Rack Mount and Benchtop Re-Circulating Liquid Chillers

HPLC-RM Series

Wakefield-Vette's HPLC-RM series is a refrigerant-free temperature control device mountable in a 19-inch rack. Rack mounting recovers desktop or floor space, permitting stacking of related devices and mobility, depending on the rack style. Air cooling frees the installation from dependence on facility cooling water. This model achieves high precision regulation of recirculating coolant using an air-cooled Peltier element. This device is self-contained with Peltier regulating element, fan cooled heat exchanger, pump, tank and power supply.

HPLC-RM-2

This Rack Mount Chiller may also be used in benchtop applications. Purchase the easy assembled mounting feet to utilize this high performance chiller in these circumstances.

	Series	Cooling capacity	Heating capacity	Cooling method	Temperature stability	Power supply	Circulating fluid	International standards
Air-cooled	 HPLC-RM-200	200 W	600 W	Peltier-type air-cooled	±0.01 to 0.03°C	Single-phase 100 to 240 VAC (50/60 Hz)	· Tap water · Ethylene glycol 20%	CE, cMETus (UL Standards)
	 HPLC-RM-800	800 W	1.4 kW					

Features:

- Fluid fill and drain ports (800W) on the front
- Mechanical sealless magnet pump eliminates shaft seal leaks
- Cooling/Heating capacities: 200W/600W, 800W/1.4kW
- Temperature stability: ±0.03°C or Better depending on load stability
- Power supply requirement: 100 ~ 240 VAC (200-800W)
- Circulating Fluid: water or 20% ethylene glycol
- Standards: CE, UL, RoHS

Applications:

Laser Machining
UV Curing Devices
X-Ray Instruments
Electron Microscopes
Atomizing Devices
Temperature Control of Paint Material
Packaging Lines
Cooling of Vacuum Pumps

Rack Mount and Benchtop Re-Circulating Liquid Chillers

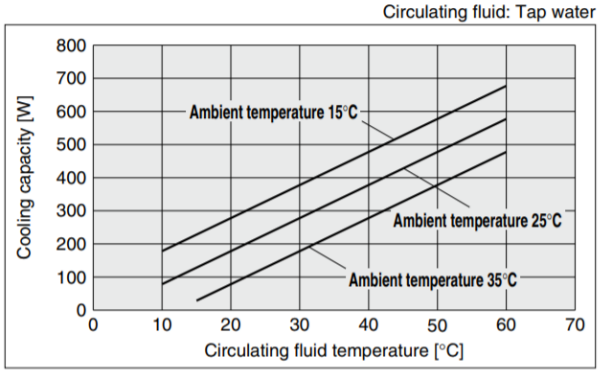
HPLC-RM-200

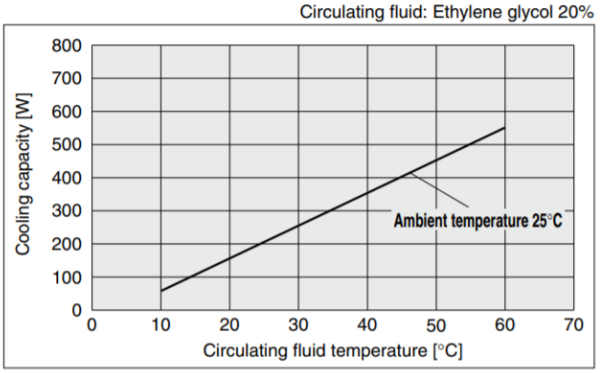
Part Number HPLC-RM-2
Available for Benchtop Applications

Cooling method		Thermoelectric device (Thermo-module)
Radiating method		Forced air cooling
Control method		Cooling/Heating automatic shift PID control
Ambient temperature/humidity		10 to 35°C, 35 to 80% RH (No condensation)
Circulating fluid system	**Circulating fluid**	Tap water, Ethylene glycol 20%
	Set temperature range	10.0 to 60.0°C (No condensation)
	Cooling capacity	200 W (Tap water)*1
	Heating capacity	600 W (Tap water)*1
	Temperature stability*3	±0.01 to 0.03°C
	Pump capacity	Refer to the performance charts.
	Tank capacity	Approx. 1.3 L
	Port size	Rc1/4
	Fluid contact material	Stainless steel, EPDM, NBR, Ceramics, PPE, Carbon, PP, PE, PPS (High pressure)
Electrical system	**Power supply**	Single-phase 100 to 240 VAC ±10%, 50/60 Hz
	Overcurrent protector	10 A
	Current consumption	5 A (100 V) to 2.5 A (240 V)
	Power consumption	440 W*1
	Alarm	Refer to "Alarm."
	Communications	RS-232C/RS-485
Weight		Approx. 14 kg
Safety standards		CE marking, UL (NRTL) standards

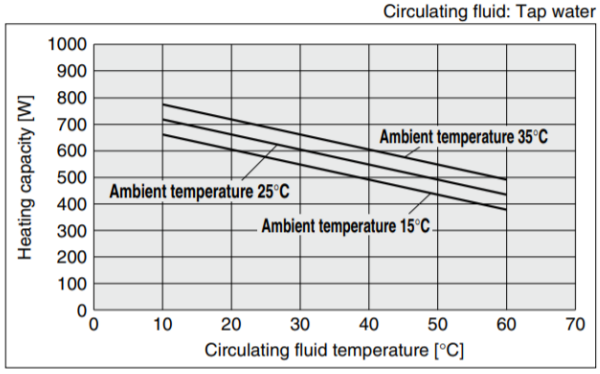
*1 Conditions: Set temperature 25°C, Ambient temperature 25°C, Circulating flow rate 3 L/min
*2 Conditions: Set temperature 25°C, Ambient temperature 25°C, Circulating flow rate 4 L/min
*3 The indicated values are with a stable load without turbulence in the operating conditions.

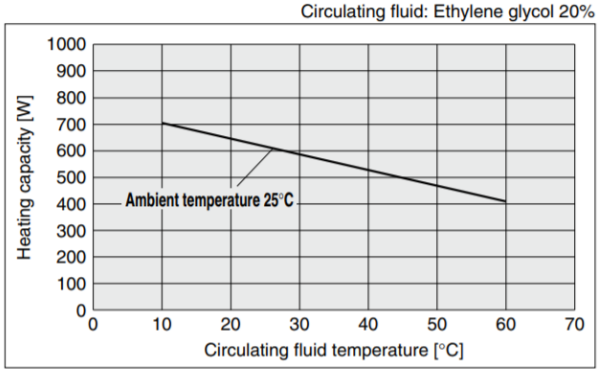
Cooling Capacity



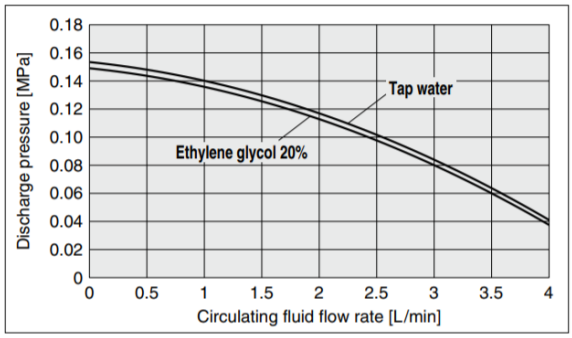


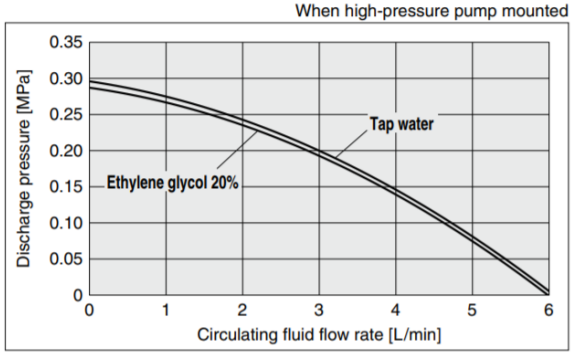
Heating Capacity





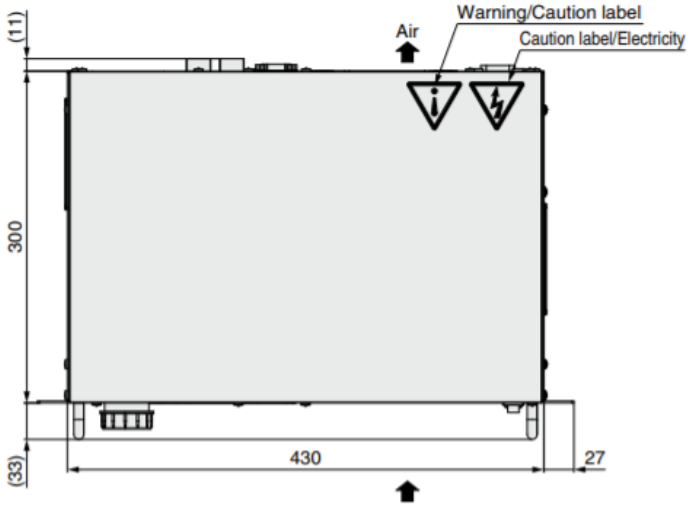
Pump Capacity

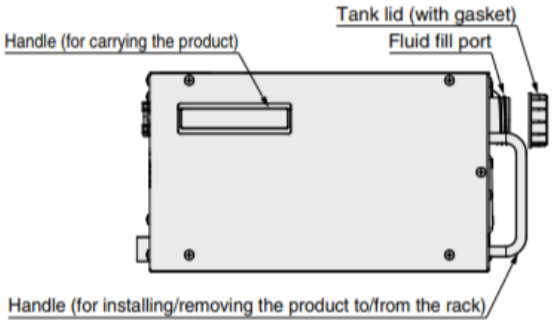


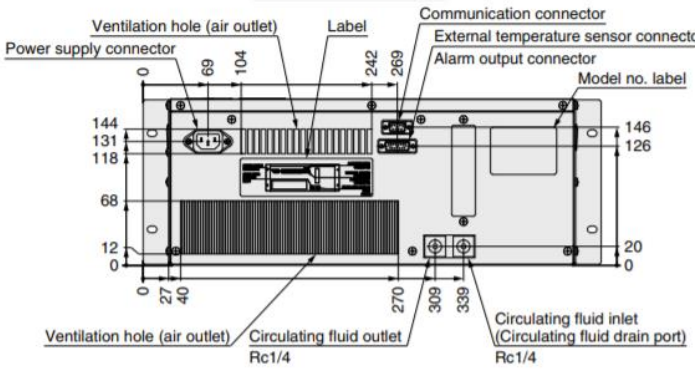


HPLC-RM-200

Dimensions

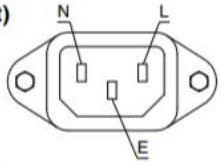






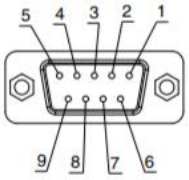
1. Power supply connector
IEC60320 C14 (or equivalent)

Pin no.	Signal contents
N	100-240 VAC
L	100-240 VAC
E	PE



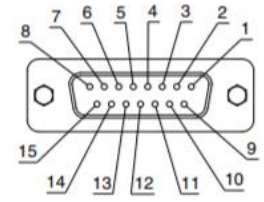
2. Communication connector
D-sub 9 pin (socket)
Holding screw: M2.6

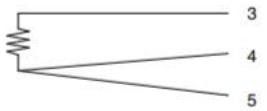
Pin no.	Signal contents	
	RS-232C	RS-485
1	Unused	BUS+
2	RD	Unused
3	SD	Unused
4	Unused	Unused
5	SG	SG
6-8	Unused	Unused
9	Unused	BUS–



3. External temperature sensor connector/Alarm output connector
D-sub 15 pin (socket)
Holding screw: M2.6

Pin no.	Signal contents
1-2	Unused
3	Terminal A of resistance temperature detector
4	Terminal B of resistance temperature detector
5	Terminal B of resistance temperature detector
6	Contact a for output cutoff alarm (open when alarm occurs)
7	Common for output cutoff alarm
8	Contact b for output cutoff alarm (closed when alarm occurs)
9	Contact a for upper/lower temp. limit alarm (open when alarm occurs)
10	Common for upper/lower temp. limit alarm
11	Contact b for upper/lower temp. limit alarm (closed when alarm occurs)
12-14	Unused
15	FG





Connection diagram of resistance temperature detector

Rack Mount and Benchtop Re-Circulating Liquid Chillers

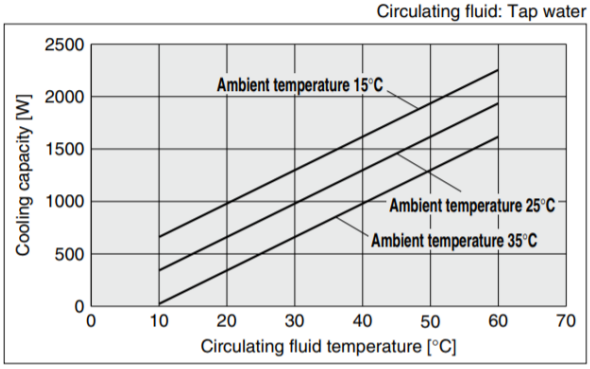
HPLC-RM-800

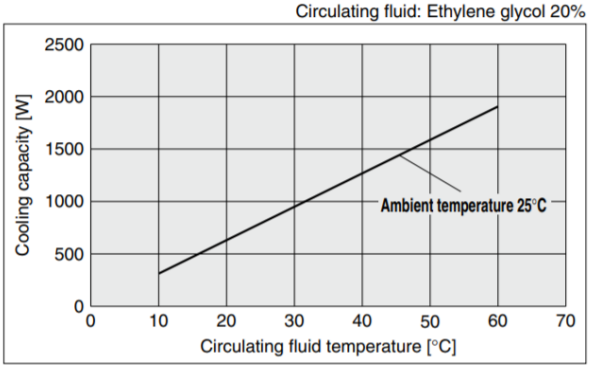
Cooling method		Thermoelectric device (Thermo-module)
Radiating method		Forced air cooling
Control method		Cooling/Heating automatic shift PID control
Ambient temperature/humidity		10 to 35°C, 35 to 80% RH (No condensation)
Circulating fluid system	Circulating fluid	Tap water, Ethylene glycol 20%
	Set temperature range	10.0 to 60.0°C (No condensation)
	Cooling capacity	800 W (Tap water)*2
	Heating capacity	1.4 kW (Tap water)*2
	Temperature stability*3	±0.01 to 0.03°C
	Pump capacity	Refer to the performance charts.
	Tank capacity	Approx. 1.3 L
	Port size	Rc3/8
	Fluid contact material	Stainless steel, EPDM, NBR, Ceramics, PPE, PPS, Carbon, PP, PE, Nylon, POM (HECR008, [illegible]), PVC (High pressure)
Electrical system	Power supply	Single-phase 100 to 240 VAC ±10%, 50/60 Hz
	Overcurrent protector	14 A
	Current consumption	10 A (100 V) to 4 A (240 V)
	Power consumption	900 W*2
	Alarm	Refer to "Alarm."
	Communications	RS-232C/RS-485
Weight		Approx. 31 kg
Safety standards		CE marking, UL (NRTL) standards

*1 Conditions: Set temperature 25°C, Ambient temperature 25°C, Circulating flow rate 3 L/min
*2 Conditions: Set temperature 25°C, Ambient temperature 25°C, Circulating flow rate 4 L/min
*3 The indicated values are with a stable load without turbulence in the operating conditions.

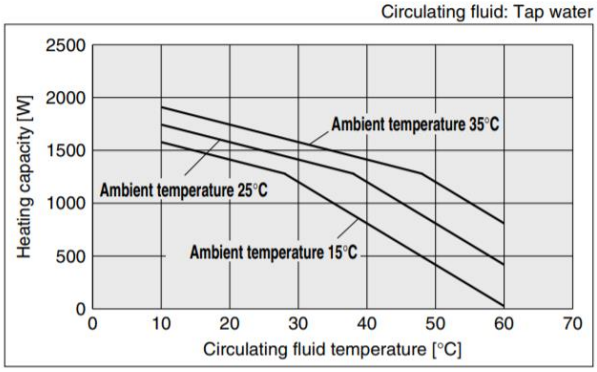
Part Number HPLC-RM-2
Available for Benchtop Applications

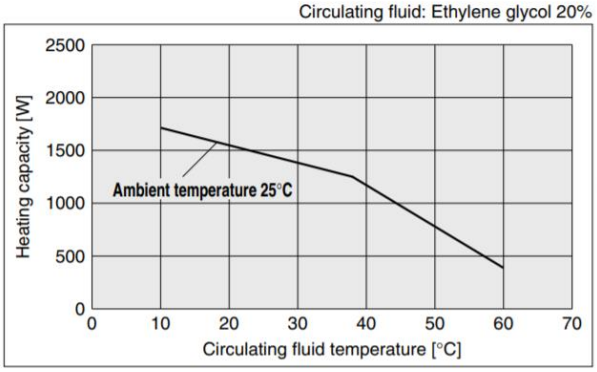
Cooling Capacity



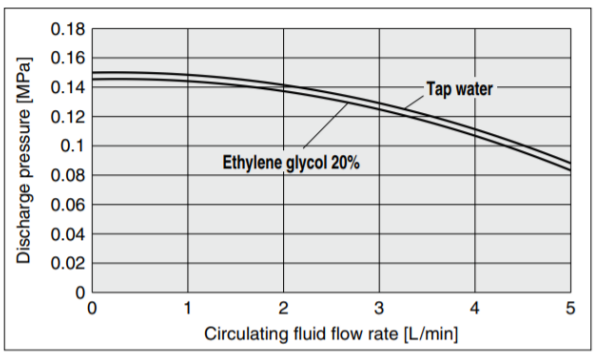


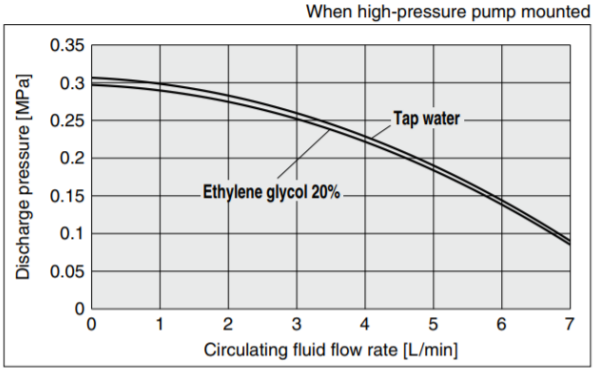
Heating Capacity





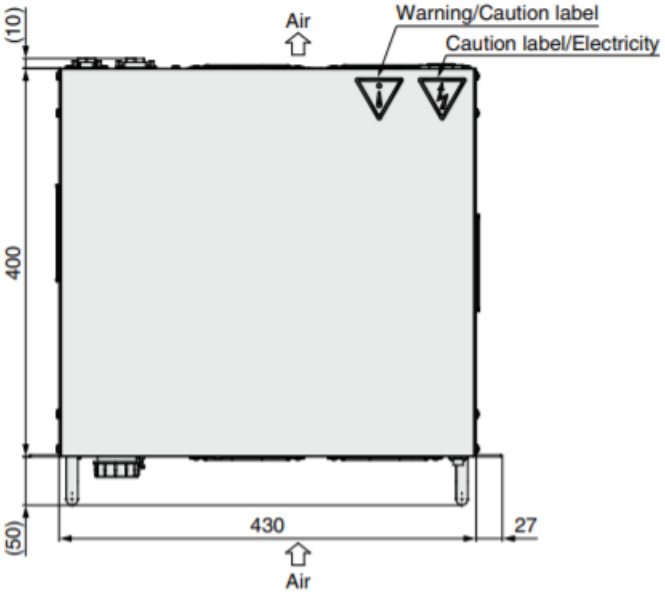
Pump Capacity

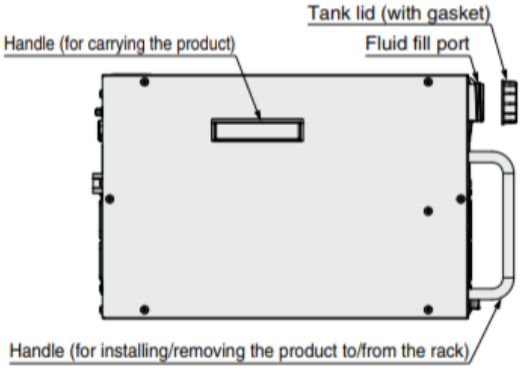


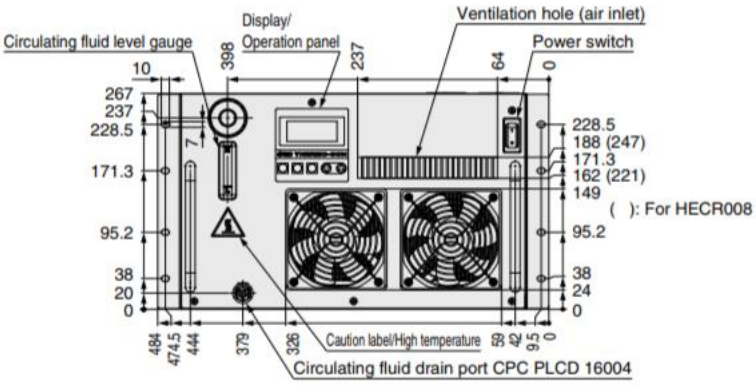


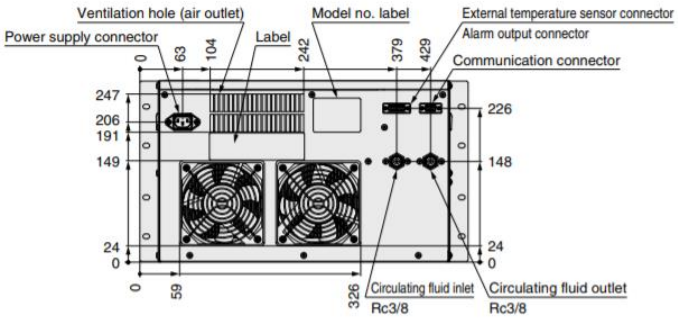
HPLC-RM-800

Dimensions



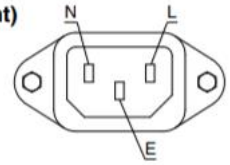






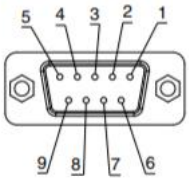
1. Power supply connector
IEC60320 C14 (or equivalent)

Pin no.	Signal contents
	HECR008
N	100-240 VAC
L	100-240 VAC
E	PE



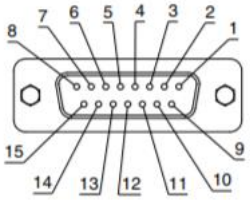
2. Communication connector
D-sub 9 pin (socket)
Holding screw: M2.6

Pin no.	Signal contents	
	RS-232C	RS-485
1	Unused	BUS+
2	RD	Unused
3	SD	Unused
4	Unused	Unused
5	SG	SG
6-8	Unused	Unused
9	Unused	BUS–



3. External temperature sensor connector/Alarm output connector
D-sub 15 pin (socket)
Holding screw: M2.6

Pin no.	Signal contents
1-2	Unused
3	Terminal A of resistance temperature detector
4	Terminal B of resistance temperature detector
5	Terminal B of resistance temperature detector
6	Contact a for output cutoff alarm (open when alarm occurs)
7	Common for output cutoff alarm
8	Contact b for output cutoff alarm (closed when alarm occurs)
9	Contact a for upper/lower temp. limit alarm (open when alarm occurs)
10	Common for upper/lower temp. limit alarm
11	Contact b for upper/lower temp. limit alarm (closed when alarm occurs)
12-14	Unused
15	FG



Connection diagram of resistance temperature detector

Mouser Electronics

Authorized Distributor

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Wakefield-Vette:

HPLC-RM-200 HPLC-RM-800

Mouser Electronics

Authorized Distributor

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Wakefield Thermal:

HPLC-RM-200 HPLC-RM-800