

## Inlet Filter Silencers, Silencers

### 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

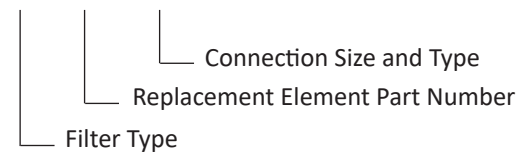
### Identification

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

- Assembly Model #
- Replacement Element #

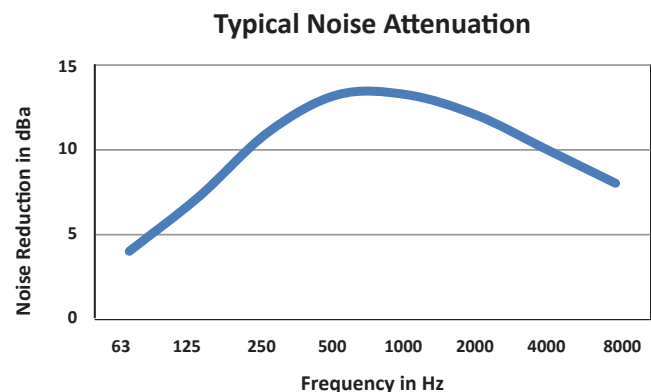
The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being an “FS” design filter with a “275™” element, “P” prefilter and 3” MPT connection size.

### FS-275P-300



### Typical Noise Attenuation

See chart for typical noise attenuation for filter silencers. It may vary due to the wide range of applications, installations, and machines.



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## 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.

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# Stamped Steel Filter Silencers

## FS Series 1/4" - 1"

### Features

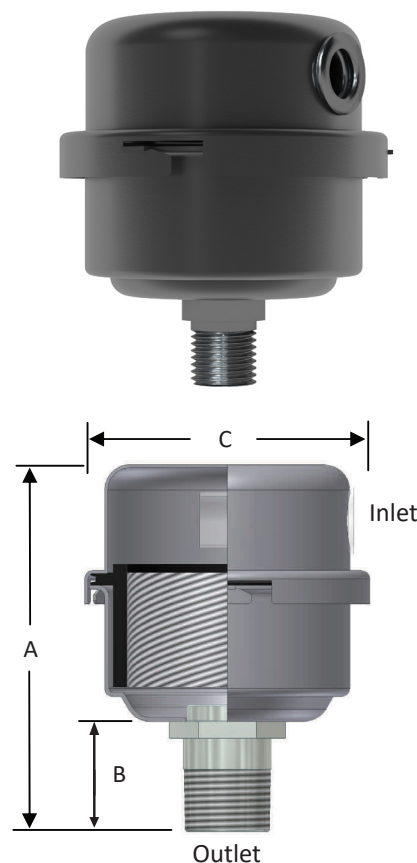
- High grade filter element with integrated gasket seal
- Fully drawn weatherhood
- Tubular silencing design: tube maximizes attenuation and air flow while minimizing pressure drop
- Corrosive resistant black powder coat carbon steel
- Ability to mount vertically and horizontally

### Technical Specifications

- 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 10 micron
- Paper: 99%+ removal efficiency standard to 2 micron
- Pressure drop graphs available upon request

### Options

- Various media for different environments
- Straight through configuration
- Various nonstandard finishes and connection styles



MPT Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			Suggested Service Ht. inches	No. of Silencing Tubes	Approx. Weight lbs	Replacement Element Part No.		Element SCFM Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
1/4"	4	FS-05-025	FS-04-025	2 3/4	1 1/16	2 1/2	1	1	0.25	05™	04™	8
3/8"	8	FS-05-038	FS-04-038	2 3/4	1 1/16	2 1/2	1	1	0.25	05™	04™	8
3/8"	8	FS-07-038	FS-06-038	3 9/16	1 1/16	3 1/4	2	1	0.50	07™	06™	12
1/2"	8	FS-05-050	FS-04-050	3	7/8	2 1/2	1	1	0.25	05™	04™	8
1/2"	12	FS-07-050	FS-06-050	3 3/4	7/8	3 1/4	2	1	0.50	07™	06™	12
1/2"	12	FS-11-050	FS-10-050	4 3/16	7/8	4 1/4	2	1	1	11™	10™	35
3/4"	12	FS-07-075	FS-06-075	4 1/8	1 1/4	3 1/4	2	1	0.50	07™	06™	12
3/4"	25	FS-11-075	FS-10-075	4 1/2	1 1/4	4 3/16	2	1	1	11™	10™	35
1"	35	FS-11-100	FS-10-100	4 1/2	1 1/4	4 3/16	2	1	1	11™	10™	35

See Filter Silencer Technical Data for sizing guidelines.

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# Stamped Steel Filter Silencers

## FS Series 1/2" - 6"

### Features

- Fully drawn weatherhood
- Tubular silencing design - tubes are positioned to maximize attenuation and air flow while minimizing pressure drop
- Corrosive resistant gray powder coat carbon steel

### Technical Specifications

- 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
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

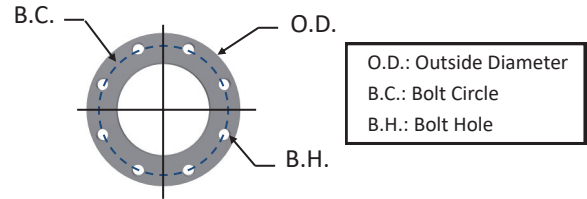
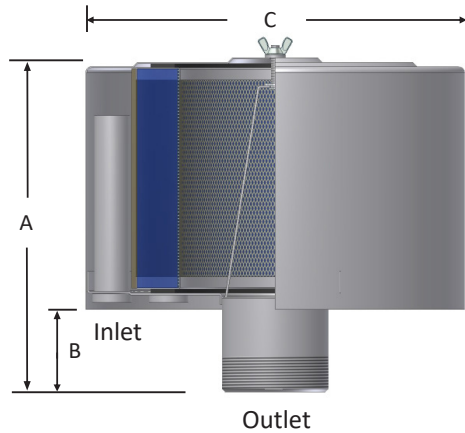
### Options



- Tap holes available
- Pressure drop indicator
- Various media for different environments
- Stainless steel construction
- Various nonstandard finishes and connection styles
- Side Access Silencer Filters (LQB Series) for space restricted enclosures (select models)



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

125/150# Pattern Flange	Dimensions - inches			No. of Holes	Flange Thickness inches
	O.D.	B.C.	B.H.		
4"	9	7 1/2	3/4	8	0.5
5"	10	8 1/2	7/8	8	0.5
6"	11	9 1/2	7/8	8	0.5

MPT Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			Suggested Service ht. inches	No. of Silencing Tubes	Approx. Weight lbs.	Replacement Element Part No.		Element SCFM Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
1/2"	10	FS-15-050	FS-14-050	3 7/16	1	6	3	1	2	15™	14™	35
3/4"	25	FS-15-075	FS-14-075	4	1 1/4	6	3	2	2	15™	14™	35
1"	35	FS-15-100	FS-14-100	3 3/4	1 5/16	6	3	3	2	15™	14™	35
1"	55	FS-19P-100	FS-18P-100	6 3/8	1 1/4	6	5	3	3	19P®	18P™	100
1 1/4"	70	FS-19P-125	FS-18P-125	6 3/4	1 5/8	6	5	5	3	19P®	18P™	100
1 1/2"	85	FS-19P-150	FS-18P-150	6 3/4	1 5/8	6	5	5	4	19P®	18P™	100
2"	135	FS-31P-200	FS-30P-200	7 1/2	2 1/4	10	5	5	8	31P™	30P™	195
2"	135	FS-231P-200	FS-230P-200	12	2 3/8	10	10	5	14	231P™	230P™	300
2 1/2"	195	FS-31P-250	FS-30P-250	7 1/2	2 1/2	10	5	5	8	31P™	30P™	195
2 1/2"	195	FS-231P-250	FS-230P-250	12 3/8	2 3/8	10	10	9	15	231P™	230P™	300
3"	300	FS-231P-300	FS-230P-300	12 3/4	3 3/8	10 1/4	10	9	15	231P™	230P™	300
3"	300	FS(12)-235P-300	FS(12)-234P-300	12 7/8	2 11/16	12 1/4	10	3	29	235P™	234P™	570
3"	300	FS-275P-300	FS-274P-300	13	3	16	10	9	33	275P™	274P™	1100
4"	520	FS(12)-235P-400	FS(12)-234P-400	13 7/8	3 11/16	12 1/4	10	6	29	235P™	234P™	570
4"	520	FS-275P-400	FS-274P-400	14	4	16	10	9	34	275P™	274P™	1100
5"	800	FS-245P-500	FS-244P-500	14	4	16	10	14	33	245P™	244P™	880
5"	800	FS-275P-500	FS-274P-500	14	4	16	10	14	36	275P™	274P™	1100
6"	1100	FS-275P-600	FS-274P-600	15	5 1/8	16	10	18	38	275P™	274P™	1100

Flange Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			Suggested Service ht. inches	No. of Silencing Tubes	Approx. Weight lbs.	Replacement Element Part No.		Element SCFM Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
4"	520	FS(12)-235P-400F	FS(12)-234P-400F	13 7/8	3 11/16	12 1/4	10	6	32	235P™	234P™	570
4"	520	FS-275P-400F	FS-274P-400F	14	4	16	10	9	39	275P™	274P™	1100
5"	800	FS-245P-500F	FS-244P-500F	14	4	16	10	14	38	245P™	244P™	880
5"	800	FS-275P-500F	FS-274P-500F	14	4	16	10	14	41	275P™	274P™	1100
6"	1100	FS-275P-600F	FS-274P-600F	15	5 1/8	16	10	18	42	275P™	274P™	1100

See Filter Silencer Technical Data for sizing guidelines.

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# Big Boy Filter Silencers

## FS Series 6" - 24"

### Features

- Tubular silencing design - tubes are positioned to maximize attenuation and air flow while minimizing pressure drop
- Corrosive resistant gray powder coat carbon steel
- Low pressure drop center bracket & outlet pipe design

### Technical Specifications

- 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
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

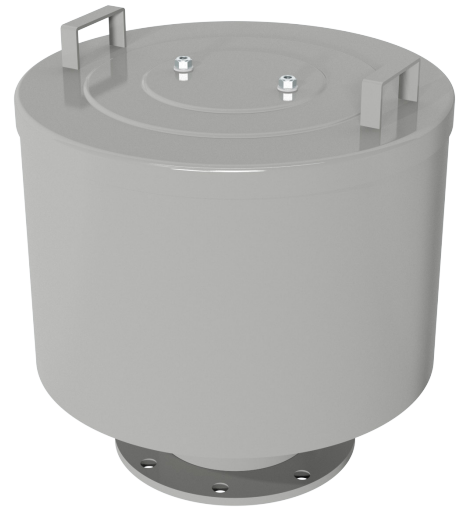
### Options



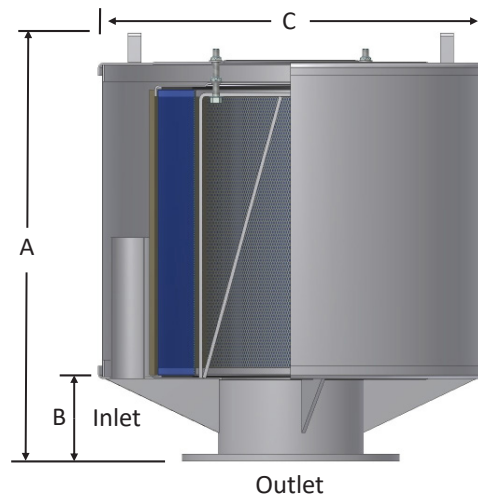
- Tap holes available
- Pressure drop indicator
- Various media for different environments
- Stainless steel construction
- Various nonstandard finishes and connection styles
- Side Access Silencer Filters (LQB Series) for space restricted enclosures (select models)

### Sumo Class Features

- Single barrel filter design allows for large airflows in space restricted work areas
- 16" to 24" flange connections available
- Designed for airflows up to 8000 SCFM



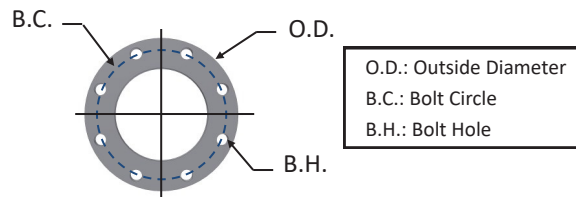
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Flange Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			Suggested Service ht. inches	No. of Silencing Tubes	Approx. Weight lbs	Replacement Element Part No.		Element SCFM Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
6"	1100	FS-377P-600F	FS-376P-600F	22 1/16	5 1/4	21 7/8	15	6	95	377P™	376P™	1825
8"	1800	FS-377P-800F	FS-376P-800F	23 1/2	6	21 7/8	15	12	105	377P™	376P™	1825
8"	1800	FS-385P-800F	FS-384P-800F	24	6	28 5/16	15	12	125	385P™	384P™	3295
10"	3300	FS-385P-1000F	FS-384P-1000F	23 1/2	6	28 5/16	15	16	130	385P™	384P™	3295
10"	3300	FS-485P-1000F	FS-484P-1000F	31 1/2	6	28 5/16	22	16	143	485P™	484P™	4705
12"	4700	FS-485P-1200F	FS-484P-1200F	31 1/2	6	28 5/16	22	24	155	485P™	484P™	4705
12"	4700	FS-685P-1200F	FS-384P(2)-1200F	38 1/2	6	28 5/16	29	24	175	685P™	384P™(2)	6600
14"	6000	FS-485P(2)-1400F	FS-484P(2)-1400F	53 5/16	6	28 5/16	22	18	245	485P™(2)	484P™(2)	9410

Flange Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			Suggested Service ht. inches	Replacement Element Part No.	
		Polyester	Paper	A	B	C		Polyester	Paper
18"	5500	FS-391-1800F	FS-390-1800F	23 1/2	6	44	15	391	390
18"	8000	FS-491-1800F	FS-490-1800F	30 1/2	6	44	22	491	490
20"	8000	FS-491-2000F	FS-490-2000F	30 1/2	6	44	22	491	490
24"	8000	FS-491-2400F	FS-490-2400F	30 1/2	6	44	22	491	490

125/150# Pattern Flange	Dimensions - inches			No. of Holes	Flange Thickness inches
	O.D.	B.C.	B.H.		
6"	11	9 1/2	7/8	8	0.5
8"	13 1/2	11 3/4	7/8	8	0.5
10"	16	14 1/4	1	12	0.5
12"	19	17	1	12	0.5
14"	21	18 3/4	1 1/8	12	0.5
18"	25	22 3/4	1 1/4	16	0.5
20"	27 1/2	25	1 1/4	20	0.5
24"	32	29 1/2	1 3/8	20	1.18



See Filter Silencer Technical Data for sizing guidelines.

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