

## Nomenclature

### NGF Series

NGF ( <input type="text"/> <input type="text"/> - <input type="text"/> )					
<b>Element Grade</b>		<b>Model</b>	<b>Flow Capacity (Nm<sup>3</sup>/min)</b>	<b>Model</b>	<b>Flow Capacity (Nm<sup>3</sup>/min)</b>
S		70	1.98	500	14.14
P / PD		150	4.25	800	22.65
H		200	5.66	1100	31.15
U		300	8.49	1600	45.30
C					
<b>Options</b>					
R	Differential Pressure Slide indicator				
R1	Differential Pressure Gauge				

### JF Series

JF (JF - <input type="text"/> - <input type="text"/> )					
<b>Model</b>	<b>Flow Capacity (Nm<sup>3</sup>/min)</b>	<b>Model</b>	<b>Flow Capacity (Nm<sup>3</sup>/min)</b>	<b>Element Grade</b>	
60	60	166	167	G	
83	83	250	250	P	
125	125	333	333	H	
				D	
				C	

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Some specifications in this bulletin may change without notice.  
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Compressed Air Filter

# NGF·JF Series

# NGF Series

## Engineering Excellence

Jemaco is a place where innovation is valued, and the real need of business are understood. We transform ideas into powerful solutions to help our customers meet their goals, overcome business challenges and thrive in a complex, always changing marketplace. Utilizing the latest technological advancements, NGF Series compressed air filter offer a new way of thinking and innovative approach to efficiently clean compressed air.

## The new generation of compressed air filtration

The NGF Series employs technological advancements in filtration materials and design to ensure premium compressed air quality and low operational costs. Filters are tested and rated delivering certifiable performance according to ISO 8573-1: 2010 air quality standards.



## Patented Venturi-Wave™ Element

### Patented Venturi-Wave™ Element Design

- The venturi profile promotes a turbulent-free transition for compressed air entering the element
- Optimized flow distribution through the element minimizes pressure loss and reduces system operating cost
- Unique backside contour assists smooth movement of air exiting the filter housing

### Deep Bed Pleated, High Performance Media

- Increased effective filtration surface area, reduces pressure drop by 50%
- 96% voids-volume ratio optimizes dirt loading capacity
- HEPA grade micro fiberglass media maximizes efficiency
- Thermally bonded polyester support layers minimize media migration
- Low wetted pressure drop for the life of the element
- Seam welded, stainless steel inner and outer support cores enhance dimensional stability of the element
- Chemically inert, non-aging polyester drain layer expedites removal of liquid
- All materials of construction are silicone free

### Element Grade Identification

- Color coded end caps promote ease of element grade identification
- Bottom end caps pad printed with genuine Jemaco filter element replacement part number

Element - Materials of Construction	
Filter Media	HEPA grade borosilicate fiberglass
Inner/Outer Support Cores	400 Series stainless steel
Drainage Layer	Filtration grade polyester
End Caps	Fiberglass reinforced polyamide resin
Bonding Agent	Polyurethane
End Cap Seal	Nitrile



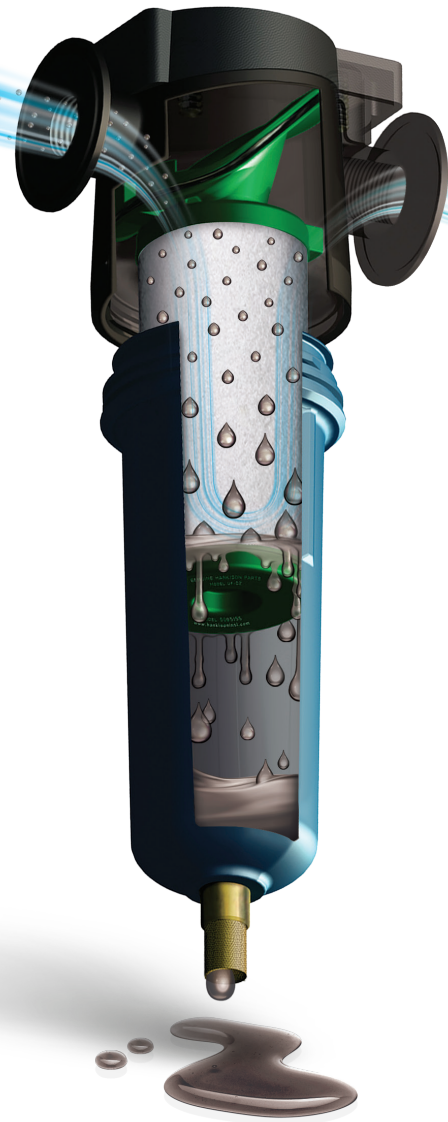
## Optimized Housing Design

### Sculpted Design

- Covers flow ranges 1.98 to 45.30 Nm<sup>3</sup>/min
- Flanged inlet and outlet connections make installation easy
- Eight flow models, with multiple port sizes, 1/2" to 3" PT, allow for greater application flexibility
- Sculpted housing designs, with large unrestricted flow paths, reduce pressure drop

### Safety Built-In

- Die cast aluminium housings provide a cost effective solution
- Chromated housings, with a polyester epoxy powder coating for corrosion resistance
- Internally ribbed bowls facilitate condensate draining
- Audible alarm when attempting bowl removal under pressure
- Drain valve
  - » S, P, H, U Grades comes with float drain
  - » PD, C Grades comes with manual drain

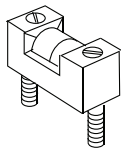


#### Housing - Materials of Construction

<b>Filter Head</b>	Aluminum
<b>Filter Housing</b>	Aluminum
<b>Seals</b>	Nitrile
<b>Chromating Process</b>	Hexavalent-free trivalent
<b>Exterior Coating</b>	Polyester epoxy powder
<b>Manual Drain</b>	Brass body, Viton® seal
<b>Internal Float Drain</b>	Polyacetal float, Brass body, Viton® seal and stainless steel springs

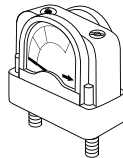
## Options

### Pressure Monitoring



**Differential Pressure Slide Indicator**

Color indicator moves based on differential pressure



**Differential Pressure Gauge**

Two color gauge face indicates element change-out based on differential pressure

# NGF Series

## International Standards for Test & Measurement

**ISO 12500** defines a universal method for manufacturers to test and rate compressed air filters. Critical performance parameters are specified for inlet oil challenge and solid particulate size distribution.

- ISO 12500-1 defines the testing of coalescing filters for oil aerosol removal performance.
- ISO 12500-2 quantifies vapor removal capacity of adsorption filters.
- ISO 12500-3 outlines requirements to test particulate filters for solid contaminant removal.

The NGF Series is tested to ISO 12500. Test results provide certifiable performance data based on defined challenge concentrations.

### NGF Series Filtration Performance

Element Grade	S	P / PD	H	U	C
<b>Particle Retention Size *</b> (Per ISO 12500-3)	3.0 µm	1.0 µm	0.01 µm	0.01 µm	0.01 µm
<b>Particle Removal Efficiency</b> (Per ISO 12500-3)	-	99.999+%	99.999+%	99.9999+%	99.999+%
<b>Oil Removal Efficiency</b> (Per ISO 12500-1)	50%	80%	99.9+%	99.99+%	0
<b>Remaining Oil Content **</b> (Per ISO 12500-1)	5.0 mg/m <sup>3</sup>	2.0 mg/m <sup>3</sup>	< 0.01 mg/m <sup>3</sup>	< 0.001 mg/m <sup>3</sup>	< 0.004 mg/m <sup>3</sup> (as a vapor)

\* Solid particulate size distribution 0.01 to 5.0 µm

\*\* Inlet oil challenge concentration 10mg/m<sup>3</sup>

### ISO 8573.1:2010 Air Quality Standard

ISO 8573.1:2010, the international standard for compressed air quality, defines the amount of contamination permissible in compressed air.

- The standard identifies three primary forms of contamination in compressed air systems – solid particles, water and oil.
- Contaminants are classified and assigned a quality class, ranging from Class 0, the highest purity level, to Class 9, the most relaxed.

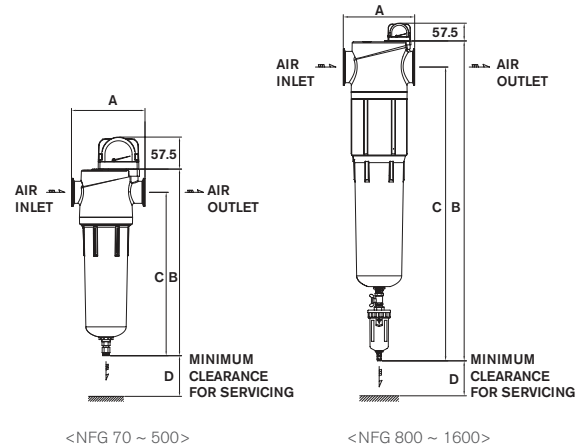
Air Quality Class	Solid Particles (Max. Number of Particle Per m <sup>3</sup> )			Water (Max. Pressure Dew point)	Oil (Total Oil Concentration - Aerosol, Liquid and Vapor)	
	0.1 - 0.5 micron	0.5 - 1.0 micron	1.0 - 5.0 micron	°C	mg / m <sup>3</sup>	ppm
	<b>0</b>	As specified by the equipment user or supplier and more stringent than class 1				
<b>1</b>	≤ 20,000	≤ 400	≤ 10	≤ -70	0.01	0.008
<b>2</b>	≤ 400,000	≤ 6,000	≤ 100	≤ -40	0.1	0.08
<b>3</b>	-	≤ 90,000	≤ 1,000	≤ -20	1	0.8
<b>4</b>	-	-	≤ 10,000	≤ +3	5	4
<b>5</b>	-	-	≤ 100,000	≤ +7	-	0

## NGF Series Specifications

Model	Flow Capacity (Nm <sup>3</sup> /min)	Connections (FLG)	Dimensions (mm)				Weight (kg)
			A	B	C	D	
70S/P/PD/H/U/C	1.98	1/2"	114	260	226	102	0.9
150S/P/PD/H/U/C	4.25	3/4"	132	271	229	127	1.4
200S/P/PD/H/U/C	5.66	1"	132	335	293	127	1.6
300S/P/PD/H/U/C	8.49	1 1/2"	200	346	285	178	3.8
500S/P/PD/H/U/C	14.14	2"	200	575	514	178	5.3
800S/P/PD/H/U/C	22.65	3"	231	852	767	204	8.5
1100S/P/PD/H/U/C	31.15	3"	231	1,034	950	204	12.6
1600S/P/PD/H/U/C	45.30	3"	231	1,302	1,218	204	18.7

\* Max. / Min. operating pressure : 16 barG / 1.4 barG      \* Max. / Min. operating temperature 65°C / 2°C  
 \* The above models are applied to the downstream of desiccant air dryers only and flow from outside to inside the element

## Dimensions



## Capacity Correction Factor

NGF Series flow capacities are rated per ISO 12500 conditions at 7 barG. To size the filter for non-standard conditions, a correction factor must be applied. Table 1 provides correction factors for inlet air pressure. Do not select filters by pipe size; use flow rate and operating pressure.

Table 1 - Correction Factors for Inlet Pressure

Inlet Pressure (barG)	1.4	2.1	2.8	4.2	5.6	7	8.3	10.3	13.8
Correction Factor	0.30	0.39	0.48	0.65	0.82	1.00	1.17	1.43	1.87

## Adjusted Flow Capacity

To calculate the flow capacity based on non-standard inlet conditions, multiply the filter's rated flow capacity by the corresponding inlet pressure correction factor.

# Total System Protection

The NGF Series provides protection for the entire compressed air system. A wide range of filters exceeds customer requirements for ISO Quality Class performance, service life and optimal energy savings.

Compressed air contamination exists in three states- solid, liquid and gaseous.

- Ingested contaminants appear in the form of water, hydrocarbons and particulates.
- The compression process introduces lubricant and wear particles into the system.
- Piping distribution and storage tanks foster contaminants in the form of rust, pipe scale and bacteria.



## NGF Series Element Specifications

Grade S Bulk Liquid Separator/Filter		Grade P / PD General Purpose Filter		Grade H High Efficiency Oil Removal Filter		Grade U Ultra High Efficiency Oil Removal Filter		Grade C Oil Vapor Removal Filter	
<b>Description</b>									
Separator/filter removes bulk liquid and solids.		General purpose filtration to protect pneumatically operated tools, motors and cylinders		Fine coalescer provides oil free air for industrial applications such as spray painting, injection molding, instrumentation and control valves.		Ultra fine coalescer delivers oil free air for critical applications including, conveying, electronics manufacturing and nitrogen replacement.		Activated carbon filter removes oil vapor and provides oil free air for food and drug manufacturing, breathing air and gas processing.	
<b>ISO Performance Data</b>									
<ul style="list-style-type: none"> <li>• Removes solids 3 micron and larger</li> <li>• Remaining oil content 5 mg/m<sup>3</sup></li> </ul>		<ul style="list-style-type: none"> <li>• Removes solids 1.0 micron and larger</li> <li>• Remaining oil content 2.0 mg/m<sup>3</sup></li> </ul>		<ul style="list-style-type: none"> <li>• Removes 99.999+% of solids 0.01 micron and larger</li> <li>• Remaining oil content &lt; 0.01 mg/m<sup>3</sup></li> </ul>		<ul style="list-style-type: none"> <li>• Removes 99.9999+% of solids 0.01 micron and larger</li> <li>• Remaining oil content &lt; 0.001 mg/m<sup>3</sup></li> </ul>		<ul style="list-style-type: none"> <li>• Removes solids 0.01 micron and larger</li> <li>• Remaining oil content &lt; 0.004 mg/m<sup>3</sup> (as a vapor)</li> </ul>	
<b>ISO 8573.1: 2010 Air Quality Class</b>									
<ul style="list-style-type: none"> <li>• Solid particles - Class 3</li> <li>• Remaining oil content - Class 5</li> </ul>		<ul style="list-style-type: none"> <li>• Solid particles - Class 2</li> <li>• Remaining oil content - Class 4</li> </ul>		<ul style="list-style-type: none"> <li>• Solid particles - Class 1</li> <li>• Remaining oil content - Class 1</li> </ul>		<ul style="list-style-type: none"> <li>• Solid particles - Class 1</li> <li>• Remaining oil content - Class 1</li> </ul>		<ul style="list-style-type: none"> <li>• Solid particles - Class 1</li> <li>• Remaining oil content - Class 1</li> </ul>	
<b>Where Applied</b>									
Downstream of aftercoolers At point-of-use if no aftercooler/separator used upstream		Upstream of ultra high efficiency oil removal filters At point-of-use if aftercooler/separator installed upstream Downstream of heatless desiccant air dryers Upstream of refrigerated air dryers		Upstream of desiccant air dryers Downstream of refrigerated air dryers At point-of-use if aftercooler/separator installed upstream		Upstream of desiccant air dryers Upstream of membrane air dryers (Use a P Grade as a prefilter if heavy liquid loads are present) Downstream of refrigerated air dryers		Downstream of high efficiency oil removal filters	
<b>Dry ΔP</b>									
psig	0.8	psig	0.6	psig	0.6	psig	0.8	psig	1.0
bar	0.06	bar	0.04	bar	0.04	bar	0.06	bar	0.07
<b>Wetted ΔP</b>									
psig	1.0	psig	1.4	psig	1.8	psig	2.0	psig	-
bar	0.07	bar	0.10	bar	0.12	bar	0.14	bar	-

\* Pressure drop not to exceed stated values at ISO 12500 test conditions \* Pressure differential in excess of 0.3 bar : pressure indicator in red area - indicates that the filter element should be replaced  
 \* Element should be replaced annually or when indicator changes to red, whichever occurs first  
 \* Grade C : Adsorption capacity, 1,000 hours at rated capacity, Element life is exhausted when odor can be detected downstream of the filter  
 \* NGF elements are performance validated to ISO 12500 ensuring air quality delivered is in accordance to ISO 8573.1:2010



# JF Series

## Compressed Air Filter

The JF Series features filters to fill every need. JF Series filter elements are designed to ensure performance and long service life. The five (5) designs are engineered for specific applications commonly found in compressed air systems. Choose one of the five filters or link them together for specialized application.

### Material & Construction

Component	Material
Vessel Head, bowl	Carbon steel
Surface finish	Polyurethane
O-rings / Gaskets	Non-Asbestos
Support cores	Stainless steel or non-corrosive polymer
G, P, H and D Element	Microglass fibers and non-woven polyester; glass-filled nylon end caps
C Element	Activated carbon bonded to a non-woven polyester substrate
Element adhesive	Two-part epoxy
Internal float drain	External drain
Manual drain	PT connection



## Engineered for Efficiency

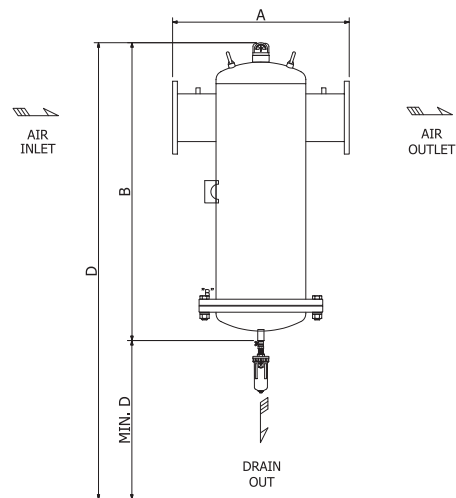
- Air-flow design is from inside-to-outside the element. Larger solid particles are trapped inside the element and do not fall to the bottom of the filter housing where they can cause drain mechanisms to foul. Finer aerosols and liquids are captured in the outer layers of filter media.
- Structural design has media layered between an inner and outer core of perforated stainless steel. This protects against differential pressure surges of up to 4.5 barG.
- Operation reliability : high quality components
- Energy saving : low pressure drop
- Problem free application : silicone free

### JF Series Specifications

Model	Flow Capacity (Nm <sup>3</sup> /min)	Connections (FLG)	Dimensions (mm)				Weight (kg)
			A	B	C	D	
JF - G/P/H/D/C - 60	60	100A	510	1,019	186	485	155
JF - G/P/H/D/C - 83	83	150A	580	1,192	217	650	195
JF - G/P/H/D/C - 125	125	200A	800	1,352	282	650	203
JF - G/P/H/D/C - 166	167	200A	800	1,352	282	650	206
JF - G/P/H/D/C - 250	250	250A	1,000	1,466	329	650	302
JF - G/P/H/D/C - 333	333	300A	1,091	1,648	469	650	405

\* Max. / Min. operating pressure : 10.3 barG / 2 barG  
 \* Max. operating temperature : 55°C (70°C Type D)  
 \* Min. operating temperature : 2°C

### Dimensions



### Correction Factors

Inlet Pressure (barG)	2.0	2.9	3.9	4.9	5.9	6.9	7.8	8.8	9.8	10.8	11.8	12.7	13.7	14.7	15.7
Factor	0.40	0.50	0.62	0.75	0.87	1.00	1.11	1.22	1.34	1.47	1.58	1.71	1.83	1.95	2.07