





# CPT CO., LTD (주)씨피티

Manufacturer Of Temperature Circulator

-90°C ~ 300°C

±0.1°C ~ ±0.001°C





## Company Introduction

Since 1987, CPT CO., LTD has consistently produced reliable temperature controller which are Chiller, Calibration Bath, Viscosity Bath, Oil Bath, Water Bath, Cold Trap in Korea. Our company tries to do our best in the field of temperature control for the satisfaction of our customers for the last 33 years.

Today's CPT CO., LTD is one of the best leader in an industry. As a venture company, CPT CO., LTD is specialized in the distribution of experimental units for temperature range -90 ~+ 300 control, stability, uniformity  $\pm 0.001^{\circ}\text{C}$  /  $\pm 0.005^{\circ}\text{C}$  which are being used in the fields of various physical & chemical test units, semi-conductor units, new materials research & development units, battery, chemical substances research & development units and biotechnology.

At the moment, we have a strong belief that development of new products and high quality are our unique road and our products are being managed under strict quality control with international standards. CPT CO., LTD Have been certified according to CE ISO9001, ISO14001 since 1993. Also, we are trying our utmost to make competitive & excellent products through our laboratory which was founded in 2002. CPT CO., LTD will the future of temperature controllers.

## Company History

- 2016 Developed  $0.01^{\circ}\text{C}$  temperature control system
- 2014 Constant temperature and vibration patents for liquid mixing tank (KIPO)
- 2012 Obtain low temperature circulating water bath (RCH) CE certification  
Export Business (Gyeonggi Small & Medium Business Administration)
- 2010 Research Institute -4 layer, the production line -2 floor, parts warehouse - Underground Moved
- 2005 Ltd. Company name changed to CPT
- 2002 Research gaebalhyeong Venture Company (SMBA game)  
Obtain low temperature circulating water bath (DRC) CE certification
- 2001 Corporate Research Technology Institute (Korea Industrial Technology Association)  
Korea Industrial Technology Association Register  
Match Academic Institute of association agreements
- 1999 Registered trade
- 1997 Partnership Ltd Dongbu Electronics
- 1996 Company incorporated
- 1995 Selected as a superior technology company by KOTEC
- 1994 Accredited as a promising company by IBK of Korea
- 1993 Obtained ISO9001 and ISO14001
- 1991 Changed name of company to Changwon Prime Tech
- 1987 Company established





# Content

|                                                                                     |                                                                                              |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|    | <b>DRC Series</b> ..... 04<br>Refrigerated & Heating Circulators<br>-35.0~160.0℃             |
|    | <b>RCH Series</b> ..... 08<br>Refrigerated & Heating Circulators<br>-35.0~160.0℃             |
|    | <b>DWB Series</b> ..... 14<br>Heating Circulators<br>Amb~160.0℃                              |
|    | <b>GCTB Series</b> ..... 18<br>Cold Trap<br>-40, -50, -80, -90℃                              |
|   | <b>OB Series</b> ..... 20<br>Oil Bath Manual/Program Type<br>200.0, 300.0℃                   |
|  | <b>VB Series</b> ..... 22<br>Viscosity Baths<br>±0.01℃ Amb~150.00℃                           |
|  | <b>CB Series</b> ..... 30<br>Calibration Baths<br>±0.01℃, -90.00~300.00℃                     |
|  | <b>BB Series</b> ..... 34<br>Black Body Calibrator for Infrared Thermometer<br>-40.00~60.00℃ |
|  | <b>THB Series</b> ..... 36<br>Teflon Heating Block<br>±0.1℃, Amb~250.0℃                      |
|  | <b>IC Series</b> ..... 38<br>Immersion Circulator<br>Amb~160℃                                |
|  | <b>UC Series</b> ..... 40<br>Ultra-Cool Refrigerated & Heating Circulator<br>-80.0~100.0℃    |
|  | <b>Accessories</b> ..... 42                                                                  |
|  | <b>Application</b> ..... 44                                                                  |

# DRC Series

DRC series is a most compact and economical product in the CPT's refrigerate and heating circulator production line. DRC series has powerful pump (9LPM), heater(1Kw~1.8Kw), and cooler with resolution  $\pm 0.1$  ( $\pm 0.05$ ) stability. CPT definitely recommend DRC series for stabilize small range units such as (1L~20L).

## Refrigerated & Heating Circulators -35.0°C~160.0°C





# Features



## Visuality

Strong yellow display color can be seen from anywhere.



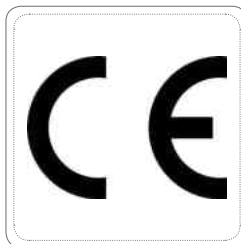
## Spatiality

Compact size with strong Cooling and Heating Power.



## Durability

strong housing and perfect fitting of stainless steel will free from care.



## Rarity

Many years of trial and error make the best quality.



## Operability

3 buttons system for quick Temperature control.



## Mobility

Optional wheels and handy capable low weighs enable you to move DRC machine anywhere.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into you are hands.



## Handling

Compact and strong ergonomic design handles enable you to move a machine easily.



## Cleaning

Extremely easy to open the case and simply vacuum a dust.



## Quick Starts

Simply press ON button to re-operate previous Temperature setting.

# Refrigerated & Heating Circulators

-20.0℃~160.0℃



| DRC 4                               |                                               |
|-------------------------------------|-----------------------------------------------|
| Working Temperature Range ℃         | -20.0~160.0                                   |
| Temperature Stability ℃             | ±0.1                                          |
| Heating Capacity W                  | 1000                                          |
| Cooling Capacity W(+20)             | 180                                           |
| Pump Capacity                       | Flow rate (1/Min) 9<br>Press .Suct (Bar) 0.35 |
| Bath opening & depth (W x D x H cm) | 9x9x15                                        |
| Dimensions (W x D x H cm)           | 19x34.5x53                                    |
| Filling Volume Liters               | 4                                             |
| Weights (Kg)                        | 22                                            |

| DRC 8                               |                                               |
|-------------------------------------|-----------------------------------------------|
| Working Temperature Range ℃         | -20.0~160.0                                   |
| Temperature Stability ℃             | ±0.1                                          |
| Heating Capacity W                  | 1000                                          |
| Cooling Capacity W(+20)             | 260                                           |
| Pump Capacity                       | Flow rate (1/Min) 9<br>Press .Suct (Bar) 0.35 |
| Bath opening & depth (W x D x H cm) | 17x17.5x15                                    |
| Dimensions (W x D x H cm)           | 22x38x54                                      |
| Filling Volume Liters               | 8                                             |
| Weights (Kg)                        | 26                                            |

| DRC 12                              |                                               |
|-------------------------------------|-----------------------------------------------|
| Working Temperature Range ℃         | -20.0~160.0                                   |
| Temperature Stability ℃             | ±0.1                                          |
| Heating Capacity W                  | 1400                                          |
| Cooling Capacity W(+20)             | 380                                           |
| Pump Capacity                       | Flow rate (1/Min) 9<br>Press .Suct (Bar) 0.35 |
| Bath opening & depth (W x D x H cm) | 25x32x15                                      |
| Dimensions (W x D x H cm)           | 33x40.5x73.2                                  |
| Filling Volume Liters               | 12                                            |
| Weights (Kg)                        | 37.2                                          |

## Applicable Accessories



Please see pages 42 to 43 for more information.



#### DRCL 20

|                                     |                                               |
|-------------------------------------|-----------------------------------------------|
| Working Temperature Range °C        | -20.0~160.0                                   |
| Temperature Stability °C            | ±0.1                                          |
| Heating Capacity W                  | 1800                                          |
| Cooling Capacity W(+20)             | 680                                           |
| Pump Capacity                       | Flow rate (1/Min) 9<br>Press .Suct (Bar) 0.35 |
| Bath opening & depth (W x D x H cm) | 30x20.5x20                                    |
| Dimensions (W x D x H cm)           | 38.5x45.5x78                                  |
| Filling Volume Liters               | 20                                            |
| Weights (Kg)                        | 45.5                                          |

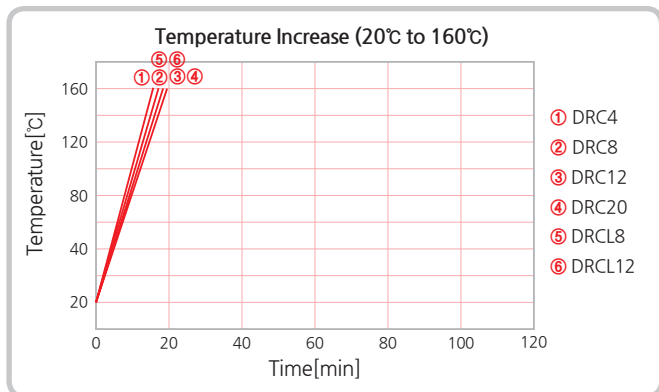
#### DRCL 8

|                                     |                                               |
|-------------------------------------|-----------------------------------------------|
| Working Temperature Range °C        | -35.0~160.0                                   |
| Temperature Stability °C            | ±0.1                                          |
| Heating Capacity W                  | 1000                                          |
| Cooling Capacity W(+20)             | 150                                           |
| Pump Capacity                       | Flow rate (1/Min) 9<br>Press .Suct (Bar) 0.35 |
| Bath opening & depth (W x D x H cm) | 17x17.5x15                                    |
| Dimensions (W x D x H cm)           | 33x41x79                                      |
| Filling Volume Liters               | 8                                             |
| Weights (Kg)                        | 37.2                                          |

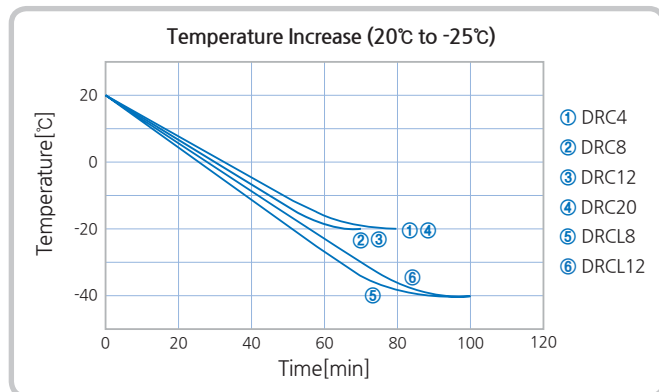
#### DRCL 12

|                                     |                                               |
|-------------------------------------|-----------------------------------------------|
| Working Temperature Range °C        | -35.0~160.0                                   |
| Temperature Stability °C            | ±0.1                                          |
| Heating Capacity W                  | 1800                                          |
| Cooling Capacity W(+20)             | 680                                           |
| Pump Capacity                       | Flow rate (1/Min) 9<br>Press .Suct (Bar) 0.35 |
| Bath opening & depth (W x D x H cm) | 25x17x15                                      |
| Dimensions (W x D x H cm)           | 38.5x45.5x78                                  |
| Filling Volume Liters               | 12                                            |
| Weights (Kg)                        | 45.5                                          |

#### Heat-up Time



#### Cool-down Time



# RCH Series

RCH series is an upgraded product of DRC series. RCH series has powerful pump (14LPM), heater(1Kw~2Kw), and cooler with resolution  $\pm 0.1$  ( $\pm 0.05$ ) stability. CPT definitely recommend RCH series for stabilize middle range units such as (1L~30L).

## Refrigerated & Heating Circulators -35.0°C~160.0°C





# Features



## Visuality

Resolution 0.1°C of strong Yellow display color can be seen from anywhere.



## Spatiality

Compact Size with strong Cooling and Heating Power.



## Durability

strong housing and perfect fitting of stainless steel will free from care.



## Connectivity

Optional RS232C of remote off/on control with external temperature probe.



## Operability

Extremely easy buttons let you control all the operation of RCH series.



## Mobility

Optional wheels and handy capable low weights enable you to move RCH machine anywhere.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into you are hands.



## Handling

Compact and strong ergonomic design handles enable you to move a machine easily.



## Cleaning

Extremely easy to open the magnetic case and simply vacuum a dust.



## Alarm

RCH series has High and Low Alarm systems with Key lock system prevents unauthorized operation.



## Program

All the RCH series has 10 programs, each and every program have 12 steps within 99Hour 59Min.



## External Control

All the RCH series enable you to control External Temperature capability within optional sensor.

# Refrigerated & Heating Circulators

-20.0°C~160.0°C, Manual/Program Type



| RCH 8                               |                                             |
|-------------------------------------|---------------------------------------------|
| Working Temp Range °C               | -20.0~160.0                                 |
| Temp Stability °C                   | ±0.1                                        |
| Heating Capa W                      | 1000                                        |
| Cooling Capa W(+20)                 | 260                                         |
| Pump Capa                           | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 17x17.5x15                                  |
| Dimensions(WxDxHcm)                 | 22x39x59                                    |
| Filling Volume Liters               | 8                                           |
| Weights (Kg)                        | 28                                          |

| RCH 12                         |                                             |
|--------------------------------|---------------------------------------------|
| Working Temp Range °C          | -20.0~160.0                                 |
| Temp Stability °C              | ±0.1                                        |
| Heating Capa W                 | 1400                                        |
| Cooling Capa W(+20)            | 380                                         |
| Pump Capa                      | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (WxDxHcm) | 25x17x15                                    |
| Dimensions(WxDxHcm)            | 35x40.5x79                                  |
| Filling Volume Liters          | 12                                          |
| Weights (Kg)                   | 36                                          |

| RCH 20                              |                                             |
|-------------------------------------|---------------------------------------------|
| Working Temp Range °C               | -20.0~160.0                                 |
| Temp Stability °C                   | ±0.1                                        |
| Heating Capa W                      | 1800                                        |
| Cooling Capa W(+20)                 | 680                                         |
| Pump Capa                           | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 30x20.5x20                                  |
| Dimensions(WxDxHcm)                 | 38.5x45.5x84                                |
| Filling Volume Liters               | 20                                          |
| Weights (Kg)                        | 49                                          |

| RCH 30                              |                                             |
|-------------------------------------|---------------------------------------------|
| Working Temp Range °C               | -20.0~160.0                                 |
| Temp Stability °C                   | ±0.1                                        |
| Heating Capa W                      | 2000                                        |
| Cooling Capa W(+20)                 | 1300                                        |
| Pump Capa                           | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 30x31x22                                    |
| Dimensions(WxDxHcm)                 | 45x63x95                                    |
| Filling Volume Liters               | 30                                          |
| Weights (Kg)                        | 87                                          |

## Applicable Accessories

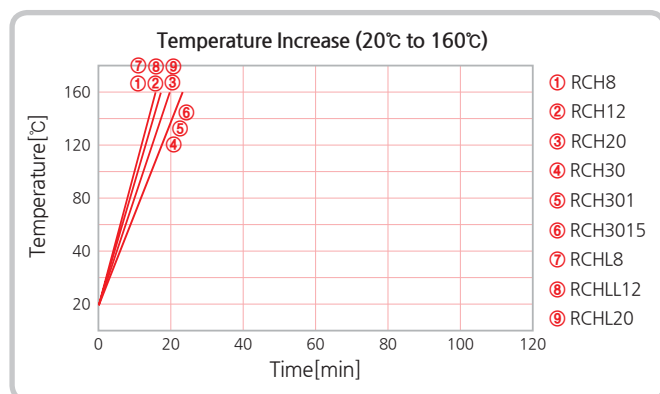


Please see pages 42 to 43 for more information.

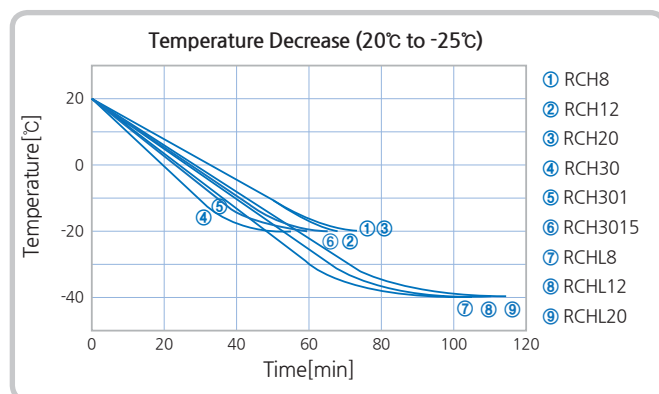


| Model    | Working Temp Range<br>℃ | Temp Stab<br>℃ | Heating<br>Capa W | Cooling<br>Capa W(+20) | Pump<br>Capacity<br>Flow rate/Press.<br>Suct 1/min, bar | Bath opening<br>& depth<br>(WxDxHcm) | Dimensions<br>(WxDxHcm) | Filling<br>Volume<br>Liters | Weights<br>(Kg) |
|----------|-------------------------|----------------|-------------------|------------------------|---------------------------------------------------------|--------------------------------------|-------------------------|-----------------------------|-----------------|
| RCH 301  | -20.0~160.0             | ±0.1           | 2000              | 1550                   | 14 0.6                                                  | 30x31x22                             | 45x63x95                | 30                          | 89              |
| RCH 3015 | -20.0~160.0             | ±0.1           | 2500              | 1900                   | 14 0.6                                                  | 30x46x22                             | 45x63x95                | 30                          | 91              |
| RCHL 8   | <b>-35.0</b> ~160.0     | ±0.1           | 1000              | 150                    | 14 0.6                                                  | 17x17.5x15                           | 30x40.5x79              | 8                           | 36              |
| RCHL 12  | <b>-35.0</b> ~160.0     | ±0.1           | 1400              | 320                    | 14 0.6                                                  | 25x17x15                             | 38.5x46.5x83            | 12                          | 49              |
| RCHL 20  | <b>-35.0</b> ~160.0     | ±0.1           | 1800              | 460                    | 14 0.6                                                  | 30x20.5x20                           | 45x63x95                | 20                          | 64              |

### Heat-up Time



### Cool-down Time



# Refrigerated & Heating Circulators

## Precision Temperature Regulation Type

RCHM RCHM series is an upgraded product of RCH series. RCHM series has powerful pump (14LPM), heater(1Kw~2Kw), and cooler with resolution  $\pm 0.01$  ( $\pm 0.005$ ) stability. CPT definitely recommend RCHM series for stabilize accurate temperature products such as Viscometer, vacuum pump, etc

**$\pm 0.01$ , -35.00°C ~ 160.00°C**



| RCHM 8                              |                                             |
|-------------------------------------|---------------------------------------------|
| Working Temp Range °C               | -20.00~160.00                               |
| Temp Stability °C                   | $\pm 0.01$                                  |
| Heating Capa W                      | 1000                                        |
| Cooling Capa W(+20)                 | 250                                         |
| Pump Capa                           | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 17x17.5x15                                  |
| Dimensions(WxDxHcm)                 | 22x39x59                                    |
| Filling Volume Liters               | 8                                           |
| Weights (Kg)                        | 27                                          |

| RCHM 12                        |                                             |
|--------------------------------|---------------------------------------------|
| Working Temp Range °C          | -20.00~160.00                               |
| Temp Stability °C              | $\pm 0.01$                                  |
| Heating Capa W                 | 1400                                        |
| Cooling Capa W(+20)            | 380                                         |
| Pump Capa                      | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (WxDxHcm) | 25x17x15                                    |
| Dimensions(WxDxHcm)            | 35x40.5x79                                  |
| Filling Volume Liters          | 12                                          |
| Weights (Kg)                   | 38                                          |

| RCHM 20                             |                                             |
|-------------------------------------|---------------------------------------------|
| Working Temp Range °C               | -20.00~160.00                               |
| Temp Stability °C                   | $\pm 0.01$                                  |
| Heating Capa W                      | 1800                                        |
| Cooling Capa W(+20)                 | 680                                         |
| Pump Capa                           | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 30x20.5x20                                  |
| Dimensions(WxDxHcm)                 | 38.5x45.5x84.5                              |
| Filling Volume Liters               | 20                                          |
| Weights (Kg)                        | 53                                          |

| RCHM 30                             |                                             |
|-------------------------------------|---------------------------------------------|
| Working Temp Range °C               | -20.00~160.00                               |
| Temp Stability °C                   | $\pm 0.01$                                  |
| Heating Capa W                      | 1800                                        |
| Cooling Capa W(+20)                 | 1300                                        |
| Pump Capa                           | Flow rate(1/Min) 14<br>Press .Suct(Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 30x31x22                                    |
| Dimensions(WxDxHcm)                 | 45x63x95                                    |
| Filling Volume Liters               | 30                                          |
| Weights (Kg)                        | 87                                          |

## Applicable Accessories



Please see pages 42 to 43 for more information.

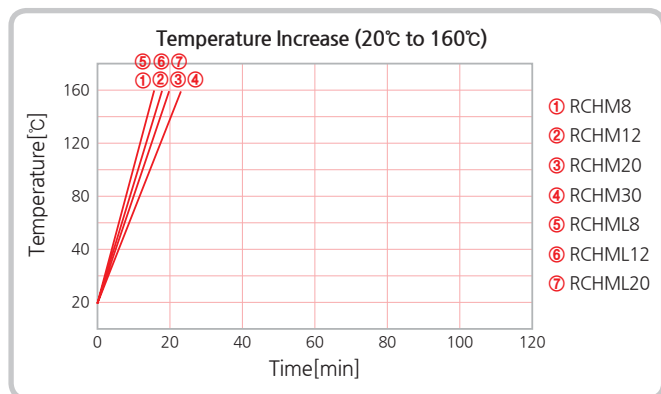


| RCHML 8                             |                       |
|-------------------------------------|-----------------------|
| Working Temperature Range °C        | -35.00~160.00         |
| Temperature Stability °C            | ±0.01                 |
| Heating Capacity W                  | 1000                  |
| Cooling Capacity W(+20)             | 150                   |
| Pump Capacity                       | Flow rate (1/Min) 14  |
|                                     | Press .Suct (Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 17×17.5×15            |
| Dimensions (W x D x H cm)           | 35×40.5×79            |
| Filling Volume Liters               | 8                     |
| Weights (Kg)                        | 27                    |

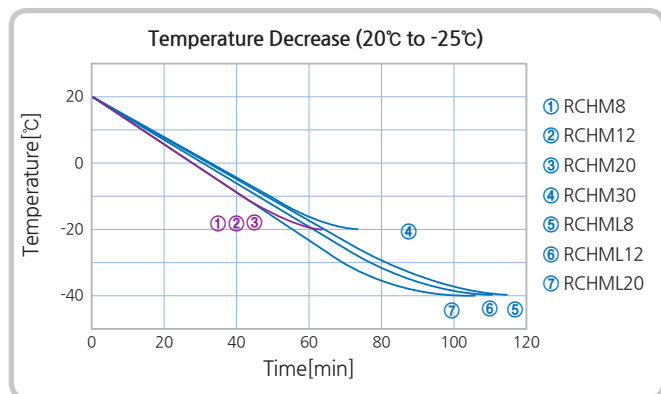
| RCHML 12                            |                       |
|-------------------------------------|-----------------------|
| Working Temperature Range °C        | -35.00~160.00         |
| Temperature Stability °C            | ±0.01                 |
| Heating Capacity W                  | 1400                  |
| Cooling Capacity W(+20)             | 220                   |
| Pump Capacity                       | Flow rate (1/Min) 14  |
|                                     | Press .Suct (Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 25×17×15              |
| Dimensions (W x D x H cm)           | 38.5×45.5×84.5        |
| Filling Volume Liters               | 12                    |
| Weights (Kg)                        | 40                    |

| RCHML 20                            |                       |
|-------------------------------------|-----------------------|
| Working Temperature Range °C        | -35.00~160.00         |
| Temperature Stability °C            | ±0.01                 |
| Heating Capacity W                  | 1800                  |
| Cooling Capacity W(+20)             | 500                   |
| Pump Capacity                       | Flow rate (1/Min) 14  |
|                                     | Press .Suct (Bar) 0.6 |
| Bath opening & depth (W x D x H cm) | 30×20.5×20            |
| Dimensions (W x D x H cm)           | 45×63×95              |
| Filling Volume Liters               | 20                    |
| Weights (Kg)                        | 87                    |

### Heat-up Time



### Cool-down Time



# DWB Series

DWB series is most basic heating circulator from CPT product line. DWB series has powerful pump (9LPM) and heater(1Kw~4Kw) with resolution  $\pm 0.1$  ( $\pm 0.05$ ) stability. CPT definitely recommend DWB series for stabilize heating temperature products

## Water baths Amb~160.0°C





# Features



## Visuality

Resolution 0.1°C of strong Yellow display color can be seen from anywhere.



## Spatiality

Compact Size with strong Heating Power.



## Durability

strong housing and perfect fitting of stainless steel will free from care.



## Rarity

Many years of trial and error make the best quality.



## Operability

3 button system for quick Temperature control.



## Mobility

Convenient to use on a table and easy to hand carry.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Usability

DWB series uses various industry such as plants, cooking, lavatory, etc.



## Cleaning

Simply changing a water from bath will clean the heater and inner side of bath.



## Quick Starts

Simply press ON button to re-operate previous Temperature setting.

# Heating Circulator

Amb~160.0℃



| DWB 5                               |                   |           |
|-------------------------------------|-------------------|-----------|
| Working Temperature Range ℃         |                   | Amb~160.0 |
| Temperature Stability ℃             |                   | ±0.1      |
| Heating Capacity W                  |                   | 1000      |
| Pump Capacity                       | Flow rate (1/Min) | 9         |
|                                     | Press .Suct (Bar) | 0.3       |
| Bath opening & depth (W x D x H cm) |                   | 13×14×15  |
| Dimensions (W x D x H cm)           |                   | 17×32×36  |
| Filling Volume Liters               |                   | 5         |
| Weights (Kg)                        |                   | 6         |

| DWB 10                              |                   |           |
|-------------------------------------|-------------------|-----------|
| Working Temperature Range ℃         |                   | Amb~160.0 |
| Temperature Stability ℃             |                   | ±0.1      |
| Heating Capacity W                  |                   | 1400      |
| Pump Capacity                       | Flow rate (1/Min) | 9         |
|                                     | Press .Suct (Bar) | 0.3       |
| Bath opening & depth (W x D x H cm) |                   | 23×14×15  |
| Dimensions (W x D x H cm)           |                   | 22×32×36  |
| Filling Volume Liters               |                   | 10        |
| Weights (Kg)                        |                   | 6.8       |

| DWB 12                              |                   |           |
|-------------------------------------|-------------------|-----------|
| Working Temperature Range ℃         |                   | Amb~160.0 |
| Temperature Stability ℃             |                   | ±0.1      |
| Heating Capacity W                  |                   | 1400      |
| Pump Capacity                       | Flow rate (1/Min) | 9         |
|                                     | Press .Suct (Bar) | 0.3       |
| Bath opening & depth (W x D x H cm) |                   | 23×14×20  |
| Dimensions (W x D x H cm)           |                   | 22×32×36  |
| Filling Volume Liters               |                   | 12        |
| Weights (Kg)                        |                   | 7         |

## Applicable Accessories



Please see pages 42 to 43 for more information.



### DWB 20

|                                     |                   |           |
|-------------------------------------|-------------------|-----------|
| Working Temperature Range °C        |                   | Amb~160.0 |
| Temperature Stability °C            |                   | ±0.1      |
| Heating Capacity W                  |                   | 1800      |
| Pump Capacity                       | Flow rate (1/Min) | 9         |
|                                     | Press .Suct (Bar) | 0.3       |
| Bath opening & depth (W x D x H cm) |                   | 27×34×15  |
| Dimensions (W x D x H cm)           |                   | 32×53×36  |
| Filling Volume Liters               |                   | 20        |
| Weights (Kg)                        |                   | 10.5      |

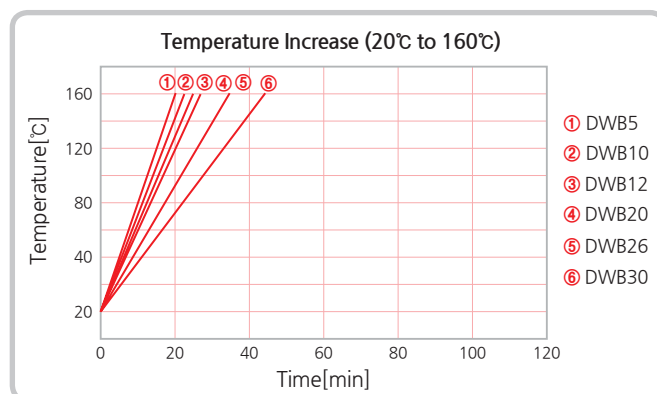
### DWB 26

|                                     |                   |           |
|-------------------------------------|-------------------|-----------|
| Working Temperature Range °C        |                   | Amb~160.0 |
| Temperature Stability °C            |                   | ±0.1      |
| Heating Capacity W                  |                   | 1800      |
| Pump Capacity                       | Flow rate (1/Min) | 9         |
|                                     | Press .Suct (Bar) | 0.3       |
| Bath opening & depth (W x D x H cm) |                   | 23×34×20  |
| Dimensions (W x D x H cm)           |                   | 32×53×36  |
| Filling Volume Liters               |                   | 26        |
| Weights (Kg)                        |                   | 11        |

### DWB 30

|                                     |                   |            |
|-------------------------------------|-------------------|------------|
| Working Temperature Range °C        |                   | Amb~160.0  |
| Temperature Stability °C            |                   | ±0.1       |
| Heating Capacity W                  |                   | 2000       |
| Pump Capacity                       | Flow rate (1/Min) | 9          |
|                                     | Press .Suct (Bar) | 0.3        |
| Bath opening & depth (W x D x H cm) |                   | 34.5×53×15 |
| Dimensions (W x D x H cm)           |                   | 70×40×36   |
| Filling Volume Liters               |                   | 30         |
| Weights (Kg)                        |                   | 17.5       |

### Heat-up Time



# GCTB Series

GCTB series is most basic cold trap from CPT product line. GCTB series has powerful cooler with resolution  $\pm 0.1$  ( $\pm 0.05$ ) stability. CPT definitely recommend GCTB series for vacuums and pump products

## Cold Trap -40, -50, -80, -90°C

GCTB80 / GCTB90



GCTB40 / GCTB50



| Model   | Working Temp Range °C | Refrigerant | Glass trap (Ø×H) cm | Bath Opening Bath Depth (W×D×Hcm) | Dimensions (W×D×Hcm) | Filling Volume Liters | Weights (Kg) |
|---------|-----------------------|-------------|---------------------|-----------------------------------|----------------------|-----------------------|--------------|
| GCT B40 | -40~0                 | R404        | 59×260              | 20×22                             | 30×40×61             | 4.8                   | 37           |
| GCT B50 | -50~0                 | R203        | 59×260              | 20×22                             | 30×40×61             | 4.8                   | 38           |
| GCT B80 | -80~0                 | R404, R-203 | 59×260              | 20×22                             | 40×58×63             | 4.8                   | 75           |
| GCT B90 | -90~0                 | R404, R-203 | 59×260              | 20×22                             | 40×58×63             | 4.8                   | 78           |



# Features



## Visuality

Resolution 0.1°C of strong Yellow display color can be seen from anywhere.



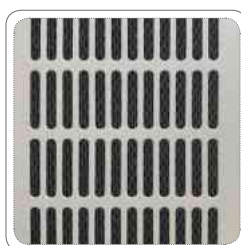
## Spatiality

Compact Size with strong Cooling power.



## Durability

strong housing and perfect fitting of stainless steel will free from care



## Noise

GCTB series has noise reduce system inside the chiller and the surface.



## Operability

Extremely easy buttons let you control all the operation of GCTB series.



## Mobility

GCTB series has extremely smooth wheels that enable you to move anywhere without strength.



## Safety

If machine detects an any problem or damage, thermometer cut-off a cooler and Fuse cut-off a peripheral power



## Sealing

Silicon band and acrylic panel block out heat flow into the bath trap from outside.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands



## Handling

Compact and strong ergonomic design handles enable you to move a machine easily.



## Cleaning

Extremely easy to open the case and simply vacuum a dust.



## Options

You can choose glass trap hole's depth, size and amounts of hole up to 2 to 4

# OB Series

OB series is strongest heating circulator from CPT product line. OB series has powerful pump (14LPM) and heater(1Kw~4Kw) with resolution  $\pm 0.1$  ( $\pm 0.05$ ) stability. CPT definitely recommend OB series for stabilize high temperature (Amb~300) products.

## Oil Bath 200.0, 300.0°C, Manual / Program Type



| Model | Working Temp Range °C | Temp Stab °C | Heat Cap W | Pump capacity Flow rate / Press. Suct 1/min. bar | Bath opening depth WxDxHcm | Dimensions WxDxHcm | Filling Volume Liters | Weights Kg |
|-------|-----------------------|--------------|------------|--------------------------------------------------|----------------------------|--------------------|-----------------------|------------|
| OB12  | Amb~200.0             | $\pm 0.1$    | 1800       | 14 0.6                                           | 15×10×19.5                 | 29×35×45           | 12                    | 16         |
| OB26  | Amb~200.0             | $\pm 0.1$    | 2000       | 14 0.6                                           | 21×16×20                   | 35×56×45           | 26                    | 18         |
| OB123 | Amb~300.0             | $\pm 0.1$    | 1800       | 14. 0.6                                          | 15×10×19.5                 | 29×35×45           | 12                    | 16         |
| OB263 | Amb~300.0             | $\pm 0.1$    | 3000       | 14. 0.6                                          | 21×16×20                   | 35×56×45           | 26                    | 18         |



# Features



## Visuality

Strong Yellow display color can be seen from anywhere.



## Spatiality

Compact Size with strong Heating Power.



## Durability

strong housing and perfect fitting of stainless steel can endure over 299°C temperature.



## Rarity

Many years of trial and error make the best quality.



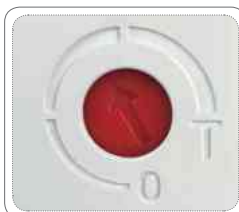
## Operability

Extremely easy buttons let you control all the operation of OB series.



## Mobility

Convenient to use on a table and easy to hand carry.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Usability

OB series uses various industry such as plants, cooking, lavatory, etc.



## Cleaning

Simply changing a water or oil from bath will clean the heater and inner side of bath.



## Quick Starts

Simply press ON button to re-operate previous Temperature setting.



## Program

All the OB series has 10 programs, each and every program have 12 steps within 99Hour 59Min.



## External Control

All the OB series enable you to control External Temperature capability within option. (Pt100)

# VB Series

VB series is a measuring tool for standard ASTM D 0445. VB series has heater(1Kw~2Kw) with resolution  $\pm 0.01$  ( $\pm 0.005$ ) stability. VB series has to be combine with RCH or RCHM series to maintain  $\pm 0.01$  ( $\pm 0.005$ ) stability. CPT definitely recommend VB series for measuring accurate Viscometer products.

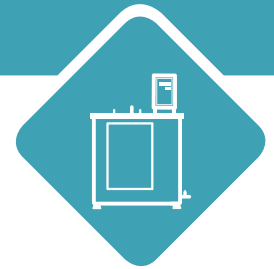
## Viscosity Baths $\pm 0.01^{\circ}\text{C}$ Amb~150.00 $^{\circ}\text{C}$



VB30 / VB30H

VBD60 / VBD60H

| Model  | Working Temp Range $^{\circ}\text{C}$ | Temp Stab $^{\circ}\text{C}$ | Heat Cap W | Bath opening depth WxDxHcm | Dimensions WxDxHcm | Filling Volume Liters | Weights Kg |
|--------|---------------------------------------|------------------------------|------------|----------------------------|--------------------|-----------------------|------------|
| VB30   | Amb~100.00                            | $\pm 0.01$                   | 1400       | 9.5x9.5x37                 | 45x30x61           | 30                    | 22         |
| VB30H  | Amb~150.00                            | $\pm 0.01$                   | 1800       | 9.5x9.5x37                 | 45x30x61           | 30                    | 22         |
| VBD60  | Amb~100.00                            | $\pm 0.01$                   | 2000       | 9.5x9.5x37(D)              | 75x30x61           | 51                    | 30         |
| VBD60H | Amb~150.00                            | $\pm 0.01$                   | 3000       | 9.5x9.5x37(D)              | 75x30x61           | 51                    | 30         |



# Features



## Visuality

Resolution 0.01°C of strong Yellow display color can be seen from anywhere.



## Spatiality

Compact size and 8inch window glass within 0.01 accuracy.



## Variety

VB series need RCHM series to maximize accuracy and VB series also can interlink with other viscosity.



## Connectivity

Optional RS232 of remote off/on control with external temperature probe.



## Operability

Extremely easy buttons let you control all the operation of VB series.



## Mobility

Convenient to use on a table and easy to hand carry.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Alarm

VB series has High and Low Alarm systems with Key lock system prevents unauthorized operation.



## Program

All the VB series has 10 programs, each and every program have 12 steps within 99Hour 59Min.



## External Control

All the VB series enable you to control External Temperature capability within option. (Pt100)

# DV3T Rheometer



The all-in-one tool for measuring viscosity and yield stress

## 7-inch Full Color Touch Screen Display

- New User Interface
- Enhanced Controls
- Real Time Graphing
- Supports Multiple Languages

## Displayed Info:

- Viscosity (cP or mPa • s)
- Temperature (°C or °F)
- Shear Rate/Stress
- % Torque
- Speed/Spindle
- Step Program Status
- Math Model Calculations

**Built-in math models** for data analysis in stand-alone mode. E.g. Casson, Bingham, Power Law, Thix Index

## Enhanced Security

- Customizable User Access
- Date and Time Stamp File
- Password Access
- Portable Log-in Settings

## Built-In Options

- Math Modeling
- Temperature Control
- Yield Tests
- Programmable QC Limits/Alarms



## Analyze characteristics

such as yield stress, flow curves (mixing, pumping, spraying), leveling and recovery

**USB PC Interface** provides optional computer control and automatic data collection capability

## Convenient Bubble Level

Internal Data Storage: 150 MB

## Integrated Temperature Control

with connection to Brookfield TC series Baths and AP/SD Controllers or Brookfield Thermosel System.

## Stand-alone programming

or download custom test programs with PG Flash Software.

## Built-in RTD Temperature Probe

**Accuracy: ±1.0% of range**  
- Displayed with test data

**Repeatability: ±0.2%**

## What's Included?

Instrument  
6 spindles (RV/HA/HB)  
or 4 spindles (LV)  
PG Flash Software  
RTD Temperature Probe  
Spindle Guard Leg\*  
Lab Stand (Model G)  
Convenience Pack  
Cleaning Cloth, Screen Protectors  
Carrying Case  
\*Not applicable to HA or HB torque models

## Optional Accessories

RheocalcT Software  
Label Printer  
Vane Spindles  
Ball Bearing Suspension  
Viscosity Standards  
RV/HA/HB-1 Spindle  
EZ-Lock Spindle Coupling System  
Quick Action Lab Stand  
Temperature Bath  
Small Sample Adapter  
UL Adapter  
Thermosel  
Helipath Stand with T-bar Spindles  
Spiral Adapter  
DIN Adapter  
Quick Connect/Extension Links

| MODEL    | VISCOSITY RANGE<br>cP(mPa•s) |      | SPEEDS<br>(2600 available) |                      |
|----------|------------------------------|------|----------------------------|----------------------|
|          | Min.                         | Max. | RPM                        | Number of Increments |
| DV3TLV   | 1†                           | 6M   | .01-250                    | 2.6K                 |
| DV3TRV   | 100††                        | 40M  | .01-250                    | 2.6K                 |
| DV3THA   | 200††                        | 80M  | .01-250                    | 2.6K                 |
| DV3THB   | 800††                        | 320M | .01-250                    | 2.6K                 |
| DV3T5xHB | 4K                           | 1.6B | .01-250                    | 2.6K                 |

† 1 cP achieved with UL Adapter accessory. 15 cP on LV with standard spindles.  
†† Minimum viscosity is achieved with optional RV/HA/HB-1 spindle.  
B = 1 billion M = 1 million K = 1 thousand cP = Centipoise  
mPa•s = Millipascal•seconds



VB30 Viscosity Bath

DRC8 Refrigerated & Heating Circulator



VBD60 Viscosity Bath

DRC8 Refrigerated & Heating Circulator

# Tuning Fork Vibro Viscometer SV-10 / SV-100



**SV-10**

0.3 mPa·s-10Pa·s  
(0.3-10,000mPa·s)

**SV-100**

1-100Pa·s  
(1,000-100,000mPa·s)

Sensor Unit

Separated Display Unit

## Specifications

|                             | SV-10                                                                                                                         | SV-100                             |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Measurement Method          | Tuning Fork Vibro Method                                                                                                      |                                    |
| Vibration Frequency         | 30Hz (Natural Frequency)                                                                                                      |                                    |
| Viscosity Measurement Unit  | mPa·s, Pa·s, cP, P                                                                                                            | Pa·s, P                            |
| Viscosity Measurement Range | 0.3mPa·s ~ 10Pa·s (0.3 ~ 10,000mPa·s)                                                                                         | 1 ~ 100Pa·s (1,000 ~ 100,000mPa·s) |
| Accuracy                    | 1% of Repeatability (S.D. , 20 ~ 30°C , No condensation )                                                                     |                                    |
| Operating Temperature       | 10 ~ 40°C ( 50 ~ 104°F )                                                                                                      |                                    |
| Minimum Sample Amount       | Standard Sample Cup (35ml-45ml), Optional Small Sample Cup (10ml), Optional Glass Sample Cup (13ml)                           |                                    |
| Temperature Measurement     | 0 ~ 160°C /0.1°C ( 32 ~ 320°F/0.1°F )                                                                                         |                                    |
| Display                     | Vacuum Fluorescent Display ( VFD )                                                                                            |                                    |
| Interface                   | RS-232C                                                                                                                       |                                    |
| Power Supply                | AC Adaptor                                                                                                                    |                                    |
| Power Consumption           | Approx. 14VA                                                                                                                  |                                    |
| Physical Dimensions         | Main Unit : 332 (W) x 314 (D) x 536 (H) mm / Approx. 5.0 kg<br>Display Unit : 238 (W) x 132 (D) x 170 (H) mm / Approx. 1.3 kg |                                    |
| Connection Cable Length     | 1.5m ( Between the Main Unit and the Display Unit )                                                                           |                                    |
| Standard Accessories        | Manual , AC Adaptor , CD-ROM ( WinCT-Viscosity )<br>Sample Cups , RS-232C Cable ( 25 pins - 9 pins )                          |                                    |

SV-10  
Tuning Fork  
Vibro Viscometer

VB30 Viscosity Bath



DRC8 Refrigerated &  
Heating Circulator

SV-10 Separated display Unit

#### Selectable Wide Measurement Range

Samples with very low viscosity to high viscosity can be measured without changing the sensor plates, so a wide range of measurements can be made continuously.  
(SV-10: 0.3mPa·s-10,000mPa·s / SV-100: 1,000mPa·s-100,000mPa·s)

#### High Measurement Accuracy

The SV series, incorporating the innovative tuning fork vibro method, provides an excellent repeatability of 1% of the measured value (by standard deviation) for viscosity measurement.

#### Temperature Measurement

It is very important to measure the temperature of the fluid correctly because the viscosity is very much dependent upon the temperature of the fluid (-2% to +10%/°C). The SV series can detect accurate temperature immediately with a temperature sensor (0 to 160°C range) located right next to the viscosity sensor plates.

#### Highly Stable Measurement

The sensor plates have very small thermal capacity and cause only minute displacement in the sample liquid, which prevents changes to the temperature and the physical properties of the sample.

#### Continuous Measurement

The SV series allows measurement of the cloud points of samples such as surface active agents and of surface/interface changes such as wettability due to its ability to measure a wide range without the need to replace the sensor plates.

#### Easy Calibration

Both one-point and two-point calibrations are possible using either viscosity standard liquids (optional) or samples of known viscosities. Simplified Calibration function, a one-key operation that utilizes purified water is also available for the SV-10.

#### Data Collection and Graphing Software

WinCT-Viscosity (RsVisco) software transmits viscosity and temperature measurement data to a PC and displays it on a graph in real-time.

#### Small Sample Size

The standard sample cup requires just over 35ml of sample fluid so there is very little waste. (Optional 10ml/13ml sample cups are also available.)

#### Easy Cleaning

Due to their simple structure, the SUS 304 stainless steel sensor plates and temperature sensor (all gold-plated) and SUS 304 stainless steel protector can be quickly and easily cleaned.

#### Non-Newtonian Sample Viscosity Measurement

Thin sensor plates allow little disturbance of sample texture and thus enable measurement of stable viscosity values.

#### Flowing Sample Measurement

Even the viscosity of flowing samples can be measured, including liquid in turbulent flow, enabling field data measurement, which is as reliable as measurements in a laboratory.

#### Foaming Sample Measurement

A low drive frequency of 30Hz allows measurement of foaming samples without breaking minute foams and with less influence scattering larger foams.

#### Sol and Gel Measurement

Sol and Gel sample fluid like starch can be measured during the change of material characteristic.

#### Vacuum Fluorescent Display

You can avoid unnecessary reading errors with an easy-to-read, large, clear display: 13mm height for viscosity measurement and 11mm height for temperature measurement.

#### Separated Type Model

The SV series is composed of a Display Unit and a Main Unit offering excellent placement flexibility.

#### RS-232C Interface

The RS-232C comes as standard for your PC or Printer connectivity and the connection cable (25 pin - 9 pin) is also standard for your convenience.

#### Accreditation

The tuning fork vibro method is recognized as a Japan industrial standard for viscosity measurement of liquids (JIS Z8803). The viscometer of this method is also accredited as a standard device for the Japan Calibration Service System (JCSS) along with capillary and rotational viscometers.

# CAS Digital Viscometer

## CL-L1 Low-end Viscometer

- Basic rotatable viscometer
- Easy operable structure, high measurement accuracy of  $\pm 1\%$ , high stability.
- Display: rotation speed, number of spindle in use, viscosity value(cP), %Torque, Temperature.
- Latest 16-bit microprocessor
- Display maximum measurement points according to the combination of spindles and rotation speed.
- Connectable with printer, software included (DV-Works)
- Measurement mode according to time setting
- Output via RS-232C
- 100V-240V AC power adapter

## CL-L3 High-end Viscometer

- Additional display function: Date storage for sampling time, Automatic printing, time setting, Additionally mountable small sample spindle kit (optional), measurement time setting,
- The function to calculate the Kinematic viscosity by entering the value of specific gravity.
- output through RS-232C, USB and LAN date storage
- various speeds (0.1 to 100 rpm / 0.1 units) can be set
- connectable with printer, software included(DV-Works, analytic software)
- Basic display: rotation speed, number of spindle in use, viscosity value(cP), %Torque, Temperature.
- Average of measured viscosity values displayed as an average viscosity value.
- alarm beeps when out of range
- easily operable, various information display on the screen
- design with static resistant

CL-L1 Viscometer

**CAS**



VB30 Viscosity Bath

DRC8 Refrigerated & Heating Circulator

CL-L3 Viscometer



VB30 Viscosity Bath

DRC8 Refrigerated & Heating Circulator

| MODEL               | CL-L1                                                                                        | CL-L3                                                                                                                                                 |
|---------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display             | LCD panel                                                                                    | 7" Full color touch screen                                                                                                                            |
| Display Function    | Rotation speed, numbers of spindles in use, viscosity rate, ratio of full scale, temperature | Rotation speed, numbers of spindles in use, viscosity rate, ratio of full scale, temperature                                                          |
| Additional function | Time setting, auto scan, maximum range calculation                                           | Saving data for sampling time, automatic printing time setting, additionally mountable small sample spindle kit(option), setting the measurement time |
| Number of spindle   | Standard: No.1 ~4 / below 10cP is No.0 spindle (option)                                      |                                                                                                                                                       |
| Measurement range   | 1~2,000,000 cP                                                                               | 1~6,000,000 cP                                                                                                                                        |
| Resolution          | 1cP                                                                                          |                                                                                                                                                       |
| Spindle speed       | 0.3/0.6/1.5/3/6/12/30/60 total of 8 settings are available                                   | 0.1~100(0.1 resolution)                                                                                                                               |
| Output              | RS-232C                                                                                      | RS-232C, USB, LAN                                                                                                                                     |
| Accuracy            | $\pm 1\%$ (Newtonian fluid)                                                                  |                                                                                                                                                       |
| Reproducibility     | $\pm 0.5\%$ (Newtonian fluid)                                                                | $\pm 0.2\%$ (Newtonian fluid)                                                                                                                         |
| Temperature range   | 0°C ~ 100°C                                                                                  |                                                                                                                                                       |
| Power               | 100~240V AC 50/60Hz                                                                          |                                                                                                                                                       |
| Product size        | 300 X 300 X 450 (mm)                                                                         | 400 X 350 X 360 (mm)                                                                                                                                  |
| Weight              | 2kg / Include stand 7 kg                                                                     |                                                                                                                                                       |
| Software            | DV-Works (Logging date to PC)                                                                |                                                                                                                                                       |

# xCUBIO single

The World's Most Customizable Set  
for Bioreactors and Fermenters with  
One Single Autoclavable Vessel



xCUBIO single

RCH20

- Unlimited biotech application options
- Unlimited sensor opportunities
- 0.5, 1, 2, 5 and 10 litres jacketed glass vessels
- Vessel options: scaled, airlift, steel, single-wall
- Up to 10 independent, internal pumps, digital or analogue
- Up to 12 MFCs with complex gassing regimes - from bacteria and fungi to cell cultivation
- xCUBIO provides the most equipment options among all bioreactors and fermentors worldwide.

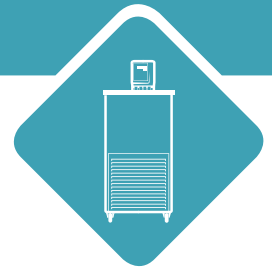
# CB Series

CB series is the most advanced product in CPT products line. CB series has powerful pump (14LPM), heater(1Kw~2Kw), and cooler with resolution  $\pm 0.01$  ( $\pm 0.005$ ) stability. CB has specifically built for Calibration Bath and conform to the requirements specified by DIN ISO 9001:2000. CPT definitely recommend CB series for an accurate calibration product.

## Calibration Baths $\pm 0.01^{\circ}\text{C}$ , $-90.00 \sim 300.00^{\circ}\text{C}$



# Features



## Visuality

Resolution 0.01°C of strong Yellow display color can be seen from anywhere.



## Calibration

CB series are specifically built for temperature correction, also conform to the requirements specified by DIN ISO 9001:2000.



## Durability

strong housing and perfect fitting of stainless steel will free from care.



## Connectivity

Optional RS232 of remote off/on control with external temperature probe.



## Operability

Extremely easy buttons let you control all the operation of CB series.



## Mobility

CB series has extremely smooth wheels that enable you to move anywhere without strength.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Handling

Compact and strong ergonomic design handles enable you to move a machine easily.



## Cleaning

Extremely easy to open the magnetic case and simply vacuum a dust for every 3months.



## Spatiality

CB series has several depths choice for long sensor and shot sensor.



## Program

All the CB series has 10 programs, each and every program have 12 steps within 99Hour 59Min.



## External Control

All the CB series enable you to control External Temperature capability within option. (Pt100)

# Calibration Baths

-80 ~ 100℃



CB340 & 440



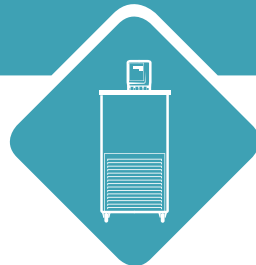
CB380 & 480

| Model | Working Temp Range<br>℃ | Temp Stab<br>℃ | Heat Capa<br>W | Bath opening & depth<br>(WxDxHcm) | Dimensions<br>(WxDxHcm) | Filling Volume<br>Liters | Weights<br>(Kg) |
|-------|-------------------------|----------------|----------------|-----------------------------------|-------------------------|--------------------------|-----------------|
| CB320 | -20.00~100.00           | ±0.01          | 1800           | 20x16.5x30                        | 38.6x45x90.8            | 18                       | 60              |
| CB340 | -40.00~100.00           | ±0.01          | 1800           | 20x16.5x30                        | 38.6x45x90.8            | 18                       | 68              |
| CB380 | -80.00~50.00            | ±0.01          | 1800           | 20x16.5x30                        | 77x46x117               | 18                       | 180             |
| CB440 | -40.00~100.00           | ±0.01          | 1800           | 20x16.5x30                        | 45x63x121.7             | 28                       | 93              |
| CB480 | -80.00~50.00            | ±0.01          | 1800           | 20x16.5x30                        | 77x46x117               | 28                       | 190             |

## Applicable Accessories



Please see pages 42 to 43 for more information.



Amb~300.00℃



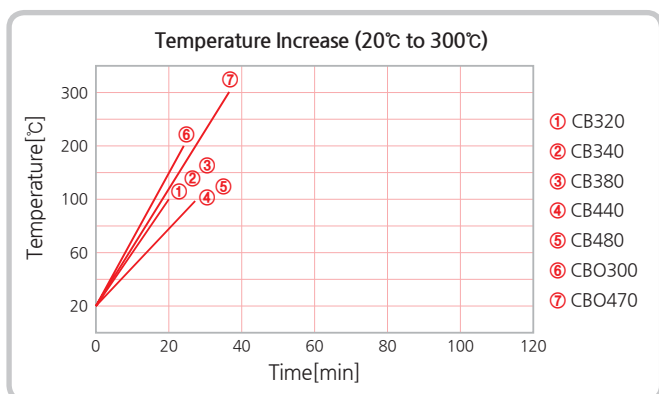
### CBO300

|                                |            |
|--------------------------------|------------|
| Working Temp Range ℃           | Amb~200.00 |
| Temp stability ℃               | ±0.01      |
| Heat Capa W                    | 2000       |
| Bath opening& depth (WxDxH cm) | 15.5x15x30 |
| Dimensions (WxDxH cm)          | 29x40x56   |
| Filling Volume (Liters)        | 18         |
| Weight (Kg)                    | 17.6       |

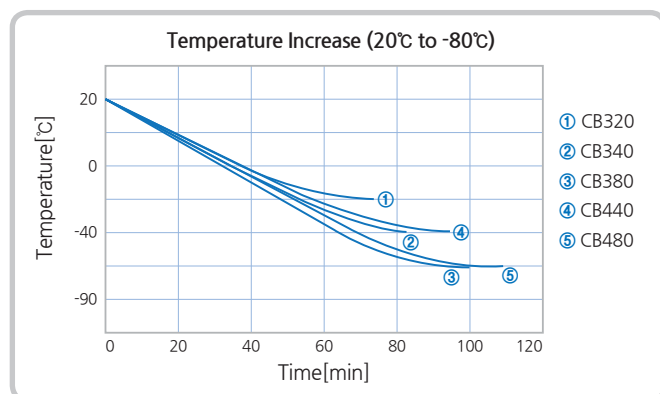
### CBO470

|                                |            |
|--------------------------------|------------|
| Working Temp Range ℃           | Amb~300.00 |
| Temp stability ℃               | ±0.01      |
| Heat Capa W                    | 3000       |
| Bath opening& depth (WxDxH cm) | 15.5x15x47 |
| Dimensions (WxDxH cm)          | 29x40x72.5 |
| Filling Volume (Liters)        | 28         |
| Weight (Kg)                    | 21.6       |

### Heat-up Time



### Cool-down Time



# BB Series

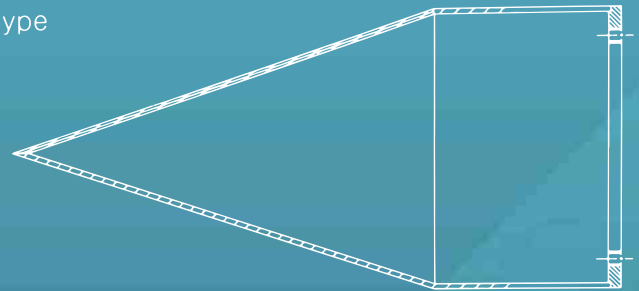
BB series are especially built for Infrared thermometers, it has light weight with perfect  $-40.00^{\circ}\text{C} \sim 60.00^{\circ}\text{C}$  of  $\pm 0.01^{\circ}\text{C}$  (0.005) accuracy. BB series has A,B and C type of black thermometer cavity types: A type for ASTM Designation E 1965-98, B type for JIS T 4207:2005.

CPT definitely recommend BB series for test infrared thermometers.

## Black Body Calibrator for Infrared Thermometer, $-20.00^{\circ}\text{C} \sim 60.00^{\circ}\text{C}$



A-type



ASTM Designation E 1965-98

B-type



JIS T 4207:2005

| Model  | Working Temp Range $^{\circ}\text{C}$ | Temp Stab $^{\circ}\text{C}$ | Heat Cap W | Bath opening depth WxDxHcm | Dimensions WxDxHcm | Filling Volume Liters | Weights Kg |
|--------|---------------------------------------|------------------------------|------------|----------------------------|--------------------|-----------------------|------------|
| BB8 -A | -20.00~60.00                          | $\pm 0.01$                   | 1000       | 17x17.5x15                 | 22x39x59           | 8                     | 30         |
| BB8-B  | -20.00~60.00                          | $\pm 0.01$                   | 1000       | 17x17.5x15                 | 22x39x59           | 8                     | 30         |
| BB8-C  | -20.00~60.00                          | $\pm 0.01$                   | 1000       | 17x17.5x15                 | 22x39x59           | 8                     | 30         |



# Features



## Visuality

Resolution 0.01°C of strong Yellow display color can be seen from anywhere.



## Spatiality

BB series are especially built to test an Infrared thermometer.



## Durability

strong housing and perfect fitting of stainless steel will free from care.



## Connectivity

Optional RS232 of remote off/on control with external temperature probe.



## Operability

Extremely easy buttons let you control all the operation of BB series.



## Mobility

Optional wheels and handy capable low weighs enable you to move BB machine anywhere.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cut-off a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into you are hands.



## Handling

Compact and strong ergonomic design handles enable you to move a machine easily.



## Cleaning

Extremely easy to open the magnetic case and simply vacuum a dust.



## Alarm

BB series has High and Low Alarm systems with Key lock system prevents unauthorized operation.



## Program

All the BB series has 10 programs, each and every program have 12 steps within 99Hour 59Min.



## External Control

All the BB series enable you to control External Temperature capability within optional sensor.

# THB Series

THB series is a laboratory experiment heating block, it has great resistance to hydrofluoric acid and sulfuric acid. Therefore, block does not bulky and ensure the warranty up 6years. Heating block can be adjustably customized by customer's wants and needs, (amb ~ 250°C ensure  $\pm 0.1^{\circ}\text{C}$  ( $0.07^{\circ}\text{C}$ ) temperature accuracy). CPT definitely recommend THB series for laboratory and experiments uses.

## Teflon Heating Block, $\pm 0.1$ , Amb ~ 250.0°C



| Model | Working Temp Range °C | Temp Stab °C | Heat Cap W | Bath opening depth WxDxHcm | Dimensions WxDxHcm | Filling Volume Liters | Weights Kg |
|-------|-----------------------|--------------|------------|----------------------------|--------------------|-----------------------|------------|
| THB1  | Amb~250.0             | $\pm 0.1$    | 800        | 19x34.5x53                 | 23x32x36           | 9 Holes [100ml]       | 6          |
| THB2  | Amb~250.0             | $\pm 0.1$    | 1200       | 19x34.5x53                 | 26x32x36           | 9 Holes [250ml]       | 6.8        |
| THB3  | Amb~250.0             | $\pm 0.1$    | 1800       | 19x34.5x53                 | 32x35x36           | 9 Holes [500ml]       | 7.5        |

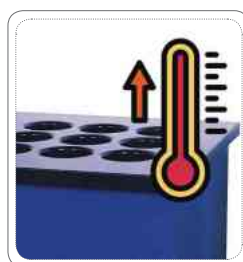


# Features



## Visuality

Resolution 0.1°C of strong red display color can be seen from anywhere.



## Spatiality

Compact size and perfect sample fitting with strong heating power.



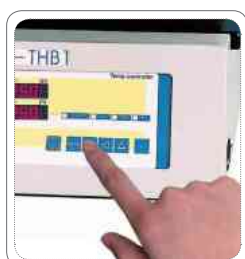
## Durability

THB series are fully laminated with Teflon, it perfectly prevents hydrofluoric acid.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater to maintains the safety of user and samples.



## Operability

Extremely easy buttons let you control all the operation of THB series.



## Mobility

Convenient to use on a table and easy to hand carry.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Cleaning

Simply vacuum or wipe a dust from heating block.

# IC Series

IC series has perfect mount, spinnable clamp with float level safety. Easy to attach on verify reservoir with extremely easy temperature set up. Amb ~ 160°C of 0.1 resolution with internal 0.05 accuracy.

CPT definitely recommend IC series for plants, laboratory and food industries.

## Immersion Circulator Amb~160°C



| Model | Working Temp Range °C | Temp Stab °C | Heat Cap W | Dimensions WxDxHcm | Electric requirement | Weights Kg |
|-------|-----------------------|--------------|------------|--------------------|----------------------|------------|
| IC20  | Amb~160.0             | ±0.1         | 2000       | 10.5x13.5x30       | 200v 60Hz            | 5.7        |
| IC20P | Amb~160.0             | ±0.1         | 2000       | 10.5x13.5x30       | 200v 60Hz            | 5.7        |



# Features



## Visuality

Resolution 0.1°C of strong yellow display color can be seen from anywhere.



## Spatiality

Compact size and perfect sample fitting with strong heating power.



## Durability

IC series has light weight 5.7kg with small and handy product.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater.



## Operability

Extremely easy buttons let you control all the operation of IC series.



## Cleaning

Simply unscrew the bottom stainless plate then wipe a waste from inner side.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Suitability

IC series has spinnable clamp to mount IC series on any kind of reservoir.



## Timer

IC series can set the timer as 99Hours 59Mins within easy buttons.



## Usability

IC series has optional 1000Kw~4000Kw heaters to heat up the fluid faster.

# UC Series

UC series is ultra-cool Refrigerated & Heating Circulator, CPT ensure  $\pm 0.01^{\circ}\text{C}$  ( $\pm 0.006^{\circ}\text{C}$ ) internal temperature accuracy. UC series can be adjustably customized by customer's wants and needs, Temperature range from  $-80.00^{\circ}\text{C}$  to  $160.00^{\circ}\text{C}$ , CPT defiantly recommend UC series for people how need to experiment in extremely low temperature.

## Ultra-Cool Refrigerated & Heating Circulator $-80.0\sim 100.0^{\circ}\text{C}$



| Model | Working Temp Range<br>$^{\circ}\text{C}$ | Temp Stab<br>$^{\circ}\text{C}$ | Heat Cap<br>W | Cooling cap W<br>( $-80^{\circ}\text{C}$ ) | Pump capacity<br>Flow rate / Press ,Suct<br>1/min. bar | Bath opening<br>Bath depth<br>WxDxH cm | Dimensions<br>WxDxHcm | Filling<br>Volume<br>Liters | Weights<br>Kg |
|-------|------------------------------------------|---------------------------------|---------------|--------------------------------------------|--------------------------------------------------------|----------------------------------------|-----------------------|-----------------------------|---------------|
| UC80  | $-80\sim 100.0$                          | $\pm 0.01$                      | 1400          | 60                                         | 14 0.6                                                 | 21x13x15                               | 41x81x104             | 12                          | 80            |

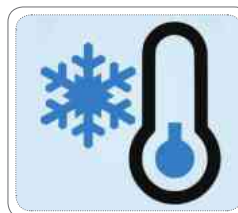


# Features



## Visuality

Resolution 0.01°C of strong Yellow display color can be seen from anywhere.



## Power

UC series are specifically built for extremely low temperature correction and  $\pm 0.01^{\circ}\text{C}$  accurate temperature.



## Durability

strong housing and perfect fitting of stainless steel will free from care.



## Connectivity

Optional RS232 of remote off/on control with external temperature probe.



## Operability

Extremely easy buttons let you control all the operation of UC series.



## Mobility

UC series has extremely smooth wheels that enable you to move anywhere without strength.



## Safety

If machine detects an any problem or damage, thermometer cut-off a Heater and Fuse cu-toff a peripheral power.



## External / Internal

Strong pump controls a Temperature for External or Internal uses.



## Quality Control

CPT Q/C system runs for 48 hours tests before get into your hands.



## Handling

Compact and strong ergonomic design handles enable you to move a machine easily.



## Cleaning

Extremely easy to open the front case and simply vacuum a dust for every 3months.



## Spatiality

UC series has several depths choices that can be customized.



## Program

All the UC series has 10 programs, each and every program have 12 steps within 99Hour 59Min.



## External Control

All the UC series enable you to control External Temperature capability within option. (Pt100)

# Accessory

Adjustable Cramp



| Model No. | Description      | size | material |
|-----------|------------------|------|----------|
| No.170    | Adjustable Cramp | 35mm | SUS316   |

Nipple Connector



| Model No. | Description          | size        | material |
|-----------|----------------------|-------------|----------|
| No.171    | nipple connector     | 1/4" - 1/4" | Brass    |
| No.172    |                      | 1/4" - 1/4" | SUS316   |
| No.173    |                      | 1/4" - 3/8" | Brass    |
| No.174    |                      | 1/4" - 3/8" | SUS316   |
| No.175    | nipple connector cap | 1/4"        | Brass    |
| No.176    |                      | 1/4"        | SUS316   |

Silicon Connector



| Model No. | Description                                                                                        | size        | material          |
|-----------|----------------------------------------------------------------------------------------------------|-------------|-------------------|
| No.177    | Silicon connector<br>Suitable Temp range (-80°C ~ +150°C)<br>Available fluid (Oil, Water, alcohol) | 8mm - 14 mm | Silicon           |
| No.178    |                                                                                                    | 9mm - 15mm  | Silicon           |
| No.179    |                                                                                                    | 14mm - 34mm | Rubber Insulation |
| No.180    |                                                                                                    | 9mm - 29mm  | Rubber Insulation |

Fluid Stop Valve



| Model No. | Description      | size        | material |
|-----------|------------------|-------------|----------|
| No.181    | Fluid stop valve | 1/4" - 1/4" | Brass    |
| No.182    |                  | 3/8" - 3/8" | Brass    |
| No.183    |                  | 1/4" - 1/4" | SUS316   |
| No.184    |                  | 3/8" - 3/8" | SUS316   |

Nipple Connecting Pipe



| Model No. | Description            | size                 | material |
|-----------|------------------------|----------------------|----------|
| No.185    | nipple connecting pipe | 1/4" - 1/4" Ø 12.7mm | SUS316   |
| No.186    |                        | Ø 12.7mm pipe        | SUS316   |

Nipple Connecting Pipe



| Model No. | Description                   | size      | material |
|-----------|-------------------------------|-----------|----------|
| No.187    | Nipple connecting curved pipe | Ø,mm 9.6  | SUS316   |
| No.188    |                               | Ø,mm 12.7 | SUS316   |
| No.189    |                               | 1/4"      | SUS316   |



### Stand Clamp



| Model No. | Description               | size                       | material                                                    |
|-----------|---------------------------|----------------------------|-------------------------------------------------------------|
| No.190    | Stand clamp (Auto handle) | 290mm-250mm-Thickness 10mm | bottom(iron) Urethane coated, pole (SUS), T connect AR(SUS) |
| No.191    |                           | 250mm-200mm-Thickness 10mm |                                                             |

### Option Wheels



| Model No. | Description                   | size                 | material     |
|-----------|-------------------------------|----------------------|--------------|
| No.192    | option wheels for DRC8/ RCH08 | 385x225x57 (DxWxHmm) | Wheels (PVC) |

### Temp Sensors



| Model No. | Description         | Type                        | Accuracy |
|-----------|---------------------|-----------------------------|----------|
| No.193    | Temperature Sensors | PT100Ω                      | ±0.1℃    |
| No.194    |                     | PT100Ω                      | ±0.5℃    |
| No.195    |                     | CA-K                        | ±1℃      |
| No.196    |                     | CA-K                        | ±1℃      |
| No.197    |                     | customize sensors available |          |

### Hose Nipple



| Model No. | Description | size            | material |
|-----------|-------------|-----------------|----------|
| No.200    | Hose nipple | Ø,mm 9.4 - 1/4" | brass    |
| No.201    |             | Ø,mm 11 - 1/4"  | brass    |
| No.202    |             | Ø,mm 13 - 1/4"  | brass    |
| No.203    |             | Ø,mm 9.4 - 3/8" | SUS316   |
| No.204    |             | Ø,mm 11 - 3/8"  | SUS316   |
| No.205    |             | Ø,mm 13 - 3/8"  | SUS316   |

### Glass Trap



| Model No. | Description                                     | size         | material |
|-----------|-------------------------------------------------|--------------|----------|
| No.301    | Glass trap Spare Safety GL14 PP Screw Connector | 8mm tube     | PP       |
| No.302    |                                                 | 8mm tube     | Teflon   |
| No.303    | Glass trap IN,OUT Screw Connector GL14          | 290mm-60mm,Ø |          |

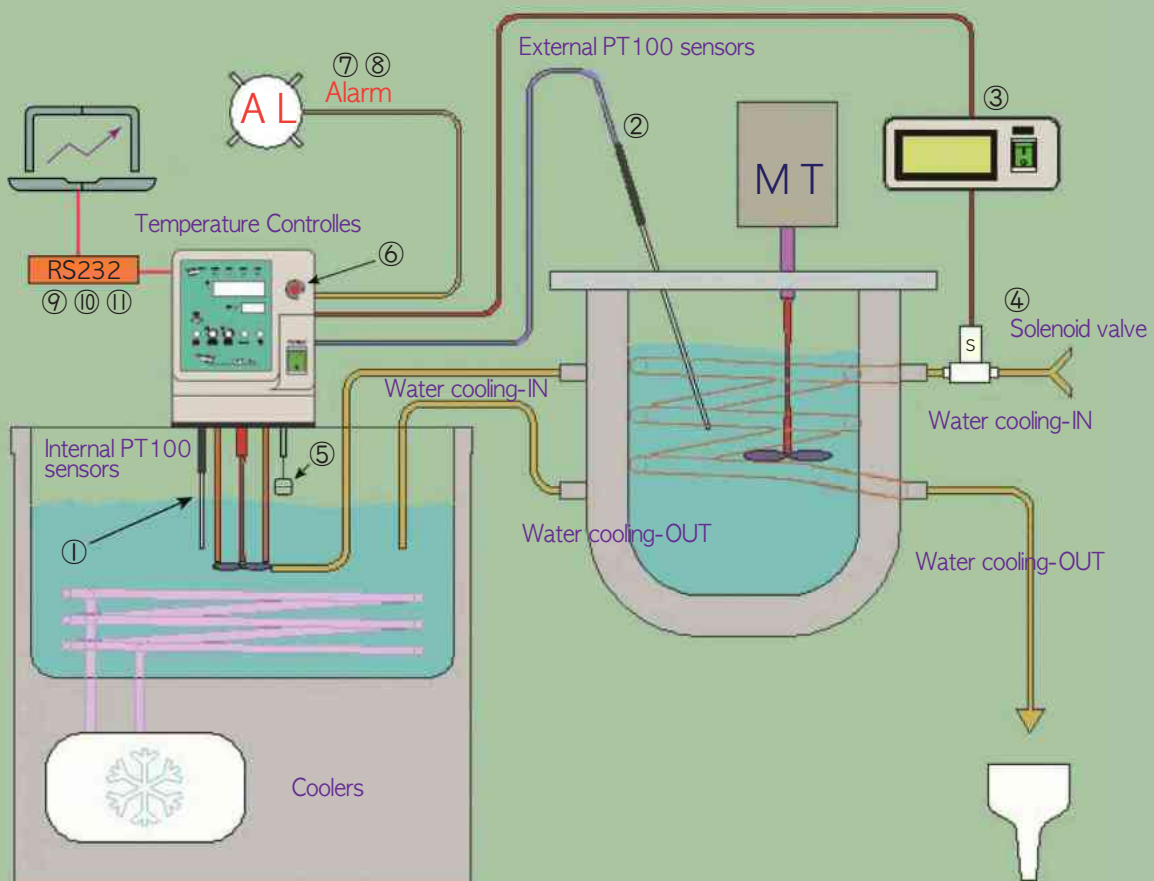
### Bath Fluid



| Model No. | Description   | Suitable Temp Range ℃ |            |  |
|-----------|---------------|-----------------------|------------|--|
| No.401    | Bath Fluid    | -30~80℃               |            |  |
| No.402    |               | 25~270℃               |            |  |
| No.403    |               | 25~500℃               |            |  |
| Model No. | Flash point ℃ | Fire point ℃          | Weights kg |  |
| No.401    | 80            | 100                   | No.401     |  |
| No.402    | 160           | 200                   | No.402     |  |
| No.403    | 163           | 211                   | No.403     |  |

# Application 1

Reactor system to control internal and external temperature ranges for -90~300°C

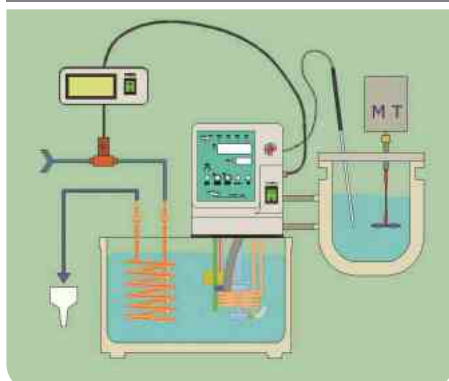


- ① Internal Temperature Sensor
- ② External Temperature Sensor
- ③ Solenoid Controller
- ④ Solenoid Valve
- ⑤ Water Level Switch
- ⑥ Safety EGO
- ⑦ Low alarm relay
- ⑧ High alarm relay
- ⑨ 4-20mA Output
- ⑩ 4-20mA Input
- ⑪ RS-232

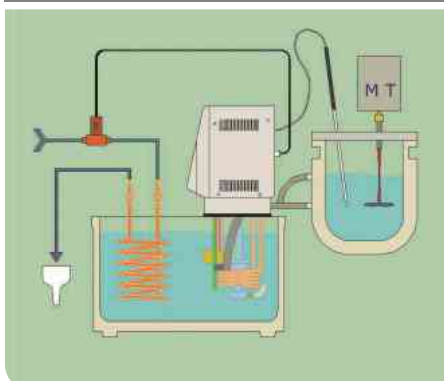


# Application 2

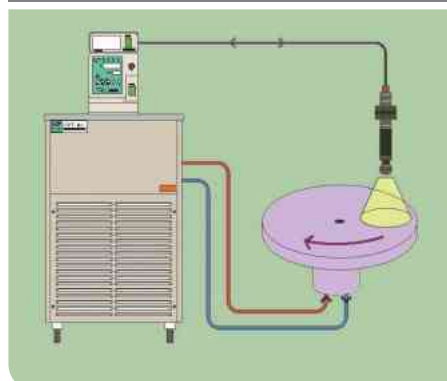
01.External + internal temp. applying Top Tech Series Reactor System Amb~300°C.



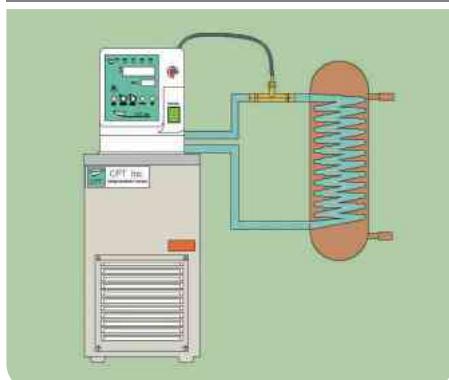
02.External + Internal temp. Applying Series Reactor System -40~300°C.



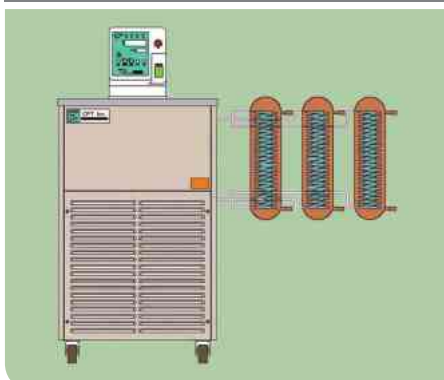
03.Applying Rotation Substance external-internal temp.



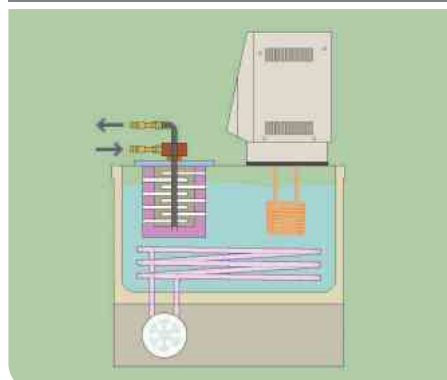
04.RCH8 ext-internal-line pt100 sensors.



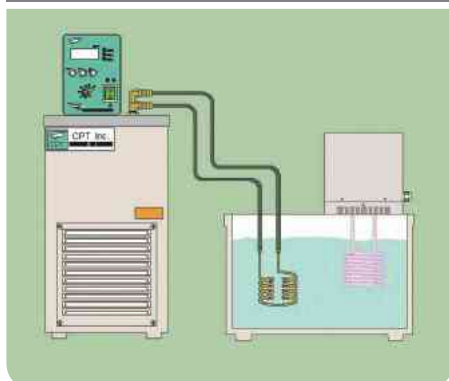
05.Applying RCH30 with 3 objects requiring temp.



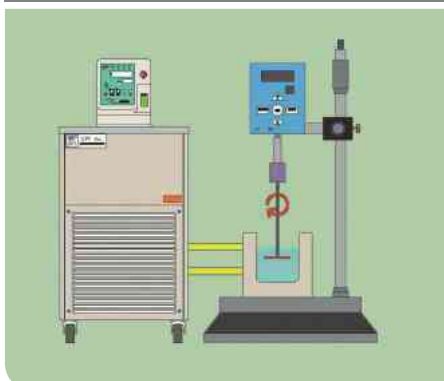
06.Condensation trap immersed in the filing port.



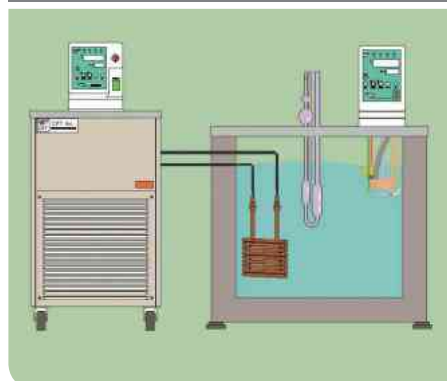
07.DRC flow-through cooler and circulator.



08.Applying Visco baths for small highly precise temp.



09.Applying Visco baths for highly precise temp.



# MEMO

# MEMO