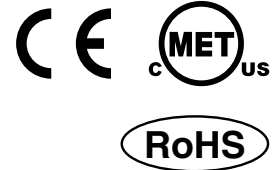


# Peltier-Type Chiller Thermo-con/ Rack Mount Type

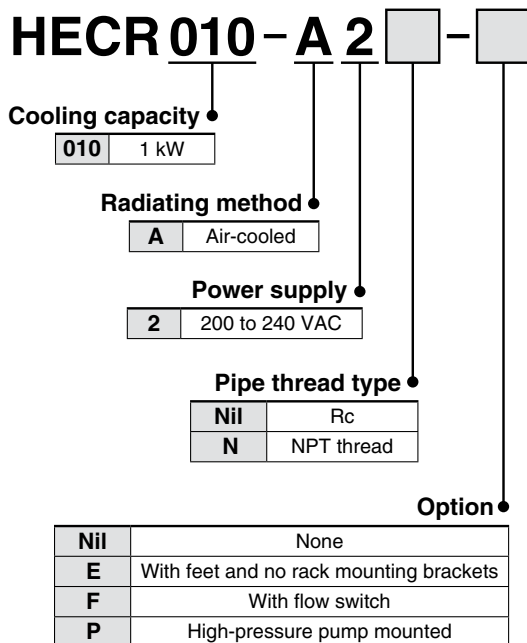
**Air-cooled**



- Cooling capacity **1 kW**
- Mountable in a 19-inch rack  
Saves space by mounting multiple equipment together in a rack.
- Temperature stability  
**±0.018 to 0.054°F**  
(±0.01 to 0.03°C)
- Set temperature range  
**50 to 140°F** (10 to 60°C)
- Power consumption **400 W** (with load factor 50%)  
Energy saving
- Low-noise design **54 dB** (with load factor 50% or less)  
Controls the number of fan rotations depending on the load, reducing noise when the cooling load is low.



## How to Order



## Specifications

Model		HECR010-A
<b>Cooling method</b>		Thermoelectric device (Thermo-module)
<b>Radiating method</b>		Forced air cooling
<b>Control method</b>		Cooling/Heating automatic shift PID control
<b>Ambient temperature/humidity</b>		50 to 95°F (10 to 35°C), 35 to 80%RH (No condensation)
<b>Circulating fluid system</b>	<b>Circulating fluid</b>	Water, 20% ethylene glycol
	<b>Set temperature range</b>	50 to 140°F (10 to 60°C) (No condensation)
	<b>Cooling capacity</b>	1 kW (Water) <small>Note 1)</small>
	<b>Heating capacity</b>	2 kW (Water) <small>Note 1)</small>
	<b>Temperature stability</b> <small>Note 2)</small>	±0.018 to 0.054°F (±0.01 to 0.03°C)
	<b>Pump capacity</b>	Refer to the performance charts.
	<b>Tank capacity</b>	Approx. 0.34 gal (1.3 L)
<b>Electrical system</b>	<b>Port size</b>	IN/OUT: Rc3/8, Drain: PLCD 16004
	<b>Wetted parts material</b>	Stainless steel, EPDM, NBR, Ceramics, PPE, Carbon, Polyethylene, Polypropylene
	<b>Power supply</b>	Single-phase 200 to 240 VAC ±10%, 50/60 Hz
<b>Overcurrent protector</b>		14 A
<b>Current consumption</b>		Max. 8 A (200 V)
<b>Communications</b>		RS-232C/RS-485
<b>Weight</b>		Approx. 73 lb (33 kg)
<b>Accessories</b>		Power supply connector, Operation Manual Power supply cable should be ordered as an option (sold separately) or prepared by the user.
<b>Safety standards</b>		CE marking, UL (NRTL) standards

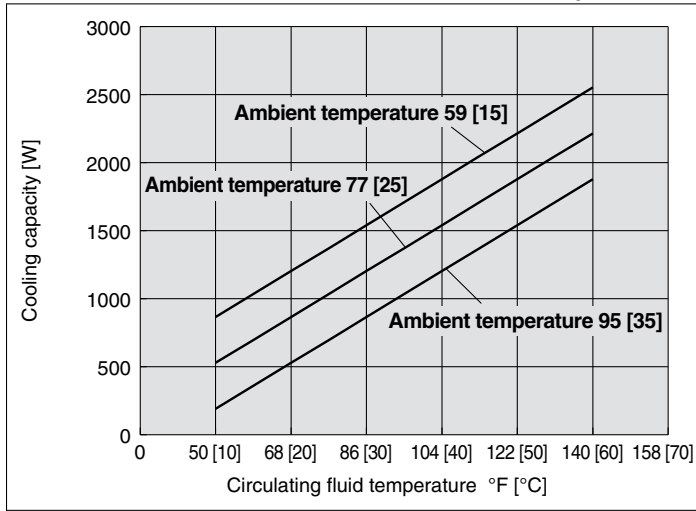
Note 1) Conditions: Set temperature 77°F (25°C), Ambient temperature 77°F (25°C), Circulating flow rate 1.05gal/min (4 L/min)

Note 2) The indicated values are with a stable load without turbulence in the operating conditions. It may be out of this range in some other operating conditions.

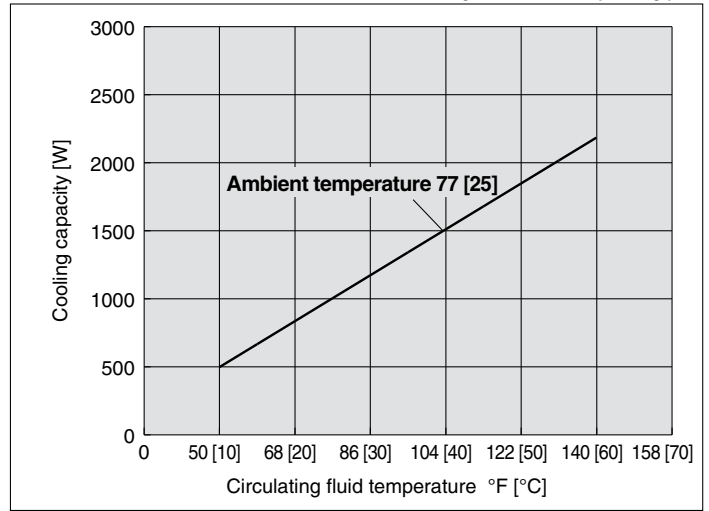
# Series HECR010

## Cooling Capacity

Circulating fluid: Water

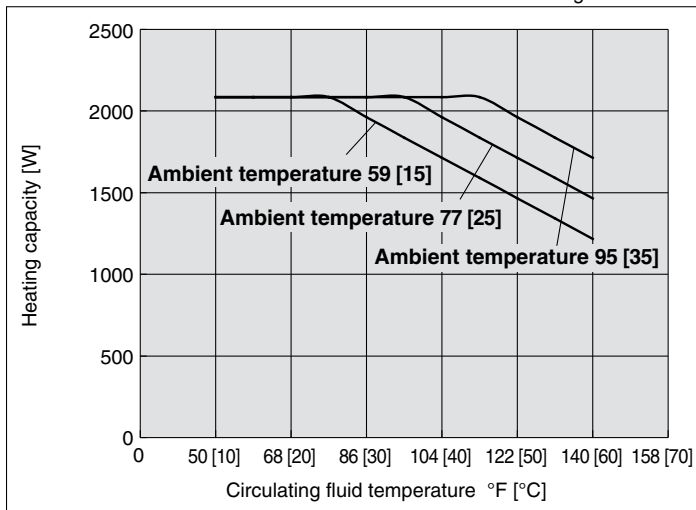


Circulating fluid: 20% ethylene glycol

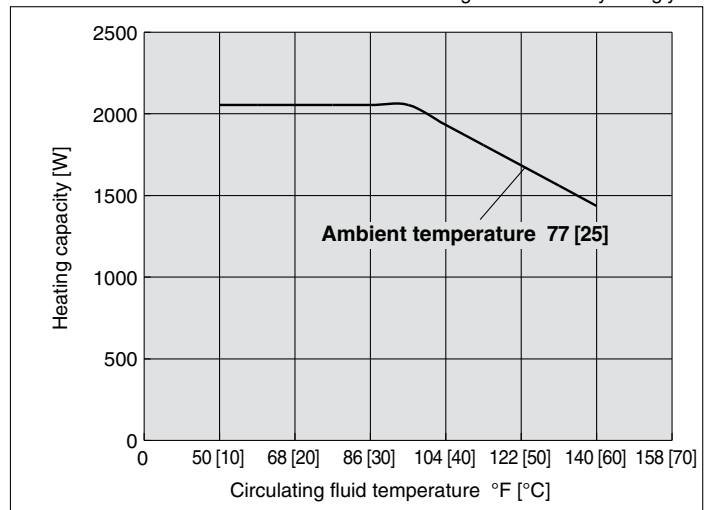


## Heating Capacity

Circulating fluid: Water

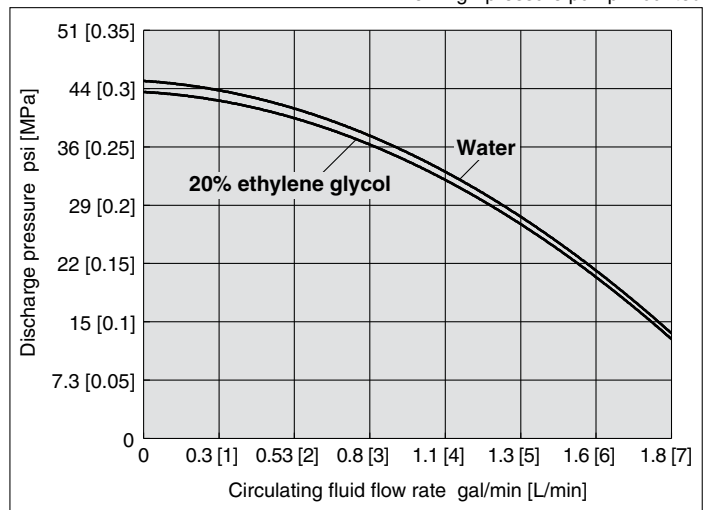
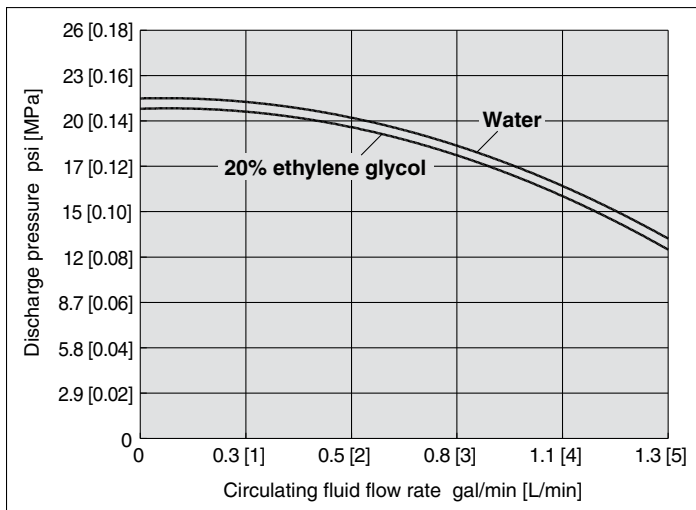


Circulating fluid: 20% ethylene glycol



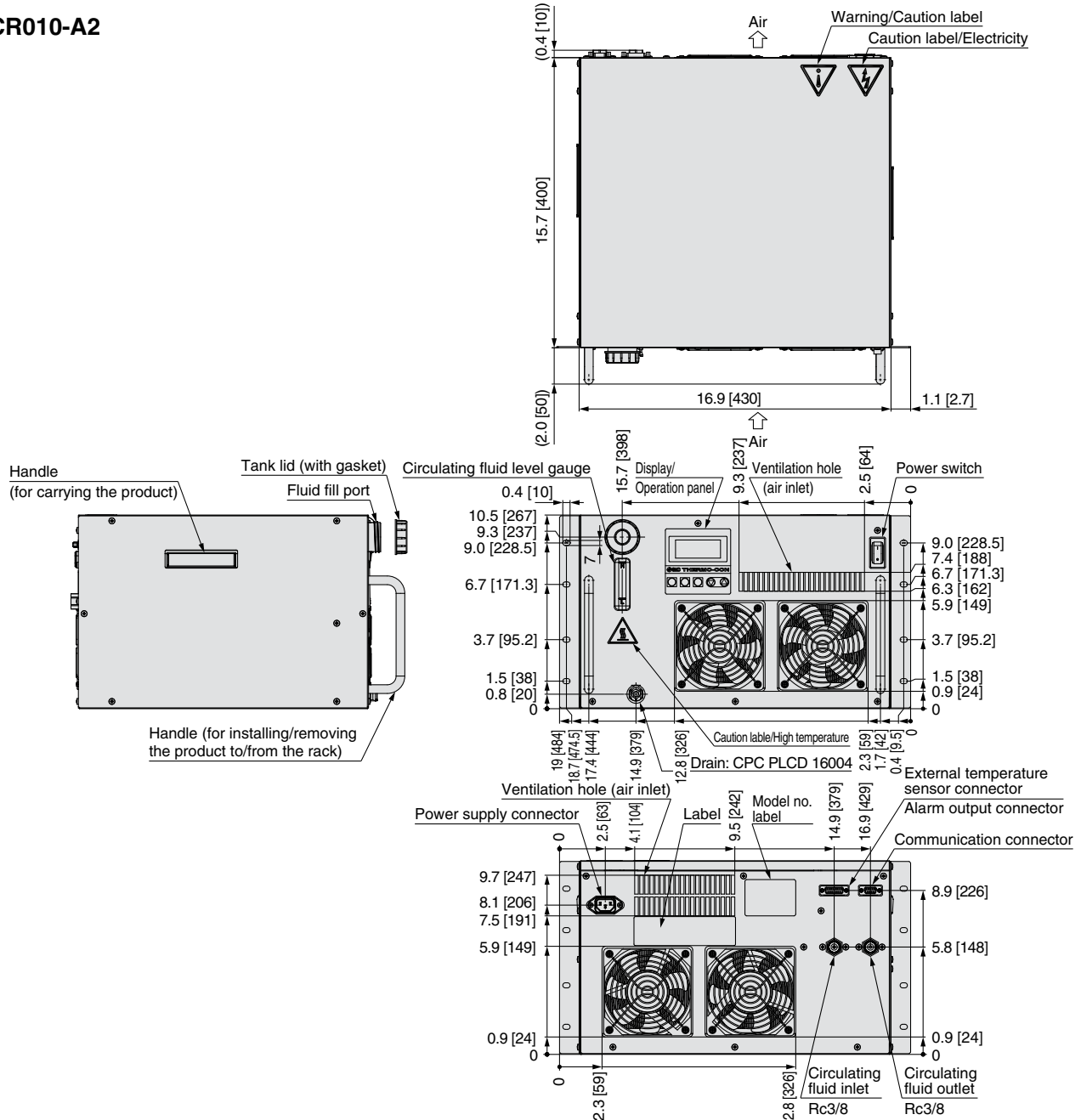
## Pump Capacity (Thermo-con Outlet)

When high-pressure pump mounted



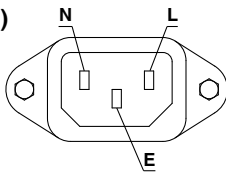
**Dimensions**

**HECR010-A2**



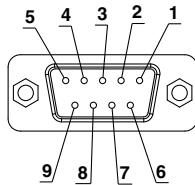
**1. Power supply connector  
IEC60320 C14 (or equivalent)**

Pin no.	Signal contents
<b>N</b>	200-240 VAC
<b>L</b>	200-240 VAC
<b>E</b>	PE



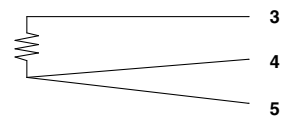
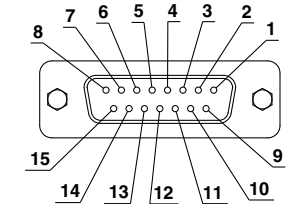
**2. Communication connector  
D-sub 9 pin (socket)  
Holding screw: M2.6**

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



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

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



Connection diagram of resistance temperature detector

# Series HECR010

## Options

Note) Options have to be selected when ordering the Thermo-con.  
It is not possible to add them after purchasing the unit.

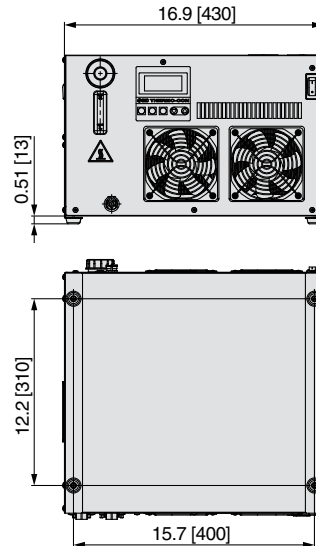
### **E** Option symbol With Feet and No Rack Mounting Brackets

Unit: inch [mm]

#### HECR010-A2□-E

- With feet and no rack mounting brackets

Rack mounting brackets and handles on the front side are removed as they are not necessary when the product is not mounted in a rack. This option has rubber feet for installing the product on the floor.



### **F** Option symbol With Flow Switch

#### HECR010-A2□-F

- With flow switch

This is an ON/OFF switch detecting low levels of the circulating fluid.  
When the fluid volume is 1 L/min or less, "ERR16" is displayed and the Thermo-con stops.  
The flow switch is built into the Thermo-con.

### **P** Option symbol High-pressure Pump Mounted

#### HECR010-A2□-P

- High-pressure pump mounted

Possible to choose a high-pressure pump in accordance with user's piping resistance.  
Cooling capacity will decrease by approx. 50 W by heat generated in the pump.

**⚠ Safety Instructions** Be sure to read "Handling Precautions for SMC Products" (M-E03-3) before using.

**SMC Corporation of America**  
10100 SMC Blvd., Noblesville, IN 46060  
[www.smcusa.com](http://www.smcusa.com)

**SMC Pneumatics (Canada) Ltd.**  
[www.smc Pneumatics.ca](http://www.smc Pneumatics.ca)

(800) SMC.SMC1 (762-7621)  
e-mail: [sales@smcusa.com](mailto:sales@smcusa.com)  
International inquiries: [www.smcworld.com](http://www.smcworld.com)

