



High efficiency compressed  
air filtration



Truly Innovative Compressed Air Purification

**LF Series**

# LF Series Filters

A filter range you can trust



## Protect your equipment while saving money

The reliability of compressed air filtration is paramount to the ongoing battle against problems caused through contamination entering your compressed air system. Contamination in the form of dirt, oil and water can lead to:

- Pipescale and corrosion within pressure vessels
- Damage to production equipment, air motors, air tools, valves and cylinders
- Premature and unplanned desiccant replacement for adsorption dryers
- Spoiled product

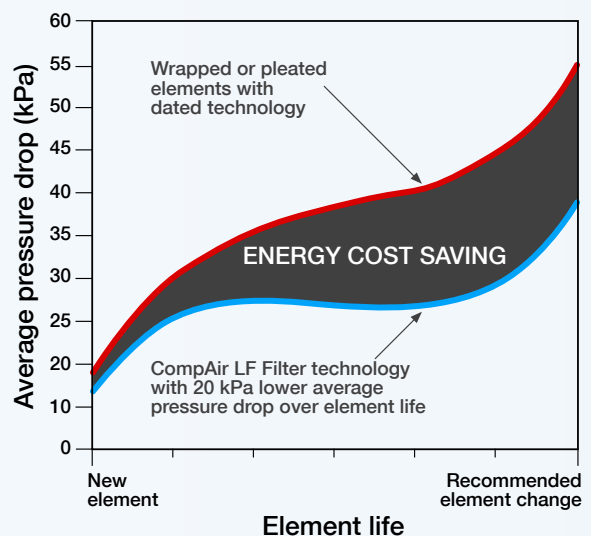
When compared to some filter designs, CompAir LF Series filters elements can reduce energy consumption by offering a lower pressure drop throughout the filter element life.

Don't be fooled by calculated savings from competitive de-mister filter modules. They do not have the efficiency of the LF Series element, allowing tiny particulates flow downstream to pneumatic equipment, causing costly wear and damage.

## Typical Savings

With a 150 kW air compressor running 24 hours per day, at 93% motor efficiency, and an electrical cost of \$0.23/kW-HR, the 20 kPa lower average pressure drop of an LF Series filter would represent an annual saving of over \$6,000! A system that has three filters could save up to \$18,000 per year.

Typical pressure drop curves for 0.01 micron compressed air filters



# High Performance Filter Elements



## **Push-Fit, Double O-Ring Seal**

Element to filter head connection chamfered for easy installation and removal.

## **Stainless Steel Element Support**

High durability and corrosion resistance.

## **Fibreglass Support**

Prefiltration layer, reduces pressure drop and extends service life.

## **Deep Bed Multi-Wrap Borosilicate Glass Microfibre**

Minimises pressure drop whilst maximising particulate retention. High tension fibre wrap prevents channelled air flow.

## **Fibreglass Support**

Contains and supports the deep bed increasing element strength and integrity.

## **Polyester Needle Felt Sleeve**

With a unique coalescing action that quickly drains oil. The sleeve is ultrasonically welded along its full length and won't crush like a foam sock, nor will it decay with age or when exposed to synthetic lubricants, corrosive materials.

## **End Cap**

Constructed from durable and non-corrosive glass filled nylon. The end cap is attached to the element with a multi part urethane resin.

The element is then held in place by internal ribs within the filter housing.

## **Wide range of applications**

Suitable for temperatures up to 120°C. Compatible with synthetic and mineral lubricants. Low average pressure drop over life of element. Regular replacement suggested for best performance and energy cost savings.

Our filter elements are also suitable for use in oil-free compressed air applications.

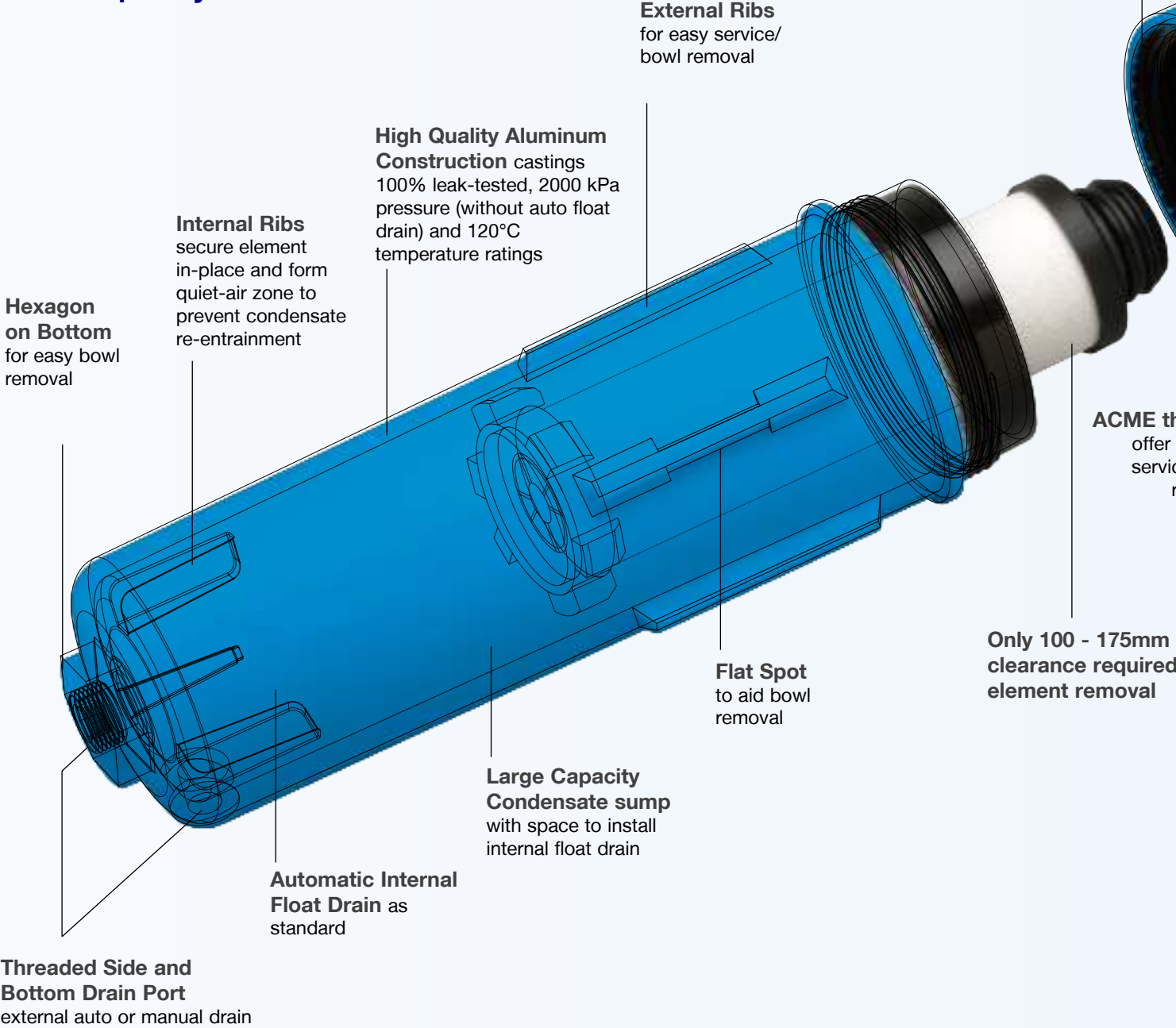
## **Low operating cost**

Regular filter element replacement saves money. It minimizes pressure drop and ensures protection of your compressed air system, pneumatic equipment and finished product. We offer an extended ten year warranty on filter housings.

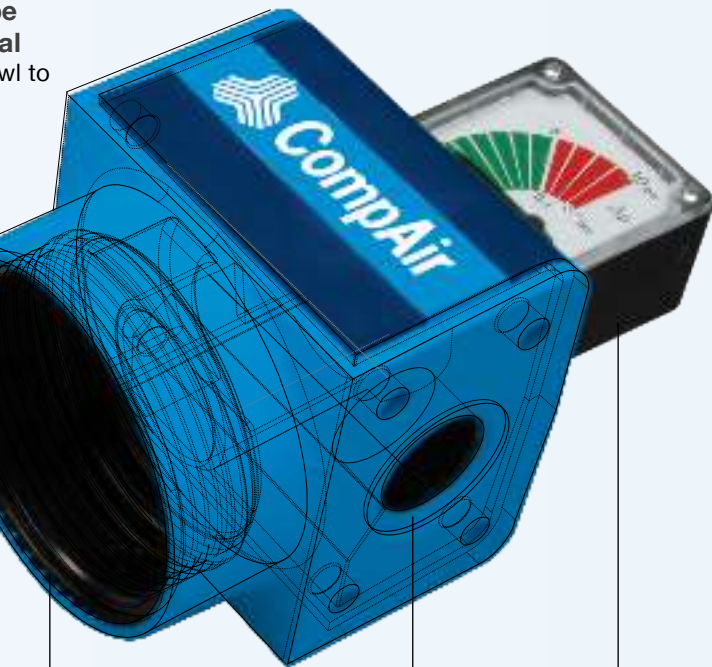
# LF Series Filters

## Features and Benefits

The CompAir LF Series filter range combine the benefits of a high performance filter housing and element to maximise energy savings and reduce lifecycle costs, without the need to compromise on air quality.



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**Modular Connections**  
option to bolt up to three filters together with High Nitrile O-ring connection, easy installation, saves space, eliminates leaks.

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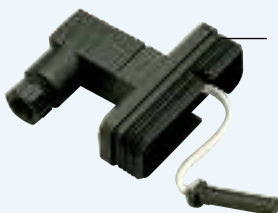
**Delta-P Gauge (standard)**

Two sided DP gauge face is not pressurized. Unique magnetic sensor ensures reliability.



**Pop-up DP Indicators (optional)**

Nylon pop-up is available as a lower cost option.



**Remote Contact DP Alarm (optional)**

Dry contacts close at 6 psid to send a notification signal to a bell, light, or control panel. Can be field installed.

## Accessories

**Mounting Brackets**

Allows convenient wall mounting of single or multiple filters.



**Ring Spanner**

Easy bowl removal.



**Port Plates**

Allows for easy change from standard port size to match larger pipe size and reduce pipe fittings. Prevents costly oversizing of filters to pipe size.



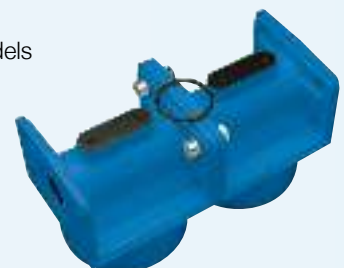
**Manual Drain Valves**

Available for all models.



**Connecting Kits**

Available for all models



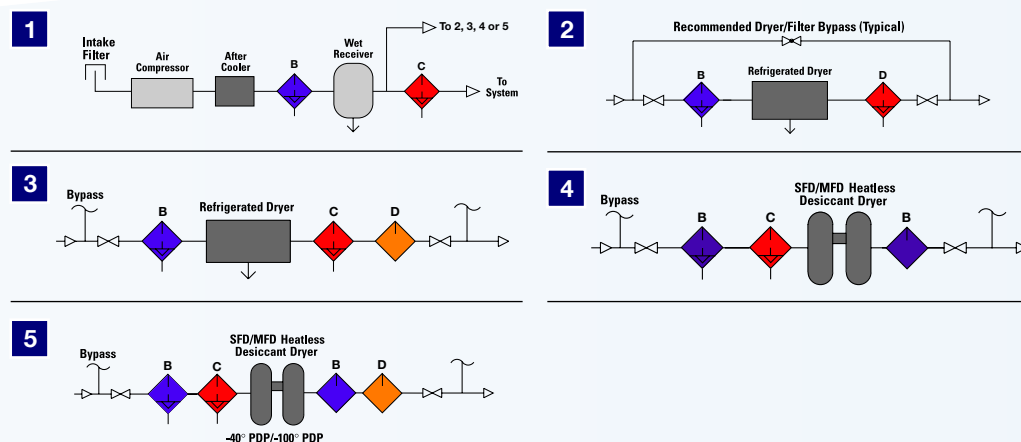
# LF Series Filters

## Technical Specifications

### Filter Grades

- B** Pre-filtration to refrigerated dryer; higher efficiency, coalescing point-of-use (heatless desiccant dryer after filter).
- C** High efficiency coalescing oil removal after refrigerated dryer; upstream of desiccant dryers.
- D** Combination particulate/vapor removal

### Typical Compressed Air Treatment Systems



Grade	Coalescing Filters		Vapor Filter
	B	C	D
Particle removal	1.0 micron	0.01 micron	0.01 micron
Maximum carryover at 20°C	0.1 ppm	0.01 ppm	0.003 ppm
Recommended temperature	38°C	38°C	25°C
Maximum temperature	121°C	121°C	121°C
Pressure drop (clean and dry)	70 mbar	100 mbar	70 mbar
Pressure drop (saturated)	140 mbar	210 mbar	N/A
Pressure drop (change element)	400 mbar	400 mbar	see note
Element media	Borosilicate Glass Microfibre		Carbon impregnated paper
Maximum working pressure	16 barg ( 20 barg without auto float drain )		
Housing material	High quality aluminium		

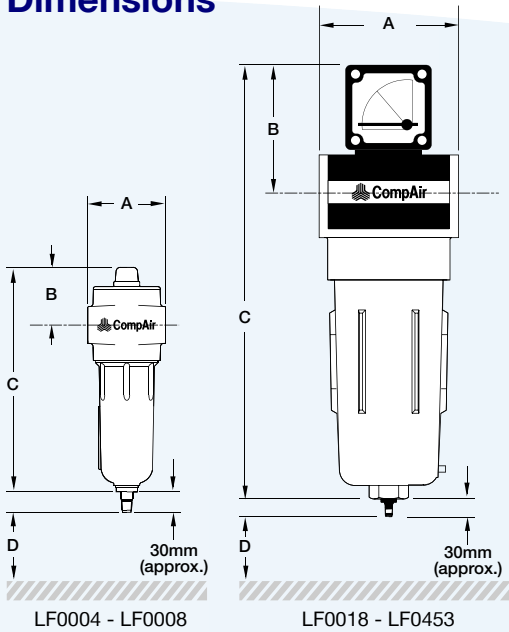
### Compressed air purity classes ISO 8573-1

The ISO 8573 group of International Standards is used for the classification of compressed air. It also provides the test methods and analytical techniques for each type of contaminant. The table below summarizes the maximum contaminant levels specified in ISO 8573 Part 1 (2010) for the various compressed air quality classes. Each compressed air classification can be achieved by installing a specific filter grade or a combination of filter grades, depending upon required performance.

Purity Class	Particles				Water		Oil
	Maximum number of particles per cubic metre as a function of particle size, d <sup>a</sup>				Vapor	Liquid <sup>a</sup>	Total Oil <sup>a</sup>
	0.1µm < d ≤ 0.5µm	0.5µm < d ≤ 1.0µm	1.0µm < d ≤ 5.0µm	Mass Concentration Cp mg/m³	Pressure Dewpoint °C	Concentration Liquid Water Cw g/m³	Liquid, aerosol, vapor mg/m³
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20 000	≤ 400	≤ 10	-	≤ -70	-	≤ 0.01
2	≤ 400 000	≤ 6 000	≤ 100	-	≤ -40	-	≤ 0.1
3	-	≤ 90 000	≤ 1 000	-	≤ -20	-	≤ 1
4	-	-	≤ 10 000	-	≤ +3	-	≤ 5
5	-	-	≤ 100 000	-	≤ +7	-	-
6	-	-	-	0 < Cp ≤ 5	≤ +10	-	-
7	-	-	-	5 < Cp ≤ 10	-	Cw ≤ 0.5	-
8	-	-	-	-	-	0.5 < Cw ≤ 5	-
9	-	-	-	-	-	5 < Cw ≤ 10	-
X	-	-	-	Cp > 10	-	Cw > 10	>5

Note: Activated carbon filters must not operate in oil saturated conditions and will not remove certain types of gases including carbon monoxide and carbon dioxide. Change interval depends on application. Please contact your distributor.

## Dimensions



Filter model	Flow rate		Dimensions (mm)				Port Size BSPP	Weight Kg	Replacement Element
	m <sup>3</sup> /min	SCFM	A	B	C	D			
LF0004(*)1/4	0.42	15	72	53	227	152	1/4"	0.7	LFE0004(*)
LF0008(*)3/8	0.85	30	72	53	227	152	3/8"	0.7	LFE0008(*)
LF0018(*)1/2	1.83	65	110	109	344	152	1/2"	4.5	LFE0018(*)
LF0019(*)3/4	1.98	70	110	109	344	152	3/4"	4.5	LFE0019(*)
LF0024(*)3/4	2.40	85	110	109	344	152	3/4"	4.5	LFE0024(*)
LF0031(*)1	3.12	110	110	109	429	152	1"	5.5	LFE0031(*)
LF0050(*)1	4.95	175	110	109	429	152	1"	5.5	LFE0050(*)
LF0070(*)1 1/2	7.08	250	145	122	555	165	1 1/2"	12.0	LFE0070(*)
LF0092(*)1 1/2	9.20	325	145	122	555	165	1 1/2"	12.0	LFE0092(*)
LF0066(*)2	6.65	235	145	122	555	165	2"	12.0	LFE0066(*)
LF0087(*)2	8.78	310	145	122	555	165	2"	12.0	LFE0087(*)
LF0133(*)2	13.32	470	145	122	555	165	2"	12.0	LFE0133(*)
LF0184(*)2	18.40	650	145	122	756	165	2"	12.5	LFE0184(*)
LF0311(*)3	31.15	1100	229	139	793	178	3"	18.5	LFE0311(*)
LF0373(*)3	37.38	1320	229	139	915	178	3"	20.0	LFE0373(*)
LF0424(*)3	42.48	1500	229	139	1063	178	3"	22.0	LFE0424(*)

## Ordering Information

LF 0066 G - P - MB

Model	Flow m <sup>3</sup> /min
0004	0.42
0008	0.85
0018	1.83
0019	1.98
0024	2.40
0031	3.12
0050	4.95
0070	7.08
0092	9.20
0066	6.65
0087	8.78
0133	13.32
0184	18.40
0311	31.15
0373	37.38
0424	42.48

Element grade(s)
<b>B</b> 1.0 micron Coalescing/particulate ****
<b>C</b> 0.01 micron High efficiency coalescing
<b>D</b> Activated carbon vapor removal

Options
<b>P</b> Pop-up indicator (Available on 1.8 - 42.5 m <sup>3</sup> /min models, G, P, & C grades only)
<b>R</b> Differential pressure gauge with remote alarm (Available on 1.8 - 42.5 m <sup>3</sup> /min models, G, P, & C grades only)

Accessories
<b>MB</b> Mounting brackets: (Available for complete range)
<b>PP</b> Port plates: (1.8 - 42.5 m <sup>3</sup> /min, models only)
<b>MDV</b> Manual drain valve: (Available for complete range)
<b>RS</b> Ring spanner available for models 1.8 - 42.5 m <sup>3</sup> /min
<b>CK</b> Connecting kits: (Available for complete range)

### Notes

\* Fill in element grade (B, C, D) to appropriate model number. \*\* With internal float drain removed.

\*\*\*Includes 1 ea. of C & D grade element.

\*\*\*\* Recommended for use as heatless desiccant dryer particulate after filter

### Correction Factors

For maximum flow rate, multiply model flow rate shown in the specification chart by the correction factor corresponding to the working pressure. See specifications for maximum pressure. Note: To reduce pressure drop by 50%, reduce flow rate by 30%.

Operating Pressure (psig)	0.3	0.6	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	10.0	12.0	14.0	16.0
Correction Factor	0.21	0.29	0.38	0.53	0.65	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51

## Technical Notes

1	Threaded and duplex filter housings are suitable for temperatures up to 120°C.
2	Threaded and duplex filters are manufactured from cast aluminium alloy and are PED 97/23/EC compliant for group 2 gases and carry CE approval.
3	Threaded connections are Rp (BSP parallel) to ISO 7/1.
4	Filter elements should be changed every 12 months / 8000 hours (whichever comes first). Activated carbon filter elements should be changed every 6 months / 1000 hours (whichever comes first).
5	Filters are suitable for use with mineral and synthetic oils, plus oil-free compressed air applications.
6	Dimension 'D' in general arrangement drawings refers to bowl clearance required for element change.
7	Mounting brackets are available for various filters.
8	Silicone free options are available, please contact CompAir for details.
9	All ppm references are ppm by mass.

# FX Series Refrigerant Dryers

## Complete air treatment

Compressed air is saturated with water as well as other atmospheric contaminants in addition to dirt and oil. Saturated compressed air not only adversely affects the end product being manufactured, but it also jeopardises the integrity of associated components, equipment and processes.

To effectively and efficiently meet the requirements for dry compressed air, CompAir has developed the FX series range of refrigerant compressed air dryers. The FX series provides reliable, efficient and environmentally friendly removal of moisture, oil, and moisture borne contaminants from compressed air. With flow capacities from 0.5 to 90.10 m<sup>3</sup>/min, the FX series can satisfy the requirements for clean and dry compressed air for a wide variety of applications and industry sectors.

For more information on the FX series of refrigerant dryers contact your CompAir representative or visit our website [www.compair.com.au/dryers](http://www.compair.com.au/dryers)



**CompAir (Australasia) Limited**  
13-17 Progress Street  
Dandenong South Vic 3176  
Ph: 1800 634 077 Fx: 1800 638 854  
[www.compair.com.au](http://www.compair.com.au)  
[sales@compair.com.au](mailto:sales@compair.com.au)