

# EXTRA COOLING SYSTEM

Fast Cooling – The Revolution



## AIR COOLED SCROLL CHILLING PLANT

### Characteristic

- **Cooling capacity:** 5.7kw~83.6kw / 1.6 ton ~ 23.8 tons
- **Outlet temperature:** (-)10C ~ +30C, can be adjusted on the chiller control panel
- **Electric power supply available:** 3PH-415V/460V-50Hz/60Hz

### Description:

ECS Make air cooled screw chiller widely used in plastic injection, extrusion, plating, mold, hydraulic, chemical, leather, printing, profiles of oxidation, reaction kettle, chemical fiber, vacuum coating, paper making, textile, central air conditioning refrigeration and various aspects of water centralized water supply, especially suitable for the inconvenience for water and the water pipe ground.

### Product features:

- 1). Brand and durable Scroll type compressor: Copeland or Danfoss
- 2). Three type evaporator support different working circuit.
  - A. Tank with coil, easy clearance
  - B. Shell and tube, high efficient
  - C. Brazed plate heat exchanger type (BPHE)
- 3). High efficient V type condenser: Screw copper tube covered aluminum fins
- 4). Expansion valve: Emerson
- 5). Iron and stainless steel pump for different option
- 6). Buffer tank installed inside chiller optional
- 7). Inbuilt iron or stainless steel circulation water pump
- 8). Multi- protection devices: -Compressor inner protection, Over current protection, High/low pressure protection, Over temperature protection, Flow switch, Phase sequence/phase missing protection, Low coolant level protection, Anti freezing protection, Exhaust overheat protection.

To ensure high quality and good experience to customers, we use the world famous brand of key parts and good material to produce our machines. Pls find the below detailed photoes for further information.

**Application:**

Our chiller used in many different industries:

Food and Beverages – Microbreweries, confectionary, bakeries, distilleries, wineries, bottling, corbonation, vegetable, meat and fish processing, etc.

Pharma and chemical – Jacketed vessels cooling, condenser cooling, PUF mixers, Laboratories applications, x ray spectrometers, paint cooling, packing machine, anodizing, plating, liquid nitrogen plant, etc



**Parameter**

Model		ECS15.8.7C	ECS18.7C
Power Supply		3 Phase-380V-50Hz	
Outlet Temperature		+7deg C ~+35 deg C can be control.	
Cooling Capacity	Kw	55.3	63.2
	Kcal/Hr.	47558	54352
	Tons	15.8	18
Refrigerant	Type	R 407c	R 407C
Compressor	Control Type	Thermostatic expansion valve	
	Type	Hermetic Scroll	
	Quantity	02 Nos.	02 Nos.
Evaporator	Power (Kw.)	9.05 x 2	10.6 x 2
	Type	Shell & Tube / Tank & Coil / BPHE	
	Chilled water flow (m3/h)	9.48	10.83

	Inlet/Outlet Pipe Dia. (mm)	DN40	DN40
Condenser	Type	High efficiency aluminum grooved finned type	
	Cooling Air Flow (m <sup>3</sup> /h)	20000	25000
	Power (Kw.)	0.75 x 2 Nos.	0.75 x 2 Nos.
Dimension	L x W x H (mm)	2290 x 1370 x 1980	2440 x 1370 x 1980
Weight	Kg.	900	1000
Protection Systems		High/Low Pressure protection, Phase-sequencing Protection, Overload Protection, Overheat Protection, Water flow protection, Anti-frozen protection.	

### **Specification list**

- Cooling capacity: 5.7kw~83.6kw / 1.6 ton ~ 23.8 tons
- Horse power: 5hp~50hp
- Outlet temperature: -10C ~ +30C, can be adjusted on the chiller control panel
- Electric power supply available: 3PH-208V/220V/380V/415V/460V-50Hz/60Hz



### **30 TON 40 HP AIR COOLED WATER CHILLER**

#### **Characteristic**

- Cooling capacity: 55.3 Kw
- Outlet temperature: -10C ~ +30C, can be adjusted on the chiller control panel
- Electric power supply available: 3PH-415V/460V-50Hz/60Hz
- Temperature stability  $\pm 0.5$  °C to  $\pm 2$  °C
- Built-in SS water tank and water pump
- Shell tube or SS PHE for optional
- Easy installation and energy saving

### **Description**

Air cooled chiller is short for air chiller, sometimes also called air cooled packaged chiller or portable air chiller and air cooled water chiller.

ECS supplying a complete line of air-cooled chillers, this air cooled chiller has a cooling capacity of 2.7KW to 168KW and water temperature control range from 7°C to 30°C, while the water temperature stability is +/-0.1°C to +/-2°C.

Air cooled chiller designed and manufactured by ECS have 3 or 4 refrigerant circuits for air chiller models from ECS-30C(D) to ECS-60C(F)

Each circuit can work or stop independently for chiller safety and energy saving consideration.

Air cooled chiller from ECS consists of a scroll compressor, air cooled condenser, built-in water pump and water tank to make a complete compressed refrigeration and water cooling system.

For scroll compressor brand, ECS using Copeland from the USA, Danfoss from France and Panasonic from Japan. All scroll compressors featuring excellent cooling capacity with compressor inner protection and energy saving.

For standard air cooled chiller evaporator, ECS using 304# stainless steel water tank with a coil, but stainless steel plate heat exchanger and closed loop shell & tube heat exchanger are also available.

It is high efficiency and durable air cooled type condenser using the finned copper tube with aluminum and big air volume cooling fan.

### **Application:**

Our chiller used in many different industries:

Food and Beverages – Microbreweries, confectionary, bakeries, distilleries, wineries, bottling, carbonation, vegetable, meat and fish processing, etc.

Pharma and chemical – Jacketed vessels cooling, condenser cooling, PUF mixers, Laboratories applications, x ray spectrometers, paint cooling, packing machine, anodizing, plating, liquid nitrogen plant, etc



Poultry



Printing



Semiconductor



Swimming Pool



Waterjet Cutting



Wineries



CNC Machines



Cement Cooling



Cold Storage



Anodizin

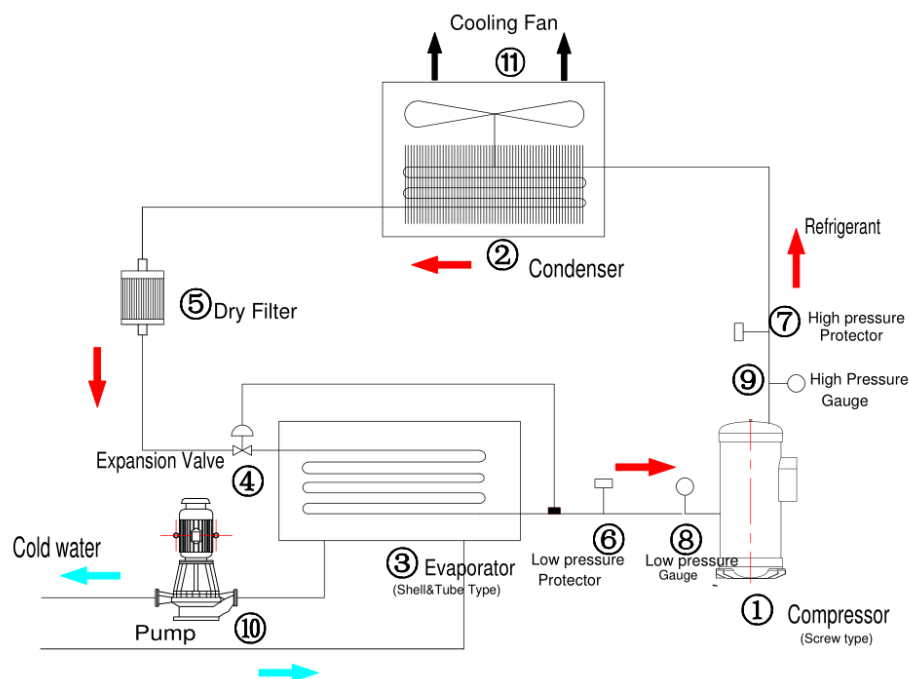
## Parameter

Model		ECS30.7C	ECS35.7C
Power Supply		3 Phase-380V-50Hz	
Outlet Temperature		+7deg C ~+35 deg C can be control.	
Cooling Capacity	Kw	109.6	125.4
	Kcal/Hr.	94256	107844
	Tons	30	35
Refrigerant	Type	R 407c	R 407C
Control Type		Thermostatic expansion valve	
Compressor	Type	Hermetic Scroll	
	Quantity	02 Nos.	02 Nos.
	Power (Kw.)	16.5 x 2	21.6 x 2
Evaporator	Type	Shell & Tube / Tank & Coil / BPHE	
	Chilled water flow (m3/h)	18.79	21.5
	Inlet/Outlet Pipe Dia. (mm)	DN65	DN80
Condenser	Type	High efficiency aluminum grooved finned type	
	Cooling Air Flow (m3/h)	40000	50000
	Power (Kw.)	1.5 x 2 Nos.	0.75 x 4 Nos.
Dimension	L x W x H (mm)	2750 x 1670 x 2135	3100 x 1670 x 2135
Weight	Kg.	1200	1400
Protection Systems		High/Low Pressure protection, Phase-sequencing Protection, Overload Protection, Overheat Protection, Water flow protection, Anti-frozen protection.	

## Note

- Normal conditions: Chilled water inlet temp is 12°C, outlet temp is 7°C, Ambient temp 35°C;
- Temperature condition: Chilled water range is 7°C--30°C, This series of unit requires the client to use the liquid with the freezing point below the required temperature as the refrigerant.
- Input power: 3P-430V-50HZ, Allowable punctuate voltage: ±10%. Allowable voltage difference in phase: ±2%
- Actual head lift is pump head lift minus the machine internal head loss (1mH<sub>2</sub>O=9.8KPa) ;
- The above parameters are based on Refrigerant R22, for other parameters of Refrigerant R134A, R407C ect. refrigerants, please contact us.
- Due to technology updating, size meters listed data may change; the above data's are for reference only, please feel free to contact us for the latest data.

## Structural



### 25HP WATER CHILLER FOR PLASTIC INJECTION MC

#### Characteristic

- Cooling capacity: 63.2 Kw 25HP
- Outlet temperature: -10C ~ +30C, can be adjusted on the chiller control panel
- Electric power supply available: 3PH-415V/460V-50Hz/60Hz
- Temperature stability  $\pm 0.5$  °C to  $\pm 2$  °C
- Built-in SS water tank and water pump
- Shell&tube or SS PHE for optional
- Easy installation and energy saving
- All models and cooling capacity are available

#### Parameter

Model		ECS15.8.7C	ECS18.7C
Power Supply		3 Phase-380V-50Hz	
Outlet Temperature		+7deg C ~+35 deg C can be control.	
	Kw	55.3	63.2
Cooling Capacity	Kcal/Hr.	47558	54352

	<b>Tons</b>	15.8	18
<b>Refrigerant</b>	<b>Type</b>	R 407c	R 407C
	<b>Control Type</b>	Thermostatic expansion valve	
<b>Compressor</b>	<b>Type</b>	Hermetic Scroll	
	<b>Quantity</b>	02 Nos.	02 Nos.
	<b>Power (Kw.)</b>	9.05 x 2	10.6 x 2
<b>Evaporator</b>	<b>Type</b>	Shell & Tube / Tank & Coil / BPHE	
	<b>Chilled water flow (m3/h)</b>	9.48	10.83
	<b>Inlet/Outlet Pipe Dia. (mm)</b>	DN40	DN40
<b>Condenser</b>	<b>Type</b>	High efficiency aluminum grooved finned type	
	<b>Cooling Air Flow (m3/h)</b>	20000	25000
	<b>Power (Kw.)</b>	0.75 x 2 Nos.	0.75 x 2 Nos.
<b>Dimension</b>	<b>L x W x H (mm)</b>	2290 x 1370 x 1980	2440 x 1370 x 1980
<b>Weight</b>	<b>Kg.</b>	900	1000
<b>Protection Systems</b>		High/Low Pressure protection, Phase-sequencing Protection, Overload Protection, Overheat Protection, Water flow protection, Anti-frozen protection.	



## PORTABLE 5HP WATER CHILLER

### Characteristic

- Cooling capacity:13.1Kw
- Outlet temperature: -10C ~ +30C, can be adjusted on the chiller control panel
- Electric power supply available: 3PH-415V/460V-50Hz/60Hz
- Temperature stability  $\pm 0.5$  °C to  $\pm 2$  °C
- Built-in SS water tank and water pump
- Easy installation and operation
- Compact design with portable wheel
- Low maintenance cost

### Description

A portable air-cooled chiller is also named portable chiller or mini chiller, is a kind of air chillers with compact design and casters. Portable air chiller can move from one place to another for easy installation and maintenance due to its small chiller size and cooling capacity



Portable air cooled chiller developed by ECS come with complete refrigeration including a compressor, air-cooled condenser, water tank, water pump with water piping system, electrical contractor & overload replay, thermostatic expansion valve, digital temperature controller and air blower.

Portable air cooled chiller designed by ECS having a cooling capacity range from 0.5Ton to 6 Ton and temperature control range from 7°C to 30°C.

For chiller model ECS-1C to ECS-7C with 1 compressor circuit and ECS-8C(D) to ECS-25C(D) with 2 circuits, ECS-30C(D)with 3 circuits, ECS-40C(F), ECS-50C(F)with 5 circuits,

### **Product features:**

- 1). Brand and durable Scroll type compressor: Copeland, Danfoss, or Panasonic.
- 2). Three type evaporator support different working circuit.
  - A. Tank with coil, easy clearance
  - B. Shell and tube, high efficient
  - C. Brazed plate heat exchanger type( BPHE)
- 3). High efficient V type condenser: Screw copper tube covered aluminum fins
- 4). Expansion valve: Emerson
- 5). Iron and stainless steel pump for different option
- 6). Buffer tank installed inside chiller optional
- 7). Inbuilt iron or stainless steel circulation water pump
- 8). Muti- protection devices: -Compressor inner protection, Over current protection, High/low pressure protection, Over temperature protection ,Flow switch, Phase sequence/phase missing protection, Low coolant level protection, Anti freezing protection ,Exhaust overheat protection.

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### **Application:**

Our chiller used in many different industries:

Food and Beverages – Microbreweries, confectionary, bakeries, distilleries, wineries, bottling, carbonation, vegetable, meat and fish processing, etc.

Pharma and chemical – Jacketed vessels cooling, condenser cooling, PUF mixers, Laboratories applications, x ray spectrometers, paint cooling, packing machine, anodizing, plating, liquid nitrogen plant, etc





## Parameter

Model		ECS3.74.7C
Power Supply		3 Phase-380V-50Hz
Outlet Temperature		+5deg C ~+35 deg C can be control.
Cooling Capacity	Kw	13.1
	Kcal/Hr.	11266
Refrigerant	Tons	3.74
	Type	R 407c
Compressor	Control Type	Thermostatic expansion valve
	Type	Hermetic Scroll
	Quantity	01 No.
	Power (Kw.)	4.54
Evaporator	Type	Shell & Tube / Tank & Coil / BPHE
	Chilled water flow (m3/h)	2.25
	Inlet/Outlet Pipe Dia. (mm)	DN20
Condenser	Type	High efficiency aluminum grooved finned type
	Cooling Air Flow (m3/h)	5000
	Power (Kw.)	0.52
Dimension	L x W x H (mm)	1200 x 700 x 1200
Weight	Kg.	300
Protection Systems		High/Low Pressure protection, Phase-sequencing Protection, Overload Protection, Overheat Protection, Water flow protection, Anti-frozen protection.

### Specification list

- Cooling capacity : 5.7kw~83.6kw / 1.6 ton ~ 23.8 tons
- Horse power : 5hp~50hp
- Outlet temperature : -10C ~ +30C, can be adjusted on the chiller control panel
- Electric power supply available : 3PH-415V/460V-50Hz/60Hz

### **20HP 55KW. AIR COOLED SCROLL CHILLING PLANT**

#### Characteristic

- Cooling capacity: 55.3 Kw
- Outlet temperature: -10C ~ +30C, can be adjusted on the chiller control panel
- Electric power supply available: 3PH-208V/220V/380V/415V/460V-50Hz/60Hz
- Temperature stability  $\pm 0.5$  °C to  $\pm 2$  °C
- Built-in SS water tank and water pump
- Shell tube or SS PHE for optional
- Easy installation and energy saving
- All models and cooling capacity are available



### Description

ECS Make air cooled screw chiller widely used in plastic injection, extrusion, plating, mold, hydraulic, chemical, leather, printing, profiles of oxidation, reaction kettle, chemical fiber, vacuum coating, paper making, textile, central air conditioning refrigeration and various aspects of water centralized water supply, especially suitable for the inconvenience for water and the water pipe ground.

#### Product features:

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- 2). Three type evaporator support different working circuit.
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- 3). High efficient V type condenser: Screw copper tube covered aluminum fins
- 4). Expansion valve: Emerson
- 5). Iron and stainless steel pump for different option
- 6). Buffer tank installed inside chiller optional
- 7). Inbuilt iron or stainless steel circulation water pump

8). Multi-protection devices: -Compressor inner protection, Over current protection, High/low pressure protection, Over temperature protection, Flow switch, Phase sequence/phase missing protection, Low coolant level protection, Anti freezing protection, Exhaust overheat protection.

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### **Application:**

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Pharma and chemical – Jacketed vessels cooling, condenser cooling, PUF mixers, Laboratories applications, x ray spectrometers, paint cooling, packing machine, anodizing, plating, liquid nitrogen plant, etc



### **Parameter**

For scroll compressor brand, ECS using Copeland from the USA, Danfoss from France and Panasonic from Japan. All scroll compressors featuring excellent cooling capacity with compressor inner protection and energy saving.

For standard air cooled chiller evaporator, ECS using 304# stainless steel water tank with a coil, but stainless steel plate heat exchanger and closed loop shell & tube heat exchanger are also available.

It is high efficiency and durable air cooled type condenser using the finned copper tube with aluminum and big air volume cooling fan.

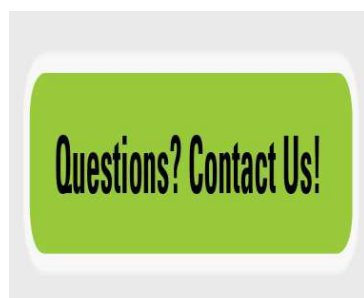
ECS is professional in air-cooled chiller manufacturing.

ECS has exported air-cooled chillers to the Philippines, China, Australia, New Zealand, Malaysia, Singapore, Indonesia, Chile, Mexico, Costa Rica, Argentina, Colombia, South Africa, Egypt Saudi Arabia, Kuwait, Spain, and USA etc.

If you are looking for a high-quality air-cooled chiller manufacturer, please contact ECS sales for the best price quotation.

### **Specification list**

- Cooling capacity: 5.7kw~83.6kw / 1.6 ton ~ 23.8 tons
  - Horse power: 5hp~50hp
  - Outlet temperature: (-) 10C ~ +30C, can be adjusted on the chiller control panel
  - Electric power supply available: 3PH-208V/220V/380V/415V/460V-50Hz/60Hz
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