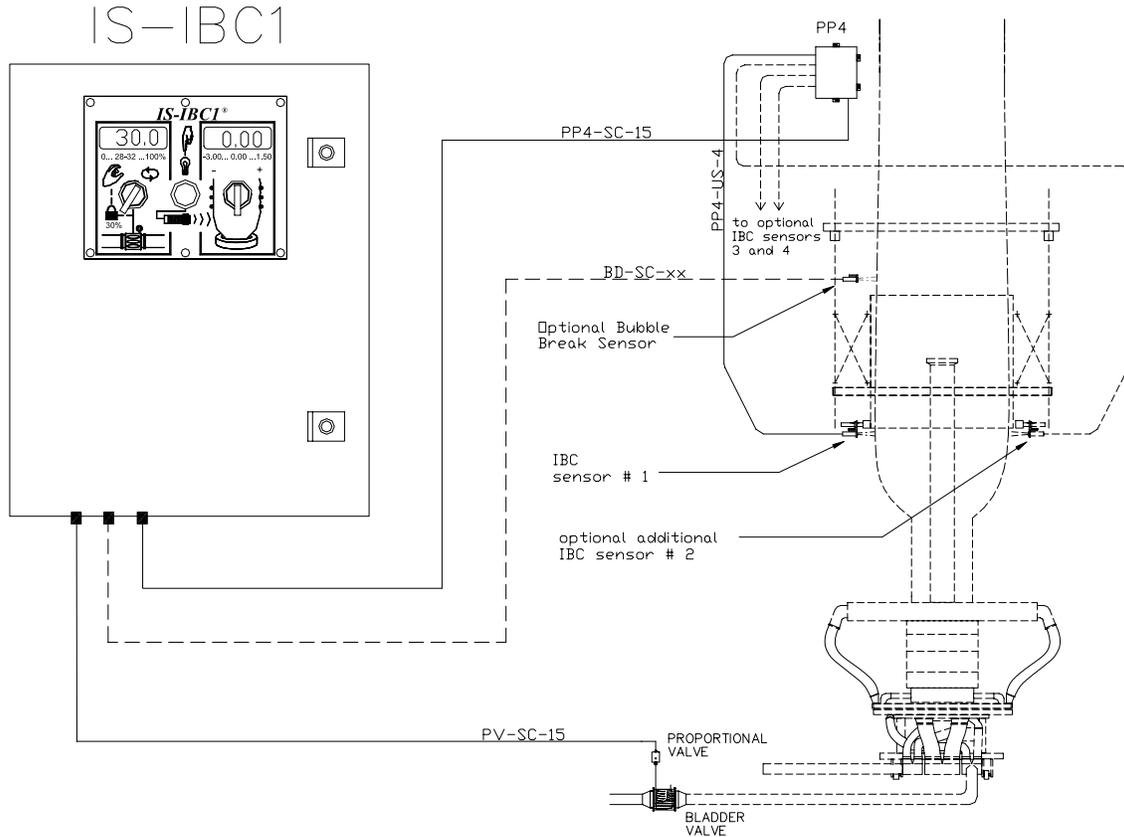


## Specification Sheet

**DRJ Part Number IBC1XSA**

**Drawing Set: IS-03-14**

Standard IBC Control, 1-4 sensors, IBC sensor based bubble break detector or optional independent bubble break sensor.



### Application

This economical configuration provides optimum production and bubble stability control and is ideally suited for operations with well-trained operators who understand IBC principals. Use when low cost is required *and* the customer has established experience with IBC systems. This system is not recommended for customers who have no IBC experience. Size changes do require the operator to set the size of the cage to achieve the correct bubble size. Startups and adjustments to cooling levels require the operator to manually balance the blowers. For optimum performance, variable speed drives should be provided for the IBC blowers. All DRJ IBC systems come with both a comprehensive manual and a color operator's manual.

### Select This Configuration When:

The objective is to replace or upgrade from a competitive system and a stand-alone panel for the operator interface is desirable. Also, this configuration works well if the new IBC system will be part of a die upgrade package because it keeps installations costs down. The main system components and operator controls are installed in NEMA panel that is easily mounted to existing support structure. All original

wiring is supplied with quick connect military style connectors. Main panel dimensions: Height-19.75" (500mm), Width-15.75 (400mm), and Depth-8.25" (210mm)

### Notes

Variable speed drives may either be purchased with the system, supplied by another vendor, or be previously installed units from an existing IBC system. If drives are supplied by DRJ, the drives will be pre-programmed with all settings for proper IBC operation. If previously used drives and blowers are to be integrated with this system, DRJ must check the variable speed drives for proper power ratings and the blowers for proper airflow to ensure optimum performance. Use the DRJ configuration form to identify any used equipment that will be used with this system.

### Electrical

System comes standard with Allen Bradley "Euro" style switches. Optional Klockner Moeller switches are also available. Power requirements: 100-250 VAC, 50-60 Hz, 4 amps maximum. Input terminal block is fused with illuminated blown fuse indicator. A power switch is provided on the bottom of the main panel. All sub-systems and control voltages are powered by 24 volts DC and are individually fused.

### General Installation Requirements

Main controller should be mounted in close proximity of the die, preferably so the operator can operate the panel and see the bubble at the same time. The IBC sensors must move linearly with the change in diameter of the cage. The IBC sensors must also move vertically as the cage moves up and down. The flow control valve must be mounted within ten feet of the die, in the supply (cold air) ducting for optimum performance. Variable speed drives are not directly interfaced with the IBC system, so blower controls must be provided by the customer.

### Standard Features

Item	Description
<b>High Performance IBC Control</b>	Patented IBC technology provides the best possible control of the bubble at the highest air exchange rate. State of the art ultrasonic sensor technology provides optimum performance even in high bubble flutter conditions. Patented "bladder valve" technology allows very good control of airflow over a wide range of operating conditions. Layflat control capability is +/- 1/8 inch (+/- 3mm). Actual performance depends on alignment of equipment, stability of melt pressure, melt strength, tension control and absence of wind effects on the air supply to the IBC blowers.

Item	Description
<a href="#"><u>Language Independent Operator Interface</u></a>	Operator interface provides digital indication of valve position (% open), cage contact (the amount of contact the bubble has with the cage), and sensor echo indicator. Operator also has ability to change cage contact and, operation mode (Balance or Run). Discrete controls allow for easy service with commonly available parts. All controls are described with intuitive graphics to eliminate dependency on ability to read a specific language.
<a href="#"><u>Configuration Interface - EZ Viewer</u></a>	Mounted inside the control panel, the configuration interface provides a 2x20 character backlit LCD display with 6 function keys that allow access to configuration parameters. Access to parameters is password protected. All parameters are stored in static ram and therefore are not susceptible to power losses. Fault alert LED and fault table are also provided. This feature can also be upgraded to older IS-IBC1 systems.
<b>Bubble Break Detector based on the IBC Sensor.</b>	When a bubble loss is detected by the IBC sensor, an output triggers a relay which is used to interface with the customer's equipment. Any function, from sounding an alarm or stopping the line, can be tied to the relay. The relay is a DP4T with 4 normally open contacts and 4 normally closed contacts. Loss detection distance and trigger delays are configured by the user. This feature arms itself automatically based on presence of a stable bubble.
<b>RS232 Interface</b>	The unit comes with a user configurable RS232 interface that can communicate at speeds ranging from 110 baud to 115K baud. Modbus RTU and Modbus ASCII protocols are supported on this port.
<b>Ethernet Interface</b>	The unit comes with a 10Mhz Ethernet port. The Ethernet port can be used to connect the IBC to the company intranet or the internet (firewall protection must be provided). Possible uses for Ethernet connection: remote diagnostic interface, integration with plant data collection or control systems. Communication protocols include Modbus over TCP and UDP.
<b>Internal Diagnostic Modem Interface</b>	Allows DRJ to log into any IBC system and monitor and tune the operation of the system. Simply connect a standard analog telephone line to the system. No other devices required.

### Optional Features

Item	Description
<b>Multiple Sensors</b>	Provides 2, 3 or 4 IBC sensors to monitor bubble diameter. Useful in rotating die applications or when very large bubble diameter precludes the ability to maintain a round bubble. For example, if the bubble were too large to support it with a cage, then four IBC sensors would be the optimum configuration. Note: some sizing cages cannot support 4 IBC sensors. Please contact DRJ to determine the correct maximum number of sensors for the cage in question.
<b>Independent Bubble Break Detector</b>	Provides an additional sensor that is mounted above the exhaust stack so bubble loss can be detected on small lines where the IBC sensors are too close to the Exhaust stack to function properly as a bubble break detector.
<b>Ethernet Switch, Unmanaged, Level II, 4 Ports</b>	Allows the single Ethernet port to be expanded to 4 ports. Allows multiple Ethernet devices to communicate with the IBC system.
<b>Klockner Moeller Electrical Switches</b>	Replaces the Allen Bradley switches with the Euro style switches from Klockner Moeller. Change the part number to IBC1XSK.