

Balston® 3 Stage Sterile Air Filtration Systems

for the Food Industry



Balston Stainless Steel Compressed Air Filter Assemblies

Safeguard your operations from rust, pipescale, water, oil, and organisms. The prefilters 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.

The final stage of filtration removes all viable organisms with an efficiency rating of 99.9999+% at 0.01 microns. Select 1/4" to 1" line filters are constructed of 304 stainless steel and are designed to hold up to the harshest environments.



Product Features:

- All 304 stainless steel construction, ideal standing up to aggressive washdown chemicals
- Remove 99.99% of 0.01 micron particles of oil, water, and dirt from compressed air and other gases
- Low pressure drop
- Remove all viable organisms - at 99.9999+% @0.01 microns
- USDA accepted for use in federally inspected meat and poultry plants
- Continuously trap and drain liquids

The Application

Compressed air is contaminated with compressor oil, water condensate, pipe scale and rust all of which provide the ideal environment and means to grow bacteria. This natural occurring contaminate can also effect the taste, appearance and shelf life of food product. The food processing and packaging industry utilizes compressed air extensively throughout their facilities. Compressed air is used to push and propel product, cut and mix product in addition to packaging product.

Cahoon Farms in Walcott, New York uses Parker Balston three stage filtration systems for all their compressed air and sterile air applications. Cahoon Farms packages fresh sliced apples and cherries, dried apples, and other assorted dried fruits. Compressed air is used extensively throughout the facility servicing pneumatic equipment, slicing and mixing food product, and packaging. The sterile compressed air applications are filtered to an efficiency of 99.9999+% at 0.01 microns,

which is 30 times better than the accepted industry standard. Cahoon Farms safeguards their food product from any possible contamination that could lead to bacteria and mold growth. The investment in these filtration systems ensures Cahoon Farms' products will maintain superior taste, quality and freshness with an extended shelf life.

Balston Sterile Air Filters

6000 Series



Sterile Air Filter Rating Information

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-105 for a detailed discussion on Balston filter efficiency rating procedure, and Bulletin TI-935 for an independent test report on Balston Sterile Air Filters). Balston Sterile Air Filters are in full compliance with the requirements of the FDA.

Explanation for 3 Stage Sterile Air System

1st Stage: Grade DX	Removal of large quantities of oil, water, and dirt from compressed air. Prefilter to Grade BX
2nd Stage: Grade BX	Complete removal of trace quantities of oil, water, and dirt down to 0.01 microns.
3rd Stage: Grade SA	Removal of bacteria providing sterile air.

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 23/75SR steam filters to ensure optimum operating life. 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.

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								
			2 PSIG	20	40	80	100	125	150	200	250
3B-6002N-0A1	1/4"	DX	9	19	39	51	63	76	90	117	145
		BX	3	8	11	21	25	31	36	47	58
3B-6904N-0A1	1/2"	SA	---	8	11	21	25	31	36	---	---
		DX	19	41	65	113	137	166	196	257	316
		BX	9	19	30	51	63	76	90	117	145
3B-6004N-0A1	1/2"	SA	---	19	30	51	63	76	90	---	---
		DX	37	78	123	214	259	315	371	484	596
		BX	10	21	34	56	70	85	101	131	162
3B-6006N-0A1	3/4"	SA	---	21	34	56	70	85	101	---	---
		DX	55	115	181	314	380	463	546	711	877
		BX	11	23	37	64	77	94	111	144	178
3B-6008N-0A1	1"	SA	---	23	37	64	77	94	111	---	---

3 Stage Sterile Air Filter Systems



Principal Specifications					
Model	3B-6002	3B-6904	3B-6004	3B-6006	3B-6008
Port Size	1/4" NPT	1/2" NPT	1/2" NPT	3/4" NPT	1" NPT
Materials of Construction					
Head	304 Stainless Steel	→	→	→	→
Bowl	304 Stainless Steel	→	→	→	→
Internals	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	10.5 lbs.	10.5 lbs.	11.8 lbs.	33.7 lbs.	34 lbs.
Dimensions	9"W X 3"D X 8"L	9"W X 3"D X 8"L	9"W X 3"D X 8"L	13"W X 4"D X 11"L	13"W X 4"D X 12"L

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					
Model P/N	Mounting Bracket (stainless steel)	Replacement Cartridge		Mounting Bracket (stainless steel) (4)	
		Box of 5	Box of 10		
3B-6002N-0A1	1/4" 3-Stage (DX, BX, SA) Stainless Filter Assembly	5/100-12-DX 5/100-12-BX 5/100-12-SA	100-12-DX 100-12-BX 100-12-SA	C01-0094	
3B-6904N-0A1	1/2" 3-Stage (DX, BX, SA) Stainless Filter Assembly	5/100-12-DX 5/100-12-BX 5/100-12-SA	100-12-DX 100-12-BX 100-12-SA	C01-0094	
3B-6004N-0A1	1/2" 3-Stage (DX, BX, SA) Stainless Filter Assembly	5/100-18-DX 5/100-18-BX 5/100-18-SA	100-18-DX 100-18-BX 100-18-SA	C01-0094	
3B-6006N-0A1	3/4" 3-Stage (DX, BX, SA) Stainless Filter Assembly	5/200-176-DX 5/200-176-BX 5/200-176-SA	200-176-DX 200-176-BX 200-176-SA	C01-0094	
3B-6008N-0A1	1" 3-Stage (DX, BX, SA) Stainless Filter Assembly	5/200-185-DX 5/200-185-BX 5/200-185-SA	200-185-DX 200-185-BX 200-185-SA	C01-0094	

4 2 each of mounting brackets are required for adequate support.

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