

# EXTRA COOLING SYSTEM

Fast Cooling – The Revolution



## **SINGLE COMPRESSOR AIR COOLED SCREW CHILLING PLANT**

### Characteristic

Outlet water temperature control from 7C° to 35C°

Chiller Power Supply Option: 3phase-415v/460v-50hz/60hz

Chiller Cooling Capacity: 20 ton ~ 150 tons

Semi-hermetic screw type compressor  
Air-cooled type condenser

Closed loop shell and tube evaporator  
No need to install a cooling tower

### Description

ECS-SC series 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.

1. The Industrial Chiller is mainly used to provide cooling water for high-end industrial equipment, at the same time, also widely used in mechanical processing and manufacturing, plastics and rubber, electrical and electronic, electroplating, chemical medicine, laser, ultrasonic cleaning, printing and other industrial production.

2. According to the different way of heat dissipation, it is named as Water Cooling Type and Air Cooling Type; According to the different structure of compressor, scroll Type, Screw Type, According to the different outlet temperature, it is named as High-temperature Chiller, Middle-temperature Chiller, Lower-temperature Chiller, Ultra-low Temperature Chiller; According to the different overall structure of condensing unit and evaporator unit, it is named as Integrated Type and Separated Type, and so on.

3. The device is equipped with European or Japanese Brand compressor, high efficiency shell & tube type condenser, stainless steel water tanks, microcomputer control, high precision temperature control system, over current and over voltage protection system, and some other

component and function, super cooling, high efficiency, low noise, simple operation. Also there are single model, double model and quadruple model combination for selecting freely.

### NOTE

1. Normal conditions Chilled water inlet temp is 12°C. outlet temp is 7 °C, Ambient temp 35°C;
2. Temperature condition: Chilled water range s 7-30 °C, This series of unit request the client to use the Liquid with the freezing point below the required temperature as the refrigerant;
3. Input power: 3PH+380V-50HZ, Allowable punctuate votge:±10% Allowable voltage difference in phase±2%;
4. Actual head lift is pump head lift minus the machine internal head loss(1mH2O=9.8kPa);
5. The above parameters are based are Refrigerant R22, for other parameters of Refrigerant R134A, R407C ect.refrigerants, pls. contact us;
6. 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.



### Parameter

AIR COOLED SCREW CHILLER WITH SINGLE COMPRESSOR					
Model		ECS-80SC	ECS-150SC	ECS-250SC	ECS-300SC
Power Supply		3 Phase-380V-50Hz			
Outlet Temperature		+5deg C ~+35 deg C can be control.			
Cooling Capacity	Kw	78	142	270	330
	Kcal/Hr.	67080	122120	232200	283800
	Tons	22.15	40.34	76.70	93.75
Refrigerant	Type	R22 / R407c / R134a /R410a			
	Control Type	Thermostatic expansion valve			

<b>Compressor</b>	<b>Type</b>	Semi-closed screw type			
	<b>Quantity</b>	01 No.	01 No.	01 No.	01 No.
	<b>Power (Kw.)</b>	29	48	86	106
	<b>Start</b>	Y- $\Delta$			
	<b>Capacity</b>	25-50-75-100 (%) or 25-100 (%)			
<b>Evaporator</b>	<b>Type</b>	High efficiency copper tube shell and tube type			
	<b>Chilled water flow (m<sup>3</sup>/h)</b>	13	24	46	57
	<b>Inlet/Outlet Pipe Dia. (mm)</b>	DN65	DN80	DN80	DN80
<b>Condenser</b>	<b>Type</b>	High efficiency hydrophilic aluminum grooved finned type			
	<b>Flow (m<sup>3</sup>/h)</b>	27000	50000	100000	120000
<b>Dimension</b>	<b>L</b>	2350	3200	4400	3850
	<b>W</b>	1450	1450	2300	2300
	<b>H</b>	2150	2150	2400	2450
<b>Weight</b>	<b>Kg.</b>	1800	2300	3800	3900
<b>Protection Systems</b>		Compressor overheat protection, high/low pressure protection, phase missing/sequence protection, flow rate protection, anti-frozen protection			

## The Feature

The main international advanced semi-closed screw compressor in which electric motor and compressor are organically integrated to ensure no leakage of the shaft sealing;

\*Cooling capacity control available at four steps (100%-75%-50%-25%), three steps (100%-66%-33%) or no steps control system;

\*Evaporator built with high efficiency shell and tube type heat changer. Condenser built with seamless copper tubes mechanically expanded into fins;

\*External rotor type axial fans;

\*High efficiency, low noise and vibration, easy to install;

\*Controlled by microcomputer way;

## Details

1. The Industrial Chiller is mainly used to provide cooling water for high-end industrial equipment, at the same time, also widely used in mechanical processing and manufacturing, plastics and rubber, electrical and electronic, electroplating, chemical medicine, laser, ultrasonic cleaning, printing and other industrial production.

2. According to the different way of heat dissipation, it is named as Water Cooling Type and Air Cooling Type; According to the different structure of compressor, scroll Type, Screw Type, According to the different outlet temperature, it is named as High-temperature Chiller, Middle-temperature Chiller, Lower-temperature Chiller, Ultra-low Temperature Chiller; According to the different overall

structure of condensing unit and evaporator unit, it is named as Integrated Type and Separated Type, and so on.

3.The device is equipped with European or Japanese Brand compressor, high efficiency shell & tube type condenser, stainless steel water tanks, microcomputer control, high precision temperature control system, over current and over voltage protection system, and some other component and function, super cooling, high efficiency, low noise, simple operation. Also there are single model, double model and quadruple model combination for selecting freely.

**1.Controller**  
Micro-computer control system,high anti-interference,performance,more functions;Or SIEMENS PLC; Modbus,Ethernet Connection.

**2.Compressor**  
Hanbell, Fusheng, Bitzer world famous brand; 3 stages; energy saving; high efficiency; low noise.

**4.Electric components**  
LS, or Schneider brand; safety and reliable.

**3.Fan**  
Powerful, high efficiency, low noise.

**5.Condenser**  
High efficiency aluminum finned type, high heat exchange effect.

**6.Evaporator**  
Full heat exchange area; high density inner thread copper pipe, high heat exchange effect.

Front of the product

After the product

Right side of the product

Left side of the product

Product side opening effect

Product side opening effect

Open the effect behind the product

Display opening effect

## **AIR COOLED SCREW CHILLER (DUAL SYSTEM)**

### **Characteristic**

Outlet water temperature control from 7C° to 35C°  
Chiller Power Supply Option: 3phase-415v/460v-  
50hz/60hz  
Chiller Cooling Capacity: 20 ton ~ 150 tons  
Semi-hermetic screw type compressor  
Air-cooled type condenser  
Closed loop shell and tube evaporator  
No need to install a cooling tower



### **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.

As a leading air cooled screw chiller supplier, ECS Chiller provides a complete range of air-cooled screw chiller from ECS-SC series, with cooling capacity from 50Ton to 580Ton/130KW to 1950KW and the chiller temperature control range is +30°C to -30°C.

Besides the standard air-cooled screw chiller control temperature of 7°C to 30°C, Top Chiller also has air-cooled glycol screw chiller control temperature below zero from 0°C to -30°C

Each air cooled screw chiller designed from ECS Chiller has the following features:

Using world famous brand semi-hermetic screw compressor- Bitzer from Germany and Handbell from Taiwan.

Each screw compressor with 4 steps of energy control 25%-50%-75%-100% to make sure the whole screw chiller is stable and guarantees high refrigeration performance. There are also 2 or 3 compressors for optional depends on the required refrigeration capacity.

Highly efficient closed loop shell and tube type heat exchanger as the evaporator, and using air cooled type condenser-Copper tube sleeve aluminum fin with big volume air cooling fan.

Integrated PLC control system with human-computer interface and big LED touch screen panel for easy operation and troubleshooting.

World famous refrigeration spare parts like Danfoss brand thermal expansion valve, Alco dryer filter, Schneider electrical contactor, and overload relay will make sure the whole air cooled screw chiller works under normal conditions.

The above original quality refrigeration spare parts will ensure each air cooled screw chiller at a steady running condition.



WATER COOLED SCREW CHILLER ALONG WITH DUAL COMPRESSOR					
Model		ECS-220DS	ECS-285DS	ECS-400DS	ECS-500DS
Power Supply		3 Phase-380V-50Hz			
Outlet Temperature		+5deg C ~+35 deg C can be control.			
Cooling Capacity	Kw	218	285	409	509
	Kcal/Hr.	187480	245100	351740	437740
	Tons	61.93	80.96	116.19	144.60
Refrigerant	Type	R22 / R407c / R134a /R410a			
	Control Type	Thermostatic expansion valve			
Compressor	Type	Semi-closed screw type			
	Quantity	02 Nos.	02 Nos.	02 Nos.	02 Nos.
	Power (Kw.)	75	94	135	166
	Start	Y- $\Delta$			
	Capacity	25-50-75-100 (%) or 25-100 (%)			
Evaporator	Type	High efficiency copper tube shell and tube type			
	Chilled water flow (m3/h)	37	49	70	87
	Inlet/Outlet Pipe Dia. (mm)	DN80	DN100	DN100	DN125
Condenser	Type	High efficiency threaded copper tube shell and tube type			
	Water Flow (m3/h)	80000	100000	160000	200000
Dimension	L	3300	4400	6600	8800
	W	2300	2300	2300	2300
	H	2400	2400	2500	2500
Weight	Kg.	3200	3800	6200	7800
Protection Systems		Compressors overheat protection, high/low pressure protection, phase missing/sequence protection, flow rate protection, anti-frozen protection.			

## Details

**1.Controller**

Micro-computer control system,high anti-interference,performance,more functions;Or SIEMENS PLC; Modbus,Ethernet Connection.

**2.Compressor**

Hanbell, Fusheng, Bitzer world famous brand; 3 stages; energy saving; high efficiency; low noise.

**4.Electric components**

LS, or Schneider brand; safety and reliable.



**3.Fan**

Powerful; high efficiency, low noise.

**5.Condenser**

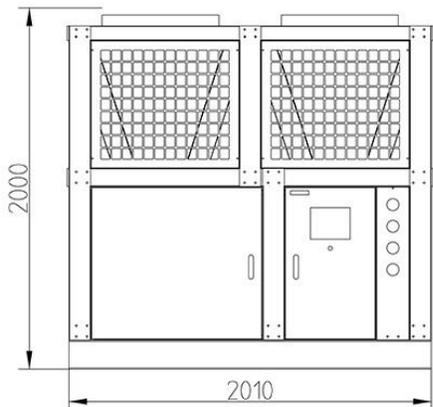
High efficiency aluminum finned type, high heat exchange effect.

**6.Evaporator**

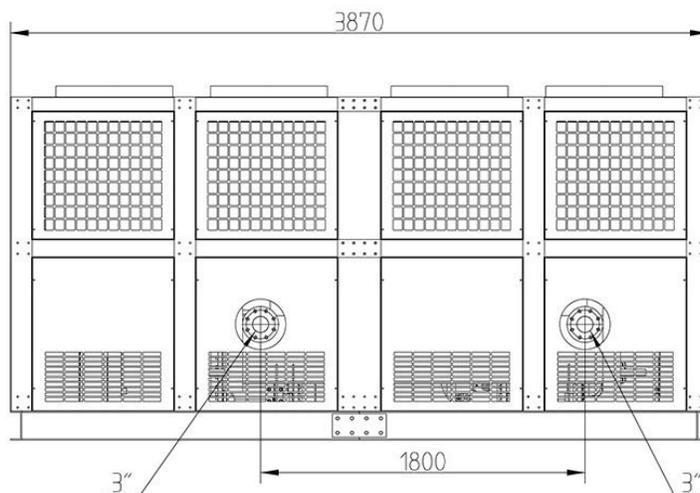
Full heat exchange area; high density inner thread copper pipe, high heat exchange effect.



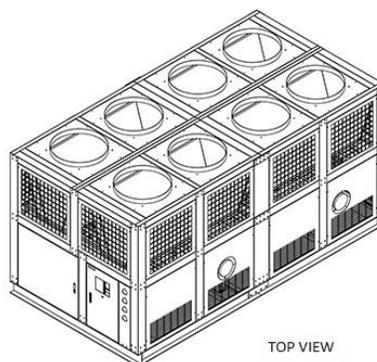
## STRUCTURE



FRONT VIEW



LEFT SIDE VIEW



TOP VIEW



### **125 TON AIR COOLED SCREW CHILLING PLANT**

#### Characteristic

1. Outlet water temperature 7C° to 35C°
2. Semi-hermetic screw type compressor
3. R-cooled type condenser
4. Closed loop shell and tube evaporator
5. No need to install a cooling tower

## Your Premier Air Cooled Screw Chiller Manufacturer

As a leading air cooled screw chiller supplier, ECS provides a complete range of air-cooled screw chiller, with cooling capacity from 20Ton to 150Ton/80KW to 530KW and the chiller temperature control range is +30°C to -30°C.

Besides the standard air-cooled screw chiller control temperature of 7°C to 25°C, ECS also has air-cooled glycol screw chiller control temperature below zero from 0°C to -30°C.

Each air cooled screw chiller designed from ECS has the following features:

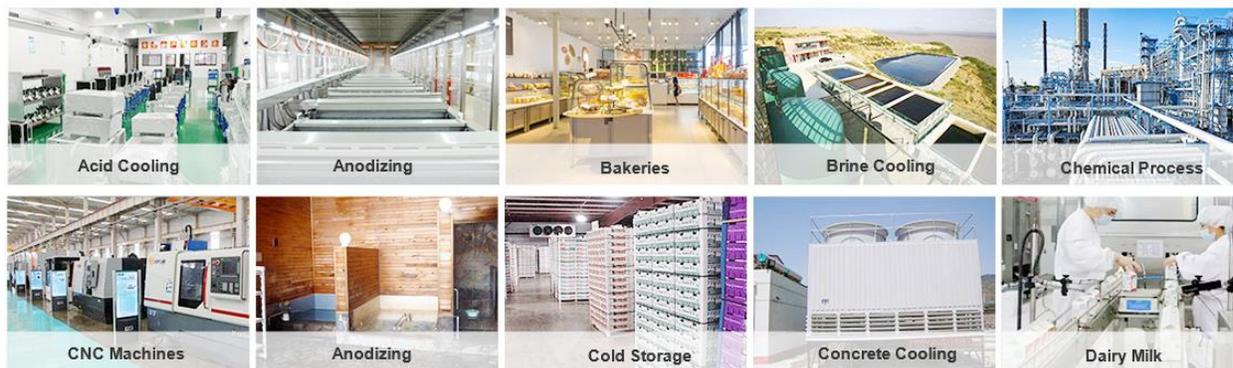
1. Using world famous brand semi-hermetic screw compressor- Bitzer from Germany and Handbell from Taiwan.
2. Each screw compressor with 4 steps of energy control 25%-50%-75%-100% to make sure the whole screw chiller is stable and guarantees high refrigeration performance. There are also 2 compressors for optional depends on the required refrigeration capacity.
3. Highly efficient closed loop shell and tube type heat exchanger as the evaporator, and using air cooled type condenser-Copper tube sleeve aluminum fin with big volume air cooling fan.
4. Integrated PLC control system with human-computer interface and big LED touch screen panel for easy operation and troubleshooting.
5. World famous refrigeration spare parts like Danfoss brand thermal expansion valve, Alco dryer filter, Schneider electrical contactor, and overload relay will make sure the whole air cooled screw chiller works under normal conditions.

The above original quality refrigeration spare parts will ensure each air cooled screw chiller at a steady running condition.

## Hot industry application of air cooled chiller

Air cooled screw chillers are also widely used in plastic processing and plastic machinery including: plastic injection molding, plastic extruders and extrusion line, blowing molding machine.

The function using air cooled screw chiller is to provide the cooling water flow rate for cool the plastic mold temperature down to make sure the product quality and production efficiency.



ECS has exported various air cooled screw chillers cooling capacity from 40Ton, 50Ton, 80Ton and 150Ton to the USA, Canada, Philippines, Australia, New Zealand, Malaysia, Singapore, Indonesia, Chile, Mexico, Costa Rica, Argentina, Colombia, South Africa, Kuwait, Egypt, Saudi Arabia etc.



As a leader of air-cooled screw chiller supplier, ECS can provide not only standard configuration chillers but some other customized products.

Please contact ECS sales Officer to get the best water cooling solution of your air-cooled screw chiller.

### Parameter

Model		ECS-220DS
Power Supply		3 Phase-380V-50Hz
Outlet Temperature		+5deg C ~+35 deg C can be control.
Cooling Capacity	Kw	330
	Kcal/Hr.	283800
	Tons	93.75
Refrigerant	Type	R22 / R407c / R134a /R410a
	Control Type	Thermostatic expansion valve
Compressor	Type	Semi-closed screw type
	Quantity	02 Nos.
	Power (Kw.)	106
	Start	Y-△
	Capacity	25-50-75-100 (%) or 25-100 (%)
Evaporator	Type	High efficiency copper tube shell and tube type
	Chilled water flow (m3/h)	57
	Inlet/Outlet Pipe Dia. (mm)	DN80
Condenser	Type	High efficiency threaded copper tube shell and tube type
	Water Flow (m3/h)	120000
Dimension	L	3850
	W	2200
	H	2350
Weight	Kg.	3300
Protection Systems		Compressors overheat protection, high/low pressure protection, phase missing/sequence protection, flow rate protection, anti-frozen protection.

### The Feature:

The main international advanced semi-closed screw compressor in which electric motor and compressor are organically integrated to ensure no leakage of the shaft sealing;

\*Cooling capacity control available at four steps(100%-75%-50%-25%),three steps(100%-66%-33%)or no steps control system;

\*Evaporator built with high efficiency shell and tube type heat changer. Condenser built with seamless copper tubes mechanically expanded into aluminums fins;

\*External rotor type axial fans;

\*High efficiency, low noise and vibration, easy to install;

\*Controlled by microcomputer way;



## 160 TON AIR COOLED SCREW CHILLING PLANT

### Characteristic

Outlet water temperature control from 7C° to 35C°

Chiller Power Supply Option: 3phase-415v/460v-50hz/60hz

Chiller Cooling Capacity: 20 ton ~ 150 tons

Semi-hermetic screw type compressor

Air-cooled type condenser

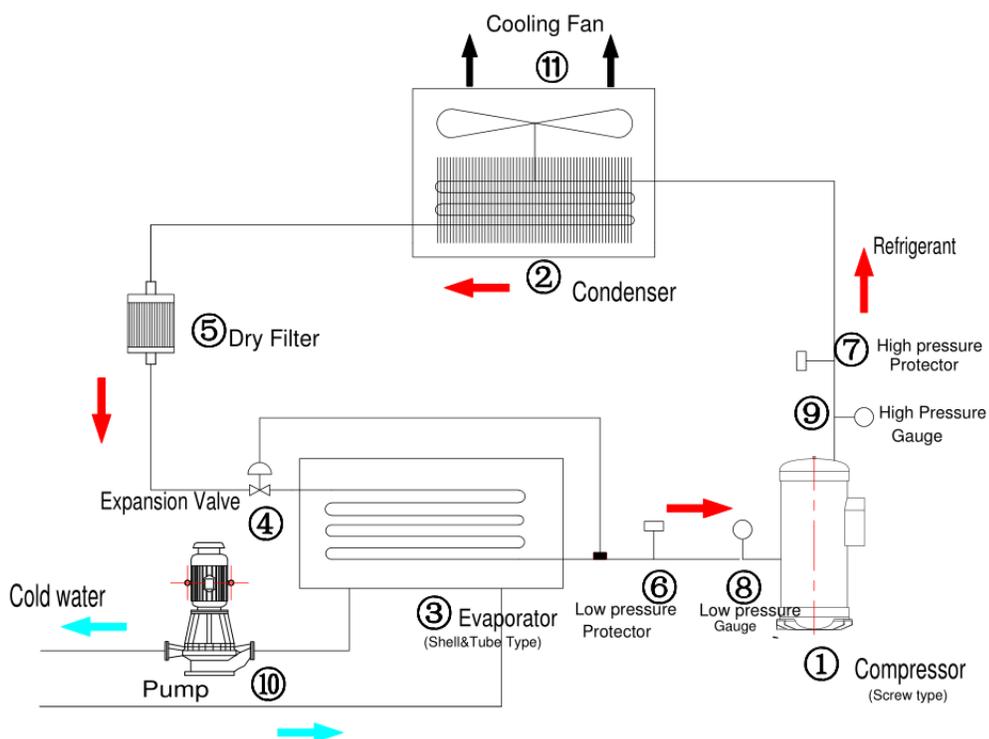
Closed loop shell and tube evaporator

No need to install a cooling tower

### Parameter

Model		ECS-530DS
Power Supply		3 Phase-380V-50Hz
Outlet Temperature		+5deg C ~+35 deg C can be control.
Cooling Capacity	Kw	530
	Kcal/Hr.	455800
	Tons	150.56
Refrigerant	Type	R22 / R407c / R134a /R410a
	Control Type	Thermostatic expansion valve
Compressor	Type	Semi-closed screw type
	Quantity	02 Nos.
	Power (Kw.)	165
	Start	Y-△
	Capacity	25-50-75-100 (%) or 25-100 (%)
Evaporator	Type	High efficiency copper tube shell and tube type
	Chilled water flow (m3/h)	91
	Inlet/Outlet Pipe Dia. (mm)	DN100
Condenser	Type	High efficiency threaded copper tube shell and tube type
	Water Flow (m3/h)	180000

Dimension	L	5850
	W	2200
	H	2450
Weight	Kg.	5000
Protection Systems		Compressors overheat protection, high/low pressure protection, phase missing/sequence protection, flow rate protection, anti-frozen protection.



## AIR COOLED WATER COOLING CHILLER RANGE STARTING FROM 25 TO 150 TONS



### Characteristic

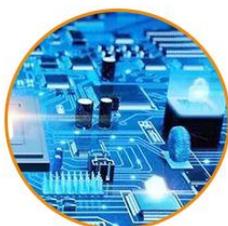
Outlet water temperature control from 7C° to 35C°  
 Chiller Power Supply Option: 3phase-415v/460v-50hz/60hz  
 Chiller Cooling Capacity: 20 ton ~ 150 tons  
 Semi-hermetic screw type compressor  
 Air-cooled type condenser  
 Closed loop shell and tube evaporator  
 No need to install a cooling tower



Poultry



Printing



Semiconductor



Swimming Pool



Waterjet Cutting



Wineries



CNC Machines



Cement Cooling



Cold Storage



Anodizin

<b>Model</b>		<b>ECS-220DS</b>
<b>Power Supply</b>		3 Phase-380V-50Hz
<b>Outlet Temperature</b>		+5deg C ~+35 deg C can be control.
<b>Cooling Capacity</b>	<b>Kw</b>	218
	<b>Kcal/Hr.</b>	187480
	<b>Tons</b>	61.93
<b>Refrigerant</b>	<b>Type</b>	R22 / R407c / R134a /R410a
	<b>Control Type</b>	Thermostatic expansion valve
<b>Compressor</b>	<b>Type</b>	Semi-closed screw type

	<b>Quantity</b>	02 Nos.
	<b>Power (Kw.)</b>	75
	<b>Start</b>	Y- $\Delta$
	<b>Capacity</b>	25-50-75-100 (%) or 25-100 (%)
<b>Evaporator</b>	<b>Type</b>	High efficiency copper tube shell and tube type
	<b>Chilled water flow (m<sup>3</sup>/h)</b>	37
	<b>Inlet/Outlet Pipe Dia. (mm)</b>	DN80
<b>Condenser</b>	<b>Type</b>	High efficiency threaded copper tube shell and tube type
	<b>Water Flow (m<sup>3</sup>/h)</b>	80000
<b>Dimension</b>	<b>L</b>	3300
	<b>W</b>	2300
	<b>H</b>	2400
<b>Weight</b>	<b>Kg.</b>	3200
<b>Protection Systems</b>		Compressors overheat protection, high/low pressure protection, phase missing/sequence protection, flow rate protection, anti-frozen protection.

Air cooled screw chiller equipment with semi-hermetic screw compressor, also called air cooled screw compressor chiller. It is for large cooling capacity application.

Each air cooled screw chiller manufactured by ECS Chiller featuring full protection devices including screw compressor overheating protection, low-temperature protection, high/low pressure, anti-freezing, phase-missing, anti-phase with overload, water flow switch and startup latency.

Various refrigerants such as R134a, R407c, R410a, and R404a are all available depending on the screw chiller working condition, application requirements and ambient temperature.



Questions? Contact Us!

**Mr. Mitesh Oza (Managing Director)**

Mobile: +91-7573872297, +91-9725634161

Email Id: [info@extracoolingsystem.com](mailto:info@extracoolingsystem.com)

URL: [www.extracoolingsystem.net](http://www.extracoolingsystem.net)

**Manufacturing Unit:**

**Extra Cooling System**

C-23, SumelBusiness Park,

Opp. HanumanpuraBRTS,

DudheshwarRoad,

Ahmedabad380004, Gujarat, India

**Office Address:**

**Extra Cooling System**

Sector No 1/276, Nirnayanagar

Opp. RameshwarTemple,

Ahmedabad 382481Gujarat, India.