SOLBERG®
Filtration & Separation

Discharge Oil Mist Filters (Open)

EF Series ½" - 1 ¾"

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

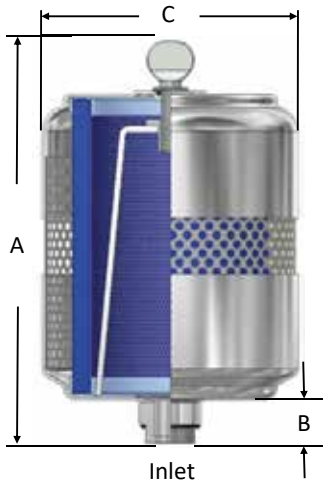
Technical Specifications

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

Options

- Additional ISO flange connections
- Non-standard connection styles

Connection Size	Connection Type	Assembly SCFM Rating	Assembly Part Number	Dimensions - inches A	B	C	Suggested Service ht. inches	Approx. Weight lbs.	Replacement Element Part No.
½"	MPT	4.5	**EF-FG5-050**	4 ½	⅞	2 ½	3	0.6	FG5
½"	MPT	7	**EF-FG7-050**	5 ½	⅞	2 ½	4	1.8	FG7
¾"	¾-20 UNEF	4	**EF-FG3-077**	3 ¾	1	2 ½	3	1.2	FG3
¾"	MPT	4.5	**EF-FG5-075**	4 ⅜	1 ¼	2 ½	3	0.9	FG5
¾"	MPT	7	**EF-FG7-075**	5 ⅜	1 ⅛	2 ½	4	1.8	FG7
1"	1-20 UNEF	4.5	**EF-FG5-103**	4 ½	⅞	2 ½	3	0.7	FG5
1"	1-20 UNEF	7	**EF-FG7-103**	5 ½	⅞	2 ½	4	0.8	FG7
1"	1-20 UNEF	16	**EF-FG9-103**	5 ⅛	⅞	5	4	1.8	FG9
1"	1-20 UNEF	24	**EF-FG10-103**	8	⅞	5	6	7	FG10
1 ¾"	1 ¾-20 UN	24	**EF-FG10-177**	8 ⅛	1 ¾	5	6	3.5	FG10
16 mm	ISO Flange	4.5	**EF-FG5-NW16**	4	⅞	2 ½	3	0.6	FG5
25 mm	ISO Flange	4.5	**EF-FG5-NW2516**	4	⅞	2 ½	3	1.4	FG5
25 mm	ISO Flange	24	**EF-FG10-KF25**	9 ⅜	2 ⅛	5	6	3.5	FG10
40 mm	ISO Flange	44	**EF-FG20-KF40**	7	2	10 ¼	5	7	FG20



See Oil Mist Discharge Filter Technical Data for sizing guidelines.

Rev: EF-US1020K

Sales/Service: 630.773.1363
sales@solbergmfg.com

www.solbergmfg.com

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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” MPT connection size.

HDL-PSG344/2-300

- 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 appropriate maintenance manual from your Solberg representative or through www.solbergmfg.com.

Rev: OMTD-US0720K

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Oil Mist Discharge Filters

General

Recent developments in product design allow for the possible selection of oil mist discharge filters based on the type of equipment being used. It is now possible to identify the appropriate grade of aerosol discharge filter because of the extensive research completed by the Solberg R&D department. Please follow the rules below to correctly size your oil mist discharge filter. If further consultation is required, please contact Solberg or the Solberg sales representative in your area.

Filter Selection Guidelines

#1: First of all, air/oil separators used in compressed air systems repeatedly fail in vacuum pump applications. The first consideration is to determine the type of vacuum pump being used. The particle size distribution and mass of oil aerosol discharging from a vacuum pump is as varied as the number of separator tank designs utilized by the industry. The main pump types are rotary vane, rotary screw, rotary piston, liquid ring, and reciprocating vacuum pumps. Each type of pump produces its own specific oil discharge characteristics and requires the appropriate media make-up to effectively capture and drain oil aerosols.

#2: Determine the type of oil being used in the vacuum pump. Trade names, viscosity/grade of oil, and the lubricant base (mineral, synthetic, etc.) are all useful details for determining the discharge aerosol characteristics.

#3: Determine how much oil the pump consumes under normal operating conditions. Typical consumption rates are gallons or liters per hour. The amount of oil consumed is typically the amount of oil being discharged.

#4: Pump operating cycles including vacuum range, temperature fluctuations, contaminant gases or vapors, and hours of operation per day/week. Also, determine the maximum pressure drop or filter restriction that the system will allow.

#5: Determine the operating temperature at the discharge connection. If it is above 220°F (104°C), methods of cooling the aerosol should be considered. In most cases, adding distance between the pump and the filter will accomplish this.

#6: Note the manufacturer and model number of the pump, the outlet connection, and the air flow.

#7: In the case where an existing air/oil separator (internal or external) is already used, it is important to specify the desired goal for a second filter. Is it planned to have a multi-staged system for severe or extreme duty applications, or is there a requirement for exceptionally clean discharge air? If a multiple stage system is needed, try to identify the primary stage unit and the purpose for the second stage.

#8: Consider where to install the filter. Where possible, it is best to install in moderate temperature environments 35 to 100°F (2 to 37°C) and avoid freezing conditions to ensure the oil drains freely without causing undue back pressure to the vacuum pump.

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.**