

# 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
- Sterilization
- 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
- Semiconductor / Solar

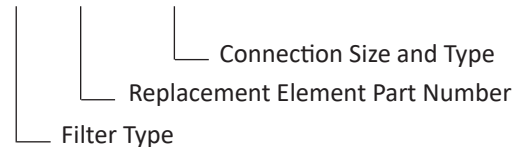
### Identification

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 4” flange connection size.

#### CSL-235P-400F



### 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>
Rough 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: US0621K

## Choosing the Best Filter for Your Equipment

A. When the connection & airflow is known:

1. Select the appropriate connection style. (i.e.: MPT, Flange, NPSC etc.)

a. Verify assembly SCFM (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 SCFM (flow) rating.)

b. Verify that the 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 15-20” H<sub>2</sub>O 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 15” H<sub>2</sub>O.

If the pressure drop exceeds 20” H<sub>2</sub>O 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.

Rev: US0621K



# Inline Straight Through Vacuum Filters

## CT Series 1" - 6"

### Features

- Compact design for space restrictions; min. service area
- Inlet above element for extended element life & maintenance intervals
- Corrosive resistant cast aluminum top with machined connections and integrated baffle design
- T-style design minimizes piping requirements
- Black powder coat carbon steel drop down bucket

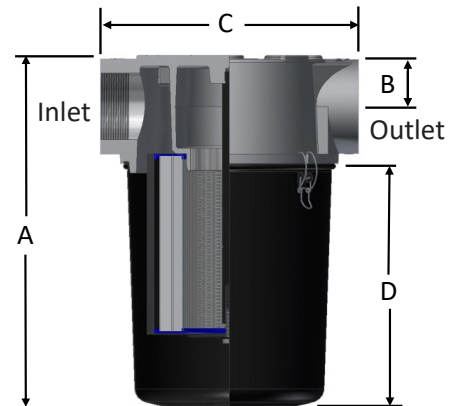
### Technical Specifications

- Vacuum Rating: medium vacuum service\*
- Temp (continuous): min -15°F (-26°C) max 220°F (104°C)
- Filter change out differential: 15-20" H<sub>2</sub>O over initial ΔP
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

### Options



- Swing bolts for heavy duty environments
- Drain ports
- Extended capacity (select models)
- Various nonstandard finishes
- Reverse pulse configuration
- See-through bucket (select models)
- Taps for gauges and mounting brackets



Inlet/Outlet Size	Inlet/Outlet Type	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches				Suggested Service ht. inches	Approx. Weight lbs.	Replacement Element Part No.		Element SCFM Rating
			Polyester	Paper	A	B	C	D			Polyester	Paper	
1"	NPSC	40	CT-897-100C	CT-896-100C	13 1/8	1 1/2	7	10 1/8	9	12	897	896	80
1 1/4"	NPSC	60	CT-897-125C	CT-896-125C	13 1/8	1 1/2	7	10 1/8	9	12	897	896	80
1 1/2"	NPSC	80	CT-897-150C	CT-896-150C	13 1/8	1 1/2	7	10 1/8	9	11	897	896	80
2"	NPSC	175	CT-851-200C	CT-850-200C	12 13/16	2	9	9	9	16	851	850	290
2 1/2"	FPT	210	CT-851-250C	CT-850-250C	12 13/16	2	9	9	9	15	851	850	290
3"	FPT	300	CT-235P-300C	CT-234P-300C	18 3/8	2 3/4	13 1/2	13	9	30	235P™	234P™	570
4"	FPT	520	CT-235P-400C	CT-234P-400C	18 3/8	2 3/4	13 1/2	13	9	26	235P™	234P™	570
6"	FPT	1100	CT-275P-600C	CT-274P-600C	18 1/4	3 3/8	19	9 13/16	10	45	275P™	274P™	1100

Note: CT 2" & 2 1/2" models: element seals on the base of the housing.

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

Rev: US0621K

[www.solbergmfg.com](http://www.solbergmfg.com)

All model offerings and design parameters are subject to change without prior notice.  
Contact your representative or visit [www.solbergmfg.com](http://www.solbergmfg.com) for the most current information.

# Inline See-Through Vacuum Filters

## ST Series 1" - 4"

### Overview

Solberg's ST Series is designed to offer exceptional performance across a broad range of vacuum applications. The transparent housing offers users the ability to inspect filter elements without disassembling the unit. Ideal for rough-medium vacuum service, this compact design offers a smaller service footprint, allowing for easy access and quick maintenance in tight spaces. Multiple filter element media options offer superior protection and longevity for the vacuum system.



### Features

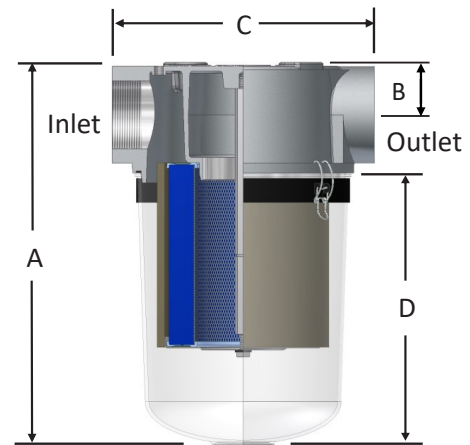
- Easy maintenance due to see-through bucket
- Compact design for space restrictions; min. service area
- Inlet above element for extended element life & maintenance intervals
- Corrosive resistant cast aluminum top with machined connections and integrated baffle design
- T-style design minimizes piping requirements
- Shatter-resistant polycarbonate drop down bucket

### Technical Specifications

- Vacuum Rating: medium vacuum service\*
- Temp (continuous): min -15°F (-26°C) max 220°F (104°C)
- Filter change out differential: 15-20" H<sub>2</sub>O over initial ΔP
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

### Options

- Swing bolts for heavy duty environments
- Drain ports
- Extended capacity (select models)
- Reverse pulse configuration
- Taps for gauges and mounting brackets



Inlet/Outlet Size	Inlet/Outlet Type	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches				Suggested Service Ht. inches	Approx. Weight lbs	Replacement Element Part No.		Element SCFM Rating
			Polyester	Paper	A	B	C	D			Polyester	Paper	
1"	NPSC	40	ST-897-100C	ST-896-100C	13 3/8	1 1/2	7	10 3/8	9	11	897	896	80
1 1/4"	NPSC	60	ST-897-125C	ST-896-125C	13 3/8	1 1/2	7	10 3/8	9	11	897	896	80
1 1/2"	NPSC	80	ST-897-150C	ST-896-150C	13 3/8	1 1/2	7	10 3/8	9	10	897	896	80
2"	NPSC	175	ST-851/1-200C	ST-850/1-200C	16 1/4	2	9	12 7/16	9	15	851/1	850/1	290
2 1/2"	FPT	210	ST-851/1-250C	ST-850/1-250C	16 1/4	2	9	12 7/16	9	14	851/1	850/1	290
3"	FPT	300	ST-235P-300C	ST-234P-300C	19 3/4	2 11/16	13 1/2	14	9	29	235P™	234P™	570
4"	FPT	520	ST-235P-400C	ST-234P-400C	19 3/4	2 11/16	13 1/2	14	9	25	235P™	234P™	570

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

Rev: US0621K