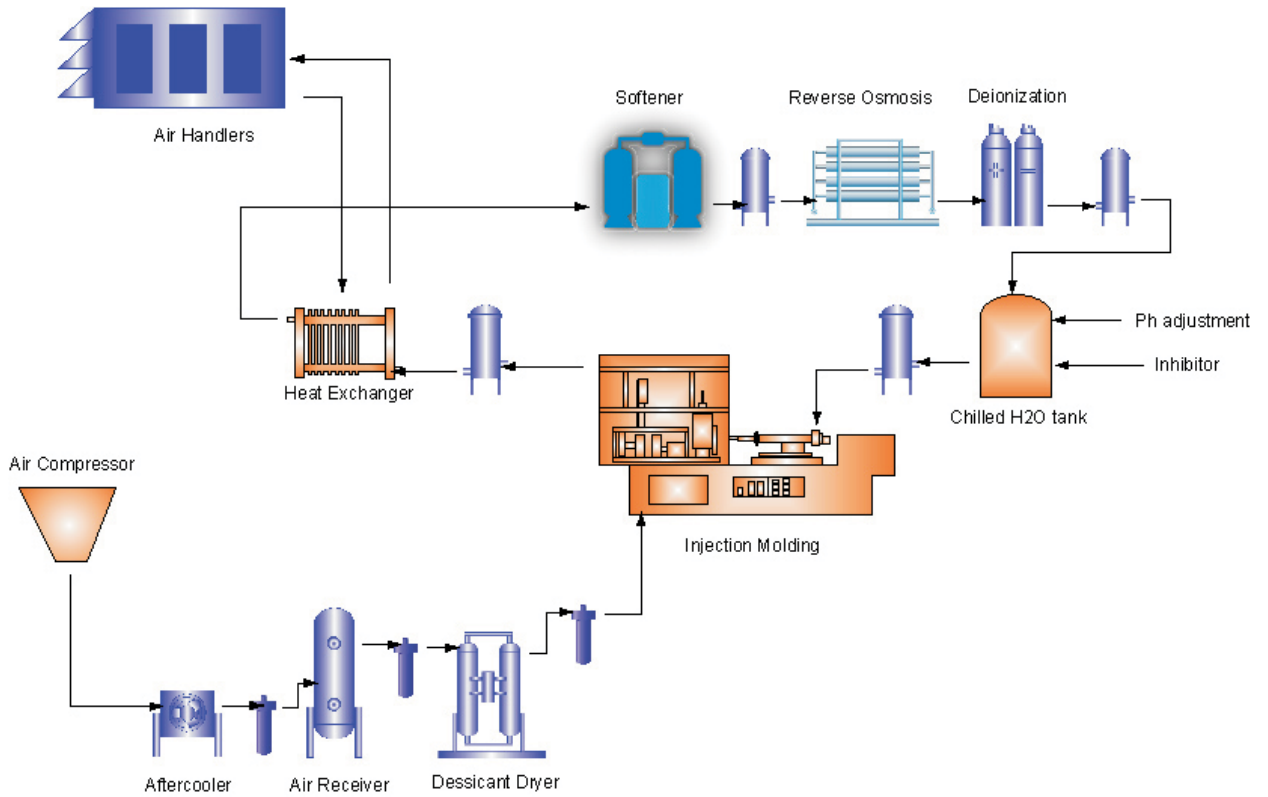










# CLASSIC

FILTER & EQUIPMENT LTD

## INJECTION STRETCH BLOW MOLDING



### SYMBOL KEY

	Aftercooler		Industrial Filter
	Air Receiver		Air Filter
	Dessicant Dryer		Deionization Resin
	RO Membrane		Softener System

### APPLICATION

Injection Stretch-Blow Molding is a three or four stage process for producing completely finished plastic containers. In the first step, the plastic is injection molded into a preform cavity where a preform is created. Temperature conditioning takes place in the third or fourth stage depending on the machine. The Blow Mold closes around the preform and a stretch rod enters the preform from the top and stretches the hot plastic to the bottom of the mold. At the same time, high pressure air is introduced to blow the preform out to the shape of the blow mold cavity. After a short cooling period the finished piece is ejected from the machine.



Water is used in the injection molding process to cool the molds and maintain the temperature specifications in the barrel. Process cooling water should first be treated with a softener to remove "hardness" which can plate out on heated surfaces.



A filter vessel is placed downstream of the softener to catch any particulate contaminants prior to the Reverse Osmosis system. This will protect the expensive membrane elements from plugging prematurely. Classic Filter and Equipment recommends a 5 micron filter element for this application.



The Reverse Osmosis system will remove ionic contaminants that can build up on process surfaces and cause premature wear on the equipment.



The Deionization resin further removes ionic contaminants and provides a higher quality water to the cooling system.



Classic Filter and Equipment recommends placing an Industrial Filter housing downstream of the ion exchange tanks to capture any stray resin that may escape from the tanks. Classic recommends a 2 to 5 micron filter for this application.



Inhibitors are often added to a water system to control rust and other process problems. Classic recommends a 2 to 5 micron filter to be placed ahead of the injection molding machine to capture any foreign material from the water tank.



After the injection molding machine, the cooling water returns to the system through a heat exchanger. Classic recommends a 2 - 5 micron filter ahead of the heat exchanger to capture any metal mold fragments or stray plastic resins from plugging the heat exchange surfaces.



The air system is another critical area in the injection molding process. Air is used to expand the form mold into the full size bottle. If the air nozzles are plugged or there is contaminant in the air, the potential exists for off-spec or poor quality bottles.



Classic recommends installing a separator downstream of the aftercooler and before the air receiver to catch any gross entrained liquids that may come off the compressor. This will prevent corrosion potential in the Air Receiver Tank.



Classic Filter and Equipment can address all of your compressed air needs. We can provide aftercoolers, dryers, air tanks and other equipment necessary to operate your compressed air lines free of contaminants and providing clean, dry air to the process.



Classic Filter recommends an air dryer to remove moisture from the compressed air lines. This will ensure that moisture does not cause premature wear on mold parts and other critical equipment.



Classic Filter and Equipment recommends installation of coalescer/filters Upstream and Downstream of the dryer. This will prevent any particulate contaminant from fouling the dryer and prevent any stray dessicant from reaching injection molding equipment.

**CLASSIC FILTER AND EQUIPMENT, LTD.**

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