EWYK-QZ

R-290

Modular Air-to-Water Inverter Heat Pump

Daikin **Safety** Shield

- Two refrigerant leak detector
- Compressor box & electrical panel extraction fans
- A siren for alert in case of refrigerant leakage
- All safety components on a separate power supply

Our safety approach to R-290

Regarding R-290, Daikin aims to raise the industry's safety standards across the entire product lifecycle, from production to disposal. All partners - including installers, wholesalers, and logistics providers - are expected to receive proper training to handle R-290 in a fully safe and clean environment. Ultimately, end users will also benefit from the resulting enhanced safety measures and established best practices.

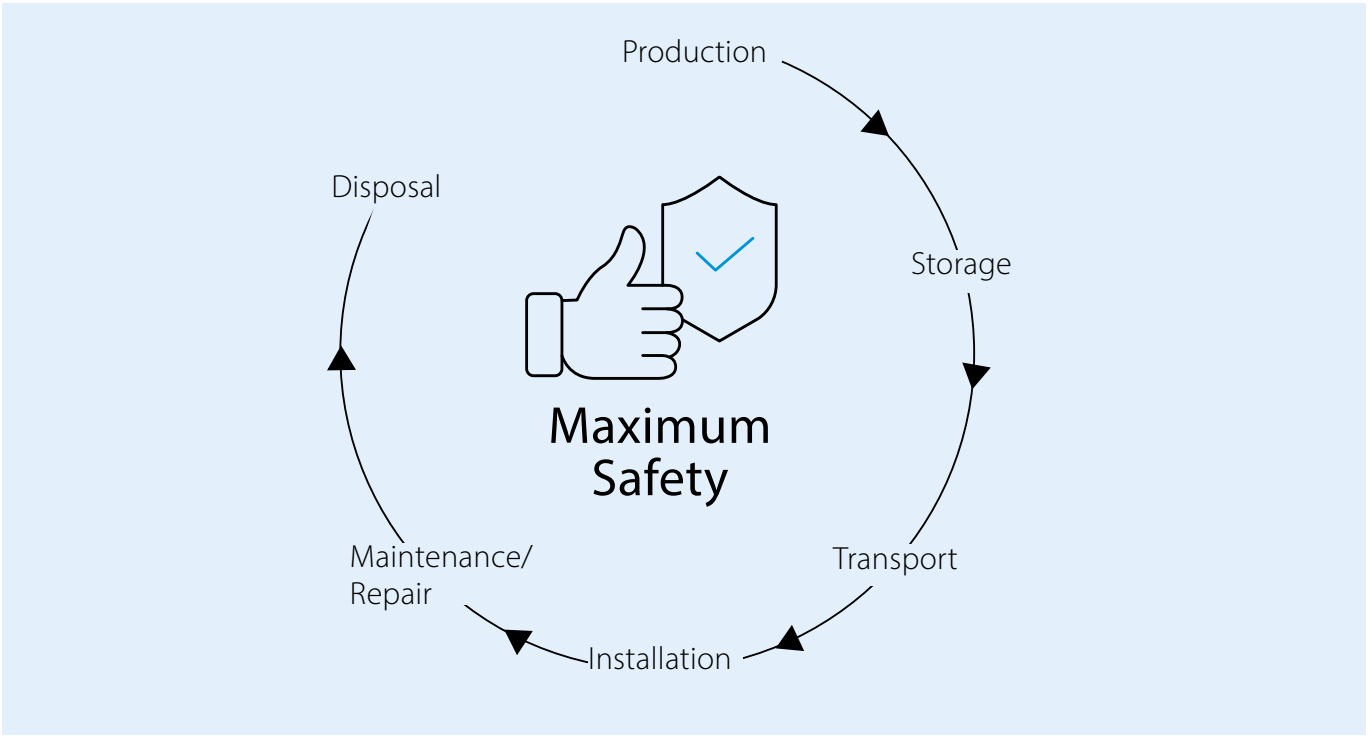
Electrical box safety design

ATEX certified fans
Cooling down the panel, maintaining a slight positive pressure inside the electrical panel and washing away eventual leakage.

Emergency power supply
All safety devices are powered by an independent power supply. To be supplied by the customer through UPS.

Siren for visual & acoustic alert
Activated in case of emergency condition by the leak detectors.

Leak detector
To detect propane leakage in the electrical panel, automatically shutting down the unit, activating the alarms.



Refrigerant circuit safety design

Refrigerant storage tanks
Ensure safe containment of propane during transport, installation, and commissioning.

Leak detector
Detecting propane leakage in the compressor box and shutting off the unit, activating the alarms and extraction fan.

Coil covers
Collecting eventual leakage in the compressor box, in order to be detected by the leak detector.

Safety valve manifold
Collecting refrigerant outside the compressor box in case of an eventual overpressure event.

ATEX certified fans
To wash away eventual leakage from the compressor box.

Safe design on hydronic circuit
A dedicated water leak separator enables early detection of any refrigerant presence in the water circuit. In the event of a leak, a mechanical shut-off valve automatically isolates the unit from the main water circuit, ensuring maximum protection and system reliability.

High temperature & natural solution

The range in numbers

1 **Product version:**
Heat pump with inversion on water side

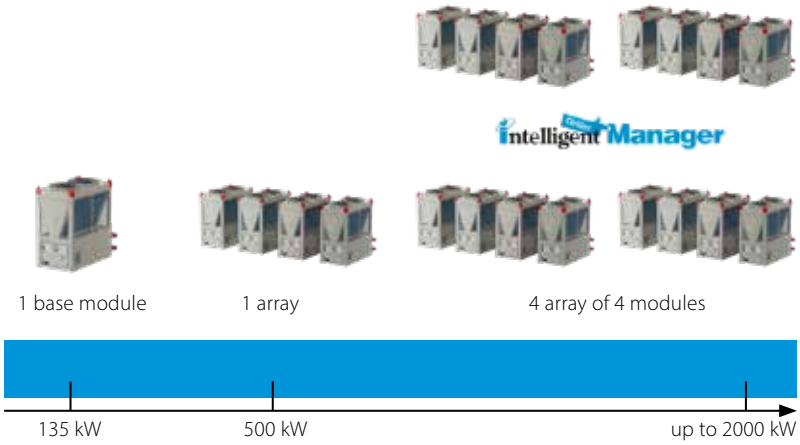
60 **Possible combinations**
of modules within a single system

Large operating range

Reaches temperatures up to 75°C, making it an ideal boiler-replacement solution for existing buildings, and is also suited for high-temperature applications where a very low-GWP refrigerant is required.

	Min.	Max.
Heating water	20°C	75°C
Chilled water	-15°C	18°C
Outdoor ambient temperature	-20°C	46°C

Capacity overview



Due to its **modular design**, the new EWYK-QZ unit offers **outstanding scalability**. Modules can be added progressively, in line with the building's development plan, allowing the system to grow as required. They can be installed **side-by-side** to minimise space demand - an ideal solution for retrofit applications with limited area availability. **Up to four module arrays** can be combined, delivering capacities of **up to 2000 kW**, managed by **Intelligent Chiller Manager (iCM)** control solution.

Intelligent Chiller Manager (iCM)

The Daikin Intelligent Chiller Manager (iCM) is a smart, **factory-engineered control solution** that ensures **seamless coordination across the entire chiller plant**. It optimises unit operation, whether in heating or cooling, guaranteeing high efficiency and reliable performance in any plant configuration. Its **extended architecture** integrates the **management of cooling towers and manifolded pumping systems** for both air-cooled and water-cooled installations. By **reducing energy consumption and mechanical stress**, the iCM enhances system **durability** while significantly **improving overall plant efficiency**. The result is a **resilient, cost-effective and high-performing HVAC system**, making the Intelligent Chiller Manager an ideal solution for a wide range of applications.

Benefits

High performance

Lower energy & maintenance costs

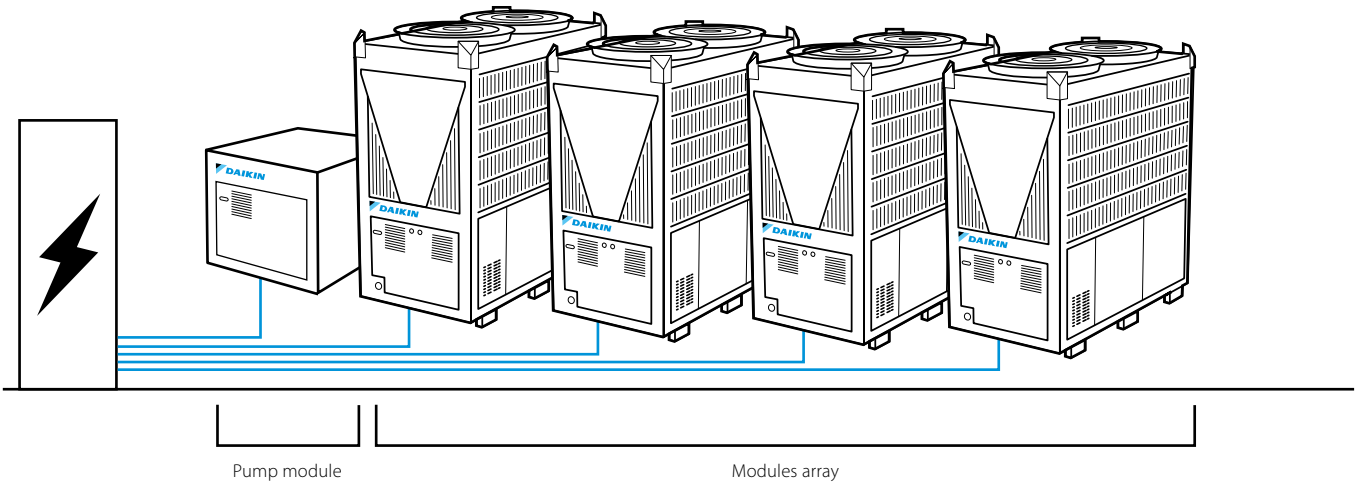
Increased reliability & lifetime

Product benefits

Plug & Play installation

Quick and easy installation thanks to the manifold kit, designed to connect modules on the waterside, as it already includes all the piping between units. On-site installation time is further reduced by having the manifold kit pre-installed at the factory.

In addition, a dedicated pump module can be easily added to the module array. Equipped with inverter pump for maximum flexibility, the module also includes an 18-litre expansion tank.



Single Power Supply: simplified electrical installation with a single cable that powers up to four modules, complete with factory-provided electrical panel. Each module can still be connected to its own separate power supply, ensuring maximum flexibility & safety.

Cables not included.

Inverter Technology

Lower operating costs

Contribution to Green Building

VFD Scroll Compressor

Inverter Fan

Thanks to its modular design, this new unit can closely match the building's cooling and heating load profile, ensuring low HVAC operating costs especially under part-load conditions. The extensive use of full inverter compressor technology further enhances system performance, allowing the units to adapt efficiently to seasonal and real-time load variations.

Verified installation

The EWYK-QZ heat pump installation is permitted only by certified installers. Certification is obtained through the Stand By Me portal, where installers must successfully complete the qualification test.

Once certified, the installer must register with Daikin systems via the e-Care App and complete the registration process before proceeding with the installation.

Natural Solution
for Lower environmental impact & Positive Contribution to Green Building

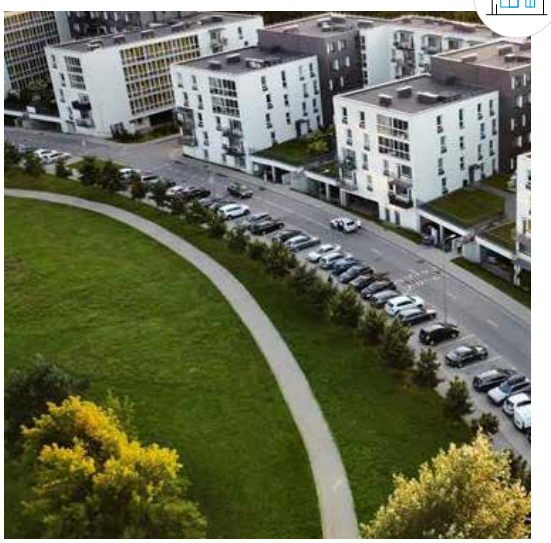
The R-290 is a low-GWP refrigerant, making it an eco-friendly alternative to traditional refrigerants with a higher global warming potential.

This unit can contribute to BREEAM and LEED project's credits, thanks to the hydronic system's energy efficiency and the lower refrigerant impact.

Product applications

Designed for both **comfort heating and cooling**, the EWYK-QZ is ideal for HVAC applications in **offices**, **hotels**, **commercial buildings**, and **healthcare facilities**. It delivers high performance in both **new installations** and **retrofit** projects, including boiler-replacement scenarios. With supply temperatures **up to 75°C** and a **scalable modular design**, it also meets the demands of **industrial** environments that require **reliable**, **flexible**, and **continuous operation**.

Comfort



Industrial

Technical data

Parameter		EWYK135QZXSA2
Nr of Compressors | Circuits | Fans	nr	2 | 2 | 2
[H1] Heating Capacity	kW	135
[H1] COP	kW/kW	3,3
[H2] Heating Capacity*	kW	101
[H2] COP	kW/kW	1,7
[H3] Heating Capacity	kW	91
[H3] COP	kW/kW	2,3
SCOP Low Temperature	kW/kW	4,2
SCOP Medium Temperature	kW/kW	3,2
[C1] Cooling Capacity	kW	128
[C1] EER	kW/kW	2,6
[C2] Cooling Capacity	kW	165
[C2] EER	kW/kW	3,3
SEER	kW/kW	4,8
Dimensions	mm	2382 x 1207 x 2653
Dimensions incl. manifold kit L x W x H	mm	2740 x 1200 x 2382
Nominal useful water heigh at pump module outlet	mH2O	15÷25
Operating weight	kg	1272
Refrigerant charge	kg	6,6
Number of refrigerant circuits		2
Compressor (Number | Type)		2 x Scroll | VFD
Fan (Number | Type)		2 | EC Brushless
Unit Main Power Supply		400V / 3ph / 50Hz
Emergency devices dedicated power supply*		230V / 1ph / 50Hz
Max running current	A	128,4
Max current wires sizing	A	141,2
Max inrush current	A	0
Sound power according to EN12102	dB(A)	79,5
Sound pressure @1m according to EN12102	dB(A)	61,3
Nominal air flow rate	l/s	14160

C1: Cooling Only Mode - Plate heat exchangers water in/out= 12/7°C; Ambient=35°C; Operating fluid: Water; Fouling factor = 0°C/W.
C2: Cooling Only Mode - Plate heat exchangers water in/out= 23/18°C; Ambient=35°C; Operating fluid: Water; Fouling factor = 0°C/W.
H1: Heating Only Mode - Plate heat exchangers water in/out= 40/45°C; Ambient=7°C; Operating fluid: Water; Fouling factor = 0°C/W.
H2: Heating Only Mode - Plate heat exchangers water in/out= 60/70°C; Ambient= -5°C; Operating fluid: Water; Fouling factor = 0°C/W.
H3: Heating Only Mode - Plate heat exchangers water in/out= 40/45°C; Ambient= -10°C; Operating fluid: Water; Fouling factor = 0°C/W.
* Instantaneous Heating Capacity

Module 1	Module 2	Module 3	Module 4	Array Heating Capacity [kW]	Array Cooling Capacity [kW]	Array Width [mm]
135	135			270	256	3180
135	135	135		405	384	5170
135	135	135	135	540	512	7160

Options & accessories

Code	Hydronic accessories
EKMNFLD3	Manifold module 3"
EKMNFLD5	Manifold module 5"
EKMODPAR3	Parallel modular kit 3"
EKMODPAR5	Parallel modular kit 5"
EKMODSER3	Series modular kit 3"
EKCONNPMP3	Pump connection kit 3"
EKCONNPMP5	Pump connection kit 5"
EKPMPLOW1	One centrifugal pump (low lift) + VFD up to 33.5 M3/h
EKPMPLOW2	One centrifugal pump (low lift) + VFD up to 48.1 M3/h
EKPMPLOW3	One centrifugal pump (low lift) + VFD up to 64.5 M3/h
EKPMPLOW5	One centrifugal pump (low lift) + VFD up to 94.6 M3/h
EKPMPLOW6	One centrifugal pump (low lift) + VFD up to 114 m3/h
EKPMPHGH1	One centrifugal pump (high lift)+ VFD up to 10.3 M3/h
EKPMPHGH2	One centrifugal pump (high lift) + VFD up to 23.3 M3/h
EKPMPHGH3	One centrifugal pump (high lift) + VFD up to 28.4 M3/h
EKPMPHGH4	One centrifugal pump (high lift) + VFD up to 47.3 M3/h
EKPMPHGH5	One centrifugal pump (high lift) + VFD up to 64.6 M3/h
EKPMPHGH6	One centrifugal pump (high lift) + VFD up to 77.4 M3/h
EKPMPHGH7	One centrifugal pump (high lift) + VFD up to 114 m3/h
EKWTRFLTR3	Water filter 3"
EKWTRFLTR5	Water filter 5"
EKTANK500	External tank without cabinet (500 l)
EKTANK1000	External tank without cabinet (1000 l)
EKTANK500C	External tank with cabinet (500 l)
EKTANK1000C	External tank with cabinet (1000 l)

Code	Mechanical & control accessories
EKRUBAVM	Unit rubber anti vibration mounts
EKSPRAVM	Spring anti vibration mounts
EKPMPRUBAVM	Pump module rubber anti vibration mounts
EKPMPSPRAVM	Pump module spring anti vibration mounts
EKCONTKIT	Container kit
EKTRANSKIT	Transport kit
EKPWSPLY	Single power supply kit up to 4 modules + pump
EKCM200J	Modbus RTU MSTP
EKCMBACMSTP	Bacnet MSTP
EKCMBACIP	Bacnet/ip communication module
EKRSCSMP	Kit DoS Router with antenna for modular unit
EKTSMSP	Temperature sensor for muse and ICM conf
EKCMSGW	Smart grid ready box
EKSCDP	Differential pressure trasducer for VPF (mto)
EKDIPM05	Intelligent pump manager for ICM 5 pumps
EKDIPM10	Intelligent pump manager for ICM 10 pumps
EKDISM	Intelligent secondary manager for ICM
EKRTPH	Remote touch panel 15,6" (including ethernet switch)
EKSCTDH	Temperature sensor for DHW
EKIODHW	Additional module for DHW and heating application

Option code	Mechanical options list	EWYK135QZXSA2
20	Evaporator victaulic kit	STD
29	20 mm evaporator insulation	STD
91	Double pressure relief valve with diverter	OPT
121	Refrigerant leak detection	STD
223	Finned tubes cu-al blue fins condenser	STD
117	Blygold coil treatment	OPT
43	Coil guards (to cover coils)	STD
141	Side panels on coil ends	STD
76-C	Sound proof system (compressor)	STD

STD: standard option

OPT: option to be added

Option code	Electrical / controls options list	EWYK135QZXSA2
10	Double setpoint	STD
14	Inverter compressor starter	STD
15	Under / over voltage control	STD
257	Energy tracking (including current limit)	STD
42B	Speedtrol (min ambient -20°c)	STD
57	Evaporator electric heater	STD
58	Evaporator flow switch	STD
60	Electronic expansion valve	STD
67	Ambient outside temperature sensor and setpoint reset	STD
68	Hour run meter	STD
69	General fault contactor	STD
90	Setpoint reset, demand limit and alarm from external device	STD
95	Compressors circuit breakers	OPT
96	Fans circuit breakers	STD
97	Main switch interlock door	STD
102	Ground fault relay	STD
259	Muse (modular unit sequencer)	STD
261	Mobile app (WLAN stick access point)	STD
229	Brushless fan (+ fan silent mode)	STD
184	ICM standard	OPT
182	Bacnet IP	OPT
260	Modbus TCP-IP	OPT
186	Performance monitoring	OPT
188	Heating only	OPT
266	Evaporator DP sensor for VPF	OPT

This product is in development and expected to be available by April 2026. Final specifications may vary.

Daikin Europe N.V participates in the Eurovent Certified Performance programme for Fan Coil Units and Variable Refrigerant Flow systems. Daikin Applied Europe S.p.A participates in the Eurovent Certified Performance programme for Liquid Chilling Packages, Hydronic Heat Pumps and Air Handling Units. Check ongoing validity of certificate: www.eurovent-certification.com

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