Cooling Water Circulator

Externally closed circulation

CFE820/920

Operating temp. range -20~+20°C

Cooling capacity Approx. 730W (at -10°C)

- High power type with inverter. Power consumption is also reduced by up to 35%. (Compared with previous our company products)
- It is ideal for synthesis tests using rotary evaporators and for cooling external equipment that changes rapidly in temperature.
  It is particularly effective at low temperatures (0 to 20°C).
- Equipped with a circulating flow control cock and an overflow drain pan as standard.
- This is an external closed circulation system with a drainage cock, earth leakage breaker, and other operation parts located in the front, with emphasis placed on operability.
- CFE920 is equipped with two circulation systems, so it can cool two rotary evaporators simultaneously.

CFE820 CFE920

Specifications

Product code	221561	221562
Model	**CFE820**	**CFE920**
Circulation method	External closed circulation	
Operating temperature range	-20°C to +20°C	
Temperature control accuracy*1 Temperature fluctuation	±0.5°C(JTM K05) at -20°C 1.6°C(JIS) at -20°C	
Cooling capacity*1	Approx.1100W, at fluid temp. 0°C	
	Approx.730W (559Kcal/h), at fluid temp. -10°C	
	Approx.270W (215Kcal/h), at fluid temp. -20°C	
External circulation pump max. flow*2	8.2 / 9.5L/min (50/60Hz)	12 / 14L/min (total of 2 systems) (50/60Hz)
External circulationpump max. lift*2	9.5 / 13m (50/60Hz)	
Number of external Circulation systems	1 system	2 systems
Internal tank	SUS304	
Temperature control	Refrigerator inverter frequency control, Refrigeration ON/OFF operation (3 minutes) depending on conditions	
Temperature sensor	T thermocouple	
Temperature setting, display	Digital setting and digital display	
Refrigerator/Refrigerant	Air-cooled sealed rotary type, 700W / R407C	
Cooling coil	Nickel plated copper	
External circulation nozzle	Rc3/8 with stop valves (Hose nipples are optional)	
Circulating pump (50/60Hz)	Magnetic drive pump, 125W	
Operating ambient temp. range*3	5 to 35°C	
Safety device	Overcurrent leakage breaker, Refrigerator overload relay protection circuit, Overheating (30°C or more), Refrigerator high pressure relay, Pump thermal protector, Refrigerator protection delay timer function, Circulation pump protective H bypass, Inverter overload protecting circuit	
Other functions	Drain, Overflow, Dust prevention filter, Water level gauge, Condensation drain pan for overflow and circulation nozzle, Calibration offset function	
Water tank Dimensions	W245×D315×H184mm	
Water tank material	Stainless steel SUS304	
External dimensions*2	W620×D440×H600mm	
Water tank capacity	14L (liquid capacity of 13L)	
Power supply (50/60Hz)	AC115V / AC220V Single phase with step-down transformer	
Weight	Approx. 65kg	
Accessories	Lid for water tank, Drain pan for overflow and circulation	

*1 Conditions: temperature and humidity: 23°C±5°C, 65%RH±20% (no load)
*2 Condition: Performance in water temp. 20°C.
*3 When installed under the laboratory table etc., exhaust ventilation (3m³/min or more) is required.
The length of the power cord is about 2 meters outside the unit.

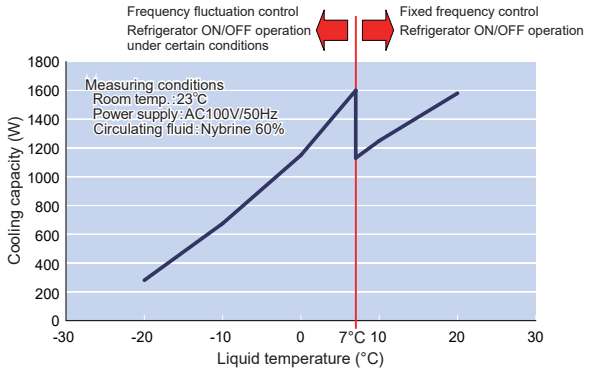
Control panel

Water tank

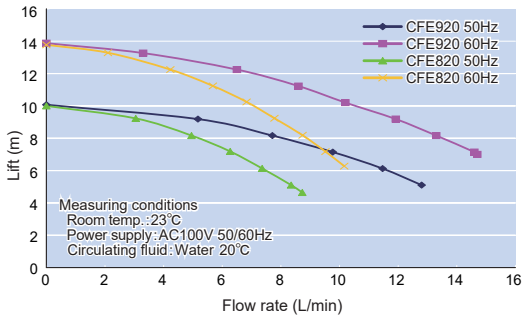
Valve (Back)

Circulation nozzles are optional.

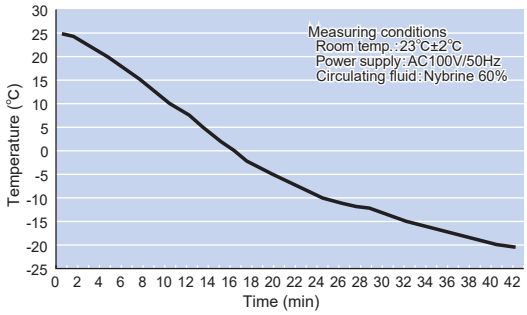
Cooling capacity curve



Flow Rate / Lift Curve

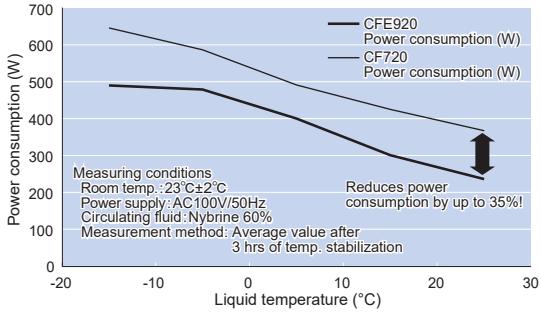


Cooling curve



Comparison of power consumption

(Compared to our conventional products)



Optional Items

No.	Description	Specifications	Product code
①	*External interlocking terminals		281488
②	*Temperature output terminal		281489
③	*External alarm terminal		281490
④	*Exhaust fan interlocking Terminals		281491
⑤	*Interlocking cables for Büch products		281492
⑥	Insulated circulation hose	Highly heat insulated, φ6mm×2m length (2pcs)	221595
⑦		φ9mm×2m length (2 pcs) with clamp (4pcs)	221581
⑧		Highly heat insulated, φ9mm×2m length (2pcs)	221599
⑨	Straight circulation nozzle	φ8mm, Connecting screw:Rc3/8	221596
⑩		φ10.5mm, Connecting screw:Rc3/8	221394
⑪		φ13mm, Connecting screw:Rc3/8	221399
⑫		φ16mm, Connecting screw:Rc3/8	221395
⑬	Hose set for connection of Büch products	Set of insulated circulation hose (221595) and two straight circulation nozzles (221596)	281493

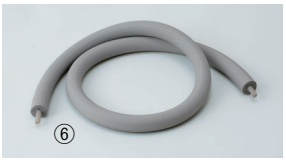
* Please specify when ordering main unit.

Example system configuration

Fume hood, Rotary evaporator, CFE920

Example of integration into a fume hood

①External interlocking terminals
②Temperature output terminal
③External alarm terminal

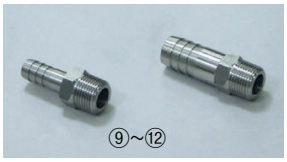


⑥

Insulated circulation hose
(Highly heat insulated)

⑦

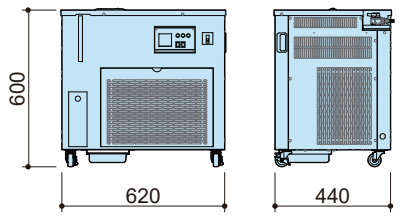
Insulated circulation hose
2m length (2 pcs) with clamp (4pcs)



⑨~⑫

Straight circulation nozzle

Dimensions (mm)



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