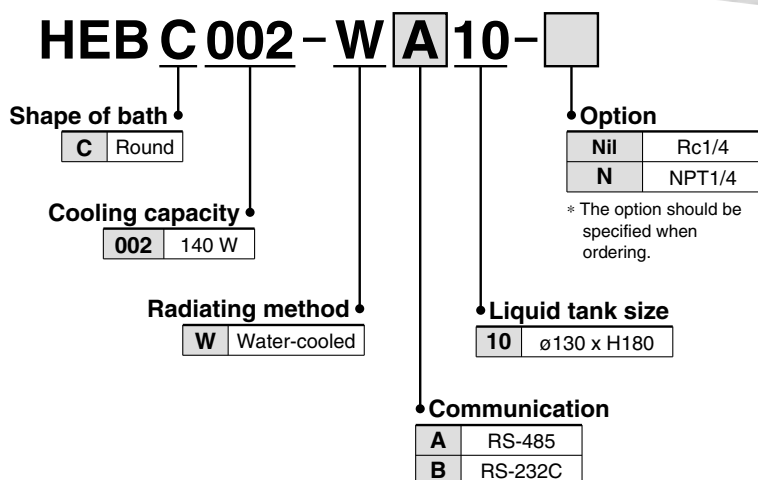


Peltier-Type Thermoelectric Bath Series *HEB*



How to Order



Specifications (For details, please consult our "Product Specifications" information.)

Model		HEBC002-WA10	HEBC002-WB10
Cooling/Heating method		Peltier element (Thermo-module, Thermoelectric device)	
Radiating method		Liquid tank: Water-cooled, Controller: Forcible air-cooled	
Control method		Cooling/Heating automatic shift PID control	
Ambient temperature/humidity		10 to 35°C, 35 to 80%RH	
Recirculating fluid system	Application fluid <small>Note 1)</small>	Water, Fluorinated liquid (GALDEN® HT135, HT200, Fluorinert™ FC-3283)	
	Set temperature range <small>Note 1) Note 5)</small>	-15.0 to 60.0°C (5 to 60°C for water)	
	Cooling capacity <small>Note 2)</small>	140 W (Water)	
	Heating capacity <small>Note 2)</small>	300 W (Water)	
	Temperature stability <small>Note 3)</small>	±0.01°C	
	Temperature distribution <small>Note 3)</small>	±0.02°C	
Tank dimension		Internal diameter ø130 x Liquid level 188 mm	
Facility water system	Temperature	10 to 35°C (no condensation)	
	Max. operating pressure	0.5 MPa or less	
	Flow rate <small>Note 4)</small>	3 to 5 ℓ/min	
	Port size	IN/OUT: Rc1/4	
	Wetted material	Stainless steel 303, Stainless steel 304, FEP, A6063 (anodized)	
Electrical system	Power supply	Single phase, 100 to 240 VAC, 50/60 Hz	
	Overcurrent protector	10A	
	Current consumption	4A (100 VAC) to 2A (240 VAC)	
	Alarm (With alarm output connector)	1) Overheating of liquid tank (which activates the thermostat) 2) Controller output voltage reduction 3) Controller fan rotation stopped	
Communication		RS-485	RS-232C
Mass		Liquid tank: Approx. 8.5 kg (Empty) Controller: Approx. 6.5 kg	
Cable		Power supply cable (2 m), DC cable, Signal cable (3 m each)	

Note 1) GALDEN® is a trademark of Solvay Solexis and Fluorinert™ is a trademark of 3M. For other fluids, contact SMC.

Note 2) Determined under the following conditions: water as the recirculating fluid, set temperature 25°C, facility water temperature 25°C, flow rate 3 ℓ/min, ambient temperature 25°C, and sealed from outside air with a lid.

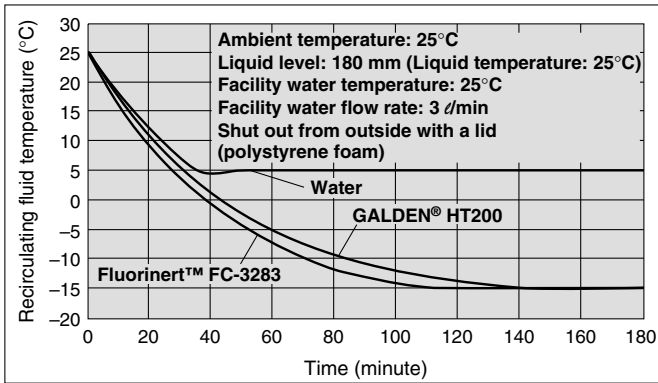
Note 3) Differs depending on operating conditions.

Note 4) An appropriate range is from 3 to 5 ℓ/min. To prevent damage to the radiating system, do not supply a flow over the maximum flow rate of 8 ℓ/min.

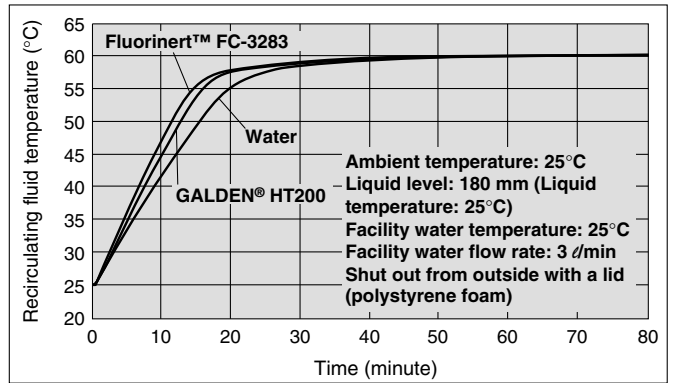
Note 5) When the temperature is set high, the liquid temperature inside of the liquid tank and the temperature inside of the thermostat could differ greatly depending on the heating mode at start-up, and the thermostat could then begin operating and stop the output.

Series HEB

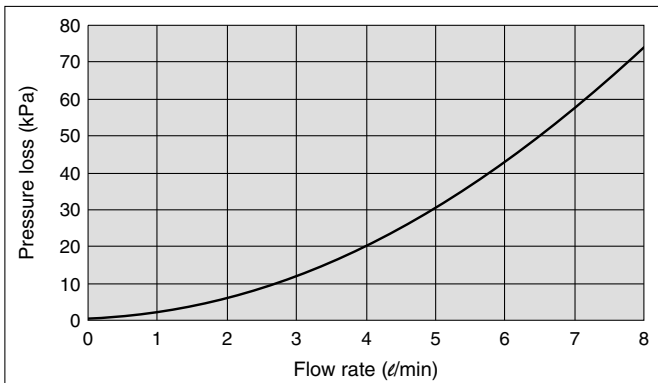
Cooling Capacity



Heating Capacity

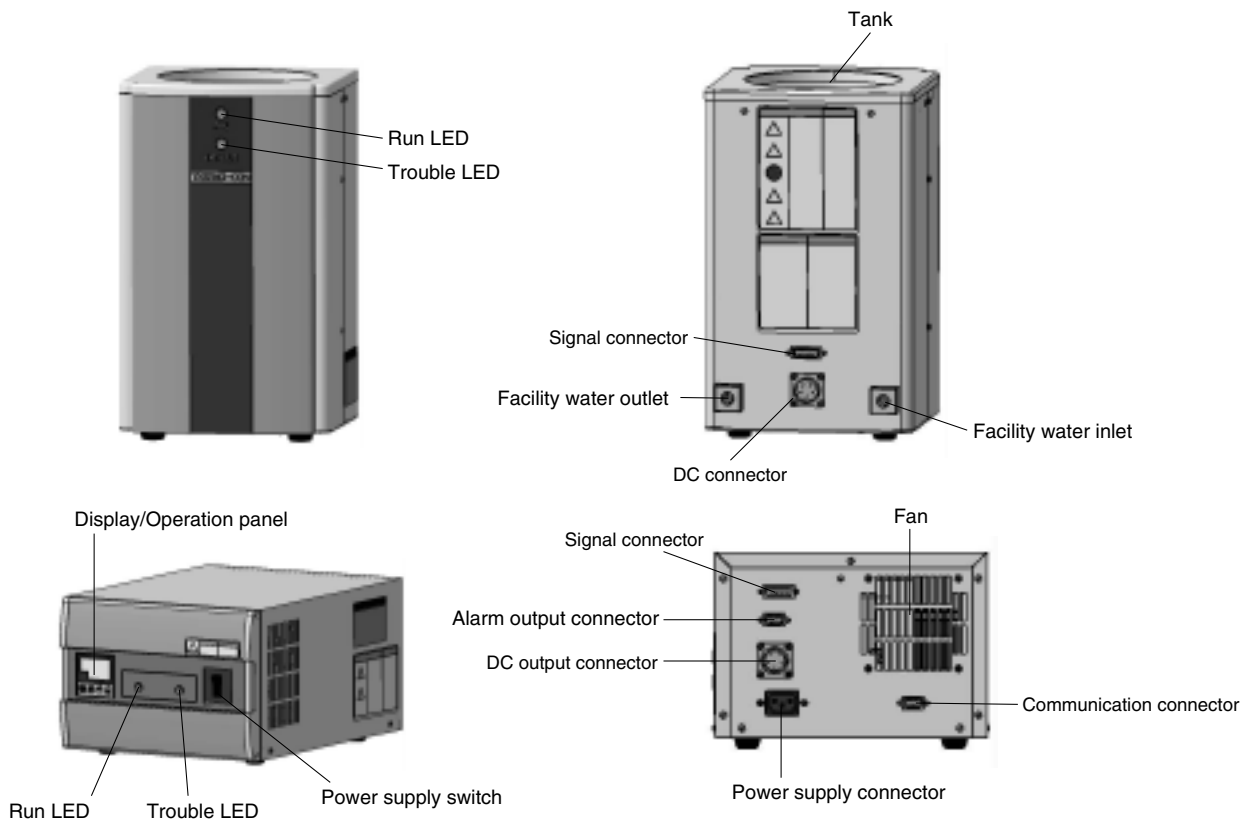


Pressure Loss in Facility Water Circuit



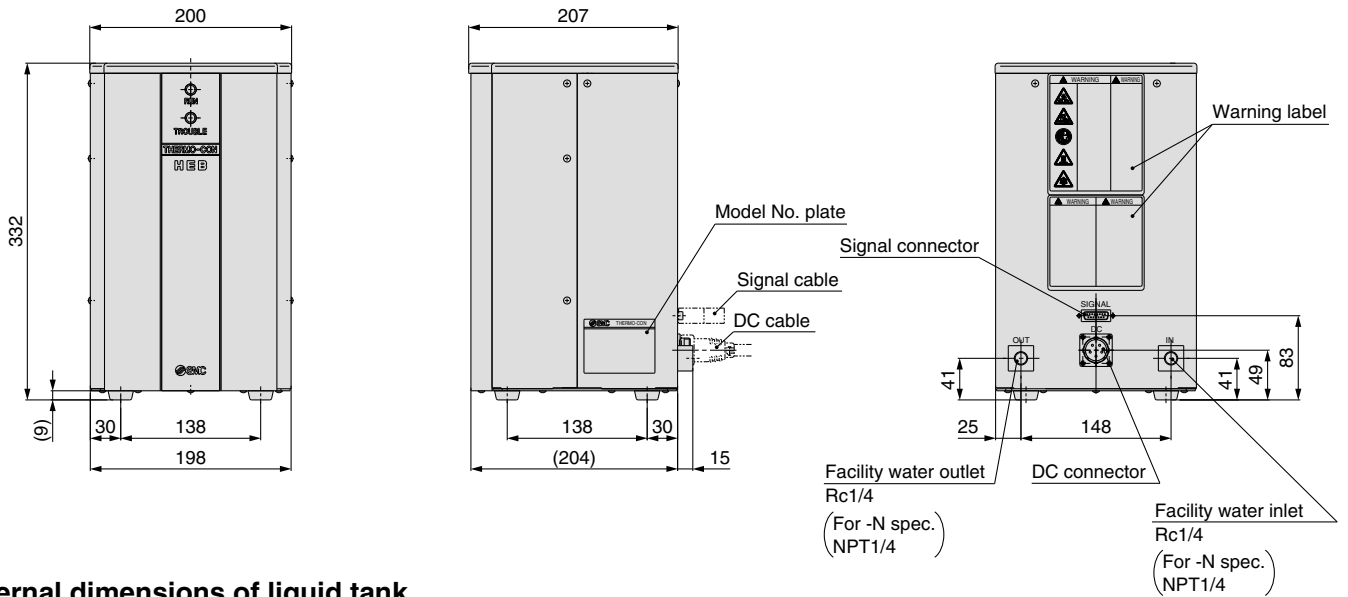
The values shown on the performance chart are representative and not guaranteed. Allow a margin for safety to device when choosing the product.

Parts Description

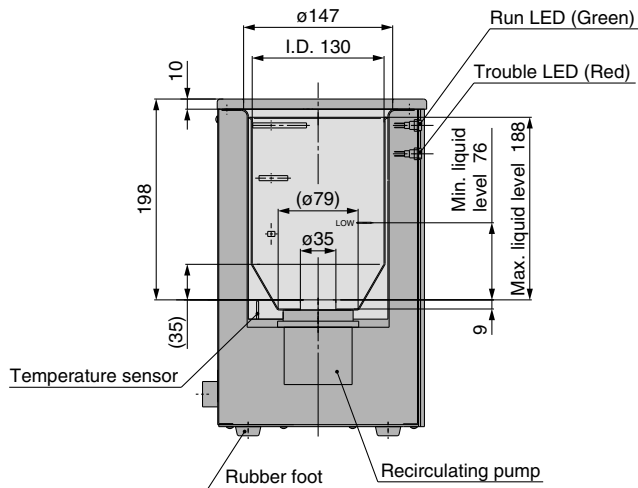


Dimensions

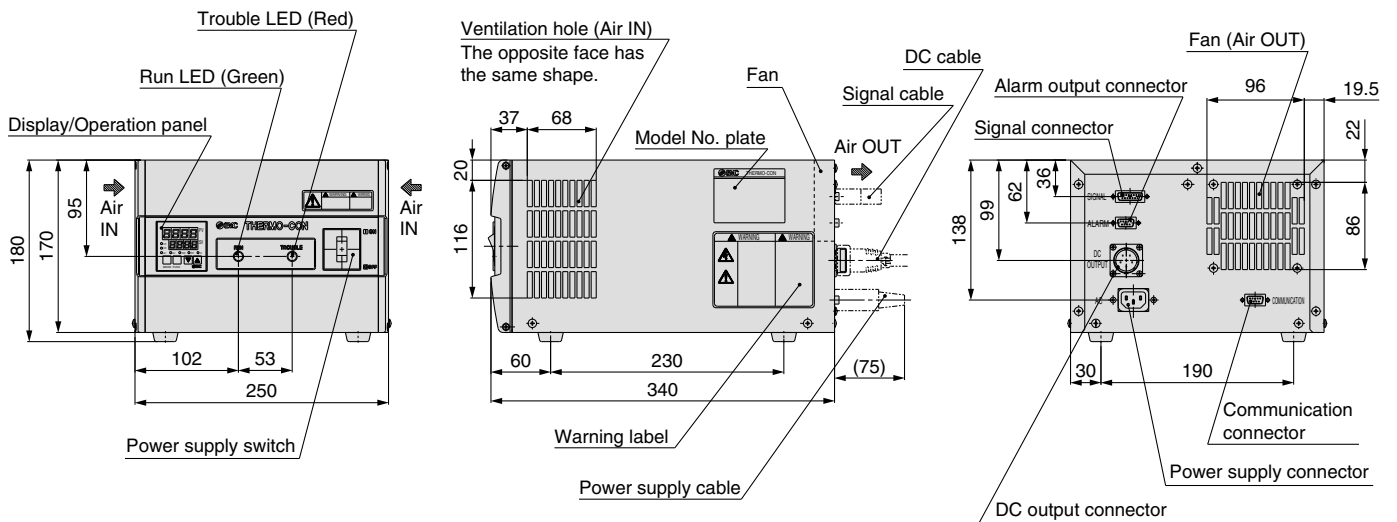
Liquid tank



Internal dimensions of liquid tank



Controller



Series HEB

Maintenance

Maintenance of the Thermoelectric Bath is performed only in the form of return to and repair at SMC's site. As a rule, SMC will not conduct on-site maintenance. Separately, the following parts have a limited life and need to be replaced before the life ends.

Parts Life Expectation

Description	Expected life	Possible failure
Recirculating pump	3 to 5 years	The recirculating fluid cannot be fed due to worn bearing and/or insufficient capacity of electrolytic capacitor, which results in temperature controlling failure.
Fan	5 to 10 years	The capacity of the fan lowers due to the end of lubricating performance of the bearing, which results in increase of internal temperature of the Controller. The overheat protective function at the inside of the power supply starts, the output stops and the display goes off.
DC power supply	5 to 10 years	Abnormal voltage is generated and the display goes off due to insufficient capacity of electrolytic capacitor.