ECO COOLER

HVAC SYSTEMS

2025 **Eco Hybrid Package**







OPTIMAL COOLING





PREMIUM HVAC SOLUTIONS FOR EFFICIENT COOLING AND HEATING

ECO Hybrid Package (EHP), Our innovative HVAC systems are engineered to deliver outstanding performance in environments where power availability is limited and energy savings are crucial. Featuring R410A, a high-efficiency refrigerant, these systems ensure reliable cooling and heating in one compact package. Whether you opt for a rooftop packaged unit, a chiller, or a condensing unit, you can count on low energy consumption, robust performance, and straightforward operation. Designed to cover spaces up to 270 m² even on a single-phase power supply, our solutions are ideal for a wide range of residential and commercial applications.

Key Benefits

1- Optimized Power Usage

Microchannel Technology: Advanced coil design enhances heat transfer while reducing refrigerant requirements, helping lower utility costs.

Evaporative Pre-Cooling: Pre-cools enter air into the condenser, decreasing required power in hot climates and further cutting energy consumption.

High-Efficiency R410A Refrigerant: Contributes to superior cooling and heating output with minimal power draw.

2- Comprehensive Climate Control

Heat Pump Mode: Offers both cooling and heating capabilities, eliminating the need for external systems.

Versatile Applications: deal for various environments, capable of effectively conditioning spaces up to 270 m² on single-phase power supply and 750 m² on three-phase power supply.



Premium HVAC Solutions for Efficient Cooling and Heating

3- CE-Certified Quality and Reliability

Stringent European Standards: Ensures dependable performance, reduced downtime, and proven durability.

Built to Last: High-quality components and robust construction minimize the need for frequent maintenance.

4- User-Friendly Design

Corrosion-Resistant Coils: Aluminum microchannel coils withstand harsh conditions, extending service life.

Easy Installation and Maintenance: Thoughtful layout allows for quick setup, inspection, and servicing, even for non-specialists.

5- Optional Solar Integration

Sustainable Energy Solution: Tap into renewable solar power to further reduce electricity consumption.

Environmentally Responsible: Lower your carbon footprint without compromising on performance.

Tailored for Energy-Limited Settings

Where electricity is scarce or expensive, our HVAC systems offer consistent, high-quality climate control without straining your power resources. Choose from our range of rooftop packaged units, chillers, or condensing units, and enjoy a comfortable indoor environment year-round—backed by modern technology, high efficiency, single-phase compatibility, and an optional solar power add-on.





EVAPORATIVE PRE-COOLING PACKAGE

ECO COOLER evaporative pre-cooling package is an energy-efficient solution designed for comprehensive climate control across various applications.

It features Microchannel Technology, an evaporative pre-cooling system, and high-efficiency R410A refrigerant to optimize power usage and lower energy costs.

With heat pump functionality, it offers both cooling and heating, eliminating the need for separate systems. The unit seamlessly integrates with ducting systems for efficient air distribution, effectively conditioning spaces up to 270 m² (single-phase) and 750 m² (three-phase).

Ideal for residential and commercial use, it provides a reliable, cost-effective, and sustainable climate control solution.















Technical Data:

Evaporative Pre-Cooling Package

| Model | ERU 3 | ERU 4 | ERU 5 | ERU 7.5 | ERU 20 | | |
|---------------------------------------|-----------------------|-----------------|-----------------|-----------------|-----------------|--|--|
| Cooling capacity* (kW) | 7.2 | 10.7 | 13 | 25 | 70 | | |
| Heating capacity** (kW) | 6 | 9 | 11 | 23 | 64 | | |
| Total power input (Cooling mode) (kW) | 2.2 | 2.9 | 3.1 | 6.1 | 17.9 | | |
| Total power input (Heating mode) (kW) | 1.9 | 2.7 | 3.2 | 6.2 | 17.2 | | |
| Total EER (Cooling mode) | 3.3 | 3.8 | 4.3 | 4.0 | 3.9 | | |
| Total EER (Heating mode) | 3.2 | 3.5 | 3.5 | 3.6 | 3.7 | | |
| Covered floor area (sq.meter) | 50~75 | 80~120 | 150~200 | 250~300 | 450~750 | | |
| Compressor | | | | | | | |
| Туре | | | Scroll | | | | |
| Quantity | 1 | 1 | 1 | 2 | 2 | | |
| Refrigerant | R410A | | | | | | |
| Power input (Cooling mode) (kW) | 1.44 | 1.9 | 2.1 | 4.2 | 12 | | |
| Power input (Heating mode) (kW) | 1.2 | 1.7 | 2.2 | 4.3 | 11.3 | | |
| Amperage (Cooling mode) (A) | 6.3 | 8.4 | 9.2 | 18.5 | 23.0 | | |
| Amperage (Heating mode) (A) | 5.1 | 7.7 | 9.7 | 18.7 | 22.4 | | |
| Indoor heat exchanger | | | | | | | |
| Туре | Microchannel | | | | | | |
| Face area (sq. meter) | | | 0.5 | 1 | 2 | | |
| Indoor fan | | | | | | | |
| Туре | | | Forward curved | | | | |
| Size (mm) | 250 | 300 | 300 | 380 | 450 | | |
| Quantity | 1 | 1 | 1 | 1 | 1 | | |
| Air flow rate (CMH) | 1500 | 3000 | 3000 | 5500 | 17000 | | |
| Control type | Three-speed | Three-speed | Three-speed | Single-speed | Single-speed | | |
| Motor power (kW) | 0.45 | 0.53 | 0.53 | 1.15 | 4.00 | | |
| Amperage (A) | 2.10 | 2.45 | 2.45 | 5.60 | 7.40 | | |
| Outdoor heat exchanger | | | | | | | |
| Туре | | | Microchannel | | | | |
| Face area (m2) | 0.5 | 0.5 | 0.5 | 1 | 2 | | |
| Precooling method | Cellulose pad | | | | | | |
| Outdoor fan | | | | | | | |
| Туре | Axial | | | | | | |
| Size (mm) | 450 | 500 | 500 | 630 | 800 | | |
| Quantity | 1 | 1 | 1 | 1 | 1 | | |
| Air flow rate (CMH) | 4000 | 4500 | 4500 | 10000 | 18000 | | |
| Control type | Pressure-based On/Off | | | | | | |
| Motor power (kW) | 0.29 | 0.42 | 0.42 | 0.74 | 1.9 | | |
| Amperage (A) | 1.3 | 1.7 | 1.7 | 2.9 | 4.1 | | |
| Electrical info | | | | | | | |
| Power supply phase/voltage/ frequency | 1P/220V/50Hz | 1P/220V/50Hz | 1P/220V/50Hz | 1P/220V/50Hz | 3P/400V/50Hz | | |
| Total amperage (Cooling mode) (A) | 8~10 | 11~13 | 13~16 | 26~32 | 35~40 | | |
| Total amperage (Heating mode) (A) | 9~11 | 12~15 | 14~17 | 28~34 | 34~38 | | |
| Installation info | | | | | | | |
| Length x Width x Height (cm) | 156 x 117 x 110 | 156 x 117 x 110 | 156 x 117 x 110 | 245 x 125 x 146 | 245 x 220 x 146 | | |
| Operating weight (kg) | 300 | 305 | 315 | 500 | 805 | | |

 $^{^{\}star}$ Cooling capacity rating is based on: ambient dry/wet bulb temperature of 46 C/22 $^{\circ}\text{C}$ – Return dry/wet bulb temperature of 27 C/19 $^{\circ}\text{C}$

ECO COOLER reserves the right to modify technical information at any time without prior notice.



 $^{^{**}}$ Heating capacity rating is based on: ambient dry/wet bulb temperature of 7 C/6 $^{\circ}$ C – Return dry/wet bulb temperature of 20 C/14 $^{\circ}$ C



CHILLER-HEAT PUMP

ECO COOLER Chiller heat pump is a multi-functional system that provides both cooling and heating, ensuring consistent comfort and substantial energy savings. It incorporates advanced microchannel technology, an evaporative pre-cooling system, and high-efficiency R410A refrigerant to reduce energy consumption.

The system offers reliable climate control with a heat pump mode, supplying chilled water at 7°C for cooling and hot water at 45°C for heating, perfect for fan coil units. Suitable for residential, commercial, and industrial spaces up to 650 m², it integrates smoothly with piping systems for optimal air distribution.

Environmentally friendly and energy-efficient, it provides top-tier performance even in extreme climates, ensuring a low-maintenance, cost-effective solution.





















Technical Data:

Chiller Heat Pump

| Model | EACH 3 | EACH 4 | EACH 5 | EACH 7.5 | EACH 20 | | |
|---------------------------------------|-----------------------|----------------|-------------------|-----------------|-----------------|--|--|
| Cooling capacity* (kW) | 5 | 8 | 11 | 22 | 60 | | |
| Heating capacity** (kW) | 4 | 7 | 10 | 20 | 58 | | |
| Total power input (Cooling mode) (kW) | 2.0 | 2.3 | 2.6 | 4.9 | 13.9 | | |
| Total power input (Heating mode) (kW) | 2.4 | 3.2 | 3.7 | 7.3 | 18.4 | | |
| Total EER (Cooling mode) | 2.7 | 3.4 | 4.2 | 4.5 | 4.3 | | |
| Total EER (Heating mode) | 1.9 | 2.0 | 2.8 | 2.7 | 3.1 | | |
| Covered floor area (sq.meter) | 50~75 | 80~120 | 150~200 | 250~300 | 450~750 | | |
| Compressor | | | | | | | |
| Туре | | | Scroll | | | | |
| Quantity | 1 | 1 | 1 | 2 | 2 | | |
| Refrigerant | R410A | | | | | | |
| Power input (Cooling mode) (kW) | 1.68 | 1.9 | 2.17 | 4.2 | 12 | | |
| Power input (Heating mode) (kW) | 2.1 | 2.8 | 3.3 | 6.6 | 16.5 | | |
| Amperage (Cooling mode) (A) | 7.4 | 8.4 | 9.5 | 19.0 | 23.0 | | |
| Amperage (Heating mode) (A) | 9.1 | 12.3 | 13.8 | 27.0 | 29.2 | | |
| Heat exchanger | | | | | | | |
| Туре | | Braze | ed plate heat exc | hanger | | | |
| Quantity | 1 | 1 | 1 | 1 | 1 | | |
| Water flow rate (CMH) | 0.81 | 1.21 | 1.69 | 3.39 | 9.23 | | |
| Outdoor heat exchanger | | | | | | | |
| Туре | | | Microchannel | | | | |
| Face area (m2) | 0.5 | 0.5 | 0.5 | 1 | 2 | | |
| Precooling method | | | Cellulose pad | | | | |
| Outdoor fan | | | | | | | |
| Туре | | | Axial | | | | |
| Size (mm) | 450 | 500 | 500 | 630 | 800 | | |
| Quantity | 1 | 1 | 1 | 1 | 1 | | |
| Air flow rate (CMH) | 4000 | 4500 | 4500 | 10000 | 18000 | | |
| Control type | Pressure-based On/Off | | | | | | |
| Motor power (kW) | 0.29 | 0.42 | 0.42 | 0.74 | 1.9 | | |
| Amperage (A) | 1.3 | 1.7 | 1.7 | 2.9 | 4.1 | | |
| Electrical info | | | | | | | |
| Power supply phase/voltage/ frequency | 1P/220V/50Hz | 1P/220V/50Hz | 1P/220V/50Hz | 1P/220V/50Hz | 3P/400V/50Hz | | |
| Total amperage (Cooling mode) (A) | 7~9 | 8~12 | 11~14 | 22~28 | 27~30 | | |
| Total amperage (Heating mode) (A) | 8~10 | 10~14 | 16~18 | 32~36 | 33~36 | | |
| Installation info | | | | | | | |
| Length x Width x Height (cm) | 78 x 117 x 110 | 78 x 117 x 110 | 78 x 117 x 110 | 112 x 117 x 120 | 225 x 117 x 130 | | |
| | 78 X 117 X 110 | 76 X 117 X 110 | 70 X 117 X 110 | 112 x 117 x 120 | 223 X 117 X 130 | | |

 $^{^{\}star}$ Cooling capacity rating is based on: ambient dry/wet bulb temperature of 46 C/22 $^{\circ}\text{C}$ - Return dry/wet bulb temperature of 27 C/19 $^{\circ}\text{C}$

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DUCT SPLIT

ECO COOLER duct split is a dual-purpose system designed for both cooling and heating, providing year-round comfort and energy efficiency. It features microchannel technology for enhanced heat transfer, an evaporative pre-cooling system to improve performance in hot climates, and a high-efficiency R410A refrigerant for minimal environmental impact.

Compatible with duct split systems, it distributes cold or warm air efficiently across spaces up to 650 m2, and integrates seamlessly with piping systems.

Suitable for residential, commercial, and industrial applications, it ensures optimal performance, reduced operational costs, and environmental sustainability, making it a low-maintenance, energy-saving solution.









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Technical Data:

Condensing Unit-Heat Pump

| Model | ECU 3 | ECU 4 | ECU 5 | ECU 7.5 | ECU 20 | | |
|---------------------------------------|-----------------------|----------------|----------------|-----------------|-----------------|--|--|
| Cooling capacity* (kW) | 7.2 | 10.7 | 13 | 26 | 70 | | |
| Heating capacity** (kW) | 6 | 9 | 10 | 20 | 64 | | |
| Total power input (Cooling mode) (kW) | 1.7 | 2.3 | 2.6 | 4.9 | 13.5 | | |
| Total power input (Heating mode) (kW) | 1.5 | 2.2 | 3.7 | 7.3 | 13.7 | | |
| Total EER (Cooling mode) | 4.1 | 4.6 | 4.9 | 5.3 | 5.2 | | |
| Total EER (Heating mode) | 4.3 | 4.3 | 2.8 | 2.7 | 4.7 | | |
| Covered floor area (sq.meter) | 50~75 | 80~120 | 150~200 | 250~300 | 450~750 | | |
| Compressor | | | | | | | |
| Туре | | | Scroll | | | | |
| Quantity | 1 | 1 | 1 | 2 | 2 | | |
| Refrigerant | R410A | R410A | R410A | | | | |
| Power input (Cooling mode) (kW) | 1.44 | 1.9 | 2.14 | 4.2 | 11.6 | | |
| Power input (Heating mode) (kW) | 1.2 | 1.7 | 3.3 | 6.6 | 11.8 | | |
| Amperage (Cooling mode) (A) | 6.3 | 8.4 | 9.4 | 19.0 | 22.5 | | |
| Amperage (Heating mode) (A) | 5.1 | 7.7 | 13.8 | 27.0 | 23.0 | | |
| Outdoor heat exchanger | | | | | | | |
| Туре | | | Microchannel | | | | |
| Face area (m2) | 0.5 | 0.5 | 0.5 | 1 | 2 | | |
| Precooling method | Cellulose pad | | | | | | |
| Outdoor fan | | | | | | | |
| Туре | | | Axial | | | | |
| Size (mm) | 450 | 500 | 500 | 630 | 800 | | |
| Quantity | 1 | 1 | 1 | 1 | 1 | | |
| Air flow rate (CMH) | 4000 | 4500 | 4500 | 10000 | 18000 | | |
| Control type | Pressure-based On/Off | | | | | | |
| Motor power (kW) | 0.29 | 0.42 | 0.42 | 0.74 | 1.9 | | |
| Amperage (A) | 1.3 | 1.7 | 1.7 | 2.9 | 4.1 | | |
| Electrical info | | | | | | | |
| Power supply phase/voltage/ frequency | 1P/220V/50Hz | 1P/220V/50Hz | 1P/220V/50Hz | 1P/220V/50Hz | 3P/400V/50Hz | | |
| Total amperage (Cooling mode) (A) | 7~8 | 8~10 | 11~14 | 22~28 | 27~30 | | |
| Total amperage (Heating mode) (A) | 5~6 | 7~9 | 16~18 | 32~36 | 33~36 | | |
| Installation info | | | | | | | |
| Length x Width x Height (cm) | 78 x 117 x 110 | 78 x 117 x 110 | 78 x 117 x 110 | 112 x 117 x 120 | 225 x 117 x 130 | | |
| Operating weight (kg) | 193 | 206 | 207 | 344 | 626 | | |

 $^{^{\}star}$ Cooling capacity rating is based on: ambient dry/wet bulb temperature of 46 C/22 $^{\circ}\text{C}$ - Return dry/wet bulb temperature of 27 C/19 $^{\circ}\text{C}$

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SOLAR SYSTEMS



COOLING SAVINGS

%30 - %50



%20 - %30

We offer an optional feature called the Solar System that can be integrated with ECO Hybrid Package units. By adding this solar-powered system, the efficiency of the units increases by up to 50% during winter and 30% in summer, significantly reducing energy consumption and saving costs. This system utilizes specialized solar panels that operate with refrigerants to enhance the performance of compressors and condensers.

In addition to improving energy efficiency, it minimizes the emission of harmful gases, ensuring a more sustainable operation. The Solar System not only optimizes the functionality of the HVAC units but also protects the ecosystem by reducing environmental impact. Other advantages include lower long-term operational costs, reduced dependency on conventional energy sources, and contribution to global efforts in combating climate change. This innovation makes our units more eco-friendly while maintaining superior performance year-round.

FOR CHOOSING US FOR CLEAN AIR AND COMFORTABLE LIVING SPACES.

We will always strive to provide the best for your health.

ECO COOLER

