Thermo-chillers (Circulating Fluid Temperature Controllers)

Water-cooled Thermo-chiller/High-performance Type HRW

- Direct heat exchanger for in-plant circulating fluid
- Can control the temperature over a wide range since a compressor is not required.
- Suitable for semiconductor processing equipment with a wide variety of features, such as high-temperature stability, a wide temperature range, failure diagnosis, external communication, etc.
- Compliant with UL Standards, SEMI Standards, CE-marking
- It is possible to select the inverter type.

Series	Set temperature range	Cooling capacity	Temperature stability	Cooling method	Circulating fluid
HRW	20 to 90°C	2 kW, 8 kW 15 kW, 30 kW	±0.3°C	Water-cooled type (Without compressor)	Fluorinated fluid, Tap water, Deionized water, Ethylene glycol aqueous solution (60%)

Thermo-cons/Thermoelectric Baths (Peltier-Type Temperature Control Equipment)

Peltier-Type Thermo-con/Rack Mount Type HECR

- Good space utilization: Mountable in a 19-inch rack
  Saves space by allowing multiple pieces of equipment to be mounted together in a rack.
- Temperature stability: ±0.01°C to 0.03°C
- Set temperature range: 10°C to 60°C
- Cooling capacity: 200 W, 400 W, 510 W, 800 W, 1 kW
- Power consumption: 200 W, 400 W

Series	Set temperature range	Cooling capacity	Temperature stability	Cooling method
HECR002	10 to 60°C	200 W	±0.01 to 0.03°C	Peltier-type air-cooled
HECR004	10 to 60°C	400 W	±0.01 to 0.03°C	Peltier-type air-cooled
HECR006	10 to 60°C	510 W	±0.01 to 0.03°C	Peltier-type air-cooled
HECR008	10 to 60°C	800 W	±0.01 to 0.03°C	Peltier-type air-cooled
HECR010	10 to 60°C	1 kW	±0.01 to 0.03°C	Peltier-type air-cooled

Peltier-Type Thermo-con HEC

High-precision chiller

- For applications requiring high-precision temperature control
- High-precision, refrigerant-free temperature control equipment that uses a Peltier device
- Simple structure and high reliability
- Can easily be built into equipment due to its compact and low-vibration design
- Compatible with a wide range of power supply voltages
- Compliant with UL Standards, CE-marking

Series	Set temperature range	Cooling capacity	Temperature stability	Cooling method	Circulating fluid
HEC	10 to 60°C	230 W 600 W	±0.01 to 0.03°C	Peltier-type air-cooled	Tap water
HEC	10 to 60°C	140 W 320 W	±0.01 to 0.03°C	Peltier-type water-cooled	Tap water Ethylene glycol aqueous solution (20%)
HEC	10 to 60°C	600 W 1200 W	±0.01 to 0.03°C	Peltier-type water-cooled	Tap water Fluorinated fluid

Peltier-Type Thermoelectric Bath HEB

High-precision thermoelectric bath

- High-precision temperature control bath that uses a Peltier device
- Compact and low noise
- Minimal up-down temperature distribution by a unique agitation method

Series	Set temperature range	Max. cooling capacity	Temperature stability	Cooling method	Circulating fluid
HEB	−15 to 60°C	140 W 280 W	0.01°C	Round type Peltier-type water-cooled	Tap water, Fluorinated fluid

Thermo-cons/Thermoelectric Baths (Peltier-Type Temperature Control Equipment)

Peltier-Type Thermoelectric Bath INR

- High-precision temperature control bath that uses a Peltier device
- Compact and low noise
- Minimal up-down temperature distribution by a unique agitation method

Series	Set temperature range	Max. cooling capacity	Temperature stability	Cooling method	Circulating fluid
INR-244-696A	−15 to 60°C	280 W	±0.02°C	Peltier-type water-cooled	Tap water Ethylene glycol aqueous solution Fluorinated fluid (Square type can only be used at room temperature.)
INR-244-745	0 to 60°C	140 W	±0.03°C	Peltier-type water-cooled	
INR-244-733	0 to 60°C	140 W	±0.03°C	Peltier-type water-cooled	
INR-244-747	0 to 60°C	320 W	±0.03°C	Peltier-type water-cooled	
INR-244-736	0 to 60°C	320 W	±0.03°C	Peltier-type water-cooled	
INR-244-746	0 to 60°C	320 W	±0.03°C	Peltier-type water-cooled	
INR-244-734	0 to 60°C	320 W	±0.03°C	Peltier-type water-cooled	
INR-244-749	0 to 60°C	320 W	±0.03°C	Peltier-type water-cooled	
INR-244-748	0 to 60°C	320 W	±0.03°C	Peltier-type water-cooled	
INR-244-757	0 to 60°C	220 W	±0.03°C	Peltier-type air-cooled	

Peltier-Type Chemical Thermo-con HED

Fluoropolymer temperature control equipment for chemical liquids

- Heat exchanger for direct temperature control that uses a Peltier device
- Compatible with a wide range of chemical liquids through the use of a fluororesin heat exchanger
- Compliant with UL Standards, CE-marking

Series	Set temperature range	Cooling capacity	Temperature stability	Cooling method	Circulating fluid
HED	10 to 60°C	300 W 500 W 750 W	±0.1°C	Peltier-type water-cooled	Deionized water, Fluorinated fluid, Ammonia hydrogen peroxide solution, etc.

Air Temperature Controllers

Peltier-Type Air-Thermo HEA

- High-precision, compact temperature control equipment that uses a Peltier device
- Compatible with localized and small-volume temperature control

Series	Set temperature range	Cooling capacity	Temperature stability	Cooling method	Fluid
HEA	0 to 50°C	22 W	±0.1°C	Peltier-type air-cooled	Air

Thermo-dryer with Air Temperature Adjustment Function IDH□

- Stable supply of temperature and pressure controlled dry clean air
  Can supply compressed air with the same conditions and quality regardless of the season
- Application example:
  Supplying compressed air with constant conditions to air bearings mounted on a tool
- Built-in filter
  Nominal filtration: 0.01 µm (99.9% filtration efficiency)
  Outlet oil mist concentration: Max. 0.01 mg/m^3 (ANR)
  Outlet cleanliness: Particles of 0.3 µm or more: 3.5 particles/L (ANR) or less
- Compatible with power supplies from around the world
  Single-phase 100, 200, 230 VAC (50/60 Hz)

Series	Air flow capacity [L/min (ANR)]	Outlet air temperature adjustment range	Outlet air set pressure range	Outlet air temperature stability	Cooling method
IDH□4	100 to 500	15 to 30°C	0.15 to 0.85 MPa	±0.1	Heater operation PID control
IDH□6	200 to 800	15 to 30°C	0.15 to 0.85 MPa	±0.1	