

# Water Circulator (Chiller)

Externally-sealed precision circulation system

CFA-302



Operating temp. range -10°C ~ +60°C

Capacity ~ 13L



## ■ Operation and functions

- Provides highly accurate circulating water with an operating temperature range of -10 to 60°C and a temperature control accuracy of  $\pm 0.1^{\circ}\text{C}$
- Demonstrates powerful cooling ability of 370W as a cooling device. (at liquid temperature 10°C, room temperature at 20°C)
- Air-cooled, which generates less heat from the device
- Standard equipped with a variety of support functions such as auto-stop operation, auto-start operation, temperature output terminal, and calibration offset function

## ■ Specifications

Model	CFA-302
<b>PERFORMANCE<sup>1</sup></b>	
Circulation method	External closed system circulation
Temperature control range	-10~+60°C
Setting temperature range	-15 ~ +65°C
Temperature control accuracy	$\pm 0.1^{\circ}\text{C}$ at 20°C JTM
Temperature fluctuation	$\pm 0.3^{\circ}\text{C}$ at 20°C JIS
Temperature display unit	0.1°C
Cooling capacity	~ 370W (318Kcal/h) at liquid temperature 10°C
Ambient temp. range	5 ~ 35°C
Circulation capacity (50/60Hz)	8.9/10.3L/min
Maximum flow rate (pump capacity)	(15.0/17.0L/min)
Circulation capacity (50/60Hz)	6.6/9.0m
Maximum head (pump capacity)	(8.0/11.0m)
<b>CONFIGURATION</b>	
Bath	Stainless steel SUS304
Temperature control system	PID control
Temperature sensor	Double sensor: Pt100 $\Omega$ (for temperature control) K-thermocouple (for overheating prevention)
Temperature setting / display method	Digital setting
Refrigeration system/rated performance	Air cooling / 300W
Refrigerant	R404A 300g
Circulation pump	Magnet pump 45W
Heater	850W (SUS316)
Cooling coil	Copper nickel plating treatment
External circulation nozzle	Rc3/8 with discharge port and return ports outer diameter $\Phi 14$ mm hose nipple
Safety device	Earth leakage breaker, overheating prevention device, refrigerator overload relay protecting circuit, delay timer for refrigerator protection, refrigerator pressure detection, float switch, bypass for circulating pump protection, self-diagnostic functions (sensor failure, heater disconnection, SSR short circuit, main relay contact short circuit, automatic overheating prevention)
Other functions	Operation monitor, drain cock, key lock, calibration offset, temperature output terminal, refrigerator pressure indicator, condenser filter
<b>STANDARD</b>	
Tank dimension (WxDxH)	245 x 315 x 180 mm
External dimension (WxDxH) <sup>*2</sup>	380 x 565 x 725 mm
Water tank capacity	~13L
Power source	AC100V single phase 13.8A
Weight	~60kg
Included accessories	Drain hose 0.5m 1 piece overflow hose 0.5m 1 piece

<sup>\*1</sup> Performance at the environmental temperature of -20°C  $\pm 5$

<sup>\*2</sup> Outer dimensions excludes protrusions.