EYELA
TOKYO RIKAKIKAI CO., LTD.

Precise ramp control for crystallization, recrystallization, and synthesis reactions

Programmable thermostatic circulator Model PCC-7010

Temperature control range: −30 to 80°C
Temperature control accuracy: ±0.03°C

With temperature settings adjustable in 0.01°C increments, PCC-7010 enables gentle temperature ramp programs. Its ability to perform slow cooling at a rate of 0.1°C/min makes it ideal for crystallization and recrystallization processes.

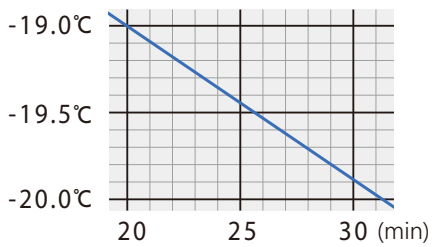
Program storage: 3 programs (Max. 10 steps/program)

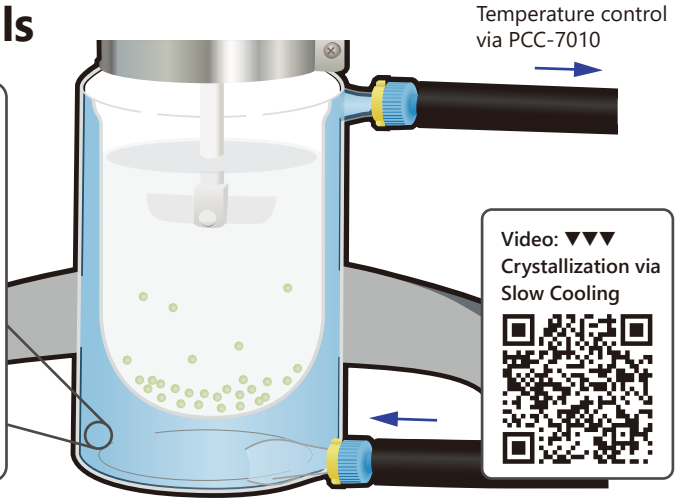
By linking these programs together, a continuous program operation of up to 30 steps is also possible.

PCC-7010

SLOW COOLING promotes the growth of large, high-purity crystals

Temperature ramp program with slow cooling at 0.1°C/min



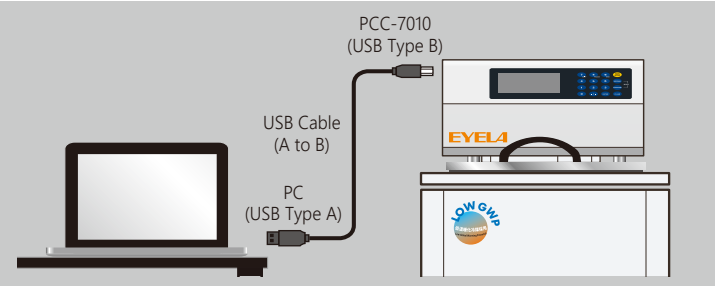


Ideal for crystallization operation

By suppressing nucleation and allowing a small number of nuclei to grow slowly, it becomes easier to obtain large, high-purity crystals.

Ideal for recrystallization purification

Gradual changes in solubility achieved through slow cooling, combined with ±0.03°C high-precision control, ensure that only the target substance precipitates selectively.



Simple Measurement and Control Software ESMon2026

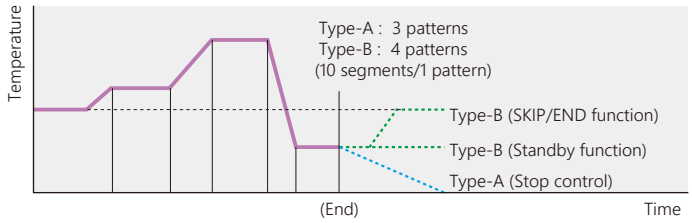
Measurement and control software is available, enabling remote temperature control via PC and the processing of trend data.
※Supported OS: Microsoft Windows® 11
※The software must be downloaded from our website.
※A communication cable for connection is not included. Please separately prepare a USB cable (Type-A male to Type-B male).

Model	**PCC-7010**
Cat. No.	**286330**
Recommended media	Tap water, Ethylene glycol, Ethanol
Temp. control range・accuracy	−30 to 80°C・±0.03°C
Cooling capacity (at liquid temp.)	680W (584kcal/h) at 0°C, 150W (129kcal/h) at −30°C
Cooling ramp	Water: 1.0 to 0.1°C/min (80→10°C) Ethanol: 1.2 to 0.1°C/min (20→−20°C), Ethanol: 0.4 to 0.1°C/min (20→−30°C)
External circulation capacity	(50Hz) Max. flow rate 5.2L/min, Max. lifting height 2.9m (discharge pressure: 0.03MPa, water)
Temperature control	PID control, SSR output
Temperature sensor	Platinum resistance thermometer Pt100Ω
Temperature setting・display	Membrane keypad input, minimum setting digit 0.01°C・digital display
Program functions	1.Constant value operation (Normal Mode), 2. Auto-start, 3. Auto-stop (1min to 99hrs 59min), 4. User Program A (3 patterns), User Progtram B (4 patterns) *1 pattern: Max. 10 segments, 1 min to 99hrs 59min / 1 segment
Safety features	Self-diagnostic functions (low water level, sensor error, SSR failure, overheat, heater wire disconnection, cooling failure, power failure alarm, program ramp error), Earth leakage and overcurrent breaker, Overload relay
External input・output	USB Communication terminal, External temperature sensor terminal
Heater	1kW (Stainless steel)
Refrigerator・refrigerant	Air-cooled, output 650W・R407C
Cooling coil	Nickel-plated copper
Circulation nozzle	Outlet: 10.5mm OD tubing port (Rc1/4, with stop valve) , Inlet: 10.5mm OD tubing port (Rc1/4)
Bath materials・capacity	Stainless steel・13L
Bath・effective dimensions	250W x 295D x 180H・200W x 125D x 145H (mm)
Ambient temperature range	5 to 35°C
Outer dimensions・weight	360 (385) W x 470 (540) D x 855H (mm) ・Approx. 52kg
Power input・supply voltage	20A, 2.0kVA・100VAC 50/60Hz

*Specifications are based on an ambient temperature of 20°C, tap water, rated voltage, 50Hz, and no-load conditions.
*Temperature control accuracy varies depending on conditions such as the specific heat and viscosity of the circulating media, ambient temperature, and set temperature. The accuracy of ±0.03°C is guaranteed under the following conditions: ambient temperature 20°C, medium temperature 40°C, rated voltage, 10L of water, with lid, and no-load.
*When setting the fluid temperature to 10°C or lower, please use a low-temperature heat transfer medium. At medium temperatures of -10°C or lower, ethylene glycol become too viscous to circulate. In such cases, please use ethanol.
*Dimensions in parentheses ( ) include protrusions. *The power plug is not included.

■Accessories: Rubber tubing (9mm ID × 25cm length): 1 pc. Silicone tubing for external circulation (9mm ID × 2m length): 1 pc. Tubing clamp: 4 pcs

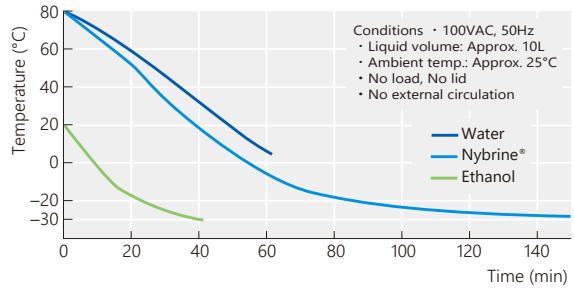
Operation patterns



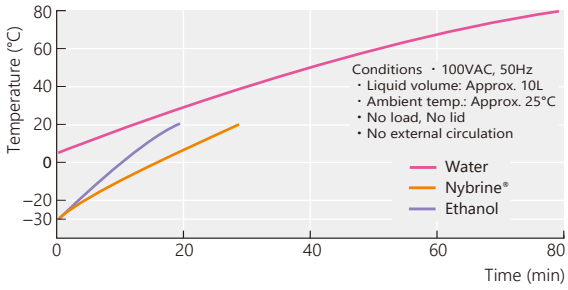
There are two types of User Programs:
Type-A (3 patterns): Control automatically stops after the program is completed.
Type-B (4 patterns): The final temperature is maintained after the program is completed (Standby function).
Type-B is ideal for repetitive experiments.
Using the SKIP/END function in Standby mode resets the program to the initial start temperature and maintains it. This allows you to prepare the next sample and restart the same program immediately by pressing the START key.

Data ※Performance varies based on conditions including room temperature, solvent type, heat load, and external circulation requirements.

Cooling curve



Heating curve



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※The appearance and specifications of the products are subject to change without notice.

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