

## Portable Water Chillers

This series of portable water chillers offer water-cooled type (SIC-W) and air-cooled type (SIC-A). All models are equipped with compressor and pump overload protector, phase shortage and reversal alarm, anti - freeze thermostat, pressure gauge etc. They feature excellent performance and a long life span. This 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 range 7 ~ 35 °C;
- Stainless iron made insulated water tank.
- Equipped with anti - freeze thermostat.
- R22 refrigerant used as standard and optional R407 for efficient cooling.
- Refrigeration loop controlled by high and low pressure switches.
- Compressor and pump overload relays.
- Italian made temperature controller maintains an accuracy of  $\pm 1^{\circ}\text{C}$ .
- Compact design, easy to operate and maintain.
- Low pressure pumps are standard configurations, while middle or high pressure pumps are optionally available.
- Optionally liquid solenoid valve, hot air bypass, liquid level indicator for water tank, manual valve on liquid pipe, fluid reservoir are available.
- All adopt Copeland compressors.
- SIC - W adopts tube - in - shell condenser design for quick heat transfer and excellent heat radiation.
- SIC - A adopts tube - fin condenser design without any need of cooling water for excellent heat transfer and rapid cooling.
- Upon request, it can be built to comply with worldwide electrical safety standards ( For example : CE, UL, CSA, JIS etc. ).



SIC-20A



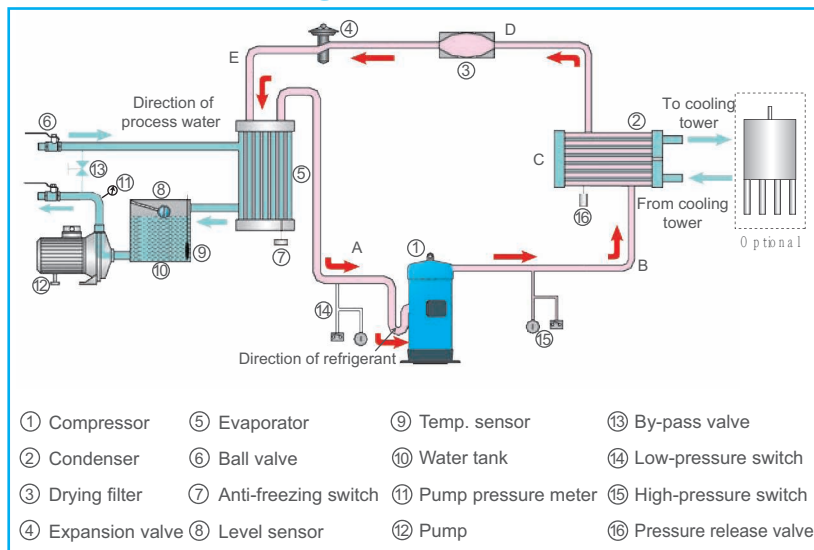
SIC-5W



Control Panel

# SIC-W/A Series

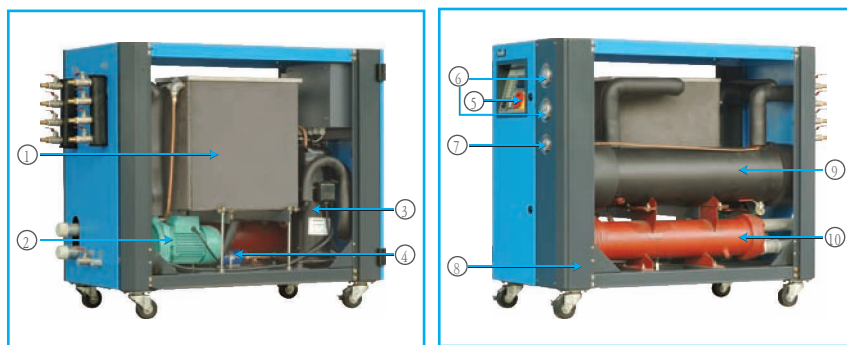
## SIC-W Working principle of water-cooled Models



SIC - W water - cooled water chiller is mainly made up of four components. They are compressor, condenser, thermostatic expansion valve and evaporator. The machine uses single stage vapor compression refrigeration system and takes the advantage of the mechanism of transformation between gas and liquid status for absorbing and releasing heat by using of refrigerant to achieve the effectiveness of refrigeration.

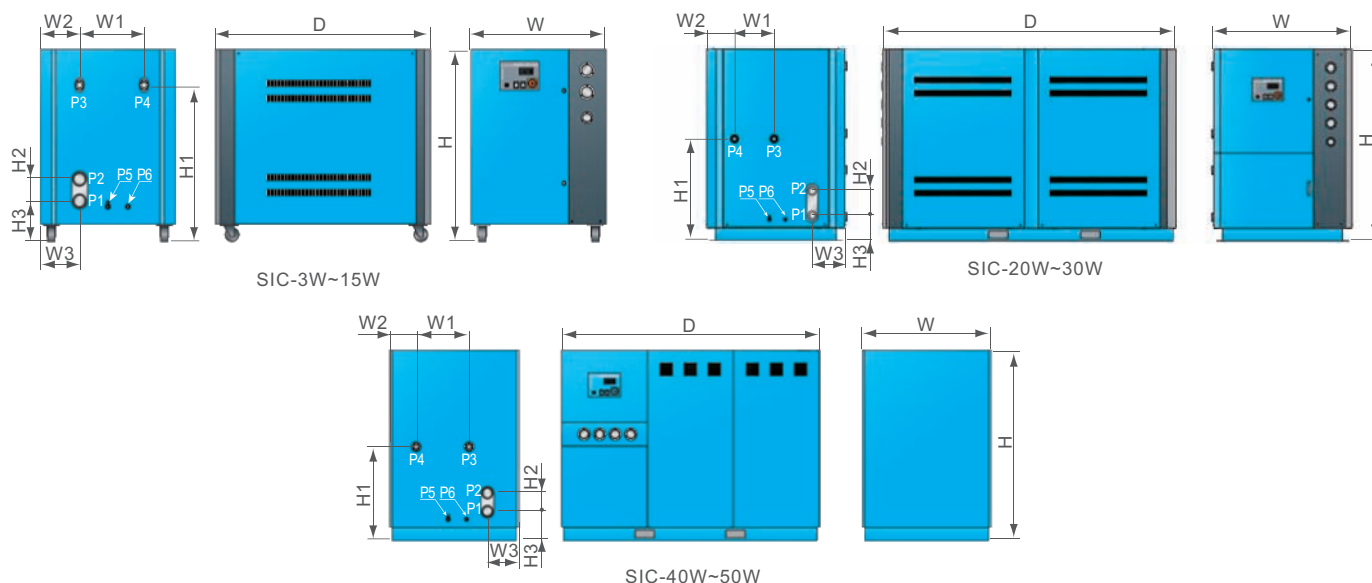
When the machine is started, its compressor starts working. Refrigerant is compressed into high pressure and high temperature gas in the process from A to B. In the process from B to C and D, this high pressure and high temp. gas is cooled when it is passing through the condenser and changed into liquid. Heat is taken away by the cooling water. In the process from D to E, the pressure of liquid refrigerant is reduced by expansion valve and a part of the refrigerant is changed from liquid to gaseous state. In the process from E to A, refrigerant absorbs the heat of process water in the evaporator and returns back to the compressor. This heat exchange process repeats until process water is cooled down to required temperature.

## Structure of Water-cooled Models



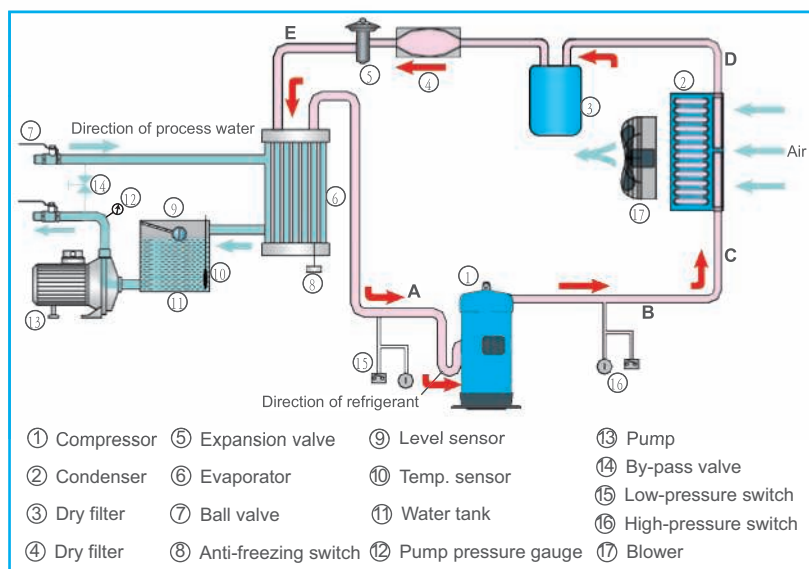
- ① Stainless iron water tank for storage of circulation water.
- ② Heavy-duty 3-phase pump ensures no blockages and high torque.
- ③ Scroll / piston type compressor(s) for super high efficiency and low noise.
- ④ Dry filter.
- ⑤ Main switch.
- ⑥ High / low pressure gauges.
- ⑦ Pump pressure gauge.
- ⑧ Powder coated frame.
- ⑨ Tube-in-shell evaporator ensures efficient cooling.
- ⑩ Tube-in-shell condenser design for quick heat transfer and excellent heat radiation.

## Outline Drawings of Water-cooled Models



| Model     | H<br>(mm) | H1<br>(mm) | H2<br>(mm) | H3<br>(mm) | W<br>(mm) | W1<br>(mm) | W2<br>(mm) | W3<br>(mm) | D<br>(mm) | P1 (inch)<br>Cooling Water Inlet | P2 (inch)<br>Cooling Water Outlet | P3 (inch)<br>Process Water Inlet | P4 (inch)<br>Process Water Outlet | P5 (inch)<br>Water Tank Outlet Port | P6 (inch)<br>Water Tank Overflow Port | Weight<br>(kg) |
|-----------|-----------|------------|------------|------------|-----------|------------|------------|------------|-----------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-------------------------------------|---------------------------------------|----------------|
| SIC-3W    | 970       | 790        | 91         | 207        | 550       | 273        | 164        | 164        | 1080      | 1"                               | 1"                                | 1"                               | 1"                                | 1/2"                                | 1/2"                                  | 210            |
| SIC-5W    | 970       | 790        | 91         | 207        | 550       | 273        | 164        | 164        | 1080      | 1 1/2"                           | 1 1/2"                            | 1"                               | 1"                                | 1/2"                                | 1/2"                                  | 240            |
| SIC-8W    | 1050      | 910        | 140        | 225        | 830       | 370        | 230        | 230        | 1200      | 1 1/2"                           | 1 1/2"                            | 1 1/2"                           | 1 1/2"                            | 1/2"                                | 1/2"                                  | 330            |
| SIC-10W   | 1050      | 910        | 140        | 225        | 830       | 370        | 230        | 230        | 1200      | 2"                               | 2"                                | 1 1/2"                           | 1 1/2"                            | 1/2"                                | 1/2"                                  | 340            |
| SIC-12.5W | 1200      | 1078       | 140        | 308        | 865       | 459        | 202        | 162        | 1370      | 2"                               | 2"                                | 2"                               | 2"                                | 1/2"                                | 1/2"                                  | 430            |
| SIC-15W   | 1200      | 1078       | 140        | 308        | 865       | 459        | 202        | 162        | 1370      | 2 1/2"                           | 2 1/2"                            | 2"                               | 2"                                | 1/2"                                | 1/2"                                  | 495            |
| SIC-20W   | 1450      | 765        | 200        | 190        | 1055      | 300        | 295        | 205        | 2235      | 2 1/2"                           | 2 1/2"                            | 2"                               | 2"                                | 1/2"                                | 1/2"                                  | 750            |
| SIC-25W   | 1450      | 765        | 200        | 190        | 1055      | 300        | 295        | 205        | 2235      | 2 1/2"                           | 2 1/2"                            | 2"                               | 2"                                | 1/2"                                | 1/2"                                  | 760            |
| SIC-30W   | 1450      | 765        | 200        | 200        | 1055      | 300        | 215        | 205        | 2235      | 3"                               | 3"                                | 2 1/2"                           | 2 1/2"                            | 1/2"                                | 1/2"                                  | 800            |
| SIC-40W   | 1760      | 910        | 140        | 190        | 1100      | 370        | 229        | 230        | 2870      | 3"                               | 3"                                | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1"                                    | 1200           |
| SIC-45W   | 1760      | 1078       | 140        | 190        | 1100      | 459        | 202        | 162        | 2870      | 3"                               | 3"                                | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1"                                    | 1450           |
| SIC-50W   | 1760      | 170        | 120        | 190        | 1100      | 180        | 325        | 505        | 2870      | 3"                               | 3"                                | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1"                                    | 1750           |

## Working Principle of Air-cooled Models



SIC - A air - cooled water chillers include four main components, such as compressor, condenser, thermostatic expansion valve and evaporator. The system adopts a single closed - loop design for refrigeration system. Refrigerant is alternatively changed from gaseous to liquid state to absorb or release heat thus a cooling effect is achieved.

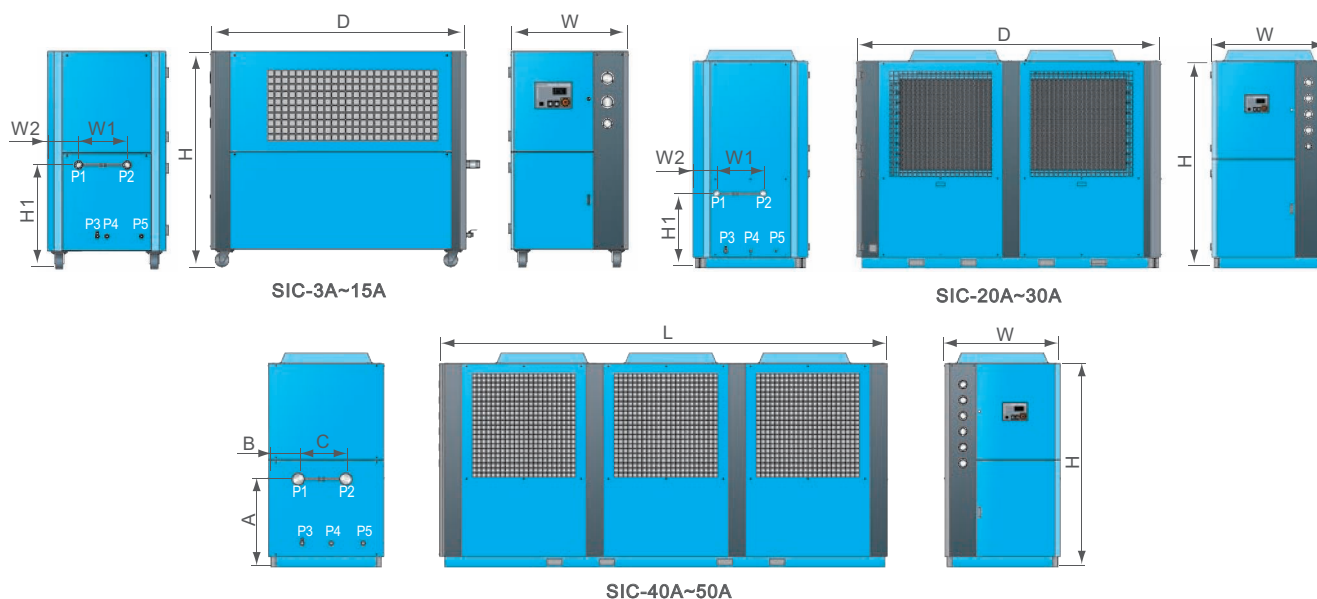
When the machine is started, compressor starts working. Refrigerant is compressed into high pressure and high temperature gas in the process from A to B. In the process from B to C and D, this high pressure and high temperature gas is cooled when it is passing through the condenser and changed into liquid. Heat is taken away by the cooling air. In the process from D to E, the pressure of liquid refrigerant is reduced by expansion valve and a part of the refrigerant is changed from liquid to gaseous state. In the process from E to A, refrigerant absorbs the heat of process water in the evaporator and returns back to the compressor. This heat exchange process repeats until process water is cooled down to required temperature.

## Structure of Air-cooled Models



- 1 Stainless iron water tank for storage of circulation water.
- 2 Heavy duty 3 - phase pump ensures no blockages and high torque.
- 3 High / low system pressure gauges.
- 4 Main power switch.
- 5 Pump pressure gauge.
- 6 Scroll / piston type compressor(s) for super high efficiency and low noise.
- 7 Refrigerant tank is fixed to make full use of the condenser cooling fin.
- 8 Expansion valve for accurate adjustment of R22 refrigerant.
- 9 Tube - fin condenser features quick heat transfer and heat radiation.
- 10 Tube - in - shell evaporator ensures efficient cooling.
- 11 Powder coated frame.

## Outline Drawings of Air-cooled Models



| Model     | H<br>(mm) | H1<br>(mm) | W<br>(mm) | W1<br>(mm) | W2<br>(mm) | D<br>(mm) | P1 (inch)<br>Process Water Inlet | P2 (inch)<br>Process Water Outlet | P3 (inch)<br>Water Tank Outlet Port | P4 (inch)<br>Water Tank Overflow Port | P5 (inch)<br>Water Tank Refill Port | Weight<br>(kg) |
|-----------|-----------|------------|-----------|------------|------------|-----------|----------------------------------|-----------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|----------------|
| SIC-3A    | 1400      | 640        | 735       | 360        | 174        | 1320      | 1"                               | 1"                                | 1/2"                                | 1/2"                                  | 1/2"                                | 305            |
| SIC-5A    | 1400      | 640        | 735       | 360        | 174        | 1320      | 1"                               | 1"                                | 1/2"                                | 1/2"                                  | 1/2"                                | 315            |
| SIC-8A    | 1350      | 640        | 735       | 300        | 204        | 1610      | 1 1/2"                           | 1 1/2"                            | 1/2"                                | 1/2"                                  | 1/2"                                | 400            |
| SIC-10A   | 1350      | 640        | 735       | 300        | 204        | 1610      | 1 1/2"                           | 1 1/2"                            | 1/2"                                | 1/2"                                  | 1/2"                                | 420            |
| SIC-12.5A | 1520      | 648        | 905       | 457        | 189        | 1780      | 2"                               | 2"                                | 1/2"                                | 1/2"                                  | 1/2"                                | 520            |
| SIC-15A   | 1520      | 648        | 905       | 457        | 189        | 1780      | 2"                               | 2"                                | 1/2"                                | 1/2"                                  | 1/2"                                | 560            |
| SIC-20A   | 1950      | 700        | 1200      | 450        | 150        | 2920      | 2"                               | 2"                                | 1"                                  | 1/2"                                  | 1/2"                                | 775            |
| SIC-25A   | 1950      | 700        | 1200      | 450        | 150        | 2920      | 2"                               | 2"                                | 1"                                  | 1/2"                                  | 1/2"                                | 800            |
| SIC-30A   | 1950      | 760        | 1200      | 430        | 160        | 2920      | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1/2"                                  | 1/2"                                | 840            |
| SIC-40A   | 1970      | 780        | 1300      | 450        | 200        | 3390      | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1"                                    | 1"                                  | 1400           |
| SIC-45A   | 1970      | 780        | 1300      | 450        | 200        | 3800      | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1"                                    | 1"                                  | 1800           |
| SIC-50A   | 1970      | 823        | 1420      | 700        | 360        | 4000      | 2 1/2"                           | 2 1/2"                            | 1"                                  | 1"                                    | 1"                                  | 2000           |

## Model Selection Reference

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

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

## SIC-W Specifications

| Model                         |                             |      | SIC-3W                                              | SIC-5W | SIC-8W           | SIC-10W | SIC-12.5W              | SIC-15W | SIC-20W          | SIC-25W                       | SIC-30W         | SIC-40W | SIC-45W         | SIC-50W |      |
|-------------------------------|-----------------------------|------|-----------------------------------------------------|--------|------------------|---------|------------------------|---------|------------------|-------------------------------|-----------------|---------|-----------------|---------|------|
| Item                          | Parameter                   |      |                                                     |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
| (1)<br>Refrigeration Capacity | kW                          | 50Hz | 8                                                   | 13.5   | 21.6             | 27      | 33.75                  | 40.5    | 54               | 67.5                          | 81              | 110.4   | 124.2           | 138     |      |
|                               |                             | 60Hz | 9                                                   | 15     | 24               | 30      | 37.5                   | 45      | 60               | 75                            | 90              | 120     | 135             | 150     |      |
|                               | kcal/hr                     | 50Hz | 6880                                                | 11607  | 18576            | 23220   | 29025                  | 34830   | 46440            | 58050                         | 69660           | 94944   | 106812          | 118680  |      |
|                               |                             | 60Hz | 77740                                               | 12900  | 20640            | 25800   | 32250                  | 38700   | 51600            | 64500                         | 77400           | 103200  | 116100          | 129000  |      |
| Compressor                    | Type                        |      | (2)<br>Scroll                                       |        |                  | Scroll  |                        |         |                  |                               |                 |         |                 |         |      |
|                               | Power                       | kW   | 50Hz                                                | 2.77   | 4.65             | 7       | 9.35                   | 12      | 14.2             | 18.7                          | 24              | 28.4    | 37.35           | 42.6    | 48   |
|                               |                             |      | 60Hz                                                | 3.32   | 5.6              | 8.5     | 11.5                   | 14.7    | 17.6             | 23                            | 29.4            | 35.2    | 46.7            | 52.8    | 58.8 |
|                               |                             |      | Hp                                                  | 3      | 5                | 8       | 10                     | 12.5    | 15               | 20                            | 25              | 30      | 40              | 45      | 50   |
| Refrigerant                   | Weight (kg)                 |      | 1.5                                                 | 2.5    | 3.8              | 5       | 7                      | 8.5     | 10               | 14                            | 17              | 20      | 25              | 34      |      |
|                               | Control Mode                |      | Thermostatic expansion valve                        |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
|                               | Type (3)                    |      | R22                                                 |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
| Evapo-<br>rator               | Type                        |      | Tube-in-shell style                                 |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
| Condenser                     | Type                        |      | Tube-in-shell style                                 |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
|                               | In/out Pipe                 |      | 1"                                                  | 1½"    |                  | 2"      |                        | 2½"     |                  |                               | 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     |                 |         |      |
| (4)<br>Pump                   | Power (kw) (50/60Hz)        |      | 0.75 / 1.1<br>0.75 / 1.5                            |        | 1.1<br>1.1 / 1.5 |         | 1.1 / 1.5 / 2.2<br>2.2 |         | 2.2 / 3 / 4<br>3 |                               | 3 / 4<br>5.5    |         | 4 / 5.5<br>5.5  |         |      |
|                               | Pump Flow (L/Min)           |      | 50 / 83 / 67                                        |        | 80 / 100 / 89    |         | 130 / 150 / 133        |         | 200 / 300 / 300  |                               | 300 / 300 / 300 |         | 533 / 366 / 367 |         |      |
|                               | Working Pressure (kg/cm²)   |      | 2.0 / 2.6 / 3.8                                     |        | 2.0 / 2.6 / 3.5  |         | 2.0 / 3 / 4.2          |         | 2.5 / 3 / 4.2    |                               |                 |         | 2.7 / 3.4 / 4.3 |         |      |
| Total Power (kW)              | 50Hz                        |      | 2.95                                                | 4.45   | 7.1              | 8.6     | 11.6                   | 13.2    | 17.2             | 20.0                          | 26.0            | 34.0    | 38.0            | 41.5    |      |
|                               | 60Hz                        |      | 3.35                                                | 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        |      | 1/2" × 4                                            |        | 1½" × 1          |         | 2" × 1                 |         |                  |                               | 2½" × 1         |         | 2½" × 1         |         |      |
|                               | Cooling Water Inlet         |      | 1/2" × 4                                            |        | 1½" × 1          |         | 2" × 1                 |         |                  |                               | 2½" × 1         |         | 2½" × 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 Ciucuit       |      | By-pass valve / Water level switch (Option)         |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
| Power                         |                             |      | 3Φ, 230 / 400 / 460 / 575V, 50 / 60Hz               |        |                  |         |                        |         |                  |                               |                 |         |                 |         |      |
| Measures Exchange             |                             |      | 1 kW = 860 Kcal / hr                                |        |                  |         | 1 RT = 3024 kcal / hr  |         |                  | 10000 Btu/hr = 2520 kcal / hr |                 |         |                 |         |      |

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

We reserve the right to change specifications without prior notice.

2) A piston type compressor is used with 3Φ, 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 either for domestic or Southeast Asia; medium ( Model denotes " P " , such as SIC - 5W - P ) or high pressure pump ( Model denotes " HP " , such as SIC - 5W - HP ) are optional for installation on customer's demands.

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



## SIC-A Specifications

| Model                         |                             |      | SIC-3A                                              | SIC-5A | SIC-8A           | SIC-10A | SIC-12.5A              | SIC-15A | SIC-20A          | SIC-25A                       | SIC-30A         | SIC-40A  | SIC-45A         | SIC-50A  |    |
|-------------------------------|-----------------------------|------|-----------------------------------------------------|--------|------------------|---------|------------------------|---------|------------------|-------------------------------|-----------------|----------|-----------------|----------|----|
| Item                          | Parameter                   |      |                                                     |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
| (1)<br>Refrigeration Capacity | kW                          | 50Hz | 7.69                                                | 13.5   | 19.08            | 25.56   | 31.41                  | 38.79   | 51.12            | 62.82                         | 77.58           | 102.24   | 113.94          | 125.64   |    |
|                               |                             | 60Hz | 9.12                                                | 16.2   | 22.8             | 30.6    | 37.6                   | 46.5    | 61.2             | 75.3                          | 93.1            | 122.4    | 136.6           | 150.7    |    |
|                               | kcal/hr                     | 50Hz | 6612                                                | 11607  | 16405            | 21976   | 27006                  | 33352   | 43943            | 54013                         | 66703           | 87906    | 97956           | 108026   |    |
|                               |                             | 60Hz | 7838                                                | 13928  | 19686            | 26371   | 32407                  | 40022   | 52731            | 64815                         | 80043           | 105487   | 117547          | 129631   |    |
| Compressor                    | Type                        |      | Scroll <sup>(2)</sup>                               |        |                  | Scroll  |                        |         |                  |                               |                 |          |                 |          |    |
|                               | Power                       | kW   | 50Hz                                                | 2.77   | 4.65             | 7       | 9.35                   | 12      | 14.2             | 18.7                          | 24              | 28.4     | 37.75           | 42.6     | 48 |
|                               |                             | 60Hz | 3.32                                                | 5.6    | 8.55             | 11.5    | 14.7                   | 17.6    | 23               | 29.4                          | 35.2            | 46.2     | 52.8            | 58.8     |    |
|                               |                             | Hp   | 3                                                   | 5      | 8                | 10      | 12.5                   | 15      | 20               | 25                            | 30              | 40       | 45              | 50       |    |
| Refrigerant                   | Weight (kg)                 |      | 2.7                                                 | 4.3    | 7                | 8       | 11                     | 13      | 18               | 22                            | 26              | 34       | 42              | 48       |    |
|                               | Control Mode                |      | Thermostatic expansion valve                        |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
|                               | Type <sup>(3)</sup>         |      | R22                                                 |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
| Evapo-<br>rator               | Type                        |      | Tube-in-shell style                                 |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
| Condenser                     | Type                        |      | Tube-fin style                                      |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
|                               | Blower (kW)                 | 50Hz | 0.25                                                |        | 0.18 × 2         |         | 0.25 × 2               |         | 0.55 × 2         | 1.1 × 2                       | 1.5 × 2         | 0.75 × 3 | 0.75 × 3        | 0.75 × 4 |    |
|                               |                             | 60Hz | 0.30                                                |        | 0.22 × 2         |         | 0.30 × 2               |         | 0.66 × 2         | 0.66 × 2                      | 0.9 × 2         | 0.9 × 3  | 0.9 × 3         | 0.9 × 4  |    |
| Water Tank (L)                |                             |      | 50                                                  |        | 85               |         | 150                    |         | 180              | 200                           | 270             | 400      |                 | 650      |    |
| (4)<br>Pump                   | Power (kw) (50/60Hz)        |      | 0.75 / 1.1<br>0.75 / 1.5                            |        | 1.1<br>1.1 / 1.5 |         | 1.1 / 1.5 / 2.2<br>2.2 |         | 2.2 / 3 / 4<br>3 |                               | 3 / 4<br>5.5    |          | 4 / 5.5<br>5.5  |          |    |
|                               | Pump Flow (L/Min)           |      | 50 / 83 / 67                                        |        | 80 / 100 / 89    |         | 130 / 150 / 133        |         | 200 / 300 / 300  |                               | 300 / 300 / 300 |          | 533 / 366 / 367 |          |    |
|                               | Working Pressure (kg/cm²)   |      | 2.0 / 2.6 / 3.8                                     |        | 2.0 / 2.6 / 3.5  |         | 2.0 / 3 / 4.2          |         | 2.5 / 3 / 4.2    |                               |                 |          | 2.7 / 3.4 / 4.3 |          |    |
| Total Power (kW)              |                             | 50Hz | 3.2                                                 | 4.7    | 7.5              | 9       | 12.1                   | 13.7    | 18.3             | 22                            | 27.5            | 36.2     | 40.25           | 44.5     |    |
|                               |                             | 60Hz | 3.8                                                 | 5.5    | 9.0              | 10.8    | 14.5                   | 15.8    | 21.9             | 26.4                          | 31.9            | 42.4     | 48.3            | 52.9     |    |
| Pipe Coupling (inch)          | Cooling Water Outlet        |      | 1" × 1                                              |        | 1½" × 1          |         | 2" × 1                 |         |                  |                               | 2½" × 1         |          | 2½" × 1         |          |    |
|                               | Cooling Water Inlet         |      | 1" × 1                                              |        | 1½" × 1          |         | 2" × 1                 |         |                  |                               | 2½" × 1         |          | 2½" × 1         |          |    |
|                               | Drainage Port Of Water Tank |      | 1/ 2"                                               |        |                  |         |                        |         |                  |                               |                 |          | 1"              |          |    |
|                               | Overflow Port Of Water Tank |      | 1/ 2"                                               |        |                  |         |                        |         |                  |                               |                 |          | 1"              |          |    |
| Protectons                    | Compressor                  |      | Overload relay                                      |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
|                               | Pump                        |      | Overload relay                                      |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
|                               | Refrigerant Circuit         |      | High and low pressure switch / anti-freezing switch |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
|                               | Cooling water Ciucuit       |      | By-pass valve / Water level switch (Option)         |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
| Power                         |                             |      | 3Φ, 230 / 400 / 460 / 575V, 50 / 60Hz               |        |                  |         |                        |         |                  |                               |                 |          |                 |          |    |
| Measures Exchange             |                             |      | 1 kW = 860 Kcal / hr                                |        |                  |         | 1 RT = 3024 kcal / hr  |         |                  | 10000 Btu/hr = 2520 kcal / hr |                 |          |                 |          |    |

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

We reserve the right to change specifications without prior notice.

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

3) Environment - friendly R407 C refrigerant is optional. ( Model denotes " U ", such as SIC - 5A - U ).

4) This pump is used as standard either for domestic or Southeast Asia; medium ( Model denotes " P ", such as SIC - 5A - P ) or high pressure pump ( Model denotes " HP ", such as SIC - 5A - HP ) are optional for installation on customer's demands.

5) Air - cooled chillers are best to be used in the environment with ambient temperature under 35 °C.

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

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