

## Water-cooled Water Chillers

The SIC-W series of water-cooled water chillers use a single closed-loop design for pressurised refrigerant. All models are equipped with compressor and motor overload protection, phase shortage and reversal alarms, anti-freeze thermostat, pressure gauges, etc. They feature excellent performance and a long lifespan. The series of working flow is based on the basic principle of heat exchange. It is applicable to the industry that requires flow of precisely controlled chilled water, and considered as indispensable equipment for modern industry.

### Features:

- Cooling capacity from 7°C to 35°C.
- Stainless insulated water tank.
- Equipped with anti-freeze thermostat.
- R22 refrigerant used as standard for efficient cooling.
- Refrigeration loop controlled by high and low pressure switches.
- Compressor and pump overload relays.
- Tube-in-shell condenser design for quick heat transfer and excellent heat radiation.
- Tube-in-shell evaporator for excellent cooling.
- Italian made temperature control can maintain accuracy of  $\pm 1^{\circ}\text{C}$ .
- Compact design, easy to operate and maintain.

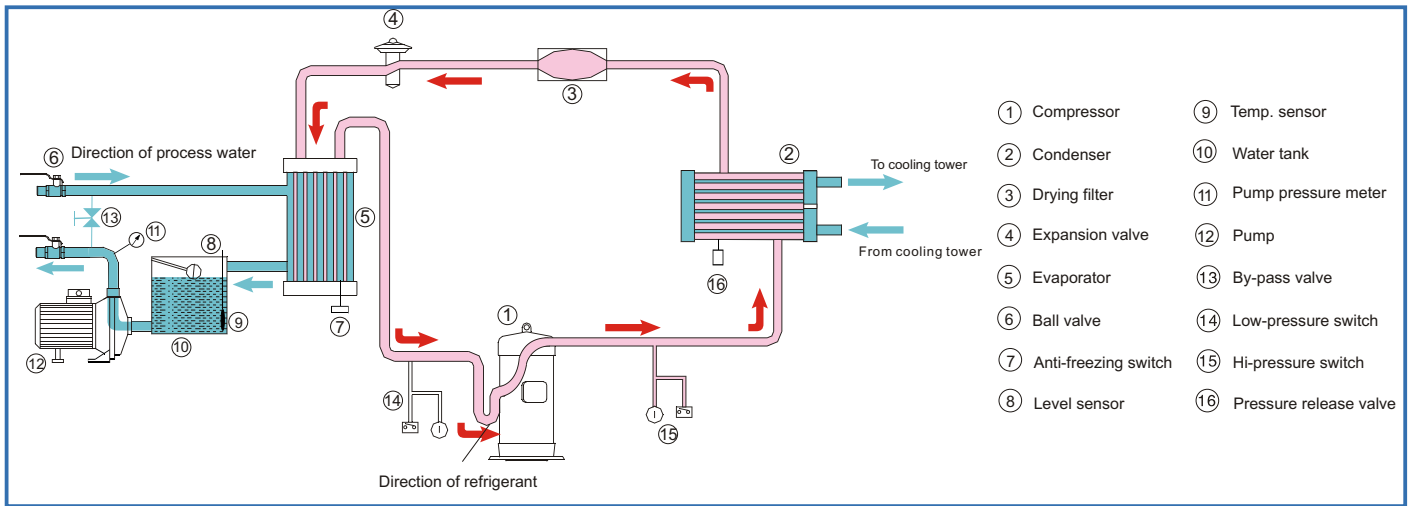


SIC-5W

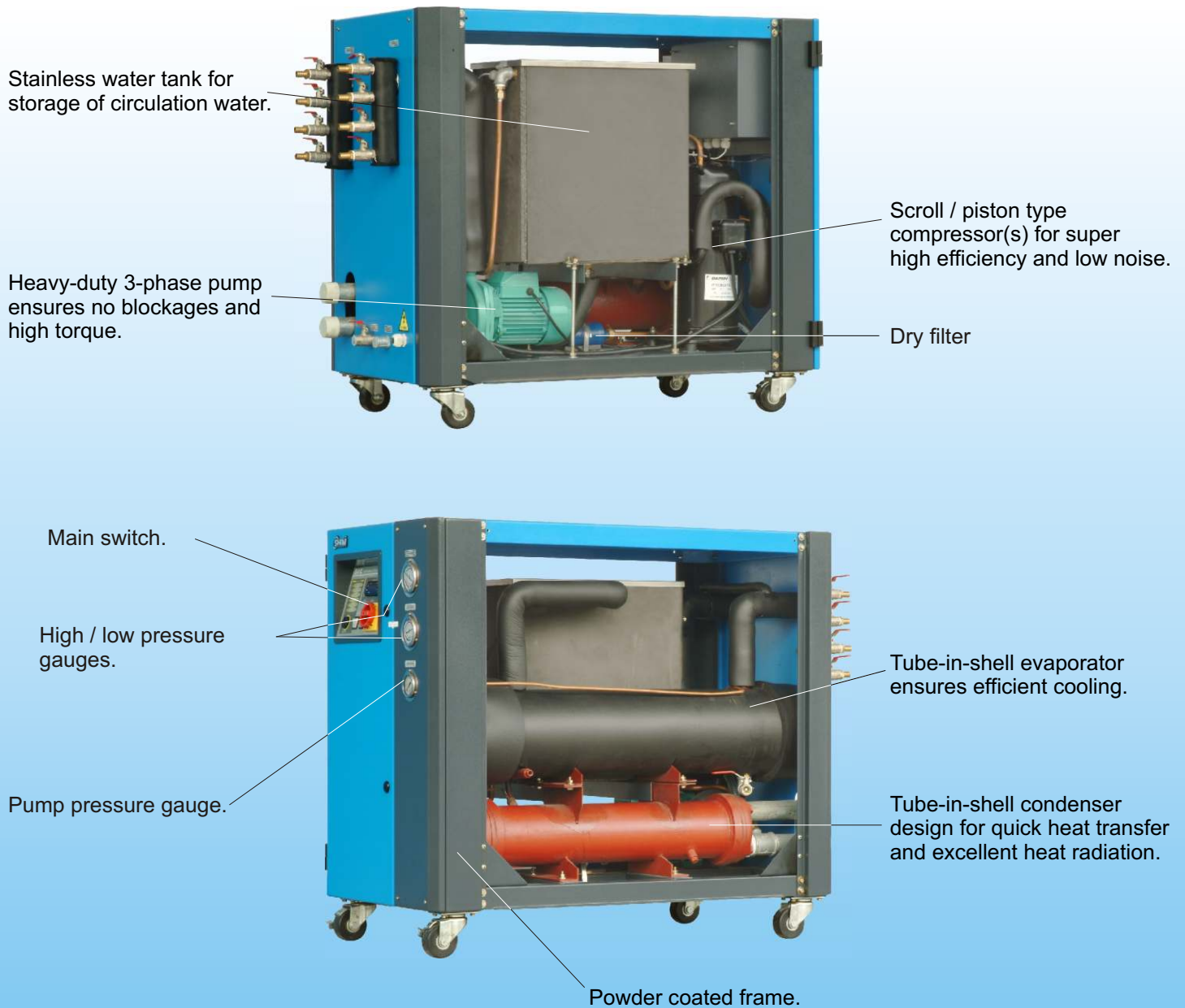


Control Panel

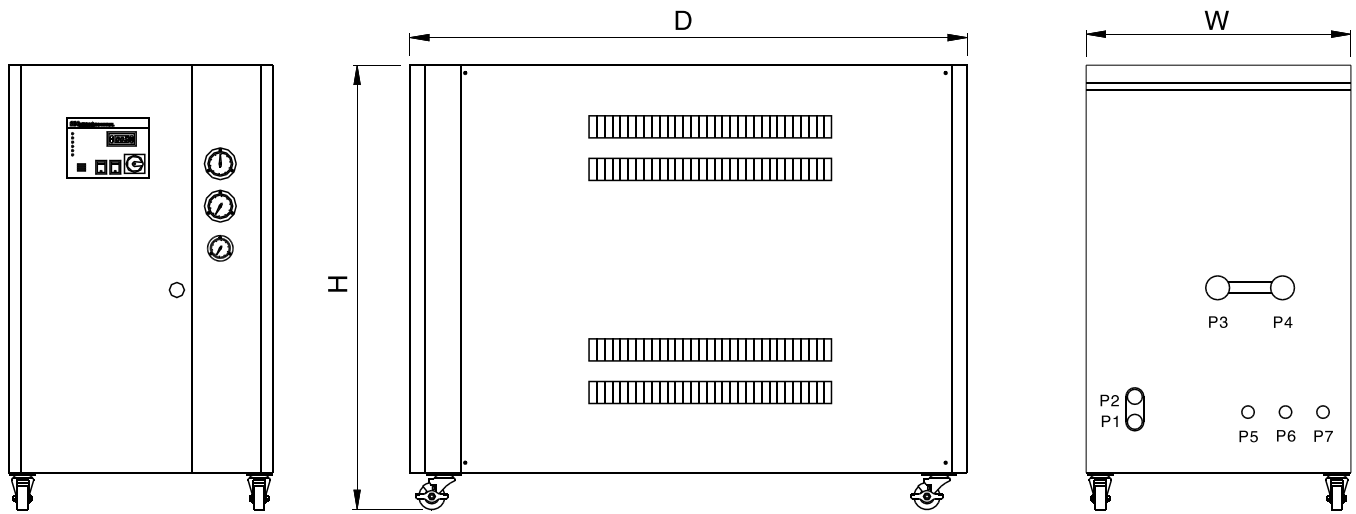
# Working principle of water-cooled chillers



# Structure of water-cooled chillers



## Dimensions



Model	P1 Cooling Water Inlet	P2 Cooling Water Outlet	P3 Process Water Inlet	P4 Process Water Outlet	P5 Water Tank Outlet Port	P6 Water Tank Overflow Port	W (mm)	D (mm)	H (mm)	Weight (kg)
SIC-3W	1"	1"	1/2" x 4	1/2" x 4	1/2"	1/2"	600	1100	960	230
SIC-4W	1"	1"	1/2" x 4	1/2" x 4	1/2"	1/2"	600	1100	960	260
SIC-5W	1 1/2"	1 1/2"	1/2" x 4	1/2" x 4	1/2"	1/2"	600	1100	960	290
SIC-8W	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	830	1200	1050	400
SIC-10W	2"	2"	1 1/2"	1 1/2"	1/2"	1/2"	830	1200	1050	410
SIC-12.5W	2"	2"	2"	2"	1/2"	1/2"	870	1380	1240	610
SIC-15W	2 1/2"	2 1/2"	2"	2"	1/2"	1/2"	870	1380	1240	640
SIC-20W	2 1/2"	2 1/2"	2"	2"	1/2"	1/2"	1000	2000	1450	750
SIC-25W	2 1/2"	2 1/2"	2"	2"	1/2"	1/2"	1000	2000	1450	760
SIC-30W	3"	3"	2 1/2"	2 1/2"	1/2"	1/2"	1000	2000	1450	800
SIC-40W	3"	3"	2 1/2"	2 1/2"	1"	1"	1050	2850	1860	1200
SIC-45W	3"	3"	2 1/2"	2 1/2"	1"	1"	1050	2850	1860	1450
SIC-50W	3"	3"	2 1/2"	2 1/2"	1"	1"	1050	2850	1860	1750

## Reference of Model Selection

Mould Clamping Force (t)	Moulding Capacity (kg/hr)	Model
≤ 250	≤ 25	SIC-3W
≤ 300	≤ 30	SIC-4W
≤ 350	≤ 35	SIC-5W
≤ 450	≤ 45	
≤ 550	≤ 55	SIC-8W
≤ 650	≤ 65	
≤ 850	≤ 85	SIC-10W
≤ 1000	≤ 100	SIC-12.5W
≤ 1300	≤ 130	

Mould Clamping Force (t)	Moulding Capacity (kg/hr)	Model
≤ 1500	≤ 150	SIC-15W
≤ 1800	≤ 180	
≤ 2200	≤ 220	SIC-20W
≤ 2500	≤ 250	
≤ 3000	≤ 300	SIC-25W
≤ 4000	≤ 400	SIC-30W
≤ 5000	≤ 500	SIC-40W
≤ 6000	≤ 600	SIC-45W
≤ 7000	≤ 700	SIC-50W

# Specifications

Item	Model		SIC-3W	SIC-4W	SIC-5W	SIC-8W	SIC-10W	SIC-12.5W	SIC-15W	SIC-20W	SIC-25W	SIC-30W	SIC-40W	SIC-45W	SIC-50W				
	Parameter																		
(1) Refrigeration Capacity	kW	50Hz	8	10.8	13.5	21.6	27	33.75	40.5	54	67.5	81	110.4	124.2	138				
		60Hz	9	13	15	24	30	37.5	45	60	75	90	120	135	150				
	kcal/hr	50Hz	6880	9288	11607	18576	23220	29025	34830	46440	58050	69660	94944	106812	118680				
		60Hz	77740	10320	12900	20640	25800	32250	38700	51600	64500	77400	103200	116100	129000				
Compressor	Type		Scroll <sup>(2)</sup>						Scroll										
	Power	kW	50Hz	2.2	3	3.7	6	7.5	9.4	11	15	18.7	22	30	34	37.5			
			60Hz	2.6	3.6	4.4	7.2	9.0	11.3	13.2	18	22.5	26.4	36	40.8	45			
		Hp	3	4	5	8	10	12.5	15	20	25	30	40	45	50				
Refrigerant	Weight (kg)	1.5	1.8	2.5	3.8	5	7	8.5	10	14	17	20	25	34					
	Control Mode	Thermostatic expansion valve																	
	Type <sup>(3)</sup>	R22																	
Evaporator	Type	Tube-in-shell style																	
Condensor	Type	Tube-in-shell style																	
	In/out Pipe	1"	1 1/2"			2"			2 1/2"			3"							
	Cooling Water Flow (L/Min)	56	65	90	100	130	160	220	270	330	480	500	600						
Water Tank (L)		50			85			150			180	200	270	400	400	400			
(4) Pump	Power (kw) (50/60Hz)	0.75 / 0.75			1.1 / 1.1			2.2 / 2.64			4.0 / 5.5			4.0 / 5.5					
	Pump Flow (L/Min)	50 / 60			80 / 96			130 / 156			200 / 240			300 / 360			533 / 640		
	Working Pressure (kg/cm)	2.0 / 2.4						2.5 / 3.0						2.7 / 3.25					
Total Power (kW)	50Hz	2.95	3.75	4.45	7.1	8.6	11.6	13.2	17.2	20	26.0	34.0	38	41.5					
	60Hz	3.35	4.35	5.15	8.5	9.0	13.9	15.4	20	24	30.1	39.7	45.6	49.8					
Pipe Coupling (inch)	Cooling Water Outlet	1 1/2" x 4			1 1/2" x 1			2" x 1			2 1/2" x 1			2 1/2" x 1					
	Cooling Water Inlet	1 1/2" x 4			1 1/2" x 1			2" x 1			2 1/2" x 1			2 1/2" x 1					
	Drainage Port Of Water Tank	1/2"									1"								
	Overflow Port Of Water Tank	1/2"									1"								
Protections	Compressor	Overload relay																	
	Pump	Overload relay																	
	Refrigerant Circuit	High and low pressure switch / anti-freezing switch																	
	Cooling water Circuit	by-pass valve / Water level switch (Option)																	
Power		3 Φ, 230/400/460/575V, 50/60Hz																	
Measures Exchange		1kW = 860kcal/hr			1RT = 3024kcal/hr			10000Btu/hr = 2520kcal/hr											

Note: (1) Refrigeration capacity is tested under the condition that cold water outlet temperature is at 12°C and ambient temperature at 30°C.

(2) A piston type compressor is used with 3 Φ, 230V power supply (SIC-3W ~ SIC-5W).

(3) Environment-friendly R470C refrigerant is optional. (Model denotes "U", such as SIC-5W-U)

(4) This pump is used as standard when export to Southeast Asia; high pressure pump is optional for installation on customer's demand. (Model denotes "HP", such as SIC-5A-HP).

(5) Demands on special voltage of power supply could be satisfied.

We reserve the right to change specifications without prior notice.

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