

NGF Series Pressure Drop Performance

Element Grade	Filter Description	Dry Δp		Wetted Δp	
		psig	bar	psig	bar
S	Bulk Liquid Separator/Filter	0.8	0.06	1.0	0.07
P / PD	General Purpose Filter	0.6	0.04	1.4	0.10
H	High Efficiency Oil Removal Filter	0.6	0.04	1.8	0.12
U	Ultra High Efficiency Oil Removal Filter	0.8	0.06	2.0	0.14
C	Oil Removal Filter	1.0	0.07	-	-

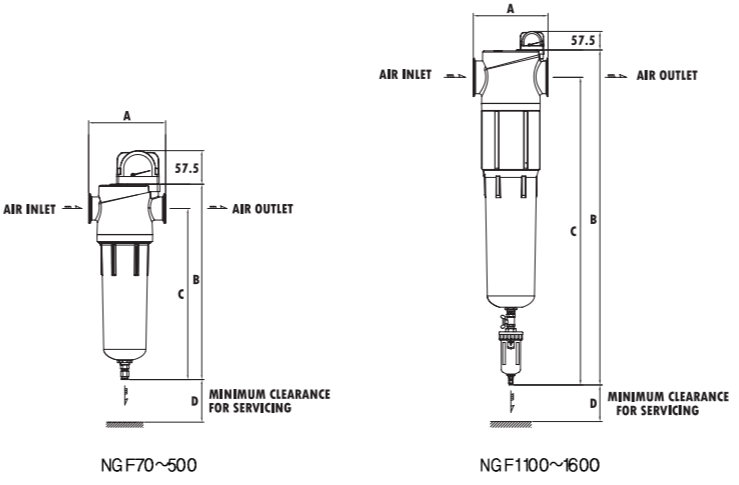
\*Pressure differential in excess of 0.3 bar – pressure indicator in red area – indicates that the filter element should be replaced. Element should be changed annually or when indicator changes to red, whichever occurs first.  
 \*Grade C : Adsorption capacity, 1000 hours at rated capacity. Element life is exhausted when odor can be detected downstream of the filter.

NGF Series Element Specifications

	<b>Grade S Bulk Liquid Separator/Filter</b>	Separator / filter removes bulk liquid and solids	1. Downstream of aftercoolers 2. At point-of-use if no aftercooler/separator used upstream	
	<b>Grade P General Purpose Filter</b> * Grade PD	General purpose filtration to protect pneumatically operated tools, motors and cylinders.	1. Upstream of ultra high efficiency oil removal filters 2. At point-of-use if aftercooler /separator installed upstream 3. Upstream of refrigerated dryers 4. Downstream of heatless desiccant dryers	
	<b>Grade H High Efficiency Oil Removal Filter</b>	Fine coalescer provides oil free air for industrial applications such as spray painting, injection molding, instrumentation and control valves.	1. Upstream of desiccant dryers 2. Downstream of refrigerated dryers 3. At point-of-use if aftercooler /separator installed upstream	
	<b>Grade U Ultra High Efficiency Oil Removal Filter</b>	Ultra fine coalescer delivers oil free air for critical applications including , conveying electronics manufacturing and nitrogen replacement.	1. Upstream of desiccant dryers 2. Upstream of membrane dryers 3. Downstream of refrigerated dryers	
	<b>Grade C Oil Vapor Removal Filter</b>	Activated carbon filter removes oil vapor and provides oil free air for food and drug manufacturing, breathing air and gas processing	1. Downstream of high efficiency oil removal filters	

\*Note : NGF PD will be provided as the same nomenclature with element 'Grade P'.  
Air flows in reverse direction.

Specifications



Hankison Model*	Flow Capacity (Nm <sup>3</sup> /min)	Dimension(mm)				Weight(kg)	Connections	
		A	B	C	D		PT	
AF-70SF/PF/PFD/HF/UF/CF	1.98	114	260	226	102	0.9	1/2"	
AF-150SF/PF/PFD/HF/UF/CF	4.25	132	271	229	127	1.4	3/4"	
AF-200SF/PF/PFD/HF/UF/CF	5.66	132	335	293	127	1.6	1"	
AF-300SF/PF/PFD/HF/UF/CF	8.49	200	346	285	178	3.8	1 1/2"	
AF-500SF/PF/PFD/HF/UF/CF	14.14	200	575	514	178	5.3	2"	
AF-1100SF/PF/PFD/HF/UF/CF	31.15	231	1034	950	204	12.6	3"	
AF-1600SF/PF/PFD/HF/UF/CF	45.30	231	1302	1218	204	18.7	3"	

\* Max./Min. Working Pressure : 16 barg / 1.4 barg, Max./Min. Working Temperature : 65°C / 2°C  
 \* AF-70PFD- AF-1600PFD models are applied to the downstream of desiccant dryers only and flow from outside to inside the element.

Inlet Pressure (barg)	1.4	2.1	2.8	4.1	5.5	7	8.3	10.3	13.8	16
Correction Factors	0.30	0.39	0.48	0.65	0.82	1.00	1.17	1.43	1.87	2.15



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Some specification in this bulletin may change without notice.

NEW NGF Series Compressed Air Filters



The New Generation of Compressed Air Filtration

# NGF Series

Energy costs continue to escalate globally, having a negative impact on plant profitability and production costs. Sustainability initiatives in plant operations must be implemented to maintain a competitive advantage.

Air treatment manufacturers are challenged to design equipment that is cost effective, delivers optimum performance and consumes less energy. The Hankison New Generation Filter Series is the ideal solution to remove contamination from compressed air systems and save energy.

The NGF Series employs technological advancements in filtration materials and design to ensure premium compressed air quality and low operational costs.

## Features

### A. 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

### B. Deep Bed Pleated, High Performance Media

- : Increases 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

## Filter and Element – Materials of Construction

Filter Head	: Aluminum
Filter Housing	: Aluminum
Exterior Coating	: Polyester Epoxy Powder
Filter Media	: HEPA Grade Borosilicate Fiberglass
Inner/Outer Support Cores	: Stainless Steel
End Caps	: Fiberglass Reinforced Polyamide Resin
End Cap Seal	: Nitrile

## 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
- : S, P, H, U Grade



### C. Element Grade Identification

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

### D. Sculpted Design

- : Flanged inlet and outlet connections make installation easy
- : Seven 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

### E. Safety Built-in

- : Die cast aluminum housing
- : 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 are installed float drain.
  - PD, C Grades are installed manual drain.

## Advanced Energy Saving Filtration Technology

The development of sustainable energy savings compressed air treatment solutions is the driving principle behind Hankison product designs. The NGF Series provides the perfect balance high performance filtration and low pressure drop. Patented elements maintain low pressure drop and long service life.

Filters are tested and rated delivering certifiable performance according to ISO 8573.1:2009 air quality standards. NGF elements are performance validated to ISO 12500 ensuring air quality delivered is in accordance to ISO 8573.1:2009 classifications

## NGF Series Filtration Performance

Element Grade	S	P / PD	H	U	C
Particle Retention Size (Per ISO 12500-3)	3.0 µm	1.0 µm	0.01 µm	0.01 µm	0.01 µm
Particle Removal Efficiency (Per ISO 12500-3)	–	99.999+%	99.999+%	99.9999+%	99.999+%
Oil Removal Efficiency (Per ISO 12500-1)	50%	80%	99.9+%	99.99+%	–
Remaining Oil Content (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)

- \*ISO 12500 International Standards for Test and Measurement and Compressed Air Quality
- : 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.



Element Grade	ISO Quality Class Solids	ISO Quality Class Oil
S	3	5
P / PD	2	4
H	1	1
U	1	1
C	1	1 (as a vapor)

- \*ISO 8573.1:2009 Air Quality Standard
- : ISO 8573, 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.