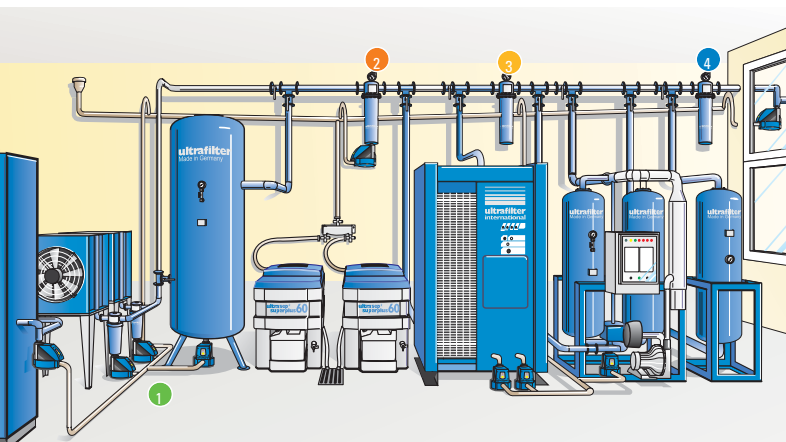


AG Aluminum

SH Steel

Industrial Filter Housings





- 1 Ultradri® water separators at compressor aftercoolers
- 2 AG Superplus coalescing prefilter before compressed air dryer
- 3 AG Superplus particulate afterfilter
- 4 AG Superplus high-efficiency particulate line of point-of-use filter

The need to effectively and efficiently dry and filter compressed air cannot be overemphasized. *Ineffective* purification can lead to system and/or equipment damage and product spoilage. *Inefficient* purification can lead to unnecessary high operating and maintenance costs.

With over 30 years of compressed air purification experience behind us, Donaldson has developed an extensive line of air filtration products with a range of efficiencies and optional features to cost-effectively meet any of your needs. Our prefilters and afterfilters can be custom-configured to suit the requirements of your specific application.



Compressed Air Contaminants

- Dust particles (from ambient air and/or desiccant)
- Liquid water and water vapor
- Liquid oil and oil vapor
- Hydrocarbon vapor
- Rust particles
- Pipe scale
- Acidic condensates

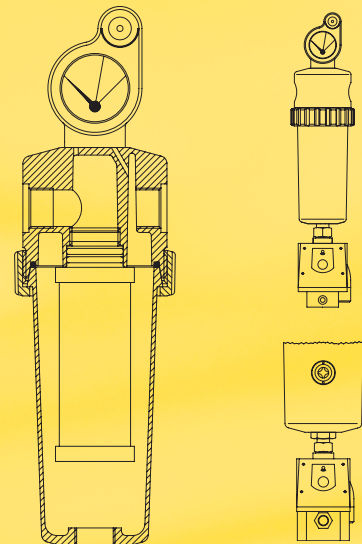
The price of ineffective and inefficient filtration

Cause	Effect	Solution
Liquid water entering refrigerated air dryer.	Inefficient dryer operation leading to higher cost and/or inability to meet dew point. Damage to dryer components such as heat exchanger.	Install water separator after air compressor and coalescing prefilter before air dryer.
Liquid water entering regenerative desiccant air dryer.	Inability to meet dew point. Damage to dryer components such as valves and/or desiccant.	Install water separator after air compressor and coalescing prefilter before air dryer.
Hydrocarbon and/or oil vapors entering process airstream.	Product spoilage. Odor and/or taste in process air.	Install high efficiency AK carbon filter after air dryer.
High pressure drop across filters.	Increased energy consumption to maintain pressure. Low line pressure leading to inefficient operation of downstream equipment.	Install filters with housings and elements engineered for low pressure drop. Replace elements at optimum point to keep both maintenance and energy costs at a minimum.

AG Superplus Industrial Filter Housings

Our top-of-the-line AG Superplus filter housings are equipped with all of the features required to make this the most efficient and cost-effective filter for your compressed air system. Its three-part aluminum housing design allows for easy disassembly and element changeout. Low pressure drop is achieved through optimal flow-path design. The tapered bowl and non-turbulent lower filter zone assure that no condensate gets re-entrained in the airstream. Our programmable Economizer differential pressure gauge notifies maintenance personnel of the optimal point at which to change the filter element. For coalescing prefilters, the Ultramat zero air-loss drain valve assures that no compressed air is lost when liquid condensate is drained.

- 1 Economizer differential pressure gauge
- 2 Three-piece aluminum housing
- 3 Low pressure drop flow channel
- 4 O-ring housing seal
- 5 Double o-ring element seal
- 6 Built-in acoustic alarm
- 7 Tapered bowl
- 8 Selection of pre- and afterfilter elements
- 9 Ultramat zero air-loss condensate drain valve



Typ 01

Typ 000

UltradePTH® FF, MF & SMF Coalescing/Particulate Filter Elements

The unique design of Ultrafilter's UltradePTH FF, MF and SMF filter elements creates a two-stage filtration process within one element. The retention rate of 0.01 µm particles in our SMF element is a remarkable 99.99999%. This is made possible by the use of our patented Ultrair® binder-free borosilicate glass fiber media. This media also allows for very low pressure drop, which means that you get the highest efficiency at the lowest energy cost. Ultrair HTNX elements are available for applications up to 180° F.

Ultrac® AK Activated Carbon Absorption Filter Element

The Ultrac AK absorption filter element utilizes a two-stage filtration process for absolute retention of oil vapor and other hydrocarbons. This patented two-stage design allows for a large surface area resulting in low pressure drop, long element life and no carry-over of carbon particles in the process air.

UltradePTH and Ultrac filter elements are built with inner and outer stainless steel support cores and aluminum end caps for maximum strength and long life. A double o-ring seal is used to assure absolutely no blow-by of unfiltered air.



Ultraporex® PE Particulate Elements

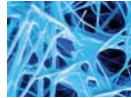
Ultraporex PE particulate filter elements are made with aluminum end-caps, double o-ring seals and sintered polyethylene media for effective filtration down to 25 µm. PE elements offer additional advantage of being fully regenerable.



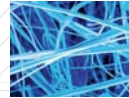
Ultraporex® SB Particulate Elements

For high temperature applications up to 248° F, Ultraporex SB filter elements are made with sintered bronze media, aluminum end-caps and double o-ring seals. SB elements are available with three retention ratings—5, 25 or 50 µm.

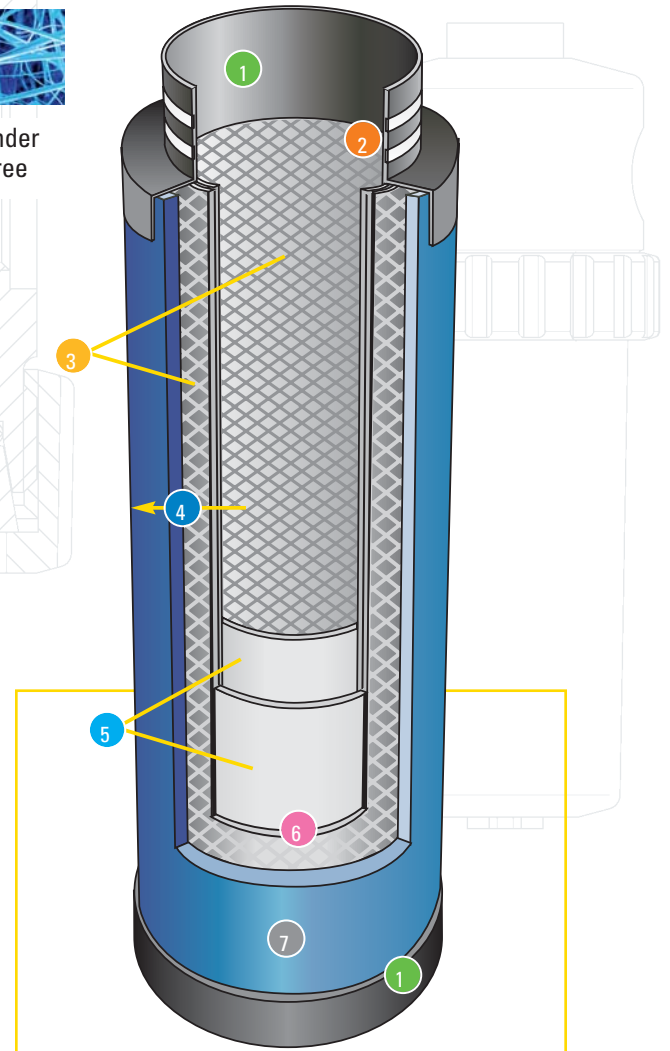
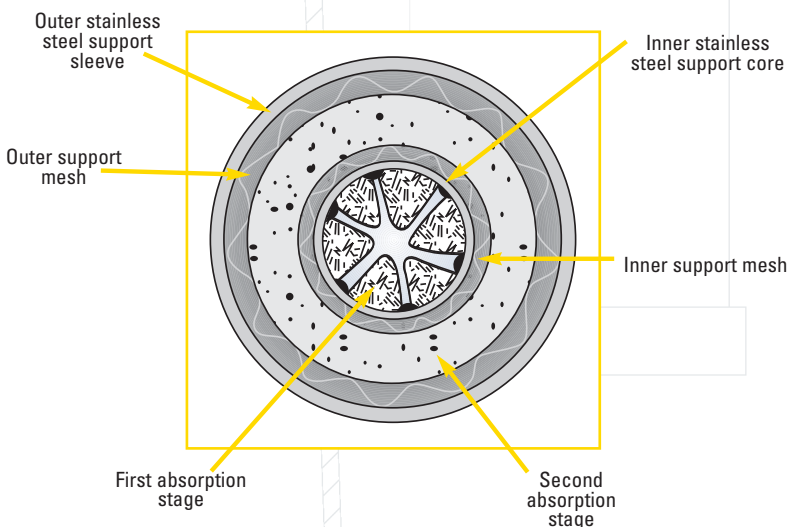
BOROSILICATE



With Binder



Binder Free



- 1 Aluminum end caps
- 2 Double o-ring seal
- 3 Stainless steel inner and outer support cores
- 4 Low pressure drop
- 5 Two-stage filtration
- 6 Ultrair® binder-free borosilicate glass fiber media
- 7 Outer foam sleeve

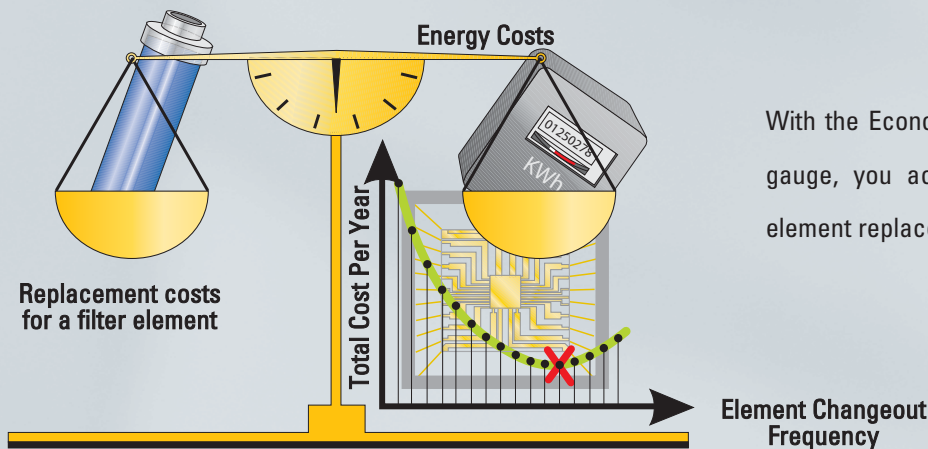
Typ 0108 - 0288





Economizer Programmable Differential Pressure Gauge

AG Superplus filter housings are equipped with the Economizer programmable differential pressure gauge. Using stored data of important parameters such as power cost and filter element price, while monitoring pressure drop, Economizer control logic calculates the optimum point at which to change the filter element, keeping operating costs at their lowest possible point. An indicator light notifies maintenance personnel when the element should be changed. The Economizer can also be connected to a central monitoring system. Cost reductions of up to 70% have been achieved with use of the Economizer differential pressure gauge.



With the Economizer programmable differential pressure gauge, you achieve a perfect balance between filter element replacement costs and energy costs.



Ultramat UFM-T Zero Air-Loss Condensate Drain Valve

AG Superplus coalescing prefilters are equipped with the Ultramat UFM-T zero air-loss condensate drain valve. Ultramat drain valves utilize an electronic liquid level sensor that requires no moving parts. Emulsification of the condensate is kept to a minimum as it passes through the valve, aiding in oil/water separation downstream.

AG Aluminum SH Steel Industrial Filter Housings

Product Summary & Technical Data

AG Standard and Superplus filter housings are designed for the purification of compressed air and gases in industrial applications. Three-piece aluminum housings with NPT connections are available in a nominal flow range of 12 to 1,728 scfm. Two-piece SH steel housings with flanged connections are available in a nominal flow range of 650 to 22,000 scfm. Superplus versions of each are equipped with energy saving Economizer differential pressure gauges and Ultramat zero air-loss condensate drain valves.



AG Housing with Econometer shown.

Specifications

	AG Aluminum		SH Steel	
	Standard	Superplus	Standard	Superplus
3-Piece Housing	X	X		
2-Piece Housing			X	X
Econometer Δp Gauge	X		X	
Economizer Δp Gauge		X		X
Float Drain Valve	X		X	
Ultramat UFM-T Zero Air-Loss Drain		X		X
NPT Connections	X	X		
ANSI Flanged Connections			X	X
ANSI Polyester Powder Finish	X	X	X	X
Maximum Op. Pressure	250 psig 150 psig	250 psig 150 psig	150 psig	150 psig
Maximum Op. Temp.	150° F 250° F	150° F 250° F	250° F	250° F

Element Data

Type	Initial Δp (psid)	Particle Size	Efficiency	Residual Oil Content	Application
Ultrapoly® PE	0.4	25 μm	100%	N/A	Particulate
Ultraporex® SB	0.4	5 μm	100%	N/A	Particulate
Ultrair® FF Fine Filter	0.7	0.01 μm	99.999%	0.1 ppm ¹	Coalescing/Particulate
Ultrair® MF Micro Filter	1.2	0.01 μm	99.99998%	0.03 ppm ¹	Coalescing/Particulate
Ultrair® SMF Sub Micro Filter	1.7	0.01 μm	99.99999%	<0.01 ppm ¹	Coalescing/Particulate
Ultrac® AK	1.2	N/A	N/A	<0.003 ppm ²	Vapor

¹At inlet concentration of 3 ppm.

²At inlet concentration of 0.05 ppm.

Specifications

Filter elements		PE		SB		FF, MF, SMF		AK		
		Ultrapoly®		Ultraporex®		Ultrair®		Ultrac®		
Filter housing	Data	Flow rate at 100 psig (cfm)	Connection*	Dimensions			Removal clearance	Weight (lbs.)	Filter element	
	Type			Standard	Height Superplus	Width			Size	No.
AG Aluminum Housings	0002	12	1/4"	11	17	3	4	4	02/05	1
	0004	24	3/8"	11	17	3	4	4	03/05	1
	0006	36	3/8"	13	19	3	5	5	03/10	1
	0009	54	1/2"	13	19	3	5	5	04/10	1
	0012	72	1/2"	14	19	4	6	6	04/20	1
	0018	108	3/4"	14	19	4	6	6	05/20	1
	0027	162	1"	17	22	4	8	7	05/25	1
	0036	216	1 1/4"	17	22	4	8	7	07/25	1
	0048	288	1 1/2"	23	29	6	11	16	07/30	1
	0072	432	2"	23	29	6	11	16	10/30	1
	0108	648	2"	31	34	6	18	23	15/30	1
	0144	864	2 1/2"	37	40	7	23	29	20/30	1
	0192	1152	3"	47	50	7	33	31	30/30	1
	0288	1728	3"	47	51	8	33	45	30/50	1
SH ASME Steel Housings Single Element	0065	650	2"	42	42	10	3	83	15/30	1
	0085	850	2 1/2"	47	48	10	6	92	20/30	1
	0115	1150	3"	56	57	13	15	129	30/30	1
	0180	1800	4"	51	53	18	4	207	20/30	3
	0255	2550	4"	62	66	18	14	240	30/30	3
	0355	3550	6"	55	58	22	5	321	20/30	4
	0455	4550	6"	67	70	22	13	337	30/30	4
	0685	6850	6"	68	71	24	12	534	30/30	6
	0920	9200	8"	73	77	29	11	647	30/30	8
	1200	12,000	8"	76	80	29	9	834	30/30	13
1550	15,550	10"	77	81	32	9	1016	30/30	15	
2200	22,000	10"	82	86	40	18	2258	30/30	27	

*AG Housings — FNPT; SH Housings — ANSI Flange

Trust Donaldson Compressed Air & Gas to deliver a complete range of compressed air purification solutions that improve air quality throughout your plant - from the compressor room to all points of use. With over 30 years of expertise in compressed air filtration and separation, Donaldson manufactures a complete line of drying and filtration equipment in an innovative, cutting-edge design with energy efficient operation and reliable performance to increase your productivity and lower your operating cost for the air volume that fits your needs.

Donaldson Compressed Air & Gas offers a wide variety of solutions to reduce your energy costs, improve your productivity, guarantee production quality and help preserve the environment.

PRODUCTS

- Activated carbon filters
- Adsorption dryers
- Breathing-air purifiers
- Cartridge filters
- Chillers
- Condensate drains
- Coolers
- Cyclone separators
- Demisters
- Disposable filters
- Elements
- Emulsion separators
- Filters
- Fine filters
- Filter housing
- High-performance filters
- High-pressure filters
- Medical vacuum filters
- Membrane dryers
- Oil/vapor absorbers
- Oil/water separation systems
- Pre-filters
- Pre-separators
- Process filter elements
- Process filter housing
- Pure gas filters
- Refrigeration compressed air dryers
- Silicon-free filters
- Steam filters
- Sterile filters
- Submicro filters
- Systems engineering
- System solution
- Vacuum filters
- Vent filters



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