

ECO COOLER
HVAC SYSTEMS

General Catalog 2023

ECO COOLER

HVAC SYSTEMS

MULTI STAGE EVAPORATIVE COOLING







About Us

Since 2000, **ECO GROUP** has started its activity in heating, Ventilation and Air conditioning. Since 2015, this group has not only undertaken remarkable HVAC projects for hospitals, hotels, shopping malls, and sport complexes, but has also ventured into producing HVAC systems under the brand **ECO COOLER**. Its objective is to prioritize energy efficiency and enhance comfort while promoting eco-friendly solutions.

ECO COOLER is an EPC company that plans and executes all Engineering, Procurement, and Construction activities needed to complete a project.

Today, we proudly offer a wide range of diverse and flexible products that meet the majority of market requirements, demands, and expectations.

Our strong emphasis on the life cycle cost (LCC) guides us throughout the entire product journey, from design to sales. By considering the LCC, our clients enjoy the following benefits:

- The lowest purchase cost
- The lowest operational cost
- The lowest service cost



We have successfully delivered a range of products, including:

- Hygienic air handling units
- Standard air handling units
- Air cooled chillers
- Water cooled chillers
- Modular chillers
- Rooftop packaged units
- Condensing units
- Heat recovery units
- Swimming pool dehumidification units.



**We are
committed
to our customers**

Our dedication to meeting our customers' needs and staying abreast of industry advancements has driven us to continuously innovate and design new products. We understand the importance of staying ahead of our competitors, which is why we collaborate with top experts in the field to develop cutting-edge solutions.

Our Projects



Mega Hospital, Hormozgan, Iran

62 HYGIENIC Air Handling Units - Total Air Flow: 360,000 CFM - Floor Area: 53,585 m²



Mother entertainment business complex, Dezful, Iran

15 Air Handling Units - Total Air Flow: 160,200 CFM - Floor Area: 38,000 m²



Valiasr Hospital with 550 Beds, Arak, Iran

42 Air Handling Units - Total Air Flow: 343,000 CFM - Floor Area: 45,000 m²



Multipurpose Faculties of Mashhad University, Mashhad, Iran

17 Air Handling Units - Total Air Flow: 207,140 CFM - Floor Area: 50,000 m²

Our Projects



Indoor Sport Hall for 6.000 People, Shiraz, Iran

3 Air Cooled Chillers and 6 Condensing Units

Total Cooling Capacity : 2700 kW

Floor Area: 66,000 m²



Other Projects

- Pasteur Razi Institute, Karaj Serum Production Unit, Iran
- Karaj New Pharmaceutical Company, Drug Production Unit, Iran
- Jaber Ibn Hayyan Pharmaceutical Company, Tehran, Iran
- Daru Pakhsh Drug Producing Company, Tehran, Iran
- Desalination project, Bandar Abbas National Copper Industries, Iran
- Hasheminejad 320-bed hospital, Mashhad University of Medical Sciences, Iran
- South Rescue Hospital of Mashhad University of Medical Sciences, Iran
- Soran 32-bed hospital, Sistan and Baluchestan, Iran
- Specialized Mother Hospital, Fasa, Iran
- Kowsar Heart Hospital, Cyclotron building, Shiraz, Iran
- Ayatollah Rafsanjani Hospital, Kerman University of Medical Sciences, Iran
- Shahid Beheshti Hospital, Social Security Organization Shiraz, Iran
- Arad Hospital, Tehran, Iran
- Bagh Malek 96-bed hospital - Ahwaz University of Medical Sciences, Iran
- Imam Ali Hospital, Social Security Organization, Shahrekord, Iran
- Amir Al-Momenin Hospital, Gerash, Iran
- Persian Gulf Hospital, Social Security Organization, Bandar Abbas, Iran
- Barana Medical Complex, Shiraz, Iran
- Holy Shrine of Imam Reza, Mashhad, Iran
- Pegah Pasteurized Milk Company, Guilan, Iran
- Mehrabad International Airport, Tehran, Iran
- Shirazis Hotel, Shiraz, Iran





Standard air handling units (AHUs) produced by ECO COOLER vary in 30 different models. We offer customized production which can fulfill our customers' needs. The flow rate has a range between 1,000 CFM and 80,000 CFM in units for heating, cooling and, ventilation. These models are modular and have double-skinned panels. Based on the application, sandwich panels of 50 mm or 60 mm thickness with polyurethane insulation can be employed.



Air Handling Unit

- Capacity ranging from **1000 CFM** to **80,000 CFM**
- Premium clean construction with minimum thermal loss and air leakage and maximum sound insulation
- Double skin panel with 5-cm Polyurethane insulation and stainless-steel sheets
- Smooth interior panels and rounded corners to avoid contaminant sedimentation
- Wide and versatile range in dimension and filter arrangement
- High quality components
- Providing all filtration level and type – from G2 filter to U16 filter, UVGI or plasma disinfection, electrostatic filter, Chemical filter bed.
- Matched with all kind of cooling and heating systems (Water, DX, electrical, steam, gas-fired)
- Advanced integrated control system.
- Smooth-running, efficient EC or AC motors combined with latest generation of fans



www.ecocooler.com.tr/products/air-handling-units

Due to the sensitive application of Hygienic air handling units (AHUs), they should be designed delicately. During the design process, ECO COOLER family takes advantage of a cutting-edge software which is called HVAC CALCULATOR (AHU SELECTION). This software not only can give our engineers the possibility to design the products based on the VDI-6022 and Eurovent standards but also can specify every critical and decisive parameter of Hygienic AHUs such as skin materials, a wide range of fans, and filters.





Eco Cooler Air Cooled Chillers EACH series designed to be suitable for all weather conditions, from cold to moderate to hot climates, the various environment, from residential building to industrial sites with polluted environment. Optimum performance, high efficiency, low power consumption, easy installation and low noise operations are the features of the EACH chillers.



Chiller

- Capacity range: 70 kW - 1970 kW
- Refrigerant: R134a, R407C, R410A
- Compressor type: Screw, Scroll
- Energy efficiency Ratio (EER): Up to 3.42
- Connectivity, flexibility and serviceability enabled by advanced controller
- Microchannel condenser technology
- Dry Expansion shell & tube evaporator
- Evaporation control by Electronic Expansion Valve
- Maximum ambient temperature of operation: 55 °C
- Optimized energy efficiency both at full and part load conditions
- Low operating sound levels are achieved by the latest compressor and fan design
- Stepped and Stepless screw compressor with professional control system to minimize energy consumption and optimize the unit performance.



www.ecocooler.com.tr/products/chillers

EACH series cooling capacities are available from 45 TR to 430 TR. Models are in two categories of STANDARD (for cold and moderate climates) and HIGH EFFICIENT (for hot and tropical climates) conditions. Screw air-cooled chillers have cooling capacities range from 150 kW to 1970 kW. Scroll air-cooled chillers have cooling capacities range from 70 kW to 980 kW, considering a standard outdoor temperature of 95 degrees Fahrenheit and various refrigerants.



The fast-changing world's need for more energy saving and users' concerns about expanding the HVAC system capacity for their future developments motivate us to design a new concept of air-cooled chillers called Modular air-cooled chillers. Less energy consumption, thanks to partial operation technique, Easy Servicing, quick maintenance, easy transportation, and running all time without downtime are the benefits of the EMCHA.

Modular Chiller

- Capacity range: 70 kW - 2000 kW
- Refrigerant: R410A
- Compressor type: Scroll
- Efficient and environment friendly
- Easy and quick servicing
- Easy installation and use
- support temperature operation range of 10°C to 52°C
- Advanced control system
- Microchannel condenser technology
- Refrigeration pressure controlled
- Building Management (BMS): MODBUS, BACNET, and CANBUS protocol
- Evaporator heat trace: Prevent freezing up of water on low ambient.
- Ground current protection: Additional protection for a compressor in the case of abnormal current leakage.
- Plate Brazed evaporator: In case of a more compact evaporator



www.ecocooler.com.tr/products/modular-chillers

Eco Cooler's Air Cooled Modular Chiller, Model EMACH, is available in capacity 20, and 37 Nominal TR (70 kW and 128 kW) and can be configured to provide project turndown and capacity requirements from 20 to 500 nominal TR. By simply adding modules, the EACHM can satisfy future incremental growth needs. This model is a quiet, serviceable, and extremely efficient system that will provide years of reliable operation.



ECO PACKAGE High Efficiency Package Units are designed for outdoor installation specifically for tropical operation with high performance, low power consumption, easy installation and low noise operations. ECO COOLER Packaged Units can be used for cooling or heating with optional electric heater. The Rooftop packaged unit consists of scroll compressors, cooling coil, condenser coil, fans, electric heater (optional), control wiring and interconnecting piping-all factory assembled.

Rooftop Packaged Unit

- Air flow rate range of 1700 m³/h to 60,000 m³/h
- Cooling capacity range of 7 kW to 630 kW
- Refrigerants: R134a, R407C, R410A
- Fully customizable
- Flexible in matching air flow rate and cooling capacity
- Available in all filtration levels and combination
- Advanced control system
- Available in All types of heating systems including heating water, steam, electrical, gas-fired
- Low noise level compressors, condenser fans, and evaporator blower
- High quality components
- Produced in an ISO 9001-2000 listed manufacturing facility
- Constructed in compliance with ASHRAE 15 safety requirements



www.ecocooler.com.tr/products/rooftop-packaged-units

The casing sheet metal is fabricated from hot dipped G90, Zinc coating and zero spangle galvanized steel, oven-baked powder coated. The units is provided with an integral weather resistant control panel for outdoor application. Panels and access doors are provided for inspection and access for all internal parts. Also, They are provided with centrifugal fans which are statically and dynamically balanced, designed for low sound level operation Belt driven.



Eco Cooler Air Cooled Condensing Units, ECHA series, designed to be suitable for gulf harsh environment with optimum performance, high efficiency, low power consumption, easy installation and low noise operations. ECHA series condensing units were designed to provide central cooling for commercial and industrial applications with the high reliability utilizing the environment friendly R134a refrigerant.

Condensing Unit

- Capacity range: 10 kW - 1820 kW
- Refrigerant: R134a, R407C, R410A
- Compressor type: Scroll
- Energy efficiency Ratio (EER): Up to 3.42
- Connectivity, flexibility and serviceability enabled by advanced controller
- Microchannel condenser technology
- Low noise axial fan
- Evaporation control by Electronic or thermostatic Expansion Valve
- Maximum ambient temperature of operation: 55 °C
- Designed to conform to ASHRAE 15 1994 (Safety Code for Mechanical Refrigeration).
- Performance Data are rated in accordance to ARI standard 550/590 98.



www.ecocooler.com.tr/products/condensing-units

ECHA series are available from 2.9 TR to 164.3 TR. Models are in two categories of STANDARD and HIGH EFFICIENT conditions. In STANDARD models the temperature difference between condensing and ambient temperature (condenser split) is 20°C / 36 °F. In HIGH EFFICIENT models the temperature difference between condensing and ambient temperature is 12 °C / 21.6 °F. STANDARD models are more compact than HIGH EFFICIENT models and are suitable for moderate temperatures.



Our Exhibitions





Our Certifications



ISO 9001:2015

Quality Management System



ISO 45001:2018

Occupational Health and Safety Management System



ISO 14001:2015

Environmental Management System



ISO 10002:2018

Customer Satisfaction Management System



GMP ISO 22716

Good Manufacturing Practices Certification



IEC 17025

Testing and calibration laboratories

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ECO COOLER

Infinite Thinking, Better Solutions!



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Products

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AHU Selection

www.ahuselection.com

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HVAC SYSTEMS

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