

▶ MAXIMUM CONTROL WITH MINIMUM FOOTPRINT

The M1 controller maximizes injection molding performance of any hot runner with the advanced features of a touch screen unit but with an optimized, minimum footprint.

BENEFITS

Out-of-the-box user friendly

- ✓ Intuitive touch screen with adjustable viewing angle
- ✓ Automatic tool diagnostics feature ensures optimal hardware configuration and performance
- ✓ Standard cable set included

Optimizes the performance of any hot runner system

- ✓ Unique low voltage soft-start method to maximize heater life
- ✓ Uniform startup feature for reduced scrap and energy usage
- ✓ Proprietary adaptive auto-tuning control algorithm
- ✓ Phase angle or burst firing modes (time proportional, zero-crossing)

Plug and play system architecture

- ✓ Patented "all-in-one" control card designed for reliability
- ✓ Modular 6 zone cards, 15 amps per zone
- ✓ Field calibration mode
- ✓ Universal power supply

Future now technology

- ✓ State of the art, color touch screen display
- ✓ Advanced micro controller technology
- ✓ Continuous ground fault and current measurement

High quality, robust design

- ✓ Compact solid metal enclosure
- ✓ Heavy duty industrial connectors
- ✓ Mold and controller protection features
- ✓ On-board heater and thermocouple fuses
- ✓ Portable stand available



▲ Portable stand available

▲ Easy access to cards



▲ M1-L unit

3803 E. Illinois Avenue · St. Charles, Illinois 60174

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► SPECIFICATIONS

M1 Controller Specifications

User Interface	Full color LCD touch screen on all HMI models
Display Size	5.7" QVGA
Calibration Accuracy	0.5°C / 1°F
Control Accuracy	+/- 0.5°C / 1°F
Power Response Time	8.3 ms at 60 Hz
Control Algorithm	Adaptive PID ² with auto-tuning
Degree (F or C)	Software selectable
Thermocouple	J or K-Type, software selectable
Operating Range	0 - 472°C or 32 - 882°F
Output Voltage	Maximum 264 VAC
Supply Voltage	200/240V Delta or 380/440V 3Ø Star
Frequency	50 - 60 Hz automatic switching
Ambient Temperature Range	5 - 45°C (41 - 113°F)
Humidity Range	Up to 95% non-condensing
Ground Fault Detection	40mA per zone
Power Control	Phase angle or burst firing modes (time proportiona, zero-crossing)
Overload Protection	Semi-conductor fuses on both heater legs
Control Modes	Closed loop (Auto), open loop (manual), standby, boost mode and slave mode
Alarm Output	Closing contact relay, max. 5A, 230V
T/C and Power Connector	HAN 24e
LED Indicators	Fault, Scan
Soft-Start with Auto-Tune	Using unique low voltage method for heater safety
Input Protection	Plug in nano fuses on both TC legs
Ports	USB



▲ M1-S



▲ M1-L

Cabinet sizing	Slots	# of Zones	Dimensions (W x D x H cm)
M1-S	4	max. 24 zones	35 x 51 x 22
M1-L	8	max. 48 zones	35 x 51 x 50

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