



## Cooling&Heating Mold Temperature Controller

STC-5W



Refer carefully to this manual before operation.

# STC-W Series

## ■ Coding Principle

STC - XX XX - xW - x

- No Code=R22, R2=R410A
- W=Water-cooled
- Compressor Power (HP)
- Pump Power (indicated by double-digit, 1HP=0.735kW)
- Heater Power (indicated by double-digit when over 10kW)
- SHINI Cooling / Heating Temperature Controller

## ■ Features

- Temperature control is between 7~120°C with an accuracy of  $\pm 1^{\circ}\text{C}$ .
- Stainless steel insulated water tank.
- Adopt imported compressor.
- Anti-freezing protection, over-temperature protection.
- R22 is employed as refrigerant, refrigeration effect is favorable.
- Refrigeration return circuit is controlled by high and low pressure switches.
- Overload protection is adopted for compressor and pump.
- Shell and tube condenser, fast heat conduction and good heat dissipation effect.
- Easy operation and simple structure that is easy of maintenance.
- Water absorption expansion tank is convenient for water storage, cooling, fast exhaust, water adsorption and cooling, making cooling more efficient.
- Double solenoid valve configuration ensures more efficient cooling that helps to maintain the temperature more accurately.
- With standard auto refilling, low level delay alarm, mould temperature controller stop alarm and fuse abnormal alarm functions.
- Standard equipped double-color alarm lamp with high power buzzer.



Control Panel(Water Chiller)



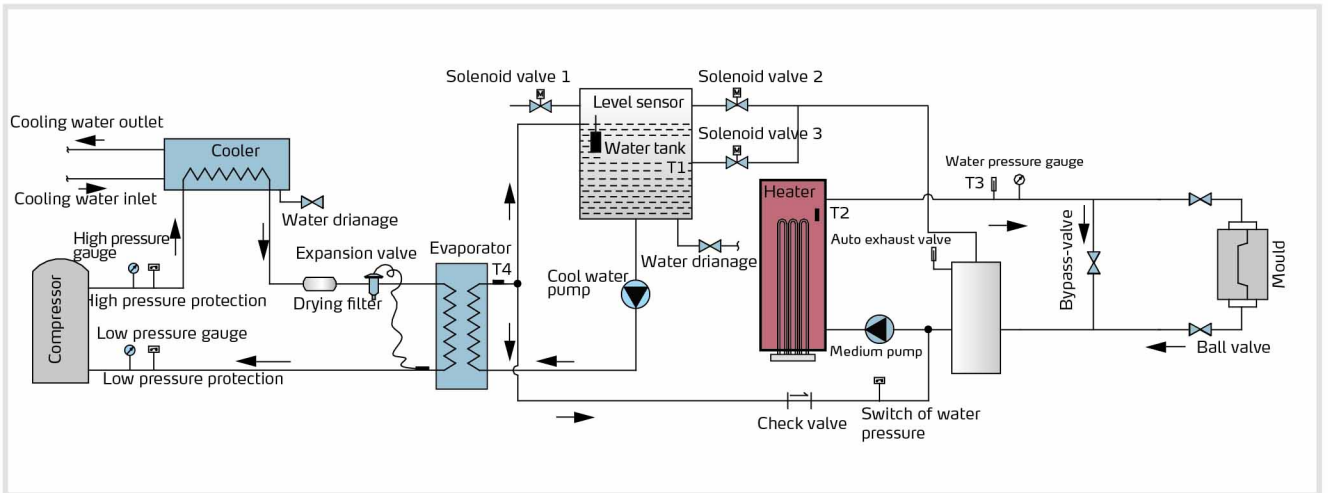
Control Panel(Water Heater)

## ■ Application

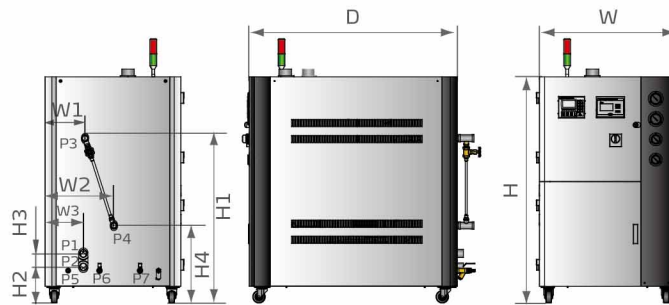
It is mainly applicable to long time cooling or heating of moulds, also suitable for patterns in which mould long heating shifts to cooling and vice versa.

## Working Principle

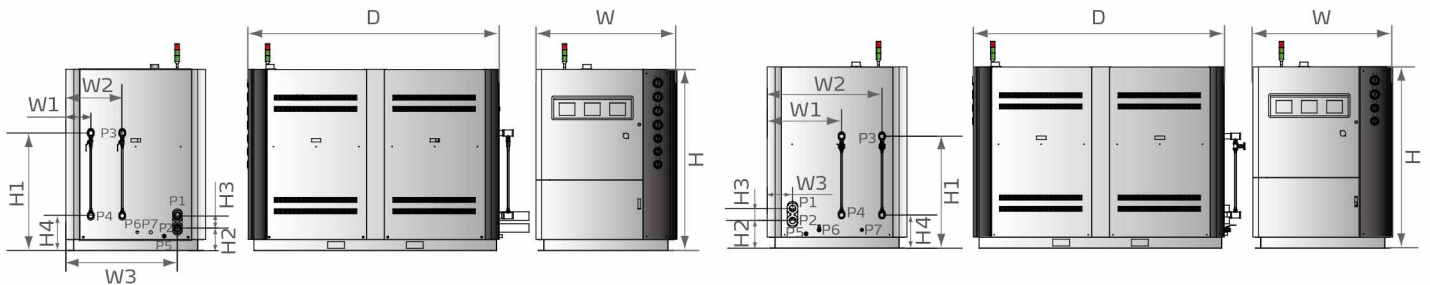
When the system needs to be heated up, solenoid valve 2 and 3 close and solenoid valve 1 opens, heaters quickly heat up the system to required temperature. Then P.I.D. controller maintains the water temperature by controlling solenoid valve 2. And when the system needs to be cooled, solenoid valve 2 and 3 opens, the temperature drops to the required temperature with the effects of chilled water in water tank. Quick heating and cooling can be achieved through solenoid valve controlling.



## Outline Drawings



STC-607-3W-2430-10W



STC-2430WF\*2-15W

STC-3650WF\*2-20W

# STC-W Series

Model	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	W (mm)	W1 (mm)	W2 (mm)	W3 (mm)	D (mm)	P1 (inch)	P2 (inch)	P3 (inch)	P4 (inch)	P5 (inch)	P6 (inch)	P7 (inch)	Weight (kg)
STC-607-3W	1340	980	207	80	458	805	235	407	250	1230	1	1	1	1	1/2	1/2	1/2	280
STC-910-5W	1340	980	207	80	458	805	235	407	250	1230	1 1/2	1 1/2	1	1	1/2	1/2	1/2	300
STC-1220-8W	1425	1040	-	130	470	845	278	450	235	1450	1 1/2	1 1/2	1 1/4	1 1/4	1/2	1/2	1/2	350
STC-2430-10W	1425	1015	-	130	470	845	278	450	235	1450	2	2	1 1/4	1 1/4	1/2	1/2	1/2	380
2430×2-15W	1610	1045	201	106	310	1245	222	502	903	2235	2 1/2	2 1/2	1 1/2	1 1/2	1/2	1/2	1/2	800
3650×2-20W	1610	995	247	106	295	1245	662	1022	225	2235	2 1/2	2 1/2	2	2	1/2	1/2	1/2	1110
4875×2-30W	1610	995	247	106	295	1245	662	1022	225	2235	3	3	2	2	1/2	1/2	1/2	1280

## STC-W Structure Chart



- ① Stainless steel insulated water tank
- ② Compressor
- ③ Tube and shell evaporator
- ④ Medium pump
- ⑤ Stainless steel heating barrel
- ⑥ Shell-tube styled condenser
- ⑦ Drying filter
- ⑧ Cool water pump



## Specifications

Model STC-		607-3W	910-5W	1220-8W	2430-10W	2430×2-15W	3650×2-20W	4875×2-30W	
Item/parameter									
Refrigerating <sup>(1)</sup>	KW	8.25	13.8	21.8	29.1	43	58.2	86	
	Kcal/hr	7,095	11,868	18,748	25,026	36980	50052	73960	
Heating Capacity	KW	6	9	12	24	24×2	36×2	48×2	
Compressor	Type	Scroll Type							
	Output Power	KW	2.04	3.32	4.91	6.46	9.5	6.46×2	9.5×2
		HP	3	5	8	10	15	10×2	15×2
Refrigerant	Filling Amount (kg)	2	2.5	4.2	5.7	8.5	4.8×2	8.5×2	
	Control Mode	Thermostatic Expansion Valve							
	Type <sup>(2)</sup>	R22							
Evaporator	Type	Plate Heat Exchanger				Shell-tube Exchanger			
Chilled Water In / Out Pipe (inch)		1	1	1-1/4	1-1/4	1-1/2	2	2	
Condenser	Type	Shell-tube Style							
	Flow(L/min)	56	65	90	100	160	220	330	
	Pipe (inch)	1	1-1/2	1-1/2	2	2-1/2	2-1/2	3	
Cool Water Pump	Power	0.75	0.75	1.1	1.1	1.5	3	3	
	Working Pressure (kgf/cm <sup>2</sup> )	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Medium Pump	Power	0.55	0.75	1.1	2.2	2.2×2	3×2	5.5×2	
	Pump Flow (L/min)	33.3	66.7	133.3	166.7	166.7×2	250×2	333.3×2	
	Working Pressure (kgf/cm <sup>2</sup> )	2~3	2~3	2~3	2~6	2~6	2~4.5	2~6	
Protector	Compressor	Overload Relay							
	Pump	Overload Relay							
	Chilling Water Return Circuit	High And Low Pressure Switch / Anti-freezing Switch							
	Water Return Circuit	Water Level Switch (option) / Bypass -valve							
W×D×H(mm)		805×1230×1340	805×1230×1340	845×1450×1425	845×1450×1425	1245×2235×1610	1245×2235×1610	1245×2235×1610	
Unit Conversion		1kW=860 kcal/hr 1RT=3,024 kcal/hr 10,000Btu/hr=2,520 kcal/hr							
Voltage Specification		3Φ, 400VAC, 50Hz							

Notes: 1) Refrigeration capacity is measured based on the flow 0.172 m<sup>3</sup> / (h-k W) and the outlet temperature (7°C) of chilled water under the environment temperature of 30°C, and the flow of 0.215m<sup>3</sup> / (h-k W)

We reserve the right to change specifications without prior notice.

2) Environmental-friendly R407C refrigerant is optional.  
(Add "R1" at model behind, such as STC-607-3W-R1)

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