



Shown with  
Float-Style  
Auto Drain

DF-0750MKS



Shown with  
Electronic  
Zero-Loss Drain

DF-0750ZUS

### DF Series Features & Benefits

- Reduced pressure drop by 50% uses less energy.
- Coalescing filter elements performance data validated according to ISO 12500-1 assuring reliable achievement of compressed air quality according to ISO 8573-1.
- Filter element can be removed together with filter bowl, reducing overall installation height requirements.
- Changing the code clip inside the filter bowl changes the flow direction through the element so that the filter can be used either as a coalescing filter (inside to outside flow) or a particulate filter (outside to inside flow).
- The integrated differential pressure indicator can be easily rotated in the filter head.
- The bayonet lock ensures that the filter cannot be opened under pressure for increased safety.
- Filter housings are immersion-coated ensuring long-term protection against corrosion.
- Nine sizes, six filter element types, and available options meet virtually all industrial air purification application requirements.

The Aircel DF Filters are designed for high quality filtration of compressed air or gas in a wide range of applications. The total filter design concept of the filter combines high performance, efficiency, ease of use, flexibility, and safety.

As one of the world's leading manufacturers of compressed air purification equipment and process filters, Aircel has built a comprehensive engineering, manufacturing, and customer support network providing filters that meet the most demanding application requirements. Aircel's innovative designs focus on energy-efficient operation and reliable performance to minimize operating expenses and reduce downtime.

With nine sizes, the DF series covers the performance range from 20 to 647 scfm flow rate corresponding to conventional compressor capacities between 2 and 120 kW. The compressed air filter is available in two models:

- Standard with float condensate drain and Econometer.
- Superplus with level-controlled condensate drain UFM-T and Economizer.

Coalescing, particulate, and activated carbon elements are available in different grades to fit your application needs.

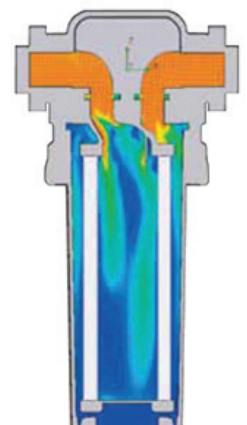
### DF SERIES How it Works

Unrivaled high performance. Aircel was developed on the basis of worldwide experiences and innovative design resulting in a highly efficient and economic filtration concept.

- A flow-optimized filter design provides minimum pressure loss.
- The innovative filtration technology ensures high separation efficiency.
- A total filter design concept delivers unrivaled efficiency.

Computer-aided simulation was the basis for the turbulence-free design with optimized airflow through the filter housing and into the element. This ensures low pressure losses. The core of each filtration system is the filter element.

Careful selection of filtration media, optimized pleating, and advanced production technology, produce a reduction of pressure loss by 50% while concurrently increasing separation efficiency. The element coalescing drainage layer is fixed in place by the outer support sleeve ensuring a constant cross-section between the element and housing at all times.



Flow Optimized  
Airflow

# DF SERIES TECHNICAL SPECIFICATIONS



## DF Model Comparison

Model	Capacity <sup>1</sup> (scfm)	Connection (in. NPT)	Element		Standard (MK) (inches)		Superplus (ZU) (inches)		Standard <sup>2</sup> Weight (lbs)	Superplus <sup>2</sup> Weight (lbs)
			Size	Qty.	Height	Width	Height	Width		
DF 0035	20	1/4	0035	1	7.5	3.5	16	3.5	1	3
DF 0120 MKLF	41	3/8	0070	1	11.5	4.5	18	4.5	2	4
DF 0120	70	1/2	0120	1	13.5	4.5	20	4.5	2	4
DF 0210	123	3/4	0210	1	14.5	6	21	6	5	6
DF 0320	188	1	0320	1	17.5	6	24	6	5	7
DF 0600 MKLF	264	1-1/2	0450	1	23	7.5	29	7.5	12	7
DF 0600	353	1-1/2	0600	1	23	7.5	31	7.5	12	7
DF 0750	441	2	0750	1	23	7.5	31	7.5	12	7
DF 1100	647	2	1100	1	30	7.5	35	7.5	16	15

1 Capacity based on 100 psig inlet pressure.

2 Without filter element.

Due to a continuous program of product improvement, specification and dimensions are subject to change without notice.

## DF SERIES Capacity Correction Factors

### To Size for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2$$

To calculate the capacity of a given Ultra-Filter DF Series filter based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

**EXAMPLE:** Ultra-Filter DF Series Model: DF 0210 MK  
Standard Capacity: 123 scfm  
Actual Operating Conditions: 75 psig inlet pressure: C1 = 0.78  
120°F inlet temperature: C2 = 0.94

$$\text{Adjusted Capacity} = 123 \text{ scfm} \times 0.78 \times 0.94 = 90 \text{ scfm}$$

### To Select the Model for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm}/C1/C2$$

To choose a Ultra-Filter DF Series filter based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

**EXAMPLE:** Given Flow: 500 scfm  
Actual Operating Conditions: 130 psig inlet pressure: C1 = 1.26  
60°F inlet temperature: C2 = 1.14  
Adjusted Capacity = 500 scfm / 1.26 / 1.14 = 348 scfm  
Selected Ultra-Filter Model: DF 0600 MK

### Capacity correction factors for system air pressure (C1)

System Pressure (psig)	15	30	45	60	75	90	100	115	130	150	160	175	190	200	220	250
Correction Factor	0.26	0.39	0.52	0.65	0.78	0.91	1	1.13	1.26	1.44	1.52	1.65	1.78	1.87	2.05	2.31

### Capacity correction factors for differing system air temperature (C2)

System Temperature (°F)	-20	0	20	40	60	80	100	120	140	150
Correction Factor	1.52	1.41	1.31	1.22	1.14	1.07	1	0.94	0.88	0.86

## Filter Element Data

Type	Initial Dp (psid)	Residual Oil Content	Particle Retention Rate
S Coalescing Filter	1.45	<0.01 ppm <sup>1</sup>	99.99998% on 0.01 micron particles
M Coalescing Filter	1.3	1 ppm <sup>1</sup>	99.9999% on 0.01 micron particles
V Coalescence Filter	0.7	1 ppm <sup>1</sup>	90% on ISO fine dust
P Particulate Filter	0.7	100% <sup>2</sup>	25 micron absolute
A Activated Carbon Filter	1.45	<0.003 ppm <sup>1</sup>	1 micron absolute

1 Based on inlet concentration of 3 ppm.

2 Related to the pore size.

## Materials

**Filter Housing:** Aluminum die cast  
**Economizer:** Polymer  
**Float Drain:** Polymer / aluminum mold cast (Standard)  
 Aluminum, glass fiber reinforced polymer (Superplus)  
**Gaskets:** Viton®  
**Maximum Operating Inlet Pressure:** 250 psig  
**Maximum Operating Inlet Temperature:** 150°F (65°C)