

**Devanshi**

# Multifunction Hot Runner Control System & Valve Gate Controller



# HRTC-N1/N2\* Hot Runner Controller

## Features

- Color LCD display, Easy operation
- Auto /Manual/Standby function
- Zone number display
- Load current / output percent display
- Selectable load current limited
- Selectable two temperature display resolution (1 or 0.1 unit)
- Selectable two thermocouple types (J or K)
- Selectable two temperature scales (°C or °F)
- Selectable two trigger output modes (Zero cross or Phase angle)
- Multi diagnostic & alarm function
- Multi self-protect and equipment-protect function
- Selectable soft-start function to dehumidify the heater
- Compatible with DME, YUDO, etc.
- Available Zone 1, 2, 4, 6, 8, 10 & 12

## Specifications

Power Supply	AC85~265V, 50/60Hz
Sensor Type	T/C J or K, displayed
Measurement Range	0~450°C (32~842°F)
Measurement Accuracy	±0.25% FS
Control Accuracy	±0.1% FS
Power Switch	Rocker Switch
Working Temperature	0~55°C (32~132°F)
Display Uni	Color LCD
Setting Range	0~450°C (32~842°F)
Control Mode	Auto-PID / Manual
Output Type	Zero Cross / Phase Angle
Load Capacity	15A, 100~3600W @ 240Vac
Working Humidity	10~85%RH (Not condensing)

## Protections

- Over voltage self-protected, and shut off output to protect heater
- Thermocouple input protection, prevent module damaged by misconnection
- Thermocouple & heater inverse protection, prevent thermocouple damaged by misconnection
- Soft-start mode, avoid the moisture make the heater burn out
- Max. load current can be limited

## Alarms

- Ultra-high or ultra-low Temperature
- Thermocouple break, short or inverse
- Thermocouple is out of its position
- Heater break, short or overload
- Output device is damaged
- Thermocouple & heater misconnection
- Power supply is over voltage
- Working temperature is too high
- Alarm relay output for machine interlock (only in N2 models)



# M20 Series (Multizone Controller)

## Features

- 2 to 120 zones of control
- Large, intuitive, full color touch screen, simple operation
- Interchangeable card design, reduces maintenance costs
- Two zones per card at 15amps per zone
- Real-time amperage measurement
- Integrated design with external heat sink, reduces downtime
- "All-in-one" control card designed for reliability
- Automated mold diagnostics to ensure hardware performance
- Selectable phase angle or zero cross power control method
- Low voltage soft start to maximize heater life
- Multiple startup sequence options available for process optimization
- Quality construction cabinet card rack and connectors
- Mold and controller protection design features reduce downtime
- Minimum cabinet wiring reduces risk of faults
- Multi-mold set-up storage
- USB support for importing and exporting data
- Password enabled security



## Specifications

User Interface	Full color LCD touch screen		
Power Supply	1-Ph+E(3 wire) 200-240Vac	3-Ph+E(4 wire) 200-240Vac	3-Ph+N+E(5 wire) 380-415Vac
Thermocouple	J or K-Type, software selectable		
Calibration Accuracy	±0.25% FS		
Control Stability	±1digit-under steady state		
Overload Protection	Fuses on both heater legs		
Working Temperature	0~55°C (32~131°F)		
Storage Temperature	-20~70°C (-4~158°F)		
Working Humidity	10~85%RH (No condensing)		
Display Size	7.0" or 10.2" inches		
Frequency	50-60Hz automatic switching		
Control Mode	Auto-PID / Manual		
Power Control	Zero Cross / Phase Angle		
Degree Unit	°F or °C, software selectable		
Measurement Range	0~500°C (32~932°F)		
Setting Range	0~450°C (32~842°F)		
Load Capacity	Rated 240Vac, 15Amps per zone		
Soft-Start	Using low voltage for heater safety		
TC Connector	Varies options available		
Mold Power Connector	Varies options available		



1 Manual 32 MAN: 5 % 5 % 0.1 A J	2 Auto 200 SV: 200 °C 10 % 0.5 A J	3 Stop 200 SV: 200 °C 0 % 0 A J	4 Stop OFF SV: 200 °C 0 % 0 A J	5 Auto 200 SV: 200 °C 10 % 0.5 A J	6 Auto 200 SV: 200 °C 10 % 0.5 A J	
7 Auto 200 SV: 200 °C 10 % 0.5 A J	8 Auto 200 SV: 200 °C 10 % 0.5 A J	9 Auto 200 SV: 200 °C 10 % 0.5 A J	10 Auto 200 SV: 200 °C 10 % 0.5 A J	11 Auto 200 SV: 200 °C 10 % 0.5 A J	12 Auto 200 SV: 200 °C 10 % 0.5 A J	
13 Auto 200 SV: 200 °C 10 % 0.5 A J	14 Auto 200 SV: 200 °C 10 % 0.5 A J	15 Auto 200 SV: 200 °C 10 % 0.5 A J	16 Auto 200 SV: 200 °C 10 % 0.5 A J	17 Auto 200 SV: 200 °C 10 % 0.5 A J	18 Auto 200 SV: 200 °C 10 % 0.5 A J	
19 Auto 200 SV: 200 °C 10 % 0.5 A J	20 Auto 200 SV: 200 °C 10 % 0.5 A J	21 Auto 200 SV: 200 °C 10 % 0.5 A J	22 Auto 200 SV: 200 °C 10 % 0.5 A J	23 Auto 200 SV: 200 °C 10 % 0.5 A J	24 Auto 200 SV: 200 °C 10 % 0.5 A J	
Pattern Null	No Alarm	A: 220V B: 220V C: 220V	2020/11/16 18:18			

## Control Cards

- Integrated design with external heat sink
- Mechanical relay on non-switched leg
- 2 zones per card at 15amps each
- Run with grounded or ungrounded thermocouples
- Phase angel or zero cross power output control
- Cards interchange ability
- Automated mold diagnostics
- Real-time amperage measurement
- Patented "all-in-one" control card designed for reliability
- Low voltage soft start to maximize heater life

## Main Interface

All M20 control card come standard with two zones per card at 15amps per zone and are fully interchangeable across all mainframe designs. The externally mounted heat sink and integrated design reduce maintenance cost and downtime.

## Valve Gate Controller (VGC)

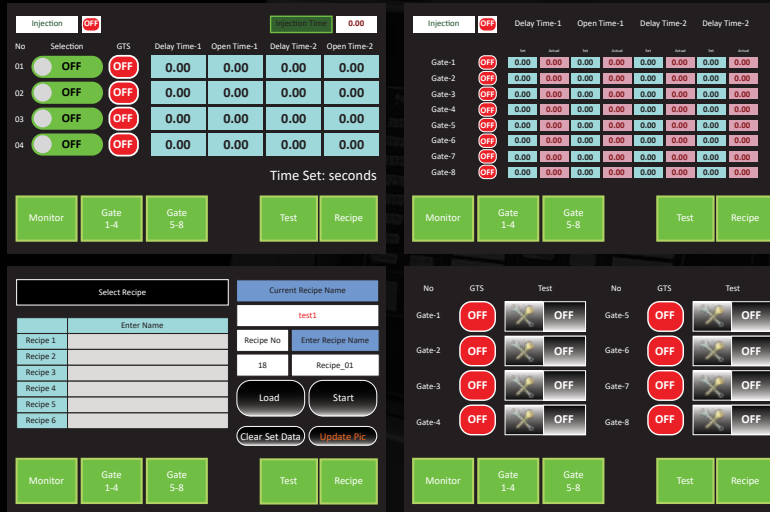
### Standard Features

- 7" Touch Display for easy settings and monitoring
- Input Power Supply : 230VAC, 50 Hz
- Injection Input Type : 24VDC
- Valve Gate Output : 24VDC ( 0.5A/solenoid)
- 2 Decimal time settings (10 msec base timer)
- Actual time display
- Injection input status monitoring
- 2 Steps for Delay time and Action Time
- Individual zone On/Off and Manual Testing buttons
- Recipe function for multiple mould data store

### Optional Features

- Injection Input
  - i) 230VAC
  - ii) Contact
- Multiple output mode available
  - i) 24VDC (Standard)
  - ii) 230VAC (Optional)
  - iii) Contact (Optional)
- Position base switching selection  
(Position input should be 0~10Vdc)
- Custom functions available on customer demand
- VGC-4Z : 4 Zone Valve Gate Controller
- VGC-8Z : 8 Zone Valve Gate Controller
- VGC-16Z : 16 Zone Valve Gate Controller





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