ 20 deg C	mg/m <sup>3</sup>	5	0.5	0.01	0.003
As per ISO 8543-1, Table 5		Class 4	Class 3	Class 1	Class 1
Working Temperature, max	deg C	80	80	80	50
Initial pressure drop/ loss	m bar	40	80	100	80
Pressure drop for Element change	m bar	700	700	700	700
Working Pressure, max	bar g	16	16	16	16

Model Nomenclature for Elements : SF XXX SX

## Typical Application



## Other range of GAS Filters

- CNG Filters
- Nitrogen Filters
- Hydrogen Filters
- Oxygen Filters
- Argon Filters
- Helium Filters
- Ammonia Filters

## Other Product Ranges



The data in this brochure are not binding, due to continuous product improvement, SUMMITS reserves the right to make changes without prior notice. For further information, contact factory

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