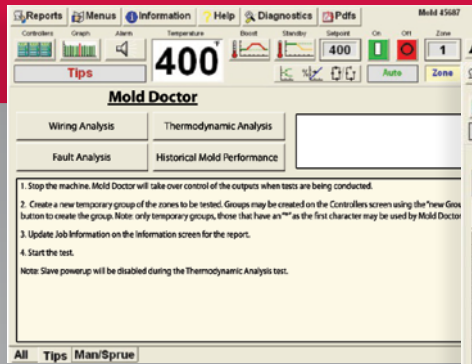
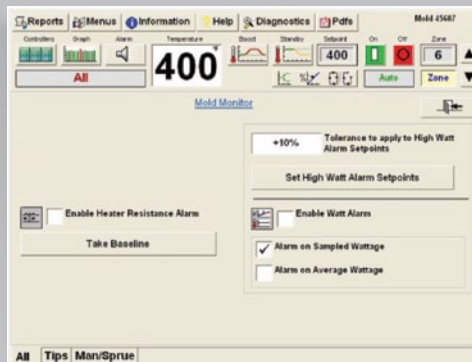


LEC Series Temperature Controller Touch Screen Option



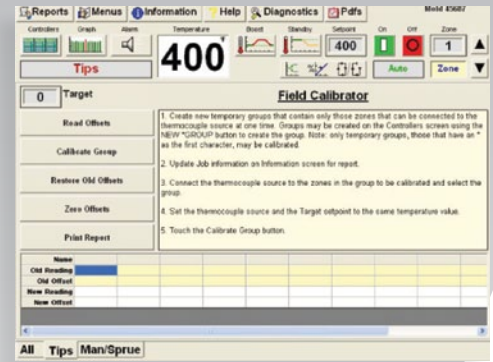
Mold Doctor®

- Advanced Troubleshooting



Leak Detection

- Lower maintenance costs
- Improved up-time

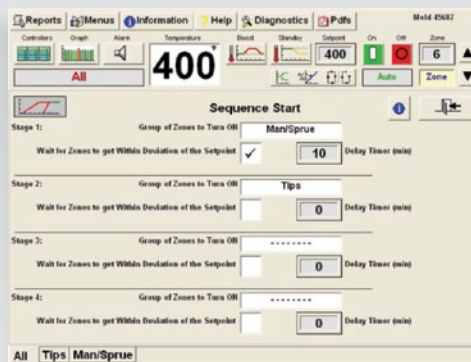


Field Calibrator

- Calibrate your Synventive controllers in house
- Accuracy $\pm 0.2^\circ\text{F}$ ($\pm 0.1^\circ\text{C}$)



12 zone LEC




Sequence Start

- Control heat expansion
- Improve hot runner sealing

Feature List

Core Description	LEC	TTC
Temperature control	●	●
Temperature control - maximum zones	*24+	640
Sequential valve gate control - integrated option	●	●
Sequential valve gate control - maximum zones	●	32
5 year warranty (2 years on touch screen interface)	●	●
Modular design	●	●
Controller warm up time - instant	●	●
If interface fails the controller still controls	●	●
Emergency interface - use any Windows XP® computer	●	●
Automatic/manual control	●	●
Zone "on", "off" and "locked off"	●	●
Set points in tenths	●	●
Adaptive PID ² control algorithm with Power Priority®	●	●
Algorithm is executed 20 times per second	●	●
Extended tuning ranges (fast/slow)	●	●
Output resolution 0.1%	●	●
Phase angle firing (1000 Steps)	●	●
Wet heater bakeout	●	●
Power compensation in manual mode	●	●
Degree F/C	●	●
Thermocouple J/K	●	●
T/C filtering - none	●	●
T/C resolution 0.03° F (0.014° C) over full scale	●	●
T/C calibration accuracy 0.2° F (0.1° C) over full scale	●	●
Operating temperature 32-113° F (0-45° C)	●	●
Input power 180-265 VAC; 480 VAC optional	●	●
Delta/wye convertible option	●	●
Circuit breaker sized to load	●	●
Actual Values		
Actual temperature	●	●
% Output	●	●
Deviation from set point	●	●
Amps (resolution 0.01 amps)	●	●
Volts	●	●
Watts	●	●
Ohms	●	●
Alarms		
High temperature (adjustable; 10° F default)	●	●
Low temperature (adjustable; 10° F default)	●	●
Thermocouple pinched (adjustable time)	●	●
Thermocouple open (remembered % output)	●	●
Thermocouple reversed	●	●
Open fuse	●	●
Shorted heater	●	●
Open heater	●	●
Uncontrolled output (relay power cut off)	●	●
Critical over temperature alarm (adjustable)	●	●
Heater resistance monitoring (predict failure)	●	●
Heater wattage monitoring (detect leaks) - auto calc.	●	●
Temperature monitoring (J/K) with programmable action	●	●
Alarm history	●	●

 - Touch screen or laptop required
 Limits, units and security local to LEC controller and touch screen
 * Touch screen able to manage 24+ zones with Synventive assistance

Application Note

When using the touch screen interface, it is recommended to only view and make changes to the controller on the touch screen.



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Operational Features	LEC	TTC
Menu storage	●	1000
Programmable groups	●	●
Instant grouping	●	●
Sequence Start (up to 4 stages with delay timers)	●	●
Sequenced Power Up - manual activation	●	●
Even Cool (controlled cooling - 15° F [7° C] max. variance)	●	●
Boost (selectable time/amount)	●	●
Trim	●	●
Slaved power up (enable/disable)	●	●
Automatic set point limit	●	●
Manual set point limit	●	●
Security levels	●	●
On power up "on" or "off" ("ask" touch screen only)	●	●
Auto load manual remembered % output	●	●
Operator identification	●	●
Tool graphics with real time data overlay	●	●
Thermocouple "rewire"	●	●
Copy Output	●	●
Standby timer until system "off"	●	●
PDF viewer - import or export files	●	●
USB port	●	●
On-line help	●	●
Software Features		
Maximum screen update rate (in seconds)	6	0.5
Gammavision® (SPC data/graphing)	●	●
Instant data reporting (up to 24 hours)	●	●
Data report storage (up to 1 year) - pdf format	●	●
Mold Doctor® (advanced troubleshooting)	●	●
Field Calibrator (0.1° F accuracy over full scale)	●	●
On screen printing	●	●
Networking (Ethernet IP) - stream .csv file - bidirectional	●	●
Remote troubleshooting/operation	●	●
Cable Connections		
Enclosure connectors HBE 24 standard or HD 25	●	●
Custom control enclosure connectors	●	●
Custom tool end of cable connectors	●	●
Inputs (24 VDC required)		
Standby (also manually activated)	●	●
Control inhibit (voltage to activate)	●	●
Control allow (voltage to activate)	●	●
Material protection	●	●
Sequenced power up	●	●
Remote boost	●	●
Mold ID - 64 combinations - auto menu load	●	●
Outputs		
Resettable alarm output	●	●
Non-resettable alarm output	●	●
"OK to Run" output with status page	●	●
Audible alarm	●	●
Miscellaneous		
Find this module LED	●	●
Daisy chain enclosures	●	●

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24 zone LEC