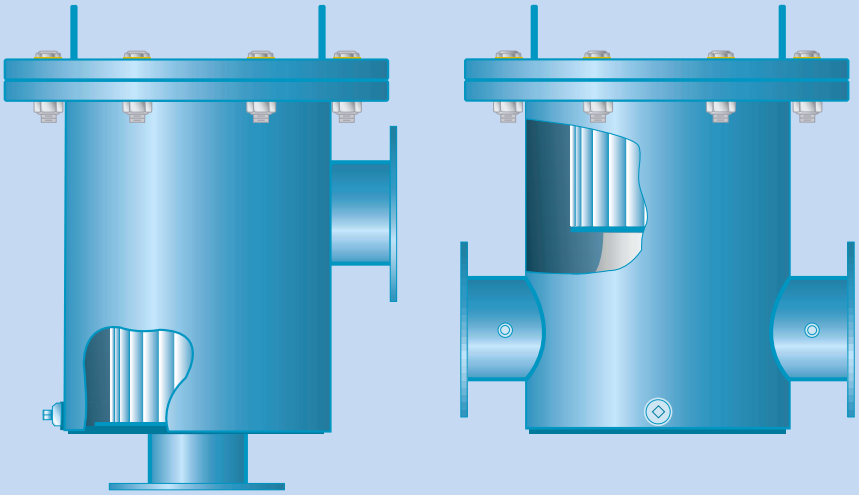
ILF and ILFS Series Inline Air Filters



ILF inline air filter

ILFS inline air filter

Built to Suit Your Application

- **Designed for application requirements.**
- **Optional design features for special production and assembly conditions are available.**
- **Choose an ILF model for an L-configuration or an ILFS for opposed connections.**
- **Interchangeable paper, felt, or wire mesh elements, for desired filtration characteristics in the same housing.**
- **Built-in taps for pressure gauges.**

Durable Construction

- **Carbon steel construction with a high-quality blue enamel finish.**
- **Removable top plate for access to the filter element.**
- **ASME Code construction and special materials, such as stainless steel, are available.**

Advanced Design and Testing

- **Our extensive in-house engineering, manufacturing, and testing facilities ensure optimized process, mechanical, and acoustic performance for your application.**

Quality You Can Count On

Universal Silencer's ILF and ILFS Series of inline air filters have been designed to withstand the demanding requirements of pressure and vacuum applications. Choose from ten standard pipe sizes ranging from 3 in. to 18 in. and flow capacities ranging from 275 to 9700 CFM. Three types of filter element media — pleated paper, pleated felt, or wire mesh — are available to suit your application.

Our inline air filters are standard with threaded connections for mounting pressure gauges to monitor pressure drop as the filter element becomes increasingly loaded with dirt.

DNV Certification, Inc.
ISO 9001 REGISTERED FIRM

40 YEARS OF PRODUCT VALUE
UNIVERSAL SILENCER

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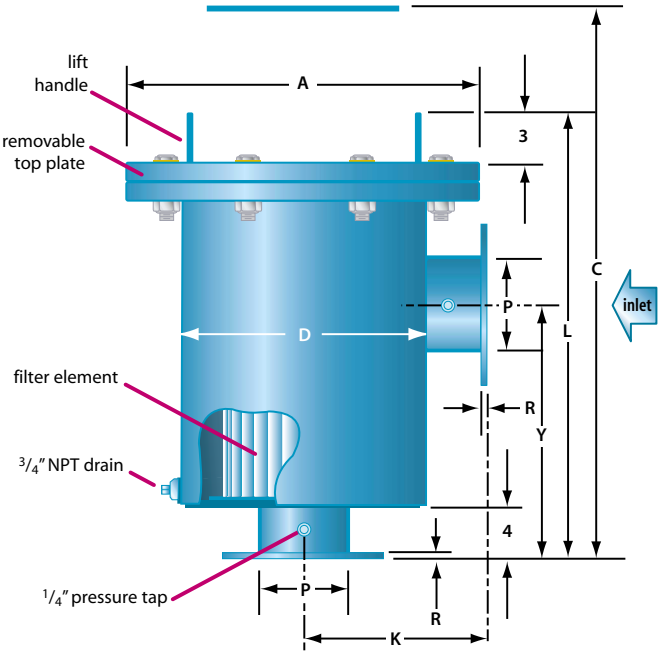
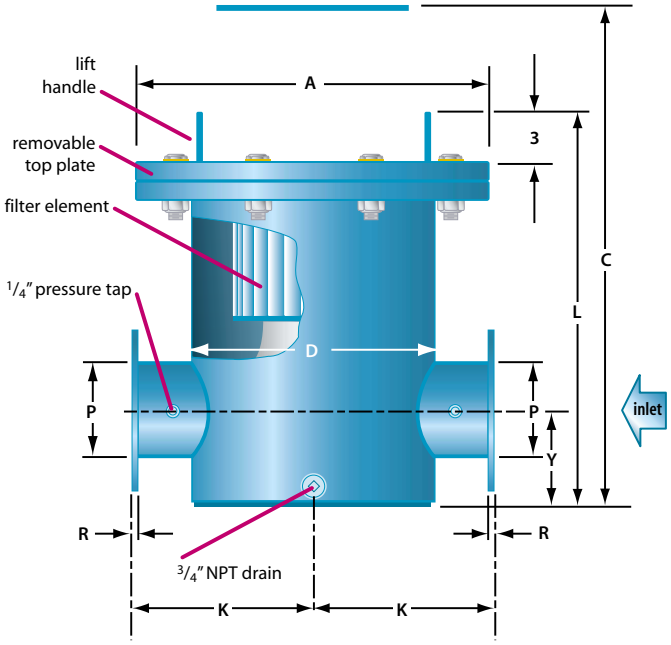
Noise Control and Air Filtration

ILF Series Filters



ILFS Series Filters



ILF DIMENSIONS, WEIGHTS, AND REPLACEMENT ELEMENTS

Model	P (nom.)	D	L	R	Y	C	A	K	Weight (est.)	Rated Cap. (CFM)	No. of Bolts	Element Part No. Paper	Felt	Wire Mesh
ILF-3	3	14	24.25	–	15.50	27	20	11	100	275	8	81-1063	81-1205	81-1038
ILF-4	4	14	24.25	0.375	15.50	27	20	11	110	500	8	81-1063	81-1205	81-1038
ILF-5	5	14	25.25	0.375	16.00	28	20	11	120	750	8	81-1063	81-1205	81-1038
ILF-6	6	16	28.00	0.5	18.25	34	22	12	120	1100	8	81-0475	81-1207	81-1040
ILF-8	8	18	39.50	0.5	28.25	45	24	13	140	1920	8	(2)81-0475	(2)81-1207	(2)81-1040
ILF-10	10	22	35.50	0.5	22.00	42	28	15	295	3000	12	81-1163	81-1209	81-1200
ILF-12	12	22	37.50	0.5	23.00	44	28	15	315	4300	12	81-1163	81-1209	81-1200
ILF-14	14	28	41.00	0.5	27.00	52	34	18	450	5900	12	81-1164	81-1210	81-1201
ILF-16	16	30	43.75	0.5	28.00	55	36	19	500	7700	12	81-1164	81-1210	81-1201
ILF-18	18	30	45.75	0.5	29.00	57	36	19	505	9700	12	81-1164	81-1210	81-1201

- Dimensions are in inches, and weights are in pounds.
- The C dimension is clearance required to remove elements.
- Non-ASME code construction is suitable for 15 in. PSI maximum working pressure or 20 in. Hg operating vacuum.
- Weight does not include filter elements.
- Size 3 in. is standard with male pipe thread connection (MNPT). Sizes 4 in. through 18 in. are standard with 125/150 lb ANSI drilled plate flanges.
- Rated capacity is based upon flow velocity of approximately 5500 ft/min. If pressure drop allowance permits, capacity may be increased by as much as 50%.
- Clean or replace filter element when pressure drop increases to 4 in. H_2O more than the pressure drop with a clean filter element.

ILFS DIMENSIONS, WEIGHTS, AND REPLACEMENT ELEMENTS

Model	P (nom.)	D	L	R	Y	C	A	K	Weight (est.)	Rated Cap. (CFM)	No. of Bolts	Element Part No. Paper	Felt	Wire Mesh
ILFS-3	3	14	23	–	5.0	29	20	11	115	275	8	81-1063	81-1205	81-1038
ILFS-4	4	14	23	0.375	5.0	29	20	11	125	500	8	81-1063	81-1205	81-1038
ILFS-5	5	14	23	0.375	5.5	29	20	11	130	750	8	81-1063	81-1205	81-1038
ILFS-6	6	16	27	0.5	6.0	36	22	12	170	1100	8	81-0475	81-1207	81-1040
ILFS-8	8	20	35	0.5	7.0	44	26	14	245	1920	8	(2)81-0475	(2)81-1207	(2)81-1040
ILFS-10	10	24	34	0.5	8.5	44	30	16	365	3000	12	81-116381-120981-1200		
ILFS-12		12		24	37	0.5	10.0	47	30	16	395	4300	12	81-116381-120981-1200
ILFS-14		14		30	44	0.5	11.0	58	36	19	605	5900	12	81-116481-121081-1201
ILFS-16		16		36	48	0.5	12.5	62	42	24	895	7700	12	81-116481-121081-1201
ILFS-18	18	36	52	0.5	13.0	66	42	24	945		9700	12	81-1164	81-1210	81-1201

- Dimensions are in inches, and weights are in pounds.
- The C dimension is clearance required to remove elements.
- Non-ASME code construction is suitable for 15 in. PSI maximum working pressure or 20 in. Hg operating vacuum.
- Weight does not include filter elements.
- Size 3 in. is standard with male pipe thread connection (MNPT). Sizes 4 in. through 18 in. are standard with 125/150 lb ANSI drilled plate flanges.
- Rated capacity is based upon flow velocity of approximately 5500 ft/min. If pressure drop allowance permits, capacity may be increased by as much as 50%.
- Clean or replace filter element when pressure drop increases to 4 in. H_2O more than the pressure drop with a clean filter element.

■ 608.873.4272 ■ 608.873.4298 fax ■ US@universal-silencer.com ■ www.universal-silencer.com

FILTER ELEMENTS

Three types of filter elements are available for Universal's cartridge filters and filter-silencers. The pleated paper elements provide the highest efficiency and are considered standard. Pleated felt and wire mesh elements are available for less demanding service, with respect to efficiency. The three types of elements are completely interchangeable and will fit the ILF or ILFS filter housings.

SERVICE INTERVALS: Paper and felt elements are typically cleaned or replaced when the air flow resistance has increased by 4 inches of water over the initial clean resistance. The maximum restriction recommended across the filter elements is 20 inches of water, but this value may be greater than the equipment can tolerate for best efficiency. The wire mesh elements should be cleaned when they are visibly dirty and re-treated with Universal Oil-Free Adhesive or motor oil. Resistance is typically not a good indicator for cleaning wire mesh elements; a periodic cleaning schedule is recommended.

Pleated Paper Element

SPECIFICATIONS:

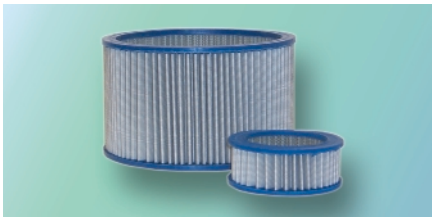
- **High-quality industrial-grade filter paper—pleated and oven-cured during production.**
- **Oven-cured plastisol end caps with molded sealing beads (larger elements for pipe sizes (P) 10 in. through 18 in. have metal end caps with closed-cell rubber gaskets).**
- **Media efficiency: 99.5% on 2 microns; 97% on 1 micron.**
- **Maximum operating temperature: 200° F for units with 3 in. through 18 in. pipe sizes.**

SERVICE INSTRUCTIONS:

Because of the low cost of the paper element, it is generally treated as a consumable and replaced when dirty. However, depending upon customer preference, the paper element may be cleaned with compressed air and reused.

Compressed Air Cleaning:

Carefully direct compressed air (100 PSI maximum) through the dry element, opposite the normal direction of flow. After cleaning, inspect carefully for holes or cracks. If damaged, replace element.



Pleated Felt Element

SPECIFICATIONS:

- **Durable polyester felt media — pleated.**
- **Oven-cured plastisol end caps with molded sealing beads (larger elements for pipe sizes (P) 10 in. through 18 in. have metal end caps with closed-cell rubber gaskets).**
- **Media efficiency: 99% on 10 microns.**
- **Maximum operating temperature: 200° F for units with 3 in. through 8 in. pipe sizes.**

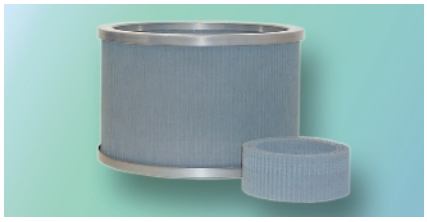
  250° F for units with 10 in. through 18 in. pipe sizes using elements with metal end caps.

SERVICE INSTRUCTIONS:

Pleated felt elements may be cleaned with compressed air (as described for paper elements) or water and reused.

Water Cleaning:

Rap gently to dislodge accumulated dirt, soak thoroughly approximately 15 minutes in warm water and mild detergent. Rinse thoroughly under low-pressure water. Air dry—do not dry with compressed air. After cleaning, inspect carefully for holes or cracks. If damaged, replace element.



Wire Mesh Element

SPECIFICATIONS:

- **Galvanized wire-mesh media—corrugated construction.**
- **Larger elements for pipe sizes (P) 6 in. through 18 in. have metal end caps.**
- **For best efficiency, wire mesh elements must be treated with oil or oil-free adhesive.**
- **May be cleaned and reused indefinitely.**
- **Wire mesh elements are considered "roughing" filters and are not recommended for applications that require efficient filtration of fine particles.**
- **Approximate efficiency: 93% on 10 microns. Efficiency will vary with element oil or adhesive coverage.**
- **Maximum operating temperature: 200° F for 3 in. through 18 in. with oil-free adhesive (the flash point for oil-free adhesive is 235° F).**

  300° F for 3 in. through 18 in. without oil-free adhesive. Filter efficiency is much lower without oil-free adhesive on the filter. Higher temperatures can be used with uncoated 3 in. through 5 in. filter elements without end caps.

SERVICE INSTRUCTIONS:

New elements are delivered pre-treated with Universal Silencer's oil-free adhesive. See the back page for details. For best efficiency, wire mesh elements must be re-treated after each cleaning. Spray the element on both sides with Universal Oil-Free Adhesive, P/N 81-0323, following the directions on the container. For oil treatment, dip the element in SAE 30-50 motor oil and drain thoroughly before using.

To clean wire mesh elements, wash in solvent or warm water and detergent in a container large enough for complete immersion of element. Rinse completely, drain, and either air dry or use compressed air. After cleaning and drying, re-treat the element with oil-free adhesive or oil as described.

P (nom.)	Replacement Element Part No.		
	Paper	Felt	Wire Mesh
3	81-1063	81-1205	81-1038
4	81-1063, 81-0474*	81-1205, 81-1206*	81-1038, 81-1039*
5	81-1063, 81-0474*	81-1205, 81-1206*	81-1038, 81-1039*
ILF-6	81-0475, 81-0474*	81-1207, 81-1206*	81-1040, 81-1039*
ILFS-6	81-0475	81-1207	81-1040
ILF-8	(2) 81-0475, (2) 81-0474*	(2) 81-1207, (2)81-1206*	(2) 81-1040, (2) 81-1039*
ILFS-8	(2) 81-0475	(2) 81-1207	(2) 81-1040, (1) 81-1199*
10	81-1163	81-1209	81-1200
12	81-1163	81-1209	81-1200
14	81-1164	81-1210	81-1201
16	81-1164	81-1210	81-1201
18	81-1164	81-1210	81-1201

* **Old part numbers are listed second.**

- **Some housing designs use new filter element part numbers. If you have a Universal Silencer ILF or ILFS unit, please check the nameplate for the filter element part numbers in your housing, or call us for help.**

UNIVERSAL SILENCER

Our corporate headquarters are located in Stoughton, Wisconsin, just southeast of Madison, the state capital. This new building houses administration, sales, and engineering departments.

Manufacturing facilities are in Muscoda (above), 75 miles west of Stoughton, and Montello (below), 70 miles north.

DNV Certification, Inc. ISO 9001 REGISTERED FIRM

Our products have been used to protect, quiet, and optimize the performance of industrial equipment for 40 years. We maintain a fully equipped testing facility to qualify filters and silencers. We are an ISO 9001 registered firm and ASME Code certified.

Keeping industrial equipment clean and quiet.

ILF and ILFS Series Inline Air Filters

OIL-FREE ADHESIVE FOR WIRE MESH ELEMENTS

This is an oil-free product developed for use on viscous impingement filters. It is a substitute for applications that do not permit oil wetting of the filter elements, such as oil-free compressors. Universal oil-free filter adhesive is available in 16-ounce aerosol spray cans, packaged 6 cans per case. Order by part number 81-0323.

Contact us for more information about our complete line of industrial silencers, air filters, and filter-silencers:

- Universal Silencer: Guide to industrial products, catalog 278
- Air filters and filter-silencers, catalog 241-B
- ILFV vacuum service inline air filters, catalog 291
- Cartridge air filters and filter-silencers, catalog 242-C
- CB compact blower silencers, catalog 255-A
- CBF/CBFI compact blower filter-silencers, catalog 261-A
- Reciprocating engine silencers and filters, catalog 246-A
- Rotary positive blower silencers, catalog 244-D
- Base plate assemblies for rotary positive blower silencers, catalog 259
- Absorptive silencers, catalog 245-B
- Acousti-Tube® and Acousti-Ring® vent and blowdown silencers, catalog 243-C
- Compressor silencers and filters, information provided by application
- Vacuum pump liquid separator-silencers, catalog 280
- Vacuum pump low-profile liquid separator-silencers, catalog 285
- Industrial fan silencers, catalog 249-A
- Steam ejectors, pressure reduction valves, and other special applications
- Acousti-Tube® silencers, catalog 260
- Acousti-Tube® silencer series, technical bulletin 94-1315
- Universal Silencer: Guide to turbine products, catalog 265
- Gas turbine silencers and filters, catalog B-249-A

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