

# Filters for the Food Industry

## Stainless Steel Harsh Environment Filters for Food Processing and Packaging

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

For Sterile Air Requirements:

Remove all viable organisms

USDA/FSIS accepted for use in federally inspected meat and poultry plants

Low pressure drop

Continuously trap and drain liquids

Remove trace oil vapor with adsorbent cartridges



Models 6006 and 6008

### Balston® Stainless Steel Compressed Air Filter Assemblies

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 for 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.

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### Filter Cartridge Description

General purpose applications such as plant compressed air	Single stage filtration. Use a Grade DX filter cartridge
Instrument air and other critical air requirements	Two stage filtration is necessary. Use a Grade DX followed by a Grade BX filter cartridge. As a general rule, a Grade BX filter cartridge should not be used alone.
Removal of trace compressor oil vapor	For rare instances where even a trace amount of oil vapor can cause a problem, three stage filtration is necessary. Use a Grade DX followed by a Grade BX, and a type CI cartridge.

### Physical Properties, Microfibre Filter Cartridges

Temperature Range	-150°F to 300°F (-100°C - 149°C)
Maximum Pressure Differential Across Filter, Inside-to-Outside Flow:	100 psi (7 barg)
Materials of Construction	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
DX	93%
BX	99.99%

### Balston Filter Cartridges

Parker provides two grades of coalescing filter cartridges, Grade DX and Grade BX. Singly or in tandem, these filters satisfy all requirements for removing liquid and solid contaminants from compressed air. Parker 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 170 and specify your model number. Example: 1/2" filter with DPI and Auto Drain with Grade DX 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 050-05-DX, 050-05-BX. 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.

# Filters for the Food Industry

## Stainless Steel Harsh Environment Filters

### 1/4" to 1" Line Size

#### Models 6102, 6002, 6904

The 6002 series models are 1/4" line size filters designed for lower flow systems and installations with space limitations. Models 6102 and 6002 are offered with two drain options: a manual drain or an auto float drain, for maintenance-free operation. Model 6904 offers 1/2" inlet and outlet connections for applications requiring 1/2" pipe with space limitations.

#### 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.

#### Models 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.



Models 6102, 6002, 6904

Model 6004

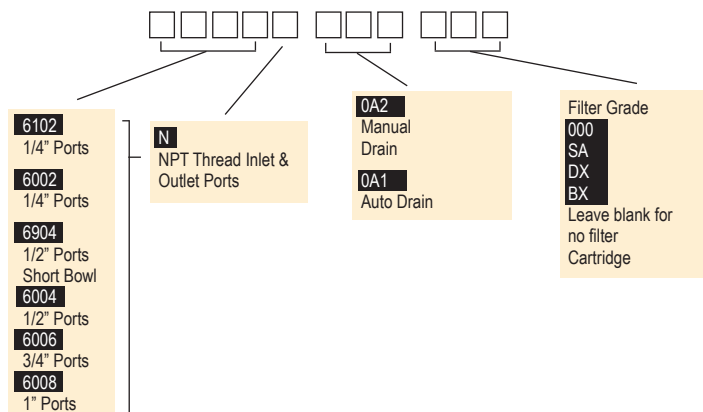


Models 6006 and 6008

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

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

\*Consult Factory. Not all configurations are available.



# Filters for the Food Industry

## Stainless Steel Harsh Environment Filters

### 1/4" to 1" Line Size

#### Flow Rates

Filter Housing Model	Port Size	Filter Cartridge Grade	Flow rates SCFM (Nm <sup>3</sup> /hr), at 2 psi (0.14 bar) (1) drop at indicated line pressure. Refer to Principal Specification Charts in each product data sheet for maximum pressure rating of each housing									
			2 (0.1)	20 (1.4)	40 (2.8)	80 (5.5)	100 (6.9)	125 (8.6)	150 (10)	200 (14)	250 (17)	
6102N	1/4"	DX	13.5 (23)	8 (14)	11 (19)	20 (34)	25 (42)	30 (51)	36 (61)	---	---	
		BX	1 (2)	2 (3)	3.5 (6)	5.7 (10)	6.8 (12)	8 (14)	10 (17)	---	---	
6002N	1/4"	DX	9 (15)	19 (32)	39 (66)	51 (87)	63 (107)	76 (129)	90 (153)	117 (199)	145 (246)	
6904N	1/2"	BX	3 (5)	8 (14)	11 (19)	21 (36)	25 (42)	31 (53)	36 (61)	47 (80)	58 (99)	
		CI	2 (3)	5 (8)	7 (12)	12 (20)	15 (25)	18 (31)	22 (37)	28 (48)	35 (59)	
		SA	---	8 (14)	11 (19)	21 (36)	25 (42)	31 (53)	36 (61)	---	---	
6004N	1/2"	DX	19 (32)	41 (70)	65 (110)	113 (192)	137 (233)	166 (282)	196 (333)	257 (473)	316 (537)	
		BX	9 (15)	19 (32)	30 (51)	51 (87)	63 (107)	76 (129)	90 (153)	117 (199)	145 (246)	
		CI	6 (10)	12 (20)	19 (32)	32 (54)	39 (66)	48 (82)	56 (95)	73 (124)	90 (153)	
		SA	---	19 (32)	30 (51)	51 (87)	63 (107)	76 (129)	90 (153)	---	---	
6006N	3/4"	DX	37 (63)	78 (133)	123 (209)	214 (364)	259 (440)	315 (535)	371 (630)	484 (822)	596 (1013)	
		BX	10 (17)	21 (36)	34 (58)	56 (95)	70 (119)	85 (144)	101 (172)	131 (223)	162 (275)	
		CI	8 (14)	16 (27)	26 (44)	44 (75)	53 (90)	65 (110)	76 (129)	99 (168)	122 (207)	
		SA	---	21 (36)	34 (58)	56 (95)	70 (119)	85 (144)	101 (172)	---	---	
6008N	1"	DX	55 (93)	115 (195)	181 (308)	314 (533)	380 (646)	463 (787)	546 (928)	711 (1208)	877 (1490)	
		BX	11 (19)	23 (39)	37 (63)	64 (109)	77 (131)	94 (160)	111 (189)	144 (245)	178 (302)	
		CI	10 (17)	20 (34)	32 (54)	56 (95)	67 (114)	82 (139)	96 (163)	125 (212)	154 (262)	
		SA	---	23 (39)	37 (63)	64 (109)	77 (131)	94 (160)	111 (189)	---	---	

Notes:

1 The SA filter grade produces a 3 psi at maximum rated flow differential pressure drop.

#### 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 (4 barg). Preferably, it should be held to 40 psig (3 barg) or less. A typical sterilization cycle is 30 psig (2 barg) 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.

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## Stainless Steel Harsh Environment Filters

### Principal Specifications

Model	6102	6002	6904	6004	6006	6008
Port Size	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT	3/4" NPT	1" NPT
Materials of Construction						
Head	316 Stainless Steel	304 Stainless Steel				
Bowl	316 Stainless Steel	304 Stainless Steel				
Internals	Acetal	Stainless Steel				
Seals	Viton	Buna-N Food Grade				
Maximum Temperature	140°F (60°C) (1)	120°F (49°C) (1)				
Maximum Pressure	150 psig (10 barg) (2)	175 psig (12 barg) (2)				
Minimum Pressure	15 psig (1 barg) (3)	15 psig (1 barg) (3)				
Shipping Weight	3.5 lbs. (1.6 kg)	3.5 lbs. (1.6 kg)	3.5 lbs. (1.6 kg)	4.0 lbs. (18 kg)	11 lbs. (5 kg)	12 lbs. (5.5 kg)
Dimensions	1.5"W x 4.2"L (3.8cm x 11.7cm)	3"W X 7"L (7cm X 18cm)	3"W X 7"L (7cm X 18cm)	3"W X 10"L (7cm X 25cm)	4"W X 10"L (10cm X 25cm)	4"W X 12"L (10cm X 30cm)

#### Notes:

1 Max. temperature with auto drain. Max. temperature with manual drain is 275°F (135°C).

2 Max. pressure with auto drain. Max. pressure with manual drain is 250 psi (17 barg).

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	Filter Tube	Drain (Manual)	Drain (Auto. Float)	Mounting Bracket (stainless steel)	
6102N-0A0-(?X)	070-063-(?X)	SAP05481	N/A	N/A	
6102N-0A1-(?X)	070-063-(?X)	N/A	C02-2392	N/A	
6002N-0A2-(?X)	100-12-(?X)	C01-0108	N/A	C01-0094	
6002N-0A1-(?X)	100-12-(?X)	N/A	C01-0109	C01-0094	
6002N-0A2-SA	100-12-SA	C01-0108	N/A	C01-0094	
6002N-0A2-000	CI-100-12-000	C01-0108	N/A	C01-0094	
6904N-0A2-(?X)	100-12-(?X)	C01-0108	N/A	C01-0094	
6904N-0A1-(?X)	100-12-(?X)	N/A	C01-0109	C01-0094	
6904N-0A2-SA	100-12-SA	C01-0108	N/A	C01-0094	
6904N-0A2-000	CI-100-12-000	C01-0108	N/A	C01-0094	
6004N-0A2-(?X)	100-18-(?X)	C01-0108	N/A	C01-0094	
6004N-0A1-(?X)	100-18-(?X)	N/A	C01-0109	C01-0094	
6004N-0A2-SA	100-18-SA	C01-0108	N/A	C01-0094	
6004N-0A2-000	CI-100-18-000	C01-0108	N/A	C01-0094	
6006N-0A2-(?X)	200-176-(?X)	C01-0108	N/A	C01-0094	
6006N-0A1-(?X)	200-176-(?X)	N/A	C01-0109	C01-0094	
6006N-0A2-SA	200-176-SA	C01-0108	N/A	C01-0094	
6006N-0A2-000	200-176-000	C01-0108	N/A	C01-0094	
6008N-0A2-(?X)	200-185-(?X)	C01-0108	N/A	C01-0094	
6008N-0A1-(?X)	200-185-(?X)	N/A	C01-0109	C01-0094	
6008N-0A2-SA	200-185-SA	C01-0108	N/A	C01-0094	
6008N-0A2-000	CI-200-185-000	C01-0108	N/A	C01-0094	
Replacement Filter Cartridge Ordering Information					
Model P/N	6102	6002/6904	6004	6006	6008
Replacement Filter Cartridges					
Number required	1	1	1	1	1
Box of 5	5/070-063-(?X)	5/100-12-(?X)	5/100-18-(?X)	5/200-176-(?X)	5/200-185-(?X)
Box of 10	070-063-(?X)	100-12-(?X)	100-18-(?X)	200-176-(?X)	200-185-(?X)
Box of 10	070-063-SA	100-12-SA	100-18-SA	200-176-SA	200-185-SA
CI Cartridges (box of 1)	---	CI-100-12-000	CI-100-18-000	CI-200-176-000	CI-200-185-000