

Advantages of a Bladder Valve for IBC Control

What you put into the bubble is related to what you can expect out of the bubble. Air flow turbulence at the control valve means air turbulence inside of the bubble, which leads to instability of the bubble and consequentially layflat variation with poor control.

What is a Bladder Valve?

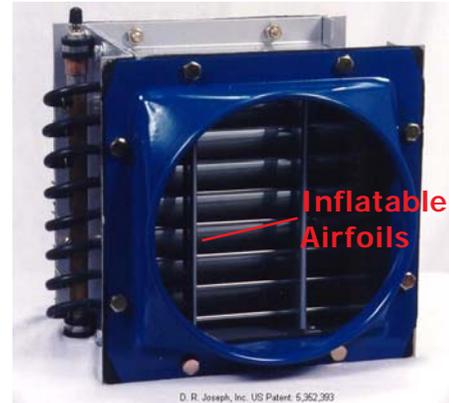
The bladder valve is a patented, airflow control valve that uses multiple parallel inflatable airfoils which, when inflated and deflated, control air flow to the die.

Why use a Flow Control Valve instead of only a Variable Speed Blower?

A good variable speed blower is important, even fundamental. However, true response time as measured in the bubble is dependant on a change of pressure inside the ducting between the blower and the die. Considering the length of ducting and time required to change its internal pressure, sluggish responses can occur. The flow control valve's placement (4-10 ft from die) and perfect balance of reserve pressure provide a faster response.

Why is a Bladder Valve more efficient than other valves?

The advantage of this design is in the lower pressure drop required to reduce airflow, which is significantly less than butterfly, shutter or rotary valves. Direction of the airflow is not disturbed, and thus induced turbulence of the air is completely avoided. There are no flat surfaces present in the bladder valve upon which the air must move, so there is no accumulation of residue in the valve. The average life span of a bladder valve is ten years.



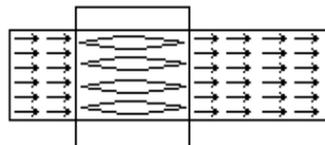
Performance and Benefits

- ⊙ Higher Air Exchange Inside the Bubble
- ⊙ Less Cleaning and Maintenance
- ⊙ Dependable
- ⊙ More Precise Control
- ⊙ Faster Response Time

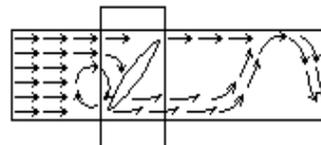
Placement

The bladder valve is installed at the inlet instead of the outlet for two main reasons. First, the outlet contains gas and residue which can obstruct the flow of air. Secondly, because the air at the outlet is hot, air density is lower, therefore diminishing control of the air. The outlet air is dependant on numerous factors which include melt temperature, thickness of the film and cooling temperature. Therefore is not practical to base airflow control on factors that are continually changing.

Air Flow with a Bladder Valve



Air Flow with a Butterfly Valve



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