

## Upgrade your blow molding machine with our state of the art Compact Logix machine control system.

Uniloy is proud to offer the Allen Bradley Compact Logix Control Package developed for our Reciprocating screw blow molding machines. This package provides improved machine sequence control as well as Ethernet connectivity. The package also includes a color touch screen operator interface with built in security access levels and alarms and diagnostics useful for trouble shooting machine operation and processing issues.

### Control System Features

#### Standard Features:

- Machine Sequence Control
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- Alarms and Diagnostics
- 4 Security Levels
- 110 VAC Output Voltage for Solenoids
- Color Touch Screen (available options are 7", 10", 12" and 15")

**Machine Sequence Control** is the process of using input and output signals and an internal sequence control counter to maintain precise order and timing of all machine movements included in each machine cycle.

**Ethernet Connection** provides Local Area Networking which means you have the ability to link your machine controller to other computers for the purpose of production scheduling, material tracking, or supervisory control. The software required to perform scheduling, tracking, and supervisory tasks, is the customer's responsibility.

**Alarms and Diagnostics** are an important feature in a machine control system. Alarms are used to alert machine operators that something within the machine or production process needs their attention. Diagnostics are provided in the form of messages which appear on the operator interface. These messages are intended to help the operator understand what needs attention or correction.

**Security Levels** are a standard feature in a Uniloy machine control system. The Allen Bradley Compact Logix system provides four security levels. The four levels are Operator, Maintenance, Administration, and Service. All four levels require login passwords and each level is designed to provide the appropriate access and capabilities required for that job function.

**Output Voltage for Solenoids** on the existing machines is typically 110 VAC. They can either be left 110 VAC or they can be converted to 24 VDC. The standard Compact Logix system provides a 110 VAC output voltage.

**Color Touch Screens** are standard equipment in Uniloy controls packages. The Compact Logix system is designed to include a Panel View Plus Monitor. The PVP is available in four sizes: the PVP

700, 1000, 1250 and 1500. Each monitor has screen backup and restore capabilities using flash cards, built in Ethernet capability thru RS232 ports, and full 16 bit color touch screen.

## **Control System Options**

The next step in building your controls package is to select your control system options. The options listed in the table below may be used as a guide to determine the control system best suited for your needs.

### **Package Options:**

- Temperature Control
- Analog Inputs
- DC Pushbuttons
- Electrical Cabinet Doors
- Power Components
- Parison Programming
- Proportional Motion Control
- Cooling Bed and Trimmer Control

**Temperature Controls** can be configured for up to 36 zones using Compact Logix. This is achieved using thermocouple control cards. This system provides closed loop control with temperature set points and actual readings displayed on the graphical interface. Solid state heat contactors are provided to replace the old mercury contacts in the existing panel.

**Analog Inputs** are used to provide the controller with information about the machine. There are 7 analog inputs which are available with Compact Logix.

- Screw Position
- Clamp Position
- Swing Arm Position
- Extruder Speed
- Extruder Load
- Melt Pressure
- Hydraulic Temperature

**DC Pushbuttons** are a 24 VDC option which replace existing 110 VAC buttons and switches in your operator stations. The new DC pushbuttons and switches are ANSI compliant.

**Electrical Cabinet Doors** are an option which can be selected to replace doors that are in poor condition, to replace doors with large cutouts which are no longer necessary, or to facilitate a controls retrofit that will not fit on a small subpanel.

**Power Components** are an option which is available for the Allen Bradley controls retrofit. The state of the art power components included are:

- Master Control Relay
- AC/VF Drive Relay (if required)
- Circuit Breakers
- Main Breaker
- Motor Contactors (mercury free)
- Motor Overloads
- Power Supply
- Distribution Block

**Parison Programming** is an option which is available using the Compact Logix controller. Parison programming provides the capability to change the thickness of the parison while it is being extruded. The parison thickness is determined by a profile, programmed into the machine controller. The machine controller uses the profile to drive proportional, or servo, hydraulic valves and cylinders which open and close the gap between the die and mandrel.

**Proportional Motion Control** is an option which is also available to control proportional hydraulic valves on the clamp and swing arms. This control option is available with the Compact Logix control system.

**Cooling Bed and Trimmer Control** is an option which is available using Compact Logix. This downstream control is accomplished through the use of networking with a flexible I/O wiring system. The downstream control feature moves the cooling bed and impact trimmer controls to the main machine by placing control nodes in the trimmer and cooling bed and linking them back to the machine controller with simple cables.

For more information about the downstream control systems or for a formal quote, contact your Uniloy Sales Representative.