Constant-temperature water circulating system

[Chiller]

**General Guide**
- Hot water circulator / High temperature circulator
  - Hot water circulator HC-03/06/09/12/15/24
- Heat exchanger
  - TEX-25A
- Chiller for open circuit
  - Coolpomp CP-80R/150R
  - Coolnit CL-80R/150R/300N/600N
- Energy saving stocked ice chiller
  - Stock chiller YW-12
- Constant temperature water bath with exocyclic coolnit bath
  - Coolnit bath EL-BF/15F
  - Thermo supplier EZ-101/EZL-81F

**Compact CH series**
- Model Selection Guide for Compact CH series
  - Cooling pump
    - CH-151AF/601A
    - CH-151BF/601B
    - CH-402B/802B
    - CH-802BF
- Pump units for Compact CH series
  - Pump units (100V) P-1121/310
  - Pump units (200V) P-320/420/520

**Simple Chiller series**
- Model Selection Guide for Simple Chiller series
- Simple series
  - Cooling pump
    - CHA-500/900/1500/2200
    - CHW-900/1500/2200

**Large Chiller CH/Large inverter chiller CHV series**
- Model Selection Guide for CH/CHV series
- Large inverter chiller CHV series: Water-cooled integrated type
  - Cooling pump
    - CHV-750W/1500W/2200W/3750W
- Large chiller CH series: Water-cooled integrated type
  - Cooling pump
    - CH-6000W-18000W
- Large inverter chiller CHV series: Air-cooled separate type
  - Cooling pump
    - CHV-750AS-6000AS
- Large inverter CH series: Air-cooled integrated type, Outdoor use
  - Cooling pump
    - CH-1500ASO-7500ASO
- Ultra low temperature circulator/Chiller unit for low temperature range
  - Super cool SC-50
  - Chiller unit for low temperature range
General guide

Circulation the hot water/Fluorine-based heat

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Heater output</th>
<th>Heating medium</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.168</td>
<td>HC-03</td>
<td>Closed circuit</td>
<td>5.0kW</td>
<td>Tap water</td>
<td>+40°C ~ +180°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.168</td>
<td>HC-06</td>
<td>Closed circuit</td>
<td>6.0kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.168</td>
<td>HC-09</td>
<td>Closed circuit</td>
<td>6.0kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.168</td>
<td>HC-12</td>
<td>Closed circuit</td>
<td>12.0kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.168</td>
<td>HC-15</td>
<td>Closed circuit</td>
<td>15.0kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.168</td>
<td>HC-24</td>
<td>Closed circuit</td>
<td>24.0kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.169</td>
<td>TFX-25A</td>
<td>Closed circuit</td>
<td>2.5kW</td>
<td>GALDEN H127F</td>
<td>+75°C ~ +200°C</td>
<td>±2.0°C</td>
</tr>
</tbody>
</table>

The line-up of chiller for open circuit (closed circuit)

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Compressor output</th>
<th>Cooling capacity</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.170</td>
<td>CP-90R</td>
<td>Open circuit</td>
<td>Air-cooled, 75W</td>
<td>approx. 140W</td>
<td>10°C ~ 70°C</td>
<td>±1.5 ~ 2.0°C</td>
</tr>
<tr>
<td>P.170</td>
<td>CP-150R</td>
<td>Open circuit</td>
<td>Air-cooled, 150W</td>
<td>approx. 220W</td>
<td>10°C ~ 70°C</td>
<td>±0.3 ~ 0.5°C</td>
</tr>
<tr>
<td>P.171</td>
<td>CL-80R</td>
<td>Open circuit</td>
<td>Air-cooled, 75W</td>
<td>approx. 140W</td>
<td>10°C ~ 70°C</td>
<td>±0.3 ~ 0.5°C</td>
</tr>
<tr>
<td>P.171</td>
<td>CL-150R</td>
<td>Open circuit</td>
<td>Air-cooled, 150W</td>
<td>approx. 220W</td>
<td>10°C ~ 70°C</td>
<td>±0.3 ~ 0.5°C</td>
</tr>
<tr>
<td>P.171</td>
<td>CL-300N</td>
<td>Open circuit</td>
<td>Air-cooled, 300W</td>
<td>approx. 410W</td>
<td>-15°C ~ +70°C</td>
<td>±0.5 ~ 0.9°C</td>
</tr>
<tr>
<td>P.171</td>
<td>CL-600N</td>
<td>Open circuit</td>
<td>Air-cooled, 600W</td>
<td>approx. 790W</td>
<td>-15°C ~ +70°C</td>
<td>±0.5 ~ 0.9°C</td>
</tr>
</tbody>
</table>

Utilize melting heat of ice which was stored during day

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Compressor output</th>
<th>Cooling capacity</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.173</td>
<td>TW-12</td>
<td>Closed circuit</td>
<td>Air-cooled, 75W</td>
<td>approx. 150W</td>
<td>around 0°C</td>
<td>—</td>
</tr>
</tbody>
</table>

External circulation while using water bath

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Compressor output</th>
<th>Cooling capacity</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.174</td>
<td>EL-1F</td>
<td>Closed circuit</td>
<td>Air-cooled, 150W</td>
<td>approx. 250W</td>
<td>10°C ~ +70°C</td>
<td>±0.1 ~ 0.3°C</td>
</tr>
<tr>
<td>P.175</td>
<td>EZ-101</td>
<td>Open circuit</td>
<td>Air-cooled, 150W</td>
<td>approx. 250W</td>
<td>10°C ~ +70°C</td>
<td>±0.1 ~ 0.3°C</td>
</tr>
<tr>
<td>P.175</td>
<td>EZL-101</td>
<td>Open circuit</td>
<td>Air-cooled, 150W</td>
<td>approx. 250W</td>
<td>10°C ~ +70°C</td>
<td>±0.1 ~ 0.3°C</td>
</tr>
</tbody>
</table>

The Standard Small Chiller unit "Compact CH series"

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Compressor output</th>
<th>Cooling capacity</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.178</td>
<td>CH-15A1</td>
<td>Closed circuit</td>
<td>Air-cooled, 150W</td>
<td>approx. 140W</td>
<td>10°C ~ +25°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>P.179</td>
<td>CH-60A1</td>
<td>Closed circuit</td>
<td>Air-cooled, 600W</td>
<td>approx. 250W</td>
<td>10°C ~ +25°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>P.180</td>
<td>CH-60B1</td>
<td>Closed circuit</td>
<td>Air-cooled, 600W</td>
<td>approx. 250W</td>
<td>10°C ~ +25°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>P.180</td>
<td>CH-602B</td>
<td>Closed circuit</td>
<td>Air-cooled, 600W</td>
<td>approx. 250W</td>
<td>10°C ~ +25°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>P.181</td>
<td>CH-802BF</td>
<td>Closed circuit</td>
<td>Air-cooled, 750W</td>
<td>approx. 250W</td>
<td>10°C ~ +25°C</td>
<td>±2.0°C</td>
</tr>
</tbody>
</table>

Simple chiller series can respond to various needs

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Compressor output</th>
<th>Cooling capacity</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.186</td>
<td>CMA-500-2200</td>
<td>Closed circuit</td>
<td>Air-cooled, 0.5kW</td>
<td>approx. 10kW</td>
<td>13°C ~ +25°C</td>
<td>±0.2°C</td>
</tr>
<tr>
<td>P.187</td>
<td>CMA-900-2200</td>
<td>Closed circuit</td>
<td>Air-cooled, 1.5kW</td>
<td>approx. 15kW</td>
<td>13°C ~ +25°C</td>
<td>±0.2°C</td>
</tr>
</tbody>
</table>

Large chiller "CH/CHV series" Can be customized

<table>
<thead>
<tr>
<th>Page</th>
<th>Model</th>
<th>Circulation</th>
<th>Compressor output</th>
<th>Cooling capacity</th>
<th>Temp. range</th>
<th>Control accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.191</td>
<td>CH-150A50</td>
<td>Closed circuit</td>
<td>Air-cooled, 1.5kW</td>
<td>approx. 15kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.192</td>
<td>CH-220A50</td>
<td>Closed circuit</td>
<td>Air-cooled, 2.3kW</td>
<td>approx. 30kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.192</td>
<td>CH-375A50</td>
<td>Closed circuit</td>
<td>Air-cooled, 3.7kW</td>
<td>approx. 50kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.193</td>
<td>CH-550A50</td>
<td>Closed circuit</td>
<td>Air-cooled, 5.9kW</td>
<td>approx. 70kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.193</td>
<td>CH-750A50</td>
<td>Closed circuit</td>
<td>Air-cooled, 9.8kW</td>
<td>approx. 100kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>CH-300W</td>
<td>Closed circuit</td>
<td>Water-cooled, 3.0kW</td>
<td>approx. 45kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>CH-500W</td>
<td>Closed circuit</td>
<td>Water-cooled, 5.0kW</td>
<td>approx. 75kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>CH-900W</td>
<td>Closed circuit</td>
<td>Water-cooled, 10kW</td>
<td>approx. 110kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>CH-1100W</td>
<td>Closed circuit</td>
<td>Water-cooled, 14kW</td>
<td>approx. 150kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>CH-1500W</td>
<td>Closed circuit</td>
<td>Water-cooled, 18kW</td>
<td>approx. 200kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>CH-1800W</td>
<td>Closed circuit</td>
<td>Water-cooled, 21kW</td>
<td>approx. 250kW</td>
<td>13°C ~ +25°C</td>
<td>±0.1°C</td>
</tr>
<tr>
<td>P.194</td>
<td>SC-60</td>
<td>Closed circuit</td>
<td>Water-cooled, 1.5kW</td>
<td>approx. 1.5kW</td>
<td>5°C ~ +40°C</td>
<td>±0.5°C</td>
</tr>
</tbody>
</table>

We contribute to the development of research and industry.

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*Note: Dimensions not included. Photos not included.
Simple chiller series can respond to various needs by selecting various options.

The Standard Small Chiller unit “Compact CH series”

Utilize melting heat of ice which was stored during non-operation time such as nighttime.

The line-up of chiller for open circuit (closed circuit is also available as an option.)

Circulation the hot water/Fluorine-based heat medium for the heating control.

Features

- Basic operating temperature range up to +80°C.
- Available in Cooling function by Primary cooling water.
- Heater output, Pumping capacity and Wetted part etc. can be changed.
- Accurately controlling the heating temperature in wide high temperature range. Inverter controlled. The pump is free from risk of liquid leakage.
- Temp. drop being in a short time by making cooling water flow into cooling coil.

is also available as an option.)

non-operation time

Features

- For open circuit machine use for circulate mainly to water bath.
- Closed circuit is also available as an option.
- For open circuit machine use for circulate mainly to water bath.
- Can be circulated to close as the option.
- Various output and external sensor can be used.
- Cooling in high temperature range (15°C-650K).

by selecting various options.

Features

- The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
- The unit type pumps can be selected according to purpose.
- The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
- The unit type pumps can be selected according to purpose.
- Various output and external sensor can be used.
- The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
- The unit type pumps can be selected according to purpose.
- Cooling in high temperature range.
- The water-cooled integrated type is ideal for cleanroom. The unit type pumps can be selected according to purpose. Cooling in high temperature range. Various output and external sensor are available.

upon request.

Features

- The air-cooled separate type, no noise or vibration in the room.
- The equipped inverter enable to save energy and realize low operation noise and small consumption current.
- Plumbing the indoor unit and the outdoor unit required.
- The water-cooled integrated type is ideal for cleanroom.
- Customizable to upon request as special order.

- The all-weather unit for outdoor.
- Customizable to upon request.
- Can be operated by the remote control panel indoor.
- The water-cooled integrated type is ideal for cleanroom.
- Customizable to upon request as special order.
- The compressor output above 18 kW is available on custom-made.
- The water-cooled integrated type is ideal for cleanroom.
- Compressor output above 18 kW is available on custom-made.

- Can be stable cooling even in ultra low temperature range (Lowest temp. -60°C).
- The stainless tank. The pump is free from risk of liquid leakage.

Proud of supply record as many as 18,000 TAITEC Chiller units from Laboratories to Various industries.

Chiller is a machine that circulates water or heating medium to an equipment while the temperature control of that, widely used among Measuring equipment, Food processing equipment, Scientific equipment, etc. Not only “Chiller = Cooling” but also “Hot water Circulator” and “Heat Exchanger” that control the temperature by giving heat to the object. TAITEC offers various Chiller units to meet user’s needs such as Ultra-low temperature circulating fluid -60°C to High temperature circulating fluid 200°C, Customizable cooling capacity and circulating fluid amount etc.

Taking advantage of supply record as many as 18,000 TAITEC Chiller units, we offer various kinds of Chiller units in different applications require cooling water circulation. Hence, the experienced TAITEC Chiller units respond to your intended use suitably.

For Open circuit and Closed circuit

Chiller for open circuit

Chiller unit for open circuit is used for circulation to the outside water bath without its water bath. This Chiller unit can be also used for closed circuit.

Chiller for closed circuit

Chiller unit for closed circuit is used for circulation to the analytical instruments and others. This Chiller has the water bath.

We contribute to the development of research and industry. [2020-2020 General Catalog]
Hot water circulator HC-03/06/09/12/15/24

Circulation the hot water up to +80°C with high accuracy ± 0.5°C. Various customized such as heater output and pump capacity upon the request.

Features
- Basic operating temperature range up to +80°C.
- Available in cooling function by primary cooling water.
- Heater output, pumping capacity and wetted part etc. can be changed.

Main Applications
- Hot water circulation to molding machine, Semiconductor manufacturing equipment, HVAC etc.
- A source of heat load for equipment testing.

Hot water circulator with high accuracy. Various customized such as heater output and number of pumps etc.

Heating temperature control with high accuracy ± 0.5°C in temperature range 40°C to 80°C. Various customized such as heater output and number of pumps, piping material, etc. based on the following models. Please feel free to contact us.

<table>
<thead>
<tr>
<th>Model</th>
<th>HC-03</th>
<th>HC-06</th>
<th>HC-09</th>
<th>HC-12</th>
<th>HC-15</th>
<th>HC-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range (°C)</td>
<td>+40°C to +80°C</td>
<td>+40°C to +80°C</td>
<td>+40°C to +80°C</td>
<td>+40°C to +80°C</td>
<td>+40°C to +80°C</td>
<td>+40°C to +80°C</td>
</tr>
<tr>
<td>Control accuracy</td>
<td>PID controller, ±0.5°C</td>
<td>PID controller, ±0.5°C</td>
<td>PID controller, ±0.5°C</td>
<td>PID controller, ±0.5°C</td>
<td>PID controller, ±0.5°C</td>
<td>PID controller, ±0.5°C</td>
</tr>
<tr>
<td>Heater output</td>
<td>3.0kW</td>
<td>6.0kW</td>
<td>9.0kW</td>
<td>12.0kW</td>
<td>15.0kW</td>
<td>24.0kW</td>
</tr>
<tr>
<td>Pump ability (50/60Hz)</td>
<td>Max. discharge pressure [MPa] 0.52</td>
<td>0.59</td>
<td>Flow rate [L/min] (2) 22/31</td>
<td>42/55</td>
<td>Motor output [kW] 0.4</td>
<td>0.75</td>
</tr>
<tr>
<td>Water bath capacity (at 80% water level)</td>
<td>28L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>110L</td>
</tr>
<tr>
<td>Safety device/function</td>
<td>Short/Over current breaker, Phase-reversal relay, Warning and Cut off for low water, Circulating water high temperature, Pump overcurrent, Overheating protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecting pipe diameter (Circulating fluid in/out)</td>
<td>Rc3/4</td>
<td>Rc1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>386×512×865mm</td>
<td>627×772×1130mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 105kg</td>
<td>approx. 110kg</td>
<td>approx. 120kg</td>
<td>approx. 160kg</td>
<td>approx. 200kg</td>
<td>approx. 220kg</td>
</tr>
<tr>
<td>Power Supply (three phase AC200V, 50/60Hz)</td>
<td>20A</td>
<td>30A</td>
<td>40A</td>
<td>50A</td>
<td>60A</td>
<td>100A</td>
</tr>
<tr>
<td>Operation current (50/60Hz)</td>
<td>12A</td>
<td>21A</td>
<td>29A</td>
<td>38A</td>
<td>46A</td>
<td>72A</td>
</tr>
</tbody>
</table>

Examples of Customization
- The primary cooling water is required when cooling function added.
- The standard model of Hot water circulator HC series is equipped with only Heating function. The cooling function can be added by increasing the cooling coils into the water bath when the steps to lower the temperature are required. Recommended when lower the tank temperature earlier than waiting for natural cooling.
- The primary cooling water is required when cooling function added. Please contact us for more information.

Additional of Pump (up to 4 units) and Steam trap.
Heat exchanger TEX-25A

Specialized in using with fluorine-based heating medium for the heating control in high temperature range.

Hot medium circulator specializes in the heating temperature control.

Designed being used with fluorine-based heating medium (Galden® HT270 or HT200) for the heating control in high temperature range (+70℃ to +200℃).

<table>
<thead>
<tr>
<th>Model</th>
<th>TEX-25A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>+70℃ to +200℃</td>
</tr>
<tr>
<td>Control accuracy (°F)</td>
<td>PID controller, ±0.5℃</td>
</tr>
<tr>
<td>Heater output</td>
<td>2.5kW</td>
</tr>
<tr>
<td>Pumping capacity</td>
<td>Flow rate [L/min] 14 (0.2MPa at 60Hz)</td>
</tr>
<tr>
<td></td>
<td>Motor output [kW] 1.1</td>
</tr>
<tr>
<td>Temp. rise and drop time (°F)</td>
<td>Temp. rise time (+70℃ → +200℃) : approx. 30 min (cooling water OFF)</td>
</tr>
<tr>
<td></td>
<td>Temp. drop time (+200℃ → +70℃) : approx. 25 min (cooling water ON), Cooling water condition : approx. 8L/min at +20℃</td>
</tr>
<tr>
<td>Safety device/function</td>
<td>Short/Over current breaker, Circulating fluid high temperature, Temperature abnormal, Low fluid cut off, Liquid high-level, Pump overload</td>
</tr>
<tr>
<td>INPUT/OUTPUT functions</td>
<td>Remote temperature control connector, Temp. monitor signal output, Safety device actuation signal output</td>
</tr>
<tr>
<td>Heating medium (Circulating fluid)</td>
<td>GALDEN HT270 or HT200 (cannot be mixed)</td>
</tr>
<tr>
<td>Fluid tank capacity</td>
<td>approx. 3L (+ Reserve tank : approx. 7L)</td>
</tr>
<tr>
<td>Connecting pipe diameter</td>
<td>Circulating fluid in/out : Rc1/2, Primary cooling water in/out : Rc1/2</td>
</tr>
<tr>
<td>Dimensions / Weight</td>
<td>406×761×924mm, approx. 115kg</td>
</tr>
<tr>
<td>Power Supply (three phase AC200V, 50/60Hz)</td>
<td>15A</td>
</tr>
<tr>
<td>Operation current</td>
<td>12A</td>
</tr>
<tr>
<td>Standard accessories</td>
<td>Signal connector, power connector, spare fuse</td>
</tr>
</tbody>
</table>

Temperature drop quickly for Maintenance.

Make cooling water flow into cooling coil e.g.; In the case the cooling water +20℃, it takes approx. 25 minutes to lower +70 ℃ from +200 ℃.

Main Applications

- Heating control in high temp. range for Semiconductor manufacturing equipment.

Features

- Accurately controlled the heating temperature in wide high temperature range.
- Inverter controlled, The pump is free from risk of liquid leakage.
- Temp. drop being in a short time by making cooling water flow into cooling coil.

Model

- TEM-25A
- Temperature range: +70℃ to +200℃
- Control accuracy (°F): PID controller, ±0.5℃
- Heater output: 2.5kW
- Pumping capacity: Flow rate [L/min] 14 (0.2MPa at 60Hz)
- Motor output [kW]: 1.1
- Temp. rise and drop time (°F): Temp. rise time (+70℃ → +200℃) : approx. 30 min (cooling water OFF)
- Temp. drop time (+200℃ → +70℃) : approx. 25 min (cooling water ON), Cooling water condition : approx. 8L/min at +20℃
- Safety device/function: Short/Over current breaker, Circulating fluid high temperature, Temperature abnormal, Low fluid cut off, Liquid high-level, Pump overload
- INPUT/OUTPUT functions: Remote temperature control connector, Temp. monitor signal output, Safety device actuation signal output
- Heating medium (Circulating fluid): GALDEN HT270 or HT200 (cannot be mixed)
- Fluid tank capacity: approx. 3L (+ Reserve tank : approx. 7L)
- Connecting pipe diameter: Circulating fluid in/out : Rc1/2, Primary cooling water in/out : Rc1/2
- Dimensions / Weight: 406×761×924mm, approx. 115kg
- Power Supply (three phase AC200V, 50/60Hz): 15A
- Operation current: 12A
- Standard accessories: Signal connector, power connector, spare fuse

(*) When the circulation flow rate is less 5 L/min at no load. (+) The unit alone at no-load. The specifications were when using GALDEN HT270.

Ambient temperature range for this product is +7℃ to +35℃. The fees for Delivery, Installing, Piping work and Wiring work are quoted separately.

Temperature rise curve (Reference)

- Model: TEX-25A
- Heating medium: GALDEN HT270
- Fluid volume: Fluid tank, approx. 3L
  + Reserve tank, approx. 7L
- Ambient temperature: +27℃ (average)
- Power supply: AC200V

External dimensions

- Model: TEX-25A
- Dimensions: 406×761×924mm
- Weight: approx. 115kg
- Power Supply (three phase AC200V, 50/60Hz): 15A
- Operation current: 12A
- Standard accessories: Signal connector, power connector, spare fuse
Coolpump CP-80R/150R

The line-up of chiller for open circuit can be chosen according to the required capacity and temperature control accuracy. Closed circuit is also available as an option.

### Features
- For open circuit machine use for circulate mainly to water bath.
- Closed circuit is also available as an option.

### Main Applications
- Circulation into temperature control water bath for inspection samples.
- Temperature control for culturing apparatus and analytical instruments is available as an option.

[CP / CL series] For open circuit machine use for circulate mainly to water bath.

Circulation system for open circuit is used mainly for preparing constant temperature chamber. It is optimum for control temperature of sample.

![CP-80R](Image)  ![CP-150R](Image)

### Model Specifications

<table>
<thead>
<tr>
<th></th>
<th>CP-80R</th>
<th>CP-150R</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature range</strong></td>
<td>-10°C - Room temp.</td>
<td></td>
</tr>
<tr>
<td><strong>Control accuracy</strong></td>
<td>±1.5 - 2.0°C (*)</td>
<td></td>
</tr>
<tr>
<td><strong>Cooling capacity</strong></td>
<td>approx. 140W</td>
<td>approx. 270W</td>
</tr>
<tr>
<td><strong>Compressor</strong></td>
<td>75W, R134a</td>
<td>150W, R134a</td>
</tr>
<tr>
<td><strong>Pumping capacity</strong></td>
<td>Max. flow rate approx. 7/8 L/min</td>
<td>Max. lift height approx. 2/2.8 m</td>
</tr>
<tr>
<td><strong>Heater</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Nozzle diameter</strong></td>
<td>Outer diameter φ13mm</td>
<td></td>
</tr>
<tr>
<td><strong>Safety device/function</strong></td>
<td>Short/Over current breaker, Freezer protection circuit (1: auto stop at 40°C of circulating fluid, 2: timer ON-OFF cycle 3min), Real flow monitor (buzzer and LED display)</td>
<td></td>
</tr>
<tr>
<td><strong>Other Functions</strong></td>
<td>Digital flow display, Sensor disconnection/Short circuit self-diagnosis</td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>230x380x459H-mm</td>
<td>250x425x529H-mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>approx. 20kg</td>
<td>approx. 34kg</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>AC100V+3.5A</td>
<td>AC100V+4.5A</td>
</tr>
<tr>
<td><strong>Standard Accessory</strong></td>
<td>Heat insulating hose for circulation (1m) x 2, Hose band x 2</td>
<td></td>
</tr>
</tbody>
</table>

*1 There may be a case where this value cannot be kept because of freezer protection timer depend on heat load.
*2 When circulating fluid is +10°C, 50Hz.
*3 Allowance of voltage variation is ±5% for AC 100V.
*Environmental temperature for this product is +5°C - +30°C. When using at above +30°C, cooling capacity may reduce. Use of water bath may needed depend on bath shape and setting temperature.
*Please do not use pure water or distilled water. These may cause breakdown of machine.
*Please use heating medium when setting below +7°C.

### USER’S VOICE

I often see this circulator at research institutes of brewing. TAITEC chiller can be used safely due to its reliability and long history of achievements.

Use optional port tank and the thermal insulation water tank for circulation into scientific instrument (closed circuit circulation). Even for objects with high piping resistance such as rotary evaporators, circulation can be easily started with the built-in priming pump.
## Coolnit CL-80R/150R/300N/600N

The line-up of open circuit chillers can be chosen according to the required capacity and temperature control accuracy. Precise temperature control type. Various output and external sensor can be used. Closed circuit can be available as an option.

### Main Applications

- Circulation into temperature control water bath for inspection samples.
- Temperature control for culturing apparatus and analytical instruments [option].

### Thermograph and safety device actuation signal can be used.

Output of thermograph, safety device actuation signal and optional external sensor. Programmed control is available by using optional program unit.

### Features

- For open circuit machine use for circulate mainly to water bath.
- Can be circulated to closed circuit machine as an option.
- Various output and external sensor can be used.
- Cooling in high temperature range [CL-600N].

### Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>CL-80R</th>
<th>CL-150R</th>
<th>CL-300N</th>
<th>CL-600N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>-10°C to +70°C</td>
<td>-15°C to +70°C</td>
<td>-15°C to +70°C</td>
<td>-15°C to +70°C</td>
</tr>
<tr>
<td>Control accuracy</td>
<td>±0.03 - 0.3°C</td>
<td>±0.05 - 0.5°C</td>
<td>±0.05 - 0.5°C</td>
<td>±0.05 - 0.5°C</td>
</tr>
<tr>
<td>Cooling capacity</td>
<td>approx. 140W</td>
<td>approx. 270W</td>
<td>approx. 410W</td>
<td>approx. 750W</td>
</tr>
<tr>
<td>Compressor (air cooled-type), Refrigerant</td>
<td>75W, R134a</td>
<td>150W, R134a</td>
<td>250W, R404A</td>
<td>600W, R404A</td>
</tr>
<tr>
<td>Pumping capacity</td>
<td>3.0/3.4kW</td>
<td>3.0/3.4kW</td>
<td>3.0/3.4kW</td>
<td>3.0/3.4kW</td>
</tr>
<tr>
<td>Max. flow rate</td>
<td>approx. 9/10 L/min</td>
<td>approx. 9/10 L/min</td>
<td>approx. 15/17 L/min</td>
<td>approx. 15/17 L/min</td>
</tr>
<tr>
<td>Max. lift height</td>
<td>approx. 4/6 m</td>
<td>approx. 4/6 m</td>
<td>approx. 6/8 m</td>
<td>approx. 6/8 m</td>
</tr>
<tr>
<td>Nozzle diameter</td>
<td>Outer diameter φ13mm</td>
<td>Outer diameter φ13mm</td>
<td>Outer diameter φ22mm</td>
<td>Outer diameter φ22mm</td>
</tr>
</tbody>
</table>

### Safety Device/Function

- Short/Over current breaker, Low flow (buzzer and LED display), High temperature, Freezer high temperature cutting circuit (auto stop at 40°C of circulating fluid in CL-80R, CL-150R and CL-300N).

### Other Functions

- Digital flow display, Remote temperature control connector, Connector for external sensor, External output terminal of cutout operation, Output terminal for thermograph (DC 0 - 1V, -20 - +80 ºC)

### Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>CL-80R</th>
<th>CL-150R</th>
<th>CL-300N</th>
<th>CL-600N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>230×395×455Hmm</td>
<td>250×425×525Hmm</td>
<td>380×540×706Hmm</td>
<td>380×540×706 Hmm</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 26kg</td>
<td>approx. 35kg</td>
<td>approx. 62kg</td>
<td>approx. 74kg</td>
</tr>
<tr>
<td>Power Supply</td>
<td>AC100V+7.3A</td>
<td>AC100V+13.5A</td>
<td>AC100V+20A</td>
<td>AC100V+30A</td>
</tr>
<tr>
<td>Standard Accessory</td>
<td>Heat insulating hose for circulation (1m) x 2, Hose band x 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes

1. When using enough water and agitation inside water bath is good. Temperature regulation accuracy may vary depend on circulating fluid, setting temperature, environmental temperature, bath volume and circulating flow.
2. When circulating fluid is +10ºC, 50Hz. (*3) Allowance of voltage variation is ±5% for AC 100V.
3. Environmental/temperature for this product is +5ºC - +30ºC. When using at above +30ºC, cooling capacity may reduces. Limit of water bath may needed depend on bath shape and setting temperature.
4. Please use heating medium when setting below +7ºC.
5. External program control is possible by using optional program unit only in the case below 40ºC.

---

CL-600N is equipped with a function “Cooling at high temperature range” can cooling control in even high temperature region.
CP/CL series Optional parts and Curved graphs etc.

Cooling curve for CP-80R/150R

Heating / Cooling curve for CL-80R/150R/600N

Cooling capacity curve for CP/CL series

External dimensions for CP/CL series

Optional Accessories

<table>
<thead>
<tr>
<th>Product Name / Model</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port tank</td>
<td>For CP-80R/150R CL-80R/150R for open circuit</td>
</tr>
<tr>
<td>Stainless thermal insulation water bath type A φ13mm</td>
<td>Inner Dimension 300×400×200H mm, With nozzle (Ex.dia.φ13mm)</td>
</tr>
<tr>
<td>Stainless thermal insulation water bath type A φ22mm</td>
<td>Inner Dimension 300×400×200H mm, With nozzle (Ex.dia.φ22mm)</td>
</tr>
<tr>
<td>PVC thermal insulation water bath type D φ13mm</td>
<td>Inner Dimension 164×294×150H mm, With nozzle (Ex.dia.φ13mm)</td>
</tr>
<tr>
<td>Spring net rack type B2</td>
<td>External dimensions 280×320×140H mm</td>
</tr>
<tr>
<td>Spring net rack type C</td>
<td>External dimensions 140×240×140H mm</td>
</tr>
<tr>
<td>External temperature sensor for CL series SP-2504R</td>
<td>Outer diameter φ4×250L mm, For CL series</td>
</tr>
<tr>
<td>Record out cable ROC-5</td>
<td>For CL series</td>
</tr>
<tr>
<td>Alarm out cable AOC-2</td>
<td>For CL series</td>
</tr>
<tr>
<td>Program setting unit PU-5</td>
<td>Can set apart when connecting via line and can be used for remote temperature control for CL series</td>
</tr>
<tr>
<td>Heating medium for low temperature &quot;Antifreeze Show Brine Blue&quot;</td>
<td>Use when needed together with low temperature water bath unit or immersion cooler 20kg, 1 can, use within setting below +7 °C</td>
</tr>
</tbody>
</table>

*For detail about antifreeze medium, see p138.
Stock chiller YW-12

Utilize melting heat of ice which was stored during non-operation time such as nighttime. Reasonable for usage which does not require severe temperature control.

Features

- To cool melting heat of ice which was stored during non-operation time such as nighttime.

Main Applications

- Cooling for Rotary evaporator (closed circuit circulation)

Storage ice effect = idea is here

Melting heat of 0°C 1g of ice into 0°C water is 80cal (approx. 335J) compare to heat energy of 1cal (approx. 4.2J) to change temperature for 1°C of 1g of water. That means 0°C ice has cooling capacity about 80 times more than 0°C water. StockChiller put this principle into practice.

Circulation nozzle can be rotated at 360°

Direction of circulation nozzle can be adjusted depending on setting place.

Cool water circulation even with not enough electric capacity

For example, at cooling for Rotary evaporator, this device works well at "no need for severe thermoregulation, want to circulate water at around 0°C, but electric capacity of the facility is already occupied and cannot use high power cooler" kind of situation.

Model | YW-12
---|---
Temperature range | around 0°C
Ice storage capacity | approx. 12kg/12h (*1)
Cooling capacity | approx. 1100W (*2)
Compressor output, Refrigerant | 75W, R134a
Pumping capacity | 80/60Hz
Max. flow rate/ approx. 6.5/7.5L/min, Max. lifting height approx. 5.0/6.8m
Dimensions inside bath | 270×310×258Hmm (Bath volume: approx. 17L at Water level 80%)
Dimensions | 314×452×532Hmm
Weight | approx. 20kg
Power Supply | AC100V-3A
Standard Accessory | L-shaped hose mouth [Outer diameter φ9mm] × 2, Hose band × 2, Connector for irregular tube × 2

(*1) In case of stop external circulation and cooling from around +20ºC.
(*2) Potential total work with maximal stored ice. Since this device utilizes melting heat of the ice for cooling, listed capacity may not be constantly obtained.

Please do not use pure water or distilled water. These may cause breakdown of machine.

External dimensions

Optional Accessories

<table>
<thead>
<tr>
<th>Product Name / Model</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-shaped hose mouth</td>
<td>2 pcs</td>
</tr>
<tr>
<td>Thermal insulation hose (inside dia. φ9mm)</td>
<td>1 m/pair</td>
</tr>
</tbody>
</table>

We contribute to the development of research and industry.

[2019-2020 General Catalog]
Coolnit bath EL-8F/EL-15F

External circulation while using water bath, variable flow rate. Can also be used for calibrating the thermometer. Remote control and temperature programming is available as an option.

Features

- Water bath is free of projections and easy to put test tube stands etc.
- External circulation function by variable flow rate.
- Remote control setting input is available as an option.

Main Applications

- Temperature regulation of culturing apparatus and analytical device.
- Calibration of thermometer in water bath. Keeping temperature of the sample.

Can temperature program control with an optional program unit.

Optional Accessories

<table>
<thead>
<tr>
<th>Product Name / Model</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulation nozzle ex.dia. φ13mm</td>
<td>For changing nozzle diameter</td>
</tr>
<tr>
<td>Caster</td>
<td>Set of 4, For EL-8F/15F CP-80R/150R CL-80R/150R</td>
</tr>
<tr>
<td>Program setting unit PU-5 (*)</td>
<td>Can set apart when connecting via line and can be used for remote temperature control.</td>
</tr>
<tr>
<td>Heating medium for low temperature Antifreeze “Show Brine Blue”</td>
<td>Use when needed together with low temperature water bath unit or immersion cooler, 20kg, 1 can, use when use below -7 ℃</td>
</tr>
</tbody>
</table>

(*)For detail, please contact us. For detail about antifreeze medium, see p198.

Inside of the water bath filled with a test tube stand (Not included in the product).
Thermo supplier EZ-101/EZL-81F

External circulation while using water bath is available. Addressed to high temperature, silicon oil can be used as well. EZ-101 for high temperature range, EZL-81F for low to high temperature range.

Features

• Silicon oil can be used in the heat insulated water bath.
• Temperature in low temperature range can be adjusted in EZL-81F.
• External circulation function by variable flow rate.

Main Applications

• Circulation to device which need temperature regulation at high temperature.
• Quality test at high temperature using water bath.
• Moisturizing and Cooling for samples.

Available from -30°C to +200°C by combining the optional immersion cooler "Cool pipe" (when setting +30°C or more, cool pipe is removed).

External dimensions

<table>
<thead>
<tr>
<th>Dimensions inside bath</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>170×300×145mm</td>
<td>210×300×145mm</td>
<td></td>
</tr>
</tbody>
</table>

Effective dimensions inside bath

<table>
<thead>
<tr>
<th>Dimensions inside bath</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>150×100×140mm</td>
<td>210×300×145mm</td>
<td></td>
</tr>
</tbody>
</table>

Water bath capacity

<table>
<thead>
<tr>
<th>Water bath capacity</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>approx. 9L</td>
<td>approx. 7.3L</td>
<td></td>
</tr>
</tbody>
</table>

Power Supply

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC100V/13A</td>
<td>AC100V/12A</td>
<td></td>
</tr>
</tbody>
</table>

Temperature range

<table>
<thead>
<tr>
<th>Temperature range</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>+60°C to +200°C</td>
<td>-10°C to +100°C</td>
<td></td>
</tr>
</tbody>
</table>

Control accuracy

<table>
<thead>
<tr>
<th>Control accuracy</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>±0.1°C to -0.3°C</td>
<td>±0.1°C to -0.3°C</td>
<td></td>
</tr>
</tbody>
</table>

Compressor

<table>
<thead>
<tr>
<th>Compressor</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>80W, R134a</td>
<td>80W, R134a</td>
<td></td>
</tr>
</tbody>
</table>

Cooling capacity

<table>
<thead>
<tr>
<th>Cooling capacity</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>approx. 140W</td>
<td>approx. 140W</td>
<td></td>
</tr>
</tbody>
</table>

Heater

<table>
<thead>
<tr>
<th>Heater</th>
<th>EZ-101</th>
<th>EZL-81F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200W</td>
<td>800W</td>
<td></td>
</tr>
</tbody>
</table>

Optional Accessories

<table>
<thead>
<tr>
<th>Product Name / Model</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immersion cooler</td>
<td>The immersion cooler can be used with EZ-101. (*)</td>
</tr>
<tr>
<td>Cool pipe series</td>
<td></td>
</tr>
<tr>
<td>Heating medium for high temp. Silicon oil MA-50</td>
<td>Kinetic viscosity 50mPa sec (cSt), 18kg, for precise temperature control and use higher than +70°C.</td>
</tr>
<tr>
<td>Heating medium for high temp. Silicon oil MA-100</td>
<td>Kinetic viscosity 100mPa sec (cSt), 18kg, for use higher than +70°C.</td>
</tr>
<tr>
<td>Heating medium for low temp. Antifreeze “Show Brine Blue”</td>
<td>Use when needed together with low temperature water bath unit or immersion cooler, 20kg, 1 can, use when below +7°C.</td>
</tr>
</tbody>
</table>

(*) Temperature setting is available between -30°C - +200°C. When setting temperature lower than RT, please use Immersion cooler together. There is special opening for Immersion cooler. When setting below +1°C, please use antifreeze. When setting above +1°C, please use heating medium for high temperature.

(2) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

(3) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

(4) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

(5) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

(6) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

(7) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

(8) When setting around RT - +60°C, please circulate cooling water (tap water) in cooling pipe. Temperature rise by work heat from mixing pump need to be minimized at below +60°C.

We contribute to the development of research and industry.
The Standard Small Chiller unit "Compact CH series" supports various industries!

**Features**

**Cooling in High Temp. Range**
The compressor continues to operate even at high temp. range to cool quickly the circulating fluid in high temp. range (200V Precise Temp. control type).

**Can be made of stainless steel overall**
The wetted parts of the chiller unit and pump can be made of stainless steel overall and used with pure water. These modifications are standard equipment in some models and optional as Custom order in other models.

**Portable & Compact design**
Compact design with casters and Air-cooled compressor (including 1 model of Water-cooled) enable the installation and the movement with ease.

The unit type pump is easy to maintain. Original vertical leak-less pump (See the right page).

Mainly Air-cooled type, easy to install (including 1 model of Water-cooled)
Easy to install and move it as primary cooling water and piping connections not required.

The casters enable the movement with ease.
The metal fittings can be fasten with the floor if necessary (Available the metal fittings in some models).

**Standard Temp. Control (Control accuracy : ±2.0℃)**

• Air-cooled type for 100V
• Ideal for using for cooling and cold water production in the case their calorific values are known.

**Precise Temp. control (Control accuracy : ±0.5℃)**

• Air-cooled type for 100V/200V  • Precise Temp. control by heater  • Various output and external

We contribute to the development of research and industry.
Pump unit can be selected according to required capacity. Correspondence table for optional pump unit.

Types and abilities of pump unit (option/sold separately)

<table>
<thead>
<tr>
<th>Discharge pressure</th>
<th>Model</th>
<th>Max. head (at 50Hz)</th>
<th>Max. flow (at 50Hz)</th>
<th>Number of circuit</th>
<th>Power supply</th>
<th>Applicable model</th>
<th>Remarks</th>
<th>Page on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>P-11</td>
<td>3m</td>
<td>8L/min</td>
<td>1</td>
<td>100V</td>
<td>CH-151AF/801A</td>
<td>The wetted parts made of stainless steel overall is available as an option.</td>
<td>P.182</td>
</tr>
<tr>
<td></td>
<td>P-21</td>
<td>9m</td>
<td>25L/min (2 circuits in total)</td>
<td>2</td>
<td>Three-phase 200V</td>
<td>CH-601A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-310</td>
<td>12.5m</td>
<td>19L/min</td>
<td>1</td>
<td>Three-phase 200V</td>
<td>CH-601A</td>
<td>The wetted parts made of stainless steel overall.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-320</td>
<td>14m</td>
<td>25L/min</td>
<td>1</td>
<td>Three-phase 200V</td>
<td>CH-601B</td>
<td>The wetted parts made of stainless steel overall.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P-420</td>
<td>25m</td>
<td>25L/min</td>
<td>1</td>
<td>Three-phase 200V</td>
<td>CH-602BF</td>
<td>The wetted parts made of stainless steel overall.</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>P-520</td>
<td>13m (Tap water)</td>
<td>23L/min (Tap water)</td>
<td>1</td>
<td>Three-phase 200V</td>
<td>CH-802BF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Our original vertical leakless pump --> P.182

Pump ability curve

Easy attachment/detachment, Powersupply from the main unit, can be attached up to 2 units (Except for P-310/520)

A modified pump unit with further capacities (Pump head and Flow rate) can be mounted.

Modified pump unit that can meet the required specs is available. (Please ask us the price and more information).

Example of Modified pump unit mounted

sensor are available.

CH-802B --> P.180

- Temperature range: -10°C to +80°C
- Cooling capacity (at 50Hz): approx. 1.3kW
- External dimensions: 407x665x996Hmm
- Power supply: Three-phase 200V

CH-802BF --> P.181

(Water-cooled type)

- Temperature range: +10°C to +70°C
- Cooling capacity (at 50Hz): approx. 1.9kW
- External dimensions: 407x790x771Hmm
- Power supply: Three-phase 200V
Cooling pump CH-151AF/601A

Air-cooled type CH series having excellent in portability for 100 V power supply. Ideal for using for cooling and cold water production in the case their calorific values are known.

Pump unit (Sold separately) → P.182  External dimensions → P.183

For standard temperature adjustment type and cold water-producing equipment.

Temperature control is simple control by ON / OFF of compressor. Designed to demonstrate the most cooling capacity in the temperature range from -10°C to room temperature. Ideal for cold water production etc. Ideal for in the case their calorific values are known.

Optional pump is the unit type, shortens maintenance time.

Our original vertical leakless pump. The unit type can make shortages maintenance time due to its easy attachment/detachment.

Features

• The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
• The unit type pumps can be selected according to purpose.

Main Applications

• Temperature control for the machine in the facility equipped with 100V power supply.

For standard temperature adjustment type and cold water-producing equipment.

Temperature control is simple control by ON / OFF of compressor. Designed to demonstrate the most cooling capacity in the temperature range from -10°C to room temperature. Ideal for cold water production etc. Ideal for in the case their calorific values are known.

Optional pump is the unit type, shortens maintenance time.

Our original vertical leakless pump. The unit type can make shortages maintenance time due to its easy attachment/detachment.

Features

• The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
• The unit type pumps can be selected according to purpose.

Main Applications

• Temperature control for the machine in the facility equipped with 100V power supply.

For standard temperature adjustment type and cold water-producing equipment.

Temperature control is simple control by ON / OFF of compressor. Designed to demonstrate the most cooling capacity in the temperature range from -10°C to room temperature. Ideal for cold water production etc. Ideal for in the case their calorific values are known.

Optional pump is the unit type, shortens maintenance time.

Our original vertical leakless pump. The unit type can make shortages maintenance time due to its easy attachment/detachment.

Features

• The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
• The unit type pumps can be selected according to purpose.

Main Applications

• Temperature control for the machine in the facility equipped with 100V power supply.
Cooling pump CH-151BF/601B

Air-cooled type CH series having excellent in portability for 100 V power supply. Built-in heater makes precise temperature control. Various output and external sensor are available.

Pump unit (Sold separately) → P.182  External dimensions → P.183

Features

• The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
• The unit type pumps can be selected according to purpose.

Main Applications

• Temperature control for the machine in the facility equipped with 100V power supply.

Various output and external sensor can be used.

Temperature setting can be the range of -10℃ to + 80℃. The constant temperature circulation can be with stable and high accuracy as the compressor is operated continuously and the temperature is controlled by the heater. Can be used with 100V power supply. Remote temperature setting and external sensor (option) can be used. Various safety devices equipped are output actuation signals.

<table>
<thead>
<tr>
<th>Model</th>
<th>CH-151BF</th>
<th>CH-601B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range (℃)</td>
<td>-10℃ to +80℃</td>
<td>+5℃ to +35℃</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>+5℃ to +35℃</td>
<td></td>
</tr>
<tr>
<td>Control accuracy (%)</td>
<td>±0.5℃, Heater PID control</td>
<td></td>
</tr>
<tr>
<td>Compressor output</td>
<td>150W, R134a 600W, R404A</td>
<td></td>
</tr>
<tr>
<td>Cooling capacity (at 50Hz) (kW)</td>
<td>approx. 0.23kW</td>
<td>approx. 1.0kW</td>
</tr>
<tr>
<td>Heater output</td>
<td>0.6kW</td>
<td>1.8kW</td>
</tr>
<tr>
<td>Temperature setting display</td>
<td>Digital system [setting/display switching system]</td>
<td></td>
</tr>
<tr>
<td>Safety device/function</td>
<td>Short/Over current breaker, Alarm and warning for compressor, High and Low temperature, Alarm and warning for pump motor, Abnormal temperature sensor disposing circuits, Alarm for replenishing liquid, Low-water cut off, Phase-reversal relay</td>
<td></td>
</tr>
<tr>
<td>Other Functions</td>
<td>Temperature check monitor, Remote temperature setting, Safety signal for safety devise, External temperature sensor connection</td>
<td></td>
</tr>
</tbody>
</table>

| Water bath capacity (water level 85%) (ml) | approx. 14L | approx. 26L |
| Applicable pump unit (P) | P-11 | P-11, P-310 |
| Dimensions | 407×485×676Hmm | 407×565×766Hmm |
| Weight (Pump unit not included) | approx. 46kg | approx. 75kg |
| Power Supply (Pump unit not included) | AC100V 50/60Hz, Single-phase |         |
| Operation current | 10A | 27A |
| Standard Accessory | Power code, Drain hose x 1, Connector for signal 1 |         |

CH-151BF

Since this unit is for AC 100 V, even if there is no AC 200V facility, can be used as the authentic chiller unit.

Heating/Cooling curve

Cooling curve

![Heating/Cooling curve diagram](Image)
Cooling pump CH-402B/602B/802B

Air-cooled type CH series having excellent in portability for 200 V power supply. Built-in heater makes precise temperature control. Cooling in high temperature range, Wide temperature range, Various output and external sensor are available.

Features
- The air-cooled integrated chiller, not requires the primary cooling water and plumbing.
- The unit type pumps can be selected according to purpose. Cooling in high temperature range.

Main Applications
- Precise temperature control for a press die machining.

Cooling in high temperature range.

[Heating control] [Cooling control]

For temperature control in high temperature range, general chiller is only heating control.

Precise temperature control for the upper and lower stages of press die machining. Circulate two with one unit is available as an option, enables to control the temperature of the upper and lower stages of the press working mold (within the capability).

Heating/Cooling curve

Cooling capacity curve

We contribute to the development of research and industry.

(2019-2020 General Catalog)
Cooling pump CH-802BF

Water-cooled type CH series having excellent in portability for 200 V power supply. Built-in heater makes precise temperature control. Cooling in high temperature range, Wide temperature range, Various output and external sensor are available.

Pump unit (Sold separately) → P.182  External dimensions → P.183

Features

• The water-cooled integrated type is ideal for cleanroom.
• The unit type pumps can be selected according to purpose.
• Cooling in high temperature range. Various output and external sensor are available.

Main Applications

• Temperature control for processing stage of semiconductor parts.

This product with the highest capability among CH series, ideal for applications requiring high cooling capacity and rapid temperature stability.

Heating/Cooling curve

Cooling capacity curve

For temperature control in high temperature range, general chiller is only heating control.

Cooling in high temperature range is required in this temperature control.

Model  CH-802BF

Temperature range (*1)  +10℃ to +70℃
Ambient temperature range  +5℃ to +35℃
Control accuracy (*2)  ±0.5℃, Heater PID control
Compressor output, Refrigerant  750W, R407C
Cooling capacity (at 50℃-6) (*3)  approx. 1.9kW
Heater output  3kW
Temperature setting display  Digital system (setting/display switching system)
Safety device/function  Short/Over current breaker, Compressor pressure abnormal, Compressor overload, Pump overload, Temperature sensor abnormality diagnosis circuit, Alarm for replenishing liquid, Low-water cut off, Phase-reversal relay
Other Functions  Temperature check monitor, Remote temperature setting, Safety device actuation signal output, External temperature sensor connection (*4)
Water bath capacity (*5)  approx. 26L (water level 80%)
Applicable pump unit (*6)  P-320, P-420, P-520
Required primary cooling water  7.5L/min at +25℃, 18L/min at +34℃
Connecting pipe diameter of Primary cooling water  R1/2
Dimensions (Pump unit not included)  407×580×771Hmm
Weight (Pump unit not included)  approx. 30kg
Power Supply [Pump unit not included]  AC200V 50/60Hz 15A, Three-phase
Operation current [Pump unit not included]  15A
Standard Accessory  Power code, Drain hose x 1, Connector for signal x 1

(*1) When setting below +7℃ or less, please be sure to use antifreeze. Please ask us what type of. (*2)Performance may not be maintained due to heating medium, environmental temperature, heat load, circulation pipe distance etc. (*3)Capacity when using tap water and the circulating fluid temperature at 10℃. The capacity varies with the pump unit mounted. The capacity decreases when the primary cooling water below its required value. (*4)External temperature sensor (φ4×250mm) is available as an option. (*5)Due to not the sealed structure, the circulating fluid might evaporates and reduces depending on the set temperature and heating medium type. (*6)Please refer the pump unit on p182.

We contribute to the development of research and industry. [2019-2020 General Catalog]
### P-11/21/310 for Compact CH series (AC100V)

**Original vertical leakless pump.**

**P-11**
- Applicable units: CH-151AF/601A, CH-151BF/601B
- Max. lift height [m] (50/60Hz): 3/4
- Max. flow rate [L/min] (50/60Hz): 2/32
- Nozzle diameter: 13mm
- Connection diameter: Rc3/8
- Circulatory circuit: 1
- Motor output: 40W
- Weight: approx. 7kg

**P-21**
- Applicable units: CH-601A, CH-601B
- Max. lift height [m] (50/60Hz): 9/13
- Max. flow rate [L/min] (50/60Hz): 19/23
- Connection diameter: Rc3/8
- Motor output: 105W
- Weight: approx. 12.5kg

**P-310**
- Applicable units: CH-601A
- Max. lift height [m] (50/60Hz): 12.5/17
- Nozzle diameter: 13mm
- Motor output: 250W
- Weight: approx. 13.5kg

**Materials of wetted parts**
- Stainless, Brass (①)
- Stainless, Brass, Vinyl chloride resin, Stainless (②)
- Stainless, Brass, Aluminum (③)
- Stainless, Brass, Aluminum, Copper (④)

**Power Supply (from the main unit)**
- P-11: AC100V-50/60Hz, 3A
- P-21: AC100V-50/60Hz, 2.8A
- P-310: AC100V-50/60Hz, 2.9A

**Standard Accessory**
- Fixing screws, Hose fixtures, Fixing screws

**Pressure rating**
- ①: Max. flow rate of P-21 is a total of two circuits.
- ②: P-11 can be made of stainless overall.
- ③: Antifreeze should be with “Show Brine Blue (we designate),” and Galden® should be used with below kinetic viscosity 4cSt.
- ④: P-320 should be used with circulating fluid with below specific gravity 1.06 and kinetic viscosity 8.5mm³/s.
- ⑤: P-420 cannot be used with circulating fluid with higher specific gravity and kinetic viscosity than water.

**P-320/420/520 for Compact CH series (AC200V).**

**Available the model used with not only tap water also antifreeze and Galden®.**

**Compact CH series (AC200V) --> P.180 - 181**

**P-320**
- Applicable units: CH-402B/602B/602BF
- Max. lift height [m] (50/60Hz): 14/18
- Max. flow rate [L/min] (50/60Hz): 23/27
- Nozzle diameter: 13mm
- Motor output: 300W
- Weight: approx. 10kg

**P-420**
- Tap water: 13/19
- Antifreeze: 14/20
- Circulatory fluid: Tap water at 25℃
- Antifreeze at 20℃
- Galden® at 20℃

**P-520**
- Tap water: 23/29
- Antifreeze: 23/27
- Galden®: 24/28

**For optional parts refer to the above.**

**Pumping capacity curve**
External dimensions for Simple/Compact CH series

Compact CH series → P.178 - 181  Simple series → P.186 - 187

### CH-151AF/601A/151BF/601B/402B/602B

- Black CH-601A/601B/402B/602B
- (Blue)CH-151AF/151B

The height (200-220) and width (40) differs with the mounted pump.

### CH-802B

- The width (40) differs with the mounted pump.

### CH-802BF

- The width (40) differs with the mounted pump.

### CHA-500

### CHA-900/1500/2200

- Black CHA-900
- (Blue)CHA-1500
- (Red)CHA-2200

### CHW-900/1500/2200

- Black CHW-900
- (Blue)CHW-1500
- (Red)CHW-2200

We contribute to the development of research and industry.

[2019-2020 General Catalog]
"Simple series" created from various supply records and requests.

Features and Advantages ~ Various Pump Capacity ~

Diverse optional accessories
All options except the standard specifications are available. Diverse pump unit specifications depending on Flow rate, Pump head and Materials (see the right page) are available to respond user’s various needs. Also, Upgrade for Pure water, Precise temp control etc. are available. Simple series enables to reduce wasteful spending by adding the minimum necessary upgrade.

Space saving
Achieved to save the installation space by 65% compared with a conventional one. Contributes to the installation space saving and flexibility in the factory layout while remaining the cooling capacity.

Capacity expansion
The compressor output can be expanded more than 6kw or 7.5 kw listed in this catalog as per request such as 11kw, 15kw, 13kw or so. Please ask us in that case.

We will take care of your problems and requirements

Diverse Options help your problems and respond requirements.
- Want to save on a water rate for the Chiller unit.
- Want to secure a stable temperature cooling water.
- Want to operate several Chiller units.
- Want to prevent Red water from the Chiller unit.
- Want to use circulating fluid in the cleanroom.
- Want to need a Chiller with High-powered pump unit.

The detail of Diverse options

The lineup of “Simple series Chiller unit” are Four types of air-cooled and Three types of water-cooled. The series consists of basic functions with the minimal functions and capabilities to extend those as per customer’s request as an option. The functions and the usage can be customized as one likes to prevent waste spending by adding the minimum necessary upgrade. This is the concept for “Simple series”. The pumping capacity variations for the standard 7 models are as shown on the right depending on the options.

Optional Accessories

<table>
<thead>
<tr>
<th>Optional Accessories</th>
<th>Enhancement for the precision of temperature control</th>
<th>Enhancement for the pumping capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hot gas bypass control (±1.0℃)</td>
<td>High flow / High pump head / Stainless steel, Bronze Casting</td>
</tr>
<tr>
<td></td>
<td>Pulse width modulation expansion valve (±0.5℃)</td>
<td></td>
</tr>
<tr>
<td>Safety devices / functions added</td>
<td>No-fuse breaker</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short circuit breaker</td>
<td></td>
</tr>
<tr>
<td>Materials of wetted part changed</td>
<td>Cooling coil (Stainless steel) • For Pure water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Piping for Antifreeze</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ball tap</td>
<td></td>
</tr>
<tr>
<td>CUSTOM-MADE</td>
<td>Remote control box</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fan speed controller (Noise reduction by revolving speed control for cooling fan)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater loaded</td>
<td></td>
</tr>
<tr>
<td>Safety measure</td>
<td>Fixing brackets</td>
<td></td>
</tr>
</tbody>
</table>

Delivery, Installing and Piping work

The fee for Delivery, Installing, Piping work and Wiring work are quoted separately.

TAITEC VOICE
Please note the following matter.

We will take care of your problems and requirements
Model Selection by Pump Characteristic Curves

"Standard" showed below is the standard pump characteristic mounted in the chiller unit. Each of "BC1-3" "SUS①-⑥" is the optional pump characteristic.

<table>
<thead>
<tr>
<th>Air-cooled type</th>
<th>Water-cooled type</th>
<th>Pump Characteristic Curves</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHA-500</td>
<td>--</td>
<td>at 50Hz</td>
</tr>
<tr>
<td>CHA-900</td>
<td>CHW-900</td>
<td>at 50Hz</td>
</tr>
<tr>
<td>CHA-1500</td>
<td>CHW-1500</td>
<td>at 50Hz</td>
</tr>
<tr>
<td>CHA-2200</td>
<td>CHW-2200</td>
<td>at 50Hz</td>
</tr>
</tbody>
</table>

Pump variations of CHA-1500/2200 and CHW-1500/2200 are common.
Cooling pump CHA-500〜2200/CHW-900〜2200

Simple chiller series can respond to various needs from the consumers by selecting various options. Proud of various kinds of pump abilities in available, which can meet a high flow rate and a high pump head. Pure water, etc. are available as an option.

Features

• The air-cooled integrated chiller, does not require the primary cooling water and plumbing.
• The water-cooled integrated type is ideal for cleanroom.
• Available various optional pump units by select.
• The enhancement for the precision of temperature control, pure water, etc. are available as an option.

Standard specifications: Air-cooled type
(Specifications can be modified as an option)

<table>
<thead>
<tr>
<th>Model</th>
<th>CHA-500</th>
<th>CHA-900</th>
<th>CHA-1500</th>
<th>CHA-2200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>+7°C to +25°C</td>
<td>+5°C to +35°C</td>
<td>+5°C to +35°C</td>
<td>+5°C to +35°C</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>+5°C to +35°C</td>
<td>+4°C to +35°C</td>
<td>+4°C to +35°C</td>
<td>+4°C to +35°C</td>
</tr>
<tr>
<td>Control accuracy (°C)</td>
<td>±2.0°C</td>
<td>±2.0°C</td>
<td>±2.0°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>Compressor output, Refrigerant</td>
<td>0.5kW, R407C</td>
<td>0.9kW, R407C</td>
<td>1.5kW, R407C</td>
<td>2.2kW, R407C</td>
</tr>
<tr>
<td>Cooling capacity [kW (50/60Hz)] (°C)</td>
<td>1.0/1.1</td>
<td>1.7/2.1</td>
<td>4.0/4.3</td>
<td>5.2/5.8</td>
</tr>
<tr>
<td>Circulation temperature at 10°C</td>
<td>1.2/1.3</td>
<td>2.7/2.9</td>
<td>4.5/4.7</td>
<td>6.0/6.5</td>
</tr>
<tr>
<td>Pumping capacity, [L/min] (°)</td>
<td>16/35</td>
<td>15/30</td>
<td>22/31</td>
<td>22/31</td>
</tr>
<tr>
<td>Motor output [kW]</td>
<td>0.15/0.22</td>
<td>0.1/0.15</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Bath water capacity (at 80% water level)</td>
<td>24L</td>
<td>26L</td>
<td>56L</td>
<td>56L</td>
</tr>
<tr>
<td>Safety device/function</td>
<td>Alarm and warning for water shortage, Compressor pressure abnormal, Compressor overload, Pump overcurrent, Water temperature abnormal, Warning indicator lamp</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Optional Accessories
(See also ★ mark in the specification table below)

1. For the precision of temperature control
2. Enhancement for the pumping capacity
3. Safety devices / functions added
4. Materials of wetted part changed
5. CUSTOM-MADE

- Hot gas bypass control (±1.0°C)
- Pulse width modulation expansion valve (±0.5°C)
- High flow / High pump head / Stainless steel, Bronze Casting
- No-fuse breaker
- Short circuit breaker
- Cooling coil (Stainless steel) - For Pure water
- Ball tap
- Remote control box
- Heater loaded
- Fixing brackets

- Remote control box (Noise reduction by cooling speed control for cooling fan)
- Fan speed controller (Noise reduction by revolving speed control for cooling fan)
- Pulse width modulation expansion valve (±0.5°C)
- Hot gas bypass control

★ Applicable in Simple chiller series

We contribute to the development of research and industry.
Pump Characteristic Curves and Cooling Capacity

Cooling capacity curve (Air-cooled type)

Cooling capacity curve (Water-cooled type)

Standard specifications: Water-cooled type (Specifications can be modified as an option)

<table>
<thead>
<tr>
<th>Model</th>
<th>CHW-900</th>
<th>CHW-1500</th>
<th>CHW-2200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range/Ambient temperature range</td>
<td>Temperature range: +7°C to +25°C, Ambient temperature range: +5°C to +35°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control accuracy (°C)</td>
<td>+2.0°C Compressor On-Off control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressor output, Refrigerant</td>
<td>0.9kW, R407C</td>
<td>1.5kW, R407C</td>
<td>2.0kW, R407C</td>
</tr>
<tr>
<td>Cooling capacity [kW] @ 0-50°C (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circulation temperature at 10°C</td>
<td>2.4/2.8</td>
<td>4.8/5.3</td>
<td>7.4/8.2</td>
</tr>
<tr>
<td>Circulation temperature at 20°C</td>
<td>2.8/3.3</td>
<td>5.8/6.1</td>
<td>9.4/10.2</td>
</tr>
<tr>
<td>Pumping capacity [L/min] @ 90Hz (L/min)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. discharge pressure [MPa]</td>
<td>0.14/0.19</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Flow rate [L/min]</td>
<td>15/27</td>
<td>22/31</td>
<td></td>
</tr>
<tr>
<td>Motor output [kW]</td>
<td>0.1/0.15</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Water bath capacity (at 85% water level)</td>
<td>20L</td>
<td>50L</td>
<td></td>
</tr>
<tr>
<td>Safety device function</td>
<td>Alarm and warning for water shortage, Compressor pressure abnormal, Compressor overload, Pump overcurrent, Water temperature abnormal, Warning indicator lamp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required primary cooling water rate [L/min] (°C)</td>
<td>5/10</td>
<td>25/50</td>
<td>35/60</td>
</tr>
<tr>
<td>Connecting pipe diameter (circulating fluid in/out, primary cooling water in/out)</td>
<td>Rc1/2, Rc1/2 (with valve)</td>
<td>Rc1, Rc1/2 (with valve)</td>
<td>Rc1, Rc3/4 (with valve)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>500×500×986/944mm</td>
<td>570×677×1236/1284mm</td>
<td>570×677×1236/1284mm</td>
</tr>
<tr>
<td>Weight</td>
<td>85kg</td>
<td>approx. 170kg</td>
<td>approx. 172kg</td>
</tr>
<tr>
<td>Power Supply (three phases AC200V, 50/60Hz)</td>
<td>15A</td>
<td>20A</td>
<td>20A</td>
</tr>
<tr>
<td>Operation current [mA] (600/936Hz)</td>
<td>4/4.7</td>
<td>7.8/8.0</td>
<td>5/10.7</td>
</tr>
</tbody>
</table>

Notes:
- The cooling capacity may vary with the water temperature. Please note it may cause defrost if the flow rate does not increase at high temperature, so please confirm if the required flow rate being secured in advance.
- There may be a case where temperature performance cannot be maintained due to environmental temperature, heat load, circulation pipe distance etc.
- To improve capacity of pump unit (changes to Large flow rate / High head, Several types).
- To add safety devices (No-fuse breaker and Earth leakage breaker).
- To change materials such as of the valve for pure water of the cooling coil, of the circulating fluid piping for the anthracite and of the ball tap.
- Various options can be added to improve accuracy of temperature adjustment (changes to Hot gas bypass control or Pulse width modulation expansion valve)

We contribute to the development of research and industry.
"Large CH series" responds user’s various needs.

**Features and Advantages**

- **Built-in Inverter realizes Energy saving, Low noise operation and Compact size.**
  
  "Water-cooled integrated type" & "Air-cooled separate type" are renewed!

  - Achieved to save energy by 65% compared with a conventional one thanks to Built-in Inverter!
  - Stable cold water can be supplied at the preset temp ±0.1°C is possible when no load stably.

- **The lineup for Separate type and Outdoor type.**
  
  The style for installation of Chiller unit and the type of compressor can be variously selected depending on the installation environment. Air-cooled integrated type, Separate type and Outdoor type are available.

- **Capacity expansion available.**
  
  The compressor output can be expanded more than 6kW or 7.5 kW listed in this catalog as per request such as 11kW, 15kW, 13kW or so. Please ask us in that case.

- **Various customization are available as per request.**
  
  Diverse customization are available in Large CH/CHV series based on that of standard model as per your request. Please ask us a customization with your request specifications.

  - The wetted parts can be made of stainless steel overall = Pure water can be used.
  - Built-in filter for the circulating fluid = Prevents clogging of pump and others.
  - Large Inverter Chiller CHV series with High precision temperature control system = Enables Control accuracy ± 0.05°C.
  - A large capacity circulation pump amounted = The limited of installation space is relieved.
  - Remote control box = Operates the unit by remote control.

**Example of Customization**

Actual examples of customization for large capacity Chiller below.

- **Precise temperature control Chiller for low temperature range**
  
  - Large cooling capacity in the minus temperature range was required!

  This Chiller unit is ideal for a circulating fluid required be controlled for the temp in the minus temperature range.

  The built-in heater brings back quickly to the ordinary temperature fluid from low temperature for the maintenance.

  Based on Modified CH-3750WFE → P.194
  - Cooling capacity (circulating temperature at -10°C, 50Hz) : approx. 0.4kW
  - Temp. range : -20°C to +20°C
  - Control accuracy : ±0.5℃
  - Note : Water-cooled integrated type

- **Large capacity air-cooled Chiller unit**
  
  - Cooled separate type with Large cooling capacity was required.

  Built-in Inverter compressor realizes Energy saving compared with a conventional one.

  The service temperature can be from +5℃ to +25℃ (antifreeze with required to use).

  Based on Modified CHV-4500AS → P.192
  - Cooling capacity (circulating temperature at +20℃, 50Hz) : approx. 23kW
  - Temp. range : +5℃ to +25℃
  - Control accuracy : ±0.5℃
  - Note : Air-cooled separate type

- **Extra-large capacity air-cooled Chiller unit**
  
  - The circulating water was unable to be drawn from Cooling tower, but Larger cooling capacity was required in some way!

  Generally, Chiller unit with large cooling capacity are mostly water-cooled type. This Extra-large cooling capacity air-cooled Chiller unit is ideal for the place where a cooling tower cannot be installed.

  Based on Modified CH-15000ASO → P.193
  - Temp. range : +10℃ to +25℃
  - Control accuracy : ±3℃
  - Note : Air-cooled integrated type, Outdoor use

**Complete indicators and Simple controls. The piping positioned on the backside.**

- Refrigerant pressure gauge (Low pressure)
- Refrigerant pressure gauge (High pressure)
- Pump pressure gauge
- 4/Temperature controller
- Compressor operation switch (indicator)
- Compressor stop switch
- Pump operation switch (indicator)
- Pump stop switch
- Power supply input indicator
- Warning indicator
- ELCB and MCCB

**Schematic diagram for Back side**

- 1/Overflow
- 2/Water inlet
- 3/Circulating fluid return port
- 4/Circulating fluid discharge port
- 5/Drain valve
- 6/Primary cooling water outlet (water-cooled type)
- 7/Primary cooling water inlet (water-cooled type)

**We contribute to the development of research and industry.**

[2019-2020 General Catalog]
Main application of large chiller CH/large inverter chiller CHV series

The temperature control for Injection molding machine

Transmission electron microscope

Installed outdoors raw material tank

Hot Water Circulator/The high temperature circulator

Specialized for the heating control

Hot Water Circulator

- Hot water circulation to Molding machine, Semiconductor manufacturing equipment, etc.

Circulation the hot water up to +80℃ with high accuracy ±0.1℃.

- Temperature range: +40℃ to +80℃
- Control accuracy: ±0.1℃
- Heater: 6.0kW
- Note: Available in Cooling function by Primary cooling water.

Hot Water Circulator/The high temperature circulator designed being used with Fluorine-based heating medium

- The heating control in high temperature range for Semiconductor manufacturing equipment.

Designed being used with Fluorine-based heating medium (Galden® HT270) for the heating control in high temperature range (+70℃ to +200℃).

- Temperature range: +70℃ to +200℃
- Control accuracy: ±2.0℃
- Heater: 2.5kW

Ultra low temperature circulator/Chiller unit for low temperature range

Specialized for the heating control in low temperature range

Ultra low temperature circulator designed being used with Fluorine-based heating medium

- Temperature control for Etching equipment.

This model is an Ultra-low temperature circulator for the cooling Etching equipment, Optical fiber production, etc. Designed being used with Fluorine-based heating medium (Galden® HT110).

- Temperature range: -60℃ to +40℃
- Control accuracy: ±0.5℃
- Cooling capacity (circulation temperature at -40℃): 1.0kW

Chiller unit for low temperature range (CUSTOM-MADE)

- Temperature control for Etching equipment.

This Chiller unit is ideal for a circulating fluid required be controlled for the temp in minus temp range.

Based on Modified CH-3750WFH → P.194

- Temperature range: -20℃ to +5℃
- Control accuracy: ±3℃
- Cooling capacity (circulation temperature at -10℃): approx. 0.35kW
- Note: Water-cooled integrated type

Delivery, Installing and Piping work

The fee for Delivery, Installing, Piping work and Wiring work are quoted separately.

TAITEC VOICE

Please note the following matter.

 Protuberances not included in Dimensions.
 Vessels of photo not included.
Cooling pump CHV-750W〜3750W

**The equipped inverter enable to save energy and realize high accuracy. Water-cooled integrated standard model. Can be customized upon request.**

### Features

- The water-cooled integrated type is ideal for cleanroom.
- The equipped inverter enable to save energy and realize low operation noise and small consumption current.
- Customizable to upon request as special order.

### Main Applications

- The temperature control for Semiconductor manufacturing equipment, roller part of printing machine, etc.

---

**The equipped inverter enable to save energy and realize low operation noise and small consumption current.**

Saves energy up to Max. 62% OFF (Compared with our conventional products) of operating current and realizes the high accuracy ± 0.1 °C.

Customizable to upon request as special order.

Can be customized based on the following specifications upon request, please feel free to ask us. Cooling capacities other than the notation (see below) and precision temperature control ± 0.05℃ are available as an option.

**The water-cooled integrated type is ideal for cleanroom.**

No exhaust heat from the compressor, no influence on the room. Primary cooling water and its piping construction (a separate fee) are required.

Equipped with Warning indicator lamp.

Failure diagnosis can be performed speedy to shorten a time required for recovery.

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**Power consumption curve**

(Compared with our conventional products)

<table>
<thead>
<tr>
<th>Model</th>
<th>CHV-750W</th>
<th>CHV-1500W</th>
<th>CHV-2200W</th>
<th>CHV-3750W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>10°C to 25°C</td>
<td>6.0°C</td>
<td>9.0°C</td>
<td>14.0°C</td>
</tr>
<tr>
<td>Control accuracy (%)</td>
<td>±0.1 °C</td>
<td>0.5°C</td>
<td>0.5°C</td>
<td>0.5°C</td>
</tr>
<tr>
<td>Cooling capacity [kW]</td>
<td>3.0</td>
<td>1.1kW, 407°C</td>
<td>1.9kW, 407°C</td>
<td>3.75kW, 407°C</td>
</tr>
<tr>
<td>Compressor output, Refrigerant</td>
<td>0.75kW, R407C</td>
<td>1.1kW, R407C</td>
<td>1.9kW, R407C</td>
<td>3.75kW, R407C</td>
</tr>
<tr>
<td>Pumping capacity [L/min]</td>
<td>22/31</td>
<td>22/31</td>
<td>22/31</td>
<td>22/31</td>
</tr>
<tr>
<td>Motor output [kW]</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Safety device/function</td>
<td>Short/Over current breaker, Warning and Cut off for low water, Pump overcurrent, Water temperature abnormal, Refrigerant high pressure, Compressor unit abnormal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water bath capacity (at 80% water level)</td>
<td>2L</td>
<td>5L</td>
<td>10L</td>
<td>10L</td>
</tr>
<tr>
<td>Required primary cooling water rate [L/min] (cooling water temperature: +20/30°C)</td>
<td>9/22</td>
<td>16/36</td>
<td>23/50</td>
<td>40/90</td>
</tr>
<tr>
<td>Connecting pipe diameter (circulating fluid in/out, primary cooling water in/out)</td>
<td>Rc1/2, Rc1/2 (with valve)</td>
<td>Rc1, Rc3/4 (with valve)</td>
<td>Rc1-1/4, Rc1 (with valve)</td>
<td></td>
</tr>
<tr>
<td>Dimensions (Not include plumbing and protuberance)</td>
<td>450x573x1220mm</td>
<td>575x680x1420mm</td>
<td>720x900x1420mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>130kg</td>
<td>200kg</td>
<td>210kg</td>
<td>280kg</td>
</tr>
<tr>
<td>Power supply (three phase AC200V, 50/60Hz) [*/**]</td>
<td>10A</td>
<td>10A</td>
<td>10A</td>
<td>10A</td>
</tr>
<tr>
<td>Operation current</td>
<td>6A</td>
<td>6A</td>
<td>6A</td>
<td>6A</td>
</tr>
</tbody>
</table>

*Required primary cooling water rate [L/min] (cooling water temperature: +20/30°C) when using tap water. Flow rate when the discharge pressure at 0.3MPa.

**Customizable to upon request as special order.**

---

We contribute to the development of research and industry.

We provide Freezers, Chillers, Water baths, Shaking water baths, Immersion coolers, CO2 incubators, CO2 incubator shakers, temperature control units, etc.

The appearance is subject to change.
Cooling pump CH-6000W～18000W

The water-cooled integrated type, ideal for cleanroom. Can be customized based on the following specifications upon request such as compressor output up to 18 kW, etc. from wide option range.

Features

• The water-cooled integrated type is ideal for cleanroom.
• Customizable to upon request as special order.
• The compressor output above 18 kW is available on custom-made.

Main Applications

• The temperature control for Semiconductor manufacturing equipment.

When the water temperature of the cooling tower is not stable during the summer hot season, by using it as the primary cooling water of water-cooled chiller, a stable temperature cooling water can be obtained. (The cooling tower is actually installed outdoors).

Pump Characteristic Curves (Reference)

Model | CH-6000W | CH-7500W | CH-9000W | CH-11000W | CH-15000W | CH-18000W
---|---|---|---|---|---|---
Temperature range | +5℃ to +25℃ | +5℃ to +25℃ | +5℃ to +25℃ | +5℃ to +25℃ | +5℃ to +25℃ | +5℃ to +25℃
Control accuracy (±) | ±2.0 to 3.0℃, Compressor On-Off control | ±2.0 to 3.0℃, Compressor On-Off control | ±2.0 to 3.0℃, Compressor On-Off control | ±2.0 to 3.0℃, Compressor On-Off control | ±2.0 to 3.0℃, Compressor On-Off control | ±2.0 to 3.0℃, Compressor On-Off control
Pumping capacity (50/60Hz) (kW) | 0.22/0.45 | 0.33/0.47 | Ask us | Ask us | Ask us | Ask us
Flow rate [L/min] | 40/110 | 83/140 | Ask us | Ask us | Ask us | Ask us
Motor output [kW] | 0.77/1.2 | 1.02/1.69 | Ask us | Ask us | Ask us | Ask us
Safety device/function | Short/Over current breaker, Overload protector. High and Low temperature. Refrigerant high and low pressure, Overheat protector for Compressor, Phase-reversal relay, Overheat protector for Compressor. Low water cut off, Warning indicator lamp | Short/Over current breaker, Overload protector. High and Low temperature. Refrigerant high and low pressure, Overheat protector for Compressor, Phase-reversal relay, Overheat protector for Compressor. Low water cut off, Warning indicator lamp | Short/Over current breaker, Overload protector. High and Low temperature. Refrigerant high and low pressure, Overheat protector for Compressor, Phase-reversal relay, Overheat protector for Compressor. Low water cut off, Warning indicator lamp | Short/Over current breaker, Overload protector. High and Low temperature. Refrigerant high and low pressure, Overheat protector for Compressor, Phase-reversal relay, Overheat protector for Compressor. Low water cut off, Warning indicator lamp | Short/Over current breaker, Overload protector. High and Low temperature. Refrigerant high and low pressure, Overheat protector for Compressor, Phase-reversal relay, Overheat protector for Compressor. Low water cut off, Warning indicator lamp | Short/Over current breaker, Overload protector. High and Low temperature. Refrigerant high and low pressure, Overheat protector for Compressor, Phase-reversal relay, Overheat protector for Compressor. Low water cut off, Warning indicator lamp
Water bath capacity (at 80% water level) | 280L | 315L | Ask us | Ask us | Ask us | Ask us
Required primary cooling water rate [L/min] (cooling water temperature: +20℃/34℃ (°C)) | 50/64 | 57/74 | 75/112 | Ask us | Ask us | Ask us
Connecting pipe diameter (circulating fluid in/out, primary cooling water in/out) | Rc1¼, Rc1¼ | Rc1¼, Rc1¼ | Ask us | Ask us | Ask us | Ask us
Dimensions | 756x1020x1581Hmm | 1107x823x1882Hmm | Ask us | Ask us | Ask us | Ask us
Weight | Ask us | Ask us | Ask us | Ask us | Ask us | Ask us
Power Supply / Operation current | AC200V・50/60Hz/three phase *Ask us for more information. | AC200V・50/60Hz/three phase *Ask us for more information. | AC200V・50/60Hz/three phase *Ask us for more information. | AC200V・50/60Hz/three phase *Ask us for more information. | AC200V・50/60Hz/three phase *Ask us for more information. | AC200V・50/60Hz/three phase *Ask us for more information.

(*)Performance may not be maintained due to environmental temperature, heat load, circulation pipe distance etc.
(1)Capacity when the ambient temperature at below +30℃.
(2)Capacity when using tap water. Flow rate when the discharge pressure at 0.4MPa.
(3)The required cooling water flow increases and decreases by the temperature. Please note that if the flow rate does not increase when the temperature is high it may cause trouble.
(4)Since the water-cooled type requires primary cooling water for cooling, please make sure the specified flow rate being secured. Pure water is available as an option.
(5)Please ask us when mixing chemicals for water treatment to circulating fluid. The fee for Delivery, Installing are quoted separately.

We contribute to the development of research and industry.
[ 2019-2020 General Catalog ]
Cooling pump CHV-750AS～6000AS

The air-cooled separate type, ideal for cleanroom. The equipped inverter enable to save energy and realize high accuracy. Can be customized based on the following specifications upon request.

The equipped inverter enable to save energy and realize low operation noise and small consumption current.

Saves energy up to Max. 60% OFF (Compared with our conventional products) of operating current and Realizes the high accuracy ± 0.1 [℃].

Customizable to upon request as special order.

Can be customized based on the following specifications upon request, please feel free to ask us. Cooling capacities other than the notation (see below) and precision temperature control ± 0.05℃ are available as an option.

Equipped with Warming indicator lamp.

Failure diagnosis can be performed speedy to shorten a time required for recovery.

The wetted parts are made of stainless.

Restrains the generation of green copper rust to reduce defect.

The separate type is ideal for temperature control for precision equipment as no exhaust heat in the room. (*The chiller unit and the outdoor unit not placed side by side as shown in the figure, in fact, they installed separately.)

Features

- The air-cooled separate type, no noise or vibration in the room.
- The equipped inverter enable to save energy and realize high accuracy.
- Plumbing the indoor unit and the outdoor unit required.

Main Applications

- The temperature control for Transmission electron microscope.

<table>
<thead>
<tr>
<th>Model</th>
<th>CHV-750AS</th>
<th>CHV-1500AS</th>
<th>CHV-2200AS</th>
<th>CHV-3750AS</th>
<th>CHV-4500AS</th>
<th>CHV-6000AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>+10℃ to +25℃</td>
<td>±0.1℃</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling capacity [kW]</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>18</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>Compressor output, Refrigerant</td>
<td>0.75kW, R407C</td>
<td>1.1kW, R407C</td>
<td>2.2kW, R407C</td>
<td>3.75kW, R410A</td>
<td>4.5kW, R410A</td>
<td>6.0kW, R410A</td>
</tr>
<tr>
<td>Pumping capacity [L/min]</td>
<td>22/31</td>
<td>42/55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor output [kW]</td>
<td>0.4</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety device/function</td>
<td>Short/Over current breaker, Warning and Cut off for low water, Pump overcurrent, Water temperature abnormal, Warming indicator lamp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water bath capacity (at 90% water level)</td>
<td>26L</td>
<td>56L</td>
<td>110L</td>
<td>230L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecting pipe diameter (Circulating fluid inlet)</td>
<td>Rc1/2</td>
<td>Rc1</td>
<td>Rc1/4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (in/cm)</td>
<td>Indoor unit: 450x556x886</td>
<td>570x677x1236</td>
<td>570x677x1241</td>
<td>687x922x1657</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdoor unit: 780x300x440</td>
<td>900x320x795</td>
<td>300x320x1540</td>
<td>990x750x1800</td>
<td>1202x1652x1563</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>Indoor unit: 70kg</td>
<td>110kg</td>
<td>115kg</td>
<td>125kg</td>
<td>160kg</td>
<td></td>
</tr>
<tr>
<td>Outdoor unit: 40kg</td>
<td>56kg</td>
<td>70kg</td>
<td>116kg</td>
<td>220kg</td>
<td>190kg</td>
<td></td>
</tr>
<tr>
<td>Power supply (three phase AC200V, 50/60Hz)</td>
<td>15A</td>
<td>20A</td>
<td>30A</td>
<td>50A</td>
<td>60A</td>
<td></td>
</tr>
<tr>
<td>Operation current</td>
<td>7A</td>
<td>11A</td>
<td>15A</td>
<td>30A</td>
<td>42A</td>
<td>45A</td>
</tr>
</tbody>
</table>

(*1) Performance may not be maintained due to environmental temperature, heat load, circulation pipe distance, etc. When the thermal load becomes below approx. 30% of the cooling capacity, the control accuracy changes to ± 2.0℃ due to the compressor On-Off control.

(*2) Capacity when the ambient temperature at below +30℃.

(*3) Capacity when using tap water. Flow rate when the discharge pressure at 0.3MPa.

(*4) The sensitivity current in ELCB should be set larger than 30mA.

We contribute to the development of research and industry.

[2019-2020 General Catalog]
Cooling pump CH-1500ASO〜7500ASO

The air-cooled integrated type for outdoor, more than compressor output 7.5 kW is available as an option. Ideal for the case it cannot placed indoor.

Features

• The all-weather unit for outdoor.
• Customizable to upon request.
• Can be operated by the remote control panel indoor.

Main Applications

• Temperature control for installed outdoors raw material tank, etc.

Can be customized upon request.

This model can be most widely customized among Large CH series. Customized based on the following specifications upon request such as Temperature range, Temperature control accuracy, Pump capacity, etc., also more than compressor output 7.5 kW is available as an option. Please feel free to ask us.

Ideal for the case it cannot placed indoor, can be used for temperature control for installed outdoors equipment.

<table>
<thead>
<tr>
<th>Model</th>
<th>CH-1500ASO</th>
<th>CH-2200ASO</th>
<th>CH-3750ASO</th>
<th>CH-5500ASO</th>
<th>CH-7500ASO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>+5°C to +25°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control accuracy (*1)</td>
<td>±2.0 to 3.0°C, Compressor On-Off control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling capacity (kW) (50/60kHz) (*2)</td>
<td>3.7/4.7</td>
<td>5.2/6.4</td>
<td>6.5/7.8</td>
<td>10.2/12.6</td>
<td>14.7/18.5</td>
</tr>
<tr>
<td>Compressor output, Refrigerant</td>
<td>1.9kW, R407C</td>
<td>2.2kW, R407C</td>
<td>2.6kW, R407C</td>
<td>3.7kW, R407C</td>
<td>5.2kW, R407C</td>
</tr>
<tr>
<td>Max discharge pressure (MPa)</td>
<td>0.22</td>
<td>0.25</td>
<td>0.27</td>
<td>0.33</td>
<td>0.40</td>
</tr>
<tr>
<td>Flow rate (L/min)</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>Motor output (kW)</td>
<td>0.4</td>
<td>0.5</td>
<td>1.0</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Water bath capacity (at 80% water level)</td>
<td>40L</td>
<td>50L</td>
<td>60L</td>
<td>70L</td>
<td>100L</td>
</tr>
<tr>
<td>Connecting pipe diameter (Circulating fluid in/out)</td>
<td>Rp1</td>
<td>Rp1¼</td>
<td>Rp1½</td>
<td>Rp1½</td>
<td>Rp1½</td>
</tr>
<tr>
<td>Dimensions</td>
<td>530x1310x1310mm</td>
<td>530x1310x1310mm</td>
<td>1040x1310x1310mm</td>
<td>1040x1310x1310mm</td>
<td>1040x1310x1310mm</td>
</tr>
<tr>
<td>Weight</td>
<td>210kg</td>
<td>240kg</td>
<td>290kg</td>
<td>490kg</td>
<td>590kg</td>
</tr>
<tr>
<td>Power Supply (three-phase 200V, 50/60Hz)</td>
<td>30A</td>
<td>50A</td>
<td>75A</td>
<td>110A</td>
<td>110A</td>
</tr>
<tr>
<td>Operation current (50/60Hz)</td>
<td>8/9A</td>
<td>10/12A</td>
<td>20/22A</td>
<td>20/22A</td>
<td>37/42A</td>
</tr>
<tr>
<td>Standard Accessory</td>
<td>Remote control panel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) Performance may not be maintained due to environmental temperature, heat load, circulation pipe distance, etc.

(2) Capacity when the ambient temperature at below +30°C.

(3) Capacity when using tap water. Flow rate when the discharge pressure at 0.1MPa.

The cooling capacity may not be maintained if the unit is placed with direct sunlight and hindrance of exhausting.

Pure water is available as an option.

Please ask us when mixing chemicals for water treatment to circulating fluid.

The fee for Delivery, Installing, Piping work and Wiring work are quoted separately.

We contribute to the development of research and industry.

[ 2019-2020 General Catalog ]
Super cool SC-60

Ultra low temperature circulator, designed being used with Fluorine-based heating medium for the wide temperature range (Lowest temp. -60℃).

Features

- Can be stable cooling even in ultra low temperature range (Lowest temp. -60℃).
- The sealed tank. The pump is free from risk of liquid leakage.

Main Applications

- Temperature control for Etching equipment.
- Temperature control for Optical fiber production.

The custom-made, performs cold water circulation between -20℃ and +5℃.

Features

- The temperature range of standard is -20℃ to +5℃.
- The temperature above the upper limit temp. (+5℃ as described) can be customized.
- Heater output, pumping capacity, wetted member etc can be changed.

Main Applications

- The cooling for Processing machinery, etc.