

# Extreme Duty Filtration

## SpinMeister™ SM Series 1/2" - DN300

### Overview

Intake air is drawn through the angled louver plates which direct the air to turn the rotor. The centrifugal force separates the contaminants from the airstream, throwing them to the outer perimeter of the cover, expelling them through the discharge port. Cleaner air is drawn to the lower chamber and filtered by a 99% efficient pleated element.

### Benefits

- Extreme duty filtration for high dust environments
- Significantly increases life of filter element
- Cost effective

### Features

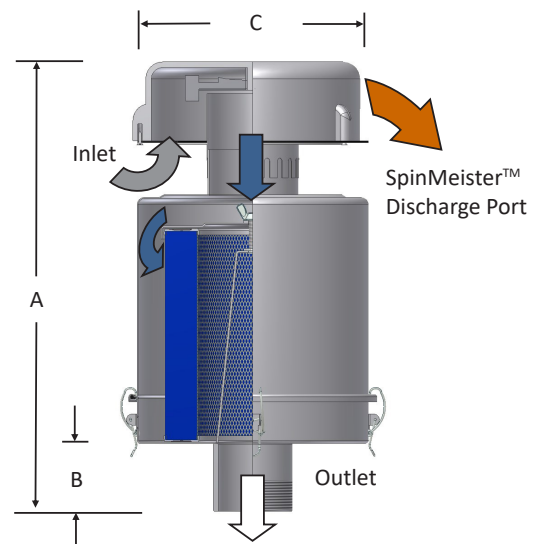
- SpinMeister™ made of molded fiber filled composite material
- All small compact filters with seamless housings
- Corrosive resistant gray powder coat carbon steel

### Technical Specifications

- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Polyester: 99%+ removal efficiency to 5 micron
- Paper: 99%+ removal efficiency to 2 micron
- SpinMeister™ Precleaner: 85% efficiency to 15 micron

### Options

- Tap holes available
- SpinMeisters™ available in polished aluminum
- Selected housings available in stainless steel
- Modify to meet specific application



Rev: SM-EU0819K

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Configuration A



Configuration B



Configuration C



Configuration D

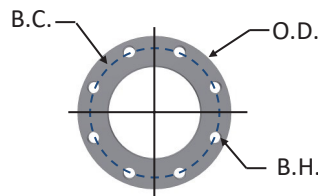
Configuration A		Assembly m <sup>3</sup> /hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Approx. Weight kg	Replacement Element Part No.		Element m <sup>3</sup> /hr Rating
Outlet Size	Type		Polyester	Paper	A	B	C			Polyester	Paper	
1/2"	MPT	51	SM1.5-11-050	SM1.5-10-050	170	22	105	35	0.7	11	10	59
3/4"	BSPT	51	SM1.5-11-076	SM1.5-10-076	183	32	105	35	0.7	11	10	59
1/2"	MPT	59	SM2-11-050	SM2-10-050	187	22	105	35	0.9	11	10	59
3/4"	BSPT	59	SM2-11-076	SM2-10-076	217	32	129	35	0.9	11	10	59
1"	BSPT	59	SM2-11-101	SM2-10-101	216	32	129	35	0.9	11	10	59

Configuration B												
1"	BSPT	169	SM2-19P-101	SM2-18P-101	300	25	175	121	1.7	19P	18P	170
1 1/4"	BSPT	169	SM2-19P-126	SM2-18P-126	300	51	175	121	1.7	19P	18P	170
1 1/2"	BSPT	145	SM2-19P-151	SM2-18P-151	300	51	191	121	1.7	19P	18P	170
2"	BSPT	170	SM2-19P-201	SM2-18P-201	312	64	191	121	1.8	19P	18P	170
2 1/2"	BSPT	170	SM2-19P-251	SM2-18P-251	325	76	191	121	1.8	19P	18P	170

Configuration C												
3"	BSPT	425	SM3-235P-301	SM3-234P-301	519	102	279	245	14	235P	234P	968
4"	BSPT	425	SM3-235P-401	SM3-234P-401	544	102	279	245	14	235P	234P	968
4"	BSPT	680	SM4-235P-401	SM4-234P-401	522	102	279	245	15	235P	234P	968
DN80	FLG	425	SM3-235P-DN80	SM3-234P-DN80	502	102	279	245	16	235P	234P	968
DN100	FLG	425	SM3-235P-DN100	SM3-234P-DN100	499	76	279	245	16	235P	234P	968
DN100	FLG	680	SM4-235P-DN100	SM4-234P-DN100	522	102	279	245	16	235P	234P	968

Configuration D												
DN150	FLG	1360	SM62-377P-DN150	SM62-376P-DN150	775	127	572	370	40	377P	376P	3100
DN200	FLG	3060	SM62-377P-DN200	SM62-376P-DN200	1044	152	641	370	46	377P	376P	3100
DN250	FLG	4590	SM63-385P-DN250	SM63-384P-DN250	1037	152	733	370	62	385P	384P	5598
DN300	FLG	4590	SM63-485P-DN300	SM63-484P-DN300	1037	152	733	546	73	485P	484P	7993

PN10 Pattern Flange	Dimensions - mm			No. of Holes	Flange Thickness mm
	O.D.	B.C.	B.H.		
DN80	200	160	18	8	20
DN100	220	180	18	8	20
DN125	250	210	18	8	22
DN150	285	240	22	8	22
DN200	340	295	22	8	24
DN250	395	350	22	12	26
DN300	445	400	22	12	26



O.D.: Outside Diameter  
B.C.: Bolt Circle  
B.H.: Bolt Hole



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All model offerings and design parameters are subject to change without prior notice.  
Contact your representative or Solberg for the most current information.

# Technical Data

## Inlet Filter Assemblies

### Applications & Equipment

- Industrial & Severe Duty
- Blowers - Side Channel & Roots (P.D.)
- Breathers
- Fuel Cells
- Piston Compressors
- Screw Compressors
- Centrifugal Compressors
- Hydraulic Breathers – fine filtration
- Engines
- Fans
- Vacuum Pumps & Systems
- Construction\Contractor Industry
- Medical
- Pneumatic Conveying
- Waste Water Aeration
- Sparging
- Factory Air
- Vacuum Vent Breathers
- Cement Processing
- Power Plants
- Centralized Air Intakes

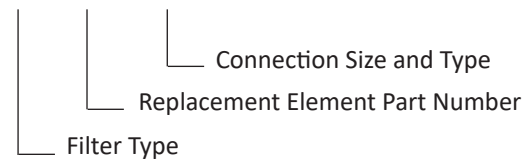
### Identification

Standard Solberg assemblies should have an identification label/nameplate that gives the following information:

- Assembly Model #
- Replacement Element #

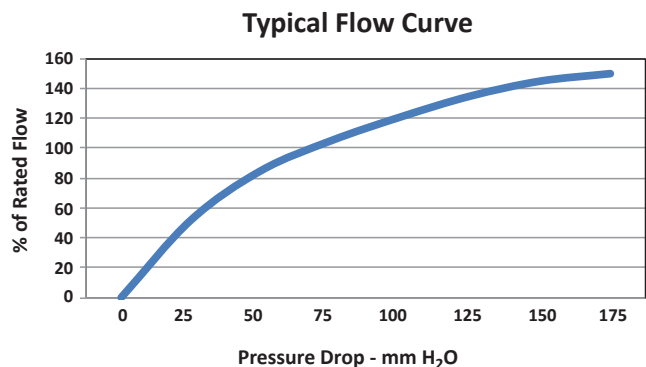
The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being an “F” design filter with a “385” element, “P” prefilter and DN250 flange connection size.

#### **F-385P-DN250**



### Typical Flow Curve

See chart for the typical flow curve for inlet filtration housing comparing the percentage of rated flow with typical pressure drop.



Rev: InletFTech-EU0719K

# Inlet Filter Assemblies

## Choosing the Best Filter for Your Equipment

A. When the connection & airflow is known:

1. select the appropriate connection style. (i.e.: BSPT, Flange, BSPP, etc.)
2. check assembly  $m^3/hr$  (flow) rating. Compare with your required airflow.

(Note: Assembly flow ratings are based on 6,000 FPM or 30m/sec for a given connection size to achieve low pressure drop performance. When required flow exceeds assembly flow rating, the pressure drop through the outlet connection will increase. In such cases select by element  $m^3/hr$  (flow) rating.)

3. when required flow rating matches connection size; skip to "C. Selecting Elements".

B. When the connection size is unknown, flexible, or the required flow rating exceeds assembly flow rating:

1. match required flow rating with the element flow rating.
2. choose related connection size.

C. Selecting Elements: The filter performance is influenced by the actual application duty and the equipment it is installed on. Regular maintenance checks and proper servicing is required.

### **Application Duty Descriptions:**

Industrial Duty: clean workshop or clean outdoor environment - small element sizing is sufficient.

Severe Duty: dirty workshop, wastewater – medium to large element is recommended.

Extreme Duty: cement, steel making, plastics or dusty material conveying – largest element sizing is recommended.

1. Select media required by your application. Options include:

a. Standard media

1. Polyester: all purpose; withstands pulses, moisture, and oily air
2. Paper: mostly dry, smooth flow applications

b. Special media: for a variety of micron levels and media types, see the "Filter Media Specifications" in the Replacement Element Section or contact Solberg.

2. Select element size by matching the element with the anticipated duty and upsize accordingly.

## Filter Assembly Maintenance

Request the appropriate maintenance manual for more in-depth information from your Solberg representative or on our website [www.solbergmfg.com](http://www.solbergmfg.com).

## Element Maintenance

Solberg elements should be replaced once the pressure drop reaches 37-50 mbar above the initial pressure drop of the installation. Cleaning the element is also an option.

Solberg recommends replacing dirty elements for optimal performance. Any damage which results from by-pass or additional pressure drop created by element cleaning is the sole responsibility of the operator.

Note: The overall performance of a filter element is altered once cleaned. The initial pressure drop after subsequent cleanings will be greater than the original, clean pressure drop of the element. After each cleaning, the pressure drop will continue to increase. Under all circumstances, the initial pressure drop of the element needs to be maintained at less than 37 mbar.

If the pressure drop exceeds 50 mbar at start-up, it should be replaced with a new element. With many types of equipment, the maximum pressure drop allowed will be dictated by the ability of the equipment to perform to its rated capacity. Under all circumstances, the operator should avoid exceeding the manufacturer's recommended maximum pressure drop for their specific equipment.



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