

Colding / Heating Temperature Controllers



STC-5W



Refer carefully to the manual before using products.



STC-W Series

■ Coding Principle



■ Features

- Temperature control is between 5~110°C with an accuracy of $\pm 1^\circ\text{C}$.
- Stainless iron insulated water tank.
- Adopts imported compressor.
- Anti-icing 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-tube styled cooler is adopted due to its excellent heat transfer and dissipation.
- Plate-type evaporator has a small size, occupying a small space.
- Simple operation and structure render maintenance easy.



Control Panel



Internal Structure 1



Internal Structure 2

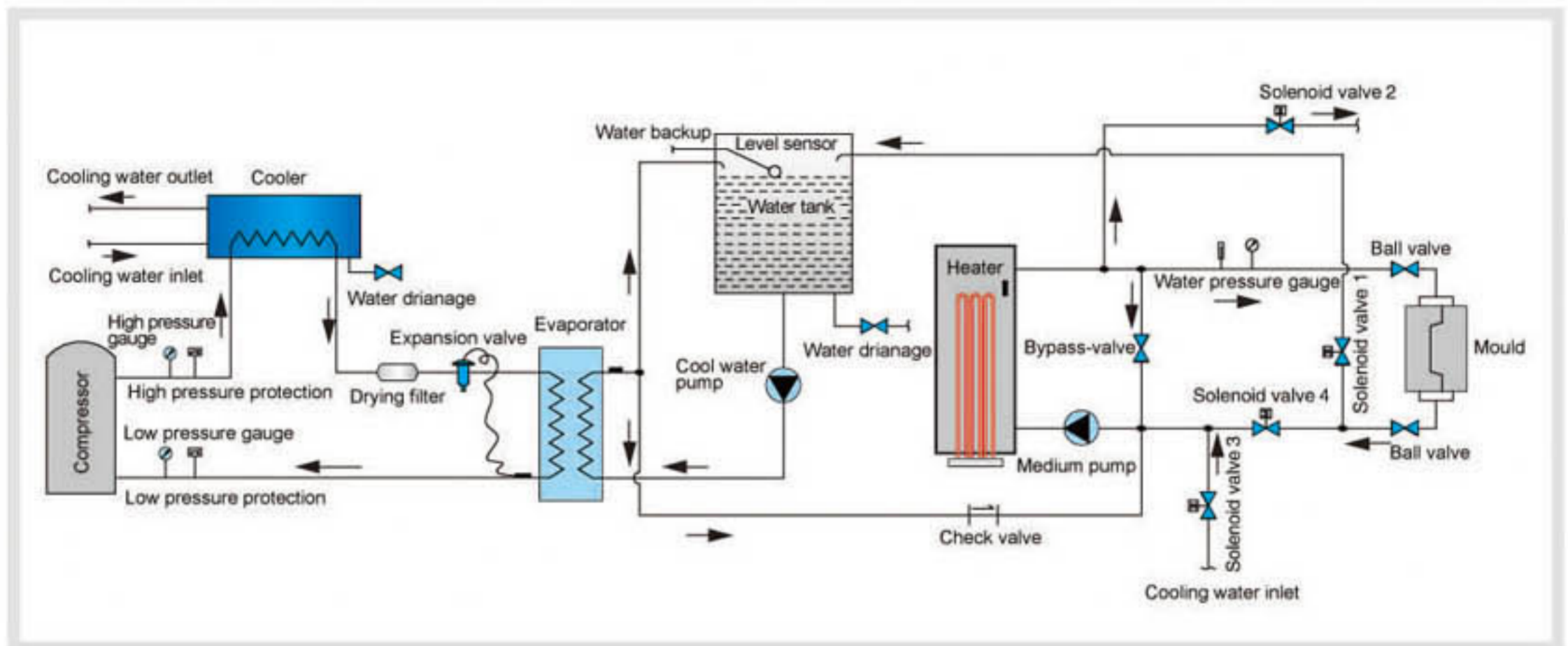
■ Application

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

■ Working Principle

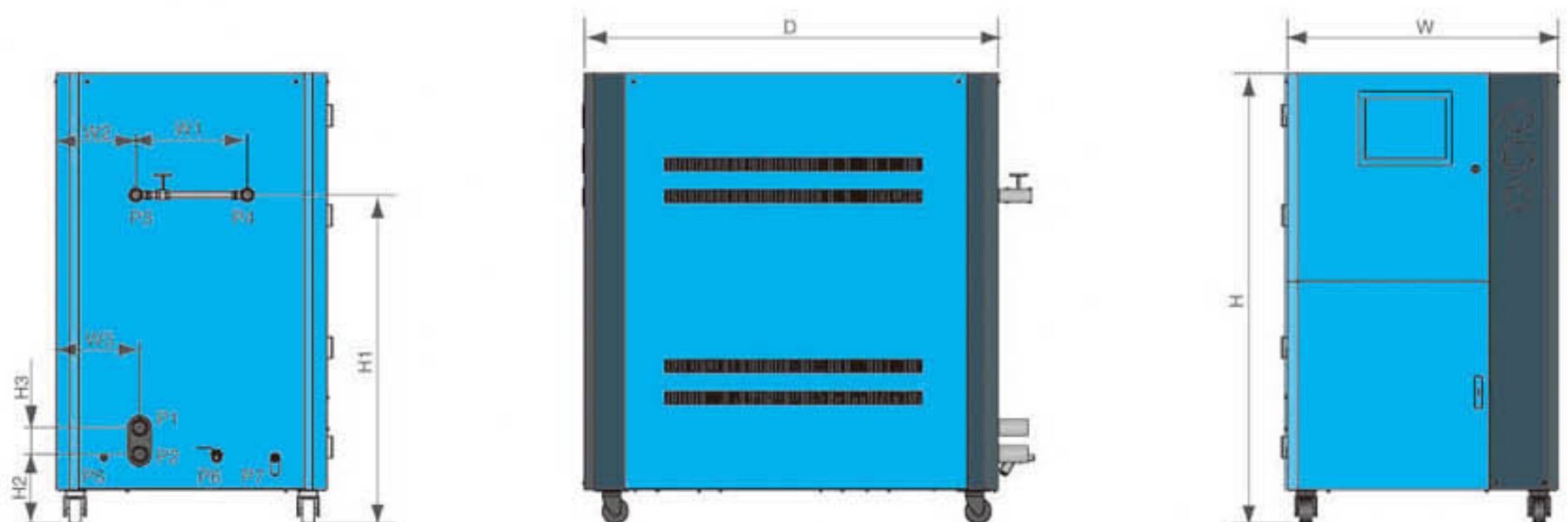
Refrigeration: refrigeration system starts to work if set for refrigerating, solenoid valve 2, 3 and 4 shut off but solenoid valve 1 runs. Flowing out of water tank and passing through chilled water pump, chilled water enters evaporator, where it is cooled and goes out to heating barrel and mould then return to water tank. A circle finishes like this.

Heating: solenoid valve 1 shuts off while valve 3 and 4 run if system is set for heating. Solenoid valve 2 adopts P.I.D. control to adjust water temp. with the accuracy of $\pm 1^{\circ}\text{C}$. And mould backwater enters heating barrel after passing medium pump and it is heated, finally returning to mould. A circle finishes.



Working Principle

■ Outline Drawings



STC-W Series

Modle	H(mm)	H1(mm)	H2(mm)	H3(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-3W	1300	980	207	80	805	330	235	250	1230	1 1/2	1 1/2	1	1	1/2	1/2	1/2	280
STC-5W	1340	980	207	80	805	330	235	250	1230	1 1/2	1 1/2	1	1	1/2	1/2	1/2	300
STC-8W	1400	1000	250	100	900	350	250	300	1250	1 1/2	1 1/2	1 1/2	1 1/2	1/2	1/2	1/2	350
STC-10W	1400	1000	250	100	900	350	250	300	1250	1 1/2	1 1/2	1 1/2	1 1/2	1/2	1/2	1/2	370

STC-W Structure Chart



- ① Stainless iron insulated water tank ② Compressor ③ Plate-type evaporator ④ Medium pump
 ⑤ Stainless steel heating barrel ⑥ Shell-tube styled cooler ⑦ Drying filter ⑧ Cool water pump

■ Specifications

Modle		STC-3W	STC-5W	STC-8W	STC-10W	
Item / parameter						
Refrigerating Output ⁽¹⁾	kW	8	13.5	21.6	27	
	Kcal/hr	6880	11607	18576	23220	
Electric Heating Capacity	kW	6	9	12	24	
Compressor	Type	Vortex Type				
	OutPut Power	kW	2.04	3.32	4.91	6.46
		HP	3	5	8	10
Refrigerant	Filling Amount (kg)	2.7	4.3	7	8	
	Control Mode	Thermostatic Expansion Valve				
	Type ⁽²⁾	R22				
Evaporator	Type	Plate				
Chilled water In / out Pipe (inch)		1	1	1 1/2	1 1/2	
Cooler	Type	Shell-tube Styled				
	Flow	56L/min	65L/min	90L/min	100L/min	
	Pipe (inch)	1 1/2				
Cool Water Pump	Power	0.75	0.75	1.1	1.5	
	Pump Flow	35L/min	45L/min	60L/min	80L/min	
	Working Pressure	2.0kgf/cm ²	2.0kgf/cm ²	2.2kgf/cm ²	2.2kgf/cm ²	
Medium Pump	Power	0.55	0.75	0.75	1.1	
	Pump Flow	35L/min	45L/min	45L/min	60L/min	
	Working Pressure	2.6kgf/cm ²	2.6kgf/cm ²	2.8kgf/cm ²	2.8kgf/cm ²	
Protector	Compressor	Overload Relay				
	Pump	Overload Relay				
	Chilling Return Circuit	High And Low Pressure Switch / Anti-freezing Switch				
	Water Return Circuit	Water Level Switch option / Bypass –valve				
Dimension (mm) W x D x H	805 x 1230 x 1300	805 x 1230 x 1340	900 x 1250 x 1400	900 x 1250 x 1400		
Measures Exchange	1kW=860 kcal/hr 1RT=3024 kcal/hr 10000Btu/hr=2520 kcal/hr					
Voltage Specification	3Φ, 230 / 400 / 460 / 575V, 50 / 60 Hz					

1) Refrigeration capacity is tested under the condition that cooling water inlet temp. is 30°C, outlet temp. is 35°C and chilled water inlet temp. is 12°C, outlet temp. is 7°C.

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-5W-R1)



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