SOLBERG®

Filtration • Separation • Silencing

protecting your equipment • protecting your environment

GMK INDUSTRIAL
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General Catalog
Metric Connections

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 our beginnings, we have been 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.

Better Buildings® U.S. DEPARTMENT OF ENERGY

Certified B Corporation

ENERGY STAR

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Standard Products

Inlet Filtration / Silencing

Solberg solutions are critical to 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

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INLET FILTERS / FILTER SILENCERS

Reduce noise of compressors and blowers

Deaden noise, absorb & silence sound

Maximize surface area

Remove dirt and debris

Use as breathers for hydraulic tanks

Vacuum Pump Discharge & Air/Oil Separation

Our air/oil separation products for 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

For most 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

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ATEX Certified Filters

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

ATEX Available

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Power Generation

Oil Mist Eliminators

Overview

We design 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

- Eliminates visible emissions (99.97% efficient at 0.3 micron)
- High performance coalescing elements offer long life
- Flow ranges from 1 - 2500 m^3/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

BAE Series

Engineered to order

www.solbergmfg.com

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

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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.

ACV Series
Standard offering

Features

- Eliminates visible emissions (99%+ efficient at 0.3 um)
- High performance coalescing elements offer long life
- Flow ranges from 3 - 68 m^3/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

ACVB Series
Blower assisted configuration

Options

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

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

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Air Filtration Selection Guidelines

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.

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Vacuum Pump Discharge Filter Selection, 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.**

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Vacuum Process Filtration & Separation

Technical Data **2-2**

Particulate Removal:

Inline Right Angle Vacuum Filters: CSL Series **2-4**

Medium to High Vacuum Filtration: WL Series **2-8**

Inline Straight Through Vacuum Filters: CT Series **2-12**

Inline See-Through Vacuum Filters: ST Series **2-13**

Extreme Duty Vacuum Filters:

SpinMeister® ST / CT Series **2-14**

Reverse Pulse Vacuum Filters: RST Series **2-16**

Medical Vacuum Bacterial Filters: HV Series **2-18**

Liquid / Mist Removal:

See-Through Liquid Separators: STS Series **2-20**

Compact Liquid Separator & Filter: LRS Series **2-22**

Multistage Liquid Knockout Tank & Filter:

SLS/SRS Series **2-24**

Pneumatic Drain System: DSP Series **2-26**

Leak Detector Filters: LDL Series **2-27**

Vapour Removal:

Vacuum Traps: VTL, VTS Series **2-28**

Vapour Condensers: JRS, JST, JCT Series **2-30**

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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

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

- Assembly Model #
- Replacement Element #

The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being a “CSL” design filter with a “235™” element, “P” prefilter and DN100 flange connection size.

CSL-235P-DN100

- Connection Size and Type
- Replacement Element Part Number
- Filter Type

Vacuum Service Rating Chart

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

Vacuum Level	Pressure (mbar)	Pressure (Torr)	Pressure (Pa)
Atmospheric Pressure	1013	760	$1.013x10^{+5}$
Rough Vacuum	1013 to 33	760 to 25	$1x10^{+5}$ to $3x10^{+3}$
Medium Vacuum	33 to $1.3x10^{-3}$	25 to $1x10^{-3}$	$3x10^{+3}$ to $1x10^{-1}$
High Vacuum	$1.3x10^{-3}$ to $1.3x10^{-9}$	$1x10^{-3}$ to $1x10^{-9}$	$1x10^{-1}$ to $1x10^{-7}$

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Choosing the Best Filter for Your Equipment

A. When the connection & airflow is known:

1. Select the appropriate connection style. (i.e.: BSPT, Flange, BSPP, etc.)
    a. Verify assembly m^3/hr (flow) rating. Compare with your required airflow.
    (Note: Assembly flow ratings are based on 6,000 FPM or 30m/sec for a given connection size to achieve low pressure drop performance. When required flow exceeds assembly flow rating, the pressure drop through the outlet connection will increase. In such cases select by element m^3/hr (flow) rating.)
    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

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

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

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

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

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Inline Right Angle Vacuum Filters

CSL Series ⅜” - 4”

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

- 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

- Vacuum Rating: 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

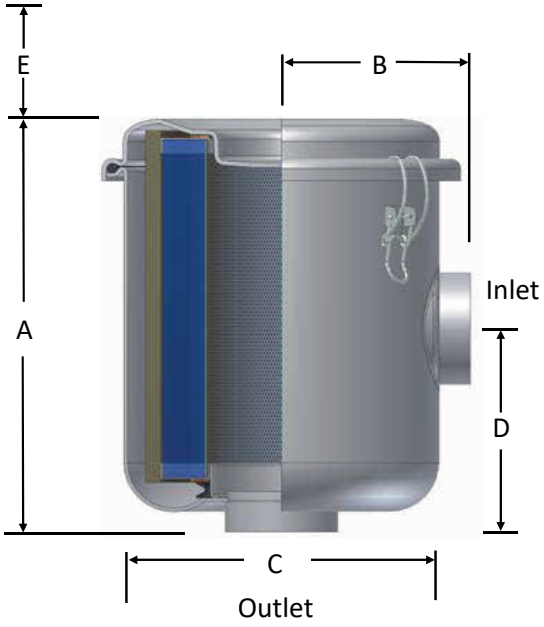
Options

ATEX Available

- 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)

www.solbergmfg.com

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



Inlet/Outlet Size	Type	Assembly m³/hr Rating	Assembly Part Number Polyester	Paper	Dimensions - mm A	B	C	D	Suggested Service ht. E	Approx. Weight (kg)	Replacement Element Part No. Polyester	Paper	Element m³/hr Rating
⅜"	BSPP	31	**CSL-825-039HCB**	**CSL-824-039HCB**	90	54	95	46	76	0.40	825	824	43
½"	BSPP	31	**CSL-825-051HCB**	**CSL-824-051HCB**	93	57	95	49	76	0.40	825	824	43
½"	BSPP	34	**CSL-843-051HCB**	**CSL-842-051HCB**	109	77	146	62	83	1.4	843	842	94
¾"	BSPP	41	**CSL-825-076HCB**	**CSL-824-076HCB**	91	58	95	50	76	0.40	825	824	43
¾"	BSPP	43	**CSL-843-076HCB**	**CSL-842-076HCB**	111	78	146	63	83	1.4	843	842	94
1"	BSPP	60	**CSL-843-101HCB**	**CSL-842-101HCB**	115	83	146	67	83	1.4	843	842	94
1"	BSPP	68	**CSL-849-101HCB**	**CSL-848-101HCB**	176	105	187	108	133	2.3	849	848	196
1 ¼"	BSPP	94	**CSL-843-126HCB**	**CSL-842-126HCB**	114	83	146	67	83	1.4	843	842	94
1 ¼"	BSPP	102	**CSL-849-126HCB**	**CSL-848-126HCB**	171	105	187	108	133	2.3	849	848	196
1 ½"	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 ½"	BSPP	357	**CSL-851-251HCB**	**CSL-850-251HCB**	271	130	222	140	235	6.8	851	850	493
3"	BSPP	510	**CSL-239-301HCB**	**CSL-238-301HCB**	360	184	337	182	279	15	239™	238™	969
3"	BSPT	510	**CSL-2541-301B**	**CSL-2540-301B**	391	216	305	216	305	14	2541	2540	1360
4"	BSPT	880	**CSL-2541-401B**	**CSL-2540-401B**	416	242	337	241	305	15	2541	2540	1360

*See Vacuum Filter Technical Data for Vacuum Service Data.

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Inline Right Angle Vacuum Filters

CSL Series 3” - 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 pressure-drop 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 ¼” gauge taps
- Lifting lugs
- Brackets for optional support legs
- Nameplate bracket

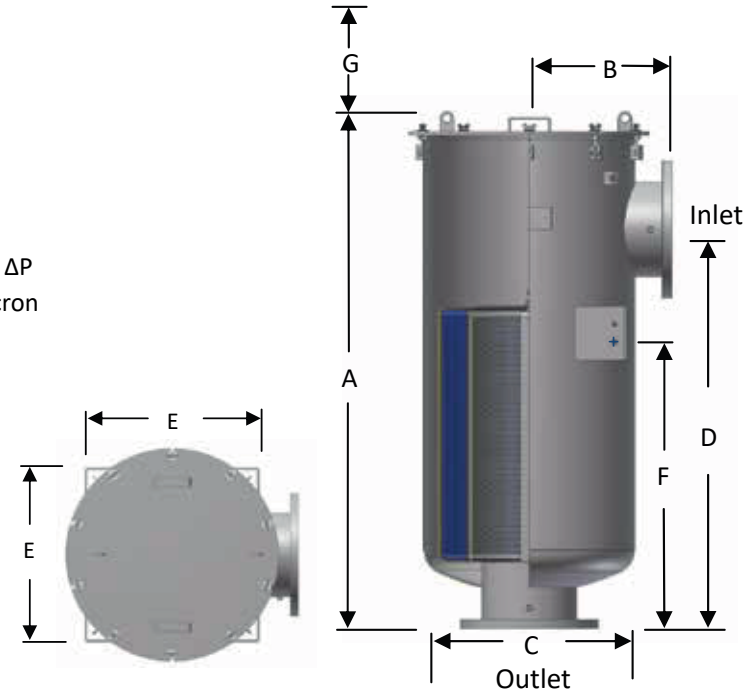
Technical Specifications

- Vacuum Rating: 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

Options

ATEX Available

- 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

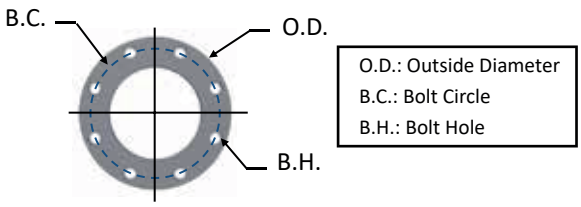


Flanged Assemblies

Flange Inlet & Outlet	Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm						Suggested Service ht. G	Approx. Weight (kg)	Replacement Element Part No.		Element m³/hr Rating
		Polyester	Paper	A	B	C	D	E	F			Polyester	Paper	
DN80	510	**CSL-235P-DN80**	**CSL-234P-DN80**	695	229	355	470	300	312	305	28	235P™	234P™	970
DN80	510	**CSL-335P-DN80**	**CSL-334P-DN80**	695	229	355	470	300	312	432	29	335P™	334P™	1360
DN100	885	**CSL-235P-DN100**	**CSL-234P-DN100**	695	229	355	470	300	312	305	28	235P™	234P™	970
DN100	885	**CSL-335P-DN100**	**CSL-334P-DN100**	695	229	355	470	300	312	432	29	335P™	334P™	1360
DN125	1360	**CSL-245P-DN125**	**CSL-244P-DN125**	730	279	470	495	377	347	305	40	245P™	244P™	1500
DN125	1360	**CSL-345P-DN125**	**CSL-344P-DN125**	730	279	470	495	377	347	432	41	345P™	344P™	1870
DN150	1870	**CSL-275P-DN150**	**CSL-274P-DN150**	755	305	470	521	377	365	305	50	275P™	274P™	1870
DN150	1870	**CSL-375P-DN150**	**CSL-374P-DN150**	755	305	470	521	377	365	432	51	375P™	374P™	2550
DN200	3060	**CSL-377P-DN200**	**CSL-376P-DN200**	973	356	572	648	484	464	432	83	377P™	376P™	3105
DN250	4930	**CSL-385P-DN250**	**CSL-384P-DN250**	1156	406	686	864	560	598	432	115	385P™	384P™	5610
DN300	7990	**CSL-485P-DN300**	**CSL-484P-DN300**	1156	406	686	864	560	642	610	125	485P™	484P™	8000
DN250	4930	**CSL-685P-DN250**	**CSL-384P(2)-DN250⁺**	1480	406	686	1143	560	820	787	171	685P™	384P™(2)⁺	11220
DN300	8415	**CSL-685P-DN300**	**CSL-384P(2)-DN300⁺**	1480	406	686	1143	560	820	787	171	685P™	384P™(2)⁺	11220
DN300	8415	**CSL-485P(2)-DN300⁺**	**CSL-484P(2)-DN300⁺**	1785	406	686	1448	560	547	610	209	485P™(2)⁺	484P™(2)⁺	16000

⁺Denotes 2 elements stacked in housing.

PN10 Pattern Flange	Dimensions - mm			No. of Holes	Flange Thickness mm
	O.D.	B.C.	B.H.		
DN80	200	160	18	8	20
DN100	220	180	18	8	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 Inlet & Outlet	Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm						Suggested Service ht. G	Approx. Weight (kg)	Replacement Element Part No.		Element m³/hr Rating
		Polyester	Paper	A	B	C	D	E	F			Polyester	Paper	
3”	510	**CSL-235P-301**	**CSL-234P-301**	695	229	355	470	300	312	305	21	235P™	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™	234P™	970
4”	885	**CSL-335P-401**	**CSL-334P-401**	695	229	355	470	300	312	432	25	335P™	334P™	1360
5”	1360	**CSL-245P-501**	**CSL-244P-501**	730	279	470	495	377	347	305	37	245P™	244P™	1500
5”	1360	**CSL-345P-501**	**CSL-344P-501**	730	279	470	495	377	347	432	40	345P™	344P™	1870
6”	1870	**CSL-275P-601**	**CSL-274P-601**	755	305	470	521	377	365	305	43	275P™	274P™	1870
6”	1870	**CSL-375P-601**	**CSL-374P-601**	755	305	470	521	377	365	432	44	375P™	374P™	2550

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

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Medium to High Vacuum Filtration

WL Series ISO Flanges NW16 - NW40, K63 - K100

Overview

Solberg's WL 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

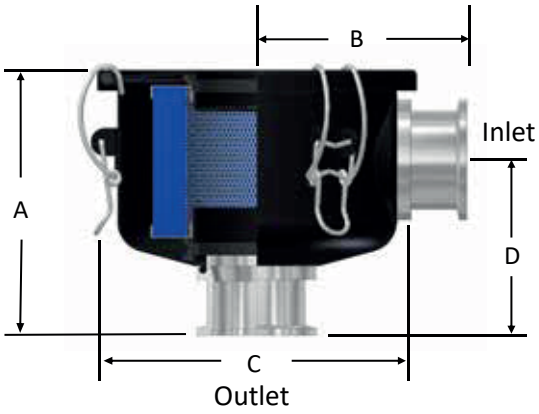
Technical Specifications

- 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

Options

ATEX Available

- Filter media 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 & Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm				Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C	D			Polyester	Paper	
NW16	39	**WL-825-NW16B**	**WL-824-NW16B**	103	66	95	58	68	0.4	825	824	42
NW25	42	**WL-825-NW25B**	**WL-824-NW25B**	103	66	95	58	68	0.4	825	824	42
NW25	59	**WL-843-NW25B**	**WL-842-NW25B**	117	86	146	70	70	1	843	842	93
NW40	93	**WL-843-NW40B**	**WL-842-NW40B**	126	96	146	80	70	1	843	842	93
NW40	136	**WL-849-NW40B**	**WL-848-NW40B**	188	118	187	121	121	2	849	848	195
K63	357	**WL-851-K63B**	**WL-850-K63B**	296	155	222	165	222	7	851	850	493
K100	885	**WL-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 & Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm				Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C	D			Polyester	Paper	
NW16	39	**WL-825-NW16EN**	**WL-824-NW16EN**	103	66	95	58	68	0.4	825	824	42
NW25	42	**WL-825-NW25EN**	**WL-824-NW25EN**	103	66	95	58	68	0.4	825	824	42
NW25	59	**WL-843-NW25EN**	**WL-842-NW25EN**	117	86	146	70	70	1	843	842	93
NW40	93	**WL-843-NW40EN**	**WL-842-NW40EN**	126	96	146	80	70	1	843	842	93
NW40	136	**WL-849-NW40EN**	**WL-848-NW40EN**	188	118	187	121	121	2	849	848	195
K63	357	**WL-851-K63EN**	**WL-850-K63EN**	296	155	222	165	222	7	851	850	493
K100	885	**WL-239-K100EN**	**WL-238-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.

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

SOLBERG®
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Medium to High Vacuum Filtration

WL Series ISO Flanges K100 - K320

Overview

Solberg's WL 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.

K320 configuration

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 ΔP readings
- Corrosive resistant black powder coat carbon steel
- Painted o-ring groove, free of scratches
- Lifting lugs and leg brackets standard

Technical Specifications

- Rated vacuum leak 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

Options

ATEX Available

- Filter media 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)

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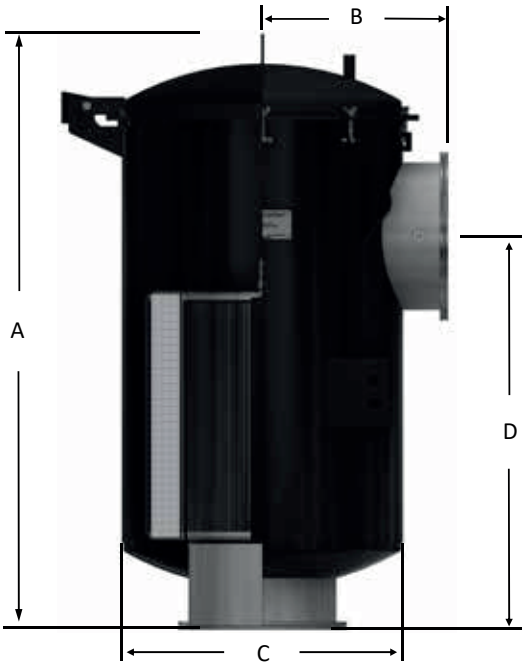
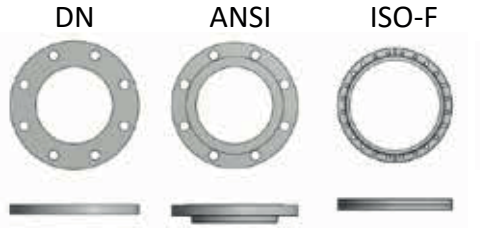


ISO-K Inlet & Outlet	Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm				Suggested Service ht. mm	Replacement Element Part No.		Element m³/hr Rating
		Polyester	Paper	A	B	C	D		Polyester	Paper	
K100	885	**WL-235P-K100**	**WL-234P-K100**	695	229	355	470	244	235P™	234P™	970
K100	885	**WL-335P-K100**	**WL-334P-K100**	737	229	311	470	368	335P™	334P™	1360
K160	1870	**WL-275P-K160**	**WL-274P-K160**	767	305	470	521	244	275P™	274P™	1870
K160	1870	**WL-375P-K160**	**WL-374P-K160**	749	305	470	521	368	375P™	374P™	2550
K200	3060	**WL-377P-K200**	**WL-376P-K200**	1011	356	514	648	368	377P™	376P™	3101
K250	4930	**WL-385P-K250**	**WL-384P-K250**	1303	432	616	889	368	385P™	384P™	5610
K320	7935	**WL-485P-K320**	**WL-484P-K320**	1308	406	686	864	546	485P™	484P™	8000
K320	8415	**WL-685P-K320**	**WL-384P(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:



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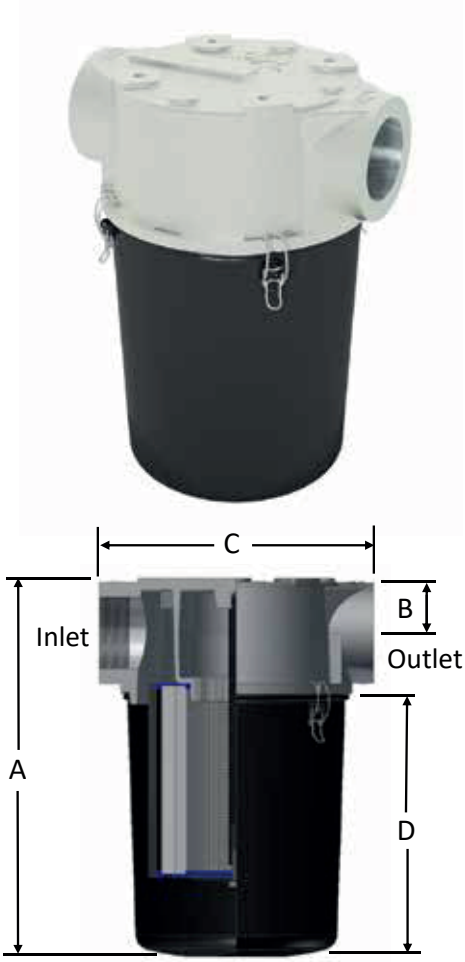
Inline Straight Through Vacuum Filters

CT Series 1” - 6”

Features

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



Technical Specifications

- Vacuum Rating: medium vacuum service*
- Temp (continuous): min -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

ATEX Available

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

Inlet/Outlet Size	Type	Assembly m³/hr Rating	Assembly Part Number Polyester	Paper	Dimensions - mm A	B	C	D	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No. Polyester	Paper	Element m³/hr Rating
¾”	BSPP	43	CT-8451-076C	CT-8450-076C	204	25	127	156	140	1.6	8451	8450	68
1”	BSPP	68	CT-897-101C	CT-896-101C	333	37	178	257	228	5.4	897	896	136
1 ¼”	BSPP	102	CT-897-126C	CT-896-126C	333	37	178	257	228	5.2	897	896	136
1 ½”	BSPP	136	CT-897-151C	CT-896-151C	335	39	178	257	228	5.1	897	896	136
2”	BSPP	298	CT-851-201C	CT-850-201C	324	50	229	228	228	7.2	851	850	493
2 ½”	BSPP	357	CT-851-251C	CT-850-251C	324	50	229	228	228	6.8	851	850	493
3”	BSPP	510	CT-235P-301C	CT-234P-301C	473	69	343	328	228	14	235P™	234P™	968
4”	BSPP	884	CT-235P-401C	CT-234P-401C	473	69	343	328	228	12	235P™	234P™	968
6"	BSPP	1870	CT-275P-601C	CT-274P-601C	462	99	483	249	254	20	275P™	274P™	1869

Note: CT 2” & 2 ½” models: element seals on the base of the housing.

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

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Inline See-Through Vacuum Filters

ST Series 1” - 4”

Overview

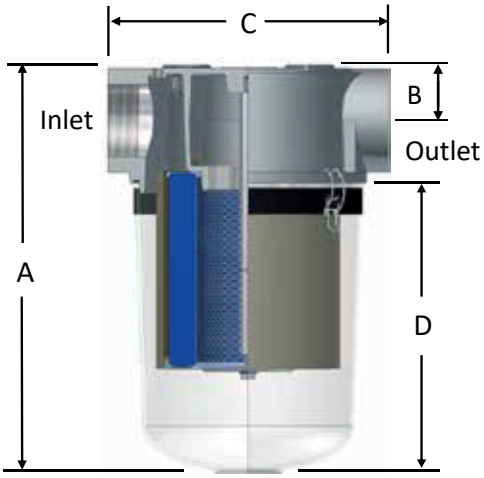
Solberg’s ST Series is designed to offer exceptional performance across a broad range of vacuum applications. The transparent housing offers users the ability to inspect filter elements without disassembling the unit. Ideal for rough-medium vacuum service, this compact design offers a smaller service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

Features

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

Technical Specifications

- Vacuum Rating: medium vacuum service*
- Temp (continuous): min -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)
- Reverse pulse configuration
- Taps for gauges and mounting brackets

Inlet/Outlet Size	Type	Assembly m³/hr Rating	Assembly Part Number Polyester	Paper	Dimensions - mm A	B	C	D	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No. Polyester	Paper	Element m³/hr Rating
¾”	BSPP	43	ST-8451-076C	ST-8450-076C	213	25	127	165	140	1.4	8451	8450	68
1”	BSPP	68	ST-897-101C	ST-896-101C	340	37	178	264	228	5.0	897	896	136
1 ¼”	BSPP	102	ST-897-126C	ST-896-126C	340	37	178	264	228	4.7	897	896	136
1 ½”	BSPP	136	ST-897-151C	ST-896-151C	342	39	178	264	228	4.6	897	896	136
2”	BSPP	298	ST-851/1-201C	ST-850/1-201C	412	50	229	315	228	7.2	851/1	850/1	493
2 ½”	BSPP	357	ST-851/1-251C	ST-850/1-251C	412	50	229	315	228	6.8	851/1	850/1	493
3”	BSPP	510	ST-235P-301C	ST-234P-301C	501	69	343	357	228	13	235P™	234P™	968
4”	BSPP	884	ST-235P-401C	ST-234P-401C	501	69	343	357	228	11	235P™	234P™	968

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

SOLBERG®
Filtration • Separation• Silencing

Extreme Duty Vacuum Filters

SpinMeister® ST / CT Series 2” - 6”

Overview

Centrifugal force 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

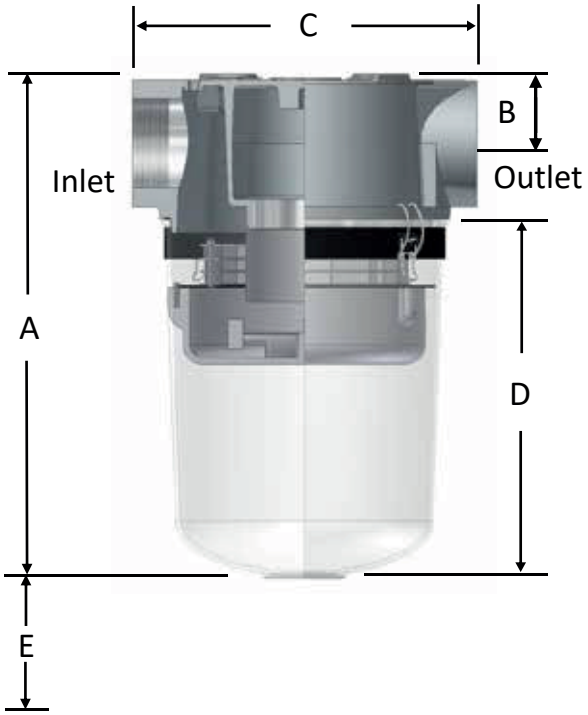
- Extreme duty filtration for high dust environments
- Excellent removal for short fibers
- Significantly increases life of filter element
- SpinMeister® Precleaner 85+% efficiency standard to 15 microns
  - Durable molded fiber filled composite material
  - Pressure drop reduced compared to typical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

Technical Specifications

- Vacuum Rating: rough vacuum service*

Options

- 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 & Outlet	m^3/hr Rating Range w/ SpinMeister®	w/ Element	Assembly Part Number	Dimensions - mm A	B	C	D	Suggested Service ht. E	Replacement Element Part No. Polyester	Paper	Optional Secondary Filters Polyester	Paper
2"	68-188	298	**ST-SML235-201C**	412	50	229	315	228	851/1	850/1	**ST-851/1-201C**	**ST-850/1-201C**
2 ½"	68-188	357	**ST-SML235-251C**	412	50	229	315	228	851/1	850/1	**ST-851/1-251C**	**ST-850/1-251C**
3"	170-340	510	**ST-SML345-301C**	501	69	343	357	228	235P™	234P™	**ST-235P-301C**	**ST-234P-301C**
3"	340-765	510	**ST-SML445-301C**	501	69	343	357	228	235P™	234P™	**ST-235P-301C**	**ST-234P-301C**
4"	170-340	884	**ST-SML345-401C**	501	69	343	357	228	235P™	234P™	**ST-235P-401C**	**ST-234P-401C**
4"	340-765	884	**ST-SML445-401C**	501	69	343	357	228	235P™	234P™	**ST-235P-401C**	**ST-234P-401C**
6"	765-1530	1870	**CTD-SM6-601C**$^{++}$	645	99	483	432	254	275P™	274P™	**CT-275P-601C**$^{+}$	**CT-274P-601C**$^{+}$

$^{+}$Denotes housings with carbon steel buckets. $^{++}$Denotes housings with carbon steel extended buckets & swing bolt fasteners.

Larger systems available.

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

SOLBERG®
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Reverse Pulse Vacuum Filters

RST Series 1” - 4”

Overview

The reverse 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

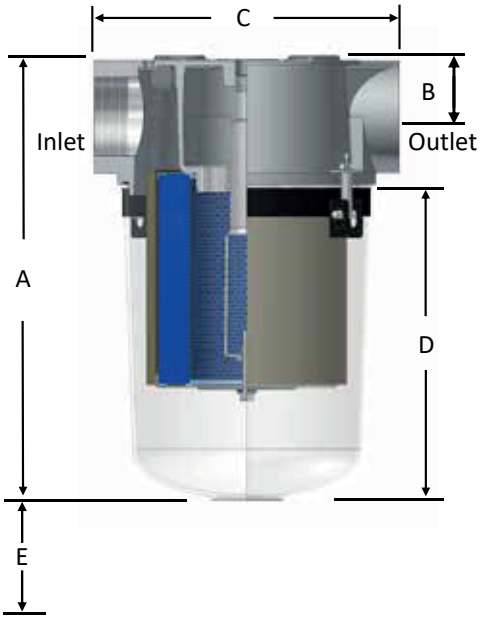
- See-through bucket made from shatter resistant polycarbonate material
- High tensile strength permits dimensional stability
- Integrated inlet baffle
- Tap on center of cast head for optional reverse pulse kit air pulse rod: ⅜” tap on 1” sizes, ¾” tap on 2 - 4” sizes
- Sturdy hook clamps secure bucket to head

Technical Specifications

- Vacuum rating: 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)

Options

- Carbon steel bucket (RCT)
- Extended bucket (RSTD)
- Alternate media
- Taps for gauges and mounting brackets



Inlet/Outlet Size	Type	Assembly m^3/hr Rating	Assembly Part Number PTFE	Dimensions - mm A	B	C	D	Suggested Service ht. E	Approx. Weight (kg)	Replacement Element Part No. PTFE	Element m^3/hr Rating
1"	BSPP	68	**RST-TF897-101C**	342	39	178	264	228	5.4	TF897	68
1 ¼"	BSPP	68	**RST-TF897-126C**	342	39	178	264	228	5.4	TF897	68
1 ½"	BSPP	68	**RST-TF897-151C**	342	39	178	264	228	5.4	TF897	68
2"	BSPP	112	**RST-TF851/1-201C**	434	50	229	315	228	7.2	TF851/1	112
2 ½"	BSPP	112	**RST-TF851/1-251C**	434	50	229	315	228	6.8	TF851/1	112
3"	BSPP	261	**RST-TF235-301C**	501	69	343	357	228	13	TF235	261
4"	BSPP	261	**RST-TF235-401C**	501	69	343	357	228	11	TF235	261

6" 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

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

Kit Benefits

- Easily mounts to RST series housings
- Compact space saving design
- Improved pulse effectiveness

*6 barg rating only applies to accumulator tank. Internal housing pressure not to exceed 0,5 barg.

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Medical Vacuum Bacterial Filters

HV Series 1” - 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
- Isolation 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

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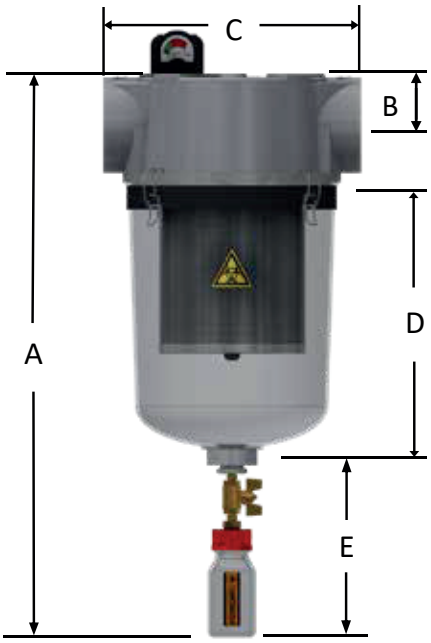

BSPP Inlet/ Outlet	Assembly Part Number (w/ Gauge)	Approx. Dimensions - mm					Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.	Rarified Air Flow Rating At 370 mbar(a)	Air Flow at Atmosphere: Free Air Aspirated (FAA)
		A	B	C	D	E					
1"	**HV-UL896-101C**	572	37	178	282	235	214	7	UL896	186 m^3/hr	68 Nm^3/hr
1 ¼"	**HV-UL896-126C**	572	39	178	282	235	214	7	UL896	208 m^3/hr	76 Nm^3/hr
1 ½"	**HV-UL896-151C**	572	39	178	282	235	214	7	UL896	208 m^3/hr	76 Nm^3/hr
2"	**HV-UL850/1-201C**	648	50	229	332	235	222	9	UL850/1	600 m^3/hr	219 Nm^3/hr
2 ½"	**HV-UL850/1-251C**	648	50	229	332	235	222	9	UL850/1	600 m^3/hr	219 Nm^3/hr
3"	**HV-UL234/2G-301C**	737	69	343	376	235	244	14	UL234/2G	964 m^3/hr	352 Nm^3/hr
4"	**HV-UL234/2G-401C**	737	69	343	376	235	244	14	UL234/2G	964 m^3/hr	352 Nm^3/hr

6" 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

Options

- 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

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See-Through Liquid Separators

STS Series 1” - 4”

Overview

Inlet air with 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

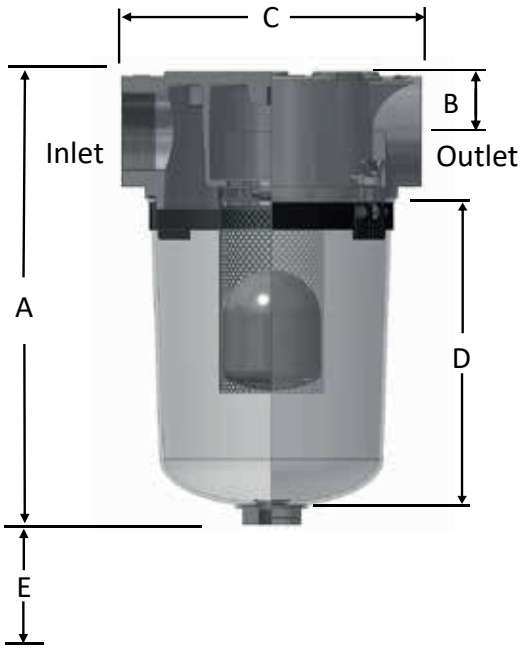
- Minimize the likelihood of damage to vacuum valves and pumps from liquid
- Protect installed equipment from liquid contamination by retrofitting STS separator
- Easy visual inspection with see-through housing
- Reduce piping costs with T-style configuration
- Compact design for space restricted work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

Features

- 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
- 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 ½”)
- Clamp style swing bolts on 3” & 4” standard
- Drain

Technical Specifications

- Vacuum Rating: medium vacuum service*
- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)**



Inlet/Outlet Size	Type	Assembly m³/hr Rating	Assembly Part Number	Dimensions - mm A	B	C	D	Suggested Service ht. E	Holding Capacity (liter)
1"	BSPP	42	**STS-101C**	360	39	178	282	228	1.6
1 ¼"	BSPP	68	**STS-126C**	360	39	178	282	228	1.6
1 ½"	BSPP	102	**STS-151C**	360	39	178	282	228	1.6
2"	BSPP	178	**STS-201C**	428	50	229	332	228	3.7
2 ½"	BSPP	195	**STS-251C**	428	50	229	332	228	3.7
3"	BSPP	407	**STS-301C**	520	69	343	376	228	5.7
4"	BSPP	424	**STS-401C**	520	69	343	376	228	5.7

Options

- Cast head protective coatings
- Heavy duty carbon steel buckets available (CTS Series)
- Clamp style swing bolts on 1" to 2 ½"
- Extended capacity (select models)
- Pressure drop gauge
- Taps for gauges and mounting brackets

*See Vacuum Filter Technical Data for vacuum service data and sizing guidelines.
**Temperature for materials only.

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Compact Liquid Separator & Filter

LRS Series ¾” - 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
- ¼” inlet/outlet taps (select models)
- 1” BSPP drain and sight port

Technical Specifications

- Vacuum Rating: rough to medium vacuum service*
- Filter change out differential: 37-50 mbar over initial ΔP
- Polyester: 99%+ particulate removal efficiency to 5 micron

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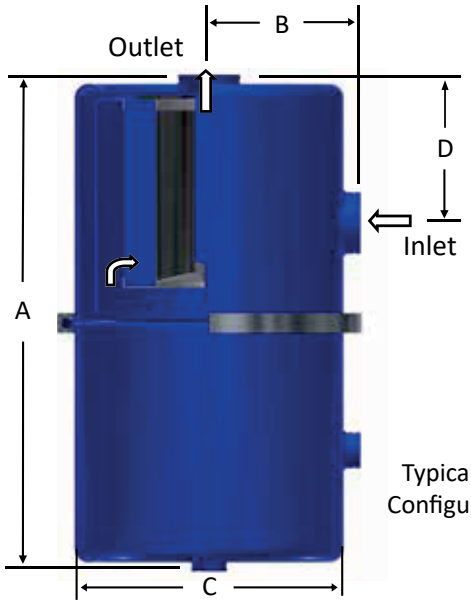

Typical LRS Configuration

Assembly m³/hr Rating	Inlet/Outlet Size	Inlet/Outlet Type	Assembly Part Number	Dimensions - mm A	B	C	D	Suggested Service ht. mm	Approx. Holding Cap. (liter)	Replacement Element Part No.	Element m³/hr Rating
105	¾"	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 ¼"	BSPP	**LRS-19-126HC**	455	117	227	76	121	5.7	19®	170
170	1 ½"	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 ½"	BSPP	**LRS-237-251HC**	577	185	346	182	216	9.5	237™	935
510	3"	BSPP	**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	FLG	**LRS-275-DN150**	998	305	436	229	244	40	275™	1869

Options

ATEX Available

- 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

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

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Multistage Liquid Knockout Tank & Filter

SLS / SRS Series

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
- ¼" plugged differential ports on inlet and outlet
- ½" 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

- Service range: up to 1000 mbar absolute
- Polyester element: 99%+ removal efficiency to 1 or 5 micron

Options

- Flange adapters
- Available with either wire mesh element or demister pad
- Custom tanks denoted with SRS prefix

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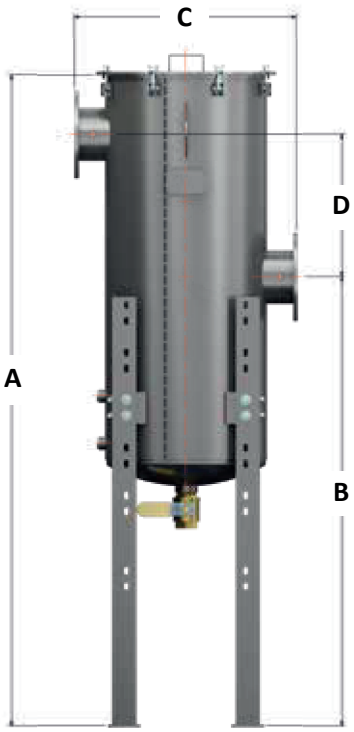

PN10 Flange Connection	Assembly Flow Range m³/hr	Assembly Part Number	Dimensions - mm A*	B*	C	D	Suggested Service ht.** Upper	Lower	Liquid Capacity (liter)	Upper Element Part No. Polyester	Lower Element Part No. Wire Mesh/Demister Pad
DN80	300 - 510	SLSDN80	1988	1340	508	457	250	660	19	235™ / 235Z	230S / 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

*Height can be adjusted up or down in 152 mm increments to a maximum of 304 mm in either direction.

**To service the lower media pack, additional service height is required.

		Assembly Part Number		Pump Max Flow Rating (m³/hr)							
		5 micron 99+% particulate protection	1 micron 99+% particulate protection	300	510	670	885	1170	1870	3060	4930
DN80	Demister	SLS-M300D5-DN80	SLS-M300D1-DN80	■	□	☒	☒	☒	☒	☒	☒
	Wire mesh	SLS-M510W5-DN80	SLS-M510W1-DN80	■	■	□	☒	☒	☒	☒	☒
DN100	Demister	SLSM670D5-DN100	SLS-M670D1-DN100	□	■	■	□	☒	☒	☒	☒
	Wire mesh	SLS-M885W5-DN100	SLS-M885W1-DN100	□	■	■	■	□	☒	☒	☒
DN150	Demister	SLS-M1175D5-DN150	SLS-M1175D1-DN150	□	□	□	■	■	□	☒	☒
	Wire mesh	SLS-M1870W5-DN150	SLS-M1870W1-DN150	□	□	□	■	■	■	□	☒
DN200	Demister	SLS-M1835D5-DN200	SLS-M1835D1-DN200	□	□	□	□	■	■	□	☒
	Wire mesh	SLS-M3060W5-DN200	SLS-M3060W1-DN200	□	□	□	□	□	■	■	□
DN250	Demister	SLS-M3085D5-DN250	SLS-M3085D1-DN250	□	□	□	□	□	■	■	□
	Wire mesh	SLS-M4930W5-DN250	SLS-M4930W1-DN250	□	□	□	□	□	■	■	■

■ Suitable for use in this flow range

□ Contact Solberg for review of application

☒ Not recommended for use at listed flowrate

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Pneumatic Drain System

DSP Series

Overview

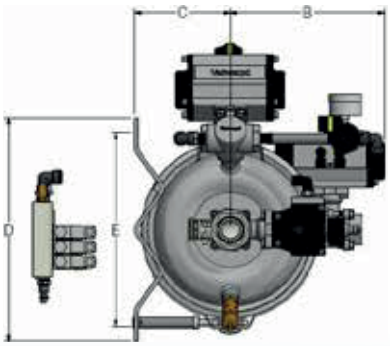
The Pneumatic Drain System allows Solberg Liquid Separator units to be drained without stopping the process or any loss of vacuum. The liquid removed by the liquid separator flows under gravity into the drain pot. When the high level sensor detects the liquid, the drain pot is isolated from the liquid 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.

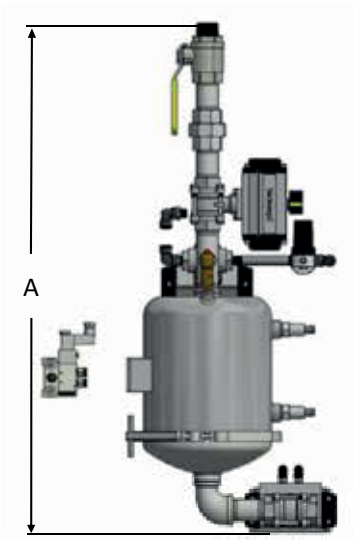
Features

- Durable carbon steel construction
- Electronic 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
- Electrical controls are UL 508A listed

Holding Capacity (liter)	BSPP Inlet & Outlet	Assembly Part Number Carbon Steel (SS Coating)	Dimensions - mm A	B	C	D	E	Weight (kg)
5	1”	**DSP-L005-101HC ***	782	197	122	286	248	17

*For gravity drain package (DSG Series), contact factory for more information.





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Leak Detector Filters

LDL Series NW25 - 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

- NW25 or NW40 stainless steel ports
- Removable/cleanable filter insert
- Centering ring/O-ring and clamps included

Technical Specifications

- Compatible with leak detectors rated up to 100 m^3/hr
- Vacuum service beyond $1x10^{-4}$ mbar
- Leak rate compatible to detector standards
- 95%+ removal efficiency standard to 10 micron

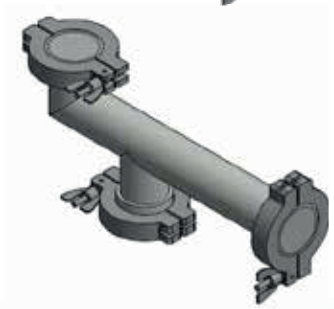
L-style config.
NW25 connection

Options

- Other micron media available upon request
- NW25 to NW40 adapters
- Multi-port “T” configuration
- Straight-through “S” configuration

Straight-through config. NW40 connection

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



T-style config.
NW40 connection

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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.

VTL Series

Benefits

- Prevent back streaming
- Remove hydrocarbons
- Trap condensable vapours
- Reduce overall maintenance costs
- Chemical resistant
- Easy 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

VTS Series

Technical Specifications

- Vacuum service down to $1x10^{-3}$ mbar
- Leak rate: $1x10^{-7}$ mbar L/sec
- Temperature range -20°C to 150°C
- Fine bead blast finish
- Viton O-ring

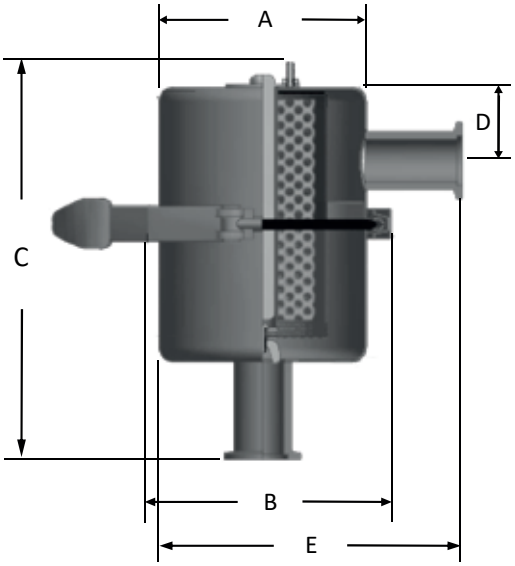
Standard Configurations:

Stainless Steel Metal Wool

- Trap hydrocarbons and large particulate
- Replaceable stainless steel or copper insert
- Reduce contamination

Molecular Sieve

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



VTL Configuration

Options (contact factory):

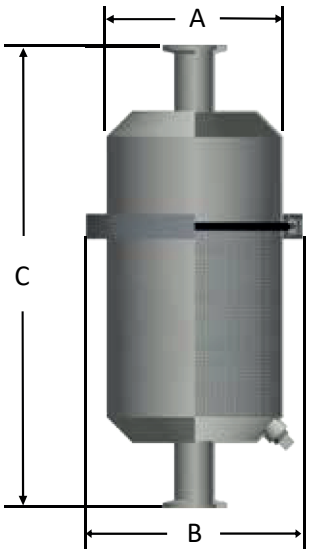
Chemical Adsorbents

- Trap chemicals and corrosives
- Chemical compatible adsorbents available (ie: activated carbon, alumina, SodaSorb, etc.)
- Reduce hazards

Fine Particulate

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

Assembly Part Number	VTL Housing Size	Dimensions - mm				
		A	B	C	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



VTS Configuration

Assembly Part Number	VTS Housing Size	Dimensions - mm		
		A	B	C
VTS-SSM4-NW16S1	4”	102	135	285
VTS-SSM4-NW25S1	4”	102	135	285
VTS-SSM6-NW40S1	6”	155	180	293

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.

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Multistage Vapour Condensers

JRS Series DN50 - DN200

Overview

JRS Series 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.

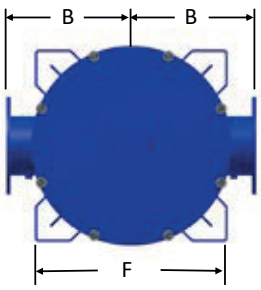
Features

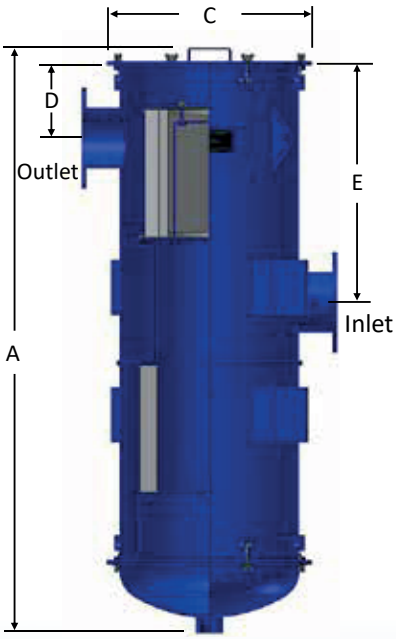
- Removable heat exchanger fin pack for ease of cleaning and long lasting optimum performance
- Coolant flask system
- Corrosive resistant blue powder coat carbon steel
- Coolant inlet and outlet ports
- 2" BSPP drain port

Options

ATEX Available

- ASME, PED rated vessels
- Stainless steel construction
- Drain systems CE compliant
- Ports, gauges, leg supports
- Davit arm
- Demister
- For removable or unremovable bottom, please contact Solberg





Flange Inlet/ Outlet	Reference Only Assembly Part Number	Reference Only Dimensions - mm						Suggested Service ht. mm	Reference Only Element Part No.
		A	B	C	D	E	F		
DN50	**JRS-GMAC235-DN50**	1205	254	355	191	470	306	254	GMAC235
DN80	**JRS-GMAC245-DN80**	1291	299	470	191	470	406	254	GMAC245
DN100	**JRS-GMAC275-DN100**	1461	300	470	200	625	542	254	GMAC275
DN125	**JRS-GMAC377-DN125**	1622	350	540	200	800	615	381	GMAC377
DN150	**JRS-GMAC385-DN150**	1994	508	838	318	800	760	381	GMAC385
DN200	**JRS-GMAC485-DN200**	2042	425	640	200	1050	688	559	GMAC485

Contact factory for application details.

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Compact Vapour Condensers

JST / JCT Series 2” - 6”

Overview

JST & JCT Series vapour 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.

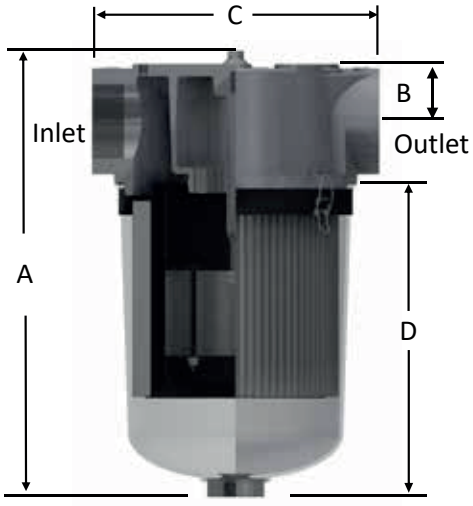
Features

- 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

ATEX Available

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



BSPP Inlet & Outlet	Drain Port Size	Assembly Part Number	Reference Dimensions - mm				Suggested Service ht. mm
			A	B	C	D	
2”	1"	**JST-C2048-201C**	446	50	229	332	254
2 ½”	½”	**JST-C2048-251C**	446	50	229	332	254
3”	1"	**JST-C2081-301C**	539	69	343	376	254
4”	1"	**JST-C2081-401C**	539	69	343	376	254
2”	1"	**JCT-C2048-201C**	523	50	229	409	254
2 ½”	1"	**JCT-C2048-251C**	523	50	229	409	254
3”	1"	**JCT-C2081-301C**	506	69	343	344	254
4”	1"	**JCT-C2081-401C**	506	69	343	344	254
6”	1"	**JCT-C3226-601C**	757	99	483	527	356

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.

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SOLBERG®
Filtration • Separation• Silencing

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

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

- Assembly Model #
- Replacement Element #

The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being an “HDL” design filter with a “PSG344/2” coalescing element, and 3” BSPT connection size.

HDL-PSG344/2-301

- Connection Size and Type
- Replacement Element Part Number
- Filter Type

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: 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 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.**

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Discharge Oil Mist Filters

HDL Series 1” - 2 ½”

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

Features

- 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
- ¼” NPSC for external drain

Config. A Config. B Config. C

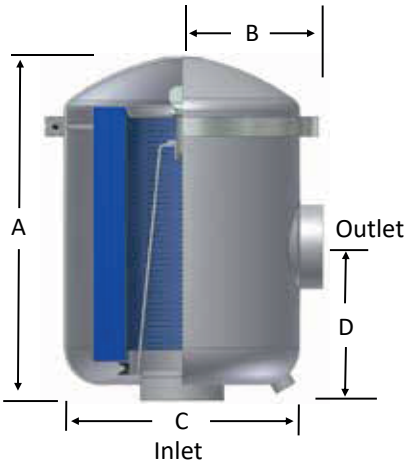
Technical Specifications

- 0.3 micron 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

ATEX Available

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



Inlet/Outlet Size	Inlet/Outlet Type	Assembly m³/hr Rating	Housing Config.	Assembly Part Number	Dimensions - mm A	B	C	D	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.	Element m³/hr Rating
1”	BSPP	68	A	**HDL-PSG848-101HC**	171	105	187	108	133	2	PSG848	85
1 ¼”	BSPP	85	A	**HDL-PSG848-126HC**	171	105	187	108	133	2	PSG848	85
1 ½”	BSPP	85	A	**HDL-PSG848-151HC**	171	105	187	108	133	2	PSG848	85
2”	BSPP	213	B	**HDL-PSG850/1-201HC**	286	117	227	127	235	7	PSG850/1	213
2”	BSPP	298	C	**HDL-PSG860/1-201HC**	443	117	227	127	368	14	PSG860/1	340
2 ½”	BSPP	425	B	**HDL-PSG244/2-251HC**	363	185	346	182	254	16	PSG244/2	510

Note: 2 ½” housing has ¼” NPSC taps standard on inlet and outlet.

See Oil Mist Discharge Filter Technical Data for sizing guidelines.

SOLBERG®
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Discharge Oil Mist Filters

HDL Series 3” - 4”, DN125 - DN200

Benefits

- Large oil 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

- Captures oil fog, mist or aerosol from exhaust of oil sealed vacuum pumps
- O-ring sealed housings
- Corrosive resistant white powder coat carbon steel
- ½” BSPP for external drain

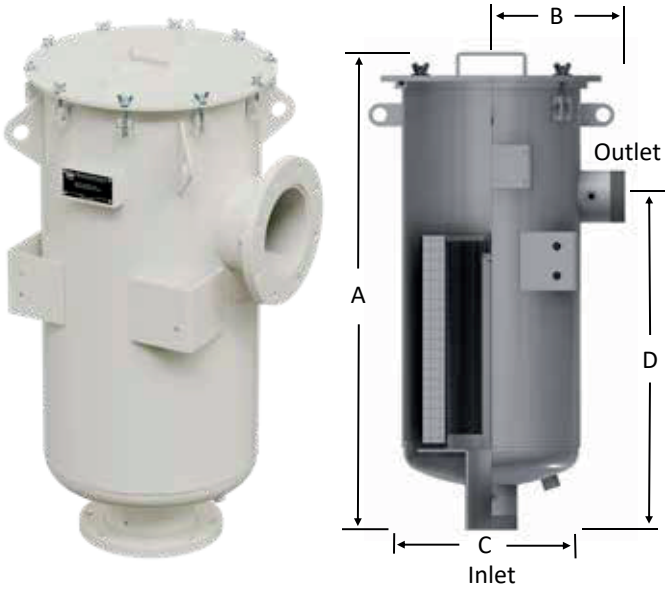
Technical Specifications

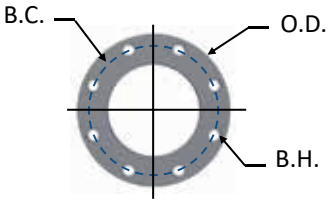
- 0.3 micron media; 99.97% efficiency
- Continuous operating temp: 20°C (68°F) up to 80°C (180°F)
- Mounted vertically
- Pressure rating: 0.5 bar

Options

ATEX Available

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





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

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

Inlet/Outlet Size	Inlet/Outlet Type	Assembly m³/hr Rating	Assembly Part Number	Dimensions - mm A	B	C	D	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.	Element m³/hr 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

See Oil Mist Discharge Filter Technical Data for sizing guidelines.

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Discharge Oil Mist Filters (Open)

EF Series ½" - 1 ¾", ISO FLG

Features

- Captures oil 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

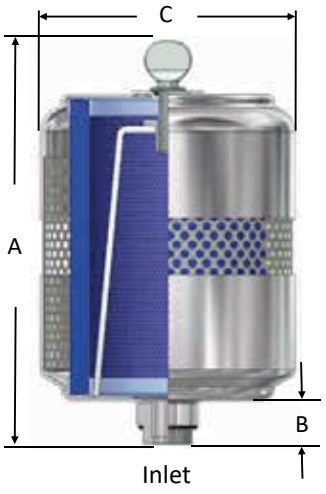
Technical Specifications

- 0.3 micron 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 Size	Connection Type	Assembly m³/hr Rating	Assembly Part Number	Dimensions - mm A	B	C	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.
½"	MPT	8	**EF-FG5-050**	114	23	64	76	0.3	FG5
½"	MPT	12	**EF-FG7-050**	142	23	64	102	0.8	FG7
¾"	¾-20 UNEF	7	**EF-FG3-077**	94	26	64	54	0.5	FG3
¾"	MPT	8	**EF-FG5-075**	119	28	64	76	0.4	FG5
¾"	MPT	12	**EF-FG7-075**	147	28	64	102	0.8	FG7
1"	1-20 UNEF	8	**EF-FG5-103**	112	21	64	76	0.3	FG5
1"	1-20 UNEF	12	**EF-FG7-103**	140	21	64	102	0.4	FG7
1"	1-20 UNEF	27	**EF-FG9-103**	157	21	129	102	0.8	FG9
1"	1-20 UNEF	41	**EF-FG10-103**	207	22	129	152	3.2	FG10
1 ¾"	1 ¾-20 UN	41	**EF-FG10-177**	235	51	129	152	1.6	FG10
16 mm	ISO Flange	8	**EF-FG5-NW16**	113	22	64	76	0.3	FG5
25 mm	ISO Flange	8	**EF-FG5-NW2516**	113	22	64	76	0.6	FG5
25 mm	ISO Flange	41	**EF-FG10-KF25**	237	54	129	152	1.6	FG10
40 mm	ISO Flange	75	**EF-FG20-KF40**	178	54	260	121	3.2	FG20



See Oil Mist Discharge Filter Technical Data for sizing guidelines.

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Discharge Oil Mist Filters (Internal Drain)

EFDB Series

Features

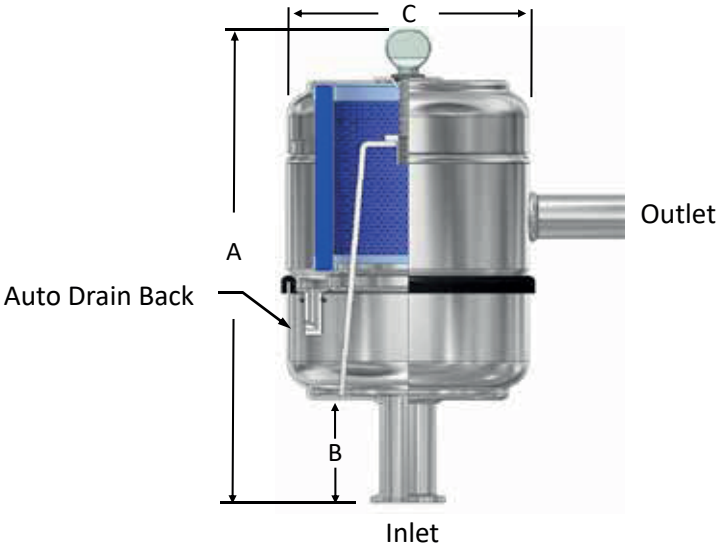
- Captures oil fog, mist or aerosol from exhaust of oil sealed vacuum pumps
- Auto drain back design to recycle oil mist:
  - Internal drain returns oil back into pump
  - Prevents oil blow back with auto sealing
  - Enclosed housing allows clean environment
- Steel construction with nickel plated finish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

Technical Specifications

- 0.3 micron 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 Size / Type	Assembly m^3/hr Rating	Assembly Part Number	Dimensions - mm A	B	C	Approx. Weight (kg)	Replacement Element Part 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 ¾ - 20 UN	41	**EFDB-FG11-177**	269	51	159	1.1	FG11

See Oil Mist Discharge Filter Technical Data for sizing guidelines.

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Discharge Oil Mist Filters (External Drain)

EE Series

Benefits

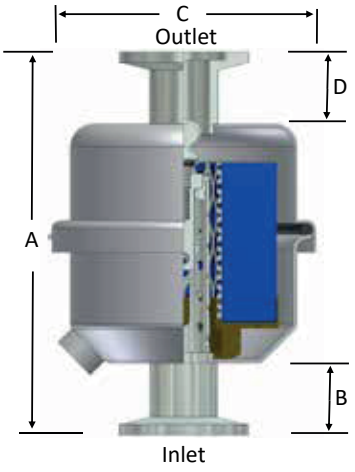
- Compact, low profile design
- Easy field maintenance

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
- ⅛" external drain

Technical Specifications

- 0.3 micron 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	Dimensions - mm				Suggested Service ht. mm	Replacement Element Part No.	Element m³/hr Rating
				A	B	C	D			
¾" NPT	½" NPSC	14	**EE-GL915-075**	116	28	81	14	60	GL915	14
16 mm ISO Flange	16 mm ISO Flange	14	**EE-GL915-QF16**	119	22	81	22	60	GL915	14
25 mm ISO Flange	25 mm ISO Flange	14	**EE-GL915-QF2516**	119	22	81	22	60	GL915	14
25 mm ISO Flange	25 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).

See Oil Mist Discharge Filter Technical Data for sizing guidelines.

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Discharge Oil Mist & Odor Filters

DSV, DEE Series NW16 - NW25

Overview

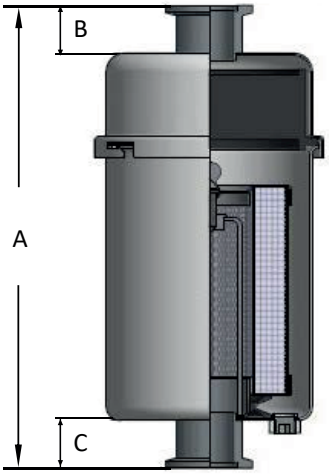
The Solberg DSV is an extremely effective vacuum pump discharge filter that offers two stages of filtration to remove both oil mist and undesirable odors from the pump's exhaust. It offers a compact, straight-through design, with an integrated drain port to easily evacuate any collected contaminants. 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

- Oil mist elimination
- Odor adsorption
- Reduce overall maintenance costs
- Contamination removal

Features

- Corrosive resistant white powder coat carbon steel
- Primary 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

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

Options

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

Connection Size	Assembly m³/hr Rating	Assembly Part Number	Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.	Odor Adsorbent Element Replacement
			A	B	C				
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

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Hydraulic Breathers

HB Series ¼”- 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

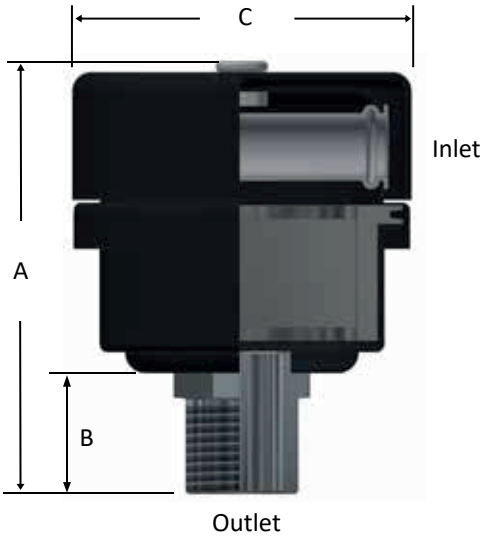
- Toolless design
- Ease of maintenance
- Equipment protection
- Noise reduction
- Compact designs

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 Outlet	Flow Rating m^3/hr	Assembly Part Number	Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.
			A	B	C			
¼"	7	**HB-05-025**	75	17	64	26	0.11	05™
⅜"	14	**HB-05-038**	75	17	64	26	0.11	05™
⅜"	14	**HB-07-038**	92	17	83	51	0.22	07™
½"	14	**HB-05-050**	80	23	64	26	0.11	05™
½"	20	**HB-07-050**	100	23	83	51	0.22	07™
½"	20	**HB-11-050**	111	23	129	51	0.45	11™
¾"	20	**HB-07-075**	109	31	83	51	0.22	07™
¾"	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 Outlet	Flow Rating m^3/hr	Assembly Part Number	Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.
			A	B	C			
1"	60	**HB-15-100**	102	38	152	59	0.95	15™
1 ¼"	119	**HB-19P-125**	168	41	155	121	1.50	19P®
1 ½"	145	**HB-19P-150**	168	38	152	121	1.58	19P®
2"	230	**HB-31P-200**	184	57	254	121	3.50	31P™

Options

- High vibration designs
- Custom connections
- Equipment specific configurations
- Multiple filter media types available

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Discharge Silencer with Filter

EFS Series ⅜”- 1”, NW16 - NW25

Features

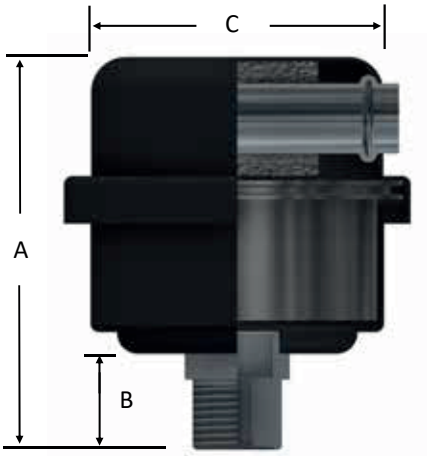
- Captures tip seal dust
- Compact design combines both filtration efficiency and noise reduction
- Integrated inlet diffuser optimizes sound attenuation
- Multi-stage noise reducing features, including final stage sound absorbent insert
- Tubular silencing design - tube is positioned to maximize attenuation 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/Outlet Size	Inlet/Outlet Type	Assembly m^3/hr Rating	Assembly Part Number	Dimensions - mm A	B	C	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.
⅜”	MPT	4	**EFS-05-038/1**	71	17	64	25	0.23	05™
½”	MPT	16	**EFS-07-050/1**	96	22	81	51	0.34	07™
NW16	ISO Flange	16	**EFS-07-NW16/1**	96	22	81	51	0.34	07™
NW25	ISO Flange	19	**EFS-07-NW25/1**	96	22	81	51	0.34	07™
1”	MPT	41	**EFS-11-100/2**	115	22	105	51	0.57	11™
NW25	ISO Flange	40	**EFS-11-NW25/2**	105	22	105	51	0.57	11™

See Oil Mist Discharge Filter Technical Data for sizing guidelines.

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.

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Tel. +34 633 112 141

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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**

SOLBERG®
Filtration • Separation• Silencing

Technical Data

Inlet Filter Silencers, Silencers

Applications & Equipment

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

Identification

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

- Assembly Model #
- Replacement Element #

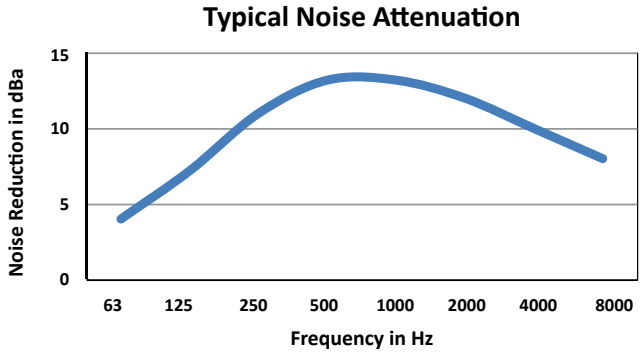
The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being an “FS” design filter with a “275™” element, “P” prefilter and 3” BSPT connection size.

FS-275P-301

- Connection Size and Type
- Replacement Element Part Number
- Filter Type

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

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

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

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

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

SOLBERG®
Filtration • Separation• Silencing

Stamped Steel Filter Silencers

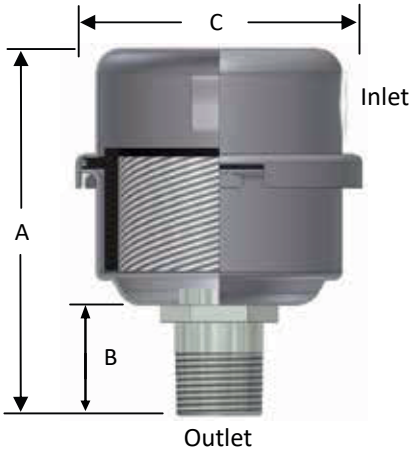
FS Series ¼" - 1"

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

MPT Outlet	Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)	Replacement Element Part No.		Element m³/hr Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
¼"	7	FS-05-025	FS-04-025	70	17	64	25	1	0.11	05™	04™	14
⅜"	14	FS-05-038	FS-04-038	70	17	64	25	1	0.11	05™	04™	14
⅜"	14	FS-07-038	FS-06-038	91	17	81	35	1	0.23	07™	06™	20
½"	14	FS-05-050	FS-04-050	76	23	64	25	1	0.11	05™	04™	14
½"	20	FS-07-050	FS-06-050	96	23	81	35	1	0.23	07™	06™	20
½"	20	FS-11-050	FS-10-050	105	23	106	35	1	0.45	11™	10™	60
¾"	20	FS-07-075	FS-06-075	105	31	81	35	1	0.23	07™	06™	20
¾"	43	FS-11-075	FS-10-075	114	31	105	35	1	0.45	11™	10™	60
1"	60	FS-11-100	FS-10-100	114	31	105	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.

SOLBERG®
Filtration • Separation• Silencing

Molded Polymer Filter Silencers

PS Series ⅛" - 1"

Benefits

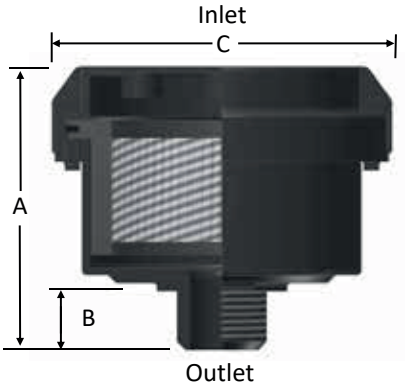
- Longer element life with maximized surface area
- Cost-efficient solution
- Low restriction improves equipment performance

Features

- Easy snap-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 Outlet	Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.		Element m³/hr Rating
		Polyester	Paper	A	B	C			Polyester	Paper	
⅛"	5	PS-03-013	PS-02-013	45	11	44	25	0.02	03™	02™	5
¼"	5	PS-03-025	PS-02-025	40	11	44	25	0.02	03™	02™	5
¼"	7	PS-05-025	PS-04-025	52	11	65	25	0.04	05™	04™	14
⅜"	10	PS-05-038	PS-04-038	52	11	65	25	0.04	05™	04™	14
½"	10	PS-05-050	PS-04-050	52	11	65	25	0.04	05™	04™	14
½"	17	PS-07-050	PS-06-050	81	18	82	35	0.09	07™	06™	20
½"	20	PS-11-050	PS-10-050	81	18	106	35	0.14	11™	10™	60
¾"	20	PS-07-075	PS-06-075	90	27	82	35	0.14	07™	06™	20
¾"	34	PS-11-075	PS-10-075	95	31	106	35	0.16	11™	10™	60
1"	60	PS-11-100	PS-10-100	95	31	106	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.

SOLBERG®
Filtration • Separation• Silencing

Stamped Steel Filter Silencers

FS Series ½" - 6", DN80 - DN150

Features

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

Technical Specifications

- Temp (continuous): min -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

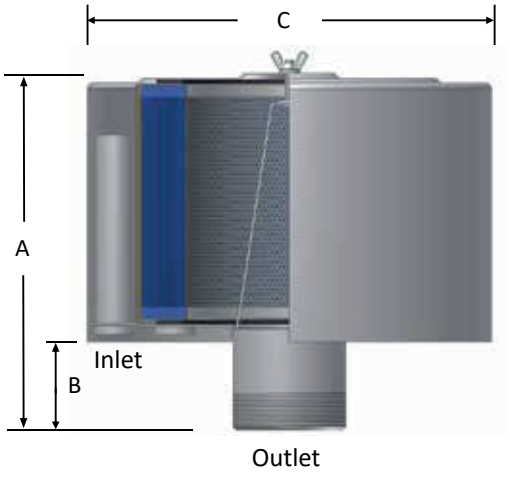
Options

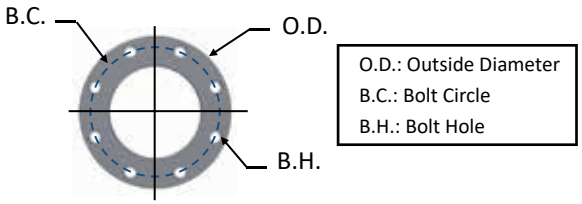
ATEX Available

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

www.solbergmfg.com

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





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

Outlet		Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)	Replacement Element Part No.		Element m³/hr Rating
Size	Type		Polyester	Paper	A	B	C				Polyester	Paper	
½"	MPT	17	FS-15-050	FS-14-050	87	24	155	59	1	0.8	15™	14™	60
¾"	MPT	43	FS-15-075	FS-14-075	96	31	155	59	2	0.9	15™	14™	60
1"	MPT	60	FS-15-100	FS-14-100	96	31	155	59	3	0.9	15™	14™	60
1"	MPT	60	FS-15-100B	FS-14-100B	96	33	155	59	3	0.9	15™	14™	60
1"	MPT	94	FS-19P-100	FS-18P-100	162	31	155	121	3	1.4	19P®	18P™	170
1 ¼"	BSPT	119	FS-19P-126	FS-18P-126	171	41	155	121	5	1.5	19P®	18P™	170
1 ½"	BSPT	145	FS-19P-151	FS-18P-151	171	41	155	121	5	1.6	19P®	18P™	170
1 ½"	BSPT	145	FS-19P-151B	FS-18P-151B	171	41	155	121	5	1.6	19P®	18P™	170
2"	BSPT	230	FS-31P-201	FS-30P-201	190	57	262	121	5	3.5	31P™	30P™	332
2"	BSPT	230	FS-231P-201	FS-230P-201	304	51	260	241	5	6.3	231P™	230P™	510
2 ½"	BSPT	332	FS-31P-251	FS-30P-251	196	64	262	121	5	3.7	31P™	30P™	332
2 ½"	BSPT	332	FS-231P-251	FS-230P-251	314	64	260	241	9	6.5	231P™	230P™	510
3"	BSPT	510	FS-231P-301	FS-230P-301	323	76	260	241	9	6.8	231P™	230P™	510
3"	BSPT	510	FS(12)-235P-301	FS(12)-234P-301	324	76	311	244	3	13	235P™	234P™	970
3"	BSPT	510	FS-275P-301	FS-274P-301	335	76	406	244	9	15	275P™	274P™	1870
4"	BSPT	885	FS(12)-235P-401	FS(12)-234P-401	356	102	311	244	6	14	235P™	234P™	970
4"	BSPT	885	FS-275P-401	FS-274P-401	356	102	406	244	9	15	275P™	274P™	1870
5"	BSPT	1360	FS-245P-501	FS-244P-501	356	102	406	244	14	15	245P™	244P™	1500
5"	BSPT	1360	FS-275P-501	FS-274P-501	356	102	406	244	14	16	275P™	274P™	1870
6"	BSPT	1870	FS-275P-601	FS-274P-601	385	127	406	244	18	17	275P™	274P™	1870

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

Flange Outlet	Assembly m³/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)	Replacement Element Part No.		Element m³/hr Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
DN80	510	FS(12)-235P-DN80	FS(12)-234P-DN80	331	76	311	244	3	13	235P™	234P™	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™	234P™	970
DN100	885	FS-275P-DN100	FS-274P-DN100	369	111	406	244	9	18	275P™	274P™	1870
DN125	1360	FS-245P-DN125	FS-244P-DN125	369	111	406	244	14	17	245P™	244P™	1500
DN125	1360	FS-275P-DN125	FS-274P-DN125	369	111	406	244	14	18	275P™	274P™	1870
DN150	1870	FS-275P-DN150	FS-274P-DN150	395	137	406	244	18	19	275P™	274P™	1870

See Filter Silencer Technical Data for sizing guidelines.

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Filtration • Separation• Silencing

Big Boy Filter Silencers

FS Series DN200 - DN400

Features

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

Technical Specifications

- Temp (continuous): min -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

ATEX Available

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

Sumo Class Features

- Single barrel filter design allows for large airflows in space restricted work areas
- DN350 to DN400 flange connections available
- Designed for airflows up to 13592 m^3/hr

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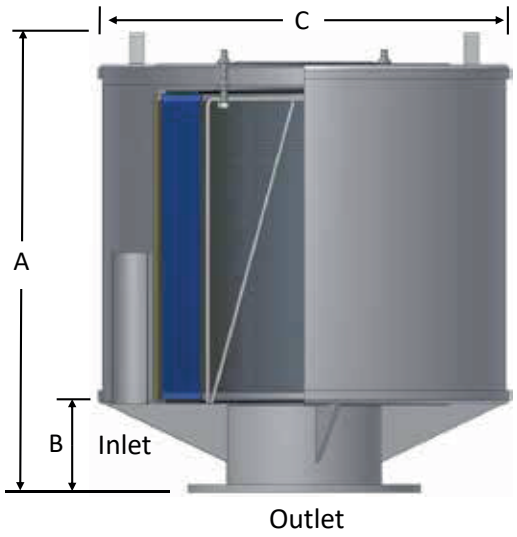
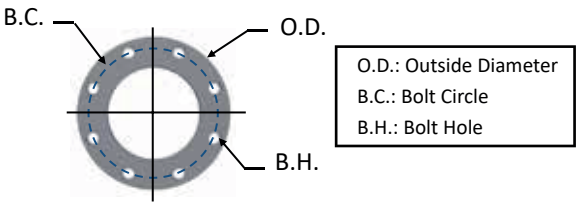


Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
DN200	3060	**FS-377P-DN200**	**FS-376P-DN200**	618	162	556	368	12	54	377P™	376P™	3105
DN200	3060	**FS-385P-DN200**	**FS-384P-DN200**	610	152	719	368	12	56	385P™	384P™	5610
DN250	5610	**FS-385P-DN250**	**FS-384P-DN250**	610	152	719	368	16	59	385P™	384P™	5610
DN250	5610	**FS-485P-DN250**	**FS-484P-DN250**	800	152	719	546	16	64	485P™	484P™	8000
DN300	7990	**FS-485P-DN300**	**FS-484P-DN300**	799	154	719	546	24	70	485P™	484P™	8000
DN300	7990	**FS-685P-DN300**	**FS-384P(2)-DN300**	977	154	719	724	24	79	685P™	384P™ (2)	11220

Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Replacement Element Part No.	
		Polyester	Paper	A	B	C		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 Flange	Dimensions - mm			No. of Holes	Flange Thickness mm
	O.D.	B.C.	B.H.		
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.

SOLBERG®
Filtration • Separation• Silencing

Enhanced Filter Silencers for Blowers

QB Series 2” - 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

ATEX Available

- Tap holes 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)

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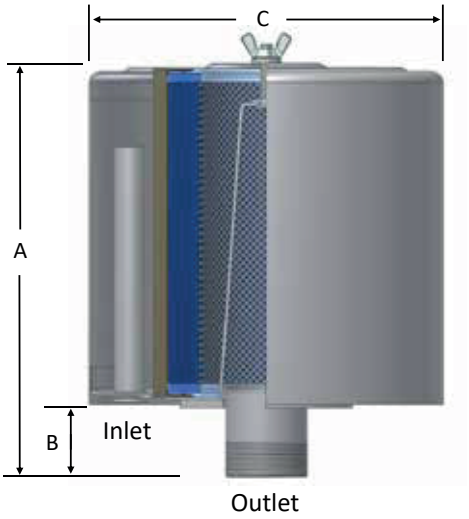

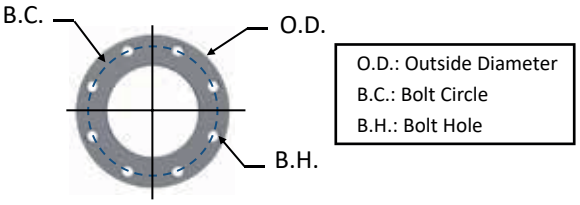

PN10 Pattern Flange	Dimensions - mm			No. of Holes	Flange Thickness mm
	O.D.	B.C.	B.H.		
DN80	200	160	18	8	20
DN100	220	180	18	8	22
DN125	250	210	18	8	22
DN150	285	240	22	8	24
DN200	340	295	22	8	24
DN250	395	350	22	12	26
DN300	445	400	22	12	26

BSPT Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
2"	230	**QB-231P-201**	**QB-230P-201**	301	51	260	241	5	6	231P™	230P™	510
2 ½"	332	**QB-231P-251**	**QB-230P-251**	307	64	260	241	9	6	231P™	230P™	510
3"	510	**QB-231P-301**	**QB-230P-301**	320	76	260	241	9	6	231P™	230P™	510
3"	510	**QB(12)-235P-301**	**QB(12)-234P-301**	326	69	311	244	3	13	235P™	234P™	969
3"	510	**QB-275P-301**	**QB-274P-301**	330	76	406	244	9	15	275P™	274P™	1870
4"	884	**QB(12)-235P-401**	**QB(12)-234P-401**	352	95	311	244	6	14	235P™	234P™	970
4"	884	**QB-275P-401**	**QB-274P-401**	356	102	406	244	9	15	275P™	274P™	1870
5"	1360	**QB-245P-501**	**QB-244P-501**	356	102	406	244	14	15	245P™	244P™	1496
5"	1360	**QB-275P-501**	**QB-274P-501**	356	102	406	244	14	16	275P™	274P™	1870
6"	1870	**QB-275P-601**	**QB-274P-601**	394	127	406	244	18	17	275P™	274P™	1870

Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	No. of Silencing Tubes	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C				Polyester	Paper	
DN80	510	**QB(12)-235P-DN80**	**QB(12)-234P-DN80**	326	69	311	244	3	14	235P™	234P™	970
DN80	510	**QB-275P-DN80**	**QB-274P-DN80**	330	86	406	244	9	15	275P™	274P™	1870
DN100	884	**QB(12)-235P-DN100**	**QB(12)-234P-DN100**	352	95	311	244	6	15	235P™	234P™	970
DN100	884	**QB-275P-DN100**	**QB-274P-DN100**	356	111	406	244	9	18	275P™	274P™	1870
DN125	1360	**QB-245P-DN125**	**QB-244P-DN125**	356	102	406	244	14	17	245P™	244P™	1496
DN125	1360	**QB-275P-DN125**	**QB-274P-DN125**	356	111	406	244	14	18	275P™	274P™	1870
DN150	1870	**QB-275P-DN150**	**QB-274P-DN150**	394	137	406	244	18	19	275P™	274P™	1870
DN200	3060	**QB-377-DN200**	**QB-376P-DN200**	584	162	556	368	12	50	377P™	376P™	3105
DN200	3060	**QB-385P-DN200**	**QB-384P-DN200**	584	162	719	368	12	56	385P™	384P™	5605
DN250	5610	**QB-385P-DN250**	**QB-384P-DN250**	584	162	719	368	16	59	385P™	384P™	5610
DN250	5610	**QB-485P-DN250**	**QB-484P-DN250**	787	162	719	546	16	64	485P™	484P™	8000
DN300	7990	**QB-485P-DN300**	**QB-484P-DN300**	787	151	719	546	24	70	485P™	484P™	8000
DN300	7990	**QB-685P-DN300**	**QB-384P(2)-DN300**	965	162	719	724	24	79	685P™	384P™	11220
DN300	7990	**QB-485P(2)-DN300**	**QB-484P(2)-DN300**	1346	162	719	546	24	88	485P™	484P™	16000

See Filter Silencer Technical Data for sizing guidelines.

SOLBERG®
Filtration • Separation• Silencing

Discharge Silencer Frames for PD Blowers

BBF Series 2” - 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

- Compact design for small blower package footprint
- Low profile allows for easier maintenance inspections
- Quick installation time
- Cost 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: 1 barg
- Hardware kit included (USA std. nuts, bolts, washers)
- Ports for relief valve, pressure & temperature gauges

Features

- Reactive style silencing design
- Integrated discharge silencer
- Adjustable motor supports for belt tensioning
- Pre-assembled rails to frame
- Corrosive resistant black powder coat carbon steel
- Assembly hardware included

Options

- Purpose built belt guard
- Flexible boot kit (clamp, flex adapter)
- Flange adapters
- Snubber discharge silencer for vacuum applications
- Contact factory for best Solberg filter for your package

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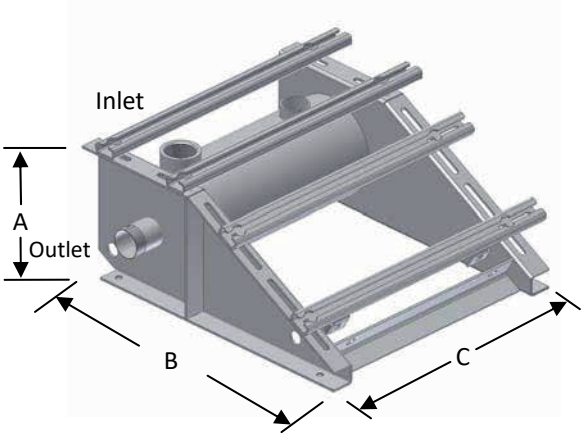

Pipe Stub Inlet	MPT Outlet	Assembly m³/hr Rating	Part Number	Dimensions - mm A	B	C	Relief Valve Port	Suggested HP Range	Approx. Weight (kg)	Belt Guard for BBF Series Part No.	Weight (kg)	Boot Kit Part Number
2″	2″	230	**BBF-200**	305	699	597	2 ½″	5 - 20+	59	DL-200	9	**BK200**
2 ½″	2 ½″	332	**BBF-250**	305	699	597	2 ½″	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).

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Side Channel Blower Silencers

SLCR, SLCRT Series ½" - 4"

Features

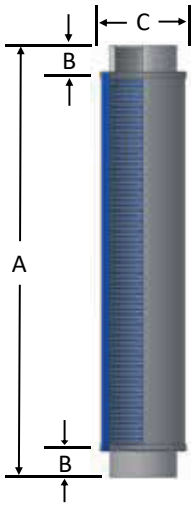
- Absorptive media pack
- Designed for minimal pressure drop
- For inlet and discharge inline air service
- Corrosive resistant gray powder coat carbon steel: ½" to 1 ½" connections; epoxy coat finish: 2" to 4" connections

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

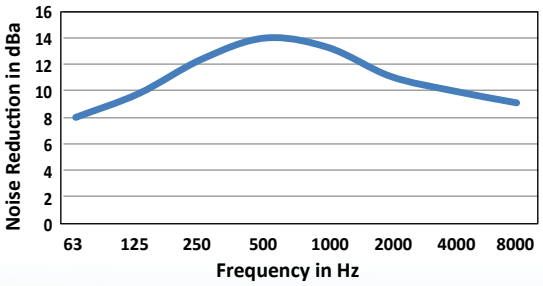
- Flange adapters
- For additional sizes, contact factory
- Special connections
- Hi-temp models



Inlet/Outlet Size	Type	Assembly m^3/hr Rating	Part Number	Dimensions - mm A	B	C	Approx. Weight (kg)
1"	BSPP	71	**SLCR101**	304	19	64	1.0
1 ¼"	BSPP	94	**SLCR126**	306	19	64	1.0
1 ½"	BSPP	264	**SLCR151**	306	19	64	1.3
2"	BSPP	459	**SLCR201**	399	N/A	89	1.8
2 ½"	BSPP	509	**SLCR251**	533	31	118	3.6
3"	BSPP	560	**SLCR301**	657	40	132	4.5
4"	BSPP	978	**SLCR401**	621	40	254	12
½"	NPT	43	**SLCRT050**	352	43	64	1.0
¾"	NPT	60	**SLCRT075**	368	51	64	1.0
1"	BSPT	71	**SLCRT101**	368	51	66	1.0
1 ¼"	BSPT	94	**SLCRT126**	368	51	64	1.0
1 ½"	BSPT	264	**SLCRT151**	368	51	66	1.3
2"	BSPT	459	**SLCRT201**	487	44	89	1.8
2 ½"	BSPT	509	**SLCRT251**	601	67	118	3.6
3"	BSPT	560	**SLCRT301**	711	67	130	4.5
4"	BSPT	978	**SLCRT401**	744	102	254	12

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

Typical Noise Attenuation



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

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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**

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Technical Data

Inlet Filter Assemblies

Applications & Equipment

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

Identification

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

- Assembly Model #
- Replacement Element #

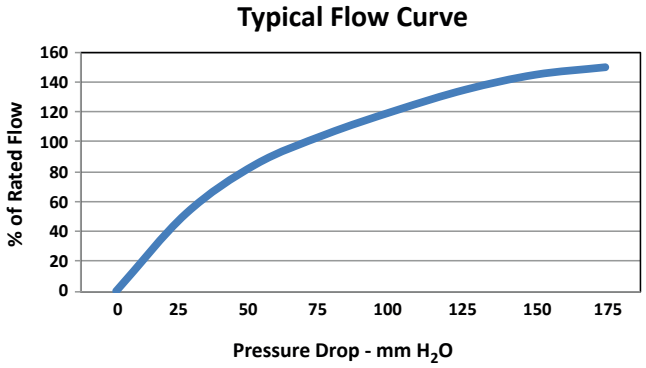
The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being an “F” design filter with a “385™” element, “P” prefilter and DN250 flange connection size.

F-385P-DN250

- Connection Size and Type
- Replacement Element Part Number
- Filter Type

Typical Flow Curve

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

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

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

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

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

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Compact **Inlet Filters**

F Series ½” - 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

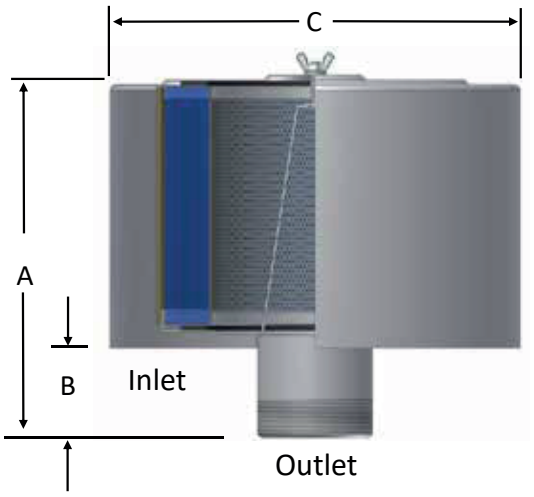
Technical Specifications

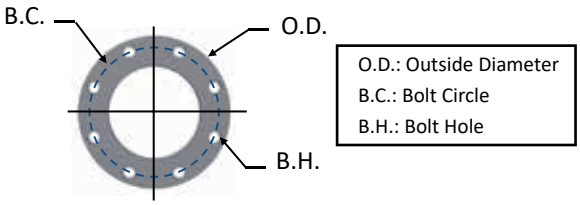
- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

Options

ATEX Available

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





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

Outlet		Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
Size	Type		Polyester	Paper	A	B	C			Polyester	Paper	
½"	MPT	17	**F-15-050**	**F-14-050**	88	23	155	59	0.68	15™	14™	60
¾"	MPT	43	**F-15-075**	**F-14-075**	96	31	155	59	0.77	15™	14™	60
1"	MPT	60	**F-15-100**	**F-14-100**	96	31	155	59	0.86	15™	14™	60
1"	MPT	94	**F-19P-100**	**F-18P-100**	165	31	155	121	1.4	19P®	18P™	170
1 ¼"	BSPT	119	**F-19P-126**	**F-18P-126**	178	44	155	121	1.4	19P®	18P™	170
1 ½"	BSPT	145	**F-19P-151**	**F-18P-151**	178	44	155	121	1.4	19P®	18P™	170
2"	BSPT	230	**F-31P-201**	**F-30P-201**	186	57	200	121	2	31P™	30P™	332
2"	BSPT	230	**F-231P-201**	**F-230P-201**	307	57	260	241	5	231P™	230P™	510
2 ½"	BSPT	332	**F-31P-251**	**F-30P-251**	205	64	200	121	2	31P™	30P™	332
2 ½"	BSPT	332	**F-231P-251**	**F-230P-251**	309	64	260	241	6	231P™	230P™	510
3"	BSPT	510	**F-231P-301**	**F-230P-301**	323	76	260	241	6	231P™	230P™	510
3"	BSPT	510	**F-235P-301**	**F-234P-301**	325	76	260	244	7	235P™	234P™	970
3"	BSPT	510	**F-275P-301**	**F-274P-301**	338	76	406	244	11	275P™	274P™	1870
4"	BSPT	885	**F-235P-401**	**F-234P-401**	348	102	260	244	7	235P™	234P™	970
4"	BSPT	884	**F-245P-401**	**F-244P-401**	359	102	308	244	10	245P™	244P™	1496
4"	BSPT	885	**F-275P-401**	**F-274P-401**	359	102	406	244	12	275P™	274P™	1870
5"	BSPT	1360	**F-245P-501**	**F-244P-501**	351	102	308	244	10	245P™	244P™	1500
5"	BSPT	1360	**F-275P-501**	**F-274P-501**	356	102	406	244	12	275P™	274P™	1870
6"	BSPT	1870	**F-275P-601**	**F-274P-601**	384	127	406	244	13	275P™	274P™	1870

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

Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C			Polyester	Paper	
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-234P-DN100**	348	102	260	244	9	235P™	234P™	970
DN100	885	**F-275P-DN100**	**F-274P-DN100**	359	102	406	244	14	275P™	274P™	1870
DN125	1360	**F-245P-DN125**	**F-244P-DN125**	351	111	406	244	12	245P™	244P™	1500
DN125	1360	**F-275P-DN125**	**F-274P-DN125**	353	102	406	244	14	275P™	274P™	1870
DN150	1870	**F-275P-DN150**	**F-274P-DN150**	384	137	406	244	15	275P™	274P™	1870

See Filter Assembly Technical Data for sizing guidelines.

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Big Boy Inlet Filters

F Series DN200 - 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

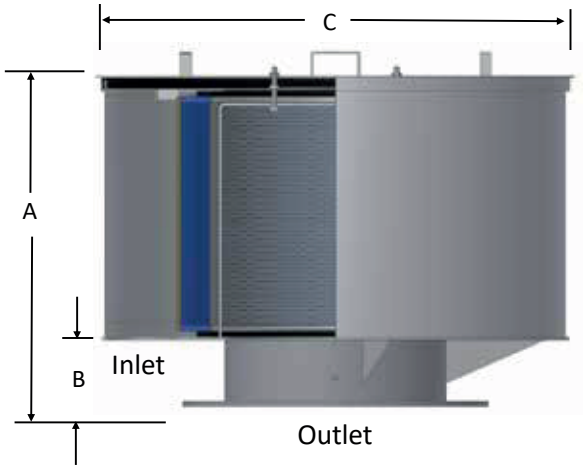
Options

ATEX Available

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

Sumo Class Features

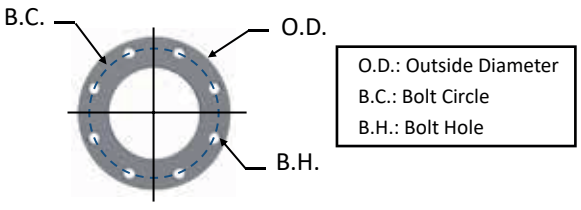
- Single barrel filter design allows for large airflows in space restricted work areas
- DN350 to DN400 flange connections available
- Designed for airflows up to 13592 m^3/hr



Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No.		Element m^3/hr Rating
		Polyester	Paper	A	B	C			Polyester	Paper	
DN200	3060	**F-377P-DN200**	**F-376P-DN200**	581	152	556	368	31	377P™	376P™	3105
DN200	3060	**F-385P-DN200**	**F-384P-DN200**	584	152	719	368	56	385P™	384P™	5605
DN250	5610	**F-385P-DN250**	**F-384P-DN250**	584	152	719	368	59	385P™	384P™	5610
DN250	5610	**F-485P-DN250**	**F-484P-DN250**	762	152	719	546	64	485P™	484P™	8000
DN300	7990	**F-485P-DN300**	**F-484P-DN300**	765	156	719	546	70	485P™	484P™	8000
DN300	7990	**F-685P-DN300**	**F-384P(2)-DN300**	978	152	719	724	79	685P™	384P™(2)	11220

Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number		Dimensions - mm			Suggested Service ht. mm	Replacement Element Part No.	
		Polyester	Paper	A	B	C		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 Flange	Dimensions - mm			No. of Holes	Flange Thickness mm
	O.D.	B.C.	B.H.		
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.

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Exposed Inlet Filters

FT Series ½” - 6”, DN80 - DN300

Features

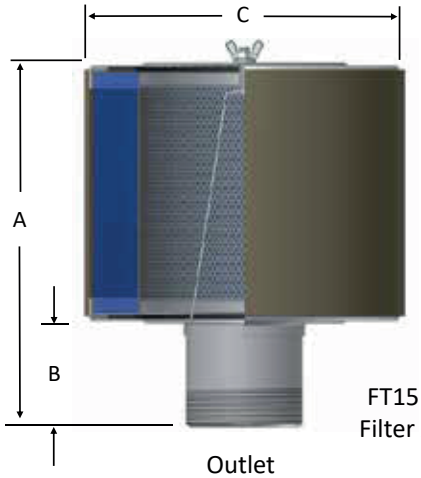
- Exposed element for optimal air flow & low restriction
- Heavy gauge base with low pressure drop outlet pipe and center bracket design
- Corrosive resistant gray powder coat carbon steel

Technical Specifications

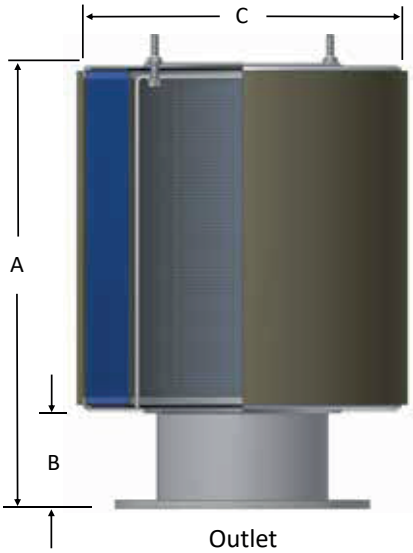
- Temp (continuous): min -26°C (-15°F) max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron

Options

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



FT15 to FT275P
Filter Assemblies



FT377P to FT685P
Filter Assemblies

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

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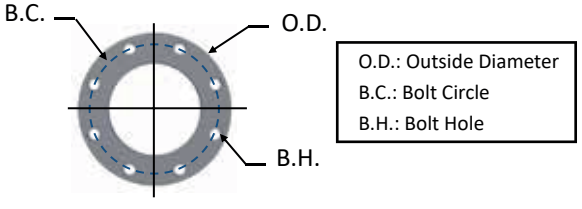
Outlet Size	Outlet Type	Assembly m^3/hr Rating	Assembly Part Number Polyester	Assembly Part Number Paper	Dimensions - mm A	Dimensions - mm B	Dimensions - mm C	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No. Polyester	Replacement Element Part No. Paper	Element m^3/hr Rating
½"	MPT	17	**FT-15-050**	**FT-14-050**	85	23	117	59	0.54	15™	14™	60
¾"	MPT	43	**FT-15-075**	**FT-14-075**	93	32	117	59	0.59	15™	14™	60
1"	MPT	60	**FT-15-100**	**FT-14-100**	93	32	117	59	0.63	15™	14™	60
1"	MPT	94	**FT-19P-100**	**FT-18P-100**	157	32	124	121	0.81	19P®	18P™	170
1 ¼"	BSPT	119	**FT-19P-126**	**FT-18P-126**	169	44	124	121	0.81	19P®	18P™	170
1 ½"	BSPT	145	**FT-19P-151**	**FT-18P-151**	169	44	117	121	0.90	19P®	18P™	170
2"	BSPT	230	**FT-31P-201**	**FT-30P-201**	184	57	152	121	1.35	31P™	30P™	332
2"	BSPT	230	**FT-231P-201**	**FT-230P-201**	301	57	152	241	3	231P™	230P™	510
2 ½"	BSPT	332	**FT-31P-251**	**FT-30P-251**	191	64	152	121	2	31P™	30P™	332
2 ½"	BSPT	332	**FT-231P-251**	**FT-230P-251**	308	64	152	241	3	231P™	230P™	510
3"	BSPT	510	**FT-231P-301**	**FT-230P-301**	320	76	152	241	4	231P™	230P™	510
3"	BSPT	510	**FT-235P-301**	**FT-234P-301**	325	76	206	241	6	235P™	234P™	970
3"	BSPT	510	**FT-275P-301**	**FT-274P-301**	330	76	305	244	10	275P™	274P™	1870
4"	BSPT	885	**FT-235P-401**	**FT-234P-401**	348	102	206	241	8	235P™	234P™	970
4"	BSPT	885	**FT-275P-401**	**FT-274P-401**	356	102	305	244	11	275P™	274P™	1870
5"	BSPT	1360	**FT-275P-501**	**FT-274P-501**	356	102	305	244	11	275P™	274P™	1870
6"	BSPT	1870	**FT-275P-601**	**FT-274P-601**	381	127	305	244	12	275P™	274P™	1870

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

Flange Outlet	Assembly m^3/hr Rating	Assembly Part Number Polyester	Assembly Part Number Paper	Dimensions - mm A	Dimensions - mm B	Dimensions - mm C	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No. Polyester	Replacement Element Part No. Paper	Element m^3/hr 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**	**FT-234P-DN100**	349	102	220	241	7	235P™	234P™	970
DN100	885	**FT-275P-DN100**	**FT-274P-DN100**	356	102	305	244	11	275P™	274P™	1870
DN125	1360	**FT-275P-DN125**	**FT-274P-DN125**	356	102	305	244	13	275P™	274P™	1870
DN150	1870	**FT-275P-DN150**	**FT-274P-DN150**	381	137	305	244	14	275P™	274P™	1870
DN200	3060	**FT-377P-DN200**	**FT-376P-DN200**	584	152	381	368	29	377P™	376P™	3105
DN200	3060	**FT-385P-DN200**	**FT-384P-DN200**	563	162	518	368	32	385P™	384P™	5605
DN250	5610	**FT-385P-DN250**	**FT-384P-DN250**	563	162	518	368	36	385P™	384P™	5610
DN250	5610	**FT-685P-DN250**	**FT-384P(2)-DN250**	944	162	518	724	43	685P™	384P™(2)	11220
DN300	7990	**FT-485P-DN300**	**FT-484P-DN300**	767	162	518	546	41	485P™	484P™	8000
DN300	7990	**FT-685P-DN300**	**FT-384P(2)-DN300**	944	162	518	724	45	685P™	384P™(2)	11220

PN10 Pattern Flange	Dimensions - mm O.D.	Dimensions - mm B.C.	Dimensions - mm B.H.	No. of Holes	Flange Thickness 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.

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Extreme Duty Filters

SpinMeister® SM Series ½” - 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

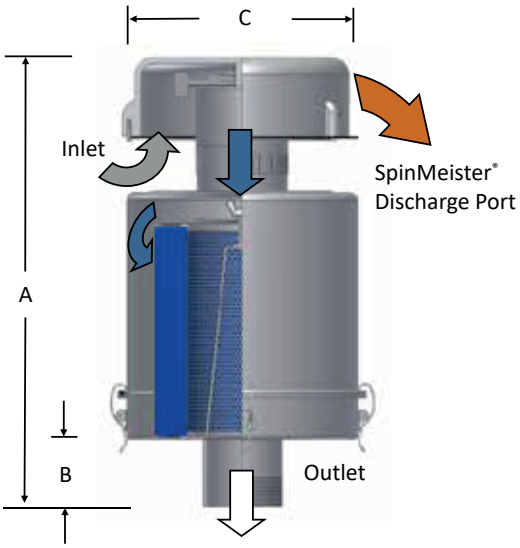
- Extreme duty filtration for high dust environments
- Significantly increases life of filter element
- Cost effective

Features

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

Technical Specifications

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



Options

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

Configuration A

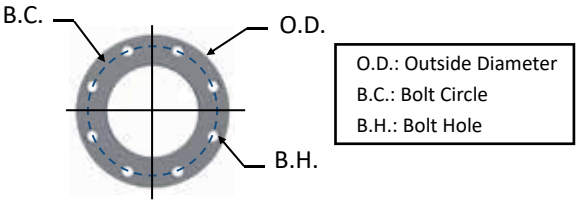
Configuration B

Configuration C

Configuration D

Configuration A Outlet Size	Type	Assembly m^3/hr Rating	Assembly Part Number Polyester	Paper	Dimensions - mm A	B	C	Suggested Service ht. mm	Approx. Weight (kg)	Replacement Element Part No. Polyester	Paper	Element m^3/hr Rating
½"	MPT	51	**SM1.5-11-050**	**SM1.5-10-050**	177	23	105	35	0.7	11™	10™	59
¾"	BSPT	51	**SM1.5-11-076**	**SM1.5-10-076**	183	31	105	35	0.7	11™	10™	59
½"	MPT	59	**SM2-11-050**	**SM2-10-050**	191	23	122	35	0.9	11™	10™	59
¾"	BSPT	59	**SM2-11-076**	**SM2-10-076**	212	31	122	35	0.9	11™	10™	59
1"	BSPT	59	**SM2-11-101**	**SM2-10-101**	207	31	122	35	0.9	11™	10™	59
Configuration B												
1"	BSPT	169	**SM2-19P-101**	**SM2-18P-101**	300	51	175	121	1.7	19P®	18P™	170
1 ¼"	BSPT	169	**SM2-19P-126**	**SM2-18P-126**	300	51	175	121	1.7	19P®	18P™	170
1 ½"	BSPT	145	**SM2-19P-151**	**SM2-18P-151**	300	51	175	121	1.7	19P®	18P™	170
2"	BSPT	170	**SM2-19P-201**	**SM2-18P-201**	312	64	175	121	1.8	19P®	18P™	170
2 ½"	BSPT	170	**SM2-19P-251**	**SM2-18P-251**	325	76	175	121	1.8	19P®	18P™	170
Configuration C												
3"	BSPT	425	**SM3-235P-301**	**SM3-234P-301**	525	76	279	245	14	235P™	234P™	968
4"	BSPT	425	**SM3-235P-401**	**SM3-234P-401**	544	102	279	245	14	235P™	234P™	968
4"	BSPT	680	**SM4-235P-401**	**SM4-234P-401**	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-DN100**	**SM3-234P-DN100**	541	105	279	245	16	235P™	234P™	968
DN100	FLG	680	**SM4-235P-DN100**	**SM4-234P-DN100**	522	102	279	245	16	235P™	234P™	968
Configuration D												
DN150	FLG	1360	**SM62-377P-DN150**	**SM62-376P-DN150**	1023	137	508	370	40	377P™	376P™	3100
DN200	FLG	3060	**SM62-377P-DN200**	**SM62-376P-DN200**	1039	152	508	370	46	377P™	376P™	3100
DN250	FLG	4590	**SM63-385P-DN250**	**SM63-384P-DN250**	1052	162	719	370	62	385P™	384P™	5598
DN300	FLG	4590	**SM63-485P-DN300**	**SM63-484P-DN300**	1221	152	719	546	73	485P™	484P™	7993

PN10 Pattern Flange	Dimensions - mm O.D.	B.C.	B.H.	No. of Holes	Flange Thickness 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.

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

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Replacement Elements

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Technical Data

Filter Elements

Filter Element Efficiency

When choosing a filter media type, 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 element part 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.

HE234QP

- P — Prefilter
- Q — I.D. & O.D. Support, Endcaps
- 234 — Element Size
- HE — Media Type

Filter Media Nomenclature

(contact Solberg for other media types and stainless steel.)

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
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

- Identified typically by “odd number” 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

- 5 micron, 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 typically by “even number” 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™

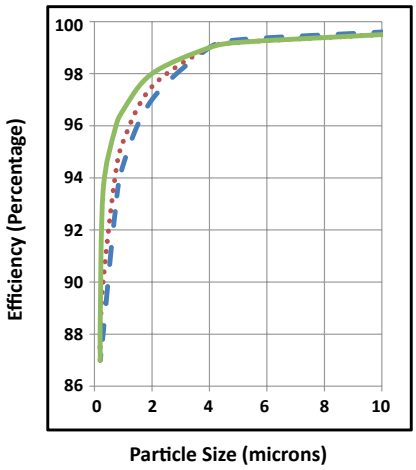
Technical Specifications

- 2 micron, 99+% efficiency
- Media classification: EU6
- Temperature min: -26°C (-15°F), max: 104°C (220°F)

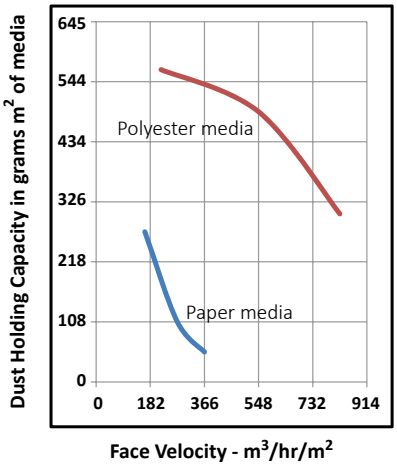
Advantages

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

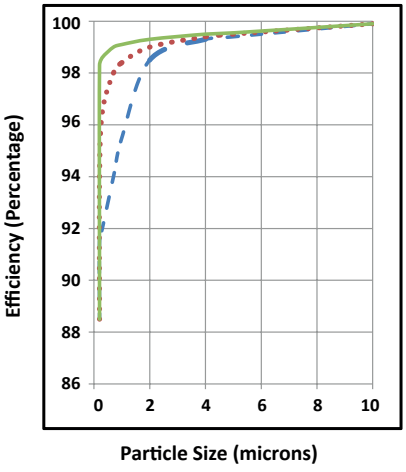
Polyester Media Efficiency



Face Velocity vs. Dust Holding Capacity



Paper Media Efficiency



Indicated Face Velocity:

- 275 m³hr/m² media
- 550 m³hr/m² media
- 825 m³hr/m² media

Indicated Face Velocity:

- 185 m³hr/m² media
- 275 m³hr/m² media
- 365 m³hr/m² media

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

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Filter Media Specifications

Filter Elements

Standard Media

5 µm Polyester: 5 micron, 99+% efficiency
- ID: "odd number": i.e. 1***9®***, 23***5***P™
- Classification: ePM_{10} 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. 1***8***™, 23***4***P™
- Classification: $ePM_{2.5}$ 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: $ePM_{2.5}$ 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. 1***5N***, 37***7N***P
- 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***23***4***
- 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***24***5***
- Classification: ePM_{10} 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

Stainless Steel Wire Mesh - S2 Media
- Stainless steel pleated wire mesh
- ID: "even number" & "S2" suffix: i.e. 1***4S2***
- 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. 3***1Y***, 34***5Y***P
- 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***37***5***
- 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***27***5***
- 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

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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. 1***9U***, 68***5U***P
- 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. 1***5W***, 38***5W***P
- 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. 27***4S***, 34***4S***P
- 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. 23***4S2***
- 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: ePM$_{10}$ 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: ePM$_{10}$ 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. ***AC***1***8***
- 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. ***ACG***3***0***
- 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. ***AA***85***0***
- 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***23***5***
- 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***34***4***
- 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

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Replacement Elements - Standard

60 - 13600 m³/hr Flow Range

Features

- Pleated media 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)

Paper Elements

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

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*

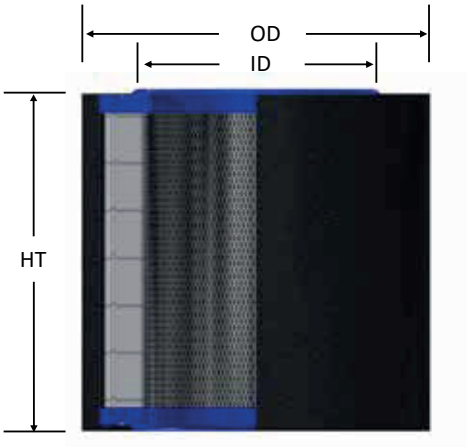
Polyester Elements

Paper Media Benefits/Specs

- Cost effective
- Gently blow out media*

Endcap Construction

- M = Molded plastisol
- 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 Part Number		Element m³/hr Rating	Surface Area m²		Dimensions - mm			Std. Endcap Features
Polyester	Paper		Polyester	Paper	I.D.	O.D.	H.T.	
15P™	**14P™**	60	0.05	0.10	76	111	59	M
19P®	**18P™**	170	0.14	0.28	76	111	122	M
31P™	**30P™**	335	0.21	0.58	92	146	124	M
35P	**34P**	470	0.37	1.02	121	200	123	M
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 Part Number		Element m³/hr Rating	Surface Area m²		Dimensions - mm			Std. Endcap Features
Polyester	Paper		Polyester	Paper	I.D.	O.D.	H.T.	
237™	**236**	935	0.8	2.1	119	197	219	GBN
235P™	**234P™**	968	0.8	2.1	121	200	241	M
335P™	**334P™**	1360	1.1	3.2	121	200	361	M
239P™	**238P™**	968	1.2	4.5	123	234	267	GBN
2541	**2540**	1360	1.4	3.3	152	229	300	G
245P™	**244P™**	1500	1.3	3.3	152	248	245	GN | M
345P™	**344P™**	1870	2.1	5.3	152	248	367	GN
275P™	**274P™**	1869	1.8	4.1	203	298	246	GN
375P™	**374P™**	2550	2.9	6.4	203	298	367	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	383	GN
485P™	**484P™**	8000	6.7	20.1	356	499	545	GN
491	**490**	13600	13.1	32.5	565	708	561	GN
685P™	--	11220	9	--	356	498	724	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.

*Replacing element is recommended.

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Replacement Elements - 800 Series

Small Vacuum Pumps 10 - 640 m³/hr Flow Range

Features

- Pleated media 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 O.D.
- 40 - 50% increased dust loading capacity with prefilter (part number suffix P)

Technical Specifications

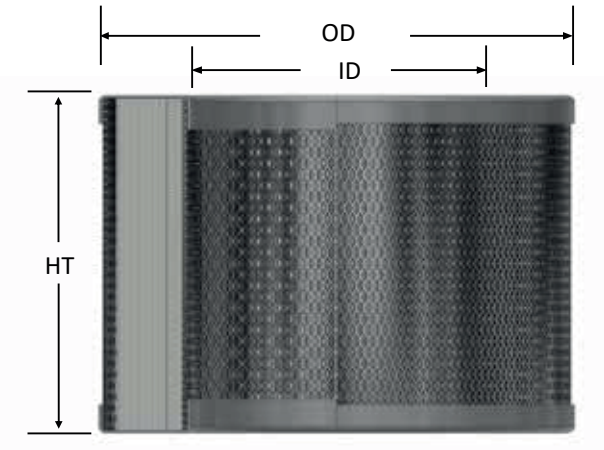
- Polyester: 99+% removal efficiency to 5 micron
- Paper: 99+% removal efficiency to 2 micron
- Temp (continuous): min -26°C (-15°F), max 104°C (220°F)
- Filter change out differential: 37-50 mbar over initial ΔP

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
- Gently blow out media*



Endcap Construction

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

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

Polyester Replacement Elements Solberg Part Number	Mann Ref Number	m^3/hr Rating	Dimensions - mm			Std. Endcap Features
			I.D.	O.D.	H.T.	
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	187	89	149	122	G
863	C21138/1	550	146	210	165	M
879	N/A	200	65	127	122	GB
897	N/A	136	60	101	214	GB

*Replacing element is recommended.

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Replacement Elements - 32 Series

Blower Market / Special Sizes

Features

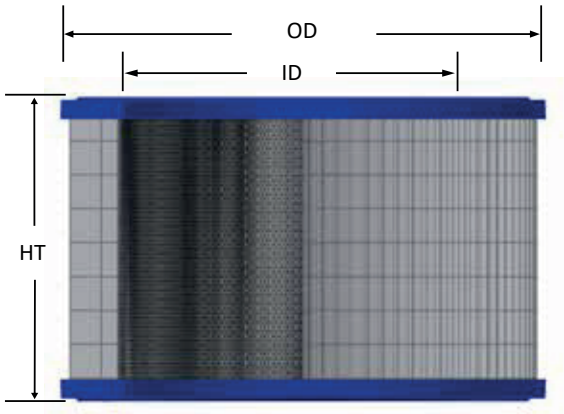
- Pleated media for high dirt holding capacity
- Polyester: reinforced with epoxy coated steel wire on both sides of cloth, expanded metal I.D.
- Paper: heavy duty industrial strength paper surrounded by galvanized expanded metal
- 40 - 50% increased dust loading capacity with prefilter (part number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

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

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

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

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

Special Sized Filter Elements

Element Part Number		Rated Flow m^3/hr	Surface Area m^2		Dimensions - mm			Std. Endcap Features
Polyester	Paper		Polyester	Paper	I.D.	O.D.	H.T.	
09	**08**	25	0.023	0.042	29	57	57	M
21NP	--	140	0.16	--	60	108	121	M
25	**24**	180	0.19	0.44	92	146	101	M
--	**80P**	297	--	0.66	105	200	76	M
--	**84P**	433	--	0.96	105	200	102	M
45P	**44P**	731	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	--	0.66	130	184	137	M
--	**108**	105	--	0.28	92	146	75	M
--	**109**	290	--	0.63	143	199	101	M
--	**126**	170	--	0.20	121	159	57	GN
--	**127**	60	--	0.09	76	111	52	M

See Element Technical Data for maintenance guidelines.

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Replacement Elements - Hockey Puck

Small FS/PS 5 - 425 m³/hr Flow Range

Features

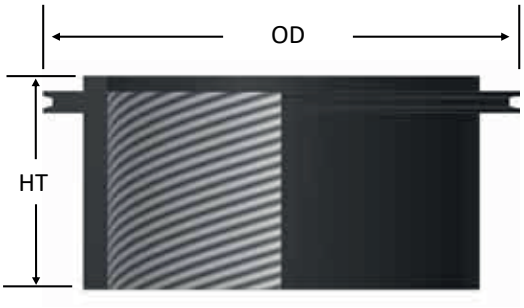
- High grade filter element
- Element construction of injection molded thermoplastic
- Integrated gasket seal
  - Positive seal between housing hemispheres
  - New seal with each element
  - Minimizes parts
- Optimal surface area per given size
- Pleated media for high dirt holding capacity

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

- 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 (replacing element is recommended)



Paper Media Benefits/Specs

- Heavy duty industrial strength paper
- Cost effective
- Gently blow out media (replacing element is recommended)

Element Part Number		Element m³/hr Rating	Surface Area m²	Dimensions - mm	
Polyester	Paper			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

*Minimum order quantity applies.

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

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Air/Oil Separator Elements - FG, GL, PSG

Oil Mist Coalescing 7 - 3060 m³/hr Flow Range

Benefits

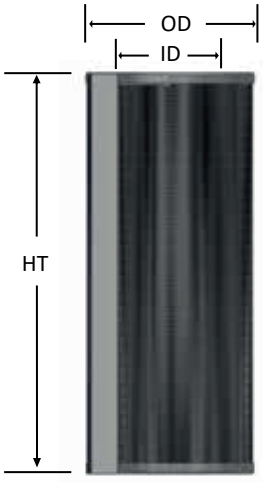
- High efficiency at low pressure drop
- Increased surface area in a given volume allows for low velocity separation of ultra-fine oil mists
- Low oil carryover

Features

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

Technical Specifications

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



Element Part Number	Element m³/hr Rating	Dimensions - mm			Features
		I.D.	O.D.	H.T.	
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	65	127	362	GP
PSG860/1	340	89	149	356	GBP
PSG244/2	510	152	248	244	GBP
PSG344/2	850	152	248	368	GBP
PSG374/2	1360	203	298	368	GBP
PSG474/2G	1870	203	298	546	GBP
PSG476G	3060	229	371	546	GP

Endcap Construction

- M = Molded plastisol
- 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.

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Accessories

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

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Prefilters

Extend the Life of Your Filter Elements

Overview

Foam prefilters 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

- Heat stamping for custom imprinting

Part Number	Fits Element Size Polyester	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

Part Number with Prefilter

234P™

- **Prefilter**
- **Element Size**

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SpinMeister® Precleaners

Extreme Duty Filtration

Overview

Intake air is 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.

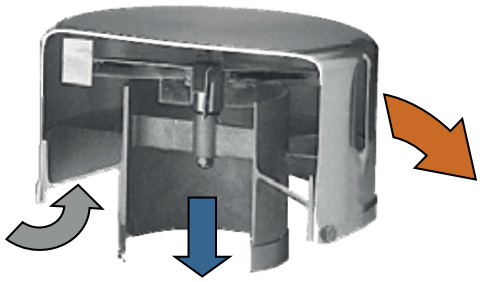
Technical Specifications

- 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 SpinMeister®

- Molded fiber filled composite 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 ½"	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



SpinMeister® Airflow Schematic

Aluminum SpinMeister®

- Polished aluminum housing
- Stainless steel 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.
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® for Vacuum

- Low pressure 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 ½"	99	89	187
SML345	170-340	4 ½"	178	114	260
SML445	340-765	4 ½"	191	114	260

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Pop Up Style Pressure Drop Gauge

Inlet Filter Assemblies

Overview

Our Pop Up style 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	⅛"

Gauge tubing not included.
Contact Solberg to add an 1/8" tap hole to the appropriate location on your housing orders.

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Pressure Drop Gauges

For Vacuum Filters

Differential Vacuum Gauge

- Indicates pressure drop across the filter 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

- Monitor amount 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.

Our Guiding Principles:

We Succeed as a Family

We Do the Right Thing

We Endeavor to Be the Best

We Take Care of the Customer

We Play Hard to Win

We Love our Planet

GMK
INDUSTRIAL
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