

circulator controller features



Performance Programmable,
Performance Digital,
Advanced Programmable



Rear View of
Performance Programmable,
Performance Digital,
Advanced Programmable



Advanced Digital



Standard Digital



MX

	controller type	performance programmable	advanced programmable	performance digital	advanced digital	standard digital	MX
performance	Maximum Temperature	200°C	200°C	200°C	200°C	170°C	135°C
	Temperature Stability	±0.005°C	±0.01°C	±0.005°C	±0.01°C	±0.04°C	±0.07°C
	Swivel 180 [™] Rotating Controller	○	○	○	○	○	
	Pump	Variable-Speed	Variable-Speed	Variable-Speed	Variable-Speed	2-speed	1-speed
	Pressure Flow Rate (maximum) 60Hz/50Hz	20.1 LPM/16.7 LPM	20.1 LPM/16.7 LPM	20.1 LPM/16.7 LPM	20.1 LPM/16.7 LPM	11 LPM/10.2 LPM	12.8 LPM/10.6 LPM
	Suction Flow Rate (maximum) 60Hz/50Hz	14.7 LPM/12.2 LPM	14.7 LPM/12.2 LPM	14.7 LPM/12.2 LPM	14.7 LPM/12.2 LPM		
	Closed-Loop Operation	○	○	○	○	○	○
	Open-Loop Operation	○	○	○	○		
	Fluid Optimization/Specific Heat Tuning	○	○	○	○		
	Temperature Calibration Capability	10-point	5-point	10-point	1-point	1-point	1-point
	External Temperature Control Capability (Pt100)	○	○	○	○		
	WhisperCool [™] Environmental Control System	○	○	○	○	○	○
Inert Gas Reservoir Purge	○	○	○	○	○		
operation	Display Type & Size	SmartTouch [™] Color LCD 4.3 inches	SmartTouch [™] Color LCD 4.3 inches	SmartTouch [™] Color LCD 4.3 inches	LCD Touch-Pad 3.75 inches	LCD Touch-Pad 3.75 inches	LCD 3.25 inches
	Enhanced Data Display Capability	7 selectable views	7 selectable views	6 selectable views	Message bar		
	Multi-Language Menus or Prompts	11 languages	6 languages	11 languages	4 languages	Icon/English	Icon/English
	Displays Temperature Trend	○	○	○			
	Time/Temperature Programs & Steps	OpenMode	Ten 100-step programs				
	Date & Time with Calendar Start/Stop	○	○	○			
	Timer	○	○	○	○		
	On-Screen Help or Prompts	○	○	○	○		
	RS232/RS485 Serial Output	○	○	○	○	RS232	
	USB A and USB B	○	○	○	○		
	Ethernet	○	○	○	○		
	DeviceNet [™] /Canbus, Modbus [®] , Profibus [®] (optional)	○		○			
Software support for LabVIEW [™] included	○		○				
Remote On/Off Capability	○		○				
safety & process protection	Safety Class (DIN 12876-1)	III	III	III	III	I	I
	Over-Temperature Protection	○	○	○	○	○	○
	Failsafe Heater Control	○	○	○	○	○	○
	High and Low Temperature Limits/Alarms	○	○	○	○	○	○
	Low-Liquid-Level Safety	○	○	○	○	○	○
	Alarm and Fault Indicators	Message	Message	Message	Message	Icon	Icon