

Spray Painting and Powder Coating

Market Application Publication



Background:

In virtually all paint spraying and powder coating applications the presence of water, oil and particulate matter, commonly found in compressed air, often causes blemishes such as fisheyes, blistering, caking or globbing. These blemishes result in costly and time-consuming stripping and rework for the blemished pieces. The aesthetic imperfections and associated rework cause disruptions and delays in the manufacturing process resulting in the expenditure of additional labor and material, as well as delayed shipments of finished products.



Contact Information: Features and benefits:

Parker Hannifin Corporation
Filtration and Separation Division
242 Neck Road
Haverhill, MA 01835

phone 800 343 4048 or 978 858 0505
fax 978 556 7501

www.balstonfilters.com

- Decreases production disruptions by eliminating fisheyes, blistering, caking, globbing and other aesthetics blemishes
- Reduces costly rework of product by eliminating all oil, water and other contaminants from compressed air supply
- Removes all water vapor which may condense post-filter and cause defects
- No moving parts or electricity needed
- Environmentally safe requiring no refrigerants or freons, silent operation
- Easy to install, requiring minimal maintenance



ENGINEERING YOUR SUCCESS.

Application:

The installation of a Parker Balston Membrane Air Dyer for paint and powder coating applications will eliminate 99.99% of all water, oil and particulate contaminate from the air resulting in flawless applications of paint or powder coats. Oil and water is coalesced and automatically drained from the prefilter while the membrane removes all water vapor to +35°F dewpoint. The removal of all water vapor completely eliminates the possibility of condensation post-filter resulting in 100% defect-free application. This process purifies the compressed air without the need for electricity, refrigerants, or moving parts. The Parker Balston membrane dryer system ensures blemish-free and full adhesion application of paint or powder and eliminates maintenance to the gun and coating system, reworking costs, and production disruptions.

Case Study:

Furniture Design Manufacturing (FDM) was experiencing issues with paint blemishes in the production process. The company installed a basic filtration system and still saw intermittent fisheyes which resulted in costly, time consuming stripping and reworking. The paint blemishes disrupted the entire manufacturing process and required additional labor and material for rework. FDM soon installed a Parker Balston complete air drying and purification system in one paint booth which immediately resulted in the elimination of paint blemishes. The new Balston system eliminated 99.99% of all water, oil and particulates while the membrane removed all water vapor from the compressed air. Furniture Design Manufacturing soon purchased 20 additional systems and has seen

significant increases in their productivity, and quality while realizing increased profits by eliminating costly rework.



Principal Specifications

Model Number	IT0010-35	IT0030-35	IT0080-35	IT0150-35	IT0250-3560	IT0250-3500	IT0500-3560	IT0500-3500	IT1000-3560	IT1000-3500
Min/Max Inlet Air Temp.	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)
Min/Max Ambient	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)
Air Temp.	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)	(4°C/49°C)
Min/Max Inlet	60/150 psig	60/150 psig	60/150 psig	60/150 psig	60/100 psig	100/150 psig	60/100 psig	100/150 psig	100/150 psig	100/150 psig
Pressure	(4.1/10 barg)	(4.1/10 barg)	(4.1/10 barg)	(4.1/10 barg)	(4.1/6.9 barg)	(6.9/10 barg)	(4.1/6.9 barg)	(6.9/10 barg)	(6.9/10 barg)	(6.9/10 barg)
Max. Pressure Drop (1)	3 psid (.2 bard)	3 psid (.2 bard)	3 psid (.2 bard)	3 psid (.2 bard)	5 psid (.34 bard)	5 psid (.34 bard)	5 psid (.34 bard)	5 psid (.34 bard)	5 psid (.34 bard)	5 psid (.34 bard)
Wall Mountable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mechanical Separator (Included)	F14F17B	F06F18B	F06F18B	F07F38B	F07F38B	F07F38B	F07F38B	F07F38B	F602-08WJR	F602-08WJR
Coalescing Prefilters (1)	8A02N-0B2-BX	2002N-0B1-BX	2002N-0B1-BX	2004N-1B1-DX 2004N-0B1-BX	2104-1B1-DX 2104-0B1-BX	2104N-1B1-DX 2104-0B1-BX	2208N-1B1-DX 2208N-0B1-BX	2208N-1B1-DX 2208N-0B1-BX	2208N-1B1-DX 2208N-0B1-BX	2208N-1B1-DX 2208N-0B1-BX
Inlet Port Size	1/4" NPT	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT	1/2" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Outlet Port Size	1/4" NPT	1/4" NPT	1/4" NPT	1/2" NPT	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Electrical Requirements	None	None	None	None	None	None	None	None	None	None
Dimensions (cm)	17.5"Lx8"Wx2.5"D (44.5 x 20.3 x 6.3)	18.1"Lx10"Wx4"D (45.2 x 10.5 x 6.3)	24"Lx11.1"Wx4"D (61 x 28.2 x 6.3)	25"Lx16"Wx4.5"D (63.5 x 40.6 x 11.4)	26"Lx18"Wx6"D (66 x 45.7 x 15.2)	26"Lx18"Wx6"D (66 x 45.7 x 15.2)	39"Lx21"Wx6"D (99 x 53.3 x 15.2)	39"Dx21"Wx6"D (99 x 53.3 x 15.2)	47"Dx28"Wx7"D (119 x 71 x 18)	47"Dx28"Wx7"D (119 x 71 x 18)
Shipping Weight	1.62 lbs (.73 kg)	6.68 lbs (3 kg)	6.68 lbs (3 kg)	14.88 lbs (6.75 kg)	24.5 lbs (11.11 kg)	24.5 lbs (11.11 kg)	36.5 lbs (16.55 kg)	36.5 lbs (16.55 kg)	52 lbs (24 kg)	52 lbs (24 kg)

Notes:

- 1 If compressed air is extremely contaminated, a Grade DX prefilter should be installed directly upstream of the membrane dryer.
- 2 Filtration efficiency: 99.99% at 0.01 micron.

Ordering Information

Model #	IT0010-35	IT0030-35	IT0080-35	IT0150-35	IT0250-3560	IT0250-3500	IT0500-3560	IT0500-3500	IT1000-3560	IT1000-3500
Replacement Prefilter Cartridges*										
Stage 1	PS403	PS702	PS702	PS802	PS802	PS802	PS802	PS802	PS802	PS802
Stage 2	---	---	---	5/100-12-DX	5/100-18-DX	5/100-18-DX	5/100-19-DX	5/150-19-DX	5/150-19-DX	5/150-19-DX
Stage 3	5/050-05-BX	5/100-12-BX	5/100-12-BX	5/100-12-BX	5/100-18-BX	5/100-18-BX	5/150-19-BX	5/150-19-BX	5/150-19-BX	5/150-19-BX

* If the house compressed air is equipped with a refrigerated dryer, the dewpoint drops to +15°F (-9°C).

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