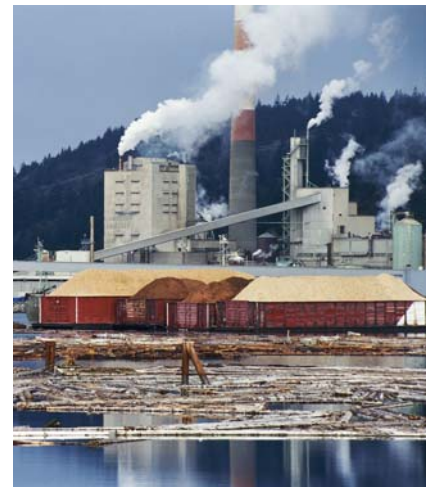




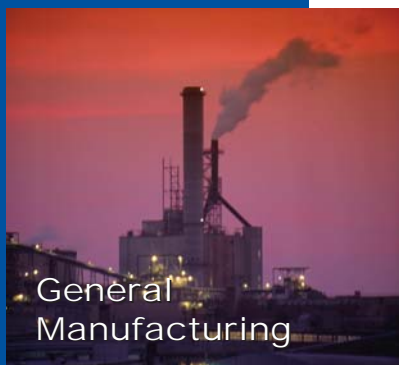
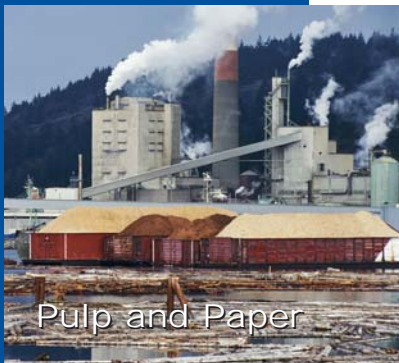
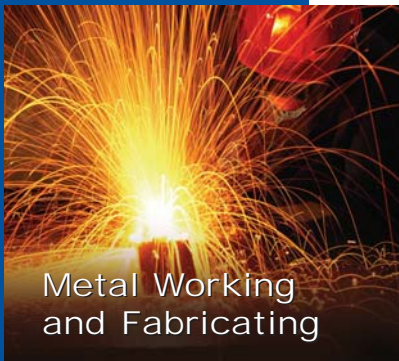
# **Balston® Stainless Steel Compressed Air Filters for Harsh Environments**



*Bulletin SSCompAir*



# Stainless Steel Compressed Air Filters for Harsh Environments



*...Ideal for pulp mills, steel and metal fabrication plants, refineries, and chemical plants*



## Balston Harsh Environment Filter Assemblies

**All 304 stainless steel construction, ideal for harsh environments: food processing plants, chemical plants, refineries, pulp mills.**

**Remove 99.99% of 0.01 micron particles of oil, water, and dirt from compressed air and other gases.**

**Continuously trap and drain liquids**

**Remove trace oil vapor with adsorbent cartridges**

Balston Harsh Environment Air Filters protect your equipment and delicate instruments from the dirt, water, and oil usually found in compressed air and other gases. These filters will remove contaminants at a very high efficiency - up to 99.99% for 0.01 micron particles and droplets. Liquid releases from the filter cartridge to an automatic drain as rapidly as it enters the filter. This allows the filter to continue removing liquids for an unlimited time without loss of efficiency or flow capacity. Select 1/4" to 1" line filters are constructed of 304 stainless steel and are designed to hold up to the harshest environments.

**Filter Cartridge Description**

<b>General purpose applications such as plant compressed air</b>	Single stage filtration. Use a Grade DXE filter cartridge
<b>Instrument air and other critical air requirements</b>	Two stage filtration is necessary. Use a Grade DXE followed by a Grade BXE filter cartridge. As a general rule, a Grade BXE filter cartridge should not be used alone.
<b>Removal of trace compressor oil vapor</b>	For rare instances where even a trace amount of oil vapor can cause a problem, three stage filtration is necessary. Use a Grade DXE followed by a Grade BXE, and a type CI cartridge.
<b>Sterile Air</b>	3 stages of filtration is necessary. Grade DXE followed by a Grade BXE filter assembly installed just upstream from the Grade SA (Sterile Air Filter).

**Physical Properties, Microfibre Filter Cartridges**

<b>Temperature Range</b>	30°F to 275°F (-1°C - 135°C)
<b>Maximum Pressure Differential Across Filter, Inside-to-Outside Flow:</b>	100 psi
<b>Materials of Construction</b>	Borosilicate glass microfibers with fluorocarbon resin binder. Resistant to water, all hydrocarbon and synthetic lubricants.

**Retention Efficiency**

Grade	Efficiency for 0.01 Micron Particles and Droplets
DXE	93%
BXE	99.99%
000	Trace Oil Vapor
SA	99.9999+%

**Balston Filter Cartridges**

Balston provides two grades of coalescing filter cartridges, Grade DXE and Grade BXE. Singly or in tandem, these filters satisfy all requirements for removing liquid and solid contaminants from compressed air. Balston also has an activated carbon adsorbent CI-type cartridge for the removal of trace oil vapors from a compressed air line. The activated carbon cartridge is Grade 000.

**How to Select the Filter Cartridge and Housing**

- 1 Decide which grade(s) of filter cartridges fits the application (see selection boxes at left).
- 2 Select the filter housing with a port size equal to the line size where the filter is to be located.
- 3 For a new installation in which the line size has yet to be selected, determine the gas flow rate and pressure at the point where the filter will be located, and then refer to the flow chart on the reverse side of this data sheet. NOTE: The filter port size must be equal to or larger than the line size (when specified).

**How to Order the Filter Assembly**

- 1 Build your own custom filter assembly using the guideline matrix on Page 12 and specify your model number. Example: 1/2" filter with an Auto Drain with Grade DXE Filter = 6004N-01A-DX.
- 2 Each assembly is shipped with the filter cartridge installed. To order additional filter cartridges, indicate the model number of the cartridges, and the grade. Examples 100-12-DXE, 100-12-BXE. The grade used for Type CI cartridges is 000 (CI-100-12-000).

Note: Assemblies with CI Cartridges are shipped with the adsorbent cartridge wrapped separately. This shipping method prolongs the life of the cartridge.



# Balston® Stainless Steel Compressed Air Filters for Harsh Environments

## Flow Rates

Filter Housing Model	Port Size	Filter Cartridge Grade	Flow rates (SCFM), at 2 psi drop at indicated line pressure. Refer to Principal Specification Charts in each product data sheet for maximum pressure rating of each housing PSIG								
			2	20	40	80	100	125	150	200	250
6002N	1/4"	DXE	9	19	39	51	63	76	90	117	145
		BXE	3	8	11	21	25	31	36	47	58
		CI	2	5	7	12	15	18	22	28	35
		SA	---	8	11	21	25	31	36	---	---
6004N	1/2"	DXE	19	41	65	113	137	166	196	257	316
		BXE	9	19	30	51	63	76	90	117	145
		CI	6	12	19	32	39	48	56	73	90
		SA	---	19	30	51	63	76	90	---	---
6006N	3/4"	DXE	37	78	123	214	259	315	371	484	596
		BXE	10	21	34	56	70	85	101	131	162
		CI	8	16	26	44	53	65	76	99	122
		SA	---	21	34	56	70	85	101	---	---
6008N	1"	DXE	55	115	181	314	380	463	546	711	877
		BXE	11	23	37	64	77	94	111	144	178
		CI	10	20	32	56	67	82	96	125	154
		SA	---	20	41	68	85	104	123	---	---

## Sterile Air Filters

Balston grade SA filter cartridges, rated at 99.9999+% efficiency for 0.01 micron particles, is at least 30 times better than the accepted standard for sterile air filters developed by independent research organizations in the U.S. and U.K. (request bulletin TI-105A for a detailed discussion on Balston filter efficiency rating procedure, and Bulletin TI-935 for an independent test report on balstonSterile Air Filters). Balston Sterile Air Filters are in full compliance with the requirements of the FDA.

## Steam Sterilization Procedure

In installations where the sterile air filter requires steam sterilization, we recommend the following procedures:

The steam sterilization pressure should not exceed 60 psig. Preferably, it should be held to 40 psig or less. A typical sterilization cycle is 30 psig steam for 30 minutes. Steaming time can be increased as desired without harm to the filter cartridges. The steam flow should not exceed the normal air flow for the unit. To ensure no buildup of condensate in the housing, condensate should be drained from the filter by a condensate drain valve during the steaming process. The cleanliness of the steam is an important factor influencing the life of the Sterile Air Filter cartridges. Parker strongly recommends using Model 23 Steam Filters to ensure optimum operating life. When autoclaving, the Grade SA filter cartridges will tolerate temperatures to 300°F (149°C) in dry gas. Viton or other heat resistant seals should be used in the housing.



**Model 6002**

The 6002 series models are 1/4" line size filters designed for lower flow systems and installations with space limitations. It is offered with two drain options, a manual drain or an auto float drain for maintenance free operation.

**Model 6004**

The 6004 series models are 1/2" line size filters designed for moderate flow rate systems. This series has increased liquid holding capacity which safeguards sensitive end use points from system upsets and morning start ups.

**Model 6006 and 6008**

The 6006 and 6008 series models are 3/4" and 1" line size filters respectively. These are designed for high flow rate systems servicing multiple end use points. These are also offered with a high capacity auto float drain option.



Model 6002

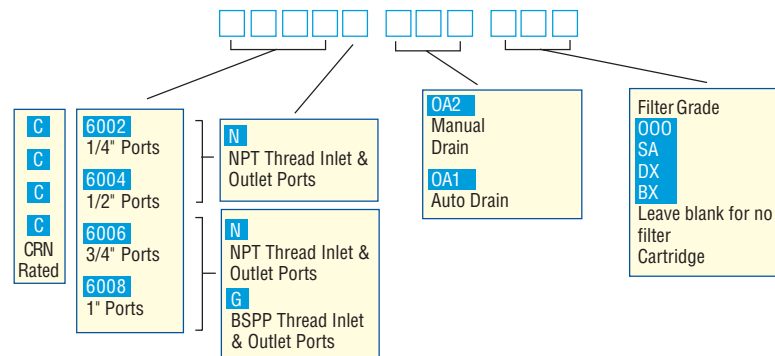
Model 6004



Models 6006 and 6008

**How to Order the Filter Assembly\***

Build your own custom filter assembly using the guideline matrix (right) and specify your model number. Example: 1/2" filter an Auto Drain with Grade DXE Filter = 6004N-0A1-DX.



\*Consult Factory. Not all configurations are available.

## Principal Specifications and Ordering Information

## Balston® Stainless Steel Compressed Air Filters for Harsh Environments

### Principal Specifications

Model	6002	6004	6006	6008
Port Size	1/4" NPT	1/2" NPT	3/4" NPT	1" NPT
Materials of Construction				
Head	304 Stainless Steel	→		
Bowl	304 Stainless Steel	→		
Internals	Nylon	Nylon	Stainless Steel	Stainless Steel
Seals	Buna-N Food Grade	→		
Maximum Temperature (1)	120°F (49°C)	→		
Maximum Pressure (2)	175 psig	→		
Minimum Pressure (3)	15 psig	→		
Shipping Weight	3.5 lbs.	4.0 lbs.	11 lbs.	12 lbs.
Dimensions	3"W X 7"L (7mm X 18mm)	3"W X 10"L (7mm X 25mm)	4"W X 10"L (10mm X 25mm)	4"W X 12"L (10mm X 30mm)

#### Notes:

1 Max. temperature with auto drain. Max. temperature with manual drain is 275°F.

2 Max. pressure with auto drain. Max. pressure with manual drain is 250 psi.

3 Required for proper operation of auto drain.

### Ordering Information For assistance, call toll-free at 1-800-343-4048 8AM to 5PM Eastern Time

#### Assembly Ordering Information (4)

Model P/N	Filter Tube	Drain (Manual)	Drain (Auto. Float)	Mounting Bracket
6002N-0A2-(?X)	100-12-(?XE)	A03-0178	N/A	C01-0094
6002N-0A1-(?X)	100-12-(?XE)	N/A	A03-0179	C01-0094
6002N-0A2-SA	100-12-SA	A03-0178	N/A	C01-0094
6002N-0A2-000	100-12-000	A03-0178	N/A	C01-0094
6004N-0A2-(?X)	100-18-(?XE)	A03-0178	N/A	C01-0094
6004N-0A1-(?X)	100-18-(?XE)	N/A	A03-0179	C01-0094
6004N-0A2-SA	100-18-SA	A03-0178	N/A	C01-0094
6004N-0A2-000	100-18-000	A03-0178	N/A	C01-0094
6006N-0A2-(?X)	200-176-(?XE)	A03-0178	N/A	C01-0094
6006N-0A1-(?X)	200-176-(?XE)	N/A	A03-0179	C01-0094
6006N-0A2-SA	200-176-SA	A03-0178	N/A	C01-0094
6006N-0A2-000	200-176-000	A03-0178	N/A	C01-0094
6008N-0A2-(?X)	200-185-(?XE)	A03-0178	N/A	C01-0094
6008N-0A1-(?X)	200-185-(?XE)	N/A	A03-0179	C01-0094
6008N-0A2-SA	200-185-SA	A03-0178	N/A	C01-0094
6008N-0A2-000	200-185-000	A03-0178	N/A	C01-0094

(4) Use a "C" prefix to order models with CRN rating

#### Replacement Filter Cartridge Ordering Information

Model P/N	6002	6004	6006	6008
Replacement Filter Cartridges				
Number required	1	1	1	1
Box of 5	5/100-12-(?X)E	5/100-18-(?X)E	5/200-176-(?X)E	5/200-185-(?X)E
Box of 10	100-12-(?X)E	100-18-(?X)E	200-176-(?X)E	200-185-(?X)E
Box of 10	100-12-SA	100-18-SA	200-176-SA	200-185-SA
Cl Cartridges (box of 1)	Cl100-12-000	Cl100-18-000	Cl200-176-000	Cl200-185-000



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