

Plastic Injection Molding

Market Application Publication



Background:

In today's Plastics Industry, manufacturers are required to produce high-quality products at a cost that is competitive to that of its global competition. To meet these strict quality, delivery and price demands, plastic injection molders require extremely efficient processes that work at a variety of speeds and volume throughputs. When producing components, a molder makes every effort to maximize the utilization of their molding machines with as little lost product or facility downtime as possible.



Contact Information:

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Features and benefits:

- Offers a reliable, efficient and economical alternative to pressure swing and refrigerated dryer technologies
- Requires no electricity, thus lowering operating costs
- Produce +35°F (2°C) dew-point, ideal for critical points of use
- No moving parts
- Silent operation
- No desiccants to change
- Ships complete with all required prefiltration, ready for simple installation

Application:

For injection molders, a critical measurement of the manufacturing process is to minimize the cycle times or maximize product throughput. With compressed air used to operate pickers, hoppers and automation associated with the molding process, downtime caused from lower quality compressed air can quickly amount to lost productivity and product loss. A Parker Balston Membrane Air Dryer will produce compressed air free of moisture and particulate with a dewpoint of +35°F. (2°C). Placed at the point of use, the system ensures smooth operation of numerous air valves, cylinders and other sensitive pneumatic components critical to the timing of equipment.

Case Study:

Webster Plastics, located in Fairport, NY, produces a variety of molded components that serve the automotive and consumer medical markets. According to John Beswick, Business Unit Manager, the quality of compressed air plays a key role in the production process. "Compressed air is used everywhere in our process, from the equipment used to drying of resin, to distribution of material, and finally at the automation used in conjunction with our molding equipment. Any pneumatic failures can greatly affect the cycle times of our equipment, which can add up to thousands of dollars in a short period of time. The use of a Parker Balston Membrane Air

Dryer will ensure a reliable source of compressed air right at the molding equipment and helps keep our equipment operating at maximum capacities."



Flow Rates

Model Number	IT0010-35	IT0030-35	IT0080-35	IT0150-35	IT0250-3560	IT0250-3500	IT0500-3560	IT0500-3500	IT1000-3560	IT1000-3500
Flow @ 100 psig Inlet Pressure, scfm (Nm ³ /Hr)	1 (1.7)	3 (5.1)	8 (13.6)	15 (25.5)	25 (42.5)	N/A	50 (85)	N/A	100 (170)	N/A
Flow @ 101-150 psig Inlet Pressure, scfm (Nm ³ /Hr)	1 (1.7)	3 (5.1)	8 (13.6)	15 (25.5)	N/A	25 (42.5)	N/A	50 (85)	N/A	100 (170)
Regeneration Flow @ 100 psig, scfm (Nm ³ /Hr) (1)	0.25 (.42)	0.5 (.85)	1.5 (2.5)	2.7 (4.6)	4.5 (7.6)	4.5 (7.6)	9.0 (15.3)	9.0 (15.3)	18.0 (30.6)	18.0 (30.6)

(1) Total Air Consumption = Regeneration + Outlet Flow.

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

Ordering Information

for assistance call toll free at 800-343-4048, 8AM to 5PM EST

Model Number	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	EK602VB	EK602VB
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).

Principal Specifications

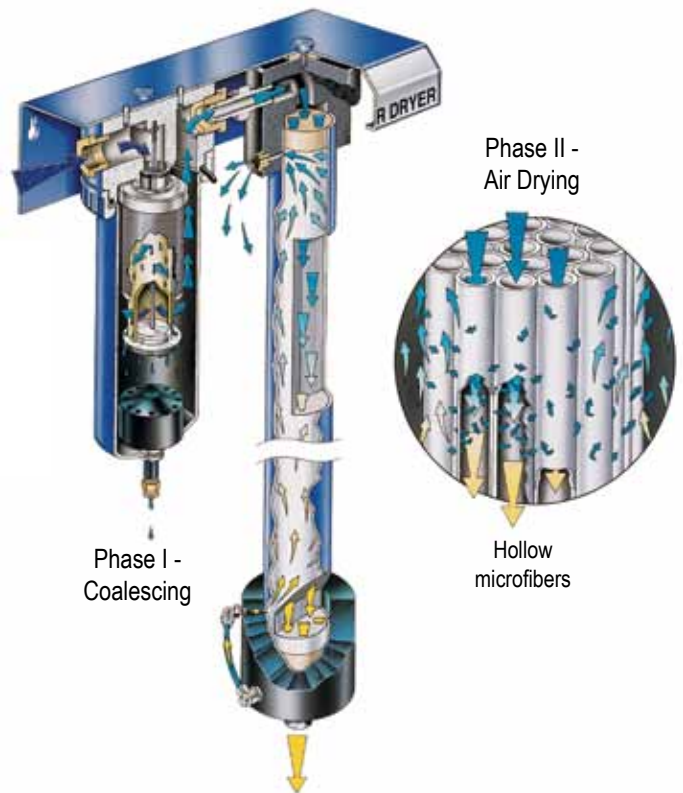
Model Number	IT0010-35	IT0030-35	IT0080-35	IT0150-35	IT0250-3560	IT0250-3500	IT0500-3560	IT0500-3500	IT1000-3560	IT1000-3500
Min/Max Inlet Air Temp.	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	40°F/120°F (4°C/49°C)	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 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 Inlet Pressure	60/150 psig (4.1/10 barg)	60/150 psig (4.1/10 barg)	60/150 psig (4.1/10 barg)	60/150 psig (4.1/10 barg)	60/100 psig (4.1/6.9 barg)	100/150 psig (6.9/10 barg)	60/100 psig (4.1/6.9 barg)	100/150 psig (6.9/10 barg)	100/150 psig (6.9/10 barg)	100/150 psig (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-OB2-BX	2002N-OB1-BX	2002N-OB1-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	1/2" NPT	1/2" 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 25.4 x 10.2)	24"Lx11.1"Wx4"D (61 x 28.2 x 10.2)	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.



Principle of Operation



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