

Extrusion Temperature Control



The Plastic Industry in North America

- Plastics is the 3rd largest industry in US
- \$400B in sales
- Employs 1.1 M workers
- 18,500 facilities in North America
- Approx 54,000 extruders currently in operation North America

Using Temperature Control in Plastics

Temperature Control is one of the most important aspects to any extrusion process. Polymer changes properties depending on temperature and pressure. Accurate temperature control increases throughput, decreases scrap rates and leads to greater profitability.

Did you know...?

Every extruder has approximately from 6-30 temperature control zones.

Each extruder has 1 melt temperature indicator in addition to temperature control.

Typical Plastics and Rubber Extrusion applications include:

- Wire coated extrusion
- Profiles for automotive or construction
- Sheet for roofing, packing, thermoforming
- Film for garbage bags
- Tee shirt bags
- Food packaging
- Fiber for carpet and nonwoven products
- OEMs producing extruders, dies, chillers, hopper feeders, melt pumps, heated water baths
- Rubber for automotive trim and tires



The Temperature Control Range for Plastics & Extrusion

Discrete DIN Controller | PlastX

The new PlastX range offers a cost-effective, fixed build solution for precision temperature control for extruders.

The PlastX instruments provide a simplified user menu which includes pre-populated setup fields with default parameters for plastic applications. This, together with the removal of unnecessary options ensures configuration is straightforward and fast to implement for users.

The new plastics specific range provides options for Heat and Heat/Cool control and includes a function for setpoint ramping, which is particularly useful in extrusion applications to protect from heater burn out.

The versatile instruments can also be used simply as process indicators reducing the need to stock multiple products for extrusion applications, thus streamlining the product portfolio and reducing inventory.



At a Glance:

- Universal input
- Multiple output configurations
- LEDs indicate low alarm, band alarm, and auto-tune
- On/off button for zones not in use
- Suitable for twin and single screw extruders
- Selectable controller or indicator modes
- Heat only or Heat/Cool control modes
- Setpoint Ramping function
- Available options: RS485, SSR, Triac, relay
- Available in 1/8 DIN and 1/16 DIN sizes

A One Page Quick Start Guide is available in English and Spanish.



The Temperature Control Range for Plastics & Extrusion



Panel Mounted Indicator | West 8010+

Every extruder requires an indicator to display the melt temperature.

The 8010+ from West Control Solutions is a digital panel mounted temperature indicator, offering a high contrast, high visibility display. The process indicator provides a user selectable dual color display option with fixed red or green displays or a green to red color change when an alarm condition occurs.

Importantly the 8010+ is a landscape 1/8 DIN instrument, meaning that operators will not misinterpret the display as a temperature zone.



At a Glance:

- High contrast, high visibility display
- Up to 5 outputs
- Up to 4 alarm outputs (latching or non-latching)
- Retransmission output
- Plug-in output modules for SSR Driver, Triac, Relay and Linear Outputs – easily field changeable
- PC configurator with easy to use “wizard” suits both novice and experienced users
- Jumperless configuration
- RS 485 communication option

Modular, Multi Loop Controller | KS Vario

The KS Vario multi loop control system enables 4 to 30 temperature zones to be controlled independently.

KS Vario can be used with any programmable logic controller (PLC) to provide superior temperature control at an affordable cost. The basic version consists of a controller module and a field bus coupler. These two components already provide a fully operational control unit with 4, 6 or 8 loops. Simply by adding the required number of individual I/O modules, the modular system is expandable up to 30 control loops with minimum extra cost.

The standard KS Vario includes a controlled start-up function specifically for plastics processing machines.

Required components including; bus coupler, control unit and an arbitrary number of I/O modules in



different sizes (2, 4, 8, or 16 channels), are simply plugged together whereby all inter-connections are made automatically.

The modular approach makes the KS Vario controller unusually cost-effective and allows it to be adapted precisely to individual tasks. Due to bus coupler modules for Ethernet, ProfiNet, Profibus DP, CANopen, DeviceNet, and Modbus - the system is open for all major industrial field buses.



The Plastic Temperature Controller Range

Touchscreen Multi Zone Control | KS Vario BT

The sophisticated KS Vario BT provides remote, standalone operation of the KS Vario controller system through a high contrast colour touchscreen HMI making the KS Vario BT a cost effective and panel space saving control solution.

The multi-channel system provides a comprehensive range of functions for up to 30 control zones as well as offering the possibility to operate several single loop controllers without the need of a superordinate PLC.

At a Glance:

- Compact operating terminal with 3,5", 5,7" or 12,1" color display
- Graphic touchscreen operation
- Simple access for 4..30 control loops
- Overall surveys
- Configuration level
- Alarm processing
- Online trend display
- 3-level password protection
- Language selection
- Recipe management
- Direct connection of the KS Vario via RS 485 or RS232 Interface
- Ethernet interface



Contact Us

For more details on the full product range from West Control Solutions please visit www.West-CS.com.

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