Doc# SP-500-L3-00-C

SPECIFICATION
TEMPERATURE CONTROL SYSTEM GX-20
(ATS Unit P/N: 9BS0000, 9BS0001, 9BS0002)

Temperature range			-20°C to +70°C *1
Fluid			Fluorinert™ FC-3283 or Opteon™ SF10 *2
Temperature stability			+/-1.0°C *3
Temperature control			Platinum, PID control type
Refrigerator/ Heat exchanger		Compressor	Rotary type, 1.6kW
		Cooling capacity *4	2kW @-10°C
		Facility water	20 LPM @+16 to 20°C, 0.3 to 0.65MPa *5
		Refrigerant	R-744 (1160g)
		Heat exchanger	Plate type
		Condensor	Water cooling type
Pump		Pump	Magnet PM type
		Motor	2.2kW
		Pump capacity	18 LPM @0.5MPa
Safety devices		Warning *6	1. Reservoir low level
			2. Compressor high temperature
			3. Fluid temperature deviation *7
		Alarm *8	1. Main breaker
			2. Emergency stop
			3. Phase monitor
			4. Fluid high temperature
			5. Fluid low temperature
			6. Pump overload
			7. Pump high pressure
			8. Pump inverter
			9. Fluid low flow
			10. Reservoir level empty
			11. Compressor overload
			12. Compressor abnormal pressure
			13. Compressor high temperature
			14. Compressor inverter
			15. Base pan leak
			16. Temperature sensor
			17. Memory data error
Piping size	Fluid	Return	Rc 3/4”
		Supply	Rc 3/4”
	Facility water	Inlet	Rc 1/2”
		Outlet	Rc 1/2”
	Drain		Rc 1/2"
Actual Required Fluid Volume			Approx. 6.8 L *9
Interface			LonWorks *10
Dimensions (overall)			366W×889D (1060)×1244Hmm *11
Power supply			208VAC, 3φ, 3wire+PE, 20Amp, 50/60Hz FLC: 13.4A Largest motor: 2.2kW *12 AIC: 5kA SCCR: 5kA

<Notes>

*1 If the pump pressure is less than 0.4MPa, the fluid temperature may not reach +70°C.
If the process lines are not insulated properly, the fluid temperature may not reach the set-point.
Please refer to the chapter of "INSTALLATION" for further information.

*2 Prior to using Fluorinert™ or Opteon™, please read SDS carefully.
Do not use fluids other than specified. Do not mix fluids. Foreign fluids may damage equipment and will void warranty.

*3 The temperature stability may change depending on the conditions. The written rate is the case under the condition of;
- the temperature setting: -20°C
- the flow rate: 15 to 18 LPM
- the pump pressure: 0.4 to 0.5MPa
- the facility water: 15 to 20 LPM @+16 to 20°C
- with ATS test stand: 1kW heat load (turn on for 2 minutes, turn off for 1 minutes, 10 cycles)

*4 Cooling capacity may change depending on the flow rate and/or pump pressure.
The written rate is the case under the condition of;
- the flow rate: 15 LPM
- the pump pressure: 0.43MPa
- the facility water: 20 LPM @+16 to 20°C
- with ATS test stand.

*5 Required amount of facility water will be changed depending on the water temperature and load status (set temperature). Make sure to keep the rate more than the written rate in the specification.
The facility water pipe resists 0.65MPa. If the water pressure is more than this rate, install a reducing valve optionally to control the pressure.

*6 When warning 1 or 2 is activated, warning display will appear on the touch screen panel and buzzer will sound. The system will continue operating.

*7 Only in Remote Mode. It shows on the host computer.

*8 When each alarm is activated, the system will stop operating.
When the safety device 3 ~ 17 are activated, alarm display will appear on the touch screen panel, buzzer will sound, and alarm signal will be output.

*9 Each volume of inside parts is as follows;
Heat exchanger: approx. 1.2L / Air vent tank: approx. 0.54L /
Piping: approx. 1.8L / Reservoir: 3.3L (Maximum capacity: 7.7L)

*10 Input / output signal will receive and transmit from the signal connector on the back side of the unit by connecting with the plug.

*11 366W×889D ×1244Hmm (Chiller only)
366W×1060D×1244Hmm (including valves)

*12 Unsettled voltage may result in lowering capacity or may not satisfy the rates in the specification.
Make sure to operate within +/-5% of 208VAC.