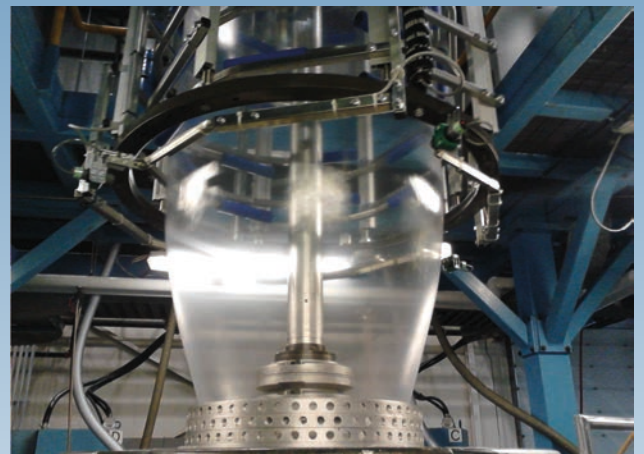
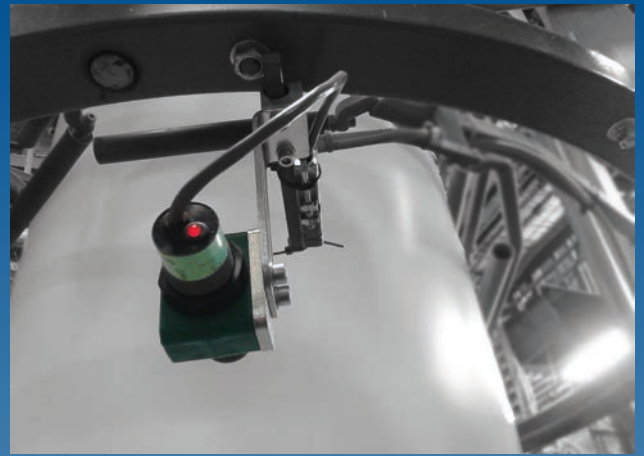
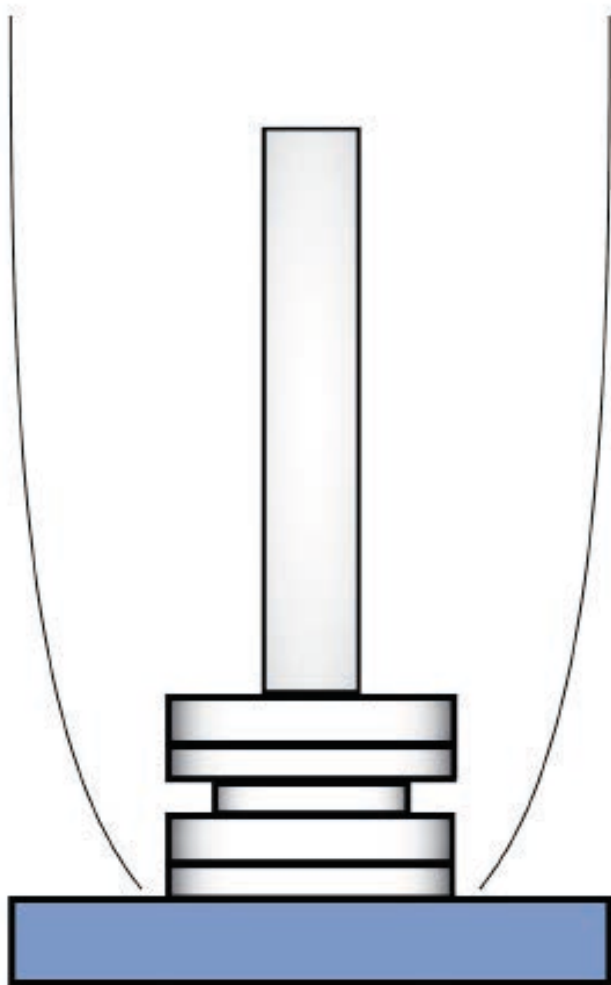


IBC Control

Internal Bubble Cooling Control



*When You Need Solutions
...Not Just Answers®*

Not All IBC Systems Are Created Equal

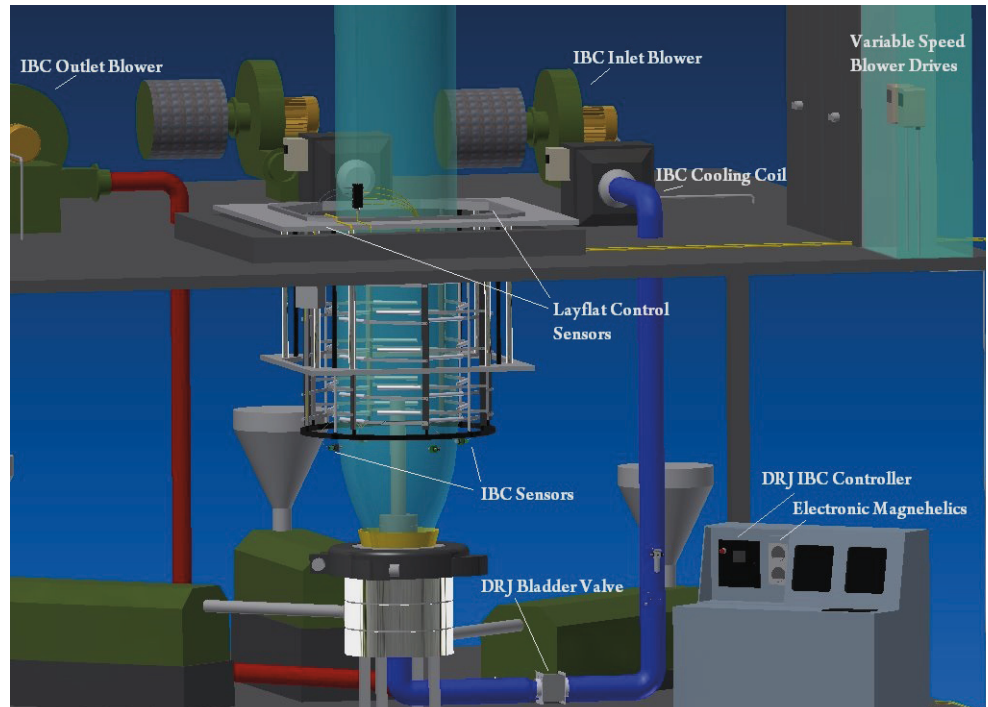
When investing in line performance, a critical component for success is the IBC system. Less comprehensive systems of lesser quality do not deliver on improved production rates, layflat tolerance, bubble stability or ease of use. D.R. Joseph provides the highest quality system on the market - equally as important on a mono layer line as is on an 11-layer line.

The latest 3rd Generation IBC system from D.R. Joseph can **improve production rates by 15 - 40%** when adding IBC to a blown film line, and offers 8 - 15% improvement in production over competing IBC systems on the market. Rate and layflat tolerance improvements are achieved by **automating the tough jobs** with proprietary control algorithms and patented processes.

IBC that Delivers

Performance boosting system for blown film lines

- Improved rate and quality
- Tighter layflat control
- Higher cooling rates
- ROI in 12 months or less
- Lower operating costs
- Reliable operation
- Flexibility
- Retrofits to any line
- High stalk, low stalk, geomembrane & everything in between
- Temperature compensation on each sensor, with patented bubble flutter filtering technology



In addition to the IBC System, DRJ offers Pressure Blowers, Variable Speed Drives, Sizing Cages, Cooling Coils, and On site Service / Training - a one stop shop for IBC upgrades!

IBC Made Easy

Powerful technology that quickly makes a new operator as capable as a seasoned veteran

Managed operations

- Cage height management
- Neck height control
- Bubble break detection
- Automatic start-up

Remote control capability

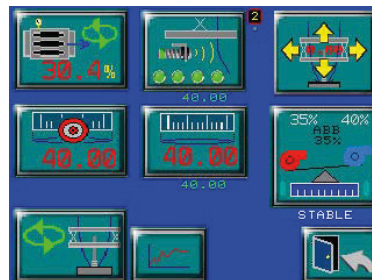
- Multiple touch screen support
- Control via Windows App
- Remote shutdown
- Remote diagnostics via internet or modem

Maintenance

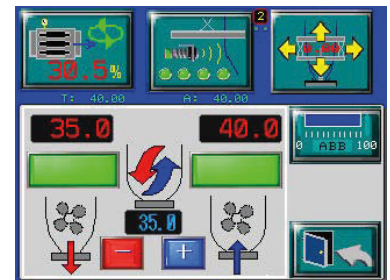
- Built-in troubleshooting
- Automatic valve calibration

Data logging

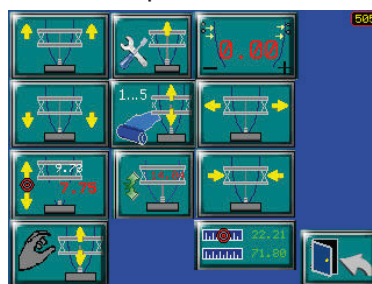
- Export .csv data via ftp
- Statistical reporting



Main Operator Screen



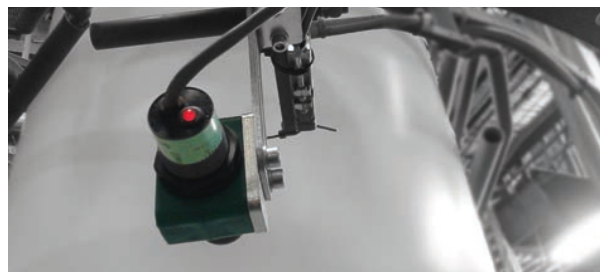
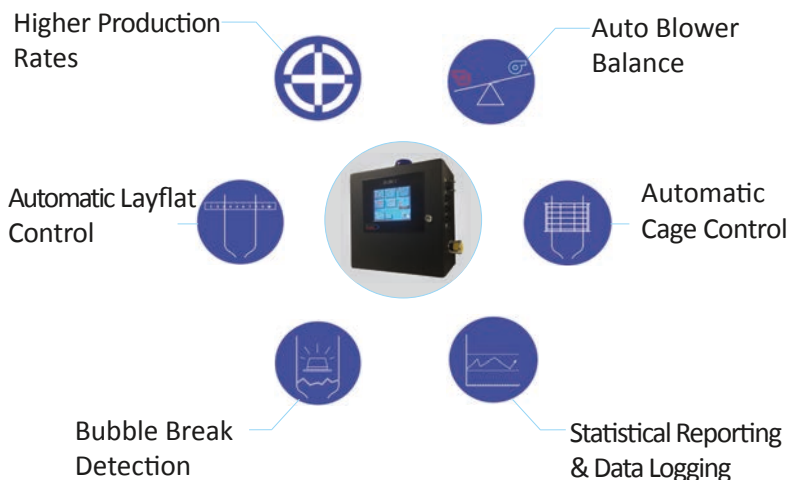
Blower Controls



Cage Control Screen



Layflat Trend Line



IBC Control Optimized for:



Expect More From Your IBC System

Automatic Blower Balance*

- Balances flow rate of inlet/outlet blowers
- Maintains balance as process conditions change
- Reports airflow blocks/failures

Layflat Controller*

- Set it and forget it size changes and start-up
- Measured via bubble diameter for faster response
- Configurable layflat alarms
- Optional integrated flat width bar calibration

Automatic Cage Controller*

- Positions cage diameter to optimally achieve target layflat and maintain proper cage contact

Auto Valve Calibration*

- Automatically calibrates airflow control valve to any die - keeps system running optimally
- Includes comprehensive airflow diagnostics

Kundig FE-8 Width Bar Integration

Facilitates width calibration after film shrinkage. Non-contact width measurement displays real world width, visible on the IBC's HMI. One button press auto calibrates the DRJ IBC System.

Bubble Break Detection

The system detects if a bubble break condition has occurred, which can then send a signal to an external device, such as an extruder, to prevent die drool in a line down situation.

Want Even More From Your IBC System?

Cage Height Management

Allows users to preselect various cage height positions (per running conditions of various jobs or even for line maintenance) and later send the cage to the predetermined height with the click of a button.

Neck Height Control

A feature for high stalk bubbles uses a dedicated sensor to measure and regulate the neck height on high stalk bubbles. Control is via air ring speed regulation, or air temperature regulation.

Data Logger

Log and export IBC process data in .csv format via built-in FTP. By logging this data to a spreadsheet, users can keep track of production and IBC process conditions to evaluate machine productivity, troubleshoot problems, validate SOP, and supply customers with a second point of quality control.

WinViewer

Adds a second remote control point for the DRJ IBC System. Requires PC based operating point, which then replicates the DRJ HMI Controls for 100% remote capability.

Automatic Layflat Calibration

Utilizing layflat information from an integrated width bar, final film width at the winder is automatically calibrated to the IBC system, accounting for film shrinkage as it makes it way down the tower to the winder.



Our motto really says why we are in business. To provide our customers with solutions... not just answers. It sounds simple, but it requires a certain diligence to see a customer's problem all the way from onset to solution. Our employees and our service people have that diligence. Our company has been developing solutions for the blown film industry since 1987 and we feel our success is measured in our customer's success.

"...though it costs all you have, get understanding." That is the driving principle that pushes us to find the solutions. We continue to work on a problem until we understand it. Once the problem is understood, corrective action is possible.

Our company maintains standard working hours of 8:30 am to 5:00 pm, yet we cover the entire globe of time zones with remote office sites, remote access software tools, email, and cell phones. We use a network of technicians in the United States, United Kingdom, Belgium, Germany, India, and Indonesia to provide technical support for our customers. We have developed an assortment of training materials and self-diagnosis tools for those more experienced with process control systems. We work to make sure every DR Joseph product will integrate with our existing equipment. Every upgrade has to be an easy retrofit.

Our offices are located centrally in one of the largest metropolitan areas in the United States, Dallas/Fort Worth. With the DFW airport nearby, we have the optional ability to ship systems and spare parts as late as 9:00 pm CST and still have the parts arrive the next day. From the airport, our offices are only 25 minutes away, so customers have a short drive to our area. Hotels, restaurants, professional sports teams, and golf courses make this area a very enjoyable visit.

Our training facility allows us to demonstrate equipment setup, how it is supposed to work, and how to service and repair it. We also provide training on the blown film process to ensure that technicians understand the environment in which they will be working.

For more information on any of the products or services offered by D. R. Joseph, please contact us at:

D. R. Joseph, Inc.
921 W. Harris Rd.
Arlington, TX 76001 USA

In North America: 800-767-4470
Ph: +1-817-987-2030
Fx: +1-817-987-2043

Email: sales@drjosephinc.com
Web site: www.drj1.com