

# Extreme Duty Vacuum Filters

## SpinMeister™ ST Series 2" - 6"

### Overview

Centrifugal force from intake air causes particulate to separate from air stream, forcing it to the outer cover perimeter and out through the discharge port. The SpinMeister™ Precleaner eliminates large objects from entering air stream. The air stream then enters the particulate filter (optional) and is filtered by a 99+% efficient pleated element.

### Features

- Extreme duty filtration for high dust environments
- Excellent removal for short fibers
- Significantly increases life of filter element
- SpinMeister™ Precleaner 85+% efficiency standard to 15 microns
  - Durable molded fiber filled composite material
  - Pressure drop reduced compared to typical precleaners
- Bucket made from shatter resistant polycarbonate
- Large dirt holding capacity
- Clip release band for easy maintenance

### Technical Specifications

- Vacuum Rating: coarse vacuum service\*
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

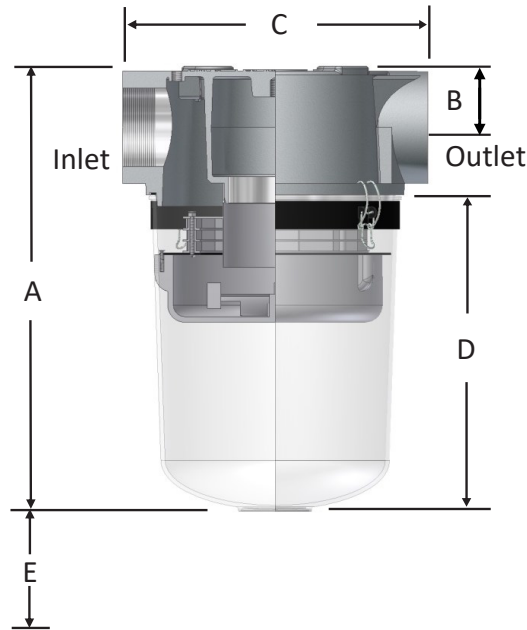
### Options

- SpinMeisters™ available in polished aluminum
- Various media
- Spool piece extender (select models)
- Pressure drop gauge
- Carbon steel bucket versions
- Taps for gauges and mounting brackets



Rev: ST SM-EU0819K

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BSPP Inlet & Outlet	m <sup>3</sup> /hr Rating Range w/ SpinMeister	w/ Element	Assembly Part Number	Dimensions - mm				Suggested Service Ht. E	Replacement Element Part No.		Optional Secondary Filters	
				A	B	C	D		Polyester	Paper	Polyester	Paper
2"	68-188	298	ST-SML235-201C	413	362	229	315	228	851/1	850/1	ST-851/1-201C	ST-850/1-201C
2 1/2"	68-188	357	ST-SML235-251C	413	362	229	315	228	851/1	850/1	ST-851/1-251C	ST-850/1-251C
3"	170-340	510	ST-SML345-301C	502	432	343	356	228	235P	234P	ST-235P-301C	ST-234P-301C
3"	340-765	510	ST-SML445-301C	502	432	343	356	228	235P	234P	ST-235P-301C	ST-234P-301C
4"	170-340	884	ST-SML345-401C	502	432	343	356	228	235P	234P	ST-235P-401C	ST-234P-401C
4"	340-765	884	ST-SML445-401C	502	432	343	356	228	235P	234P	ST-235P-401C	ST-234P-401C
6"	765-1530	1870	CTD-SM6-601C <sup>++</sup>	645	546	483	432	254	275P	274P	CT-275P-601C <sup>+</sup>	CT-274P-601C <sup>+</sup>

<sup>+</sup>Denotes housings with carbon steel buckets. <sup>++</sup>Denotes housings with carbon steel extended buckets & swing bolt fasteners.

Larger systems available.

\*See Vacuum Filter Technical Data section for sizing guidelines and service data.



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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 Vacuum Filters

### Applications & Equipment

- Industrial & Severe Duty
- Vacuum Pumps & Systems: Roots, Rotary Vane, Screw, Piston
- Vacuum Packaging Equipment
- Vacuum Furnace
- Blowers: Side Channel & P.D.
- Vacuum Lifters
- Intake Suction Filters
- Food Industry
- Woodworking/Routers
- Ash Handling
- Printing Industry
- Medical/Hospital
- Remote Installations for Piston & Screw Compressors
- Paper Processing
- Waste Water Aeration
- Cement Processing
- Bag House Systems
- Vacuum Vent Breathers
- Chemical Processing
- Factory Automation Equipment
- Leak Detection Systems

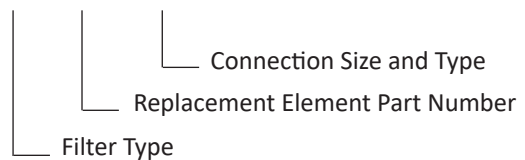
### Identification

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 a “CSL” design filter with a “235” element, “P” prefilter and DN100 flange connection size.

#### CSL-235P-DN100



### Vacuum Service Rating Chart

Threaded vacuum filter connections must be free of defect and properly sealed to achieve deeper vacuum levels. Vacuum service levels are given for reference only and serve as a guideline for product selection. Product certification and alternative designs are available for applications requiring deeper vacuum levels and specific leak rates. Please contact factory for details.

Vacuum Level	Pressure (mbar)	Pressure (Torr)	Pressure (Pa)
Atmospheric Pressure	1013	760	1.013x10 <sup>5</sup>
Coarse Vacuum	1013 to 33	760 to 25	1x10 <sup>5</sup> to 3x10 <sup>3</sup>
Medium Vacuum	33 to 1.3x10 <sup>-3</sup>	25 to 1x10 <sup>-3</sup>	3x10 <sup>3</sup> to 1x10 <sup>-1</sup>
High Vacuum	1.3x10 <sup>-3</sup> to 1.3x10 <sup>-9</sup>	1x10 <sup>-3</sup> to 1x10 <sup>-9</sup>	1x10 <sup>-1</sup> to 1x10 <sup>-7</sup>

Rev: InletVacTech-EU0719K

# Inlet Vacuum Filters

## 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<sup>3</sup>/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<sup>3</sup>/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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