

redge[®]

Elevate

New !

Reversible Propane Heat pump



R-290

NOMINAL CAPACITY

 45 - 65 kW

MODULAR CAPACITY

 up to 520 kW

- # **One solution, all applications:** full inverter, compact and reliable heat pumps
- # **Delivers high temperatures** with outstanding efficiency and intelligent control
- # **Built for safety:** Market leading safety pack with advanced ATEX components, trusted in the field

SAFETY PACKAGE

- # **External Electrical Cabinet External:**
Electrical cabinet outside the refrigerant circuit zone, compliant with safety regulations, making maintenance faster and safer for technicians.
- # **ATEX-Certified Leak Detector:**
Propane (R290) leaks continuous monitoring, with instant safety protocols start preventing hazardous concentrations and protecting people.
- # **Pressure Relief Valve:**
Critical safety component, automatically discharging excess refrigerant pressure to ensure safe & reliable operation under all conditions.
- # **Visual & Acoustic alarm:**
Leak two-level alarm safety system : visual & acoustic activated in case of alert, ensuring safe intervention in ATEX environments.
- # **ATEX-Certified Exhaust Fan:**
Automatically activated when a leak is detected, safely extracting flammable gases and minimizing ignition risk for a safe operating environment.
- # **Water/Refrigerant Separator:**
Ensuring complete isolation, preventing any risk of refrigerant mixing with water, guaranteeing operational safety.
- # **SIL2-certified safety chain:** guaranteeing the highest level of reliability and protection.

eDRIVE

Variable speed drive pump option, which modulates the water flow through the plate heat exchanger and reduces energy costs:

- # Saves energy consumption especially at part-load conditions and during off period, reaching up to 75% reduction of the pump consumption.
- # Savings on the initial system cost, due to fewer pumps and piping connections than primary-secondary systems.
- # Flexibility and accuracy of the pump operation control: smooth start and stop, gradual change of speed, accuracy and stability of control.
- # Reduction of the repeated stress on the pump and piping resulting in longer equipment lifetime.
- # Elimination of the start-up current thanks to variable frequency drive that controls a gradual pump motor supply.



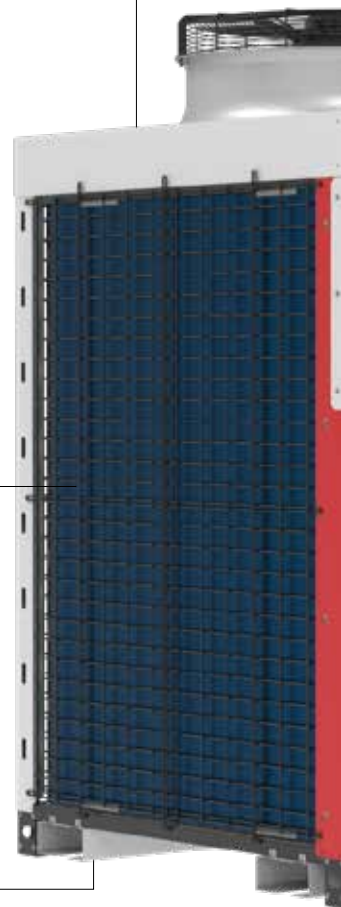
CONTROL

- # eClimatic electronic controller and intelligent control parameters optimising part-load efficiency.
- # Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet).
- # DC Advanced display, equipped with a graphic screen providing access to the main user parameters, with two optional displays:
 - Remote Display
 - Service Display

eCLIMATIC



DC Advanced



ACOUSTIC COMFORT

Three different noise level configurations available:

- # **Quiet operation** (standard), achieved with compact design, silent compressors and pumps, and with high-performance propeller fans, all installed in a closed box.
- # **Low noise level option:** High performance acoustic compressor casing can halve the noise produced by the unit.
- # **Active Acoustic Attenuation System** with variable fan speed allows progressive adaptation of the unit to the building load while respecting the noise level constraints and the operating limits (as an option).

CASING & DESIGN

- # Casing made of white painted galvanised steel.
- # Compact design.
- # All thermodynamic and hydraulic components installed below the coils.

THERMODYNAMIC SYSTEM

- # High-efficiency coil design for faster heating response and long-term reliability
- # Stainless steel brazed plate heat exchanger for optimal transfer in low-temperature systems
- # EC fans for silent, adaptive airflow with ultra-low energy consumption
- # Inverter compressor that adapts to any condition, delivering stable heating, cooling, and DHW (even in coldest climates)

SMART MONITORING & TOTAL CONTROL WITH REDGE CLOUD

- # **Complete Remote Monitoring:** Access and manage all your heat pumps units, no matter their location or condition, from a single intuitive platform.
- # **Comprehensive Multi-Unit Management:** Centralized access to data from multiple installations, giving you a bird's-eye view of your entire operation, streamlining your maintenance efforts.
- # **Customizable Dashboard** to make your life easiest.
- # **User-Friendly Interface:** A self-explanatory, easy-to-navigate dashboard ensures you get the insights you need with minimal effort—just a glance is enough to stay on top of everything.
- # **Real-Time Data at Your Fingertips:** Effortlessly monitor critical heat pump parameters such as Inlet & Outlet temperatures, outdoor temperature, system status (ON/OFF), generic and safety alarms.



Y_(A) **B**_(B) **H**_(C) **45**_(D) **S**_(E) **Y**_(F) **1**_(G) **M**_(H)

- (A) **Y** = Elevate
 (B) **B** = Inverter compressor
 (C) **H** = Heating optimized
 (D) **45** = Approximate power in kW
 (E) **S** = Single circuit
 (F) **Y** = Refrigerant Propane
 (G) **1** = Revision number
 (H) **M** = 400V/3/50Hz

Elevate - YBH				45	60
Heating mode					
Standard unit Full load performances *	HM1	Nominal capacity 30/35°C	kW	44,2	63,1
		COP 30/35°C	kW/kW	3,68	3,43
	HM2	Nominal capacity 40/45°C	kW	42,3	60,3
		COP 40/45°C	kW/kW	3,07	2,9
	HM3	Nominal capacity 47/55°C	kW	40,6	57,8
		COP 47/55°C	kW/kW	2,6	2,49
	HM4	Nominal capacity 55/65°C	kW	39,2	55,7
		COP 55/65°C	kW/kW	2,19	2,12
Seasonal energy efficiency **	HM1	SCOP 30/35°C	kWh/kWh	4,13	4,13
		ηs heat 30/35°C	%	162	162
		Energy label		A++	A++
	HM2	SCOP 40/45°C	kWh/kWh	3,56	3,57
		ηs heat 40/45°C	%	139,3	139,7
	HM3	SCOP 47/55°C	kWh/kWh	3,23	3,18
		ηs heat 47/55°C	%	126	124
	HM4	Energy label		A++	A++
		SCOP 55/65°C	kWh/kWh	2,90	2,78
		ηs heat 55/65°C	%	113	108
Cooling mode					
Standart unit Full load performances *	CM1	Nominal capacity 12/7°C	kW	38,9	50,4
		EER 12/7°C	kW/kW	2,77	2,67
	CM2	Nominal capacity 23/18°C	kW	53,3	69,4
		EER 23/18°C	kW/kW	3,6	3,5
	CM3	Nominal capacity -2/-8°C	kW	22,2	28,6
		EER -2/-8°C	kW/kW	1,72	1,63
Seasonal energy efficiency **	SEER 12/7°C		kWh/kWh	4,9	4,75
	ηs cool 12/7°C		%	193	187
	SEER 23/18°C		kWh/kWh	6,61	6,32
	SEPR 12/7°C		kWh/kWh	6,64	6,43
	SEPR -2/-8°C		kWh/kWh	3,80	3,75
Sound levels - Standard unit					
Sound power in heating mode® - Standard unit			dB(A)	80,6	83,8
Sound pressure in heating mode at 10 m® - Standard unit			dB(A)	48,7	51,9
Sound levels - Standard unit + LNCJ option®			dB(A)	74,9	78,6
Dimensions - Standard unit					
Length			mm	1350	1350
Width			mm	1593	1593
Height			mm	2120	2120
Operating weight ®					
Standard unit			kg	411	500
Standard unit + LNCJ®			kg	417	508
Standard unit + LNCJ® + WTG® + DPEH®			kg	609	710

- * In accordance with standard EN14511-3:2022.
 ** In accordance with standard EN14825:2022, average climate
 ① Standard EN 12102-1
 ② Standard EN 12102-1, ISO 3744 enveloping surface calculation method
 ③ Option: LNCJ = Low noise
 ④ Option: WTG = Water Tank (100l)
 ⑤ Option: DPEH = Hydraulic module with eDrive high-pressure twin pump
 ⑥ Values are guidelines only. Refer to the unit name plate.
 dbT Dry bulb temperature
 wbT Wet bulb temperature
 BPHE Brazed plate heat exchanger