

WITH A
BUILT-IN
TANK

ENERGY SAVING CHILLER

ORION

INVERTER CHILLER OF SMALL CAPACITY COOLING CAPACITY :3.9kW/4.1kW

PATENTED

THE OUTLINE

Inverter
Compressor

Discharge Pump
Circulation Pump

Digital
Controller

Signal
Terminals

Condenser
Filter

Anti-freeze
(Elective)

Temperature
Alarm

Air-cooled type

FEATURES

- Maximum 80% of energy saved
Responding to the loads, operation with the least energy can be attained.
(Compared with heater PID controlling method)
- Highly precise controlling of liquid temperature
Detection of the liquid temperature regulates the rotation speed of compressor by means of PID controlling, and it is controlled to be within ± 0.5 of the set temperature.
- Liquid temperature controlled in a wide range
Adoption of electronic expansion valve enables to set water temperature to a desired degree within the range from 5 to 35.
- Highly reliable
Since various sensors monitor the conditions of refrigerating cycles, the operation is always maintained at the best.



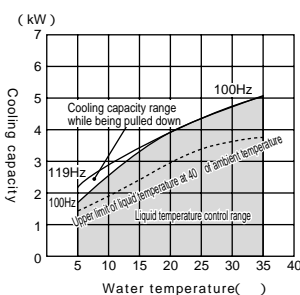
RKF110-V-G1

SPECIFICATIONS

Item	Model	Air cooled type		Water cooled type	
		RKF110-V-G1	RKF110-V-G2	RKF110-VW-G1	RKF110-VW-G2
Performance	Cooling capacity *1,3	3.9		4.1	
	Ambient temperature range	5 to 40			
	Cooling water temperature range			5 to 35	
	Temperature control range	5 to 35			
	Control preciseness *2	Within ± 0.5			
Electric characteristics	Power source	3 phase 200V 50/60Hz			
	Power consumption (50/60Hz) *3	1.5/1.7		1.1/1.2	
	Electric current (When heater is on) (50/60Hz) *3	4.8/5.5(9.8/10.5)		4.1/5.2(9.1/10.2)	
	Power capacity	3.8		3.8	
	Breaker capacity	15		15	
Equipment details	Circulation pump Structure & Output (50/60Hz)	Magnet drive 105/145			
	Discharge pump Structure & Output (50/60Hz)	Magnet drive 105/145	Cascade type 400	Magnet drive 105/145	Cascade type 400
	Circulating quantity	13/21 (Head:8m)	35/42 (Head:10m)	13/21 (Head:8m)	35/42 (Head:10m)
	Net tank capacity	35			
	Refrigerant	R-22			
External dimensions (HxDxW)	mm	1033.5x700x450			
Product mass (Dry mass)	kg	Approx.100			
Protector	Compressor	Electronic thermostat, Motor protector			
	Discharge pump	Overcurrent relay			
	Refrigerating cycle	High pressure cut-off			
	Inverter	Overcurrent cut-off			
	Heater	Overheat protecting thermostat (doubly)			
	Water circuit	Level switch(water level, heater protection)			
	Entire unit	Compressor protection, Underload control			
Operation sound	*3, *5	59		58	

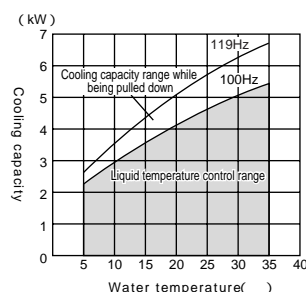
*1 The cooling capacity is over 90% of the above indicated values. *2 According to the applicable conditions, it exceeds the limit of ± 0.5 .
*3 Based on the conditions of 20 of water temperature, 32 of ambient temperature (about air-cooled model), 25 of cooling water (about water-cooled type) and that the operation of pressure pump is stopped. *4 The flow rate of discharge pump and the values of head are those at a certain point. Since each pump has different pumping characteristics, refer to the relative performance curves for details. *5 The sound level was measured 1m away from the front and 1m high.
Note 1) Use clear water (tap water). Note 2) The exhaust heat quantity (kW) is about 1.3 times the cooling capacity. Note 3) Fit a strainer (20 to 40 mesh) to the water inlet.

COOLING CAPACITY RKF110-V-G1/G2



- Conditions
 - Ambient temperature : 32
 - Liquid cooled: Clear water
 - Operation of discharge pump: Stopped
- Cooling capacity range while being pulled down
The range of cooling capacity while to lower the liquid set temperature at the time of changing it (Liquid temperature cannot be controlled in this range.)
- Cycles indicated in the figure are of the operation cycles of compressor.
- The 100Hz line in the figure shows the upper limit of water temperature control at the ambient temperature of 32.

RKF110-VW-G1/G2



- Conditions
 - Cooling water temperature : 25
 - Liquid cooled: Clear water
 - Operation of discharge pump: Stopped
- Cooling capacity range while being pulled down
The range of cooling capacity while to lower the liquid set temperature at the time of changing it (Liquid temperature cannot be controlled in this range.)
- Cycles indicated in the figure are of the operation cycles of compressor.
- The 100Hz line in the figure shows the upper limit of water temperature control at the cooling water temperature of 25.

COOLING WATER FLOW RATE (for condensation)

Loss of water head in the cooling water circuit (Inlet temperature: 32°C)
RKF110-VW-G1,G2 : 10 ~ 25m

