



## BA Series Dual-Stage Compressed Air Filters



ENGINEERING YOUR SUCCESS.

# Breathing Air Purifiers

## Dual Stage Compressed Air Filters - BA Series

**BA Series filters** are designed to be used as point-of-use breathing air filters. This combination unit contains both a fine grade coalescing filter element and an activated carbon vapor removal element.

These filters may also be used in applications requiring compressed air to be free of odor or taste bearing hydrocarbons. Food/beverage applications would be typical where compressed air comes in contact with the product. The BA-Series can also be used as a prefilter for critical needs such as zero air generators, membrane filters, and many others!

Replacement elements are supplied in convenient repair kits which include one coalescing element, two activated carbon adsorber elements, and replacement seals. Two adsorber elements are supplied because the stage one coalescer will routinely outlive the extremely sensitive second stage adsorber element.

For severe applications with excessive solid and liquid contaminants, the BA Series should be preceded by Finite H-Series pre-coalescer or interceptor filters.

Finite also supplies pressure regulators which can be used downstream of the filter to lower system operating pressures to desired levels for breathing air applications.

### Typical Applications

- Industrial Breathing Air
- Aircraft Cabin Air
- Zero Air Generator Prefilter
- Instrument Air
- Food Processing/Packaging
- Membrane Prefiltration
- Instrument Air Dryer Prefilter

### Features

- Connection sizes: 1/4" - 1" NPT
- Flows: Up to 75 SCFM
- Maximum Pressure: 500 PSIG
- Maximum Temperature: 175° F
- Drain Port: 1/8" NPT with standard manual drain (float drain available)

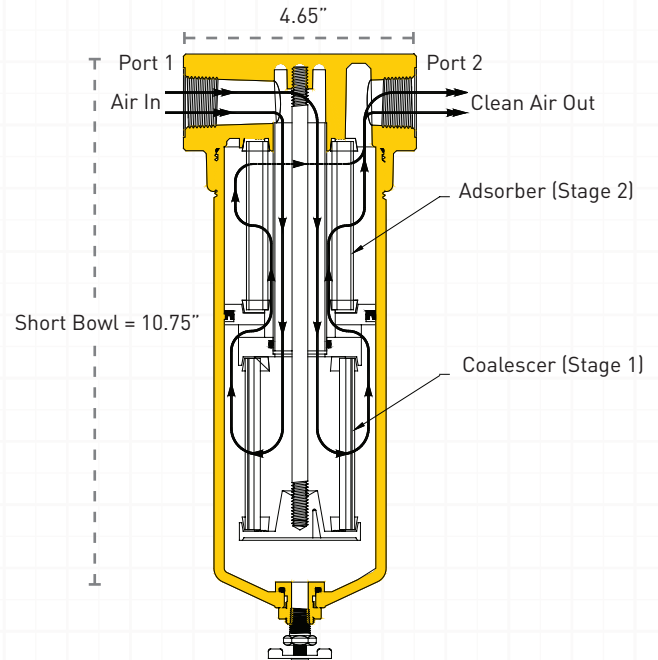
Finite's BA-Series Purifiers are available in 1/4" - 1" NPT connection sizes.



## How it Works

Compressed air enters port #1 of the housing and is directed down a hollow chamber into the first-stage coalescing element (bottom). Oil, water, and solid contaminant are removed with a 99.97% or higher efficiency as the air flows from the inside of the element to the outside. The coalesced liquid drains off the element into the bowl where it is removed either manually, or by an automatic float drain. The oil-free air then is redirected upwards to the inside of the adsorber element (top) by means of a non-bypassing separation device. The second stage's activated carbon element collects hydrocarbon vapors as the air flows from the inside to the outside of the element. The purified air then exits through port #2 of the housing.

Note: This product does not remove toxic gases from the air stream. A carbon monoxide monitor is recommended.



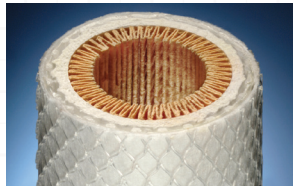
## Choice of Media Types

All BA filters have an activated carbon element (Stage 2). Depending on the application, you may either choose to use a micro-glass coalescer (C) or a micro-glass coalescer with a built-in pleated prefilter (Q) (Stage 1.)

### Stage 1

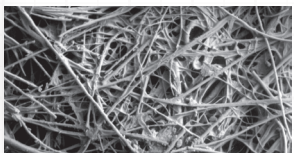


**C: Micro-glass coalescer**

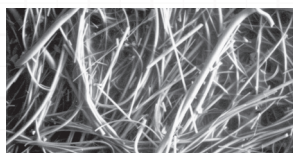


**Q: Micro-glass coalescer with built-in pleated prefilter**

Grade 4 500 x



Grade 6 500 x



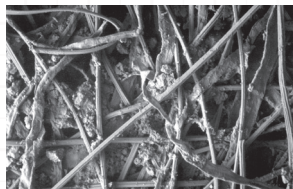
Stage 1 coalescers come in grade 6 (standard) or grade 4. Choose grade based on coalescing efficiencies in the chart below.

### Stage 2



**A: Activated Carbon**

Grade A 125 x



Stage 2 adsorber polishes air stream of final trace amounts of hydrocarbon vapors with an efficiency of 99%+.

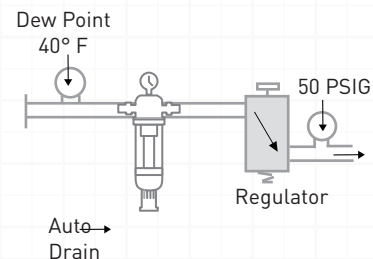
## Coalescing Media Specifications

Grade Designation	Coalescing Efficiency .3 to .6 Micron Aerosols	Maximum Oil Carryover <sup>1</sup> PPM w/w	Micron Rating
4	99.995%	.003	.01
6	99.97%	.008	.01

<sup>1</sup>Tested per ADF-400 at 40 ppm inlet.

Expected life of the filter elements is entirely dependent on the quality of the incoming compressed air, but can be several thousand hours. However, the elements should be changed whenever odors and/or taste become present regardless of hours in operation.

## Application



Use any compressor with aftercooler and refrigerated dryer. Air intended for use as industrial breathing air and in decompression chambers. **CAUTION:** Always use high temperature synthetic lubricants and monitor (alarm) for carbon monoxide concentrations exceeding established maximum recommended levels. This system will not eliminate toxic gases!

OTHER SPECS MET: O.S.H.A. 29CFR 1910.134



## Flow Ratings

Part Number	BAN1L		BAN15L		BAN2L		BAN3S		BAN4S		BAN3L		BAN4L	
Grade	4	6	4	6	4	6	4	6	4	6	4	6	4	6
Max. Rated Flow (SCFM) at 100 PSIG	10	14	12	16	14	18	25	30	35	45	40	60	50	75
Δp (dry)	2.0		2.0		2.0		1.5		2.0		1.5		2.0	
Δp (wet)	4.0		4.0		4.0		3.5		4.0		3.5		4.0	

Note: The differential pressure (Δp) includes the effects of the housing and both elements.

## How to Order

### Complete Dual-Stage Assemblies

BA	N	3	L	6	C	U	G
Series Name	Port Type	Port Size	Bowl <sup>1</sup>	Element Grade <sup>2</sup>	Element Type	End Seal	Accessory Designator for preinstalled accessories
	N - NPT	1 - 1/4" 15 - 3/8" 2 - 1/2" 3 - 3/4" 4 - 1"	L - Long S - Standard (S available on 3/4" and 1" port size only)	4 6	C Q	U = Urethane (Standard on all elements)	A - Auto Drain D - DPI Indicator (1/4"-1/2" only) G - DPG Gauge N - No Accessories W - A + D (1/4"-1/2" only) Y - A + G

1. Bowl length is determined by the flow rate required. See Flow Ratings Chart above.
2. Designate first stage; grade and media type, second stage; grade and media type will always be "A" media, and is not designated in the part number

### BA-Series Replacement Elements

K	BA	3	L	6	C	U
Repair Kit	Series Name	Port Size	Bowl <sup>1</sup>	Element Grade	Element Type	End Seal
		1 - 1/4" 15 - 3/8" 2 - 1/2" 3 - 3/4" 4 - 1"	S - Standard L - Long (S available on 3/4" and 1" port size only)	4 6	C Q	U = Urethane (Standard on all elements)

Note: Each repair kit contains (1) coalescing element, (2) activated carbon adsorber elements and replacement seals.

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