Hankison™

Compressed Air Filters

HF Series

20 to 21250 scfm
(34 to 36104 nm^3/h)

hankisonair.com

Compressed Air Treatment

Reduce Operating Costs

The HF Series has been designed utilizing quality media and manufacturing techniques. The result is increased performance, reduced size and lower operating pressure drop, in a variety of grades to match your requirements.

Hankison filters remove more contaminants with less pressure drop through housings that have large flow areas. Compare the operating pressure drop of competitive brands and remember that for every extra 2 psi of pressure drop, power input needs to be increased by 1%. A systems approach has been used to allow for convenient matching of filter types to achieve the air quality you desire, while comprehensive third party testing guarantees performance to CAGI[1], ISO[2] and PNEUROP[3] standards.

With a greater selection of filter grades, more models to choose from and worldwide technical and service support, Hankison offers a systemized solution for your compressed air quality needs.

Quality Compressed Air

A typical compressed air system is contaminated with abrasive solid particles such as dust, dirt, rust and scale, compressor lubricants (mineral or synthetic), condensed water droplets and acidic condensates and oil and hydrocarbon vapors.

If not removed, these contaminants increase pneumatic equipment maintenance costs, lead to instrument and control failure, contribute to poor product fit and finish, and contaminate processes.

The right Hankison filter or filter system will remove these contaminants allowing your compressed air system to deliver the quality of air required by your application–whether it's plant air, instrument air, medical air or helping to ensure consistent output quality while minimizing operating costs.

[1] CAGI - Compressed Air And Gas Institute
[2] ISO - International Standards Organization
[3] PNEUROP - European Committee of Manufacturers of Compressors, Vacuum Pumps and Pneumatic Tools

Engineered for Efficiency

Modular Housings for Flows through 780 scfm

- Manufactured from top quality aluminum, zinc and steel
- Chromated and epoxy powder painted for added durability and corrosion resistance
- 300 psig (21 barg) maximum working pressure (tested to a 5:1 safety factor)

Easy to Operate

Differential Pressure Gauge

- Differential pressure indicators
  - Indicates optimum time for element change – maximizing your element investment while minimizing pressure drop
  - Large, easy to read gauge face
  - Dual faces allow housings to be mounted in any flow direction
  - Can be mounted remotely
  - Switch for remote indication available
- Slide indicator
  - Changes color when filter element requires replacement

Liquid level indicator

- Allows visual monitoring of liquid level and signals the need for preventative maintenance to avoid downstream contamination
- Manufactured from thermoset polyurethane, compatible with synthetic lubricants

Internal automatic drains

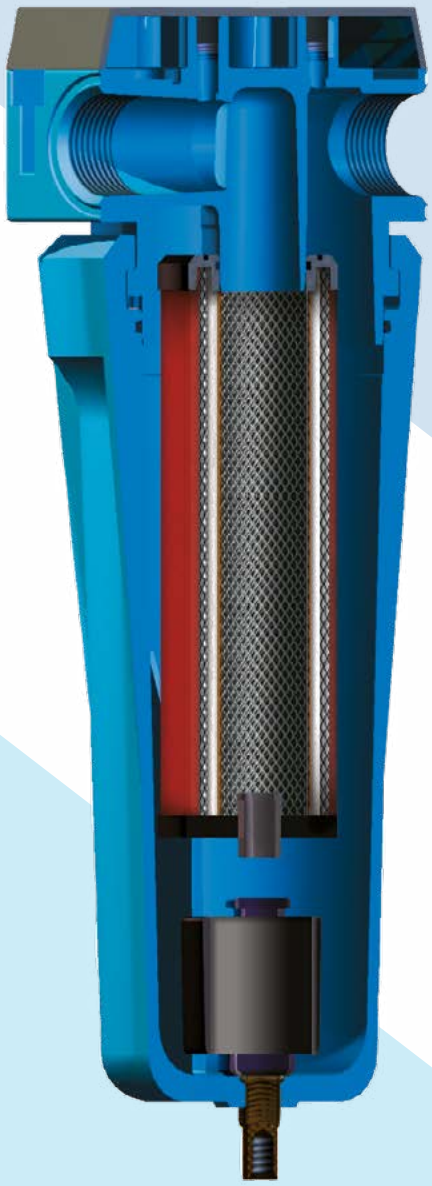
- Pilot operated, pneumatically actuated to reliably discharge collected liquid
- Viton seals - compatible with synthetic lubricants
- Inlet screen for additional protection
- Discharge fitting threaded to facilitate drain line connection

Easy to Install

- Modular connections allow housings to be connected in series easily, while saving space
- Wall mounting bracket optional
- Can be mounted for left or right entry
- New space saving design reduces service clearances

Easy to Maintain

- ⅛ turn, self locking bayonet head to bowl connections (through 1”)
- Push on elements make element replacement quick and easy
- If housing is not depressurized before disassembly, escaping air gives audible warning
- Captive O-ring
- Ribbed bowls allow use of C spanner
- Color coded elements for easy identification



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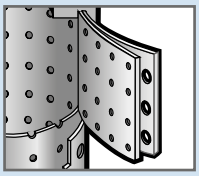
Seven Element Grades for Enhanced Performance

Features

- Withstands temperatures to 150°F (66°C)
- Push-on elements provide simple replacement
- Piston type seal keeps unfiltered air from by-passing element
- Stainless steel, corrosion resistant inner and outer cores
  - Low resistance to flow
  - Seam welded durability
- Matrix blended fiber media
  - Large, effective surface area ensures high efficiencies and minimizes pressure drop
- Coated, closed cell foam sleeve
  - Resists chemical attack from oils and acids
  - Ensures high efficiencies by preventing re-entrainment of coalesced liquids
- Chemically resistant end caps
- Silicone free

Air Quality/Pressure Drop

GRADE	SOLID PARTICULATE MICRONS	REMAINING OIL PPM	PRESSURE DROP DRY PSID	DRY BARG	WET PSID	WET BARG
11	10	-	0.8	0.06	0.8	0.06
9	3	5	1	0.07	1.5	0.11
7	1	1	1	0.07	2	0.14
6	1	-	1	0.07	-	-
5	0.01	0.008	1	0.07	3	0.21
3	0.01	0.0008	2	0.07	6	0.42
1	0.01	0.003	1	0.07	-	-

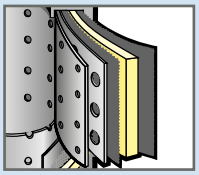


Grade 11 Impact Type Moisture Separator

- Provides bulk liquid removal
- Maximum inlet liquid load: 30,000 ppm w/w

Operation

- Two stainless steel orifice tubes provide 10 micron mechanical separation

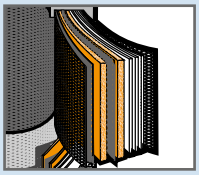


Grade 9 Separator/Filter

- Mechanical for bulk liquid removal plus a 3.0 micron coalescer
- Maximum remaining oil content[1]: 5 ppm w/w

Operation

- First stage - two stainless steel orifice tubes provide 10 micron mechanical separation
- Second stage - in-depth fiber media captures solid and liquid particles to 3 microns



Grade 7 Air Line Filter

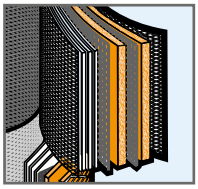
- Provides removal of liquid water and oil
- Removes solid particulate to 1.0 micron
- Maximum remaining oil content[1]: 1.0 ppm w/w

Operation

- First stage - captures larger particles with alternate layers of fiber media and screen
- Second stage - coalesces aerosols and captures solid particles with multiple layers of epoxy bonded, blended fiber media

[1] Filter efficiency has been established in accordance with CAGI standard ADF400 and is based on 100°F (38°C) inlet temperature.
[2] Filter efficiency has been established in accordance with CAGI standard ADF500 and is based on 100°F (38°C) inlet temperature.

Grade 6 Desiccant Dust Removal After-filter

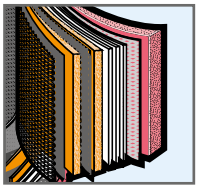


- Removes solid particulate to 1.0 micron

Operation

- First stage - coalesces aerosols and captures solid particles with multiple layers of epoxy bonded, blended fiber media
- Second stage - captures larger particles with alternate layers of fiber media and media screen

Grade 5 High Efficiency Oil Removal Filter

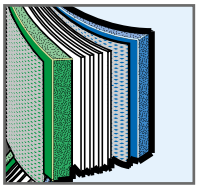


- Designed for coalescing fine water and oil aerosols
- Removes solid particulate to 0.01 micron
- Maximum remaining oil content[1]: 0.008 ppm w/w

Operation

- First stage - multiple layers of fiber media and screen remove larger particles, pre-filtering the air
- Second stage - multiple layers of bonded, blended fiber media for fine coalescence

Grade 3 Maximum Efficiency Oil Removal Filter

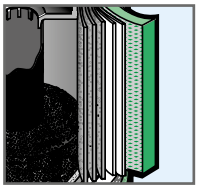


- Designed for coalescing ultra-fine oil aerosols
- Removes solid particulate to 0.01 micron
- Maximum remaining oil content[1]: 0.0008 ppm w/w

Operation

- First stage - coated, closed cell foam sleeve acts as prefilter and flow disperser
- Second stage - multiple layers of matrix blended fiber media for ultra-fine coalescence

Grade 1 Oil Vapor Removal Filter



- Removes oil and hydrocarbon vapors normally adsorbed by activated carbon
- Removes solid particulate to 0.01 micron
- Maximum remaining oil content[2]: 0.003 ppm w/w
- Multiple layers of fine media prevent particle migration
- Designed for 1000 hour life at rated conditions

Operation

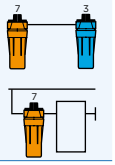
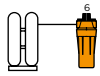
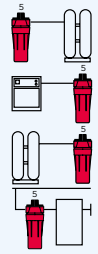
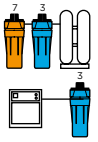
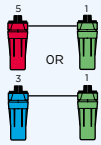
- First stage - multiple layers of fiber media and screen remove larger particles, pre-filtering the air
- Second stage - multiple layers of bonded, blended fiber media for fine coalescence

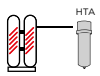
[1] Filter efficiency has been established in accordance with CAGI standard ADF400 and is based on 100°F (38°C) inlet temperature.
[2] Filter efficiency has been established in accordance with CAGI standard ADF500 and is based on 100°F (38°C) inlet temperature.

Hankison™

Total System Protection

HF Series Element Specifications

Element Grade	Description	ISO Performance Data	Where Applied	
 Grade 11 Impaction Type Moisture Separators	Moisture separator removes bulk liquid from your system.	• Removes liquids and solids 10 microns and larger	Downstream of aftercoolers	
 Grade 9 Separator/Filter	Separator/filter removes bulk liquid and solids.	• Removes solids 3.0 microns and larger • Remaining oil content 5 ppm/w ISO 8573.1 Quality Class: • Solid Particles - Class 2 • Remaining Oil Content - Class 4	At point-of-use if no aftercooler/separator used upstream	
 Grade 7 Air Line Filter	General purpose filtration to protect pneumatically operated tools, motors and cylinders.	• Removes solids 1.0 micron and larger • Remaining oil content 1.0 ppm/w ISO 8573.1:2010 Quality Class: • Solid Particles - Class 2, • Remaining Oil Content: Class 4	Upstream of ultra high efficiency oil removal filters At point-of-use if aftercooler/ separator installed upstream	
 Grade 6 Desiccant Dust Removal Afterfilter	Dry particulate filtration protects compressed air lines and factory piping from abrasive desiccant dust.	• Removes solids 1.0 microns and larger No liquid should be present at filter inlet	Downstream of pressure-swing (heatless) desiccant dryers	
 Grade 5 High Efficiency Oil Removal Filter	Fine coalescer provides oil free air for industrial applications such as spray painting, injection molding, instrumentation and control valves.	• Removes 99.999+% of solids 0.01 micron and larger • Remaining oil content < 0.08 ppm/w ISO 8573.1: 2010 Air Quality Class: • Solid Particles - Class 1 • Remaining Oil Content - Class 1	Upstream of desiccant dryers Downstream of refrigerated dryers At point-of-use if aftercooler/ separator installed upstream	
 Grade 3 Maximum Efficiency Oil Removal Filter	Ultra fine coalescer delivers oil free air for critical applications including, conveying, electronics manufacturing and nitrogen replacement.	• Removes 99.9999+% of solids 0.01 micron and larger • Remaining oil content< 0.0008 ppm/w ISO 8573.1: 2010 Air Quality Class: • Solid Particles - Class 1 • Remaining Oil content - Class 1	Upstream of desiccant or membrane dryers; use a Grade 7 as a prefilter if heavy liquid loads are present Downstream of refrigerated dryers	
 Grade 1 Oil Vapor Removal Filter	Activated carbon filter removes oil vapor and provides oil free air for food and drug manufacturing, breathing air and gas processing.	• Removes solids 0.01 micron and larger • Remaining oil content < 0.003 ppm/w (as a vapor) ISO 8573.1: 2010 Air Quality Class: • Solid Particles - Class 1 • Remaining Oil Content - Class 1	Downstream of high efficiency oil removal filters	

Filter Type	Description	ISO Performance Data	Where Used	
 High Temperature Dry Particulate	High Temperature Dry Particulate Afterfilter	• Removes solids 1.0 micron and larger No liquid should be present at filter inlet	Downstream of heat reactivated desiccant dryers	

Product Specifications

Model	Capacity @ 100 psig (6.7 barg) scfm	Capacity @ 100 psig (6.7 barg) nm³/h	Connections in	Dimensions H in	Dimensions W in	Weight lbs	Replacement Element Model	Replacement Element Qty.
Modular Type Housings								
HF(Grade)-12-(Conn.)-(Features)[2]	20	34	3/8" or 1/2" NPT	8	4	4.2	E (Grade)-12	1
HF(Grade)-16-(Conn.)-(Features)[2]	35	60	3/8" or 1/2" NPT	11	4	8.1	E (Grade)-16	1
HF(Grade)-20-(Conn.)-(Features)[2]	60	102	3/8" or 1/2" NPT	13	4	8.5	E (Grade)-20	1
HF(Grade)-24-(Conn.)-(Features)[2]	100	170	3/4" or 1" NPT	15	5	6.3	E (Grade)-24	1
HF(Grade)-28-(Conn.)-(Features)[2]	170	289	3/4" or 1" NPT	20	5	6.9	E (Grade)-28	1
HF(Grade)-32-(Conn.)-(Features)[1 2]	250	425	1", 1-1/4" or 1-1/2" NPT	23	6	10.2	E (Grade)-32	1
HF(Grade)-36-(Conn.)-(Features)[1 2]	375	637	1", 1-1/4" or 1-1/2" NPT	27	6	11.3	E (Grade)-36	1
HF(Grade)-40-(Conn.)-(Features)[1 2]	485	824	2" or 2-1/2" NPT	31	8	28.0	E (Grade)-40	1
HF(Grade)-44-(Conn.)-(Features)[1 2]	625	1062	2-1/2" NPT	37	8	33.0	E (Grade)-44	1
HF(Grade)-48-(Conn.)-(Features)[1 2]	780	1325	2-1/2" NPT	43	8	38.0	E (Grade)-48	1
ASME Pressure Vessels								
HF(Grade)-52-(Conn.)-(Features)[1]	625	1062	3" NPT	41	10	37	E (Grade)-PV	1
HF(Grade)-54-(Conn.)-(Features)[1]	1000	1699	3" NPT	48	16	93	E (Grade)-54	2
HF(Grade)-56-(Conn.)-(Features)	1250	2124	3" NPT	48	16	93	E (Grade)-PV	2
HF(Grade)-60-(Conn.)-(Features)	1875	3186	3" NPT	49	16	123	E (Grade)-PV	3
HF(Grade)-64-(Conn.)-(Features)	2500	4248	4" FLG	52	20	185	E (Grade)-PV	4
HF(Grade)-68-(Conn.)-(Features)	3125	5309	4" FLG	52	20	189	E (Grade)-PV	5
HF(Grade)-72-(Conn.)-(Features)	5000	8495	6" FLG	55	24	285	E (Grade)-PV	8
HF(Grade)-76-(Conn.)-(Features)	6875	11681	6" FLG	63	28	537	E (Grade)-PV	11
HF(Grade)-80-(Conn.)-(Features)	8750	14866	6" FLG	63	28	599	E (Grade)-PV	14
HF(Grade)-84-(Conn.)-(Features)	11875	20176	8" FLG	69	33	742	E (Grade)-PV	19
HF(Grade)-88-(Conn.)-(Features)	16250	27609	8" FLG	68	39	936	E (Grade)-PV	26
HF(Grade)-92-(Conn.)-(Features)	21250	36104	10" FLG	71	46	1471	E (Grade)-PV	34

1 Drain plugs standard. Externally mounted automatic drains are available.
2 Time-based Filter Monitor recommended.

Technical Specifications

Drain Option	Maximum Operating Pressure	*Maximum Operating Temperature	Minimum Operating Temperature
Filter Housings HF-12 to HF-52			
Drain Plug	300 psig (20.7 barg)	150°F (66°C)	35°F (2°C)
Internal Automatic Drain	250 psig (17.2 barg)	150°F (66°C)	35°F (2°C)
Differential Pressure Slide Indicator			
Differential Pressure Gauge			
ASME Pressure Vessels HF-54 to HF-92			
Drain Plug	225 psig (15.5 barg)	150°F (66°C)	35°F (2°C)
Internal Automatic Drain	225 psig (15.5 barg)	150°F (66°C)	35°F (2°C)
Differential Pressure Slide Indicator			
Differential Pressure Gauge			

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Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region.

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