

EcoVolt H2O

Exhaust Air Heat Pump Hot Water System
with CMEV Function



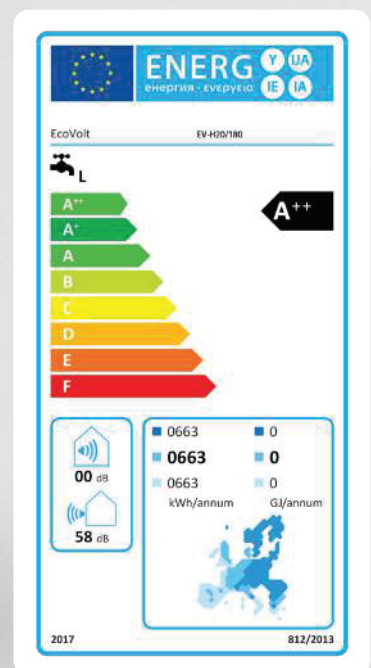
ErP A++



R290
REFRIGERANT

DUPLEX SS TANK
180L & 270L

HIGHEST EFFICIENCY IN IT'S CLASS



LOW CARBON EFFICIENT HOT WATER AND VENTILATION SYSTEM

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HOW DOES ECOVOLT H2O WORK?

The EcoVolt H2O uses a fan to extract ambient air from the wet rooms of the property. This air flows across an evaporator containing a low temperature, energy efficient R290 refrigerant.

- ▶ The heat in the air is transferred to the refrigerant via the evaporator located at the top of the unit.
- ▶ The refrigerant having extracted the heat from the air, then moves to the compressor, which increases the refrigerants pressure & temperature.
- ▶ This high pressure, high temperature refrigerant travels from the compressor to the condenser coil wrapped around the duplex stainless-steel tank. The heat from the refrigerant transfers to the tank which in return heats the water inside until the water reaches its desired temperature.
- ▶ Having transferred the heat to the water, the refrigerant returns to a low temperature and pressure, and reverts to the evaporator.
- ▶ The cycle continues until the refrigerant has transferred enough heat to bring the stored water to its desired temperature. Once the water has reached the desired temperature, the EcoVolt H2O will switch off.
- ▶ The EcoVolt H2O efficiency improves the higher the ambient temperature of the air. It is possible to extract from other locations that contain a lot of waste heat like commercial hair salons, kitchens, server rooms etc.
- ▶ The EcoVolt H2O complies with the Irish building regulations for Part L and Part F for hot water and ventilation. This is possible by the added CMEV function that can be selected on the unit and commissioned by a qualified person in this field.

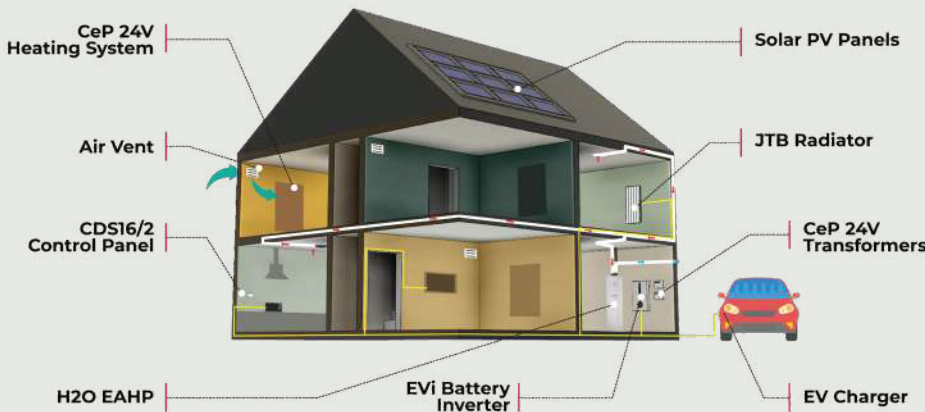
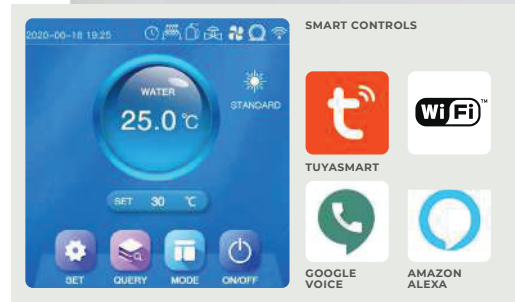
BENEFITS OF ECOVOLT H2O

- ▶ The product comes with an A++ energy rated label and is a renewable energy product as certified by TUV SUD.
- ▶ Uses up to 70% less energy than a traditional electric immersion cylinder.
- ▶ Low standing losses of 0.97 kWh /24h
- ▶ 2 sizes available to suit small apartments to large family homes.



EXHAUST AIR HEAT PUMP HOT WATER SYSTEM WITH CONTINUOUS MECHANICAL EXTRACT VENTILATION (CMEV)

With 2 models available for selection (180L and 270L) the H2O is the designer’s choice to comply with the new nZEB regulations. Fitted with new functions and improved components the H2O can operate as a hot water and ventilation system in one. Delivering excellent efficiency in its class, the H2O makes building compliance easy when entered on the SEAI DEAP portal. Our quick and easy guide on how to enter on DEAP using test data from our EN16147 certificates is available from our website.



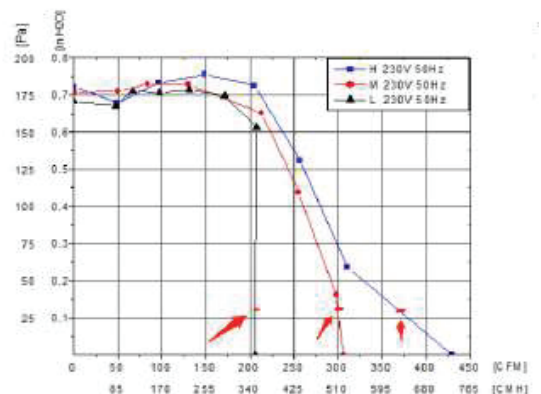
The H2O Exhaust Air Heat Pump

is part of the suite of innovative homes of the future. Everything we do is powered by clean green electricity that can be generated from renewable sources like solar PV and battery storage systems. All our products collectively are a must for all high-performance buildings that conform to the nZEB and Passive House Standard.

CMEV FUNCTION



The CMEV function of the H2O allows the product to comply with the 2019 Part F Irish building regulations for ventilation. One of the approved ventilation strategies under the regulations is continuous mechanical extract ventilation or CMEV for short. Based on the ventilation design the commissioning engineer can set the fan speed using the selector switch and secure with the sealed cover. The fan inside the H2O will continue to run at the set speed to continuously extract from the wet rooms. The settings for the selector switch is OFF / Low Speed / Medium Speed / High Speed. The ventilation rates for the fan are as follows in litres per second 126 / 183 / 226.



TECHNICAL SPECIFICATIONS

ECOVOLT MODEL	EV-H20/180	EV-H20/270
POWER SUPPLY	230V/50HZ	
RATED INPUT POWER (COMPRESSOR)	0.57KW	0.57KW
RATED INPUT CURRENT (COMPRESSOR)	2.9A	2.9A
RATED HEATING CAPACITY (COMPRESSOR)	2.4KW	2.4KW
RATED INPUT POWER (IMMERSION)	1.5KW	1.5KW
RATED INPUT CURRENT (IMMERSION)	6.9A	6.9A
MAX CURRENT (COMPRESSOR & IMMERSION)	12.0A	12.0A
REFRIGERANT	R290 (330G)	R290 (330G)
COMPRESSOR	MIDEA	
ERP LABEL	A++	A++
EFFICIENCY η_{wh} (EN16147)	154.5%	168.7%
COP DHW	3.75	3.81
EXPANSION VALVE	EEV	EEV
WATER TANK CAPACITY	180L	270L
LOSSES PST BY	0.97 kWh/24h	1.02 kWh/24h
INNER TANK MATERIAL	DUPLEX STAINLESS STEEL 2205	
INNER TANK THICKNESS	1.0MM	1.0MM
INNER TANK DIAMETER	Φ 500MM	Φ 500MM
WATER INLET/OUTLET PIPE	G 3/4"/FEMALE	G 3/4"/FEMALE
RATED WATER TANK PRESSURE	8 bar	8 bar
OUTER CASING	RAL 9016	RAL 9016
FAN	VARIABLE	VARIABLE
VENTILATION	VERTICAL DISCHARGE	VERTICAL DISCHARGE
DUCT CONNECTIONS	150MM	150MM
RESISTIVE IMMERSION ELEMENT	1.5KW / DRY HEATER	1.5KW / DRY HEATER
RATED OUTLET WATER TEMPERATURE	55°C	55°C
MAX OUTLET WATER TEMPERATURE	70°C	70°C
WORKING RANGE WITH ELECTRIC HEATER	-15°C-43°C	-15°C-43°C
WORKING RANGE WITHOUT ELECTRIC HEATER	-7°C-43°C	-7°C-43°C
ANTI-CORROSION FOR WATER TANK	MAGNESIUM ANODE	MAGNESIUM ANODE
ANTI LEGIONELLA	WATER HEATED UP TO 70°C BY ELECTRIC HEATER	
IP CLASS	IPX1	IPX1
UNPACKED DIMENSION	Φ 620×1620MM	Φ 620×1850MM
PACKED DIMENSION	700×700×1790MM	700×700×2010MM
NET WEIGHT	88KG	102KG
GROSS WEIGHT	106KG	120KG
NOISE @ 1 METER	46 dB	46 dB
VENTILATION RATES	300m3/hr / 83.3l/s	300m3/hr / 83.3l/s