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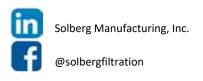




# We partner with our customers, colleagues, and suppliers to help them innovate and discover new possibilities.



#### Connect with us!



#### **Filtration Experts**

Selecting and sizing application-appropriate filtration and separation is an art, as much as it is a science. With more than 50 years of experience in designing, developing, and manufacturing application-specific solutions, the name Solberg represents filtration expertise when it comes to protecting vacuum pumps, blowers, compressors and other types of equipment.

The concept of filtration and separation is quite simple: remove any contaminant from an air or gas flow before the contaminant can enter a piece of equipment. However, contaminant removal becomes extremely complex when multiple process variables exist. Working with filtration experts in the early stages of design and specification will save money and prevent countless hours of frustration for engineers and operators. Not only will the proper filtration and separation solution help users save on maintenance costs and energy consumption, it can help improve worker safety and morale with consistent process up-time and higher quality outputs. Enlist Solberg early.

## **Serious About Sustainability**

Since ourbeginnings, we havebeen mindful of our Corporate Social Responsibility (CSR). From manufacturing processes to vendor and customer relationships, we continually examine our methods to ensure the well-being of our people and reduce our environmental impact.



We integrate comprehensive and transparent social and environmental performance standards throughout all areas of our business to guarantee that CSR remains rooted in our business culture. We are active in elevating our



environmental commitment, from installing rooftop solar arrays on our buildings, to adhering to LEED guidelines in our work environments. We are a certified B Corporation and strive to further our environmental efforts. We strive to bring positive, responsible change across our 7 P's: People, Planet, Product, Property, Power, Prosperity, and Philanthropy.









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# Solberg Locations

#### **Global Partner**

Our desiretopartner with customers has led us to expand our global operations. With facilities in North America, South America, Europe, Asia, and Australia, and sales to over 50 countries, customers have access to our products and services from practically anywhere in the world. Our culturally respectful business practices, diverse application experience, and intercontinental project collaboration help us ensure that the right solutions are delivered around the world.



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Around the world, we engineer, manufacture, and deliver solutions for the equipment that powers our lives. From compressors to turbines, vacuum pumps to reciprocating engines, Solberg's filtration, silencing and separation products can be found on the most challenging applications.

For more than 50 years, we have embraced the ideal of industrial growth while advocating environmental responsibility. We are committed to providing products and systems that protect mission critical machinery, while safeguarding the surrounding environment. We believe that these worldwide commitments help better our communities, encourage the achievements of our employees, and help our customers succeed.



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# Standard Products

## Inlet Filtration / Silencing

Solbergsolutions are criticalto improving the lifecycle and performance of machinery. We engineer and manufacture filtration, separation, and silencing solutions. Our products protect a wide range of equipment including compressors, blowers, vacuum pumps, engines, fuel cells, and turbines.

Our compact configurations reduce the overall footprint without sacrificing performance, and all of our inlet filtration and separation products are engineered to offer high levels of protection from particulate and other contaminants in harsh operating environments.

#### rePlacement Filter elements

#### **Various Media Options:**

Standard Polyester & Paper
Small Vacuum Pump Elements
Blower Elements / Special Sizes
Hockey Puck
Oil Mist Coalescing





#### vacuum Process Filtration & seParation

Particulate Removal

**Liquid Separation** 

**Vapour Condensing** 

## inlet Filters / Filter silencers



# Vacuum Pump Discharge & Air/Oil Separation

Our air/oil separation productsfor vacuum pumps, compressors, gear boxes, and lubrication consoles capture oil mist emissions and protect surrounding environments. The collected oil can be recycled back to the equipment to reduce oil consumption and associated maintenance costs. Our products are well-suited for breather applications and are used on a full range of pump technologies including rotary vane, rotary screw, liquid ring, rotary piston, and scroll.



# Custom Solutions & Pressure Rated Vessels

## **Custom & Configured Solutions**

Formost applications, there are two choices when it comes to installing an industrial air filtration system: standard or custom. Both types of systems can be equally effective when utilized correctly. However, there are instances where a custom filtration solution will provide the highest protection levels for your equipment.

For more challenging projects where operating conditions are exceptionally harsh, or size and space constraints

exist, our team of filtration and separation experts will develop custom designs to meet the most demanding application requirements. Our field experience, commitment to innovation, and customer focus ensures world-class solutions to meet the evolving demands of today's marketplace. From ASME and PED code vessels for pressure and vacuum service, to reverse pulse systems with programmable electrical control box options, Solberg has the expertise to provide the right solutions for your applications.

## **Unique Applications**

Medical/Hospital/ Pharmaceutical
Food/Beverage Industry
Pneumatic Conveying
Power Generation
Natural/Methane Gas, Water or Oil Separators
High Pressure Filter Vessels (+15 PSIg)
Metallurgy and Steel Degassing

# **Available Certifications/Standards**

PED 2014/68/EU
ASME, VIII, IX, U-STAMP, B31.1, B31.3
CRN registration
AWS D1.1, D1.2, D1.3
Non-Destructive Examination: RT, UT, PT
Positive Material Identification

#### Add-Ons & Accessories

PI/PT and PDI/PDT
Custom electrical controls
PLC and HMI interfaces
Automation with I/O
Existing control integration





# Your Partner for Explosion Protection

#### Safety in Filtration

Explosions may occur within applications such as pharmaceutical, chemicals, metal, food, plastics, coal and wood working industries. Solberg was one of the first filtration companies qualified to service these industries in compliance with the ATEX directive 2014/34/EU (ATEX 114). This is a European Union code that seeks to minimize the possibility of explosions related to equipment used in potentially explosive gaseous or dusty environments.

Solberg is registered by the TUV Rheinland Group under Ref-N 968/Ex-Ab 557/04. Solberg's registration allows the design, manufacture and marking of inlet filter silencers, inlet filters, inlet vacuum filters, integrated liquid separators/vacuum filters and air/oil separation filters for non-mining applications. ATEX certified products undergo a strict testing regime and documentation is available upon request.

Most products are suitable for deployment in Group II Category 2 Gas Zones 1,2 and Group II Category 2 Dust Zones 21, 22, and will be marked in accordance with the directive and the norm 80079-36 as follows:

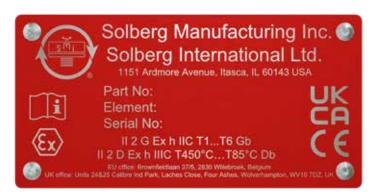
For gas: II 2 G Ex h IIB T1...T6 Gb

For dust: II 2 D Ex h IIIB T450°C...T85°C Db

(IIC and IIIC marking available on request after review of the application.)



#### **ATEX Marking & Nameplate**



#### **Filter Types** (Available on select models and sizes)

- Replacement Filter Elements for ATEX assemblies
- Filter Silencers
- Filter Assemblies
- Inlet Vacuum Filters
- Air/Oil Separators

Look for the "ATEX Available" logo in the catalog or contact Solberg at www.solbergmfg.com







# **Power Generation**

# **Oil Mist Eliminators**

#### **Overview**

Wedesign and manufacture high efficiency oil mist removal systems to capture oil mist and particulate emissions from turbo machinery and engines. Our high performance replaceable coalescing elements offer long life.

Our systems optimize equipment performance, offer a safe and clean work environment, and reduce costly repairs & maintenance.

#### **Features**

- Eliminatesvisible emissions (99.97% efficient at 0.3 micron)
- High performance coalescing elements offer long life
- Flow ranges from 1 2500 m<sup>3</sup>/hr (3 1500 CFM)
- Vacuum level control valve for precise vacuum regulation
- ■Integrated vacuum relief valve for motor protection
- Motors for both standard EU and North American voltages
- Rugged carbon steel construction
- ■Industrial grade powder coat finish
- Pressure differential taps
- Drain port for oil recovery

#### **Options**

- Redundant equipment to ensure continuous operation
- ■Full automation: PLC and DCS compatible
- Stainless steel construction for harsh environments
- Custom coating and colors
- ■ASME Section VIII or PED pressure certifications
- Explosive environment options: ATEX, Class I Div. 1, etc.
- ■Motor listings: UL, CE, IEC, CSA, IEEE, KOSHA, etc.
- ■Motor accessories: heaters, starters, switches, VFD, etc.
- ■Skid mounted units for ease of transport & installation
- ■Service and maintenance platforms
- ■EAC certification



**SME Series** Standard offering



Engineered to order



# **Power Generation**

# **Crankcase Ventilation**

#### **Overview**

Solberg designs and manufactures high efficiency, open and closed Advanced Crankcase Ventilation Systems to capture hazardous oil mist and particulate emissions (blow-by). This blow-by is vented from the crankcase of reciprocating engines.

Our systems ensure environmental compliance, protect the engine's turbocharger, intercoolers and inlet air filters, while keeping the engine room free of oil mist. Our series come standard with industry-leading automated vacuum control technology to regulate crankcase pressure and prevent seal leakage.

#### **Features**

- ■Eliminatesvisible emissions (99%+ efficient at 0.3 um)
- High performance coalescing elements offer long life
- Flow ranges from 3 68 m<sup>3</sup>/hr (2 40 CFM) for single units
- ■Integrated vacuum control valve for precise vacuum regulation
- Diaphragm vacuum regulation valve design no springs, no manual vacuum adjustment required
- ■Standard vacuum setting of -2.5 mbar (1" W.C.)
- ■Universal mounting bracket
- ■Drain port for oil recovery

#### **Options**

- ■Installation kits Atmospheric
- ■bypass Insulation jackets
- ■Custom solutions
- Configurable vacuum settings



**ACV Series**Standard offering



Blower assisted configuration

Visit www.solbergmfg.com for more information on our complete line of Crankcase Ventilation and Oil Mist Elimination products.



#### Air FiltrationSelectionGuidelines

Achieving peak performance from a compressor, blower, vacuum pump, engine, or any other pneumatic rotating machinery requires consistent and clean air flow with minimal restriction. Filtration and separation technologies exist to provide this basic need. Choosing the appropriate filtration technology can help optimize the operating conditions within a given piece of equipment, even when the external conditions may be quite severe. A critical step in creating the optimum working conditions is correctly sizing the filter. Correctly sized filtration will deliver higher performance levels over a longer time period, resulting in reduced maintenance costs over the lifetime of the equipment.

The primary consideration in properly sizing a filter or separator is air velocity through both 1) an orifice or connection size, and 2) the filtration media based on flow rate and surface area.

Generally, the slower the air velocity through a media, the higher the filtration efficiency and the lower the pressure drop across the filter. A properly sized filter is essential for optimizing air system performance and needs to be an early-stage consideration when designing any system.

**#1:** Always begin the selection process by choosing the appropriate media and filter element size based on the following requirements: filtration level, flow, pressure drop, temperature, chemical compatibility, etc.

Note: Indicating an efficiency level with a specific micron requirement is essential to choosing the right media. Stating the need for a "1-micron filter" is insufficient, as the efficiency rating has not been specified. For most general duty industrial applications, a 5 micron filter with 99% filtration efficiency is adequate. Follow the suggested Air-to-Media ratios for the external environment conditions and filtration efficiency needs.

**#2:** Contaminant level and type can significantly impact filter life and equipment maintenance. As the filter stops the contaminants from entering the equipment, the filter element begins to load up with contaminant and the pressure differential steadily increases until a terminal pressure differential is reached. At this point, the filter element must be replaced. Solberg's published flow rates for elements take filter life into consideration and will provide a reasonable maintenance interval for most general duty industrial applications. For harsh operating conditions, it is recommended that a larger filter element be selected to offer longer filter life and extend maintenance intervals. **#3:** Once the appropriate media and

element size is selected, identify the appropriate housing for the

element. The inlet connection greatly influences the overall pressure drop of the inlet filter system. To minimize the restriction contributed by the filter housing, match the connection size to that of the equipment being protected or the pipe size in the application plumbing. It is acceptable to use larger connections, while connections smaller than the pipe size are to be avoided.

See www.solbergmfg.com or our literature for suggested flows.



#### VacuumPumpDischargeFilterSelection,Installation, and Operational Guidelines

Coalescing air/oil separation technology is highly effective at capturing oil mist from the exhaust of an oil sealed/lubricated vacuum pump and keeping surrounding work environments clean and safe. Each pump technology produces its own specific oil discharge characteristics and requires the appropriate housing and element configuration to optimize performance.

Critical factors that influence performance of a coalescing air/oil separator include quality of the oil, equipment type, oil type and viscosity, challenge rate, process gas characteristics, operating temperature, operating vacuum level, and maximum air flow rating of the pump. Because of these variables, it is always best to work with Solberg personnel when selecting and sizing a vacuum pump discharge filter. However, Solberg's standard product lines will perform well in most general duty applications. The following guidelines will help when selecting a standard product.

**#1:** Protect the pump with adequate inlet filtration. Contaminants such as particulates, water, and solvents can damage the pump internals and significantly reduce the effectiveness of the discharge filter.

**#2:** Identify the type of vacuum pump oil being used. Solberg's standard coalescing technology works well with most commercially available vacuum pump oils across a broad range of viscosities. Generally, maximum coalescing effectiveness is achieved with temperatures at the inlet of the filter: at or below 70°C (~160°F) for mineral oils, at or below 82°C (~180°F) for synthetics. For best results, consult with the factory and provide information on operating temperature and viscosity/grade of oil prior to making any filter selection.

**#3:** Determine the filter size based on the flow rating of the pump at atmospheric conditions, not the connection size. An undersized coalescing filter will cause increased back pressure and negatively affect pump performance. **#4:** To capture oil, the coalescing element must receive the oil challenge in an

#### aerosol form. If the oil

is in a vapour state, it will pass through the coalescing media. Generally, the coalescing technology will perform more effectively at lower operating temperatures. In many cases, adding distance between the pump and the filter will help to lower the air stream temperature and improve coalescing effectiveness.

**#5:** Install in external environments where temperatures will not fall below freezing or exceed 37°C (100°F). Creating distance between the pump and the exhaust filter is desirable, however, avoid installing long pipe runs and horizontal sections where condensed oil can accumulate. When possible, install a drip-leg to gather any excess oil within the piping.

**#6:** Drain the filter and drip-leg to ensure your vacuum system performs at optimal levels. If the system is not drained regularly, issues such as high back pressure and unsafe working conditions can occur.

Once as much information as possible has been obtained, send the data to Solberg for review, review our datasheets, or visit our website, **www.solbergmfg.com**.







# Vacuum Process Filtration & Separation

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Multistage Liquid Knockout Tank & Filter:	2-22
SLS/SRS Series	
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# **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**

StandardSolberg 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 Connection Size and Type Replacement Element Part Number

## Vacuum Service Rating Chart

Filter Type

Threadedvacuum filterconnections 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+5 to 3x10 <sup>3</sup>
Medium Vacuum	33 to 1.3x10-3	25 to 1x10-3	3x10+3 to 1x101
High Vacuum	1.3x10-3 to 1.3x10 <sup>9</sup>	1x10-3 to 1x10-9	1x10-1 to 1x10 <sup>7</sup>

#### **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.)
  - a. Verify assembly m3/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 m3/hr (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.

#### **Element Maintenance**

Solbergelements 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.





# Inline Right Angle Vacuum Filters

# **CSL Series 3/8 - 4"**

#### **Overview**

Solberg's CSLSeries is designed to protect equipment from contaminants carried over from a variety of industrial processes. Ideal for rough-medium vacuum service, the CSL can be utilized in systems where standard duty flanges and threaded connections are acceptable. Multiple filter element media options offer superior protection and longevity for the vacuum system.

#### **Benefits**

- ■Large holding capacity and easy field cleaning, especially when mounted horizontally or inverted
- Low pressure design

#### **Features**

- Seamless drawn housings
- O-ring seal
- Corrosive resistant black powder coat carbon steel
- ■Stainless steel torsion clips for durability

#### **Technical Specifications**

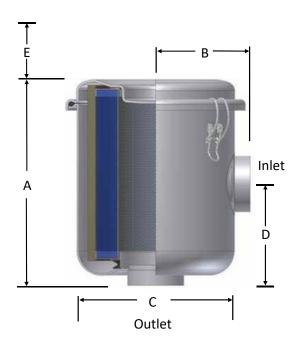
- ■VacuumRating: medium vacuum service\*
- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Polyester: 99%+ removal efficiency standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron



- ■Vacuum gauge
- Higher holding capacity configurations available (select models)
- ■Material/Finishes: stainless steel, epoxy coating
- ■Support brackets
- ■Alternative top-to-canister fastening system for low pressure or pulsating systems
- ■Stainless steel (select models)







Inlet/	/Outlet	Assembly m³/hr	Assembly P	art Number	ا	Dimensions - mm		Suggested Service ht.	Approx. Replacement Weight Element Part No.		ement	Element m³/hr	
Size	Туре	Rating	Polyester	Paper	Α	В	С	D	E E	(kg)	Polyester	Part No. Paper	Rating
3/8"	BSPP	31	CSL-825-039HCB	CSL-824-039HCB	90	54	95	46	76	0.40	825	824	43
1/2"	BSPP	31	CSL-825-051HCB	CSL-824-051HCB	93	57	95	49	76	0.40	825	824	43
1/2"	BSPP	34	CSL-843-051HCB	SL-842-051HCB	109	77	146	62	83	1.4	843	842	94
3/4"	BSPP	41	CSL-825-076HCB	CSL-824-076HCB	91	58	95	50	76	0.40	825	824	43
3/4"	BSPP	43	CSL-843-076HCB	CSL-842-076HCB	111	78	146	63	83	1.4	843	842	94
1" BS	PP	60	CSL-843-101HCB	CSL-842-101HCB	115	83	146	67	83	1.4	843	842	94
1" BS	PP	68	CSL-849-101HCB	CSL-848-101HCB	176	105	187	108	133	2.3	849	848	196
1 1/4	"BSPP	94	CSL-843-126HCB	CSL-842-126HCB	114	83	146	67	83	1.4	843	842	94
	"BSPP	102	CSL-849-126HCB	CSL-848-126HCB	171	105	187	108	133	2.3	849	848	196
1 1/2	"BSPP	136	CSL-849-151HCB	CSL-848-151HCB	170	105	187	109	133	2.3	849	848	196
2	" BSPP	298	CSL-851-201HCB	CSL-850-201HCB	258	114	222	127	235	6.8	851	850	493
2 1/2	"BSPP	357	CSL-851-251HCB	CSL-850-251HCB	271	130	222	140	235	6.8	851	850	493
3	" BSPP	510	CSL-239-301HCB		360	184	337	182	279	15	239™	238™	969
3	" BSPT	510	CSL-2541-301B CS		391	216	305	216	305	14	2541	2540	1360
4	" BSPT	880	CSL-2541-401B CS	L-2540-401B	416	242	337	241	305	15	2541	2540	1360



<sup>\*</sup>See Vacuum Filter Technical Data for Vacuum Service Data.



# Inline Right Angle Vacuum Filters

# CSLSeries3" - 6", DN80 - DN300

#### **Overview**

Solberg's CSL Series is designed to protect equipment from contaminants carried over from a variety of industrial processes. Ideal for rough-medium vacuum service, the CSL can be utilized in systems where standard duty flanges and threaded connections are acceptable. Multiple filter element media options offer superior protection and longevity for the vacuum system.

## Benefits

- Reduce piping costs with multiple mounting configurations (mount horizontal or inverted)
- ■Minimize equipment pressure-drop change with low pressuredrop filter design

#### **Features**

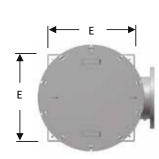
- Heavy duty T-bolts for easy maintenance
- Corrosive resistant black powder coat carbon steel
- O-ring stays in place with unique U-channel groove
- ■Inlet & outlet 1/4" gauge taps
- Lifting lugs
- ■Brackets for optional support legs
- ■Nameplate bracket

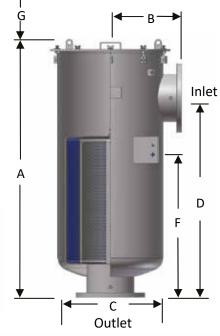
## **Technical Specifications**

- ■VacuumRating: medium vacuum service\*
- Filter change out differential: 37-50 mbar over initial ΔP
- Polyester: 99%+ removal efficiency standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron



- ■Straight-through configurations
- Specialty filter media
- Stainless steel
- ■Various nonstandard finishes and connection styles
- ISO flange
- ■PN6, PN16 flange patterns
- ■Flange faces and internal surfaces free of paint
- ■Mounting housing bands





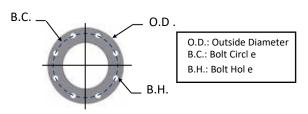


# **Flanged Assemblies**

Flange Inlet &	Assembly m3/hr	Assembly I		D	Dimensions - mm				Suggested Service ht.	Approx.	Replacement Element Part No.	Element m3/hr	
Outlet	Rating	Polyester	Paper	Α	В	С	D	E	F	G G	Weight (kg)	Polyester Paper	Rating
DN80	510 <b>CSL</b>	-235P-DN80 CSL-23	4P-DN80	695	229	355	470	300	312	305	28	235P™ 234P™	970
DN80	510 <b>CSL</b>	-335P-DN80 CSL-33	4P-DN80	695	229	355	470	300	312	432	29	335₽™ 334₽™	1360
DN100	885 <b>CSL</b>	-235P-DN100 CSL-2	34P-DN100	695	229	355	470	300	312	305	28	235P™ 234P™	970
DN100	885 <b>CSL</b>	-335P-DN100 CSL-3	34P-DN100	695	229	355	470	300	312	432	29	335P™ 334P™	1360
DN125	1360 <b>CS</b>	L-245P-DN125 CSL	244P-DN125	730	279	470	495	377	347	305	40	245P™ 244P™	1500
DN125	1360 <b>CS</b>	L-345P-DN125 CSL	344P-DN125	730	279	470	495	377	347	432	41	345P™ 344P™	1870
DN150	1870 <b>CS</b>	L-275P-DN150 CSL	274P-DN150	755	305	470	521	377	365	305	50	275P™ 27 <b>4</b> P™	1870
DN150	1870 <b>CS</b>	L-375P-DN150 CSL	374P-DN150	755	305	470	521	377	365	432	51	375₽™ 374₽™	2550
DN200	3060 <b>CS</b>	L-377P-DN200 CSL	376P-DN200	973	356	572	648	484	464	432	83	377₽™ 376₽™	3105
DN250	4930 <b>CS</b>	L-385P-DN250 CSL	384P-DN250	1156	406	686	864	560	598	432	115	385₽™ 384₽™	5610
DN300	7990 <b>CS</b>	L-485P-DN300 CSL	484P-DN300	1156	406	686	864	560	642	610	125	485P™ 484P™	8000
DN250	4930	CSL-685P-DN250	CSL-384P(2)-DN25	<b>1</b> 480	406	686	1143	560	820	787	171	685P™ 384P™(2)+	11220
DN300	8415	CSL-685P-DN300	CSL-384P(2)-DN30	<b>)</b> 480	406	686	1143	560	820	787	171	685P''' 384P'''(2)+	11220
DN300	8415 <b>CS</b>	L-485P(2)-DN300+	CSL-484P(2)-DN300	+1785	406	686	1448	560	547	610	209	485P'''(2)+ 484P'''(2)-	16000

<sup>+</sup>Denotes 2 elements stacked in housing.

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



All flanges are oriented "split center".

## **BSPT Assemblies**

BSPT	SPT Assembly Assembly Part Number		art Number		D	imensi	ons - m	n		Suggested Approx. Service ht. Weight		Replace Element F		Element
Outlet	Rating	Polyester	Paper	Α	В	С	D	Ε	F	G G	(kg)	Polyester	Paper	m3/hr Rating
3"	510	CSL-235P-301	CSL-234P-301	695	229	355	470	300	312	305	21	235P™	<sup>и</sup> 234P™	970
3"	510	CSL-335P-301	CSL-334P-301	695	229	355	470	300	312	432	23	335P™	″ 334P™	1360
4"	885	CSL-235P-401	CSL-234P-401	695	229	355	470	300	312	305	23	235P™	<sup>и</sup> 234Р™	970
4"	885	CSL-335P-401	CSL-334P-401	695	229	355	470	300	312	432	25	335P™	<sup>и</sup> 334Р™	1360
5"	13	60 <b>CSL-245P-50</b> 1	. CSL-244P-501	730	279	470	495	377	347	305	37	245P™	<sup>и</sup> 244Р™	1500
5"	13	60 <b>CSL-345P-50</b> 1	. CSL-344P-501	730	279	470	495	377	347	432	40	345P™	″ 344P™	1870
6"	18	70 <b>CSL-275P-60</b> 1	. CSL-274P-601	755	305	470	521	377	365	305	43	275P	⁴ 274P™	1870
6"	18	70 <b>CSL-375P-60</b> 1	. CSL-374P-601	755	305	470	521	377	365	432	44	375₽™	374P ™	2550

<sup>\*</sup>See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.





# Medium to High Vacuum Filtration

# WLSeriesISOFlangesNW16 - NW40,K63 - K100

#### **Overview**

Solberg'sWL Series Vacuum Filters are designed for a variety of industrial and semicon processes where rapid thermal and/ or pressure cycles create harsh operating conditions. Ideal for medium-high vacuum applications that utilize vacuum furnaces or deposition tools, the WL series comes standard with a variety of vacuum rated flange options and replaceable filter elements that offer superior protection and longevity for the vacuum system.

Housings in this series are 100% helium leak tested to ensure vacuum integrity and verify leak rates down to 1x10-5 mbar L/s.

#### **Features**

- ■Stainless steel ISO flange connections
- ■Seamless drawn housings
- Corrosive resistant carbon steel construction
- Powder coat finish (black models)
- O-ring housing seal
- Stainless steel torsion clips

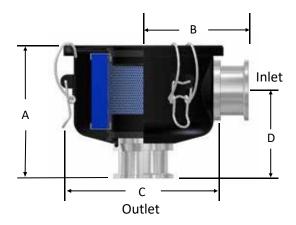
#### **Technical Specifications**

- ■Vacuum leak rate: 1x10-5 mbar L/sec (verified by helium leak test)
- ■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 standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron



- Filtermedia options available to meet strict process requirements: PTFE, PTFE Glass, SS mesh, and more
- ■Activated alumina, activated carbon, and zeolite available for foreline trapping and other applications
- ■Stainless steel (select models)
- **■**Contact factory for larger sizes





# SS ISO Flange w/Black Filter Assembly Finish

ISO Flg Inlet &	Assembly m3/hr	Assembly Pa	Assembly Part Number			ons - mm		Suggested Service ht.	Approx. Weight	Replace Element		Element m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	D	mm	(kg)	Polyester	Paper	Rating
NW16	39	WL-825-NW16	3 WL-824-NW16B	103	66	95	58	68	0.4	825	824	42
NW25	42	WL-825-NW25	3 WL-824-NW25B	103	66	95	58	68	0.4	825	824	42
NW25	59	WL-843-NW25	3 WL-842-NW25B	117	86	146	70	70	1	843	842	93
NW40	93	WL-843-NW40	3 WL-842-NW40B	126	96	146	80	70	1	843	842	93
NW40		136 <b>WL-849-NW40</b>	3 WL-848-NW40B	188	118	187	121	121	2	849	848	195
K63	357 <b>WL</b>	851-K63B	WL-850-K63B	296	155	222	165	222	7	851	850	493
K100	885 <b>WL</b>	239-K100B WL-238	-K100B	395	221	337	220	254	10	239™	238™	969

# SS ISO Flange w/Electroless Nickel Filter Assembly Finish

ISO Flg Inlet &	Assembly m3/hr	Assembly P	art Number		Dimensio	ons - mm		Suggested Service ht.	Approx. Weight	Replacer Element		Element m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	D	mm	(kg)	P <b>ølaypet</b> er		Rating
NW16	<b>VM</b> -825	NW16EN WL-824-	NW16EN	103	66	95	58	68	0.4	825	824	42
NW25	W2-825	NW25EN WL-824-	NW25EN	103	66	95	58	68	0.4	825	824	42
NW25	V <b>S</b> /9-843	NW25EN WL-842-	NW25EN	117	86	146	70	70	1	843	842	93
NW40	<b>VA/3.</b> -843	NW40EN WL-842-	NW40EN	126	96	146	80	70	1	843	842	93
NW40	136 WL	849-NW40EN WL-	348-NW40EN	188	118	187	121	121	2	849	848	195
K63	357 <b>WL</b> -	851-K63EN WL-85	)-K63EN	296	155	222	165	222	7	851	850	493
K100	885 <b>WL</b>	239-K100EN WL-2	8-K100EN	395	221	337	220	254	10	239™	238™	969

 $Rated\ flows\ are\ determined\ based\ upon\ atmospheric\ conditions,\ for\ exact\ sizing\ or\ larger\ flows,\ please\ contact\ factory.$ 



<sup>\*</sup>See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.



# Medium to High Vacuum Filtration

# WLSeriesISOFlangesK100 - K320

#### **Overview**

Solberg'sWL Series Vacuum Filters are designed for a variety of industrial and semicon processes where rapid thermal and/ or pressure cycles create harsh operating conditions. Ideal for medium-high vacuum applications that utilize vacuum furnaces or deposition tools, the WL series comes standard with a variety of vacuum rated flange options and replaceable filter elements that offer superior protection and longevity for the vacuum system.

Housings in this series are 100% helium leak tested to ensure vacuum integrity and verify leak rates down to 1x10-5 mbar L/s.

#### **Features**

- ■ISO-K stainless steel flanges standard
- K200 housings and larger have domed lid with hinge to minimize deflection
- ■NW10 differential ports for accurate vacuum ∆P readings
- ■Corrosive resistant black powder coat carbon steel
- ■Painted o-ring groove, free of scratches
- ■Lifting lugs and leg brackets standard

#### **Technical Specifications**

- ■Rated vacuumleak rate of 1x10-5 mbar L/sec or better (verified by helium leak test)
- 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 standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron

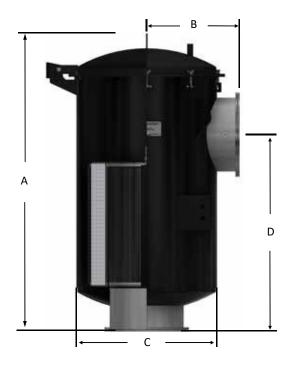




- ■Filtermedia options available to meet strict process requirements: PTFE, PTFE Glass, SS mesh, and more
- ■Activated alumina, activated carbon, and zeolite available for foreline trapping and other applications
- ■Stainless steel (select models)



K320 configuration



ISO-K Inlet &	Assembly m3/hr	Assembly I	Part Number		Dimensio	ons - mm		Suggested Service ht.	Replaceme Part	ent Element	m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	D	mm	Polyester	Paper	Rating
K100	V8/8.5235F	-K100 WL-234P-I	100	695	229	355	470	244	235P™	234P™	970
K100	V&/8.5335F	-K100 WL-334P-I	100	737	229	311	470	368	335P™	334P™	1360
K160	1870 <b>W</b> l	-275P-K160 WL-2	74P-K160	767	305	470	521	244	275P™	274P™	1870
K160	1870 <b>W</b> l	-375P-K160 WL-3	74P-K160	749	305	470	521	368	375₽™	374P™	2550
K200	3060 <b>W</b> L	-377P-K200 WL-3	76P-K200	1011	356	514	648	368	377₽™	376P™	3101
K250	4930 <b>W</b> Լ	-385P-K250 WL-3	84P-K250	1303	432	616	889	368	385P™	384P™	5610
K320	7935 <b>W</b> L	-485P-K320 WL-4	84P-K320	1308	406	686	864	546	485P™	484P™	8000
K320	8415 <b>WL</b>	-685P-K320 WL-3	84P(2)-K320	1613	432	686	1143	724	685P™	384P™(2)	11213

Rated flows are determined based upon atmospheric conditions, for exact sizing please contact factory. Special configurations available upon request.

# Other Flange Types Available:







# Inline Straight Through Vacuum Filters

# CTSeries1" - 6"

#### **Features**

- Compactdesign 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

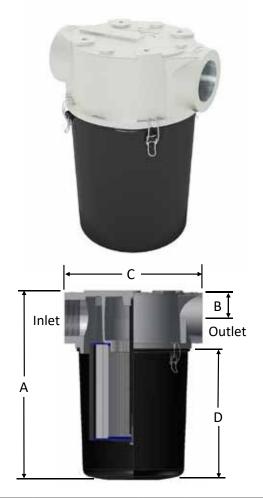
#### **Technical Specifications**

- ■VacuumRating: medium vacuum service\*
- 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 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/0	Outlet	Assembly m³/hr				Dimensio	ons- mm		Suggested Service ht.	Approx. Weight		ement Part No.	Element m³/hr
Size	Туре	Rating	Polyester	Paper	Α	В	С	D	mm	(kg)	Polyester		Rating
3/4"	BSPP	CT38451	076C CT-8450-0	76C	204	25	1 2	7 156	140	1.6	8451	8450	68
1"	BSPP	CT8897-1	01C CT-896-101	С	333	37	178	257	228	5.4	897	896	136
1	BSPP	102 <b>CT-8</b>	97-126C CT-896	-126C	333	37	178	257	228	5.2	897	896	136
1/4	RSPP	136 <b>CT-8</b>	97-151C CT-896	-151C	335	39	178	257	228	5.1	897	896	136
" <sub>2"</sub> 1	BSPP	298 <b>CT-8</b>	51-201C CT-850	-201C	324	50	229	228	228	7.2	851	850	493
<b>1</b> /2/2'	BSPP	357 <b>CT-8</b>	51-251C CT-850	-251C	324	50	229	228	228	6.8	851	850	493
"3"	BSPP	510 <b>CT-2</b>	35P-301C CT-23	4P-301C	473	69	343	328	228	14	235P™ 2	.34P™	968
4"	BSPP	884 <b>CT-2</b>	35P-401C CT-23	4P-401C	473	69	343	328	228	12	235P™ 2	.34P™	968
6"		1870 <b>CT</b> -	275P-601C CT-2	74P-601C	462	99	483	249	254	20	275P™ 2	74P™	1869

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

<sup>\*</sup>See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.



# Inline See-Through Vacuum Filters

# STSeries1" - 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

mediaoptions offer superior protection and longevity for the vacuum system.

#### **Features**

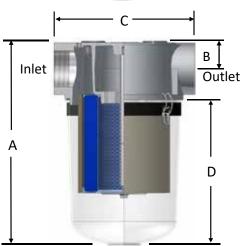
- ■Easy maintenance due to see-through bucket Compact design for space
- ■restrictions; min. service area Inlet above element for extended
- ■element life & maintenance intervals Corrosive resistant cast aluminum
- ■top with machined connections and integrated baffle design
- ■T-style design minimizes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

#### **Technical Specifications**

- ■VacuumRating: medium vacuum service\*
- ■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 standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron

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





Inlet/	Outlet	Assembly m³/hr	Assembly P	Assembly Part Number		Dimensions-mm				Approx. Weight	Replace Element	ement Part No	Element m³/hr
Size	Туре	Rating	Polyester	Paper	Α	В	С	D	Service ht. mm	(kg)	Polyester	Paper	Rating
3/4"	BSPP	43	ST-8451-076C S	T-8450-076C	213	25	127	165	140	1.4	8451	8450	68
₿Ŝ₽₽		68	ST-897-101C ST	896-101C	340 340	37	178	264	228	5.0	897	896	136
1 <sup>B</sup> §17/2	ì	102	ST-897-126C	ST-896-126C	342	37	178	264	228	4.7	897	896	136
1 1/2	ì	136	ST-897-151C	ST-896-151C	412	50	229	264	228	4.6	897	896	136
2"		298 <b>ST</b> -	851/1-201C ST-8	50/1-201C	412	50	229	315	228	7.2	851/1	850/1	493
21/2	ì	357	ST-851/1-251C	ST-850/1-251C	501	69	343	315	228	6.8	851/1	850/1	493
3" BSDD		510 <b>ST</b> -	235P-301C ST-23	4P-301C	501	69	343	357	228	13	235P™	234P™	968
4"		884 <b>ST</b> -	235P-401C ST-23	4P-401C				357	228	11	235P™	234P™	968

<sup>\*</sup>See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.



# **Extreme Duty Vacuum Filters**

# SpinMeister ® ST / CT Series 2" - 6"

#### **Overview**

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

#### **Features**

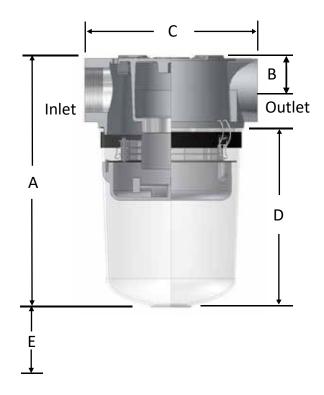
- ■Extreme duty filtration for high dust environments
- Excellent removal for short fibers
- ■Significantly increases life of filter element
- ■SpinMeister® Precleaner 85+% efficiency standard to 15 microns
  - -Durable molded fiber filled composite material
  - -Pressure drop reduced compared to typical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

## **Technical Specifications**

■Vacuum Rating: rough vacuum service\*

- SpinMeister® available in polished aluminum
- ■Various media
- ■Extended capacity (select models)
- Pressure drop gauge
- ■Carbon steel bucket versions
- ■Taps for gauges and mounting brackets





BSPP Inlet &	Range w/ w/		Assembly Part		Dimensio	ons - mn	n	Suggested Service ht.	Replac Element		Optional Secondary Filters		
Outlet			Number	Α	В	С	D	E	Polyester	Paper	Polyester	Paper	
2"	68-188	298	ST-SML235-201C	412	50	229	315	228	851/1	850/1 <b>S</b>	T-851/1-201C ST	-850/1-201C	
2 1/2"	68-188	357	ST-SML235-251C	412	50	229	315	228	851/1	850/1 <b>S</b>	T-851/1-251C ST	-850/1-251C	
3"	170-340	510	ST-SML345-301C	501	69	343	357	228	235P™ 2	34P™ <b>ST-2</b>	35P-301C ST-23	4P-301C	
3"	340-765	510	ST-SML445-301C	501	69	343	357	228	235P™ 2	34P™ <b>ST-2</b>	35P-301C ST-23	4P-301C	
4"	170-340	884	ST-SML345-401C	501	69	343	357	228	235P™ 2	34P™ <b>ST-2</b>	35P-401C ST-23	4P-401C	
4"	340-765	884	ST-SML445-401C	501	69	343	357	228	235P™ 2	34P™ <b>ST-2</b>	35P-401C ST-23	4P-401C	
6"	765-1530	1870	CTD-SM6-601C++	645	99	483	432	254	275P™ 2	74P™ <b>CT-2</b>	75P-601C+ CT-2	74P-601C+	

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

Larger systems available.



<sup>\*</sup>See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.



# Reverse Pulse Vacuum Filters

## RST Series 1" - 4"

#### **Overview**

Thereverse pulse RST Series incorporates split second bursts of pressurized air to create a powerful shock wave that cleans the filter element and extends its service life. Quick pulses cause particulate sitting on the element's pleated surface area to release and collect in the drop out area of the filter housing. Pulses can be repeated as required and can occur during a running process because the split second air bursts have minimal effect on the process pressure. (Optional pulse kit is available.)

## **Benefits**

- Superior level of filtration offers enhanced equipment protection (PTFE style elements)
- ■Extends the life of filter element, reducing overall cost
- See-through design allows for instant visual inspection

#### **Features**

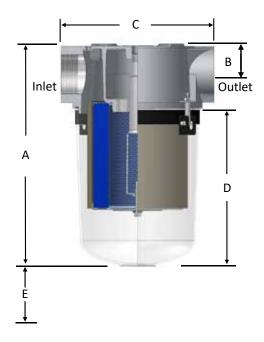
- See-through bucket made from shatter resistant polycarbonate material
- ■High tensile strength permits dimensional stability
- ■Integrated inlet baffle
- ■Tap on center of cast head for optional reverse pulse kit air pulse rod: 3/8" tap on 1" sizes, 3/4" tap on 2 4" sizes
- ■Sturdy hook clamps secure bucket to head

## **Technical Specifications**

- ■Vacuumrating: medium vacuum service
- ■PTFE media: 0.3 micron, 99.5% efficiency
- Temperature ratings:
  - -Complete assembly: max 104°C (220°F)
  - -See-through bucket only: max 125°C (257°F)



- Carbonsteel bucket (RCT)
- Extended bucket (RSTD)
- Alternate media
- ■Taps for gauges and mounting brackets



Inlet/	Outlet	Assembly m3/hr	Assembly Part Number PTFE		Dimensio	ons - mm		Suggested Service ht.	Approx. Weight	Replacement Element Part No.	Element m3/hr	
Size	Туре	Rating	Nulliber PTFE	Α	В	С	D	E E	(kg)	PTFE PTFE	Rating	
1"	BSPP	68	RST-TF897-101C	342	3 9	1 7	8 264	228	5.4	TF897	68	
1 1/4	, BSPP	68	RST-TF897-126C	342	39	178	264	228	5.4	TF897	68	
1 1/2		68	RST-TF897-151C	342	39	178	264	228	5.4	TF897	68	
2"	BSPP	112 <b>RST</b>	-TF851/1-201C	434	50	229	315	228	7.2	TF851/1	112	
2 1/2	, BSPP	112 <b>RST</b>	-TF851/1-251C	434	50	229	315	228	6.8	TF851/1	112	
3"	BSPP	261 <b>RST</b>	-TF235-301C	501	69	343	357	228	13	TF235	261	
4"		261 <b>RST</b>	-TF235-401C	501	69	343	357	228	11	TF235	261	

<sup>6&</sup>quot; option available upon request.

#### Reverse Pulse Kit Option

The reverse pulse kit assembly is designed to hold an appropriate volume of pressurized air close to the housing which improves the effectiveness of the pulse. The compact assembly includes an accumulator vessel and solenoid valve that can be easily mounted to the RST filter series.

#### **Kit Features**

- ■Typicalaccumulator capacity 5 liters
- Maximum working pressure of accumulator vessel: 6 barg\*
- EE marked vessel according to directive 2014/68/EU
- Solenoid valve: 24V DC, brass material with NBR seal

#### Kit Benefits

- Easilymountsto RST series housings
- **Compact** space saving design
- mproved pulse effectiveness

<sup>\*6</sup> barg rating only applies to accumulator tank. Internal housing pressure not to exceed 0,5 barg.





# **Medical Vacuum Bacterial Filters**

## HVSeries1" - 4"

#### **Overview**

Solberg's HV Series bacterial filters for medical vacuum service are designed to offer industry leading pressure drop performance and meet demanding filtration requirements in accordance with current European and US medical vacuum standards:

ISO 7396-1:2016 Medical gas pipeline systems — Part 1 Pipeline systems for compressed medical gases and vacuum

#### NFPA 99:2018 Health Care Facilities Code

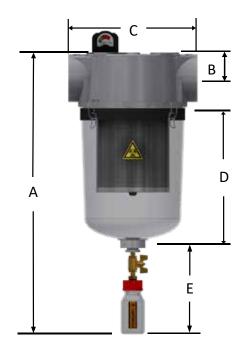
With its exclusive transparent design, pleated element construction, maximized element surface area, and minimal pressure drop, the HV Series offers an innovative, high quality, and long lasting solution that satisfies the strict requirements of the medical industry.

Third party verification ensures Solberg's elements meet ISO 45 H classification as defined in ISO 29463-1. The HV Series achieves greater than 99.995% total retention rate offering a very high level of protection in medical/hospital, dental, and laboratory applications.

# Benefits

- ■Minimizes microbial contamination of vacuum pump oil and surrounding environment
- Visual pressure differential indication allows for real time monitoring and maintenance checks of the filter
- Biohazard labels improve safety and awareness at facility
- ■Increased surface area and large collection area maximizes contaminant holding capacity
- Low pressure drop design for reduced energy consumption over time
- ■Corrosion resistant and heavy duty materials of construction offer high performance and extended service life
- solation valve allows for quick and easy change out of glass flask for sterilization or disposal
- ■Equipped with pressure differential gauge for visual indication to service filter
- ■Easily incorporated into the medical gas distribution system piping allowing for a CE marking according to the Medical Devices Directive 93/42/EC
- ■High efficiency elements tested and verified to meet EN1822-1 filter class H14 requirements
- Meets NFPA 99 requirements for vacuum filtration





BSPP Inlet/	Inlet/ Number (w/		Approx.	Dimensio	ons - mm		Suggested Service ht.	Approx. Weight	Replacement Element Part	Rarified Air Flow Rating At	Air Flow at Atmosphere: Free
Outlet	Gauge)	Α	В	С	D	E	mm	(kg)	No.	370 mbar(a)	Air Aspirated (FAA)
1"	HV-UL896-101C	572	37	178	282	235	214	7	UL896	186 m3/hr	68 Nm3/hr
1 1/4'	HV-UL896-126C	572	39	178	282	235	214	7	UL896	208 m3/hr	76 Nm3/hr
1 1/2'	HV-UL896-151C	572	39	178	282	235	214	7	UL896	208 m3/hr	76 Nm3/hr
_	HV-UL850/1-201C	648	50	229	332	235	222	9	UL850/1	600 m3/hr	219 Nm3/hr
2 1/2'	HV-UL850/1-251C	648	50	229	332	235	222	9	UL850/1	600 m3/hr	219 Nm3/hr
3"	HV-UL234/2G-301C	737	69	343	376	235	244	14	UL234/2G	964 m3/hr	352 Nm3/hr
4"	HV-UL234/2G-401C	737	69	343	376	235	244	14	UL234/2G	964 m3/hr	352 Nm3/hr

<sup>6&</sup>quot; option available upon request.

## **Technical Specifications**

- ■Operating pressure range:atmospheric to full vacuum
- ■Particulate removal > 99.995% efficiency
- Meets ISO 29463-1 requirements for ISO 45H class filtration
- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)
- Corrosive resistant aluminum cast head
- Shatter resistant polycarbonate collection area
- Glass drain flask for easy removal and sterilization

- Available with or without gauge (Standard HV part number includes gauge)
- For information on a unit without gauge, please contact the factory
- Taps for gauges and mounting brackets





## See-Through Liquid Separators

### STSSeries1" - 4"

#### **Overview**

Inletairwith potentially harmful liquid and large particulate enters the housing and is separated by a baffle mechanism and directional air flow changes. The larger particles and liquid drop down and collect at the bottom of the separator. The float capsule within the separator screen rises with the liquid level until max capacity and limits the flow, thereby protecting the pump from damage.

### Benefits

- ■Minimizethe likelihood of damage to vacuum valves and pumps from liquid
- Protect installed equipment from liquid contamination by retrofitting STS separator
- ■Easy visual inspection with see-through housing
- ■Reduce piping costs with T-style configuration
- ■Compact design for space restricted work areas

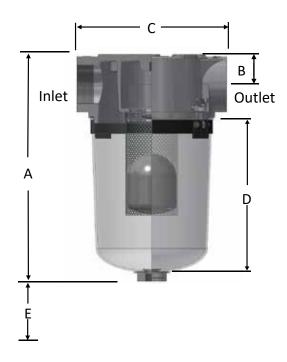
### **Features**

- Compactdesign 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
- ■Shatter-resistant polycarbonate drop down bucket
- Stainless steel float capsule for emergency shut-off
- ■Stainless steel perforated float tube (SS expanded metal on 1" to 1 1/2")
- ■Clamp style swing bolts on 3" & 4" standard
- Drain

### **Technical Specifications**

- ■VacuumRating:medium vacuum service\*
- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)\*\*





Inlet/	Outlet	Assembly m³/hr	A consumbly Doub		Dimensi		Suggested	Holding	
Size	Туре	Rating	Assembly Part Number	Α	В	С	D	Service ht. E	Capacity (liter)
1"	BSPP	42	STS-101C	360	39	178	282	228	1.6
1 1/4"		68	STS-126C	360	39	178	282	228	1.6
1 1/2"		102	STS-151C	360	39	178	282	228	1.6
2"	BSPP	178	STS-201C	428	50	229	332	228	3.7
2 1/2"	BSPP	195	STS-251C	428	50	229	332	228	3.7
3"	BSPP	407	STS-301C	520	69	343	376	228	5.7
4"		424	STS-401C	520	69	343	376	228	5.7

- Cast head protective coatings
- Heavy duty carbon steel buckets available (CTS Series)

  Clamp style swing bolts on 1" to 2 1/2"

- Extended capacity (select models)

  Pressure drop gauge

  Taps for gauges and mounting brackets



<sup>\*</sup>See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.

<sup>\*\*</sup>Temperature for materials only.



## Compact Liquid Separator & Filter

### LRS Series 3/4 - 3", DN100 - DN150

#### **Overview**

The inlet air, with liquids and particulate that are potentially harmful to the vacuum pump, enters the highly efficient vacuum filter and is separated by an integrated baffle. The larger particles and liquid drop down to the large capacity lower chamber. The lower chamber has significant liquid/slurry holding capacity. The final stage has a replaceable filter element for particulate that is 99+% efficient before it reaches the vacuum pump.

### **Benefits**

- Simplified vacuum package: 2 functions in 1 (liquid separator & inlet air filter)
- Multistage filtration & separation
- ■Protects pump from harmful liquids that break down lubricating/sealing oil
- Lower cost than individual separator and filter
- Significant liquid/slurry holding capacity
- ■Prevents emulsification of oil in oil lubricated systems
- ■Reduce footprint with compact design

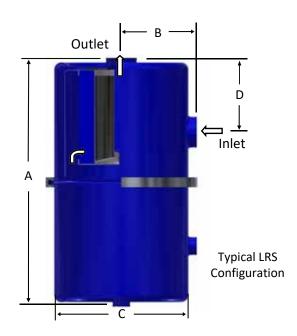
### **Features**

- Corrosive resistant blue powder coat carbon steel
- Integrated baffle
- Expansion chamber
- ■1/4" inlet/outlet taps (select models)
- 1" BSPP drain and sight port

### **Technical Specifications**

- ■VacuumRating: roughtomedium vacuum service\*
- Filter change out differential: 37-50 mbar over initial  $\Delta P$
- Polyester: 99%+ particulate removal efficiency to 5 micron





Assembly m³/hr	Inlet/	Outlet	Assembly Part		Dimensio	ons - mm		Suggested Service ht.	Approx. Holding Cap.	Replacement Element Part	Element m³/hr
Rating	Size	Туре	Number	Α	В	С	D	mm	(liter)	No.	Rating
105	3/4"	NPSC	LRS-19-075HC	451	117	230	76	121	5.7	19®	170
145	1"	BSPP	LRS-19-101HC	454	117	227	76	121	5.7	19®	170
145	1 1/4	BSPP	LRS-19-126HC	455	117	227	76	121	5.7	19®	170
170	1 1/2	' BSPP	LRS-19-151HC	456	118	227	90	121	5.7	19®	170
230	2"	BSPP	LRS-237-201HC	564	171	346	168	216	9.5	237™	935
335	2 1/2	, BSPP	LRS-237-251HC	577	185	346	182	216	9.5	237™	935
510	3"	FLG	LRS-237-301HC	578	186	346	182	216	9.5	237™	935
885	DN100	FLG	LRS-275-DN100	594	292	436	203	244	17	275™	1869
1415	DN150		LRS-275-DN150	998	305	436	229	244	40	275™	1869



- ■PED,ASME rated vessels
- Stainless steel construction & nonstandard finishes
- ■Specialty filter media
- ■Extended bucket for additional holding capacity
- Preseparator stainless steel demister
- ■Vacuum gauges
- ■Drain systems CE compliant
- ■Support legs
- For larger flows, see our Liquid Knockout Separator Series



 $<sup>{}^{*}\</sup>text{See}$  Vacuum Filter Technical Data for vacuum service data and sizing guidelines.



## Multistage Liquid Knockout Tank & Filter

### SLS / SRSSeries

### **Overview**

Solberg's Knockout series is a heavy duty multistage liquid and particulate separator to protect vacuum pumps from harmful contaminants that destroy lubricating or seal oil. This turn-key solution for a majority of liquid removal applications is readily available and easily configured. Multiple separator pack options are available and adjustable legs are standard for easy installation. Sustain your vacuum levels and prevent emulsification in oil lubricated systems with the Knockout series.

### **Benefits**

- Maximum pump protection with multi-stage filtration & separation
- Reduce costs with a singular modular design
- Housings may be used in a variety of conditions with multiple media pack options available
- ■Minimize frequent and costly maintenance checks with large liquid/slurry holding chamber

#### **Features**

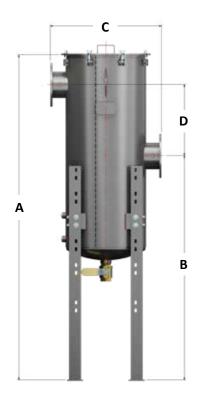
- (2) 1"sight glass ports with sight glasses (low/high level)
- ■1" upper chamber drain port
- "y plugged differential ports on inlet and outlet
- 2" plugged equalization port for use with pneumatic drain system
- 6 position adjustable legs, pre drilled to accept pneumatic drain system option
- Predrilled floor anchor holes
- ■Nameplate
- 2" drain with brass ball valve included
- Lifting lugs on the tank body

### **Technical Specifications**

- Servicerange:upto 1000 mbarabsolute
- Polyester element: 99%+ removal efficiency to 1 or 5 micron



- **F**langeadapters
- Available with either wire mesh element or demister pad
- Custom tanks denoted with SRS prefix



PN10 Flange Connection	Assembly Flow Range m3/hr	Assembly Part Number	Dimensions - mm  A* B* C D				Suggested Service ht.** Upper Lower		Upper Element Part No. Polyester	Lower Element Part No. Wire Mesh/Demister Pad	
	•	T di t i tallibei	٠٠.				Оррсі	LOWEI	(liter)	•	i dd
DN80	300 - 510	SLSDN80	1988	1340	508	457	250	660	19	235™ / 235Z	230S / DM8
DN100	510 - 885	SLSDN100	1988	1340	597	457	250	711	34	245™ / 245Z	234S / DM12
DN150	885 - 1170	SLSDN150	2089	1441	737	419	375	838	57	375™ / 375Z	274S / DM16
DN200	1170 - 3060	SLSDN200	2089	1441	880	419	375	838	91	377™ / 377Z	276S / DM20
DN250	1870 - 4930	SLSDN250	2369	1619	1016	432	375	1016	151	385™ / 385Z	384S / DM26

 $<sup>^{*}</sup>$ Height can be adjusted up or down in 152 mm increments to a maximum of 304 mm in either direction.

		Assembly P	Assembly Part Number			Max	Flo	w Ra	ating	ı (m	³/hr)		
		5 micron 99+% particulate protection	CLC M200D1 DN90	300	510	029	885	1170	1870	3060	4930		
DN80	Demister	ME10WE DN90 SLSM670DE				$\times$	$\times$	$\times$	$\times$	$\times$	$\times$		
DNOU	Wire mesh	-DN400 CLC M00FWE DN400	SLS M67004 DN400				$\times$	$\times$	$\times$	$\times$	$\times$		
DN100	Demister	CLC M4477EDE DN4E0 - CLC	CLC MOOFWA DNAOO					$\times$	$\times$	$\times$	$\times$		
DN 100	Wire mesh	M1870W5-DN150 SLS	SLS M1175D1 DN150						$\times$	$\times$	$\times$		
DNASO	Demister		SLS M1173D1 DN150							X	X		
DN150	Wire mesh	WIIOSSDS-DINZOO SLS-	SLS M1070W1 DN130								$\times$		Suitable for use in this
DN200	Demister	M2005DF DN250 SLS	SLS M2060W4 DN200								X		flow range
DNZUU	Wire mesh	1VI3U63D3-DIN23U 3L3-	3L3-IVI3000VV 1-DIV200										Contact Soberg for review of application
DN250	Demister	M4930W5-DN250	SLS-M3085D1-DN250										Not recommended for
DN230	Wire mesh		SLS-M4930W1-DN250									$\times$	use at listed flowrate



 $<sup>\</sup>ensuremath{^{**}\text{To}}$  service the lower media pack, additional service height is required.



## Pneumatic Drain System

### **DSP Series**

### **Overview**

The Pneumatic Drain System allows Solberg Liquid Separator units to be drained without stopping the process or any loss of vacuum. The liquid removed by the liquid separator flows under gravity into the drain pot. When the high level sensor detects the liquid, the drain pot is isolated from the liquid separator by the upper pneumatic ball valve. The bleed in valve then opens along with the bottom drain valve, allowing the liquid to drain using compressed air. When the lower level sensor triggers, the bleed in valve closes along with the bottom drain valve and the upper pneumatic ball valve opens to allow the process to repeat.

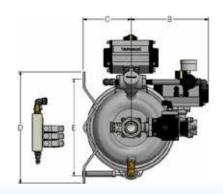


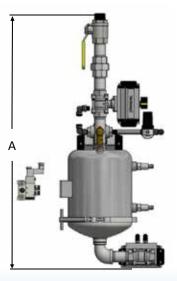
- ■Durablecarbon steel construction
- lectronic level sensors which can be adjusted for sensitivity
- ■Bracket supports the system on a frame or wall
- ■Pneumatic ball valves in stainless steel, 24 VDC, operated by compressed air (ranges from 5.5 8 barg)
- Removable bottom section for easy maintenance
- ■lectrical controls are UL 508A listed



Holding Capacity	BSPP Inlet &	Assembly Part Number Carbon Steel (SS Coating)		Weight				
(liter)	Outlet	carbon steer (33 coating)	Α	В	С	D	E	Weight (kg)
5	1"	DSP-L005-101HC *	782	197	122	286	248	17

<sup>\*</sup>For gravity drain package (DSG Series), contact factory for more information.







## **Leak Detector Filters**

### LDLSeriesNW25 - NW40

### **Overview**

Ideal for helium leak detectors, the LDL filter is manufactured out of high quality stainless steel and is configurable with NW25 or NW40 ports. The LDL features a removable and cleanable filter insert that utilizes a proprietary combination of stainless steel media rated for 10 micron containment. This technology combines effective surface area with uninterrupted throughput to ensure the removal of trapped helium and promote a fast clean-up time. Maintenance is simple and quick.



### **Features**

- ■NW25or NW40 stainless steel ports
- Removable/cleanable filter insert
- tentering ring/O-ring and clamps included

### **Technical Specifications**

- Compatible with leak detectors rated up to 100 m3/hr
- Vacuum service beyond 1x10-4 mbar
- Leak rate compatible to detector standards
- ■5%+ removal efficiency standard to 10 micron



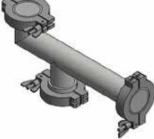
L-style config. NW25 connection

- Other micron media available upon request
- NW25 to NW40 adapters
- Multi-port "T" configuration
- traight-through "S" configuration

Connection Size	Assembly Part Number	Configuration	Replacement Element Part No.
NW25	LDS-DT40-2NW25	Straight-through	DT40
NW25	LDL-DT40-2NW25	L-style	DT40
NW25 (3)	LDT-DT40-3NW25	T-style	DT40
NW40	LDS-DT40-2NW40	Straight-through	DT40
NW40	LDL-DT40-2NW40	L-style	DT40
NW40 (3)	LDT-DT40-3NW40	T-style	DT40



Straight-through config. NW40 connection



T-style config. NW40 connection



## Vacuum Traps

## VTL / VTS Series NW16 - NW50

### **Overview**

Solberg's vacuum traps can be used to protect a variety of vacuum pump technologies from particulate, liquid, aerosol and vapour contaminants migrating from a process. Multiple insert options and configurations are available to ensure pumps are properly protected. The trap minimizes pump oil contamination resulting in significantly fewer oil changeouts and reduced maintenance costs.

### Benefits

- ■Prevent back streaming
- Remove hydrocarbons
- Trap condensable vapours
- Reduce overall maintenance costs
- Themical resistant
- asy maintenance

#### **Features**

- ■All stainless steel construction
- No tools needed to separate housing hemispheres with the quick release v-band for ease of maintenance
- Integrated drain port
- Connections available NW16, 25, 40, 50

### **Technical Specifications**

- Vacuumservice down to 1x10-3 mbar
- Leak rate: 1x10-7 mbar L/sec
- Temperature range -20°C to 150°C
- ine bead blast finish
- iton O-ring



**VTL Series** 



**VTS Series** 

### Standard Configurations:

### Stainless Steel Metal Wool

- ■Traphydrocarbonsandlarge particulate
- Replaceable stainless steel or copper insert
- Reduce contamination

### **Molecular Sieve**

- ■Trapwater vapour and other gases
- Rechargeable 13X Zeolite desiccant
- ■Integral 120 VAC or 240 VAC regeneration heater
- Reduce oil change-out

### Options (contact factory):

### **Chemical Adsorbents**

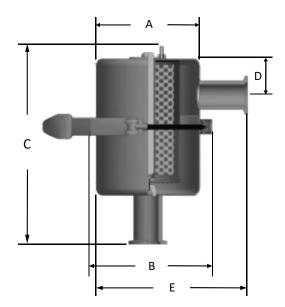
- ■Trap chemicalsandcorrosives
- Chemical compatible adsorbents available (ie: activated carbon, alumina, SodaSorb, etc.)
- Reduce hazards

### Fine Particulate

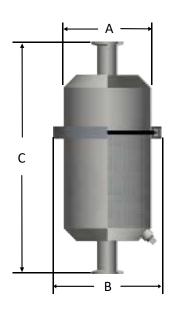
- ■Trapfine particulate
- ■Multiple media available (down to .2 micron at 99.99% efficiency)
- ■Reduce dust and particle ingestion

		Dimensions - mm							
Assembly Part Number	VTL Housing Size	Α	В	С	D	E			
VTL-SSM4-NW16S1	4"	102	135	245	38	168			
VTL-SSM4-NW25S1	4"	102	135	245	38	168			
VTL-SSM6-NW40S1	6"	155	183	248	64	211			
VTL-MS4-NW25S1	4"	102	133	206	38	168			
VTL-MS4-NW40S1	4"	102	133	206	32	168			
VTL-MS6-NW50S1	6"	155	152	266	57	211			

		Dimensions-mm						
Assembly Part Number	VTS Housing Size	Α	В	С				
VTS-SSM4-NW16S1	4"	102	135	285				
VTS-SSM4-NW25S1	4"	102	135	285				
VTS-SSM6-NW40S1	6"	155	180	293				



**VTL Configuration** 



**VTS Configuration** 

**NOTE**: When unable to achieve base pressure, the operator should regenerate the sieve by turning on the heater for a few hours and running the mechanical pump with its ballast valve open. The frequency and duration of sieve regeneration depends on the kind and amount of gas(es) produced by the particular application.





## Multistage Vapour Condensers

### JRSSeriesDN50 - DN200

#### Overview

JRSSeries vacuum filter systems are designed to protect equipment from harmful vapours and liquids that can break down pump oils and destroy a pump's inner workings. Vapour removal is accomplished through transitioning a substance from a gaseous state to a liquid or solid state and collecting any condensed material that accumulates.

#### **Features**

- Removable heat exchanger fin pack for ease of cleaning and long lasting optimum performance
- Coolant flask system
- Corrosive resistant blue powder coat carbon steel
- Coolant inlet and outlet ports
- ■2" BSPP drain port

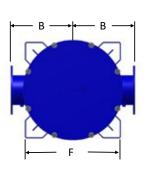
### **Options**

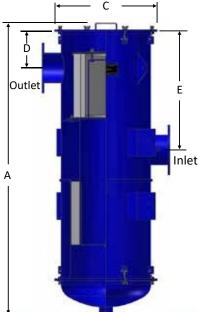


- ■ASME, PED rated vessels
- tainless steel construction
- rain systems CE compliant
- orts, gauges, leg supports
- avit arm
- Demister
- $\blacksquare$  or removable or unremovable bottom,

please contact Solberg







Flange Inlet/	Reference Only Assembly Part	Re	eference	Only C	imensi	ions - m	ım	Suggeste d Service	Reference Only Element
Qutlet	Number		В	С	D	E	F	ht.mm	Part No.
1021050 JE	RS-GMAC235-DN50		254	355	191	470	306	254	GMAC235
1021980 JI	RS-GMAC245-DN80		299	470	191	470	406	254	GMAC245
DN100 <b>J</b>	RS-GMAC275-DN100 14	61	300	470	200	625	542	254	GMAC275
DN125 <b>J</b>	RS-GMAC377-DN125 16	22	350	540	200	800	615	381	GMAC377
DN150 <b>J</b>	RS-GMAC385-DN150 19	94	508	838	318	800	760	381	GMAC385
DN200 <b>J</b>	RS-GMAC485-DN200 20	)42	425	640	200 1	050 68	8	559	GMAC485

Contact factory for application details.



## Compact Vapour Condensers

## JST / JCTSeries2" - 6"

### **Overview**

JST& JCTSeriesvapour condensers are designed to protect equipment from harmful vapours and liquids that can break down pump oils and harm a pump's inner workings. Vapour removal is accomplished through transitioning a substance from a gaseous state to a liquid or solid state and collecting any condensed material that accumulates.

### **Features**

- ■Removable heat exchanger fin pack for ease of cleaning and long lasting optimum performance
- ■Coolant flask system
- ■Stainless steel demister pad
- **■**Compact housing for minimal footprint
- Removable bottom for full accessibility
- Coolant inlet and outlet ports
- JST Series: Durable see-through bucket made from shatter resistant polycarbonate
- JCT Series: Corrosive resistant carbon steel bucket



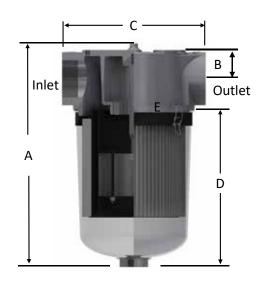
### **Options**



- ■ATEXavailable for JCT versions only
- Additional ports Vacuum gauge
- ■Support frame Extended capacity
- ■(select models) Taps for gauges and
- mounting brackets

Drain	Accombly Bart	Refe	rence Dim	ensions -	mm	Suggeste d Service
Size	Number	Α	В	С	D	ht.mm
1"	JST-C2048-201C	446	50	229	332	254
1/2"	JST-C2048-251C	446	50	229	332	254
1"	JST-C2081-301C	539	69	343	376	254
1"	JST-C2081-401C	539	69	343	376	254
1"	JCT-C2048-201C	523	50	229	409	254
1"	JCT-C2048-251C	523	50	229	409	254
1"	JCT-C2081-301C	506	69	343	344	254
1"	JCT-C2081-401C	506	69	343	344	254
1"	JCT-C3226-601C	757	99	483	527	356
	Port Size  1"  1/2"  1"  1"  1"  1"  1"  1"	Port Size Assembly Part Number  1" JST-C2048-201C  1/2" JST-C2048-251C  1" JST-C2081-301C  1" JST-C2081-401C  1" JCT-C2048-251C  1" JCT-C2048-251C  1" JCT-C2081-301C  1" JCT-C2081-301C	Port Size Assembly Part Number A  1" JST-C2048-201C 446  1/2" JST-C2048-251C 446  1" JST-C2081-301C 539  1" JST-C2081-401C 539  1" JCT-C2048-201C 523  1" JCT-C2048-251C 523  1" JCT-C2081-301C 506  1" JCT-C2081-301C 506	Port Size Assembly Part Number A B  1" JST-C2048-201C 446 50  1/2" JST-C2048-251C 446 50  1" JST-C2081-301C 539 69  1" JST-C2081-401C 539 69  1" JCT-C2048-201C 523 50  1" JCT-C2048-251C 523 50  1" JCT-C2081-301C 506 69  1" JCT-C2081-401C 506 69	Port Size         Assembly Part Number         A         B         C           1"         JST-C2048-201C         446         50         229           1/2"         JST-C2048-251C         446         50         229           1"         JST-C2081-301C         539         69         343           1"         JST-C2081-401C         539         69         343           1"         JCT-C2048-201C         523         50         229           1"         JCT-C2048-251C         523         50         229           1"         JCT-C2081-301C         506         69         343           1"         JCT-C2081-401C         506         69         343	Port Size         Assembly Part Number         A         B         C         D           1"         JST-C2048-201C         446         50         229         332           1/2"         JST-C2048-251C         446         50         229         332           1"         JST-C2081-301C         539         69         343         376           1"         JCT-C2081-401C         539         69         343         376           1"         JCT-C2048-201C         523         50         229         409           1"         JCT-C2048-251C         523         50         229         409           1"         JCT-C2081-301C         506         69         343         344           1"         JCT-C2081-401C         506         69         343         344

Contact Solberg for additional sizing information or about flow rates for your specific application.



## Did you know?

Our oil mist discharge filters help prevent oil mist from being emitted into the environment around industrial equipment. The oil can be returned to the equipment to reduce oil consumption and pollution!

All of our products protect the environment, protect equipment, and help keep industrial working conditions safe.





# Vacuum Pump Discharge & Air/Oil Separation

Technical Data	3-2
Discharge Oil Mist Filters: HDL Series	3-4
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## **Technical Data**

### **Oil Mist Discharge Filters**

### **Applications & Equipment**

- ■Vacuum Pumps & Systems
- ■Vacuum Furnaces & Ovens
- ■Vacuum Freeze Drying & Outgassing
- ■Vacuum Metalizing
- ■Vacuum Drying
- ■Vacuum Coating
- ■Custom Vacuum Pumping Systems
- Food Processing & Packaging
- ■Industrial Vacuum Processes
- Pressure Unloading Vents on Piston Compressors
- Medical Work Areas
- Industrial Aerosol Scrubbing
- Heat Treating Equipment
- Vacuum Hold Down
- Routing Equipment
- Laboratory Industry
- Leak Detectors
- Autoclaving, Sterilization
- Reciprocating Engines
- Crankcase Ventilation Systems

### **Identification**

StandardSolberg 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 "HDL" design filter with a "PSG344/2" coalescing element, and 3" BSPT connection size.

### HDL-PSG344/2-301

	L	Connection Size and Type
	Replacem	ment Element Part Number
Filter Tvr	ne .	

### **Installation & Maintenance**

Mounting orientation is typically top-up vertical, so draining can occur. See figure below for proper installation method. Request the appropriate maintenance manual from your Solberg representative or through www.solbergmfg.com.



#### General

Coalescing air/oil separation technology is highly effective at capturing oil mist from the exhaust of an oil sealed/lubricated vacuum pump and keeping surrounding work environments clean and safe. Each pump technology produces its own specific oil discharge characteristics and requires the appropriate housing and element configuration to optimize performance.

Critical factors that influence performance of a coalescing air/oil separator include quality of the oil, equipment type, oil type and viscosity, challenge rate, process gas characteristics, operating temperature, operating vacuum level, and maximum air flow rating of the pump. Because of these variables, it is always best to work with Solberg personnel when selecting and sizing a vacuum pump discharge filter. However, Solberg's standard product lines will perform well in most general duty applications. The following guidelines will help when selecting a standard product.

### Filter Selection Guidelines

**#1:**Protectthepumpwithadequate inlet filtration. Contaminants such as particulates, water, and solvents can damage the pump internals and significantly reduce the effectiveness of the discharge filter.

**#2:** Identify the type of vacuum pump oil being used. Solberg's standard coalescing technology works well with most commercially available vacuum pump oils across a broad range of viscosities. Generally, maximum coalescing effectiveness is achieved with temperatures at the inlet of the filter: at or below 70°C (~160°F) for mineral oils, at or below 82°C (~180°F) for synthetics. For best results, consult with the factory and provide information on operating temperature and viscosity/grade of oil prior to making any filter selection.

**#3:** Determine the filter size based on the flow rating of the pump at atmospheric conditions, not the connection size. An undersized coalescing filter will cause increased back pressure and negatively affect pump performance.

**#4:** To capture oil, the coalescing element must receive the oil challenge in an aerosol form. If the oil is in a vapor state, it will pass through the coalescing media. Generally, the coalescing technology will perform more effectively at lower operating temperatures. In many cases, adding distance between the pump and the filter will help to lower the air stream temperature and improve coalescing effectiveness.

**#5:** Install in external environments where temperatures will not fall below freezing or exceed 37°C (100°F). Creating distance between the pump and the exhaust filter is desirable, however, avoid installing long pipe runs and horizontal sections where condensed oil can accumulate. When possible, install a drip-leg to gather any excess oil within the piping.

**#6:** Drain the filter and drip-leg to ensure your vacuum system performs at optimal levels. If the system is not drained regularly, issues such as high back pressure and unsafe working conditions can occur.

Once as much information as possible has been obtained, send the data to Solberg for review, review our data sheets, or visit our website, **www.solbergmfg.com**.





## Discharge Oil Mist Filters

### HDLSeries1" - 2 1/2

### Benefits

- Easy field maintenance
- Pleated filter element provides increased surface area for low back pressure separation of ultra-fine oil mists
- ■Waste oil can be recycled



- ■Captures oil fog, mist or aerosol from exhaust of oil sealed vacuum pumps
- Seamless drawn housings
- ■O-ring sealed housings
- Corrosive resistant white powder coat carbon steel
- ■Discharge baffle
- 1/4" NPSC for external drain



Config. A Config. C

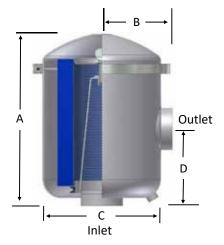
### **Technical Specifications**

- ■0.3micron media;99.97%efficiency
- Continuous operating temp: 20°C (68°F) up to 80°C (180°F)
- Mounted vertically
- Pressure rating: 0.35 bar

### **Options**



- ■Nonstandard finishes
- Lower back pressure media
- Application specific gaskets/seals
- ■Custom connections
- ■Stainless steel housings (select models)



Inlet/0	Inlet/Outlet Assembly m³/hr Housing		A b b - D b b b	Dimensions - mm				Suggested	Approx.	Replacement	Element	
Size	Туре	m <sup>2</sup> /nr Rating	Config.	Assembly Part Number	Α	В	С	D	Service ht. mm	Weight (kg)	Element Part No.	m³/hr Rating
1"	BSPP	68	Α	HDL-PSG848-101HC	171	105	1 8	7108	133	2	PSG848	85
1 1/4'		85	Α	HDL-PSG848-126HC	171	105	187	108	133	2	PSG848	85
1 1/2'	BSPP	85	Α	HDL-PSG848-151HC	171	105	187	108	133	2	PSG848	85
2"	DCDD	213	В	HDL-PSG850/1-201HC	286	117	227	127	235	7	PSG850/1	213
2"	RSPP	298	С	HDL-PSG860/1-201HC	443	117	227	127	368	14	PSG860/1	340
2 1/2'	)	425	В	HDL-PSG244/2-251HC	363	185	346	182	254	16	PSG244/2	510

Note: 2 1/2" housing has 1/4" NPSC taps standard on inlet and outlet.



## Discharge Oil Mist Filters

### HDLSeries3" - 4", DN125 - DN200

### **Benefits**

- ■Largeoil holding capacity and easy field maintenance
- ■Pleated filter element provides increased surface area for low back pressure separation of ultra-fine oil mists
- ■Multiple separation stages in single element design
- ■Waste oil can be recycled

#### **Features**

- ■Capturesoil fog, mist or aerosol from exhaust of oil sealed vacuum pumps
- ■O-ring sealed housings
- ■Corrosive resistant white powder coat carbon steel
- 1/2" BSPP for external drain

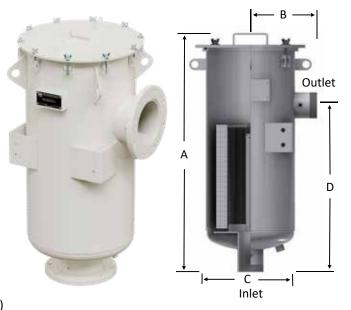
### **Technical Specifications**

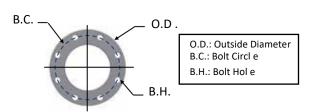
- ■0.3micron media;99.97%efficiency
- Continuous operating temp: 20°C (68°F) up to 80°C (180°F)
- ■Mounted vertically
- Pressure rating: 0.5 bar

### **Options**



- ■Various nonstandard finishes and connection styles
- Lower back pressure media
- ■Application specific gaskets/seals
- Stainless steel housings
- ■Nameplate bracket
- Lifting lugs





PN10 Pattern	Din	nensions -	mm	No. of	Flange Thickness
Flange	O.D.	B.C.	B.H.	Holes	mm
DN125	250	210	18	8	22
DN150	285	240	22	8	24
DN200	340	295	22	8	24

Inlet/0	Inlet/Outlet		Assembly Part Number		Dimensio	ons - mm		Suggested Service ht.	Approx. Weight	Replacement Element Part	Element m³/hr
Size	Туре	m³/hr ' Rating	Assembly Fait Number	Α	В	С	D	mm	(kg)	No.	Rating
3"	BSPT	510	HDL-PSG344/2-301	819	229	378	572	381	34	PSG344/2	850
4"	BSPT	850	HDL-PSG344/2-401	819	229	378	572	381	35	PSG344/2	850
DN125	FLG	1360	HDL-PSG474/2-DN125	999	305	470	775	559	72	PSG474/2	1870
DN150	FLG	1870	HDL-PSG474/2G-DN150	999	305	470	775	559	72	PSG474/2G	1870
DN200	FLG	3060	HDL-PSG476G-DN200	1202	356	572	826	559	81	PSG476G	3060



## Discharge Oil Mist Filters (Open)

## EF Series 1/2 - 1 3/4, ISO FLG

#### **Features**

- ■Capturesoil fog, mist or aerosol from discharge of oil sealed vacuum pumps
- ■Steel construction with nickel plated finish
- ■Seamless drawn housings
- ■Easy thumb screw access for element maintenance
- ■Oil run-off from the filter returns to the pump

### **Technical Specifications**

- ■0.3micron media;99.97%efficiency
- Continuous operating temp: 20°C (68°F) to 80°C (180°F)



- ■Additional ISO flange connections
- ■Non-standard connection styles



Con Size	nection Type	Assembly m3/hr Rating	Assembly Part Number	Dime A	ensions - B	- mm C	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.
1/2"	MPT	8	EF-FG5-050	114	23	64	76	0.3	FG5
1/2"	MPT	12	EF-FG7-050	142	23	64	102	0.8	FG7
3/4"	3/4-20 0	NEF 7 8	EF-FG3-077 EF-FG5-075	94	26	64	54	0.5	FG3
3/4"	MPT MPT	12	EF-FG7-075	119	28	64	76	0.4	FG5
3/4"	1-20 UNEF	8	EF-FG5-103	147	28	64	102	0.8	FG7
1"	1-20 UNEF	<del>12</del> 27	EF-FG7-103	112	21	64	76	0.3	FG5
1"	1-20 UNEF	41	EF-FG9-103	140	21	64	102	0.4	FG7
1"	1-20 UNEF	41	EF-FG10-103	157	21	129	102	0.8	FG9
1"	1 3/4-20	UN 's	EF-FG10-1//	207	22	129	152	3.2	FG10
1 3/4	'ISO Flange	8	EF-FG5-NW16 EF-FG5-NW2516	235	51	129	152	1.6	FG10
16 mm	ISO Flange	41	EF-FG10-KF25	113	22	64	76	0.3	FG5
25 mm	ISO Flange	75	EF-FG20-KF40	113	22	64	76	0.6	FG5
25 mm	ISO Flange		LI-FOZO-KF40	237	54	129	152	1.6	FG10
40 mm				178	54	260	121	3.2	FG20





## Discharge Oil Mist Filters (Internal Drain)

### **EFDB Series**

### **Features**

- ■Capturesoil fog, mist or aerosol from exhaust of oil sealed vacuum pumps
- ■Auto drain back design to recycle oil mist:
  - -Internal drain returns oil back into pump
- -Prevents oil blow back with auto sealing
- -Enclosed housing allows clean environment
- ■Steel construction with nickel plated finish
- ■Seamless drawn housings
- ■Easy thumb screw access for element maintenance
- Oil run off from the filter returns to the pump

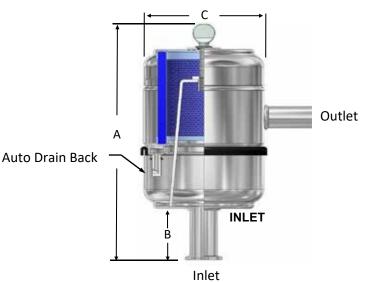


### **Technical Specifications**

- ■0.3micron media;99.97%efficiency
- Continuous operating temp: 20°C (68°F) to 80°C (180°F)

### **Options**

- Additional ISO flange connections
- ■Non-standard connection styles



Connection	Assembly m3/hr	Assembly Part	Dim	ensions -	mm	Approx. Weight	Replacement Element Part	
Size / Type	Rating	Number	Α	В	С	(kg)	No.	
KF25 ISO Flange	27	EFDB-FG9-KF25	255	54	133	1.1	FG9	
1-20 UNEF	27	EFDB-FG9-103	220	21	133	1.0	FG9	
1 3/4 - 20 UN	41	EFDB-FG11-177	269	51	159	1.1	FG11	



## Discharge Oil Mist Filters (External Drain)

## **EE Series**

### **Benefits**

- Compact, low profile design
- Easy field maintenance

### **Features**

- ■Captures oil fog, mist or aerosol from discharge of oil sealed vacuum pumps
- Seamless drawn housings
- ■Corrosive resistant white powder coat carbon steel
- ■EE-PSG925 assemblies come standard in zinc nickel finish
- 1/8" external drain

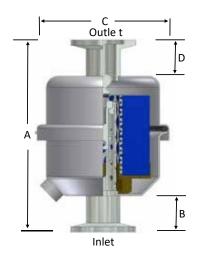
### **Technical Specifications**

- ■0.3micron media; 99.97%efficiency
- Continuous operating temp: 20°C (68°F) to 80°C (180°F)
- ■Back pressure valve designed to release element at 0,5 bar (7.35 PSI) differential for pump safety

### **Options**

- Additional ISO flange connections
- ■Non-standard finishes available





Inlet Type	Outlet Type	Assembly m3/hr Rating	Assembly Part Number	A D	imensio B	ns - mn C	n D	Suggested Service ht. mm	Replacement Element Part No.	Element m3/hr Rating
3/4" NPT	1/2" NPSC		EE-GL915-075	116	28	81	14	60	GL915	14
16 mm ISO Flange1	6 mm ISO Flange	1.1	EE-GL915-QF16	119	22	81	22	60	GL915	14
25 mm ISO Flange2	5 mm ISO Flange	24	EE-GL915-QF2516	119	22	81	22	60	GL915	14
25 mm ISO Flange2	5 mm ISO Flange	34	EE-PSG925-NW25	186	22	135	22	124	PSG925	34

Note: QF2516 designation: unit has an ISO NW25 flange with a 16 mm tube (neck).



## Discharge Oil Mist & Odor Filters

### DSV,DEESeriesNW16 - NW25

### Overview

The Solberg DSV is an extremely effective vacuum pump discharge filter that offers two stages of filtration to remove both oil mist and undesirable odors from the pump's exhaust. It offers a compact, straight-through design, with an integrated drain port to easily evacuate any collected contaminants. This innovative two- stage design starts with a proprietary coalescing media that cleans the discharge air by capturing and coalescing oil mist. The oil free air is then directed through an adsorptive activated carbon cartridge to remove any residual vapours or odors. The DSV was designed to be easily disassembled and serviced without the use of tools, allowing for extremely fast filter change-out and minimal downtime.

### Benefits

- Oilmist elimination
- Ddor adsorption
- Reduce overall maintenance costs
- Contamination removal

#### **Features**

- Corrosive resistant white powder coat carbon steel
- ■rimary filter captures and coalesces oil entrained in air stream
- Activated carbon element removes offensive odors generated by the process
- External drain
- ■DEE Series: back pressure valve at 0.5 bar (7.35 psi) differential for pump safety

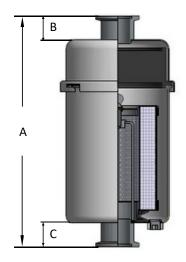
### **Technical Specifications**

- ■0.3micron media;99.97%efficiency
- Continuous operating temp: 0°C (32°F) to 80°C (180°F)

- Clamp, centering ring, and o-ring kit for inlet/outlet
- Drain kits available upon request

Connection	Assembly m3/hr	Assembly Part Number	Dimensions - mm			Suggested Service ht.	Approx. Weight	Replacement Element Part	Odor Adsorbent Element	
Size Rating		Assembly I dividumsel	Α	В	С	mm	(kg)	No.	Replacement	
NW16	20	DSV-PSG725/AC10-NW16	214	22	22	102	1.4	PSG725	AC10	
NW25	20	DSV-PSG725/AC10-NW25	214	22	22	102	1.4	PSG725	AC10	
NW16	20	DEE-PSG725/AC10-NW16	214	22	22	102	1.4	PSG725	AC10	
NW25	20	DEE-PSG725/AC10-NW25	214	22	22	102	1.4	PSG725	AC10	







## **Hydraulic Breathers**

## HB Series 1/4-2"

### Overview

Solberg's breathers are designed to protect hydraulic tanks, lube oil reservoirs, gearboxes and other enclosures that need bidirectional venting. Our line of breathers improve flow dynamics, reduce noise, help maintain fluid purity, and minimize oil migration to the surrounding environment. Keep your system free of contaminants and maximize uptime with Solberg's breathers.

### Benefits

- **■**Toolless design
- ■Ease of maintenance
- Equipment protection
- Noise reduction
- ■Compact designs

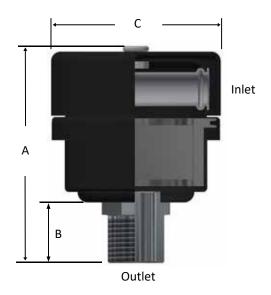
### **Features**

- ■Integrated gasket seal
- ■High-efficiency polyester media
- ■Integrated rain cap and metal inlet tube design minimizes the potential for moisture migration during wash down
- Corrosive resistant black powder coat carbon steel
- ■Integrated silencing tubes for noise reduction

### **Technical Specifications**

- Temp(continuous): min-26°C (-15°F) max 104°C (220°F)
- Breather change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- Polyester: 99% removal efficiency
  - -Cylindrical style cartridge 5 micron rating
  - -Hockey Puck style cartridge 10 micron rating





### Hockey Puck Style Cartridge

MPT	MPT Flow Rating Assembl		Din	nensions - r	mm	Suggested Service ht.	Approx. Weight (kg)	Replacement Element Part
Outlet	m3/hr	Number			С	mm	Weight (Ng)	No.
1/4"	7	HB-05-025	75	17	64	26	0.11	05™
3/8"	14	HB-05-038	75	17	64	26	0.11	05™
3/8"	14	НВ-07-038	92	17	83	51	0.22	07™
1/2"	14	HB-05-050	80	23	64	26	0.11	05™
1/2"	20	HB-07-050	100	23	83	51	0.22	07™
1/2"	20	HB-11-050	111	23	129	51	0.45	11™
3/4"	20	HB-07-075	109	31	83	51	0.22	07™
3/4"	42	HB-11-075	120	31	129	51	0.45	11™
1"	60	HB-11-100	120	31	129	51	0.45	11™

### Cylindrical Style Cartridge

MPT	Flow Rating	Assembly Part	Din	nensions - r	nm	Suggested Service ht.	Approx. Weight (kg)	Replacement Element Part
Outlet	m3/hr	Number	Α	В	С	mm	110.6.1. (1.6/	No.
1"	60	HB-15-100	102	38	152	59	0.95	15™
1 1/4"	119	HB-19P-125	168	41	155	121	1.50	19P®
1 1/2"	145	HB-19P-150	168	38	152	121	1.58	19P®
2"	230	HB-31P-200	184	57	254	121	3.50	31P™

- ■Highvibration designs
- ■Custom connections
- Equipment specific configurations
- Multiple filter media types available





## Discharge Silencer with Filter

## EFS Series 3/8-1",NW16 - NW25

#### **Features**

- ■Captures tip seal dust
- Compact design combines both filtration efficiency and
- ■Integrated inlet diffuser optimizes sound attenuation
- ■Multi-stage noise reducing features, including final stage sound absorbent insert
- ■Tubular silencing design tube is positioned to maximize attenuation and air flow while minimizing pressure drop
- ■Patented high grade element with built-in Butterfly gasket seal which creates a positive seal between housing hemispheres, and a new seal with each element
- Seamless drawn housings
- Corrosive resistant black powder coat carbon steel
- Ability to mount vertically, or horizontally

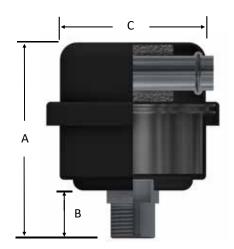
### **Technical Specifications**

- Temp(continuous):min -26°C(-15°F) max 104°C (220°F)
- Polyester: 99%+ removal efficiency standard to 10 micron

### **Options**

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





Inlet	t/Outlet	Assembly m3/hr	AssemblyPart		ensions -	mm	Suggested Service ht.	Approx. Weight	Replacement Element Part
Size	Туре	Rating	rissembly: are	C A	В		mm	(kg)	No.
3/8"	MPT	4	EFS-05-038/1	731	17		25	0.23	05™
1/2"	MPT	16	EFS-07-050/1	96 81	22		51	0.34	07™
NW16	ISO Flange	16	EFS-07-NW16/1	96 81	22		51	0.34	07™
NW25	MDT	13	EFS-07-NW25/1	105	22		51	0.34	07™
1"	ISO Flange	40	EFS-11-100/2	1 <b>19</b> 5	22		51	0.57	11™
NW25	100 1101180		EFS-11-NW25/2	105			51	0.57	11™



## Did you know?

The first product invented and launched by our founder, Charlie Solberg Sr. was the FS Series - a tubular filter silencer designed for small air compressors - in 1966.

Since then, Solberg has been serving the global compressor, blower, and fan markets with the supply of air intake filter silencer assemblies. From the very small to the very large, we have a solution to suit your requirements.

Also available in stainless steel and ATEX-certified.





## **Filter Silencers**

Technical Data	4-2
Filter Silencers: FS, PS Series	4-4
Big Boy Filter Silencers: FS Series	4-8
Enhanced Filter Silencers for Blowers: QB Series	4-10
Discharge Silencer Frames for PD Blowers: BBF Series	4-12
Side Channel Blower Silencers: SLCR Series	4-14





## **Technical Data**

## Inlet Filter Silencers, Silencers

### **Applications & Equipment**

- ■Industrial &SevereDuty
- 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**

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

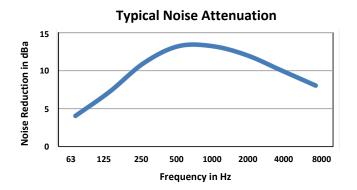
- Assembly Model #
- Replacement Element #

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" BSPT connection size.



### **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.



### 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.)
  - a. Verify assembly m3/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 m3/hr (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.

### **Element Maintenance**

Solbergelements 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.





## 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

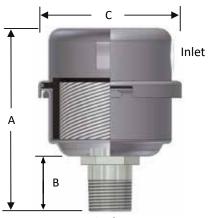
### **Technical Specifications**

- Temp (continuous):min -26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar 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





Outlet

MPT	Assembly m³/hr	Assembly Part Number		Dimensions - mm			Suggested Service ht.	No. of Silencing	Approx. Weight	Replaceme Part	nt Element	Element
Outlet	Rating	Polyester	Paper	Α	В	С	mm	Tubes	(kg)	Polyester	Paper	m³/hr Rating
1/4"	7	FS-05-025 FS		70 70	17 17	64 64	25	1	0.11	05™	04™	14
3/8"	14	FS-05-038 FS		91	17	81	25	1	0.11	05™	04™	14
3/8"	14	FS-05-050 FS	-04-050	76 96	23 23	64 81	35	1	0.23	07™	06™	20
1/2"	20	FS-07-050 FS		105	23	106	25	1	0.11	05™	04™	14
1/2"	20	FS-11-050 FS FS-07-075 FS		105	31	81	35	1	0.23	07™	06™	20
1/2"		FS-11-075 FS	10-075	114	31	105	35	1	0.45	11™	10™	60
3/4"	60	FS-11-100 FS	10-100	114	31	105	35	1	0.23	07™	06™	20
3/4"							35	1	0.45	11™	10™	60
1"							35	1	0.45	11™	10™	60

Note: MPT threaded housings are interchangeable with BSPT up to 1". See Filter Silencer Technical Data for sizing guidelines.



## Molded Polymer Filter Silencers

## PS Series 1/8 - 1"

### **Benefits**

- Longerelement life with maximized surface area
- Cost-efficient solution
- Low restriction improves equipment performance

#### **Features**

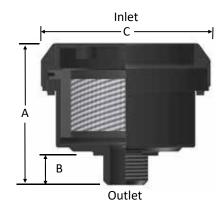
- ■Easysnap-on design for quick servicing Durable glass
- ■reinforced nylon housing Compact, low profile
- ■configuration Noise reducing silencing design High
- grade filter element with integrated gasket seal



## Technical Specifications

- Temp (continuous):min-26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 10 micron
- Paper: 99%+ removal efficiency standard to 2 micron





MPT	Assembly Assembly Part Number MPT m³/hr		Dimensions - mm			Suggested Approx. Service ht. Weight		Replaceme Part	Element m³/hr		
Outlet	Rating	Polyester	Paper	Α	В	С	mm	(kg)	Polyester	Paper	Rating
1/8"	5	PS-03-013	PS-02-013	45	11	44	25	0.02	03™	02™	5
1/4"	7	PS-03-025 PS-05-025	PS-02-025 PS-04-025	<del>40</del> 52	11 11	44 65	25	0.02	03™	02™	5
1/4"	10	PS-05-038	PS-04-038	52	11	65	25	0.04	05™	04™	14
3/8"	17	PS-05-050 PS-07-050	PS-04-050	52 81	11	65 82	25	0.04	05™	04™	14
1/2"	20	PS-11-050	PS-06-050 PS-10-050	81	18 18	106	25	0.04	05™	04™	14
1/2"	20	PS-07-075 PS-11-075	PS-06-075	90	27	82 106	35	0.09	07™	06™	20
1/2"	60	PS-11-100	PS-10-075 PS-10-100	95	31 31	106	35	0.14	11™	10™	60
3/4"			1.0.20.200				35	0.14	07™	06™	20
3/4							35	0.16	11™	10™	60
1"							35	0.18	11™	10™	60

Note: MPT threaded housings are interchangeable with BSPT up to 1".

See Filter Silencer Technical Data for sizing guidelines.



## Stamped Steel Filter Silencers

## FS Series 1/2 - 6",DN80 - DN150

#### **Features**

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

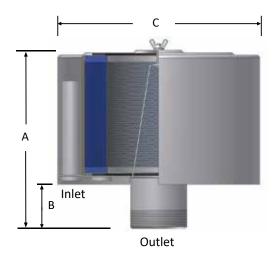
### **Technical Specifications**

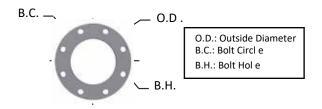
- Temp (continuous):min-26°C (-15°C) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- ■Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron



- Tapholes 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)







PN10 Pattern	Din	nensions - I	mm	No. of	Flange Thickness
Flange	O.D. B.C. B.H.		Holes	mm	
DN80	200	160	18	8	20
DN100	220	180	18	8	22
DN125	250	210	18	8	22
DN150	285	240	22	8	24

Ou	m³/hr ´		•	Assembly Part Number		Dimensions - mm		Suggested Service ht.	No. of Silencing	Approx. Weight	Element		Element m³/hr
Size	Type	Rating	Polyester	Paper	Α	В	С	mm	Tubes	(kg)	Polyester	Paper	Rating
1/2	" МР	T 17	FS-15-050	FS-14-050	87	24	155	59	1	0.8	15™	14™	60
3/4	" МР	T 43	FS-15-075	FS-14-075	96 96	31	155	59	2	0.9	15™	14™	60
ΝήΡΤ	ПП	60	FS-15-100	FS-14-100		31	155	59	3	0.9	15™	14™	60
N∕ÍPT		60	FS-15-100B	FS-14-100B	96	33	155	59	3	0.9	15™	14™	60
ΝήΡΤ	$\overline{}$	94	FS-19P-100	FS-18P-100	162	31	155	121	3	1.4	19P®	18P™	170
1 <sub>B</sub> 31/1		119	FS-19P-126	FS-18P-126 FS-18P-151	171 171	41 41	155 155	121	5	1.5	19P®	18P™	170
1B31P/1		145	FS-19P-151	FS-18P-151B	171	41	155	121	5	1.6	19P®	18P™	170
18SP/		145	FS 19P 151B FS-31P-201	FS-30P-201	190	57	262	121	5	1.6	19P®	18P™	170
2" B	-	230	FS-31P-201	FS-230P-201	304	51	260	121	5	3.5	31P™	30P™	332
2" B	SPT	230 332	FS-231P-201 FS-31P-251	FS-30P-251	196	64	262	241	5	6.3	231P™ 2	.30P™	510
2 1/2	<b>2</b> ′BSPT	332 332	FS-231P-251	FS-230P-251	314	64	260	121	5	3.7	31P™	30P™	332
	<b>B</b> SPT	510	FS-231P-301	FS-230P-301	323	76	260	241	9	6.5	231P™ 2	.30P™	510
3" B	SPT	510	FS(12)-235P-301	S(12)-234P-301	324	76	311	241	9	6.8	231P™ 2	30P™	510
3" B	SPT	510			335	76	406	244	3	13	235P™ 2	.34P™	970
3" B	\$PT	885	FS-275P-301	FS-274P-301	356	102	311	244	9	15	275P™ 2	74P™	1870
4" B	SPT	885	FS(12)-235P-401	S(12)-234P-401	356	102	406	244	6	14	235P™ 2	34P™	970
4" B	SPT		FS-275P-401	FS-274P-401	356 356	102 102	406 406	244		<del>15</del>	275P™ 2	74P™	1870
5" B	SPT	13	60 FS-245P-501	FS-244P-501	356 385	102	406	244	14	15 16	245P™ 2	44P™	1500 1870
5" B	SPT	13	60 FS-275P-501	FS-274P-501	385	12/	1 406	244	14 18	15 17	275P™ 2	74P™	1870 1870
6" B	SPT	18	70 <b>FS-275P-601</b>	FS-274P-601				2//	18	1/	275P™ 2	.74P™	18/0

Note: MPT threaded housings are interchangeable with BSPT up to 1".

Flange	Assembly m³/hr	Assembly Part Number		Dimensions - mm			Suggested Service ht.	No. of Silencing	Approx. Weight	Replacement Element Part No.	Element m³/hr
Outlet	Rating	Polyester	Paper	Α	В	С	mm	Tubes	(kg)	Polyester Paper	Rating
DN80	510	FS(12)-235P-DN80 F	S(12)-234P-DN80	331	76	311	244	3	13	235₽™ 234₽™	970
DN80	510	FS-275P-DN80	FS-274P-DN80	344	76	406	244	9	15	275P™ 274P™	1870
DN100	885	FS(12)-235P-DN100	FS(12)-234P-DN100	356	102	311	244	6	14	235P™ 284P™	970
DN100	885	FS-275P-DN100	FS-274P-DN100	369	111	406	244	9	18	275P™ 2 <b>7</b> 4P™	1870
DN125	1360 <b>FS</b> -	245P-DN125	FS-244P-DN125	369	111	406	244	14	17	245P™ 2 <b>4</b> 4P™	1500
DN125	1360 <b>FS</b> -	275P-DN125	FS-274P-DN125	369	111	406	244	14	18	275P™ 274P™	1870
DN150	1870 <b>FS</b> -	275P-DN150	FS-274P-DN150	395	137	406	244	18	19	275P™ 274P™	1870

See Filter Silencer Technical Data for sizing guidelines.





## Big Boy Filter Silencers

### FSSeriesDN200 - DN400

### **Features**

- ■Tubularsilencing 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-26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar 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**



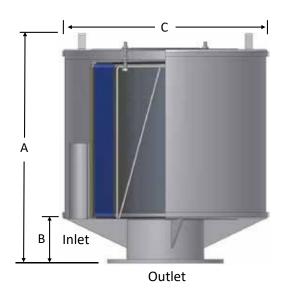
- Tapholes available
- Pressure drop indicator
- ■Various media for different environments
- Stainless steel construction
- ■Various nonstandard finishes and connection styles
- ■Side Access Silencer Filters (LQB Series) for space restricted enclosures (select models)

#### Sumo Class Features

- ■Single barrelfilter design allows for large airflows in space restricted work areas
- ■DN350 to DN400 flange connections available
- ■Designed for airflows up to 13592 m3/hr



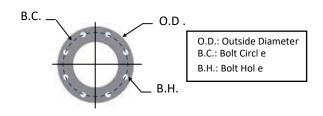




Flange Outlet	Assembly m3/hr Rating	Assembly Polyester	Part Number Paper	Dim A	ensions - B	mm C	Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)		nt Element No. Paper	Element m3/hr Rating
DN200	3060	FS-377P-DN200 I	S-376P-DN200	618	162	556	368	12	54	377P™	376P™	3105
DN200	3060	FS-385P-DN200 I	S-384P-DN200	610	152	719	368	12	56	385P™	384₽™	5610
DN250	5610	FS-385P-DN250	S-384P-DN250	610	152	719	368	16	59	385P™	384₽™	5610
DN250	5610	FS-485P-DN250	S-484P-DN250	800	152	719	546	16	64	485P™	484P™	8000
DN300	7990	FS-485P-DN300	S-484P-DN300	799	154	719	546	24	70	485P™	484P™	8000
DN300	7990	FS-685P-DN300	S-384P(2)-DN300	977	154	719	724	24	79	685P™	384P™ (2)	11220

Flange Outlet	Assembly m3/hr Rating	Assembly I Polyester	Assembly Part Number yester Paper		Dimensions - mm A B C			Replacement Element Part No. Polyester Paper	
DN350	9345	FS-391-DN350 FS-	390-DN350	1038	152	1092	368	391	390
DN400	13592	FS-491-DN400 FS-	490-DN400	809	152	1092	546	491	490

PN10 Pattern	Dii	mensions - r	No. of	Flange Thickness	
Flange	O.D.	B.C.	в.н.	Holes	mm
DN200	340	295	22	8	24
DN250	395	350	22	12	26
DN300	445	400	22	12	26
DN350	505	460	22	16	28
DN400	565	515	26	16	32



See Filter Silencer Technical Data for sizing guidelines.





## **Enhanced Filter Silencers for Blowers**

## QBSeries2" - 6",DN80 - DN300

#### **Features**

- Multiple silencing features to reduce and deaden sound
- -Tubular Silencing: Tubes placed to maximize attenuation
- -Quiet Band Support: with "Quiet band" technology, utilizes sound suppression in the design of the housing
- Low pressure drop housing design
- ■Corrosive resistant gray powder coat carbon steel
- Removable top lid for element change-out (DN200-300 sizes)

## **Technical Specifications**

- Temp (continuous):min-26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- ■Polyester: 99%+ removal efficiency to 5 micron
- ■Paper: 99%+ removal efficiency to 2 micron

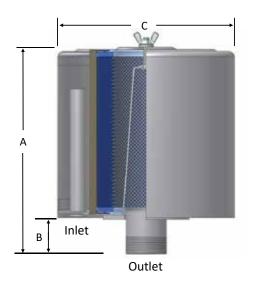


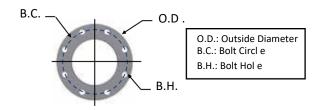
## **Options**



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







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

BSPT	Assembly m3/hr	Assembly F	Assembly Part Number		ensions -	mm	Suggested Service ht.	No. of Silencing	Approx. Weight	Replac Element	ement Part No.	Element m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	mm	Tubes	(kg)	Polyester	Paper	Rating
2"	230 <b>QB</b> -	231P-201	QB-230P-201	301	51	260	241	5	6	231P™	230P™	510
2 1/2"	332 <b>QB</b> -	231P-251	QB-230P-251	307	64	260	241	9	6	231P™	230P™	510
3"	510 <b>QB</b> -	231P-301	QB-230P-301	320	76	260	241	9	6	231P™	230P™	510
3"	510 <b>QB</b>	12)-235P-301 QB(1	2)-234P-301	326	69	311	244	3	13	235P™	234P™	969
3"	510 <b>QB</b> -	275P-301	QB-274P-301	330	76	406	244	9	15	275P™	274₽™	1870
4"	884 <b>QB</b>	12)-235P-401 QB(1	2)-234P-401	352	95	311	244	6	14	235P™	234P™	970
4"	8	34 <b>QB-275P-401</b>	QB-274P-401	356	102	406	244	9	15	275P™	274P™	1870
5"	13	60 <b>QB-245P-501</b>	QB-244P-501	356	102	406	244	14	15	245P™	244P™	1496
5"	13	60 <b>QB-275P-501</b>	QB-274P-501	356	102	406	244	14	16	275P™	274P™	1870
6"	18	70 <b>QB-275P-601</b>	QB-274P-601	394	127	406	244	18	17	275P™	274P™	1870

Flange	Assembly m3/hr	Assembly F	Part Number	Dime	ensions ·	- mm	Suggested Service ht.	No. of Silencing	Approx. Weight	Replacement Element Part No.	Element m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	mm	Tubes	(kg)	Polyester Paper	Rating
DN80	510 <b>QB</b>	12)-235P-DN80 QB(	2)-234P-DN80	326	69	311	244	3	14	235P™ 2 <b>3</b> 4P™	970
DN80	510 <b>QB</b>	275P-DN80	QB-274P-DN80	330	86	406	244	9	15	275P™ 274P™	1870
DN100	884 <b>QB</b>	12)-235P-DN100 QB	12)-234P-DN100	352	95	311	244	6	15	235P™ 2 <b>3</b> 4P™	970
DN100	628420784	<b>2-725/P1D0</b> N100		356	111	406	244	9	18	275P™ 2 <b>7</b> 4P™	1870
DN125	Q3624Q#	- <b>2045</b> 128N125		356	102	406	244	14	17	245P™ 244P™	1496
DN125	Q33627QH	- <b>2075</b> 1280125		356	111	406	244	14	18	275P™ 2 <b>7</b> 4P™	1870
DN150	Q857.2.7Q#E	- <b>2076:P50</b> N150		394	137	406	244	18	19	275P™ 274P™	1870
DN200	620186-8-7061	<b>-337/72D0</b> 1200		584	162	556	368	12	50	377₽™ 376₽™	3105
DN200	62036-88244	- <b>338\$2</b> 9 <b>D</b> N200		584	162	719	368	12	56	385P™ 3 <b>8</b> 4P™	5605
DN250	Ø⊞188 <b>2</b> #	- <b>328\$250</b> N250		584	162	719	368	16	59	385P™ 3 <b>8</b> 4P™	5610
DN250	QB1482#	- <b>4285250</b> N250		787	162	719	546	16	64	485P™ 4 <b>8</b> 4P™	8000
DN300	<b>QB9482</b>	- <b>42853</b> 9 <b>D</b> N300		787	<del>151</del>	<del>719</del>	546	24	70	485P™ 4 <b>8</b> 4P™	8000
DN300	<b>QB983#</b>	( <b>285)N3013</b> 00		965 1346	162	719 719	724	24	79	685P™ 3 <b>8</b> 4P™	11220
DN300	7990 <b>Q</b> E	-485P(2)-DN300 QB-	484P(2)-DN300	1340	102	, <u>, , , , , , , , , , , , , , , , , , </u>	546	24	88	485P™ 4 <b>8</b> 4P™	16000

See Filter Silencer Technical Data for sizing guidelines.





# Discharge Silencer Frames for PD Blowers

## BBFSeries2" - 6"

#### **Blower Market Solutions**

Maximize Productivity - From junior to experienced technicians, assemble & ship blower packages faster with fewer resources.

Significant Costs Savings - Only one vendor needed to help you improve margins through lower labour and material handling costs.

**Engineering Support** - Design specifications and drawings are available to help you configure and present your package to your customers.

Ultra Compact Design - Integrated Discharge Silencer offers a low profile and small footprint.

Build Your Sound Enclosure Competitively - The compact design allows you to build significantly smaller and less costly enclosures to meet more stringent noise level requirements.



BBF Series frame shown with optional equipment.

## **Benefits**

- Compactdesign for small blower package footprint
- Low profile allows for easier maintenance inspections
- Quick installation time
- tost savings (minimal packaging, freight & storage)
- sound enclosures are more economical due to compact frame footprint
- Engineering support provided by Solberg for sizing specifications and specific requirements

# **Technical Specifications**

- Pressure rating: 1barg
- Hardware kit included (USA std. nuts, bolts, washers)
- orts for relief valve, pressure & temperature gauges

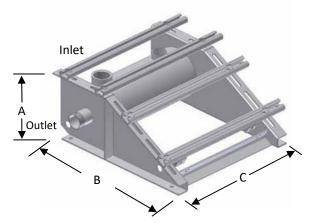
#### **Features**

- Reactivestyle silencing design
- Integrated discharge silencer
- Adjustable motor supports for belt tensioning
- re-assembled rails to frame
- corrosive resistant black powder coat carbon steel
- Assembly hardware included

#### **Options**

- Purpose built belt guard
- lexible boot kit (clamp, flex adapter)
- lange adapters
- nubber discharge silencer for vacuum applications
- ntact factory for best Solberg filter for your package





Pipe Stub	Stub MPT m3/hr Part Number		Part Number	Dim	ensions -	mm	Relief Valve	Suggested	Approx. Weight	Belt Guard	for BBF Series	Boot Kit Part
Inlet	Outlet	Rating		Α	В	С	Port	HP Range	(kg)	Part No.	Weight (kg)	Number
2"	2"	230	BBF-200	305	699	597	2 1/2"		59	DL-200	9	BK200
2 1/2	"2 1/2"	332	BBF-250	305	699	597	2 1/2"	5 - 20+	59	DL-200	9	BK200
3"	3"	510	BBF-300	386	889	711	2"	10 - 50	81	DL-300	10	BK300
4"	4"	884	BBF-400	386	889	711	2"	10 - 50	81	DL-300	10	BK400
6"	6" Flange	1870	BBF-600F	451	1003	977	3"	20 - 60	179	DL-600	13	BK600

## **Optional Accessories**



Belt guard



Boot kit (includes flexible boot and 2 clamps).





# Side Channel Blower Silencers

## SLCR, SLCRT Series 1/2-4"

#### **Features**

- Absorptive media pack
- Designed for minimal pressure drop
- ■For inlet and discharge inline air service
- ■Corrosive resistant gray powder coat carbon steel: 1/2" to 1 connections; epoxy coat finish: 2" to 4" connections

## **Technical Specifications**

- ■Max. temperature (continuous): 107°C (225°F)
- ■Due to the wide range of equipment and environments, please contact factory for typical noise attenuation for your application

### **Options**

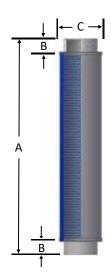
- ■Flange adapters
- For additional sizes, contact factory
- ■Special connections
- Hi-temp models

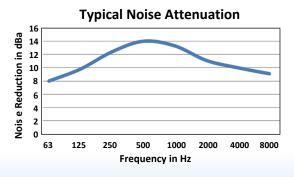
Inlet/ Size	Outlet Type	Assembly m3/hr Rating	Part Number	Dime A	ensions - B	mm C	Approx. Weight (kg)
1"	BSPP	71	SLCR101	304	19	64	1.0
1 1/4	" BSPP	94	SLCR126	306	19	64	1.0
1 1/2	" BSPP	264	SLCR151	306	19	64	1.3
2"	RSPP	459	SLCR201	399	N/A	89	1.8
2 1/2	" BSPP	509	SLCR251	533	31	118	3.6
3"	BSPP	560	SLCR301	657	40	132	4.5
4"		978	SLCR401	621	40	254	12

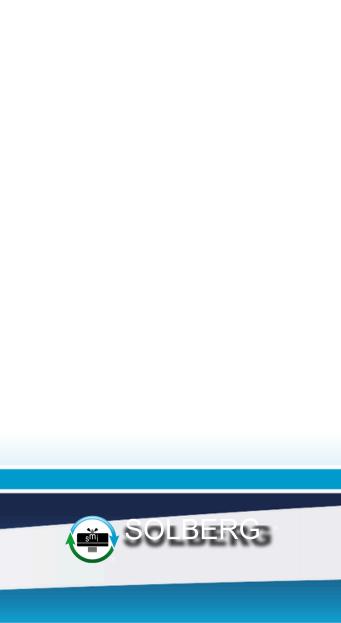
1/2	NPT	43	SLCRT050	352	43	64	1.0
3/4	NPT	60	SLCRT075	368	51	64	1.0
1"	BSPT	71	SLCRT101	368	51	66	1.0
1 1/4	BSPT	94	SLCRT126	368	51	64	1.0
11/2	BSPT	264	SLCRT151	368	51	66	1.3
2"	BSPT	459 <b>SLC</b>	RT201	487	44	89	1.8
2 1/2	BSPT	509	SLCRT251	601	67	118	3.6
3"	BSPT	560 <b>SLC</b>	RT301	711	67	130	4.5
4"	BSPT	978 <b>SLC</b>	RT401	744	102	254	12

Note: MPT and FPT threaded housings are interchangeable with BSPT and BSPP up to 1".













# **Inlet Filters**

Technical Data	5-2
Compact Inlet Filters: F Series	5-4
Big Boy Inlet Filters: F Series	5-6
Exposed Inlet Filters: FT Series	5-8
Extreme Duty SpinMeister® Filters: SM Series	5-10





# **Technical Data**

## **Inlet Filter Assemblies**

## **Applications & Equipment**

- ■Industrial &SevereDuty
- ■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

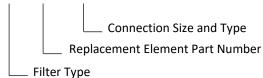
### **Identification**

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

- Assembly Model #
- Replacement Element #

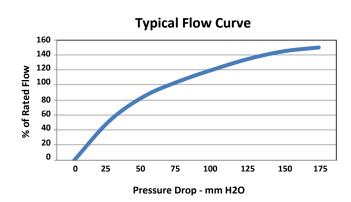
The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being an "F" design filter with a "385™" element, "P" prefilter and DN250 flange connection size.

## F-385P-DN250



## Typical Flow Curve

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



### **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.)
  - a. Verify assembly m3/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 m3/hr (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.

#### **Element Maintenance**

Solbergelements 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.





# Compact Inlet Filters

# F Series 1/2 - 6",DN80 - DN150

#### **Features**

- Fully drawn weatherhood
- Low entry velocity air gap between base and cover
- Heavy gauge base with low pressure drop outlet pipe and center bracket design
- ■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
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron

## Options

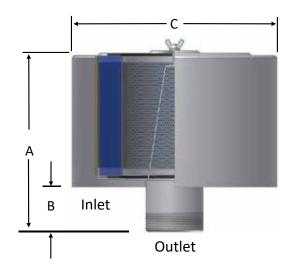
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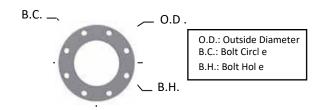
ATEX Available

- Tapholes available
- Pressure drop indicator
- ■Various media for different environments
- Stainless steel construction
- ■Various nonstandard finishes and connection styles









PN10 Pattern	Dir	nensions - n	nm	No. of	Flange Thickness
Flange	O.D.	B.C.	B.H.	Holes	mm
DN80	200	160	18	8	20
DN100	220	180	18	8	22
DN125	250	210	18	8	22
DN150	285	240	22	8	24

Out	tlet	Assembly m3/hr	Assembly F	Part Number	Dim	nensions -	mm	Suggested Service ht.	Approx. Weight		ent Element : No.	Element m3/hr
A Size	Туре	Rating	Polyester	Paper		В	С	mm	(kg)	Polyester	Paper	Rating
<sup>88</sup> 1/2"	MPT	17	F-15-050	F-14-050		23	155	59	0.68	15™	14™	60
96 <sup>2</sup> /2"	MPT	43	F-15-075	F-14-075		31 31	155 155	59	0.77	15™	14™	60
165 165	MDT	60	F-15-100	F-14-100		31	155	59	0.86	15™	14™	60
178"	BSPT	94	F-19P-100 F-19P-126	F-18P-100 F-18P-126		44	155	121	1.4	19P®	18P™	170
17 <u>8</u> 1/4	' BSPT	119	F-19P-151	F-18P-151		44	155	121	1.4	19P®	18P™	170
18 <u>6</u> 1/2	BSPT	145	F-31P-201	F-30P-201		57	200	121	1.4	19P®	18P™	170
3072"	BSPT	230	F-231P-201 F-2	B0P-201		57	260	121	2	31P™	30P™	332
205 <sub>2″</sub> 309	BSPT	230 332				64 64	200 260	241	5	231P™	230P™	510
<u>2</u> 1/2	RSDT	F <sub>2</sub> 33P-25	1	F-30P-251		76	260	121	2	31P™	30P™	332
<u>, 2</u> 1/2	RSDT	F-231P-2	51	F-230P-251		76	260	241	6	231P™	230P™	510
3383"	BSPT	I 510	01 F-230P-301			76	406	241	6	231P™	230P™	510
3483"	BSPT	<b>F-235P-</b> 3	01 F-234P-301			102	260	244	/	235P™	234P™	970
3593"	BSPT	I 885	01 F-274P-301			102	308	244	11	275P™	274P™	1870 970
359 <sup>4</sup> "	BSPT		01 F-234P-401			102	406	244	7	235P™	234P'M	1496
35 <b>1</b> 4"	BSPT		01 F-244P-401			102	308	244 244	10 12	245P™	244P™	1870
356 <sup>4</sup> "	BSPT	,	01 F-274P-401			102	406	244	10	275P™	274P™	1500
384 <sup>5</sup> "	BSPT		45P-501 F-244F			127	406	244	10	245P™	244P™	1870
5"	T thread		75P-501 F-274F	ት <b>501</b> ዓ <mark>ት</mark> ው1with BSPT ፡	n to 1"			244	13	275P™	274P™	1870
6, 1411		1870 4-2	73P-0017-274H	+001	op to I .				13	2/3P**	2/4P	1070

Flange	Assembly m3/hr		Assembly Part Number		Dimensions - mm			Approx. Weight	Part	nt Element No.	Element m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	mm	(kg)	Polyester	Paper	Rating
DN80	510	F-245P-DN80	F-244P-DN80	330	86	308	244	10	245P™	244P™	1496
DN80	510	F-275P-DN80	F-274P-DN80	330	76	406	244	10	275P™	274P™	1870
DN100	885	F-235P-DN100 F-2	34P-DN100	348	102	260	244	9	235P™	234P™	970
DN100	885	F-275P-DN100 F-2	74P-DN100	359	102	406	244	14	275P™	274P™	1870
DN125	1360	F-245P-DN125 F-2	44P-DN125	351	111	406	244	12	245P™	244P™	1500
DN125	1360	F-275P-DN125 F-2	74P-DN125	353	102	406	244	14	275P™	274P™	1870
DN150	1870	F-275P-DN150 F-2	74P-DN150	384	137	406	244	15	275P™	274P™	1870

See Filter Assembly Technical Data for sizing guidelines.





# Big Boy Inlet Filters

## FSeriesDN200 - DN400

#### **Features**

- ■Heavy gauge base with low pressure drop outlet pipe and center bracket design
- Low entry velocity air gap between base and cover
- ■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
- Pressure drop graphs available upon request
- ■Polyester: 99%+ removal efficiency standard to 5 micron
- ■Paper: 99%+ removal efficiency standard to 2 micron

## **Options**



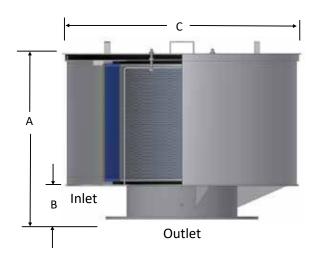
- Tapholes available
- Pressure drop indicator
- Various media for different environments
- Stainless steel construction
- ■Various nonstandard finishes and connection styles

## Sumo Class Features

- Single barrelfilter design allows for large airflows in space restricted work areas
- ■DN350 to DN400 flange connections available
- ■Designed for airflows up to 13592 m3/hr



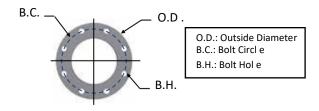




Flange	Assembly m3/hr	Assembly I	Assembly Part Number		nensions -	mm	Suggested Service ht.	Approx. Weight	Part		Element m3/hr
Outlet	Rating	Polyester	Paper	Α	В	С	mm	(kg)	Polyester	Paper	Rating
DN200	3060	F-377P-DN200	-376P-DN200 F-	581	152	556	368	31	377₽™	376P™	3105
DN200	3060	385P-DN200 F-38	4P-DN200 F-385P-	584	152	719	368	56	385P™	384P™	5605
DN250	5610	DN250 F-384P	DN250 F-485P-	584	152	719	368	59	385P™	384₽™	5610
DN250	5610	DN250 F-484P	DN250 F-485P-	762	152	719	546	64	485P™	484P™	8000
DN300	7990	DN300 F-484P	DN300 F-685P-	765	156	719	546	70	485P™	484P™	8000
DN300	7990	DN300 F-384P(2)-	DN300	978	152	719	724	79	685P™	384P™(2)	11220

Flange	Assembly m3/hr	Assembly P	art Number	Dim	ensions - r	nm	Suggested Service ht.	Replacement Element Part No.	
Outlet	Rating	Polyester	Paper	Α	В	С	mm	Polyester	Paper
DN350	9345	F-391-DN350	F-390-DN350	631	156	1092	368	391	390
DN400	13592	F-491-DN400	F-490-DN400	812	156	1092	546	491	490

PN10 Pattern	Dir	mensions - n	nm	No. of	Flange Thickness
Flange	O.D.	B.C.	в.н.	Holes	mm
DN200	340	295	22	8	24
DN250	395	350	22	12	26
DN300	445	400	22	12	26
DN350	505	460	22	16	28
DN400	565	515	26	16	32



See Filter Assembly Technical Data for sizing guidelines.





# **Exposed Inlet Filters**

# FT Series 1/2 - 6",DN80 - DN300

#### **Features**

- Exposedelement for optimal air flow & low restriction
- Heavy gauge base with low pressure drop outlet pipe and center bracket design
- Corrosive resistant gray powder coat carbon steel

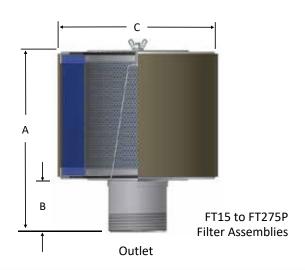
### **Technical Specifications**

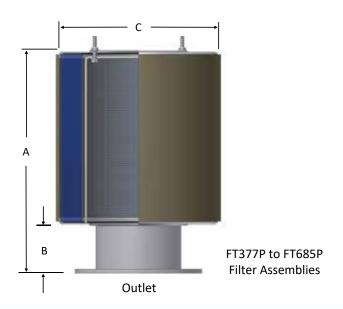
- Temp (continuous):min-26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

### **Options**

- Tapholes available
- Pressure drop indicator
- Various media for different environments
- Stainless steel construction
- ■Various nonstandard finishes and connection styles







Ou	tlet	Assembly m3/hr	Assembly P	art Number	Dim	nensions - I	mm	Suggested Service ht.	Approx. Weight		nt Element	Element m3/hr
Size	Туре	Rating	Polyester	Paper	Α	В	С	mm	(kg)	Polyester	Paper	Rating
1/2"	MPT	F17715-0	50	FT-14-050	85	23	117	59	0.54	15™	14™	60
3/4"	MPT MPT	F4315-0	75	FT-14-075	93	32	117	59	0.59	15™	14™	60
1"	MPT	F8015-1	00	FT-14-100	93	32	117	59	0.63	15™	14™	60
1"	BSPT	P\$7419P-	100	FT-18P-100	157	32	124	121	0.81	19P®	18P™	170
1 1/4'	BSPT	119 <b>FT</b> -:	9P-126	FT-18P-126	169	44	124	121	0.81	19P®	18P™	170
1 1/2'	BSPT	145 <b>FT</b> -:	9P-151	FT-18P-151	169	44	117	121	0.90	19P®	18P™	170
2"	BSPT	230 <b>FT</b> -3	1P-201	FT-30P-201	184	57	152	121	1.35	31P™	30P™	332
2"	BSPT BSPT	230 <b>FT</b> -2	31P-201 FT-230	P-201	301	57	152	241	3	231P™	230P™	510
2 1/2'	BSDT	332 <b>FT</b> -3	1P-251	FT-30P-251	191	64	152	121	2	31P™	30P™	332
2 1/2'	RSPT		332 <b>FT-231P-25</b> :	FT-230P-251	308	64	152	241	3	231P™	230P™	510
3"	RSPT		510 <b>FT-231P-30</b> :	FT-230P-301	320	76	152	241	4	231P™	230P™	510
3"	RSPT		510 <b>FT-235P-30</b> :	FT-234P-301	325	76	206	241	6	235P™	234P™	970
3"	BSPT		510 <b>FT-275P-30</b> :	FT-274P-301	330	76	305	244	10	275P™	274P™	1870
4"	BSPT		885 <b>FT-235P-40</b> :	FT-234P-401	348	102	206	241	8	235P™	234P™	<del>970</del>
4"	BSPT		885 <b>FT-275P-40</b> :	FT-274P-401	356	102	305	244	11	275P™	274P™ 274P™	1870
5"		1	360 <b>FT-275P-50</b> :	FT-274P-501	356	102	305	244	11 12	275P™	274P™ 274P™	1870 1870
6"		1	870 <b>FT-275P-60</b> :	FT-274P-601	381	127	305	244	12	275P™	<u> </u>	18/0

Note: MPT threaded housings are interchangeable with BSPT up to 1".

Flange	Assembly m3/hr		Assembly Part Number		ensions -		Suggested Approx. Service ht. Weight		Part		Element m3/hr
Outlet	Rating	Polyester	Paper	A	В	С	mm	(kg)	Polyester	Paper	Rating
DN80	510	FT-235P-DN80 FT	234P-DN80	330	76	206	241	6	235P™	234P™	970
DN80	510	FT-275P-DN80 FT-	274P-DN80	330	76	305	244	10	275P™	274P™	1870
DN100	885	FT-235P-DN100 F	-234P-DN100	349	102	220	241	7	235P™	234P™	970
DN100	885	FT-275P-DN100 F	-274P-DN100	356	102	305	244	11	275P™	274P™	1870
DN125	1360	FT-275P-DN125 F	-274P-DN125	356	102	305	244	13	275P™	274P™	1870
DN150	1870	FT-275P-DN150 F	-274P-DN150	381	137	305	244	14	275P™	274P™	1870
DN200	3060	FT-377P-DN200 F	T-376P-DN200	584	152	381	368	29	377P™	376P™	3105
DN200	3060	FT-385P-DN200 F	T-384P-DN200	563	162	518	368	32	385P™	384₽™	5605
DN250	5610	FT-385P-DN250 F	T-384P-DN250	563	162	518	368	36	385P™	384₽™	5610
DN250	5610	FT-685P-DN250 F	-384P(2)-DN250	944	162	518	724	43	685P™	384P™(2)	11220
DN300	7990 7000	FT-485P-DN300 F	-484P-DN300	767	162	518	546	41	485P™	484P™	8000
DN300	<del>7990</del>	FT-685P-DN300 F	1-384P(2)-DN300	944	162	518	724	45	685P™	384P™(2)	11220

PN10 Pattern	Dir	nensions - n	nm	No. of	Flange Thickness
Flange	O.D.	B.C.	в.н.	Holes	mm
DN80	200	160	18	8	20
DN100	220	180	18	8	22
DN125	250	210	18	8	22
DN150	285	240	22	8	24
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 Circl e
B.H.: Bolt Hol e

See Filter Assembly Technical Data for sizing guidelines.





# **Extreme Duty Filters**

## SpinMeister SM Series 1/2 - 4", DN80 - 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

- Extremeduty 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

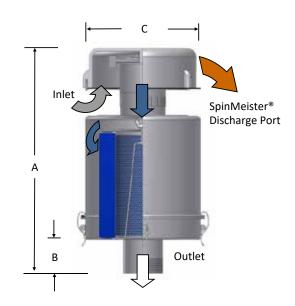
## **Technical Specifications**

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

## **Options**

- Tapholes available
- SpinMeister® available in polished aluminum
- elected housings available in stainless steel
- Modify to meet specific application











Configuration B



Configuration C



Configuration D

Configur Out Size		Assembly m3/hr Rating	Assembly I	Part Number Paper	Dim A	ensions - B	mm C	Suggested Service ht. mm	Approx. Weight (kg)		ement Part No. Paper	Element m3/hr Rating
1/2"	MPT	51	SM1.5-11-050	SM1.5-10-050	177	23	105	35	0.7	11™	10™	59
3/4"	MPT	51	SM1.5-11-076	SM1.5-10-076	183	31	105	35	0.7	11™	10™	59
1/2"	BSPT	59	SM2-11-050	SM2-10-050	191	23	122	35	0.9	11™	10™	59
3/4"	BSPT	59	SM2-11-076	SM2-10-076	212	31	122	35	0.9	11™	10™	59
1"		59	SM2-11-101	SM2-10-101	207	31	122	35	0.9	11™	10™	59

Configur	ration B											
1"	BSP	169	SM2-19P-	SM2-18P-	300	51	175	121	1.7	19P®	18P™	170
1 1/4	T	169	101 SM2-	101 SM2-	300	51	175	121	1.7	19P®	18P™	170
1 1/2	BSP	145	19P-126	18P-126	300	51	175	121	1.7	19P®	18P™	170
2"	Т	170	SM2-19P-	SM2-18P-	312	64	175	121	1.8	19P®	18P™	170
2 1/2	BSP	170	151 SM2-	151 SM2-	325	76	175	121	1.8	19P®	18P™	170
	Т		19P-201	18P-201								

Configur	ration C		SM2-19P-	SM2-18P-								
3"	BSPT	425	SM3-235P-301	SM3-234P-301	525	76	279	245	14	235P™	234P™	968
4"	BSPT 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	520	102	279	245	15	235P™	234P™	968
DN80	FLG	425	SM3-235P-DN80	SM3-234P-DN80	522	86	279	245	16	235P™	234P™	968
DN100	FLG	425	SM3-235P-	SM3-234P-	541	105	279	245	16	235P™	234P™	968
DN100	FLG	680	DN100 SM4-	DN100 SM4-	522	102	279	245	16	235P™	234P™	968

			235P-DN100	234P-DN100								
Configu	ration D											
DN150	FL	1360	SM62-377P-DN150	SM62-376P-DN150	1023	137	508	370	40	377P™	376P™	3100
DN200	G	3060	SM62-377P-DN200	SM62-376P-DN200	1039	152	508	370	46	377₽™	376P™	3100
DN250	FL	4590	SM63-385P-DN250	SM63-384P-DN250	1052	162	719	370	62	385P™	384P™	5598
DN300	G	4590	SM63-485P-DN300	SM63-484P-DN300	1221	152	719	546	73	485P™	484P™	7993

FL

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

See Filter Assembly Technical Data for sizing guidelines.



O.D.: Outside Diameter B.C.: Bolt Circl e B.H.: Bolt Hol e



## Did you know?

Our elements come in a variety of sizes, shapes, and media. Whether you need Polyester, Paper, HEPA or a specialty media, we have what you're looking for. We also offer many different end cap styles and materials from plastic, to rubber, to metal.

Find these on our website at www.solbergmfg.com/replacement-elements





# **Replacement Elements**

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# **Technical Data**

## **Filter Elements**

## Filter Element Efficiency

When choosing a filter mediatype, an accurate and useful filter efficiency rating must have two components: efficiency and micron filtration rating. The micron rating of a media means very little if the efficiency percentage is unknown. For example, a 1 micron media rated at 60% efficiency may offer less filtration than a 5 micron media rated at 99% efficiency. Always make sure you have both when you compare different media types for your application.

#### **Element Maintenance**

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

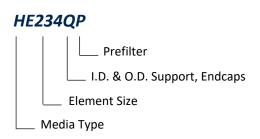
Note: The overall performance of a filter element is altered once cleaned. The initial pressure drop after subsequent cleanings will be greater than the original, clean pressure drop of the element. After each cleaning, the pressure drop will continue to increase. Under all circumstances, the initial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

Request the appropriate maintenance manual for more in-depth information from your Solberg representative or through www.solbergmfg.com.

## **Identification**

The elementpart number designates media type, and depending on the element: support material, gasket type, potting adhesive, and if it comes with an element prefilter wrap. For example, the following part number HE234QP, identifies the filter element as having a HEPA media "HE", with dimensions of a 234™ element, "Q" designates stainless steel ID & OD & endcaps, and "P" means it has a prefilter wrap. See partial list below for other filter media designations.



#### Filter Media Nomenclature

Polyester Std.: 5 μm, i.e. 385™ Paper Std.: 2 μm, i.e. 384™ Z Media: 1 μm Polyester, i.e. 15Z HE Media: HEPA, i.e. HE10 UL Media: ULPA, i.e. UL234 DT Media: Dutch Twill, i.e. DT375 MX Media: Nomex, i.e. 377MX

#### (contact Solberg for other media types and stain less steel.)

TF Media: PTFE, i.e. TF345
TG Media: Hi-Temp PTFE, i.e. TG235
PSG Media: Coalescing, i.e. PSG244
AC Media: Activated Carbon, i.e. AC18
GMAC Media: Activated Carbon, i.e. GMAC19
AA Media: Activated Alumina, i.e. AA850
ACG Media: AC Granulate, i.e. ACG30

RY Media: PPS, i.e. RY485 Y Media: Polypropylene, i.e. 849Y ZE Media: Zeolite, i.e. ZE848 S Media: Wire Mesh, i.e. 274S N Media: 4 µm Polyester, i.e. 231N U Media: 25 µm Polyester, i.e. 685U W Media: 100 µm Polyester, i.e. 15W

### **Polyester Element Features**

- Identifiedtypically by"oddnumber" nomenclature: i.e. 19®, 235P™
- Pleated industrial needle felt polyester media
- Reinforced with epoxy coated steel wire on both sides of the media
- Dust loading capacity is increased 40-50% with prefilter "P" designation at end of element part number i.e.: 235P™

## **Technical Specifications**

■ ■ Encron, 99+% efficiency Media classification: EU6

Temperature min: -26°C (-15°F), max: 104°C (220°F)

## **Advantages**

- Less maintenance: washable
- More durable
- Moisture resistant
- Handles hot air and oil mist from unload cycle of reciprocating/piston compressor

## **Paper Element Features**

- Identified typicallyby "evennumber" nomenclature: i.e. 18™, 234P™
- Heavy duty industrial strength paper surrounded by galvanized expanded metal
- Dust loading capacity is increased 40-50% with prefilter "P" designation at end of element part number i.e.: 234P™

## **Technical Specifications**

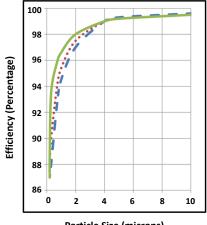
■ ■ Mcron, 99+% efficiency Media classification: EU6

Temperature min: -26°C (-15°F), max: 104°C (220°F)

## **Advantages**

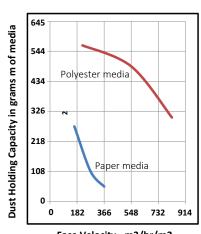
- Optimal surface area available
- Higher efficiency than many alternative media
- Cost effective

### **Polyester Media Efficiency**



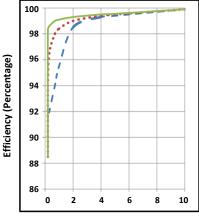
Particle Size (microns)

# Face Velocity vs. Dust Holding Capacity



Face Velocity - m3/hr/m2

## **Paper Media Efficiency**



Particle Size (microns)

#### Indicated Face Velocity:



Note: Efficiency charts are based on SAE Fine Dust Test.

#### Indicated Face Velocity:







# Filter Media Specifications

## **Filter Elements**

#### Standard Media

**5 μm Polyester:** 5 micron, 99+% efficiency

- ID: "odd number": i.e. 19®, 235P™
- Classification: ePM10 75% (ISO 16890)
- Pleated industrial needle felt polyester media
- Plastisol potting
- Temperature min: -26°C (-15°F), max: 104°C (220°F)
- Reinforced epoxy coated steel wire on ID and OD

2 μm Paper: 2 micron, 99+% efficiency

- ID: "even number": i.e. 18<sup>™</sup>, 234P<sup>™</sup>
- Classification: ePM2.5 50% (ISO 16890)
- Heavy duty industrial strength paper
- Plastisol potting
- Galvanized expanded metal
- Temperature min: -26°C (-15°F), max: 104°C (220°F)

## High Efficiency

1 µm Polyester - Z Media: 1 micron, 99+% efficiency

- ID: "odd number" & "Z" suffix: i.e. 1*9Z*, 23*5Z*P
- Classification: ePM2.5 60% (ISO 16890)
- Epoxy coated steel wire on both sides of media
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Washable lukewarm water & mild detergent

4 μm Polyester - N Media: 4 micron, 99+% efficiency

- ID: "odd number" & "N" suffix: i.e. 15N, 377NP
- Temp min: -26°C (-15°F), max: 104°C (220°F)

**E12 - HE Media:** 0.3 um, 99,97%

- ID: "HE" prefix & "even number": i.e. *HE*23*0*, *HE*33*4*P
- Classification: E12 under EN 1822/ISO 30E under ISO 29463)
- Heavy duty industrial strength glass surrounded by galvanized expanded metal
- Maximum oversizing required to minimize pressure drop
- Plastisol potting standard
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Options: silicone potting, viton gaskets

H14 - UL Media: 0.1 micron, 99.995% efficiency

- ID: "UL" prefix & "even number": i.e. *UL*234
- Classifcation: H14 under EN1822/ISO45H under ISO 29463
- Plastisol potting
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Options: silicone potting, viton gaskets

**Dutch Twill Weave - DT Media** 

- ID: "DT" prefix & "odd number": i.e. **DT**245
- Classification: ePM10 70% (ISO 16890)
- Stainless steel woven wire cloth
- Viton gaskets & epoxy potting
- Temp min: -26°C (-15°F), max: 190°C (375°F)

### Chemical / Food / Pharmaceutical

#### StainlessSteelWireMesh - S2 Media

- Stainless steel pleated wire mesh
- ID: "even number" & "S2" suffix: i.e. 1452
- Stainless steel expanded metal
- Chemical resistant and high temperature resistant
- Available with silicone endcaps

Polypropylene (PP) - Y Media: 5 micron, 99+% efficiency

- ID: "odd number" & "Y" suffix: i.e. 317, 3457P
- Epoxy coated steel wire on ID and OD

PTFE - TG Media: 0.3 micron, 99.5% efficiency

ID: "TG" prefix & "odd number": i.e. *TG*375 ■ Classification: E11 under EN1822/ISO 15E under ISO 29463 ■ High temperature, chemical, & moisture resistant ■ Options: viton gaskets, epoxy potting ■ Temp (intermittent): Up to 250°C (482°F) PTFE - TF Media: 0.3 micron, 99.5% efficiency ■ ID: "TF" prefix & "odd number": i.e. *TF*275 ■ Classification: E11 under EN1822/ISO 15E under ISO 29463 ■ Chemical & moisture resistant ■ Minimal pressure drop ■ Temp (intermittent): 104°C (220°F) ■ Options: viton gaskets, epoxy potting

#### **PPS - RY Media**

- Broad chemical resistant media, high temp
- ID: "RY" prefix & "odd number": i.e. **RY**48**5**
- Temp min: -15°F (-26°C), max: 220°F (104°C) Options: viton gaskets, epoxy

potting

## **Coarse Efficiency**

25 µm Polyester - U Media: 25 micron, 99+% efficiency

- ID: "odd number" & "U" suffix: i.e. 190, 6850P
- Temp min: -26°C (-15°F), max: 104°C (220°F)

100 µm Polyester - W Media: 100 micron, 99+% efficiency

- ID: "odd number" & "W" suffix: i.e. 15W, 385WP
- Temp min: -26°C (-15°F), max: 104°C (220°F)

#### Wire Mesh - S Media

- Epoxy coated pleated wire mesh
- ID: "even number" & "S" suffix: i.e. 2745, 3445P
- Expanded metal
- Temp min: -26°C (-15°F), max: 104°C (220°F)

#### Stainless Steel - S2 Media

- Stainless steel pleated wire mesh
- ID: "even number" & "S2" suffix: i.e. 23452
- Chemical resistant and high temperature resistant
- Stainless steel expanded metal
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Options: silicone or epoxy potting, viton gaskets

## **High Temperature**

Nomex - MX Media: 5 Micron, 99+% efficiency

- ID: "odd number" & "MX" suffix: i.e. 37**7MX**
- Classification: ePM10 80% (ISO 16890)
- Silicone potting
- Temperature min: -15°F (-26°C), max: 385°F (196°C)
- Reinforced epoxy coated steel wire on ID and OD

#### Nomex with Stainless Steel Support - MXD Media

- 5 micron, 99+% efficiency
- ID: "odd number" & "MX" suffix: i.e. 377 MXD
- Classification: ePM10 80% (ISO 16890)
- Silicone potting
- Reinforced stainless steel wire mesh on ID and OD
- Temperature min: -26°C (-15°F), max: 196°C (385°F)

Note 1: Elements rated for higher temperatures can be achieved with optional gasket material and potting compounds.

Note 2: Classifications are best estimates based on ISO 16890-1:2016.

## **Chemical Adsorption**

Activated Carbon - AC Media: 10 micron, 99+% efficiency

- ID: "AC" prefix & "even number": i.e. AC18
- Removes gas or vapour odors, contaminants, & particulate
- Pleated media
- Reinforced with epoxy coated steel wire on both sides of cloth

#### **Activated Carbon Granulate - ACG Media**

- ID: "ACG" prefix & "even number": i.e. ACG30
- Removes gaseous or vapour odors
- Granulates are enclosed within a polyester wrap and expanded metal on the ID and OD

#### **Activated Alumina - AA Media**

- ID: "AA" prefix & "even number": i.e. AA850
- Desiccant used in the adsorption of water & oil vapour and the prevention of backstreaming in pumps
- Adsorbs up to 40% of media's weight

#### **Activated Carbon - GMAC Media**

- 3 micron, 70% efficiency
- ID: "GMAC" prefix & "odd number": i.e. *GMAC*235
- Superior odor removal
- Chemically inert

## **Coalescing Media**

#### PSG Media, FG Media, GL Media

- 0.3 micron, 99.97% efficiency
- ID: "PSG" prefix & "even number": i.e. **PSG**344
- ID: "FG" prefix: i.e. *FG*9
- ID: "GL" prefix: i.e. *GL*915
- Heavy duty industrial glass media, reinforced with epoxy coated steel wire & expanded metal
- Continuous operating temp: 20°C (68°F) to 80°C (180°F)
- Environmentally friendly sealing material
- High D.O.P. efficiency low oil carryover
- Multiple media configurations, contact factory







# Replacement Elements - Standard

## 60 - 13600m³/hrFlowRange

#### **Features**

- ■Pleatedmedia for high dirt holding capacity
- Polyester: reinforced with epoxy coated steel wire on both sides of cloth, expanded metal I.D.
- ■Paper: heavy duty industrial strength paper surrounded by galvanized expanded metal
- ■40 50% increased dust loading capacity with prefilter (part number suffix P)

## **Technical Specifications**

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



**Paper Elements** 

## Polyester Media Benefits/Specs

- Lessmaintenancedue tolonger durability
- Moisture resistant
- Handles hot air and oil mist from unload cycle of reciprocating/piston compressor
- ■Washable with lukewarm water and mild detergent\*

## Paper Media Benefits/Specs

- Cost effective
- ■Gently blow out media\*



**Polyester Elements** 

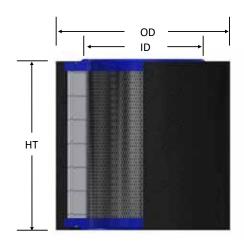
## **Endcap Construction**

■M = Moldedplastisol

■B = Closed one end with bolt hole, open on other end

■G = Galvanized metal

■N = Neoprene blended gasket on open endcaps



## Replacement Elements up to 510 m³/hr flow

Element Pa	Element Part Number Element m³/hr		Surface	Din	Std. Endcap			
Polyester	Paper	Rating	Polyester	Paper	I.D.	O.D.	H.T.	Features
15P™	14P™	60	0.05	0.10	76	111	59	М
19P®	18P™	170	0.14	0.28	76	111	122	М
31P™	30P™	335	0.21	0.58	92	146	124	М
35P	34P	470	0.37	1.02	121	200	123	М
231P™	230P™	510	0.42	1.10	92	146	241	M

Note: Also available in wire mesh. Example part number for wire mesh: 230S

See Element Technical Data for maintenance guidelines.

## Replacement Elements up to 13600 m³/hr flow

Element Pa	rt Number	Element	Surface	Area m²	Dir	nensions - r	nm	Cul Endon
Polyester	Paper	m³/hr Rating	Polyester	Paper	I.D.	O.D.	H.T	Std. Endcap Features
237™	236	935	0.8	2.1	119	197		GBN
235P™	234P™	968	0.8	2.1	121	200	219	M
335P™	334P™	1360	1.1	3.2	121	200	241	М
239P™	238P™	968	1.2	4.5	123	234	361	GBN
2541	2540	1360	1.4	3.3	152	229	267	G
245P™	244P™	1500	1.3	3.3	152	248	300	GN   M
345P™	344P™	1870	2.1	5.3	152	248	245	GN
275P™	274P™	1869	1.8	4.1	203	298	367	GN
375P™	374P™	2550	2.9	6.4	203	298	246	GN
377P™	376P™	3105	4.4	11	229	371	367	GN
385P™	384P™	5610	4.4	13.2	356	499	367	GN
391	390	9350	8.6	22.3	565	708	367	GN
485P™	484P™	8000	6.7	20.1	356	499	383	GN
491	490	13600	13.1	32.5	565	708	545	GN
685P™		11220	9		356	498	561	GN

Note: Most are available in wire mesh. Example part number for wire mesh: 274S  $\,$ 

Additional media available, contact factory or see Filter Media Specifications. See Element Technical Data for maintenance guidelines.



<sup>\*</sup>Replacing element is recommended.



# Replacement Elements - 800 Series

# SmallVacuumPumps10 - 640m/hrFlowRange

#### **Features**

- Pleated media for high dirt holding capacity
- olyester: reinforced with epoxy coated steel wire on both sides of cloth, expanded metal I.D.
- Paper: heavy duty industrial strength paper surrounded by galvanized expanded metal O.D.
- ■40 50% increased dust loading capacity with prefilter (part number suffix P)

## **Technical Specifications**

- Polyester: 99+% removal efficiency to 5 micron
- ■aper: 99+% removal efficiency to 2 micron
- emp (continuous): min -26°C (-15°F), max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP

## Polyester Media Benefits/Specs

- Less maintenance due to longer durability
- Moisture resistant
- Handles hot air and oil mist from unload cycle of reciprocating/piston compressor
- ■Washable with lukewarm water and mild detergent\*

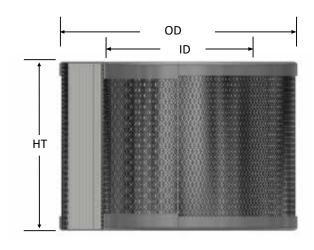
## Paper Media Benefits/Specs

- Cost effective
- Eently blow out media\*

#### **Endcap Construction**

- B = Closed one end w/bolt hole C = Closed one
- ■nd E = EPDM gasket F = Felt gaskets on open
- ndcaps G = Galvanized metal H = Felt gasket
- n bolt hole M = Molded plastisol N =
- Neoprene blended gasket on open endcaps R =
- Mixed rubber/cork gasket on open endcaps





Paper Replacement Elements				, Di	mensions - m	m	
Solberg Part Number	Mann Ref Number	m³/hr Rating	Surface Area m	ı² I.D.	O.D.	н.т.	Std. Endcap Features
800	C31	10	0.013	10	30	30	GB
802	C31/1	10	0.020	10	30	37	GB
804	C32	20	0.033	10	30	62	GB
806	C42/1	15	0.031	13	38	37	GB
808	C42/2	10	0.017	13	38	29	GB
810	C43 C44	25	0.051	13	38	61	GB GG
812	C64/1	15	0.031	13	38	38	GC
814	C64/3	25	0.051	18	59	39	GB
816	C66	25	0.051	18	59	39	GC
818	C66/1	35	0.083	18	59	61	GB GB
820	C75	35	0.071	18	59	52	GC
824	C75/2	43	0.085	38	65	67	GCF
826	C76/2	43	0.085	38	65	71	GC
828	C79/1	25	0.045	38	65	42	GB
830	C79/2	45	0.085	25	65	72	GCF
832	C713	43	0.085	38	65	71	GBHF
834	C718	70	0.14	38	65	120	GBHF
836	C912	85	0.17	38	65	171	GCF
838	C1049	55	0.11	60	83	69	G
840	C1112	140	0.33	45	93	141	G
842	C1112/2	95	0.16	60	98	69	GCF
844	C1132	95	0.17	60	98	73	G
<del>846</del>	C1337	110	0.25	60	98	101	G
848	C15124/1	200 493	0.46	65 89	127	122	GR
850	N/A	493 493	1.2	89	149	221 216	GBR
850/1	C711/1	45	0.090	38	149 67	70	GC
852	C411	50	0.10	13	38	129	GB
854	C26240	640	1.6	195	254	194	G
856	C1574	190	0.63	87	149	122	G
858	C21138/1	550	1.3	144	210	165	M
862	N/A	45	0.093	60	94	74	М
868	C69/1	55	0.11	29	49	143	GB
870	C75/2	45	0.086	38	65	71	GBF
872	N/A	-	-	152	216	86	GCE
874	N/A	200	0.46	65	127	122	GB
878	N/A	136	0.49	60	101	214	GB
896							

Polyester Replacement Elements	Mann Ref			mensions - m	m	Chil Furdam
Solberg Part Number	Number	m³/hr Rating	I.D.	O.D.	H.T.	Std. Endcap Features
821	C66/1	35	18	59	52	GB
825	C75	43	38	65	67	GC
827	C75/2	43	38	65	67	GCF
841	C1049	140	45	93	141	G
843	C1112	95	60	98	69	G
845	C1112/2	95	60	98	73	GCF -
847	C1132	110	60	98	101	G -
849	C1337	200	65	127	122	G
851	C15124/1	493	89	150	221	GR
851/1	N/A	493	89	150	216	GBR
857	C26240	637	192	254	194	G
859	C1574 C21138/1	187	89	149	122	G M
863	N/A	550	146	210	165	GB
879	N/A N/A	200	65	127	122	GB GB
897	IN/A	136	60	101	214	GB.

 $<sup>{\</sup>rm *Replacing\ element\ is\ recommended}.$ 





# Replacement Elements - 32 Series

## BlowerMarket / SpecialSizes

#### **Features**

- ■Pleatedmedia for high dirt holding capacity
- Polyester: reinforced with epoxy coated steel wire on both sides of cloth, expanded metal I.D.
- ■Paper: heavy duty industrial strength paper surrounded by galvanized expanded metal
- ■40 50% increased dust loading capacity with prefilter (part number suffix P, select models)



- 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 standard to 5 micron
- Paper: 99+% removal efficiency standard to 2 micron



## Polyester Media Benefits/Specs

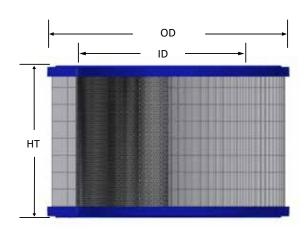
- Moisture resistant
  Handles hot air and oil mist from unload cycle of reciprocating/piston compressor
- Washable with lukewarm water and mild detergent (replacing element is recommended)

## Paper Media Benefits/Specs

- Cost effective
- ■Gently blow out media (replacing element is recommended)

## **Endcap Construction**

- ■G = Galvanized metal M = Molded plastisol N =
- ■Neoprene blended gasket on open endcaps



## Common Filter Elements for the Blower Market

Solberg Part Number	Universal Ref.	Solberg Part Number	Universal Ref.	Din	nensions - n	nm	Std. Endcap
Polyester	Number	Paper	Number	I.D.	O.D.	н.т.	Features
32-01	81-1202	32-00	81-0470	108	152	51	М
32-03	81-1203	32-02	81-0471	108	152	63	М
32-05	81-1204	32-04	81-0472	184	248	98	М
32-07	81-1205	32-06	81-1063	184	248	152	M
32-09	81-1206	32-08	81-0474	251	292	178	М
32-11	81-1207	32-10	81-0475	295	349	219	М
32-13	81-1209	32-12	81-1163	330	432	254	М
32-15	81-1210	32-14	81-1164	482	584	356	M

Solberg Part Number	Stoddard Ref.	Solberg Part Number	Stoddard Ref.			nm	Std. Endcap
Polyester	Number	Paper	Number	I.D.	O.D.	H.T.	Features
32-17	F8-151	32-16	F8-108	122	175	109	М
32-19	F8-135	32-18	F8-109	180	258	130	M
32-21	F8-134	32-20	F8-110	239	318	124	М
32-23	F8-139	32-22	F8-111	239	318	254	М
32-25	F8-148	32-24	F8-137	381	502	375	М

Note: Contact factory for availability. Also available in wire mesh.

## **Special Sized Filter Elements**

Element Part Number		Rated Flow	Surface Area m <sup>2</sup> Dimensions - mm		Std. Endcap			
Polyester	Paper	m³/hr	Polyester	Paper	I.D.	O.D.	H.T.	Features
09	08	25	0.023	0.042	29	57	57	М
21NP		140	0.16		60	108	121	М
25	24	180	0.19	0.44	92	146	101	М
	80P	297		0.66	105	200	76	M
	84P	433		0.96	105	200	102	M
45P	44P	/31	0.64	1.60	152	248	129	GN   M
	144P	955		1.90	152	248	148	GN
75P	74P	951	1	1.95	203	298	129	GN   M
371P	370P	3058	2.1	6.70	254	349	367	GN
575P		4248	7.8		203	298	621	GN
	100	85		0.21	32	98	70	M
	101	205		0.53	114	168	126	M
	102	145		0.31	143	197	73	M
	104	255 105		0.66	130	184	137	M M
	108	290		0.28	92	146	75	M
	109	170		0.63	143	199	101	GN
_	126	60		0.20	121	159	57	M
_	127	80		0.09	76	111	52	IVI

See Element Technical Data for maintenance guidelines.



# Replacement Elements - Hockey Puck

## SmallFS/PS5 - 425m/haFlowRange

#### **Features**

- Highgrade filter element
- Element construction of injection molded thermoplastic
- ■Integrated gasket seal
  - -Positive seal between housing hemispheres
  - -New seal with each element
  - -Minimizes parts
- Optimal surface area per given size
- ■Pleated media for high dirt holding capacity

## **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 standard to 10 micron
- Paper: 99%+ removal efficiency standard to 2 micron



## Polyester Media Benefits/Specs

- Lessmaintenancedue tolonger durability
- Moisture resistant
- Handles hot air and oil mist from unload cycle of reciprocating/piston compressor
- ■Washable with lukewarm water and mild detergent (replacing element is recommended)

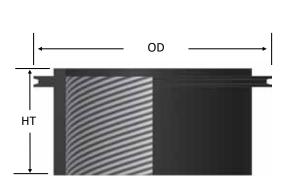
## Paper Media Benefits/Specs

- Heavy duty industrialstrengthpaper
- ■Cost effective
- ■Gently blow out media (replacing element is recommended)

Element Pa	Element Part Number		6 (500 400	Dimensions - mm		
Polyester	Paper	m3/hr Rating	Surface Area m2	O.D.	H.T.	
03™	02™	5	0.009	40	25	
05™	04™	14	0.019	60	25	
07™	06™	20	0.054	78	35	
11™	10™	60	0.10	102	37	
17*	16™	425	0.74	191	83	

<sup>\*</sup>Minimum order quantity applies.

See Element Technical Data for maintenance guidelines. Contact factory for options.





# Air/Oil Separator Elements - FG, GL, PSG

## Oil Mist Coalescing 7 - 3060 m3/hr Flow Range

## **Benefits**

- ■Highefficiency at low pressure drop
- ■Increased surface area in a given volume allows for low velocity separation of ultra-fine oil mists
- Low oil carryover

#### **Features**

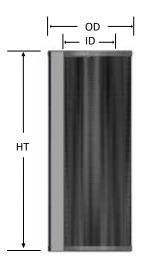
- Reinforced with epoxy coated steel wire
- ■Metal support on both sides of media

## **Technical Specifications**

- ■0.3micron media;99.97%efficiency
- Continuous operating temp: 20°C (68°F) to 80°C (180°F)

<b></b>	Element	Dir	nensions - r	nm	F
Element Part Number	Ra <sup>3</sup> /hr ting	I.D.	O.D.	н.т.	Features
FG3	7	32	57	54	MW
FG5	8	32	57	76	MW
FG7	12	32	57	102	MW
FG9	27	76	102	102	MW
FG10	41	76	102	152	MW
FG11	51	98	127	108	MW
FG20	75	203	229	121	MW
GL910	7	13	46	36	DW
GL915	17	19	59	60	DW
PSG925	35	38	76	124	GBP
PSG848	85	65	127	121	GP
PSG850/1	215	89	149	222	GBP
PSG145	300 340	65	127	362	GP
PSG860/1	540 510	89	149	356	GBP
PSG244/2	850	152	248	244	GBP
PSG344/2	1360	152	248	368	GBP
PSG374/2	1870	203	298	368	GBP
PSG474/2G	3060	203	298	546	<del>GBP</del>
PSG476G		229	371	546	UF .





#### **Endcap Construction**

- M = Moldedplastisol
- B = Closed one end with bolt hole, open on other end
- G = Galvanized metal
- C = Closed one end, open on other end
- D = Element with molded open end, metal closed
- ■W = Wrapped coalescing media
- P = Pleated coalescing media

See Element Technical Data for maintenance guidelines.

## Did you know?

Our gauges offer an effective way to monitor pressure drop, and are a convenient way to help achieve maximum filter-life from elements. They enable easy filter maintenance, reducing downtime for processes.

Find these on our website at www.solbergmfg.com/accessories



# Accessories

Prefilters	7-2
SpinMeister® Precleaners	7-3
Pop Up Style Pressure Drop Gauge	7-4
Pressure Drop Gauges	7-5





# Pr efilter s

## **ExtendtheLifeofYour Filter Elements**

#### **Overview**

Foamprefilters extend the life of Solberg filter elements by adding an additional preliminary layer of filtration. Prefilters are suitable for most applications.

#### **Features**

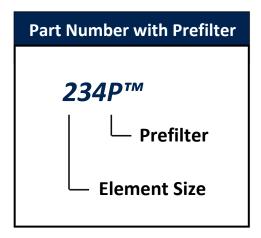
- Foam wrap material construction
- ■Dust loading capacity is increased by 40-50% with a prefilter added to the filter element
- ■Minimal impact on pressure drop

## **Options**

■Heatstamping for custom imprinting

Part Number	Fits Elen Polyester	nent Size Paper
PF14	15™	14™
PF18	19®	18™
PF24	25	24
PF30	31™	30™
PF34	35	34
PF44	45	44
PF84	85	84
PF230	231™	230™
PF234	235™	234™
PF244	245™ 239™	244™ 238™
PF274	275™	274™
PF334	335™	334™
PF344	345™	344™
PF374	375™	374™
PF376	377™	376™
PF384	385™	384™
PF390	391	390
PF484	485™	484™
PF490	491	490
PF544	545	544
PF570	571	570
PF684	685™	
PF842	843	842
PF848	849	848
PF850	851	850







# SpinMeister Precleaners

## **Extreme Duty Filtration**

#### **Overview**

Intake airis drawn through the angled louver plates which direct to turn the rotor. The centrifugal force separates the particulate contaminants from the airstream, throwing them to the outer perimeter of the cover, expelling them through the discharge port. Clean air then enters into your equipment.

## **Technical Specifications**

- Temp (continuous): min -51°C (-60°F) max 121°C (250°F)
- ■85%+ removal efficiency standard to 15 microns
- Heavy duty vibration resistant stainless steel clamp



- ■Molded fiberfilledcomposite housing
- ■Plastic rotors
- ■To be used with Solberg Inlet SpinMeister® Filter Assemblies

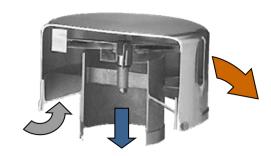
Part Number	m³/hr Rating Range	Slip Fit Outlet	Dimensions - mm H.T. Slip Fit I.D. Cover O.D.			
SM-1.5	5-34	1 1/2"	57	38	89	
SM-2	35-185	2"	76	51	121	
SM-3	125-425	3"	102	76	178	
SM-4	425-675	4"	137	102	238	
SM-6	750-1500	6"	168	152	305	

## Aluminum SpinMeister®

- Polished aluminumhousing
- Stainless steel rotors
- ■To be used with Solberg Inlet SpinMeister® Filter Assemblies

Dout	m³/hr	Clin Fit	Dimensions - mm			
Part Number	Rating Range	Slip Fit Outlet	H.T. Slip Fit I.D. Cover O			
SMA-2	34-187	2"	80	51	121	
SMA-3	238-510	3"	121	76	210	
SMA-4	238-595	4"	121	102	210	
SMA-6	680-1445	6"	182	152	311	
SMA-9	1530-3400	9"	207	229	435	





SpinMeister® Airflow Schematic

## SpinMeister® for Vacuum

- Lowpressure drop design
- Molded fiber filled composite housing
- Stainless steel rotors
- ■To be used with Solberg Vacuum Filter Series

Part Number	m³/hr Rating Range	Slip Fit Outlet	Dimensions - mm H.T. Slip Fit I.D. Cover O.D.			
SML235	68-187	3 1/2"	99	89	187	
SML345	170-340	4 1/2"	178	114	260	
SML445	340-765	4 1/2"	191	114	260	



# Pop Up Style Pressure Drop Gauge

## **Inlet Filter Assemblies**

#### **Overview**

Our Pop Upstyle pressure drop gauge shows the amount of filter element restriction and how much life the element has left. This is a convenient and inexpensive way to receive the maximum usage from every element.

The yellow indicator in the filter monitor gauge drops as dirt accumulates on the filter element. The element is ready for change-out or servicing when the yellow indicator reaches the red zone. This allows you to determine the condition of the filter element even after the equipment has been shut down.

The element should be replaced at the maximum noted pressure drop, or the manufacturer's recommended level. For use on inlet filter silencer and inlet filters.

## **Benefits**

- Continuously monitors filter
- Easy filter maintenance
- Maximized filter element life
- Reduced downtime
- ■Graduated restriction readings



Note: The monitor gauge has a 1/8" connection. It is mounted either on the weatherhood or on the outlet pipe, depending on the filter assembly.

Part Number	Pressure Drop Rating mm	MPT Outlet
VG-020-013	500	1/8"

Gauge tubing not included.

Contact Solberg to add an 1/8" tap hole to the appropriate location on your housing orders.



# Pressure Drop Gauges

## For Vacuum Filters

## **Differential Vacuum Gauge**

- ■Indicates pressure dropacrossthefilter assembly or filter element
- ■Shock and vibration resistant
- ■To be used on CSL & HDL Series

### EZ Read Pressure Drop Gauge

- ■Gauge kit includes: gauge,connectors, mounting hardware
- ■To be used on ST, CT and HV Series

## **Vacuum Gauges**

- Monitoramount of restriction across the filter assembly or element, when installed on the inlet and outlet
- ■Convenient and inexpensive way to assure maximum usage from filter element
- ■1/4" connection
- **0-760** mm Hg (0-30" Hg)
- ■To be used on CSL, ST, CT Series



Part Number	Gauge Type		
2030	Magnehelic Gauge 0-30"WC		
555-0048	Easy Read Color Differential Pressure Gauge		
VG-030-025	Pressure Gauge		
VG-030-025	Vacuum Gauge		

Gauge tubing not included.
Contact factory for installation requirements.

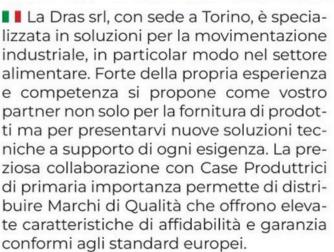


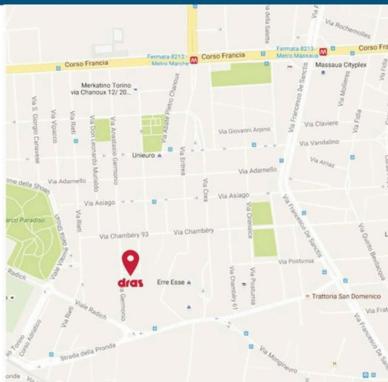
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