



Hybrid
technology
maximum
efficiency

The Ecotech Free Cooling Hybrid Chiller is designed to provide efficient cooling solutions, especially in applications where energy savings and sustainability are priorities.

The Ecotech Free Cooling Hybrid Chiller is engineered to provide efficient cooling while minimizing energy consumption. By utilizing both traditional and free cooling methods, it offers a versatile solution for various applications.

Key Advantages of Hybrid Chillers:

Cooling Capacity: Typically ranges from 100 kW to 2,000 kW.

Refrigerant Type: R 410, R-134A, or other environmentally friendly refrigerants such as R454B - R32, R1234YF - R513A.

Operation Modes: Chilled water mode and free cooling mode.

Free Cooling System

Free Cooling Type: Air-cooled or water-cooled, depending on the installation.

Free Cooling Temperature Range: Typically operates efficiently when ambient temperatures are below 15°C (59°F).

Heat Exchanger: Plate type or shell-and-tube heat exchangers for efficient heat transfer.

Performance Specifications

Coefficient of Performance (COP): Generally ranges from 3.5 to 6.0, depending on operating conditions.

Electrical Specifications

Power Supply: Standard voltage options (e.g., 400V/3PH/50Hz or 460V/3PH/60Hz).

Power Consumption: Varies by model and cooling capacity, usually specified in kW.

Control System

Control Type: Advanced microprocessor-based control system for monitoring and optimization.

Interface: User-friendly display with options for remote monitoring and control.

Features: Integration with Building Management Systems (BMS), alarms, and diagnostics.

Physical Specifications

Dimensions: Varies by model; typically designed for compact installation.

Material: Corrosion-resistant casing, usually made of galvanized steel, and corrosion resistant epoxy powder painted



Environmental Considerations

Noise Levels: Designed to operate quietly, typically below 70 dBA at 1 meter.

Sustainability: Designed with energy efficiency in mind and compliant with environmental regulations.

Applications

Typical Uses: Data centers, commercial buildings, industrial processes, and other applications requiring reliable cooling.

Air-Cooled Chiller Specifications with R-454B

MODEL	46	60	75	90	110	120	140
Cooling Capacity	46,5 kW	58 Kw	75 kW	93 kW	116 kW	120 kW	140 kW
Compressor Power Input	11,62kW	14,1 kW	18,7 kW	23,8 kW	28,29 kW	28,57 kW	33,3 kW
EER (Energy Efficiency Ratio)	4.0	4.1	4.01	4.2	4.0	4.1	4.2
Refrigerant Type	R-454B	R-454B	R-454B	R-454B	R-454B	R-454B	R-454B
Operating Temperature Range	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C
Compressor quantity	2	2	2	2	4	4	4
MODEL	360	410	450	500	560	630	700
Cooling Capacity	366 kW	410 kW	450 kW	490 kW	560 kW	630 kW	700 kW
Compressor Power Input	91,5 kW	102,5 kW	107,1kW	122,5kW	140kW	153,65 kW	175 kW
EER (Energy Efficiency Ratio)	4.0	4.0	4.2	4.1	4.1	4.1	4.0
Refrigerant Type	R-454B	R-454B	R-454B	R-454B	R-454B	R-454B	R-454B
Operating Temperature Range	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C
Compressor quantity	4	4	4	4	6	6	6
MODEL	950	1000	1100	1200	1300	1400	1500
Cooling Capacity	950 kW	1000 kW	1100 kW	1200 kW	1272 kW	1450 kW	1500 kW
Compressor Power Input	212 kW	227,4 kW	222 kW	241,4 kW	280 kW	315 kW	339kW
EER (Energy Efficiency Ratio)	4,48	4,39	4.5	4,97	4,54	4,60	4,42
Refrigerant Type	R134 / R513	R134 / R513	R134 / R513	R134 / R513	R134 / R513	R134 / R513	R134 / R513
Operating Temperature Range	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C	-5°C to 47°C
Compressor quantity	2	2	2	2	2	2	2

*Referred to +15 °C water outlet and 35 °C ambient temperature

*ITECH reserves the right to change specification without notice