



RAK INVERTER

Commercial and large pools specific



Video Demo


POLYCONNECT 2.0



REDUCE ENERGY BILLS AND CONTROL NOISE LEVELS

with this full-Inverter technology reversible high-power heat pump specially designed for large sized pools.

The exclusive intelligent system integrated into RAK Inverter heat pumps **regulates the output** in relation to the water temperature but also takes into consideration the outside air temperature. This guarantees **heating performance** at the **best COP*** and **lowest noise level!**



Features and benefits



SIMPLE AND INTUITIVE OPERATION

Color digital touch screen.

Three operating modes: heating, Cooling and Automatic.



INTELLIGENT OPERATING MODE

PolySmart Control: the heat pump autoregulates its output depending on the water and air temperature.



INSTALLATION

Several units (up to 16) can be connected
Master controller to be ordered as an option.

OPTIMAL PERFORMANCES



Optimal Twist: Titanium exchanger in a PVC housing, efficient and corrosion resistant.



2D Technology: inverter compressor, higher COP thanks to the Hz by Hz variable speed motor.



FULL INVERTER

DC Brushless: variable speed fan motor ensures optimal performances.



OPTIMAL COP

An efficient electronic expansion valve which regulates the flow of refrigerant gas in accordance with the weather conditions.



EXCLUSIVE «LOW TEMPERATURE» SYSTEM

- Reverse-cycle defrosting,
- Preheating of the compressor housing,
- Antifreeze system for the evaporators condensation,
- Automatic piloting of the 'low temperature' system.



COMMISSIONING AND WINTERING

The technical start-up and the 1st wintering of the machine can be carried out on request by dedicated POLYTROPIC technicians.



CONNECTED SOLUTION

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



Accessories included: winter cover, hydraulic connection kit, multilingual user and maintenance manual

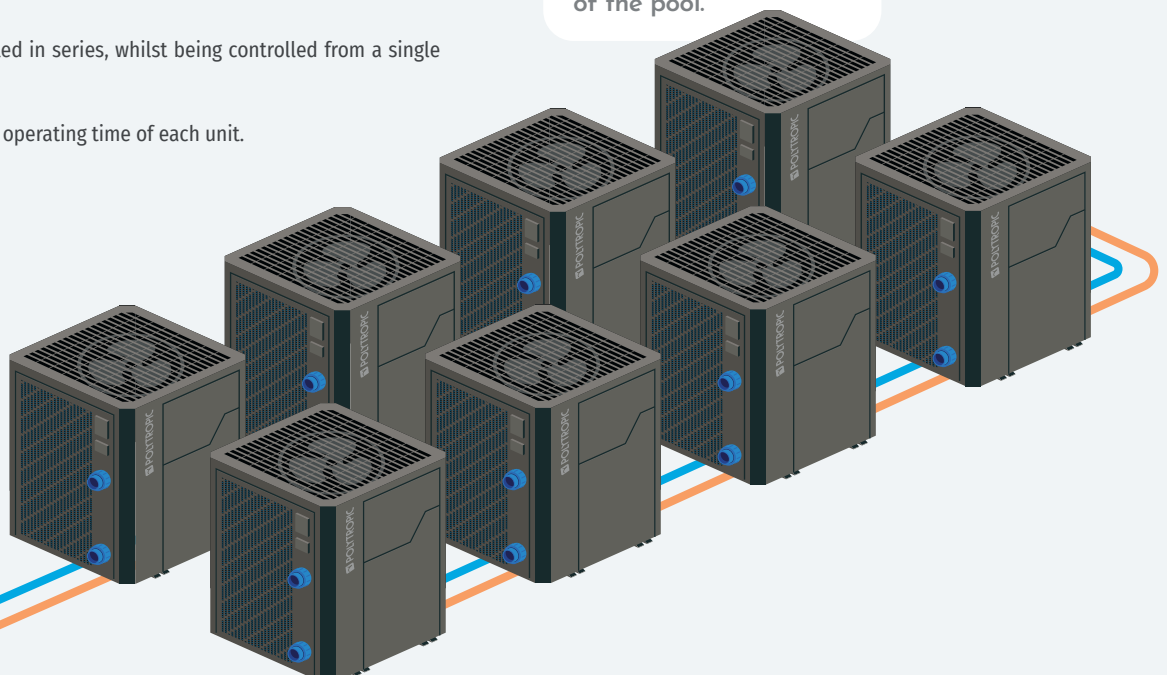
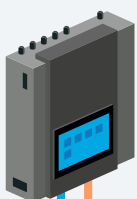
An exclusive system

EASY INSTALLATION AND CUSTOMIZED SOLUTION

- Installation is made easy with this compact pool heat pump and its standard electrical connection.
- RAK Inverters can be installed in series, whilst being controlled from a single remote display
- The regulation optimize the operating time of each unit.

Up to 16 units can be connected depending on the needs and volume of the pool.

Remote control screen in the technical room



Technical specifications

THREE-PHASE MODELS	RAK35 IVT	RAK45 IVT	RAK90 IVT
SCOP according to EN 17645	7,1	7,1	7,2
Classification according to EN 17645	A	A	A
Air 26°C / Water 26°C / Humidity 80%			
Energy Output BOOST mode	41,5 kW	56,8 kW	103,2 kW
COP BOOST mode	6,1	5,6	5,2
Energy Output SMART mode	41,5 ~ 24,1 kW	56,8 ~ 24,4 kW	103,2 ~ 39,1 kW
COP SMART mode	6,1 ~ 10,2	5,6 ~ 10,2	10,2 ~ 5,2
Energy Output SMART ECO-Silence mode	24,1 kW	24,4 kW	39,1 kW
COP ECO-Silence mode	10,2	10,2	10,1
Air 15°C / Water 26°C / Humidity 70%*			
Energy Output BOOST mode	35,6 kW	43,7 kW	84,1 kW
COP BOOST mode	4,6	4,4	4,5
Energy Output SMART mode	35,6 ~ 18,0 kW	43,7 ~ 18,2 kW	84,1 ~ 31,9 kW
COP SMART mode	7,2 ~ 4,6	7,1 ~ 4,4	6,5 ~ 4,5
Energy Output SMART ECO-Silence mode	18,0 kW	18,2 kW	31,9 kW
COP ECO-Silence mode	7,2	7,1	6,5
Air 7°C / Water 26°C / Humidity 90%			
Energy Output BOOST mode	28,5 kW	32,9 kW	63,7 kW
COP BOOST mode	3,7	3,4	3,2
Air -7°C / Water 26°C / Humidity 0%			
Energy Output BOOST mode	17,8 kW	21,9 kW	40,4 kW
COP BOOST mode	2,8	2,7	2,4
Noise level CTTM mini-maxi (at 10m) according to EN ISO 3741 : 2010 **	46 ~ 49 dB(a)	46 ~ 51 dB(a)	-
Maximum noise level (at 10m) according to EN ISO 3744: 2010	39 dB(a)	44 dB(a)	49 dB(a)
Temperature working range	-15°C -> 43°C		
Installation			
Hydraulic connexions	63 mm		Flange 90 mm
Power	400 V / 3~+N / 50 Hz		
Circuit breaker and cable size (for 20 m)	3P +N C 25 A (5G*4 mm²)	3P +N C 32 A (5G*6 mm²)	3P +N C 50 A (5G*10 mm²)
Power Input Max (air 26°C)	6,8 kW	10,1 kW	25,0 kW
Minmum water flow	12 m³/h	15 m³/h	38 m³/h
Dimensions in mm (L x l x h)	1050 x 1050 x 1260		2000 x 980 x 1960
Weight net (gross)	207 kg (264 kg)		530 kg (620 kg)

* Tests run with air temperature of 15°C, water inlet temperature of 26°C and water outlet temperature of 28°C in order to define the required water flow, heating capacity and consumption. In accordance with FPP recommendations (French Pool Federation).

**The BOOST and ECO mode noise levels at 10 m are certified by the independent testing laboratory CTTM according to EN ISO 3741 : 2010.

***Noise levels in BOOST and ECO mode at 10 m, certified by the independent laboratory Centre de Transfert de Technologie du Mans, according to EN ISO 3741: 2010



Colour touch screen

A LARGE AND HIGHLY RESPONSIVE COLOR TOUCH SCREEN

- High capacitive **TFT touch screen** and large size for **good readability**: L 72 x H 68 mm, 4" diagonal (over 10.5 cm) .
- Protected by a **layer of thermal toughened glass** to ensure **maximal resistance**.
- The transparent protective door protects the display from climatic conditions, dust and scratches.

Remote control screen in the technical room to control several units (optional)
Code : AO1500001



Intuitive user interface

THE MULTILINGUAL CONTROL INTERFACE

Clear operations and intuitive navigation:



Access the 3 intuitive operating modes in a single gesture!



Alarm messages, diagnostics and problem resolutions, hotline contact



Access to the last 50 log-book events



POLYCONNECT2.0
INSIDE

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



POLYTROPIC
TechniCenter

The Polyconnect application offers an additional
2 Year warranty on all parts *



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POLYCONNECT2.0

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