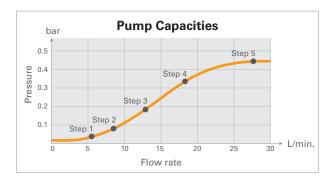
Refrigerated & Heating Bath Circulators (General)

Rapid heating and cooling throughout the entire temperature range.







Pump Step	1	2	3	4	5
Max. pressure (psi)	0.5	1.1	2.4	4.9	5.9
Max. flow rate (L/min)	5.6	8.0	12.8	18.8	28.0

X Bath fluid: water at the normal temperature.

RW3-2025

Standard accessories

- Stainless steel flat cover
- Silicone rubber tubing (305mm length / 12mm inner dia.)

Optional accessories see page 30-31

· Test tube racks, Spring wire racks, Gateway



Easy maintenance of condenser by removable gridded vent



Condenser air-filter for refrigerating efficiency



Convenient side handles





Green















Performance

- · Temperature range.
- RW3-35 models from -35°C to 150°C.
- RW3-25 models from -25°C to 150°C.
- Optimum refrigeration system by Microprocessor PID control.
 Energy efficient refrigeration operation is available within full range of temperature control.
- Three point temperature calibration / Automatic tuning / Automatic run.
- Suitable for both internal and external bath environments due to reduced turbulence by using five-speed adjustable pump and built-in cooling coil. (1 to 3 steps of the pump for internal circulation and 4 to 5 steps for external circulation)

Convenience

- Bright VFD display with quick adjustable dial knob. (0.1℃ resolution)
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Convenient memory function of up to three frequently set temperature.

- · Corrosion-resistant, leak-proof, round-cornered, and easy-to-clean stainless steel bath with easy access drain valve.
- Detachable condenser air-filter for easy maintenance of refrigerating efficiency.
- \cdot CFC-free refrigerant (R-507, R-404A) and a double service valve for leakage prevention.
- Quick-release front grill for easy cleaning of the condenser.
- $\mbox{Built-in RS-}232$ port and USB port for external control and data collection.
- Side handles enables convenience handling and transport.

Safety

- Isolated design of agitator, heater, and sensor by a baffle plate to minimize the turbulence in the bath fluid and also to protect users and samples against direct contact.
- Complete safety protection system with warning alarms.
- Low fluid level and dry-running, over-temperature, over-current.
- Keypad lock function prevents accidental changes during operation.

for temperature range from -25°C to 150°C

	Model	RW3-0525	RW3-1025	RW3-2025	RW3-3025			
Bath volume (L / cu ft)		5 / 0.2	10 / 0.4	20 / 0.7	30 / 1.1			
Working temperature range (℃ / ℉)		-25 to 150 / -13 to 302	-25 to 150 / -13 to 302					
Temperature stability 1) (±°C / °F)		0.05 / 0.09						
0 "	at -20 [℃] (-4°F), W	140	180	310	465			
Cooling	at 0°C (+32°F), W	270	360	610	700			
capacity 2) (bath fluid: ethanol)	at +20 [℃] (+68 [°] F), W	400	560	850	980			
(batti ilaia, ctilailoi)	Refrigerator	1/3 LBP, R-507	1/3 LBP, R-507	1/2 LBP, R-404A	3/4 LBP, R-404A			
Pump	Max. pressure	5.9 PSI (406.8 millibar)						
(bath fluid: water) Max. flow rate		28 liters / minute (7.4 gallons / minute)						
	Bath opening / depth	150×99, 160	211×154, 180	290×214, 200	300×264, 230			
	(WxL, D) (mm / inch)	/ 5.9×3.9, 6.3	/ 8.3×6.1, 7.1	/ 11.4×8.4, 7.9	/ 11.8×10.4, 9			
Dimension	Exterior	308x480x733	366x532x780	386x602x825	446x662x895			
	(WxLxH) (mm / inch)	/ 12.1x18.9x28.9	/ 14.4x20.9x30.7	/ 15.2x23.7x32.5	/ 17.6x26.1x35.2			
	Net weight (kg / lbs)	38 / 83.8	44 / 97	60 / 132.2	67 / 147.7			
Electrical requir	rements (230V, 60Hz)	11A	11A	12.5A	13.5A			
Cat. No.		AAH57041K	AAH57051K	AAH57061K	AAH57071K			
Electrical requirements (230V, 50Hz)		11A	11A	12.5A	13.5A			
Cat. No.		AAH57042K	AAH57052K	AAH57062K	AAH57072K			
Electrical requir	rements (120V, 60Hz)	12.6A	12.6A					
Cat. No.	Cat. No.		AAH57053U	-	-			

for temperature range from -35°C to 150°C

	Model	RW3-0535	RW3-1035	RW3-2035	RW3-3035				
Bath volume (L / cu ft)		5 / 0.2	10 / 0.4	20 / 0.7	30 / 1.1				
Working tempe	rature range (°C / °F)	-35 to 150 / -31 to 30	-35 to 150 / -31 to 302						
Temperature sta	ability ¹) (±℃ / ℉)	0.05 / 0.09	0.05 / 0.09						
0 "	at -20 [℃] (-4°F), W	140	180	310	465				
Cooling	at 0°C (+32°F), W	270	360	610	700				
capacity 2) (bath fluid: ethanol)	at +20 [℃] (+68°F), W	400	560	850	980				
(batri riulu, etriarioi)	Refrigerator	1/2 LBP, R-404A	1/2 LBP, R-404A	3/4 LBP, R-404A	1 LBP, R-404A				
Pump	Max. pressure	5.9 PSI (406.8 millibar)	5.9 PSI (406.8 millibar)						
(bath fluid: water)	Max. flow rate	28 liters / minute (7.4)	28 liters / minute (7.4 gallons / minute)						
	Bath opening / depth	150×99, 160	211×154, 180	290×214, 200	300×264, 230				
	(W×L, D) (mm / inch)	/ 5.9×3.9, 6.3	/ 8.3×6.1, 7.1	/ 11.4×8.4, 7.9	/ 11.8×10.4, 9				
Dimension	Exterior	308x480x733	366x532x780	386x602x825	446x662x895				
	(W×L×H) (mm / inch)	/ 12.1x18.9x28.9	/ 14.4x20.9x30.7	/ 15.2x23.7x32.5	/ 17.6x26.1x35.2				
	Net weight (kg / lbs)	38 / 83.8	44 / 97	60 / 132.2	67 / 147.7				
Electrical requirements (230V, 60Hz)		12.5A	12.5A	13.5A	14.5A				
Cat. No.		AAH57141K	AAH57151K	AAH57161K	AAH57171K				
Electrical requir	rements (230V, 50Hz)	12.5A	12.5A	13.5A	14.5A				
Cat. No.		AAH57142K	AAH57152K	AAH57162K	AAH57172K				

- 1) Technical data according to DIN 12876. (bath fluid: ethanol at -10°C)
- 2) The cooling capacity is measured under 230V / 60Hz electrical condition.
- * FDA establishment registered company. FDA listed products.

Refrigerated & Heating Bath Circulators (Programmable)

Newly developed bath circulator with the intelligent programmable controller brings the best intuitive control performance to your laboratory.







Intelligent program control

- 10 programs available for temperature ramp up and dwell control.
- 10 steps per a program and 99 hours 59 minutes per a step.
- · Stored programs are easily linkable.
- · Programs can be repeated up to 99 cycles.
- Pre-heating and heating time are settable before program starts.

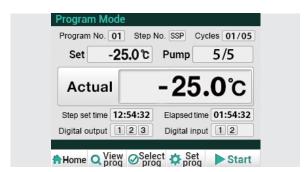
RW3-0525P

Standard accessories

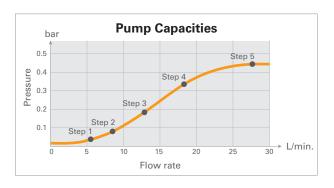
- Stainless steel flat cover
- Silicone rubber tubing (305mm length / 12mm inner dia.)

Optional accessories see page 30-31

- Suction function for pumps
- Test tube racks, Spring wire racks, Gateway



Touch LCD Controller



Pump Step	1	2	3	4	5
Max. pressure (psi)	0.5	1.1	2.4	4.9	5.9
Max. flow rate (L/min)	5.6	8.0	12.8	18.8	28.0

* Bath fluid: water at the normal temperature.

























Performance

- · Temperature range.
- RW3-35P models from -35°C to 150°C.
- RW3-25P models from -25 $^{\circ}$ C to 150 $^{\circ}$ C.
- Optimum refrigeration system by Microprocessor PID control.
 Energy efficient refrigeration operation is available within full range of temperature control.
- Three point temperature calibration / Automatic tuning / Automatic run.
- Suitable for both internal and external bath environments due to reduced turbulence by using five-speed adjustable pump and built-in cooling coil. (1 to 3 steps of the pump for internal circulation and 4 to 5 steps for external circulation)

Convenience

- Intuitive touch screen LCD controller with easy icons and logical menus.
- Dual wait on/off timer modes. (1 min. to 99 hr. 59 min.)
- Digital input and output control function for interlocking external devices.

- Built-in RS-232 port and USB port for external control and data collection.
- Corrosion-resistant, leak-proof, round-cornered, and easy-to-clean stainless steel bath with front access drain valve.
- Detachable condenser air-filter for easy maintenance of refrigerating efficiency.
- Usage of CFC-free refrigerant (R-507, R-404A) and a double service valve for leakage prevention.
- Quick-release front grill for easy cleaning of the condenser.
- Built-in casters and side handles for easy transport and installation.

Safety

- Isolated design of agitator, heater, and sensor by a baffle plate to minimize the turbulence in the bath fluid and also to protect users and samples against direct contact.
- Complete safety protection system with warning alarms.
- Low fluid level and dry-running, over-temperature, over-current.
- Keypad lock function prevents accidental changes during operation.
- · Splash-proof keypad.

for temperature range from -25℃ to 150℃

	Model	RW3-0525P	RW3-1025P	RW3-2025P	RW3-3025P			
Bath volume (L / cu ft)		5 / 0.2	10 / 0.4	20 / 0.7	30 / 1.1			
	rature range (°C / °F)	-25 to 150 / -13 to 30	-25 to 150 / -13 to 302					
Temperature st	ability ¹¹ (±℃ / ℉)	0.05 / 0.09	0.05 / 0.09					
Cooling	at -20 [℃] (-4°F), W	80	150	300	470			
capacity 2)	at 0 ^{°C} (+32°F), W	230	270	420	630			
(bath fluid:	at +20 [°] C (+68°F), W	320	380	550	740			
ethanol)	Refrigerator	1/3 LBP, R-507	1/3 LBP, R-507	1/2 LBP, R-404A	3/4 LBP, R-404A			
Pump	Max. pressure	5.9 PSI (406.8 millibar)						
(bath fluid: water) Max. flow rate 28 liters / minute (7.4 gallons / minute)								
	Bath opening / depth	150×99, 160	211×154, 180	290×214, 200	300×264, 230			
	(W×L, D) (mm / inch)	/ 5.9×3.9, 6.3	/ 8.3×6.1, 7.1	/ 11.4×8.4, 7.9	/ 11.8×10.4, 9			
Dimension	Exterior	308x480x733	366×532×780	386x602x825	446×662×895			
	(W×L×H) (mm / inch)	/ 12.1x18.9x28.9	/ 14.4x20.9x30.7	/ 15.2x23.7x32.5	/ 17.6x26.1x35.2			
	Net weight (kg / lbs)	38 / 83.8	44 / 97	60 / 132.2	67 / 147.7			
Electrical requi	rements (230V, 60Hz)	11A	11A	12.5A	13.5A			
Cat. No.		AAH57641K	AAH57651K	AAH57661K	AAH57671K			
Electrical requirements (230V, 50Hz)		11A	11A	12.5A	13.5A			
Cat. No.		AAH57642K	AAH57652K	AAH57662K	AAH57672K			
Electrical requi	rements (120V, 60Hz)	12.6A	12.6A					
Cat. No.		AAH57643U	AAH57653U	-	-			

for temperature range from -35℃ to 150℃

	Model	RW3-0535P	RW3-1035P	RW3-2035P	RW3-3035P			
Bath volume (L / cu ft)		5 / 0.2	10 / 0.4	20 / 0.7	30 / 1.1			
	rature range (℃ / ℉)	-35 to 150 / -31 to 30	-35 to 150 / -31 to 302					
Temperature st	ability ¹⁾ (±℃ / ℉)	0.05 / 0.09	0.05 / 0.09					
o "	at -20 [℃] (-4°F), W	80	150	400	440			
Cooling	at 0 ^{°C} (+32°F), W	150	330	660	700			
capacity 2) (bath fluid: ethanol)	at +20 ^{°C} (68°F), W	280	450	800	880			
(batil lidia, etilaliol)	Refrigerator	1/2 LBP, R-404A	1/2 LBP, R-404A	3/4 LBP, R-404A	1 LBP, R-404A			
Pump	Max. pressure	5.9 PSI (406.8 millibar)						
(bath fluid: water)	Max. flow rate	28 liters / minute (7.4 gallons / minute)						
	Bath opening / depth	150×99, 160	211×154, 180	290×214, 200	300×264, 230			
	(W×L, D) (mm / inch)	/ 5.9×3.9, 6.3	/ 8.3×6.1, 7.1	/ 11.4×8.4, 7.9	/ 11.8×10.4, 9			
Dimension	Exterior	308×480×733	366×532×780	386×602×825	446x662x895			
	(W×L×H) (mm / inch)	/ 12.1x18.9x28.9	/ 14.4x20.9x30.7	/ 15.2x23.7x32.5	/ 17.6x26.1x35.2			
	Net weight (kg / lbs)	38 / 83.8	44 / 97	60 / 132.2	67 / 147.7			
Electrical requirements (230V, 60Hz) 12.5A		12.5A	12.5A	13.5A	14.5A			
Cat. No. AA		AAH57741K	AAH57751K	AAH57761K	AAH57771K			
Electrical requirements (230V, 50Hz) 12.		12.5A	12.5A	13.5A	14.5A			
Cat. No.		AAH57742K	AAH57752K	AAH57762K	AAH57772K			

- 1) Technical data according to DIN 12876. (bath fluid : ethanol at -10 $^{\circ}\text{C}$)
- 2) The cooling capacity is measured under 230V / 60Hz electrical condition.
- \divideontimes FDA establishment registered company. FDA listed products.