



POLYTROPIC

• POOL HEATING SOLUTIONS •



ELITE R290

The eco-responsible heat pump
for the swimming pool of tomorrow



INNOVATION !

The ELITE R290 heat pump has been developed by our R&D department to make the most of full-inverter technology while using a natural, environmentally-friendly refrigerant, R290.

Above and beyond current regulations, it prefigures the machine of tomorrow with **innovative operation and high energy efficiency**. It's **THE solution of the future** - available today! - to reduce the carbon footprint of pool heating.



Technical specifications

MODELS	ELITE R290 XS	ELITE R290 S	ELITE R290 S+	ELITE R290 M	ELITE R290 XM
SCOP acc. to EN 17645	7,8	7,5	7,9	7,8	7,6
Classification acc. to EN 17645	A	A	A	A	A
Recommended pool size*	15-45 m³	45-55 m³	55-70 m³	70-85 m³	85-105 m³
Air 26°C / Water 26°C / Humidity 80%					
Energy Output POWER BOOST mode	9,2 kW	12,5 kW	14,2 kW	16,6 kW	21,5 kW
COP POWER BOOST Mode	5,7	5,5	5,5	5,1	5,5
Energy Output SMART mode	7,5 ~ 4,3 kW	9,4 ~ 5,0 kW	11,9 ~ 7,1 kW	14,1 ~ 8,1 kW	17,8 ~ 11,5 kW
COP SMART Mode	11,2 ~ 6,8	10,3 ~ 6,3	11,1 ~ 6,6	11,2 ~ 6,0	11,2 ~ 5,9
Energy Output ECO-Silence mode	4,3 kW	5,0 kW	7,1 kW	8,1 kW	11,5 kW
COP ECO-Silence Mode	11,2	10,3	11,1	11,2	11,2
Air 15°C / Water 26°C / Humidity 70%**					
Energy Output POWER BOOST mode	6,9 kW	9,2 kW	10,8 kW	12,8 kW	17,1 kW
COP POWER BOOST Mode	4,4	4,5	4,5	4,4	4,4
Energy Output SMART mode	5,7 ~ 3,3 kW	7,6 ~ 4,1 kW	9,1 ~ 6,8 kW	10,9 ~ 6,2 kW	14,1 ~ 9,1 kW
COP SMART Mode	7,1 ~ 5,1	7,2 ~ 5,3	7,2 ~ 5,4	7,4 ~ 5,1	7,5 ~ 4,8
Energy Output ECO-Silence mode	3,3 kW	4,1 kW	5,5 kW	6,2 kW	9,1 kW
COP ECO-Silence Mode	7,1	7,2	7,2	7,4	7,5
Air 7°C / Water 26°C / Humidity 90%					
Maximum power output	5,8 kW	7,1 kW	9,0 kW	10,6 kW	13,7 kW
COP minimum	3,9	4,0	4,0	3,8	3,3
Air -15°C / Water 26°C / Humidity 0%					
Maximum power output	2,8 kW	3,5 kW	4,6 kW	4,9 kW	8,2 kW
COP minimum	2,0	2,4	2,3	2,1	2,2
Noise level min-max (at 10m) according to EN ISO 3741 : 2010	25 ~ 27 dB(A)	27 ~ 29 dB(A)	27 ~ 30 dB(A)	28 ~ 32 dB(A)	28 ~ 33 dB(A)
Noise level min-max (at 10m) according to EN ISO 3744 : 2010	21 ~ 24 dB(A)	22 ~ 25 dB(A)	25 ~ 28 dB(A)	25 ~ 29 dB(A)	26 ~ 29 dB(A)
Temperature working range	-25°C -> +43°C				
Installation					
Hydraulic connections	1,5" / 50 mm				
Power	220-240 V / 1~+N / 50 Hz				
Circuit breaker and cable size (for 20 m)	C 10 A (3G 2,5 mm²)	C 16 A (3G 2,5 mm²)	C 16 A (3G 2,5 mm²)	C 20 A (3G 4 mm²)	C 20 A (3G 4 mm²)
Power input Max (air 28°C)	1,8 kW	2,0 kW	2,4 kW	3,4 kW	4,1 kW
Minimum water flow	2 m³/h	2 m³/h	3 m³/h	4 m³/h	5 m³/h
Dimensions in mm (L x l x h)	960 x 475 x 755		1190 x 555 x 970		
Weight net (gross)	73 kg (79 kg)	74 kg (80 kg)	91 kg (98 kg)	92,5 kg (99,5 kg)	94 kg (101 kg)

* Period from May to September with cover.

** Tests carried out at an air temperature of 15°C, with a water inlet at 26°C and a water outlet at 28°C to define the water flow rate, heating capacity and consumption, in accordance with FPP recommendations.

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VERY HIGH ENERGY EFFICIENCY

- ✓ Environmentally-friendly gas
- ✓ Excellent COP
- ✓ Controlled energy consumption thanks to exclusive self-regulation
- ✓ Compatible with photovoltaic panel systems PolySolar Energy System
- ✓ Body made from recycled materials
- ✓ A cutting-edge, innovative design



Using the natural refrigerant R290 (or propane) has a number of advantages.

- **Reliable, natural and neutral** for the environment, the physical properties of R290 natural and environmentally-friendly gas and its high energy efficiency make it possible to achieve an even better COP.
- The use of R290 propane also **extends the range of operating temperatures** (down to -25°C)
- It requires no special training for servicing or recharging, and no annual leak check. **What's more, R290 is not affected by current F-Gas regulations and the regulatory context that is restricting the use of traditional fluids.**

Equipment benefits



SIMPLE, INTUITIVE OPERATION

Colour TFT touchscreen.

3 operating modes: Heating, Cooling and Automatic (heating or cooling to maintain set temperature).



OPTIMISED PERFORMANCE

Optimal Twist : a spiral wound PVC/titanium condenser that is impervious to corrosion.



2D Technology : an INVERTER compressor with enhanced performance, very high COP thanks to its hertz-by-hertz speed variation.



DC Brushless : a fan with variable speed down to the rpm to ensure optimum performance.



INTELLIGENT OPERATION

PolySmart Control : the heat pump regulates its own power to adapt to the needs of your pool, depending on the water temperature and the ambient temperature.



VERY LOW NOISE LEVEL

Standard sound insulation and variable compressor and fan speeds ensure extremely low noise levels.

NEW !



POWER BOOST MODE

This mode **optimises the performance of the heat pump** by providing more power and accelerating the temperature rise at the start of the season.

It **reduces heating time by 20%**, ensuring faster heating and greater efficiency for optimum use of the pool from the start of the season.



20% SHORTER HEATING TIME



CONNECTED SOLUTION

PolyConnect inside : **wifi module and 4G key** included for remote control via smartphone and permanent supervision by the Technicenter.



EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

- Defrosting by cycle inversion,
- Compressor crankcase preheating,
- Condensate anti-freeze system,
- Automatic control of the 'low temperature' system.

ACCESSORIES INCLUDED : winter cover, 50 mm hydraulic connection kit, 4 'Silent block' anti-vibration pads, condensate drainage kit.



NEW !

REFRIGERANT PRESSURE INDICATION TO OPTIMISE POOL PERFORMANCE

This new function **maximises system performance while reducing energy consumption**: the pressure sensor included in the ELITE R290 displays **the refrigerant pressure in the heat pump in real time** to optimise performance, **and indicates the ideal flow rate to achieve the best COP**.

- + **OPTIMISATION**: the sensor reads the refrigerant pressure in real time to help adjust the water flow rate. Adjusting the by-pass or variable speed filtration pump then ensures optimum machine performance, providing improved energy efficiency and energy savings.
- + **ACCURACY**: precise measurement of the refrigerant pressure means you can fine-tune the water flow rate and the heat pump's output for greater efficiency.
- + **DOMOTICS**: compatible with most automated equipment management systems (Indygo, Vigipool, E-Dro, PoolCop). Pressure information is sent to the variable speed pump to automatically adjust the water flow and ensure better performance.
- + **MAINTENANCE**: in the event of a refrigerant pressure anomaly, the PolyConnect connected solution transmits the information directly, facilitating after-sales diagnostics and reducing response times.

Ideal 'hybrid' installation with the photovoltaic panels

Save even more on your energy bill with the Elite R290 heat pump, by combining it with the PolySolar Energy system photovoltaic panel kit.

Electricity consumption is then further optimised by freeing itself in part from the electricity distribution network and enabling self-consumption.

**SUPPLIES UP TO 100%
OF THE CONSUMPTION
REQUIRED TO KEEP YOUR
HEAT PUMP RUNNING
SMOOTHLY.***



* depending on the model and number of panels



POLYCONNECT_{2.0}



CONNECTED SOLUTION

Easily connect the heat pump by scanning the QR code, control it via the free app and **benefit from secure remote supervision** for preventive maintenance and remote diagnosis by Polytropic technicians.

