



POLYTROPIC

Pool Heating Solutions

CATALOGUE

HEAT PUMPS - HEAT EXCHANGERS
DEHUMIDIFIERS - POLYCONNECT

2020





POLYTROPIC

Pool Heating Solutions

EDITORIAL

POLYTROPIC is committed to the design and manufacture of high-quality pool heating solutions.

On the pool heating market since 2003, we develop complete ranges of heat pumps and dehumidifiers designed to meet the specific needs of the pool world through a sustainable, global approach.

Proven know-how, reliable tested and certified products, and an energy efficient, innovative approach are the assets that make POLYTROPIC a **leading French brand** in pool heating.

This position is reinforced by our capacity to provide support to professionals and individuals throughout the life cycle of our products. **A design office** at your service, **an in-house telephone technical service** and **a reactive customer services network** respond to all your requests and those of your customers.

This new catalogue is once again an opportunity to reinforce the strong values on which the company has been based since it was founded: technicality, innovations, reliability and commitment to our customers!

The POLYTROPIC team

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A SPECIFIC EXPERTIZE

To be able to offer you one of the most reliable, affordable pool heaters **on the market**, we have chosen to specialise in pool heat pumps.

Our specific expertise leads us to regularly **develop new ranges**, respond with great flexibility to the needs of our customers and anticipate the necessary market developments.

Beyond the supply of quality equipment, we also stand out for the particular attention we pay to **customer service**. Listening to our customers, understanding their specific needs, providing support at all times and keeping our commitments are our priorities.



OUR COMMITMENT

We are continuously committed **to providing a solution to all requests from our professional customers**, even the most specific ones, in order to satisfy the pool owners.

Our entire team, from the product design stage to the after sales service, is involved and committed to customer satisfaction:



RELIABLE PRODUCTS

Beyond the respect for safety standards, we systematically **check**, through strict methodological test procedures, the performances and the robustness of our products **on our test benches**. The technicity, the reliability and the life cycle of Polytropic products are recognized by our customers, who have entrusted us over last 15 years.



ADAPTED SOLUTIONS

Our capacity to listen to and to understand the specific needs of our partners, to respond efficiently and **to provide innovative solutions at the right price** allows us to create long term partnerships.



LONG TERM PARTNERSHIP

It is our responsibility to assist **our professional customers as well as the pool owners**. Our technical team is at your service to reply to all queries in short notice.

WARRANTIES

All our swimming pool Heat Pumps have a 3-year minimum warranty to cover spare parts, labour and field servicing. Our **Premium customers** can benefit from a 5-year warranty. If you would like to become our Premium partner, **please contact us**.



CUSTOMER SATISFACTION

Customer satisfaction is a top Priority at Polytropic!

Our main concern is to understand the needs of our customers: retailers, installers and pool owners.

It is this concern to perform that has made our reputation and that drives all our actions.



• **ADVICE**

Lay-out, selection, technical advice.



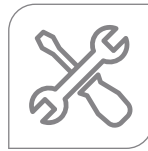
• **R&D**

Design, recommendation, selection.



• **LOGISTICS**

Stocking, order preparation, shipping.



• **AFTER SALES SERVICE**

Internal multi-lingual technical hotline throughout the product life-cycles.



• **NETWORK OF TRAINED TECHNICIANS**

Ready for intervention on a growing number of territories.



• **TRAINING**

We offer free training for your technical teams on our test bench to master installation and the workings of our products.

LES CERTIFICATIONS



• Polytropic is an active member of the French Pool Federation (Fédération des Professionnels de la Piscine - FPP) and an Environment Committee and heating task force leader.



• **ROHS Certification**

All the electric and electronic components mounted on the heat pumps produced and distributed by Polytropic are free from dangerous substances.



• **ISO standards**

All the Polytropic production sites are compliant with the international standard ISO 9001 :2000 relative to management and production quality.



• **TÜV partnership**

All the Heat Pumps are certified by an independent TÜV laboratory in compliance with the European norms for the following standards:
- Noise level: ISO/EN 354 standard,
- Heating capacity: ISO/EN 5151 standard,
- CE EMC and LVD standard



• **Eco-participation**

Polytropic pays the eco-contribution to ECOSYSTEMES for the recycling of heat pumps.



• **F-GAS regulation**

All the heat pumps made by Polytropic are charged with R290, R32 and R410a gases and in line with the current F-GAS regulation.

DURABLE SOLUTIONS

Not only is energy efficiency a major selection criteria today, the global environmental impact of a heat pump is now also critical.

The European F-Gas regulations enforce a reduction of HFC refrigerant gasses with strong global warming potential (PRG). The project is to ban these gasses completely in the longer term. R410A gas which is commonly used in heat pumps is now subjected to comply with the new F-Gas regulation and the heat pump market has had to react.

As a designer/manufacturer of heat pumps and in order to meet and exceed the regulations, **Polytropic offers alternatives to the current technologies.** Our research work has led us to develop machines with new refrigerant gasses that are less harmful and as efficient.

We have developed:

- A complete range of Inverter heat-pumps running on R32 gas, currently in stock.
- A specific range of heat pumps for Commercial pools running on R290 gas, available for commercial and public swimming pool sector.



R32, BETTER FOR THE ENVIRONMENT AND FOR PERFORMANCE

R32 is the gas that naturally replaces R410A. R410A is composed for more than 50% of its volume of R32 and the thermodynamic properties of the two gases are relatively equivalent, with a slight advantage of 5-7% for R32.

The benefits of R32:

- No impact on the Ozone layer
- 5 to 7% better performance compared to R410A
- Less gas required in the circuit for the same output (20 to 30% less fluid)
- Completely pure fluid, easier to recycle
- PRG of 675 (compared to 2088 for R410A)



R290, NATURAL AND NEUTRAL FOR THE ENVIRONMENT

R290 gas is an excellent alternative to HFC type gasses as its impact on the environment is extremely low and it has excellent thermodynamic properties. Propane (R290), as a refrigerant gas is not affected by restrictions in the industrial world.

The benefits of R290:

- Natural
- No impact on the Ozone layer
- High energetic performance (COP of 6 at Air 15°C)
- PRG of 3 only (compared to 2 088 for R410A)
- Very reliable gas
- Reduced maintenance – not liable to annual testing of the circuit

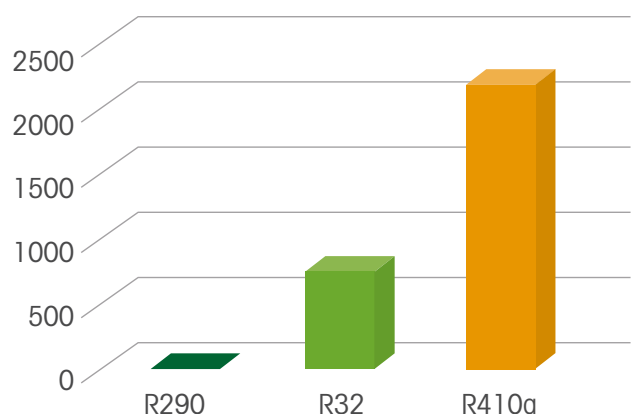
Please note that the noise level of the machines is not affected by the gas type used and the new technological solutions allow for reduced noise levels (Inverter Technology)

SOME INTERESTING FIGURES

For comparison means:

R290	G.W.P* = 3
R32	G.W.P* = 675
R410a	G.W.P* = 2088

*G.W.P. : identifies the Global Warming Potential of a gas.



A COMPREHENSIVE FIELD AFTER SALES SERVICE NETWORK

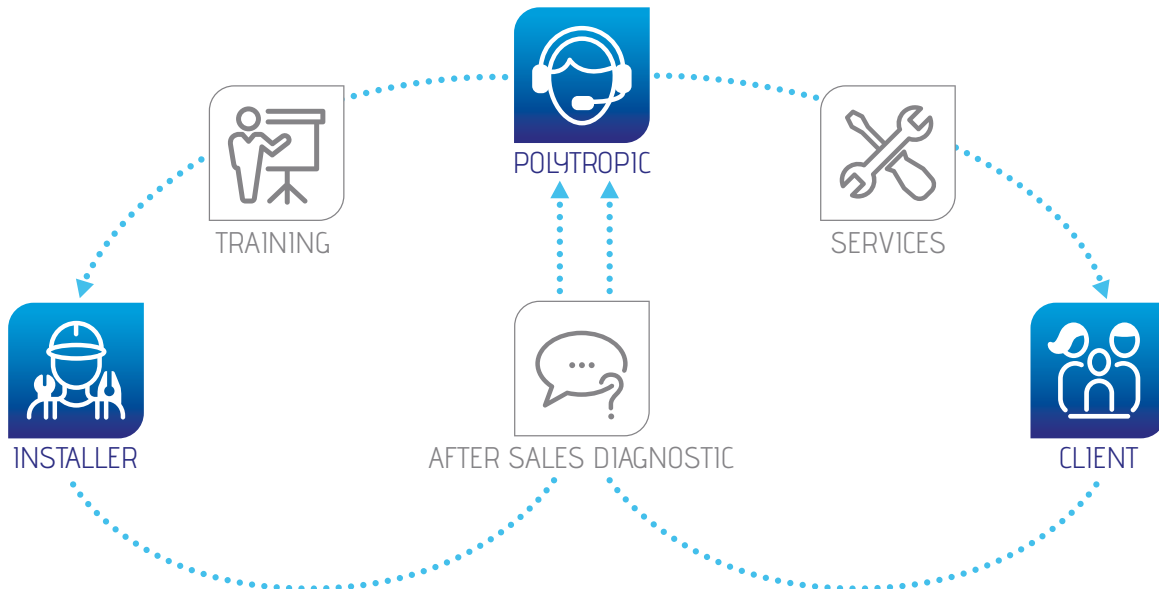
FOR THE PROFESSIONALS AND POOL OWNERS

POLYTROPIC has carefully selected over **further 90** in **Spain, Germany, Benelux, England and Switzerland.**

Managed by our head office in **Lyon**, the technical network is permanently monitored to ensure **swift quality intervention.** **The monitoring also measures in-coming calls and customer handling management.**

The technical team will accompany installers from product selection through to installation and start-up.

The servicing diagnostic is done directly with the pool owner. Our technicians then set up all the necessary procedures to ensure swift action and customer satisfaction without heavy administration burden.



HOTLINE

+33 4 78 56 93 96

Not surcharged call

For further information: www.polytropic.fr

POLYTROPIC DESIGN OFFICE

DESIGN, RECOMMENDATION, SELECTION

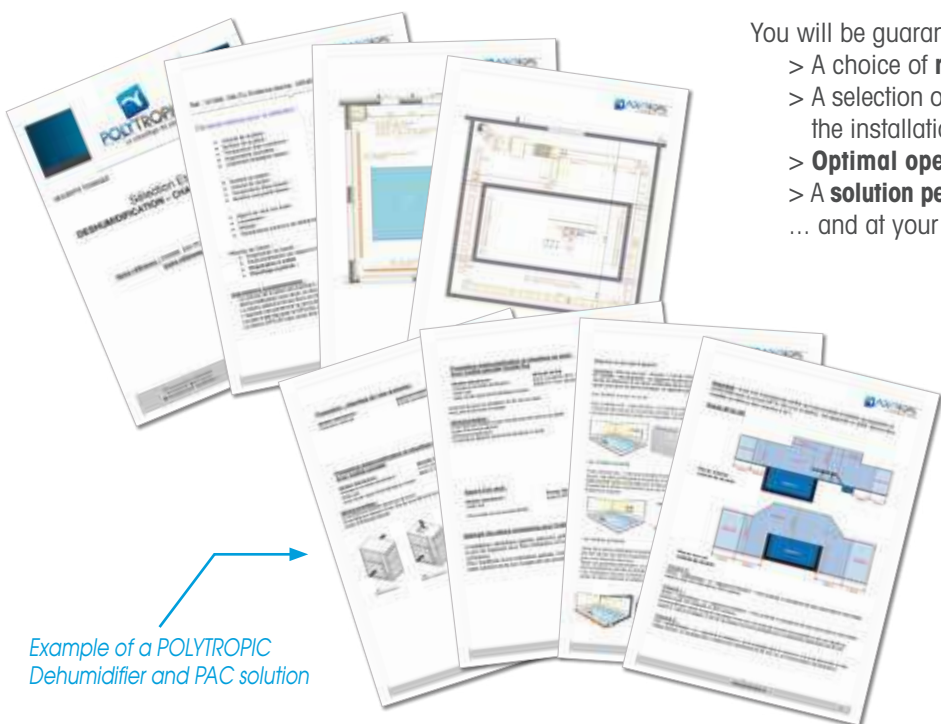
We are continuously working to strengthen a global solution to further increase **customer satisfaction**. The specific support of the **Polytropic DESIGN OFFICE** guarantees the best diagnosis and recommendation possible based on the specific characteristics of your project: audit, thermal studies, selection and sizing of equipment, location, etc.

The **technical design office** is available to professionals to **assist them in the choice of the heating or dehumidification device** and its installation:

- > What heat pump model? What technology? What power is required depending on the size of the pool, the geographical area and the frequency of pool use? **Each pool heating project is unique** and sometimes difficult to design. **The POLYTROPIC technical design office provides support** by proposing a suitable solution for each pool!
- > **The aeraulic experience of a team of dedicated and trained technicians** advises you in the sizing and ideal location of very specific **dehumidification equipment for indoor pools** (devices, accessories, duct networks, etc.)

You will be guaranteed:

- > A choice of **relevant equipment at the best price**
- > A selection of **essential accessories** to be able to complete the installation
- > **Optimal operation** of the facility
- > A **solution perfectly adapted** to the specificity of the project ... and at your customer's request!



Example of a POLYTROPIC Dehumidifier and PAC solution

Thanks to our team's expertise in this area, we provide clear, precise, customised plans for your project.



100% CUSTOMER-ORIENTED TRAINING

Polytropic offers technical training provided by qualified trainers who are in touch with the real needs of the profession.

As designer-manufacturers, we are able to provide **free training for your technical teams** on request to help you master the operation and installation of our products.

This is good opportunity to meet and exchange ideas to obtain clear and relevant information so that you can **offer your customers the best services** and technical advice.

Discover the full catalogue of solid training with technical workshops **in your workplace or at POLYTROPIC**, in French and in foreign languages, and benefit from our unique expertise.



HOW TO CHOOSE A HEAT PUMP?

OUR AQUAVARIATION SOFTWARE

Choosing the right power for your heat pump means, above all, **optimising your energy consumption, controlling your budget and maximising your enjoyment.**

THE SOLUTION: We have developed **thermodynamic calculation software** based on heat transfer equations to precisely determine the pool's thermal losses. This allows you to compare and choose the most suitable heat pump for your customer's pool.

Thanks to our Aquavariation software, you can also estimate **the energy consumption** of the selected heat pump.

Accessible online, Aquavariation is easy to use on tablets, PCs and smartphones.

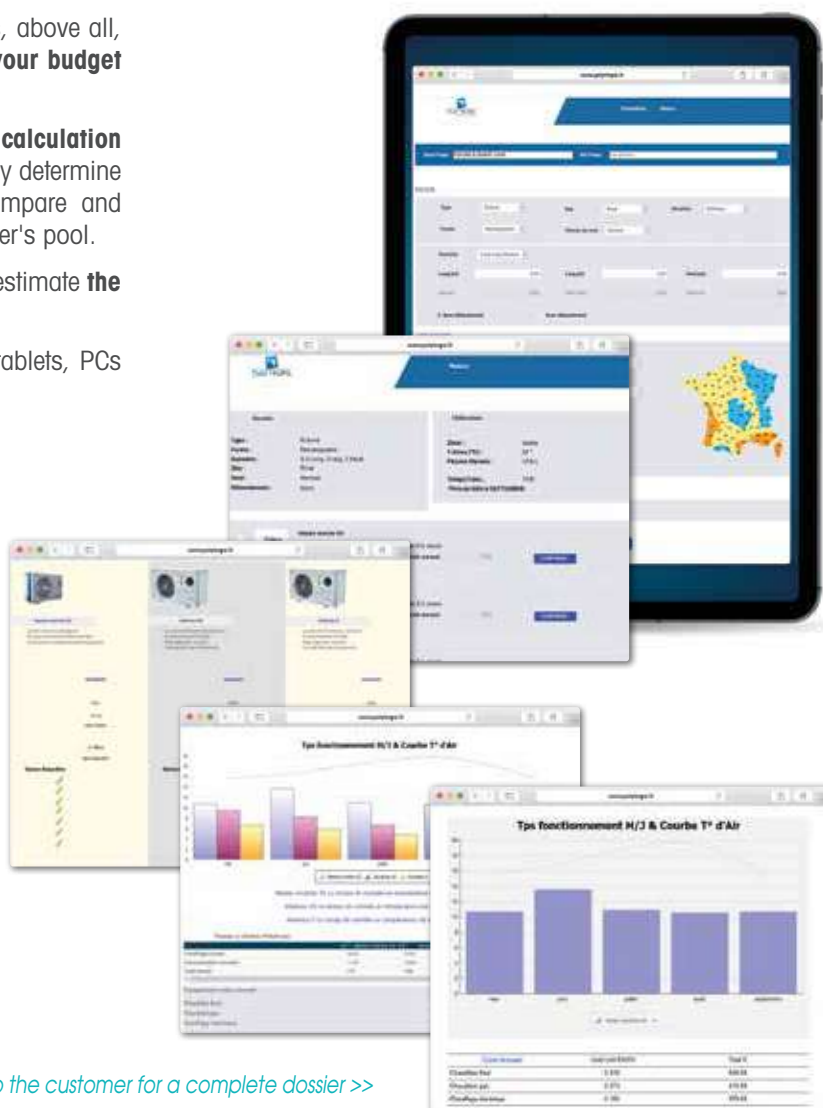
NEW!

In addition to the size of the pool, its location and conditions of use:

- > The wind speed and overflow pool parameters are now taken into account.
- > The pump operating time can be modified.
- > The accessories compatible with the selected machine are displayed.



AQUAVARIATION

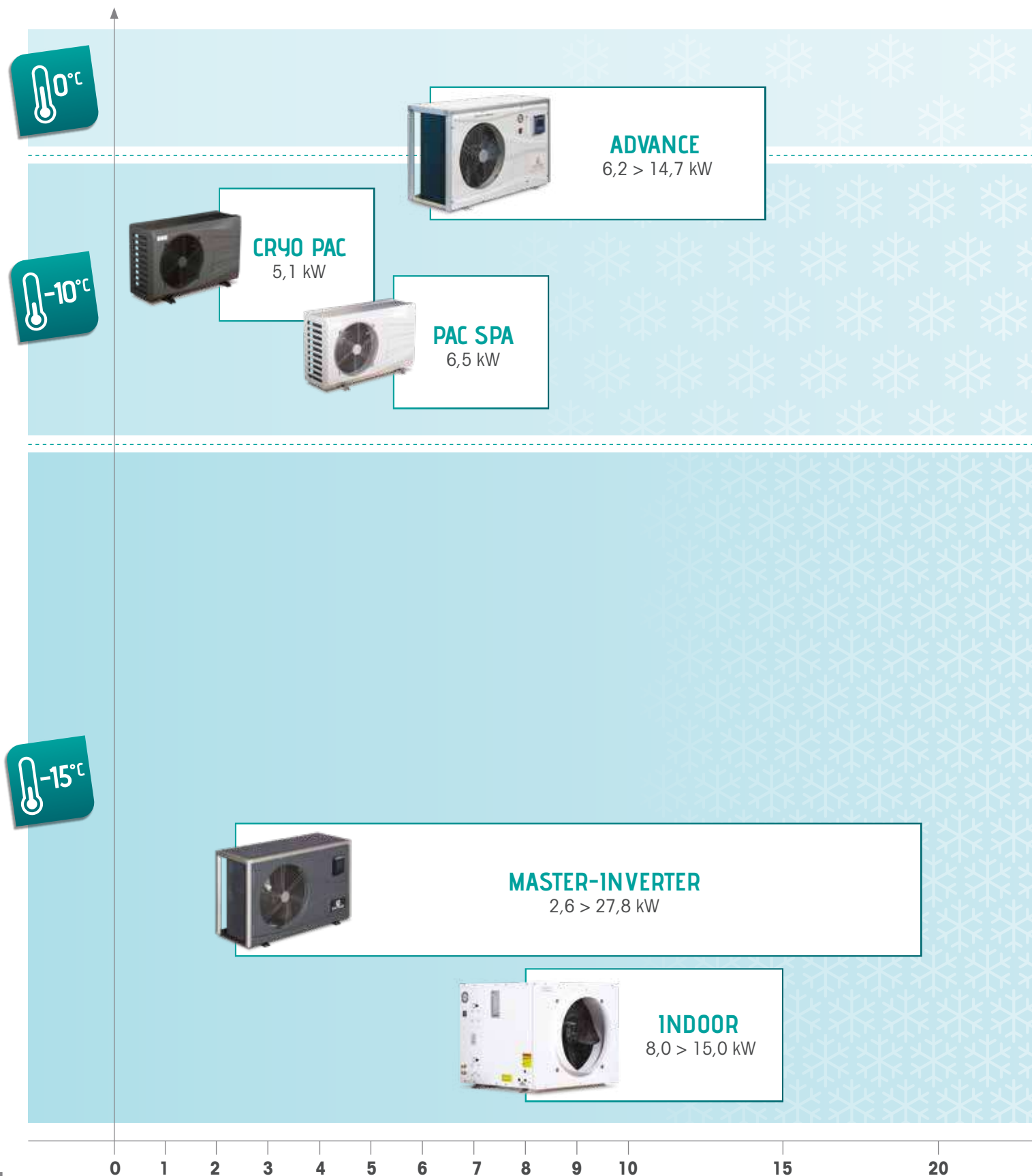


Detailed report to be given to the customer for a complete dossier >>

OVERVIEW

HEAT PUMPS

WORKING
TEMPERATURE



Heating capacity according to FPP recommendations:
Air 15°C / Water 26°C / 70% Humidity Rate



RAK
30 > 90 kW



GREEN PAC
50 > 100 kW

25 30 40 50 60 70 80 90 POWER

ADVANCE Range



THE SPRING TO AUTUMN SOLUTION

The best suited Heat Pump to secure a longer swim season with a stable water temperature of 28°C



ADVANCE XM three phase

ADVANCE M

ADVANCE S

ADVANCE XS



FEATURES AND BENEFITS

• SIMPLE AND INTUITIVE

An intelligent LED display, developed specifically for:

- Programming and visualising the temperature
- Setting the calendar and operation periods
- **3 operating modes: Heating, Cooling and Automatic**



• EFFICIENT AND RAPID DEFROSTING

A 4-way valve allowing:

- Reverse-cycle defrosting
- operation at low temperatures



• LOW NOISE LEVEL

Noise reduction insulation on all panels (ABS Panels)



• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

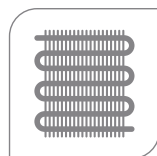
Protection of the heat pump at temperatures below 0°C:

- Preheating of the compressor housing
- Antifreeze system of the evaporator condensation
- Automatic piloting of the 'low temperature' system



• OPTIMAL PERFORMANCES

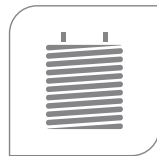
- « BlueFins » evaporator for a better corrosion resistance and better evacuation of the condensation (hydrophobic).



- Rotating or Scroll compressors - robust, efficient and quiet.



- Titanium exchanger in PVC housing, efficient and corrosion resistant.



• CONNECTED SOLUTION

Compatible with the remote management solutions - Polyconnect PRO and LITE. See pages 31 and 48



• IMPROVED COP LEVELS*

An intelligent electronic expansion valve is incorporated adapting the flow of cooling gas in accordance with the working conditions.



TECHNICAL SPECIFICATIONS

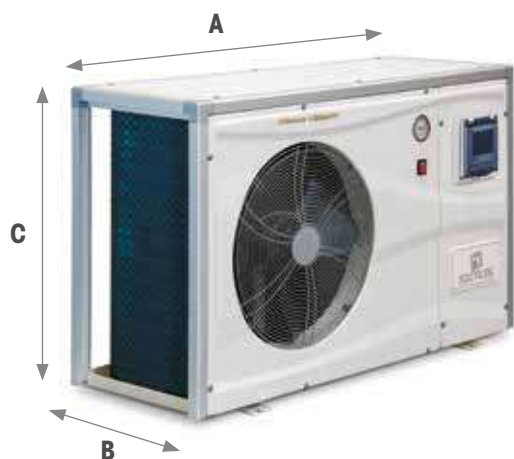
Model	Advance XS 1-Phase	Advance S 1-Phase	Advance M 1-Phase	Advance M 3-Phase	Advance XM 3-Phase
Recommended pool size <i>(May to September with cover)</i>	30 - 45 m ³	45- 60 m ³	60 - 85 m ³	60 - 85 m ³	85 - 105 m ³
Air 28°C / Water 28°C / 80% Humidity rate					
Energy Output	8,20 kW	10,10 kW	14,90 kW	16,30 kW	18,90 kW
Energy Input	1,55 kW	1,91 kW	2,81 kW	3,13 kW	3,63 kW
COP	5,30	5,30	5,30	5,20	5,20
Air 15°C / Water 26°C / 70% Humidity rate*					
Energy Output	6,20 kW	8,20 kW	11,70 kW	12,90 kW	14,70 kW
Energy Input	1,35 kW	1,74 kW	2,54 kW	2,78 kW	3,20 kW
COP	4,60	4,70	4,60	4,60	4,60
Compressor	Rotating TOSHIBA	Rotating TOSHIBA	Rotating TOSHIBA	Scroll Copeland <small>brand products</small>	Scroll Copeland <small>brand products</small>
Intensity (maximum)	5,2 A (6,5 A)	7,8 A (10,6 A)	11,4 A (14,2 A)	4,6 A (6,4 A)	5,2 A (7,0 A)
Hydraulic connections	1,5" / 50 mm	1,5" / 50 mm	1,5" / 50 mm	1,5" / 50 mm	1,5" / 50 mm
Power	230V / 1~+N / 50 Hz	230V / 1~+N / 50 Hz	230V / 1~+N / 50 Hz	400V / 3~+N / 50 Hz	400V / 3~+N / 50 Hz
Breaker and cable size for 20 m with D curve	D 16 A (3G2,5 mm ²)	D 16 A (3G2,5 mm ²)	D 20 A (3G4 mm ²)	D 16 A (5G2,5 mm ²)	D 16 A (5G2,5 mm ²)
Minimum water flow	5 m ³ /h	5 m ³ /h	5 m ³ /h	5 m ³ /h	6 m ³ /h
Noise level (at 10 m)	32 dB(a)	33 dB(a)	33 dB(a)	33 dB(a)	34 dB(a)
Temperature working range	0°C -> 35°C			-15°C -> 35°C	
Weight (net)	58 kg	73 kg	90 kg	93 kg	97 kg
Soft starter	Yes	Yes	Yes	Yes	Yes
Refrigerant	R32			R410a	

*In accordance with FPP recommendations (French Pool Federation)

The heating capacity, COP and noise levels are TÜV certified.

ACCESSORIES INCLUDED: winter cover, 50 mm hydraulic connection kit, 4 "Silent block" anti-vibration pads, condensate drainage kit, multilingual user and maintenance manual.

DIMENSIONS



Dimensions in mm	Advance XS 1-Phase	Advance S 1-Phase	Advance M 1-Phase	Advance M 3-Phase	Advance XM 3-Phase
A	1007	1007	1117	1117	1117
B	401	401	485	485	485
C	617	617	701	701	701

> ACCESSORIES SEE PAGES 28/31

MASTER-INVERTER Range



THE INTELLIGENT SWIMMING POOL HEAT PUMP

Control your heat pump in silence with this swimming pool heat pump with integrated FULL INVERTER Technology.



MASTER INVERTER L and L+

MASTER INVERTER XXS, XS, S and S+

MASTER INVERTER M and XM

The **exclusive intelligence system integrated in Master-Inverter heat pump** 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 level and lowest noise level.**

- Very low noise levels.
- COP : 30 to 40% more efficient.
- The heat pump automatically adapts itself to meet the exact needs of the pool.
- 3 operating modes: BOOST, SMART and ECO-Silence.
 - **BOOST mode:** this mode uses 85 to 100% of the pump's capacity in order to ensure quick heating of the swimming pool.
 - **ECO-Silence mode:** the fan works at the minimal necessary speed to minimize noise level and the compressor prioritises the COP.
 - **SMART mode:** heating capacity and noise level are adjusted automatically depending on the ambient temperature and the pool water temperature.

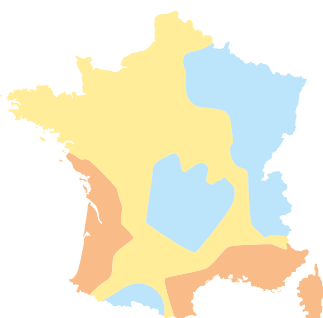
DEPENDING ON THE POOL HEATING REQUIREMENTS, MASTER-INVERTER WILL AUTOMATICALLY ADAPT ITS OUTPUT TO MEET THE SET POINT.

To summarize, this is how Master-Inverter operates in SMART mode :

	Power	COP	Noise level
Cold air and cold water	High	Standard	Standard
Cold air and warm water	Average	Average	Low
Warm air and warm water	Minimum	Maximum	Minimum

SELECTION TABLE from May 15th to September 15th *

**cover or automatic pool cover required*



	XXS	XS	S	S+	M	XM	L	L+
Warm zone	30 m ³	45 m ³	55 m ³	70 m ³	85 m ³	105 m ³	130 m ³	160 m ³
Moderate zone	25 m ³	40 m ³	50 m ³	65 m ³	80 m ³	100 m ³	115 m ³	145 m ³
Cold zone	20 m ³	35 m ³	45 m ³	60 m ³	75 m ³	85 m ³	105 m ³	130 m ³

Warning: This table does not replace a formal thermal study and is supplied as a general guide for your information only. Please contact Polytropic for information regarding all seasons heating solutions.

FEATURES AND BENEFITS



• SIMPLE AND INTUITIVE OPERATION

"Touch-screen" digital electronic display with **three operating modes: Heating, Cooling and Automatic.**
Optional **TFT touch screen**



• EFFICIENT AND RAPID DEFROSTING

A 4-way valve allowing:
- Reverse-cycle defrosting
- Operation at low temperatures



• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

Protection of the heat pump at temperatures below 0°C:
- Preheating of the compressor housing
- Antifreeze system of the evaporator condensation
- Automatic piloting of the 'low temperature' system



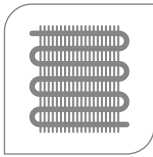
• LOW NOISE LEVEL

INVERTER TECHNOLOGY: automatically adjusts the rotation speed of the compressor and fan to reduce noise to the minimum.



• IMPROVED COP LEVELS

An intelligent electronic expansion valve is incorporated adapting the flow of cooling gas in accordance with the working conditions.



• OPTIMAL PERFORMANCES

- « Blue Fins » coating on the evaporator for a better resistance to corrosion and better evacuation of the condensation (hydrophobic).



- Inverter compressor, higher COP thanks to the variable speed motor



- Titanium exchanger in a PVC housing, efficient and corrosion resistant.



- Variable speed ventilator to ensure optimal performances.



• INTELLIGENT OPERATING MODE

The heat pump autoregulates its output depending on the air temperature.



• CONNECTED SOLUTION

Compatible with the remote management solutions - Polyconnect PRO and LITE.
See pages 31 and 48



ACCESSORIES INCLUDED: winter cover, 50 mm hydraulic connection kit, 4 "Silent block" anti-vibration pads, condensate drainage kit, multilingual user and maintenance manual.



NEW TOUCH SCREEN (OPTIONAL)

4" touch screen with clearly readable colour interface for easy and intuitive navigation. Easily interchangeable with the LCD screen (supplied as standard) thanks to a plug-and-play installation.

Code: A01400001

More information p.29

DIMENSIONS



Dimensions in mm	Master-Inverter XXS	Master-Inverter XS	Master-Inverter S	Master-Inverter S+	Master-Inverter M	Master-Inverter XM	Master-Inverter L	Master-Inverter L+
A	967	967	968	967	1070	1070	1110	1120
B	358	358	358	358	430	430	530	530
C	593	593	593	593	690	690	830	830

> ACCESSORIES SEE PAGES 28/31

A SIZEABLE ASSET: IT'S EXCLUSIVE REGULATION

Inverter heat pumps available on the market regulate their power and thus their COP as a priority and the sound level only once the water has reached its set point, say 28 ° C. Master-Inverter **however analyses the air temperature and water temperature** in order to adjust the power required to maintain the temperature of the pool.

HOW DOES IT WORK?

The inertia and volume of pool water requires important heating capacities. **Master-Inverter anticipates the demand of energy as it has a double entry regulation system.**

If the water temperature is at 27°C with good weather conditions (outside temperature of 25°C and sunny), the pool will require less energy than if the air temperature is 15°C and cloudy.

Our exclusive system allows the heat pump **to adapt the power consumption** based on the air temperature, thus **ensuring a higher COP** during the swim season and **lowering noise level** to the minimum for the large part of the season.

RESULT

An overall higher COP during the season and a lower noise level.

FOCUS ON DIFFERENT OPERATING MODES



BOOST MODE

The heat pump will rise its heating capacity to near full capacity in order to heat the pool water rapidly. This mode is used at the beginning of the season for a quick water temperature rise.



SMART MODE

Master-Inverter will autoregulate its power depending on the following criteria:

- the difference between the recommended temperature (in general 28°C) and the water temperature
- the current water temperature
- the air temperature



ECO-SILENCE MODE

The best setting for silence and energy savings!
Maximum power output is restrained in order to prioritize low noise level and high COP. It is recommended to set « priority heating » on the heat pump when in ECO-SILENCE mode.

WHY CHOOSE INVERTER TECHNOLOGY?



INVERTER COMPRESSOR AND BRUSHLESS FAN

An Inverter compressor is a variable speed compressor; the frequency variation is the ability to modify the rotation speed of the motor. In the case of heat-pumps, it is the rotation speed of the compressor that will vary. We therefore have compressors with variable rotation speeds that will modify the quantity of cooling agent in the circuit.

The exchangers (air condenser and titanium exchanger) of the Master-inverter are sized to operate with the maximum power of the Inverter compressor.

When we reduce the frequency on the compressor, we reduce its rotation speed and thus the quantity of cooling agent in

the system, but our exchangers remain the same size. The exchangers are therefore 'oversized'. It is this temporary oversize that enables Master-Inverter to obtain such **high levels of COP.**

When the ambient temperature is high and the full power of the heat-pump is not necessary, the Brushless motor of the fan (variable speed) kicks in, reducing the rotation speed of the fan, **lowering the noise level of the heat pump.**

The combination of the Inverter compressor and the Brushless fan motor allow to **regulate the power** of Master-Inverter **when the pool does not require full power.**

HIGHER COP

=

LOWER ELECTRICITY INVOICE




LOWER NOISE LEVEL

=

BETTER USER COMFORT

TECHNICAL SPECIFICATIONS

Model	Master-Inverter XXS	Master-Inverter XS	Master-Inverter S	Master-Inverter S+	Master-Inverter M	Master-Inverter XM	Master-Inverter L	Master-Inverter L+	
Recommended pool size**	15-30 m ³	30-45 m ³	45-55 m ³	55-70 m ³	70-85 m ³	85-105 m ³	105-130 m ³	130-160 m ³	
Air 28°C / Water 28°C / Humidity 80%									
Energy Output Boost Mode	6,8 kW	8,8 kW	10,6 kW	12,8 kW	16,5 kW	20,1 kW	24,2 kW	27,8 kW	
COP Boost mode	6,5 ~ 5,9	6,5 ~ 5,5	6,8 ~ 5,4	6,8 ~ 5,6	6 ~ 5,1	5,9 ~ 5,2	6 ~ 5,4	5,9 ~ 5,2	
Energy Output Smart Mode	6,8 ~ 3,2 kW	8,8 ~ 3,5 kW	10,6 ~ 3,9 kW	12,8 ~ 4,2 kW	16,5 ~ 5,5 kW	20,1 ~ 6,5 kW	24,4 ~ 7,8 kW	27,8 ~ 10,5 kW	
COP Smart Mode	10,8 ~ 5,9	10,8 ~ 5,5	10,8 ~ 5,4	11,2 ~ 5,6	10,8 ~ 5,1	10,1 ~ 5,2	10,8 ~ 5,4	10,1 ~ 5,2	
Energy Output ECO-Silence Mode	5,8 ~ 3,2 kW	5,8 ~ 3,5 kW	7,1 ~ 3,9 kW	8,4 ~ 4,2 kW	9,9 ~ 5,5 kW	12,2 ~ 6,5 kW	16,3 ~ 7,8 kW	18,6 ~ 10,5 kW	
COP ECO-Silent	10,8 ~ 8,3	10,8 ~ 8,3	10,8 ~ 8,3	11,2 ~ 8,5	10,8 ~ 8,3	10,1 ~ 8,1	10,8 ~ 8,3	10,1 ~ 8,1	
Air 15°C / Water 26°C / Humidity 70%									
Energy Output Boost Mode	5,4 kW	6,6 kW	7,8 kW	9,8 kW	11,5 Kw	14,6 kW	18,2 kW	22,8 kW	
COP Boost mode	4,8 ~ 4,5	4,9 ~ 4,4	5,2 ~ 4,9	5 ~ 4,5	4,6 ~ 4,2	4,6 ~ 4,3	4,6 ~ 4,4	4,5 ~ 4,2	
Energy Output Smart Mode	5,4 ~ 2,6 kW	6,6 ~ 3,2 kW	7,5 ~ 3,5 kW	9,8 ~ 3,7 kW	11,5 ~ 4,2 kW	14,6 ~ 4,9 kW	18,2 ~ 6,8 kW	22,8 ~ 8,1 kW	
COP Smart Mode	6,7 ~ 4,5	6,7 ~ 4,4	6,7 ~ 4,9	7,0 ~ 4,5	6,7 ~ 4,2	6,6 ~ 4,3	6,7 ~ 4,4	6,5 ~ 4,2	
Energy Output ECO-Silence Mode	2,9 ~ 2,6 kW	3,8 ~ 3,2 kW	4,9 ~ 3,5 kW	5,9 ~ 3,9 kW	6,7 ~ 4,2 kW	8,5 ~ 4,9 kW	10,2 ~ 6,8 kW	12,5 ~ 8,1 kW	
COP ECO-Silent	6,7 ~ 5,6	6,7 ~ 5,6	7,1 ~ 6,1	7,0 ~ 5,5	6,7 ~ 5,7	6,6 ~ 5,6	6,7 ~ 5,7	6,5 ~ 5,6	
Air -7°C / Water 26 ° / Humidity 0%									
Energy Output	2,75	3,35	4,65	5,45	5,8	8,3	9,72	12,11	
COP	2,86	2,82	3,96	3,64	2,83	3	2,98	2,81	
Noise level minimum, ECO-Silence Mode (at 10m)	21 dB(a)	21 dB(a)	21 dB(a)	22 dB(a)	22 dB(a)	24 dB(a)	24 dB(a)	25 dB(a)	
Components									
Compressor	2D Full DC  Mitsubishi / Toshiba								
Fan	Variable speed DC brushless								
Expansion valve	Electronic								
Exchanger	Titane spiralé								
Housing	UV resistant ABS housing panels, sound insulation of the panels								
Refrigerant	R32								
Installation									
Hydraulic connections	1,5" / 50 mm								
Power	230V / 1~+N / 50 Hz						230V / 1~+N / 50 Hz or 380V / 3~+N / 50 Hz		
Circuit breaker and cable size (for 20m)	C 10 A (3G2,5 mm ²)	C 10 A (3G2,5 mm ²)	C 16 A (3G2,5 mm ²)	C 16 A (3G2,5 mm ²)	C 20 A (3G4 mm ²)	C 20 A (3G4 mm ²)	C 32 A (3G6 mm ²) or 3 x C 16 A (5G2,5 mm ²)	C 40 A (3G10 mm ²) or 3 x C 16 A (5G2,5 mm ²)	
Power Input Max	1,6 kW	1,7 kW	2,0 kW	2,0 kW	3,1 kW	3,7 kW	5,7 kW	8,0 kW	
Minimum water flow	4 m ³ /h			5 m ³ /h			6 m ³ /h	6 m ³ /h	
Weight (net)	45 kg	46 kg	48 kg	49 kg	60 kg	63 kg	93 kg	94 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).

** Recommended pool size (May to September with cover)

INDOOR Range

-15°C

0°C*



HIDE YOUR SWIMMING POOL HEAT PUMP!



INDOOR XM Mono and XM Tri

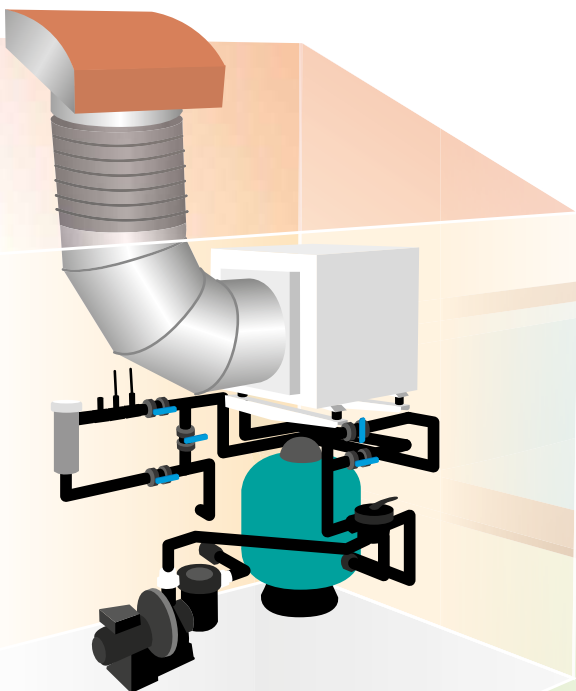
INDOOR S and M



ELEGANT AND DISCRETE SOLUTION

This discrete swimming pool Heat Pump is installed inside a pool house. A POLYTROPIC exclusivity.

- No more noise issues: install the Heat Pump in the pool house which will act as a noise barrier.
- Invisible and almost inaudible from the outside, this exclusive swimming pool Heat Pump disappears from sight.
- Less than 80 cm in width to pass through any pool house door:
 - Designed to pass through standard size doors for an installation in existing pool houses.
 - Perfect for renovation
- Variable Speed Fan driven by a pressure sensor on the evaporator:
 - Self-regulated air flow to minimize air-flow requirement (and thus noise level) whilst meeting heating requirements.
 - The air-flow is automatically regulated in accordance with weather changes and pressure losses (if the installation requires extra air-ducts or grills).
- Several hydraulic connections:
Hydraulic connections available on two sides of model XM: you will always have a solution to install the INDOOR swimming pool heat pump, to suit all technical room configurations.



FEATURES AND BENEFITS



• SIMPLE AND INTUITIVE

- An intelligent LED display, developed specifically for:
- Programming and visualising the temperature
 - Setting the calendar and operation periods
 - **3 operating modes: Heating, Cooling and Automatic**



• EFFICIENT AND RAPID DEFROSTING

- A 4-way valve allowing:
- Reverse-cycle defrosting
 - Operation at low temperatures



• OPTIMAL COP

- An intelligent electronic expansion valve is incorporated adapting the flow of cooling gas in accordance with the working conditions.



• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

- Protection of the heat pump at temperatures below 0°C, except Indoor S



• OPTIMAL PERFORMANCES

- Variable speed fan to ensure optimal performances.



- Rotating or Scroll compressors – robust, efficient and quiet.



- Titanium exchanger in a PVC housing, efficient and corrosion resistant.



• CONNECTED SOLUTION

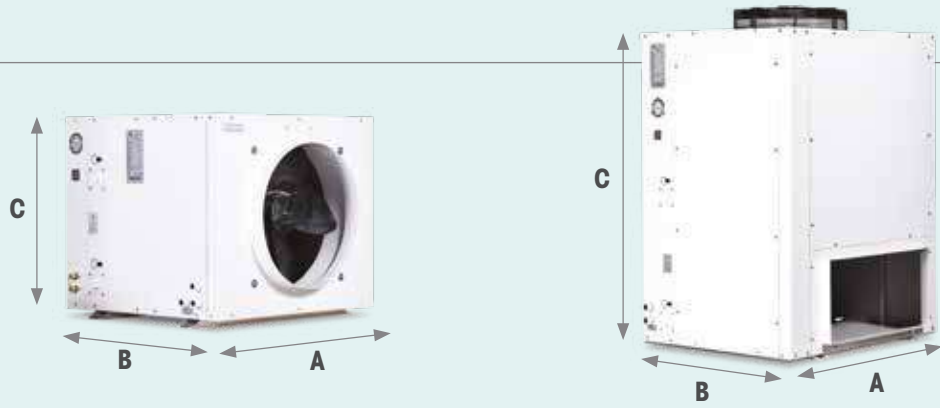
- Compatible with the remote management solutions - Polyconnect PRO and LITE.
See pages 31 and 48

TECHNICAL SPECIFICATIONS

Model	Indoor S 1-Phase	Indoor M 1-Phase	Indoor XM 1-Phase	Indoor XM 3-Phase
Recommended pool size <i>(May to September with cover)</i>	45 - 55 m ³	60 - 85 m ³	85 - 105 m ³	85 - 105 m ³
Air 28°C / Water 28°C / Humidity 80%				
Energy Output	10,70 kW	16,30 kW	19,40 kW	18,20 kW
Energy Input	2,02 kW	3,13 kW	3,73 kW	3,50 kW
COP	5,30	5,20	5,20	5,20
Air 15°C / Water 26°C / Humidity 70%*				
Energy Output	8,00 kW	12,80 kW	15,20 kW	15,40 kW
Energy Input	1,70 kW	2,78 kW	3,30 kW	3,35 kW
COP	4,70	4,60	4,60	4,60
Heating capacity (Air -3°C/Water 26°C)	-	6,80 kW	8,30 kW	8,20 kW
Compressor	Rotating TOSHIBA	Scroll Copeland	Scroll Copeland	Scroll Copeland
Intensity (maximum)	8,2 A (12,9 A)	13,1 A (15,8 A)	15,3 A (23,0 A)	5,2 A (7,8 A)
Hydraulic connections	1,5" / 50 mm	1,5" / 50 mm	1,5" / 50 mm	1,5" / 50 mm
Power	230V / 1~+N / 50 Hz	230V / 1~+N / 50 Hz	230V / 1~+N / 50 Hz	400V / 3~+N / 50 Hz
Breaker and cable size for 20 m with D curve	D 16 A (3G2,5 mm ²)	D 20 A (3G4 mm ²)	D 25 A (3G4 mm ²)	D 16 A (5G2,5 mm ²)
Minimum water flow	5 m ³ /h	7 m ³ /h	7 m ³ /h	7 m ³ /h
Noise level (at 10m)	33 dB(a)	33 dB(a)	34 dB(a)	34 dB(a)
Temperature working range	0°C -> 35°C	-15°C -> 35°C	-15°C -> 35°C	-15°C -> 35°C
Weight (net)	85 kg	105 kg	172 kg	172 kg
Soft starter	-	Yes	Yes	-
Variable Speed Fan	No	Yes	Yes	Yes
Refrigerant	R410a			

*In accordance with FPP recommendations (French Pool Federation)

DIMENSIONS



Dimensions in mm	Indoor S 1-Phase	Indoor M 1-Phase	Indoor XM 1-Phase	Indoor XM 3-Phase
A	770	770	915	915
B	726	726	780	780
C	637	637	1276	1276

ACCESSORIES INCLUDED: 50 mm hydraulic connection kit, 4 "Silent block" anti-vibration pads, condensate drainage kit, multilingual user and maintenance manual.

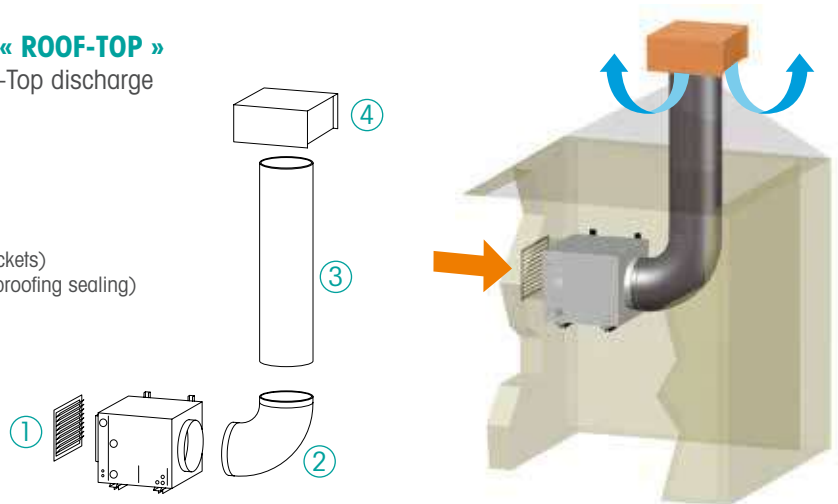
INSTALLATION ACCESSORIES

• INDOOR S AND INDOOR M INSTALLATION « ROOF-TOP »

Front Wall Suction / Vertical discharge and Roof-Top discharge
Ref.: A004000004 (Roof-top discharge 'Tile' colour)

Kit includes:

1. Galvanized steel grid 600 x 400*
2. Galvanized steel 90° elbow Ø 450
3. Flexible duct Ø450 – 2 meters (with two mounting brackets)
4. Roof-Top exhaust hood Ø 450 'Tile' colour (with waterproofing sealing)

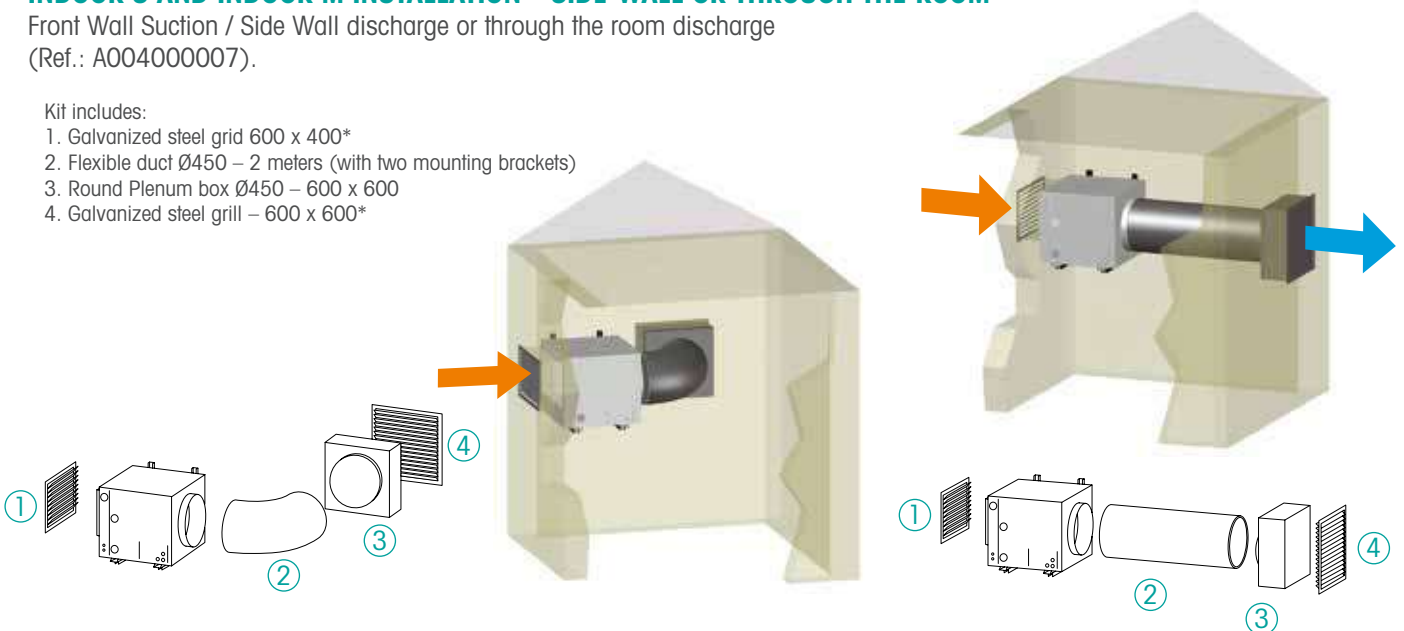


• INDOOR S AND INDOOR M INSTALLATION « SIDE-WALL OR THROUGH THE ROOM »

Front Wall Suction / Side Wall discharge or through the room discharge
(Ref.: A004000007).

Kit includes:

1. Galvanized steel grid 600 x 400*
2. Flexible duct Ø450 – 2 meters (with two mounting brackets)
3. Round Plenum box Ø450 – 600 x 600
4. Galvanized steel grill – 600 x 600*

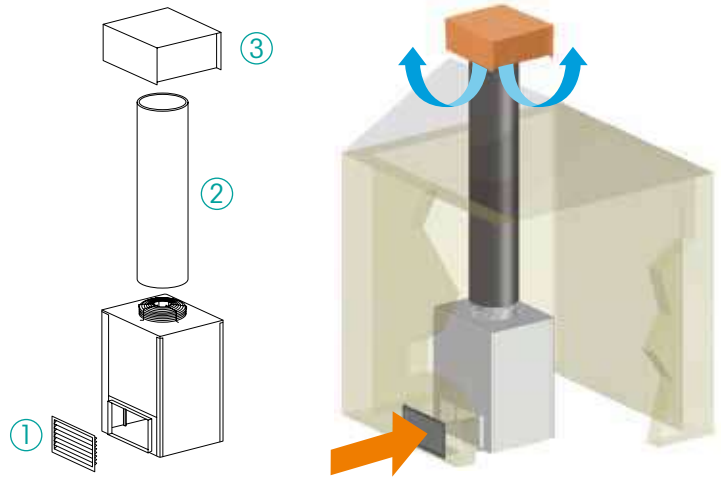


• **INDOOR XM INSTALLATION « ROOF-TOP »**

Front Wall Suction / Vertical discharge and Roof-Top discharge
 Ref.: A004000001 (Roof-top discharge 'Tile' colour)

Kit including:

1. Galvanized steel grid 600 x 300*
2. Flexible duct Ø450 – 2 meters (with two mounting brackets)
3. Roof-Top exhaust hood Ø 450 'Tile' colour (with waterproofing sealing)

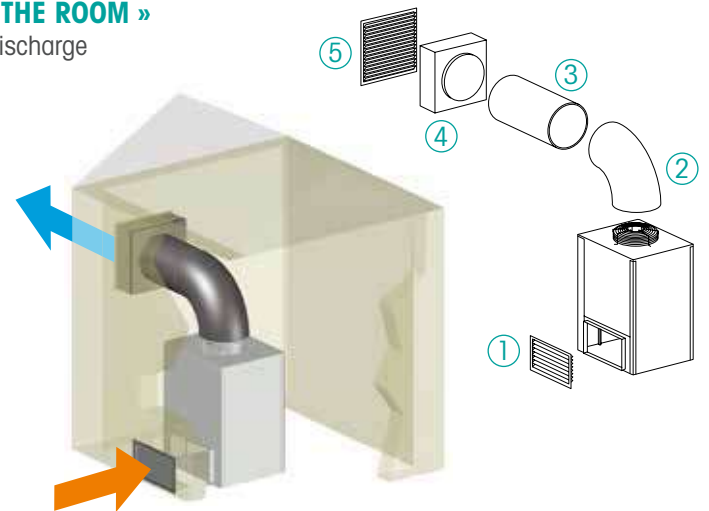
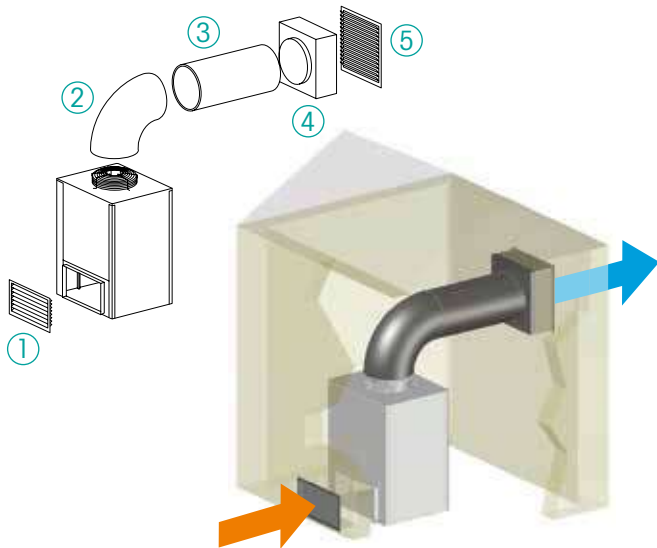


• **INDOOR XM INSTALLATION « SIDE-WALL OR THROUGH THE ROOM »**

Front Wall Suction / Side Wall discharge or through the room discharge
 (Ref.: A004000003).

Kit includes:

1. Galvanized steel grid 600 x 300*
2. Galvanized steel Elbow 90° Ø450
3. Flexible duct Ø450 – 2 meters (with two mounting brackets)
4. Round Plenum box Ø450 – 600 x 600
5. Galvanized steel grill – 600 x 600*



• **600 x 600 ANTI-NOISE ACOUSTIC GRILL**

Optional
 Code: A004000035
 See page 30



* Optional choice of the grill's RAL colour to blend in as much as possible with the pool environment: study on request.

TECHNICAL ROOM VENTILATION

It is imperative to properly ventilate the technical room to avoid condensation and humidity accumulation that could generate water drops or create corrosion on some of the equipment in the room.

Permanent Vent for technical room
 Vent with humidity sensor (vent operation according to humidity level).
 Ref.: A0040027

Delivered with wall outlet and exterior grill (Ø110 mm).



RAK Range



SPECIALLY DESIGNED FOR LARGE SIZED POOLS

With high-energy performance and reduced maintenance, its operation extends your swimming season with water at the right temperature!



RAK 90 and RAK 70

RAK 45

RAK 30

FEATURES AND BENEFITS

• SIMPLE AND INTUITIVE



An intelligent LED display, developed specifically for:

- Programming and visualising the temperature
- Setting the calendar and operation periods
- **3 operating modes: Heating, Cooling and Automatic**

• EFFICIENT AND RAPID DEFROSTING



A 4-way valve allowing:

- Reverse-cycle defrosting
- operation at low temperatures

• OPTIMAL COP



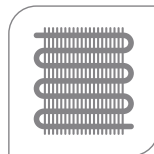
An efficient electronic expansion valve, it regulates the flow of refrigerant gas in accordance with the weather conditions.

• COMMISSIONING AND WINTERING



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

• OPTIMAL PERFORMANCES



- « BlueFins » evaporator for a better corrosion resistance and better evacuation of the condensation (hydrophobic)



- Scroll compressors - robust, efficient and quiet



- Titanium Spiraled tubular heat exchanger in a PVC housing and integrated paddle flow sensor

• CONNECTED SOLUTION




Compatible with the remote management solutions - Polyconnect PRO.
See pages 48

• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM



Protection of the heat pump at temperatures below 0°C.

TECHNICAL SPECIFICATIONS

Model	RAK 30	RAK 45	RAK 70	RAK 90
Recommended pool size	Sizing by our customer service department is mandatory			
Air 28°C / Water 28°C / Humidity 80%				
Energy Output	36,4 kW	52,7 kW	89,1 kW	108,9 kW
Energy Input	7,43 kW	10,3 kW	17,5 kW	21,4 kW
COP	4,9	5,1	5,1	5,1
Air 15°C / Eau 26°C / Humidity 70%*				
Energy Output	29,4 kW	43,9 kW	69,8 kW	84,2 kW
Energy Input	6.68 kW	9,4 kW	15,9 kW	20,5 kW
COP	4.4	4,7	4,4	4,1
Compressor	2x Scroll 			
Intensity (maximum)	12,7 A (14,6 A)	18,6 A (28,0 A)	31,4 A (45,0 A)	37,2 A (54,0 A)
Hydraulic connections	2" / 63 mm	2" / 63 mm	Flange Ø 90 mm	Flange Ø 90 mm
Power	400V / 3~ + N / 50 Hz	400V / 3~ + N / 50 Hz	400V / 3~ + N / 50 Hz	400V / 3~ + N / 50 Hz
Breaker and cable size for 20 m with D curve	D 16 A (5G2,5 mm ²)	D 32 A (5G4 mm ²)	D 50 A (5G10 mm ²)	D 63 A (5G16 mm ²)
Minimum water flow	12 m ³ /h	15 m ³ /h	34 m ³ /h	43 m ³ /h
Noise level (at 10m)	42 dB(a)	46 dB(a)	54 dB(a)	57 dB(a)
Weight (net)	230 kg	268 kg	500 kg	530 kg
Temperature working range	-15°C -> 35°C	-15°C -> 35°C	-15°C -> 35°C	-15°C -> 35°C
Refrigerant	R410a			

* In accordance with FPP recommendations (French Pool Federation)

ACCESSORIES INCLUDED: hydraulic connection kit, condensate drainage kit, multilingual user and maintenance manual.

DIMENSIONS

Dimensions in mm	RAK 30	RAK 45	RAK 70	RAK 90
A	1470	1470	2000	2000
B	705	705	980	980
C	955	1260	1960	1960



> **ACCESSORIES** PLEASE CONTACT US

GREEN PAC Range



ENERGETIC PERFORMANCE AND REDUCED MAINTENANCE

A range of high capacity heat pumps specifically designed for larger swimming pools using a natural and eco-friendly refrigerant gas.



- **Designed and Manufactured in partnership with an Italian factory.**
Certified UNI EN 9001: 2000.



FEATURES AND BENEFITS



• SOPHISTICATED REGULATION

Carel Digital controller to centralise all the data.



• EFFICIENT AND RAPID DEFROSTING

A 4-way valve allowing:
- Reverse-cycle defrosting
- Operation at low temperatures



• LOW NOISE LEVEL

The heat pump is composed of an aluminium frame with galvanized steel panels coated with PVC thermoglued coating and noise reduction insulation on all panels.



• SIMPLIFIED MAINTENANCE

R290 gas does not fall under the F-gas regulations, including the periodic checks on fluid confinement.



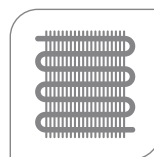
• ATEX CERTIFICATED

Every single Green PAC component is compliant with the safety norms ATEX (spark proof). GREEN PAC is equipped with ATEX leak detector, pressure sensors and ATEX probes.



• OPTIMISED PERFORMANCE

- The use of R290 refrigerant is innovative and offers high energy efficiency. Reliable, natural and environmentally friendly.



- « Blue Fins » coating on the evaporator for a better resistance to corrosion and better evacuation of the condensation (hydrophobic).



- Scroll compressors – robust, efficient and quiet.



- Titanium spiraled tubular heat exchanger in a PVC housing and integrated paddle flow sensor.



• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

Protection of the heat pump at temperatures below 0°C.

TECHNICAL SPECIFICATIONS

Model	Green PAC 50	Green PAC 70	Green PAC 100
Recommended pool size	Please contact us		
Air 27°C / Water 27°C/ Humidity 80%			
Energy Output	61 kW	79 kW	115 kW
Energy Input	8.5 kW	11.1 kW	15.9 kW
COP	7.2	7.1	7.2
Air 15°C / Eau 26°C / Humidity 70%*			
Energy Output	49 kW	68 kW	98 kW
Energy Input	8.0 kW	11.3 kW	16,1 kW
COP	6.1	6.0	6.1
Air -3°C / Water 26°C			
Energy Output	29 kW	39 kW	57 kW
Compressor	Scroll Copeland <small>scroll products</small>	Scroll Copeland <small>scroll products</small>	Scroll Copeland <small>scroll products</small>
Intensity (maximum)	16,5 A (34,2 A)	27,7 A (43,9 A)	33,0 A (68,4 A)
Hydraulic connections	2" / 63 mm	2" / 63 mm	2" / 63 mm
Power	400V / 3~+N/ 50 Hz	400V / 3~+N/ 50 Hz	400V / 3~+N/ 50 Hz
Breaker and cable size for 20 m with D curve	D 40 A (5G6 mm ²)	D 50 A (5G10 mm ²)	D 80 A (5G16 mm ²)
Minimum water flow	10m ³ /h	12 m ³ /h	16 m ³ /h
Noise level (at 10m)	52 dB(α)	54 dB(α)	56 dB(α)
Working temperature range	-10°C -> 35°C	-10°C -> 35°C	-10°C -> 35°C
Weight (net)	475 kg	580 kg	650 kg
Refrigerant	R290		

* In accordance with FPP recommendations (French Pool Federation)

ACCESSORIES INCLUDED: hydraulic connection kit, condensate drainage kit, multilingual user and maintenance manual.

DIMENSIONS

Dimensions in mm	Green PAC 50	Green PAC 70	Green PAC 100
A	2050	1550	2050
B	1000	1950	1950
C	1650	1400	1650



> ACCESSORIES SEE PAGES 28/31

CRYO PAC Range



CRYOTHERAPY SPECIFIC

Heat Pump designed specifically to cool water down to +5°C for cryotherapy applications or cold-water therapy, mainly for athletes and physiotherapy purposes.

Developed in France
A POLYTROPIC exclusive

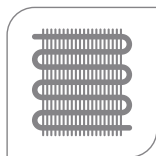


Thanks to the Full-Inverter technology, the CRYO PAC adjusts its operation according to the pool requirements, giving peace of mind, extension of the equipment's lifespan and 30% energy savings compared to a standard heat pump.

- Conventional installation like a standard pool heat pump
- Anti-UV ABS casing

ACCESSORIES INCLUDED: winter cover, hydraulic connections, "Silent block" anti-vibration pads, condensate drainage kit

FEATURES AND BENEFITS



• OPTIMAL PERFORMANCES

- « BlueFins » evaporator for a better corrosion resistance and better evacuation of the condensation (hydrophobic)



- Titanium exchanger in PVC housing, efficient and corrosion resistant

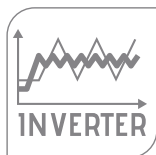


- Thermstatic expansion valve



• SIMPLE AND INTUITIVE

An intelligent LED display



• INTELLIGENT OPERATING MODE

- The heat pump autoregulates its output depending on the air temperature.



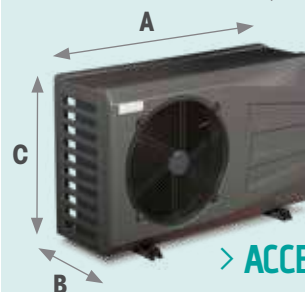
- Variable speed ventilator to ensure optimal performances.

• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

TECHNICAL SPECIFICATIONS

Model	CRYO PAC XSmall Mono
Air 32°C / Water 5°C	
Energy Output in cold mode	2,8
Energy Input	1,53
Energy Efficient Ratio (EER)	1,8
Compressor	Inverter
Intensity (maximum)	6,3 A (7.8A)
Hydraulic connections	1.5", 50 mm
Power	230V / 1~+ N / 50 Hz
Breaker and cable size for 20 m with D curve	D 16 A (3G2,5mm²)
Minimum water flow	4 m³/h
Noise level (at 10m)	32 dB(a)
Temperature working range	-10°C -> 35°C
Weight (net)	33kg
Refrigerant	R32

DIMENSIONS



Dimensions in mm	CRYO PAC XSmall Mono
A	1006
B	345
C	630

> ACCESSORIES SEE PAGES 28/31

PAC SPA Range



SPA SPECIFIC HEAT PUMP

Your spa at 38°C even when it is freezing outside! When comfort rhymes with savings and ecology!



FEATURES AND BENEFITS



• SIMPLE AND INTUITIVE

An intelligent display, developed specifically for:

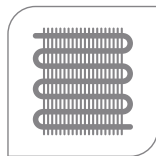
- Heating
- Reverse-cycle defrosting



• EFFICIENT AND RAPID DEFROSTING

A 4-way valve allowing:

- Reverse-cycle defrosting
- operation at low temperatures



• OPTIMAL PERFORMANCES

- « BlueFins » evaporator for a better corrosion resistance and better evacuation of the condensation (hydrophobic)



- Toshiba Rotating compressor operating with R410a gaz – compatible with future environmental regulations.



- Titanium exchanger in PVC housing, efficient and corrosion resistant



• OPTIMAL COP

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



• EXCLUSIVE 'LOW TEMPERATURE' SYSTEM

Protection of the Heat Pump at temperatures below 0°C:

- Preheating of the compressor housing
- Antifreeze system of the evaporator condensation
- Automatic piloting of the 'low temperature' system

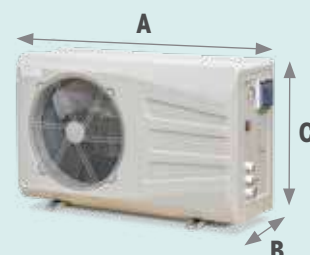
TECHNICAL SPECIFICATIONS

Model	PAC SPA
Recommended pool size	On request
Energy Output (air 28°C/Water 38°C/Humidity 80%)	7,90 kW
COP (air 28°C/Water 28°C/Humidity 80%)	4,80
Energy Output (air 15°C/Water 38°C/Humidity 70%)	6,50 kW
COP (air 15°C/Water 26°C/Humidity 70%)	4,10
Energy Output (air 0°C/Water 38°C/Humidity 0%)	3,56 kW
COP (air 0°C/Water 38°C/Humidity 0%)	2,10
Energy Output (air -10°C/Water 38°C/Humidity 0%)	2.48 kW
COP (air -10°C/Water 38°C/Humidity 0%)	1,50
Compressor	Rotating
Regulator	Electronic
Intensity (maximum)	8,0 A (12,0 A)
Hydraulic connection	1,5" / 50 mm
Power	230V / 1~+N / 50 Hz
Breaker and cable size for 20 m with D curve	D 16 A (3G2,5 mm ²)
Minimum water flow	4 m ³ /h
Noise level (at 10m)	33 dB(a)
Temperature working range	-10°C -> 38°C
Weight (net)	47 kg
Refrigerant	R410a

ACCESSORIES INCLUDED: winter cover, hydraulic connections, "Silent block" anti-vibration pads, condensate drainage kit.

DIMENSIONS

Dimensions in mm	PAC SPA
A	808
B	300
C	546



> ACCESSORIES SEE PAGES 28/31

ACCESSORIES and OPTIONS



REMOTE WALL MOUNTED KIT

For remote installation of your display, in the technical room for example. The kit includes: a metal wall mount to be surface mounted, a box with transparent protective door, a 10-meter cable and a plug-and-play connection for a quick connection.

Code A00300008: for all models except GREEN PAC

Code A00300005: for GREEN PAC

WALL MOUNTING BRACKETS

These brackets are specially designed for the overhead installation of a heat pump, which has numerous advantages. They raise the heat pump from the ground, do not require concrete slabs, protect it from rain, snow and plant debris, and leave the necessary clearance between the wall and the heat pump.

Supplied with 4 anti-vibration pads.



SMALL SIZE - Code A00100002

With a spirit level for easy installation.

Dim. 780 x 550 x 375 mm. Thickness 1.8 mm

For Master-Inverter XXS / XS / S and S+, Advance XS / S, Indoor S, Cryopac, PacSPA

LARGE SIZE - Code A00100001

Dim. 850 x 550 x 400 mm. Thickness 2 mm

For Master-Inverter M / XM / L and L+, Advance M and XM

Incompatible with RAK, Indoor XM, and Green Pac



" BIG FOOT "

Pair of anti-vibration rubber mounts specially adapted for installation of the heat pump on the ground.

Each mount is equipped with an aluminium bar molded into the casing to install the feet of the machine.

Big Foot mounts are made from recycled tires. As they are supple, they absorb vibrations and their height allows air circulation. The Big Foot mounts do not require installation on concrete slabs and can be installed on packed gravel.

Supplied in pairs with screws.

Code A00600001



NEW TOUCH SCREEN (OPTIONAL)

COMPATIBLE WITH THE MASTER-INVERTER HEAT PUMP RANGE ONLY



Code A01400001



>> The mounting box with its transparent protective door protects the display from climatic conditions, dust and scratches. The screen and internal components are protected from damage.

A NEW **VERY** RESPONSIVE **DIGITAL TOUCH SCREEN** WITH A **HIGHLY READABLE** COLOUR INTERFACE **FOR EASY AND INTUITIVE NAVIGATION!**

- High-gloss capacitive TFT touch screen **with a 480x480 resolution** IPS panel.
- Protected by a layer **of thermal toughened glass** to **ensure its resistance**.
- **Resistant casing** for the protection of components against vibrations: Dim A 880 x B 800 x C 14 mm
- **Large size** ensures good **readability**: L 72 x H 68 mm, 4" diagonal (over 10.5 cm)
- Easily interchangeable with the LCD screen (supplied as standard) thanks to a **quick plug-and-play installation**
- **Brightness adjustment** for **easy reading** in sunlight.



>> Clock settings, timers and display parameters...



>> Access the **three intuitive operating modes** BOOST, ECO-Silence and SMART in a single gesture!

INTUITIVE USER INTERFACE
Clear operation and intuitive navigation, touch and visual responsiveness...



>> View all information simultaneously



>> Secure access, detailed description of errors and display of clear alerts...

ELECTRICAL BOX

CIRCUIT BREAKER AND DIFFERENTIAL

Essential for the safety of the installation.



FOR ALL MODELS EXCEPT THE INVERTER

Reference	Circuit breaker model	Differential model
A01000001	230V / 1~+N / 16 A (D-curve)	-
A01000002	230V / 1~+N / 16 A (D-curve)	30 mA (40A)
A01000003	230V / 1~+N / 20 A (D-curve)	-
A01000004	230V / 1~+N / 20 A (D-curve)	30 mA (40A)
A01000005	230V / 1~+N / 25 A (D-curve)	-
A01000006	230V / 1~+N / 25 A (D-curve)	30 mA (40A)
A01000007	400V / 3~+N / 16 A (D-curve)	-
A01000008	400V / 3~+N / 16 A (D-curve)	30 mA (40A)
A01000009	400V / 3~+N / 32 A (D-curve)	-
A01000010	400V / 3~+N / 32 A (D-curve)	30 mA (40A)
A01000011	400V / 3~+N / 63 A (D-curve)	-
A01000012	400V / 3~+N / 63 A (D-curve)	30 mA (63A)

FOR ALL INVERTER MODELS: Master-Inverter and Cryo Pac

Reference	Circuit breaker model	Differential model
A01000013	230V / 1 ~+N / 16A (C-curve)	-
A01000014	230V / 1 ~+N / 16A (C-curve)	30 mA (40A)
A01000015	230V / 1 ~+N / 20A (C-curve)	-
A01000016	230V / 1 ~+N / 20A (C-curve)	30 mA (40A)
A01000019	400V / 3 ~+N / 16A (C-curve)	-
A01000020	400V / 3 ~+N / 16A (C-curve)	30 mA (40A)
A01000021	230V / 1 ~+N / 32A (C-curve)	-
A01000022	230V / 1 ~+N / 32A (C-curve)	30 mA (40A)
A01000023	230V / 1 ~+N / 40A (C-curve)	-
A01000024	230V / 1 ~+N / 40A (C-curve)	30 mA (40A)

600X600 ANTI-NOISE ACOUSTIC GRILL (OPTIONAL)

Code A00400035

For the INDOOR heat pump

Combines the functions of an external rain grill and an acoustic attenuator.

Anodized aluminium outer casing.

- Acoustic fins filled with rot-proof rock wool protected by a mesh.
- Anti-drip system preventing rainwater entering the network.



Frequency (Hz)	125	250	500	1k	2k	4k	8k
Acoustic attenuation (dB)	6	8	10	14	18	16	15

BY-PASS KIT

Ref. A01100001

Crucial to regulate the water flow of swimming pool heat pump.

Full kit contains 2 elbows 90°, 2 « T » and 3 « union » valves.

Glue included.

Suitable for all models except RAK, GREEN PAC and PIXEL





POLYCONNECT LITE

Control your heat pump remotely from your smartphone or tablet anywhere in the world using a simple WiFi connection!

For inverter models: Code A01300006
Others: Code A01300001



• INSTALLATION

A discreet plug-and-play WiFi box, simple to connect directly to the heat pump between the electronic card and the digital display.



• CONFIGURATION

Once the customer has downloaded the application on his smartphone, all he needs to do is :

- Connect the WiFi module to the Heat Pump
- Log-in with a secured password
- Connect the WiFi module to the home WiFi network (like any other WiFi appliances available on the market).

Only imperative: to have WiFi coverage near the Heat Pump



• USAGE

From anywhere in the world, the Pool Owner can then have access to his pool Heat Pump.

This will enable him to:

- > Check the **operating status** of the heat pump in real time.
- > Check the **values of different sensors**:
 - water temperature
 - air temperature
 - operating status of the filtration pump
- > Check **error messages**.
- > Change **settings** as if he was in front of the pool Heat Pump:
 - change filtration working hours
 - change water temperature settings
 - change temperature working hours
- > Configuring "Priority heating" allows to control the pool heat pump and also the filtration pump from a distance through to the **weekly calendar** of the App.

• INTERFACE

Simple intuitive interface.

> PolyConnect Lite Main Screen



Colour-coded backgrounds = heat pump working status



Grey background = heat pump on stand-by

> Examples



Temperature and operating status of various components of the Heat Pump.

ELECTRICAL HEATERS

The electrical heaters always reitute the same heating power regardless of weather conditions.



HET 30 up to 120



EOV

HET 15 up to 24

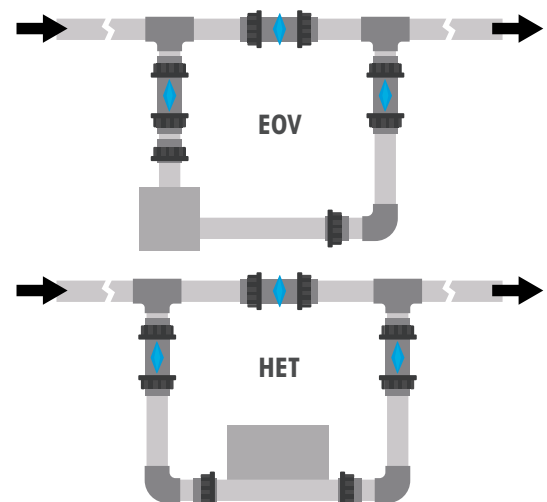


FEATURES AND BENEFITS

- The bodies of the electric heaters are made from PVC-C (EOV) or Titanium (HET) for a better installation. PVC-C offers better resistance against temperature than standard PVC (up to 90°C), and is perfectly suited to swimming pool applications.
- The heater element is made from Titanium for optimal resistance against corrosive water.
- The main advantage of the electrical heater is that it always reitutes the same heating power regardless of weather conditions.
- Models 3kW, 6kW and 9kW can be installed in both 230V single phase or 400V three phase modes.
- HET 30 to 120: set up with a touch screen included

INSTALLATION

- Electrical heaters must be installed with a U bend in order to ensure water is always inside the heater.
- Electrical installation requirements:
 - Circuit breaker protection and a 30mA differential
 - Correct cable sizing
 - Hydraulic connections to be made with Ø50 mm or Ø63 mm PVC piping directly onto the union fittings provided.
- Minimum working operating flow: 5 m³/h.



TECHNICAL SPECIFICATIONS

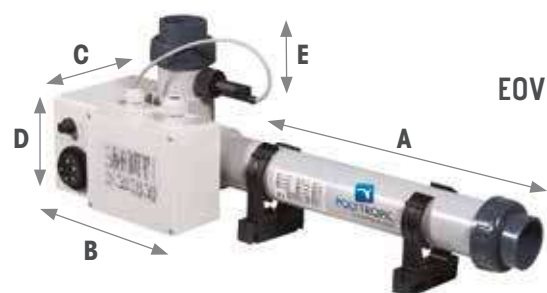
Model	Energy Output	Power supply	Circuit breaker	Hydraulic connections
EOV 03	03 kW	230V / 1~+N / 50 Hz or 400 V / 3~ + N / 50 Hz	C25A (1-phase) C16A (3-phase)	Ø 50 mm Ø 2"
EOV 06	06 kW		C32A (1-phase) C16A (3-phase)	
EOV 09	09 kW		C50A (1-phase) C25A (3-phase)	
EOV 12	12 kW	400 V / 3~ + N / 50 Hz	C25A (3-phase)	Ø 50 mm Ø 2"
HET 15	15 kW	400 V / 3~ + N / 50 Hz	C25A (3-phase)	
HET 18	18 kW		C32A (3-phase)	
HET 24	24 kW		C40A (3-phase)	
HET 30	30 kW	400 V / 3~ + N / 50 Hz	C50A (3-phase)	Ø 63 mm Ø 2" ½
HET 36	36 kW		C63A (3-phase)	
HET 45	45 kW		C80A (3-phase)	
HET 54	54 kW		C80A (3-phase)	
HET 60	60 kW		C100A (3-phase)	
HET 72	72 kW		C125A (3-phase)	
HET 96	96 kW		C150A (3-phase)	
HET 120	120 kW	C200A (3-phase)		

All units are provided with:

- Regulation thermostat from 0°C to 35°C - manual ($\leq 24\text{kW}$) or electronic ($> 24\text{kW}$).
- Thermal protection fuses:
 - > Manual reset for heater element
 - > Automatic reset for the electrical box ($> 24\text{kW}$)
 - > Automatic reset for heater body ($> 24\text{kW}$)
- Water flow sensor
- Schneider Electric contactor
- Wall mounting support brackets

DIMENSIONS

Model	EOV 03 / EOV 06	EOV 09 / EOV 12
A	255 mm	395 mm
B	225 mm	225 mm
C	210 mm	210 mm
D	120 mm	120 mm
E	90 mm	90 mm



HET 15
up to 24

Model	HET 15 / HET 18 / HET 24
A	592 mm
B	160 mm
C	249 mm

Model	HET 30 / HET 36 HET 45 / HET 54	HET 60 / HET 72	HET 96 / HET 120
A	699 mm	699 mm	1042 mm
B	307 mm	307 mm	307 mm
C	367 mm	367 mm	367 mm



HET 30
up to 120

HEAT EXCHANGERS

ECHT-T exchangers have been designed for an easy installation in renovation and new projects.



FEATURES AND BENEFITS

- Installed in the home heater-room, the multicellular ECHT heat exchangers use the home heating circuit to warm the pool water.

They can be connected to the water circuit of a gaz, fuel or wood heater or even a Heat Pump.

- The water flow sensor guarantees that the exchanger will only work when the circulation pump is in operation.
- Exchangers are delivered without pump or controller.

Additional kit available comprising:

- Digital control thermostat
- Water temperature display +/- 0,5°C
- Integrated heating priority
- Water-flow alarms

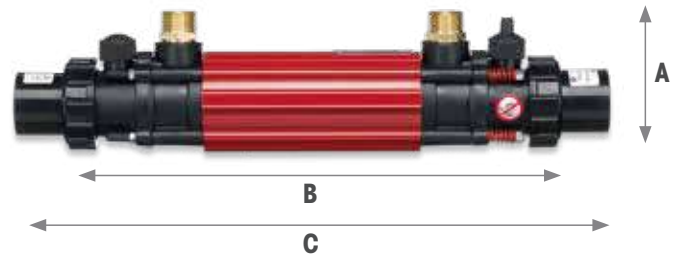


TECHNICAL SPECIFICATIONS

Model		ECHT 40	ECHT 70	ECHT 90	ECHT 130
Primary circuit (water heater)	Hydraulic connections	BSP Ø 1"			
	Water flow	1,3 m³/h	1,8 m³/h	2,7 m³/h	4,2 m³/h
	Pressure drop	6,8 KPa	8,3 KPa	12,9 KPa	20,0 KPa
Secondary circuit (swimming pool)	Hydraulic connections	Ø 1,5" with Ø50 PVC UNION fitting			
	Water flow	10 m³/h	16 m³/h	17 m³/h	19 m³/h
	Pressure drop	5,0 KPa	9,2 KPa	10,6 KPa	12,6 KPa
Maximum working pressure		4 bars	4 bars	4 bars	4 bars
Recommended pool size (based on a 48h heating time)					
Boiler water temperature	90°C	90 m³	120 m³	200 m³	250 m³
	70°C	60 m³	90 m³	120 m³	200 m³
	50°C	40 m³	60 m³	90 m³	120 m³

DIMENSIONS

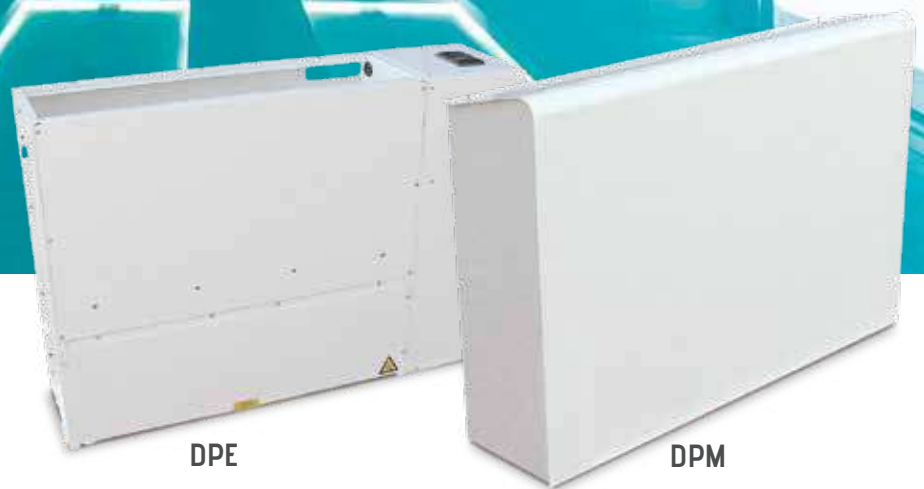
Dimensions in mm	ECHT 40	ECHT 70	ECHT 90	ECHT 130
A	210	210	210	210
B	426	596	726	886
C	540	710	840	1000



WALL MOUNTED AND THROUGH

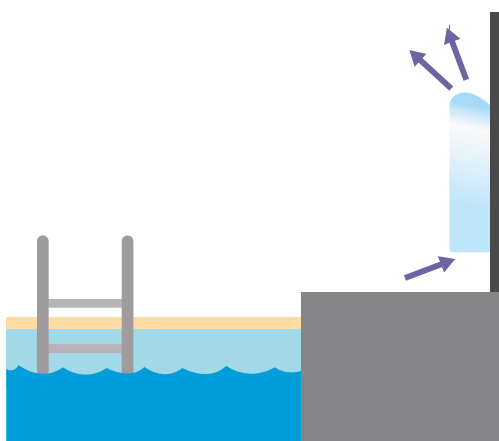
THE WALL DEHUMIDIFIERS

DPM and DPE dehumidifiers are high performance units, ideal for swimming pools, and for rooms where humidity needs to be controlled.

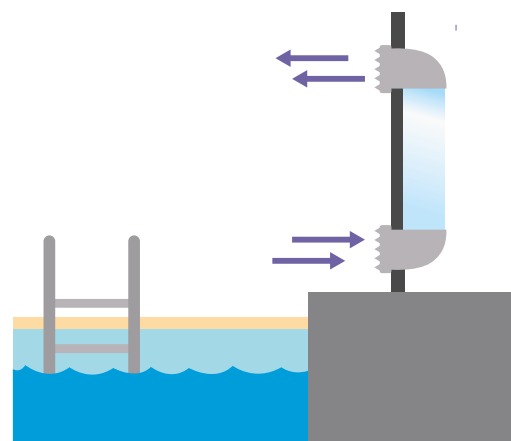


SPECIFICATIONS

- They are designed for an easy installation and do not require specific installation skills: wall mounting and 230V / 50Hz power supply.



DPM VERSION
Wall mounted



DPE VERSION
Through the wall installation, the dehumidifier is installed in an adjacent room and only the grills are visible.

- Installation has to be made in conformity with local legal requirements
- R410a Refrigerant
- High Pressure security
- Electronic regulation and Digital display
- Mono or three-phase power supply for the DPM / DPE 200

TECHNICAL SPECIFICATIONS

RANGE		DPM / DPE				
Model		50 1-Phase	60 1-Phase	100 1-Phase	150 1-Phase	200 1-Phase/3-Phase
Dehumidification capacity	30°C / 80% HR	2,0 l/h	2,4 l/h	4,2 l/h	6,5 l/h	7,9 l/h
	30°C / 70% HR	1,8 l/h	2,2 l/h	3,5 l/h	5,9 l/h	7,2 l/h
	30°C / 60% HR	1,5 l/h	2,0 l/h	2,8 l/h	4,7 l/h	6,0 l/h
Operating range		50 to 100% HR and 20°C to 35°C				
Max Air flow		550 m³/h	600 m³/h	1000 m³/h	1400 m³/h	1700 m³/h
Power supply		230V / 1~ + N / 50Hz				230V / 1~ + N or 380V / ~3+ N
Energy Input (maximum)		4,4 A (5,0 A)	4,4 A (5,0 A)	8,4 A (8,8 A)	10,5 A (11,0 A)	13,2 A (14,7 A) or 6,6 A (7,5 A)
Refrigerant		R410a				
Noise level (at 1m)		42 dB(A)	42 dB(A)	44 dB(A)	52 dB(A)	54 dB(A)
Weight (net)		50 kg	50 kg	55 kg	72 kg	78 kg

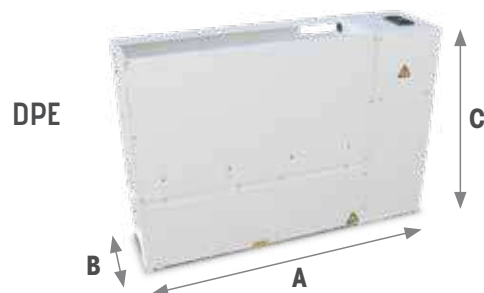
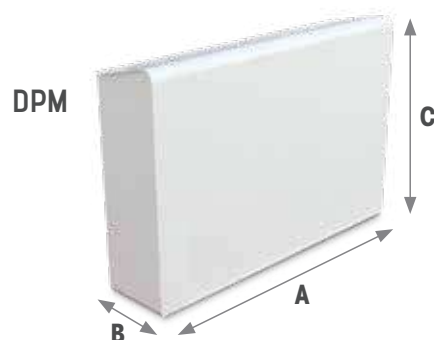
AVAILABLE OPTIONS					
Model	50 1-Phase	60 1-Phase	100 1-Phase	150 1-Phase	200 1-Phase/3-Phase
Electrical heater	2 kW	2 kW	3 kW	6 kW	6 kW
Hot water coil * and regulation	3,5 kW	3,5 kW	7 kW	11 kW	11 kW
Remote hygro-thermostat	Sans fil	Sans fil	Filaire	Filaire	Filaire

* Performance with water 80/70 °C – air 30°C

DIMENSIONS

Model DPM	50 1-Phase	60 1-Phase	100 1-Phase	150 1-Phase	200 1-Phase/ 3-Phase
A (mm)	780	780	1245	1310	1310
B (mm)	255	255	255	310	310
C (mm)	660	660	660	750	750

Model DPE	50 1-Phase	60 1-Phase	100 1-Phase	150 1-Phase	200 1-Phase/ 3-Phase
A (mm)	885	885	1245	1310	1310
B (mm)	255	255	255	310	310
C (mm)	660	660	660	750	750



DUCTED DEHUMIDIFIERS



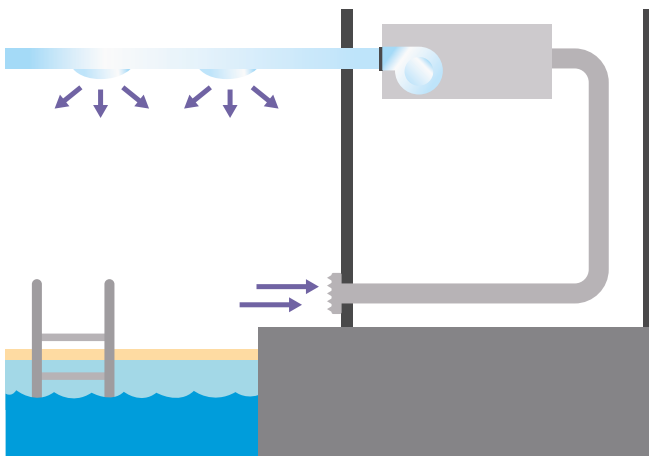
DPG



DPG- BC

DPG and DPG-BC units are high performance models specially designed for indoor pool environment and they are also able to dry other rooms where humidity could be a problem.

SPECIFICATIONS



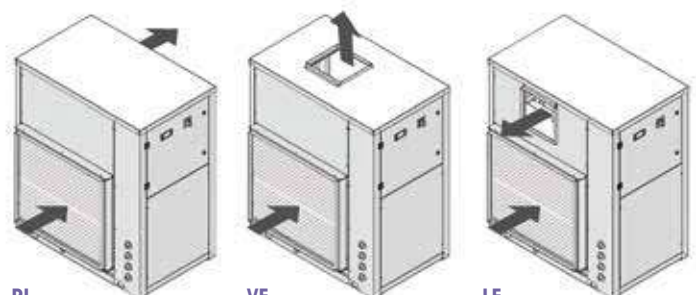
Discharge ducts installation drawings

- Self-supporting frame with removable panels.
- Galvanized steel panels with epoxy coating.
- G5 air filter with synthetic fiber (non-electrostatic), easily cleanable.
- All DPG units have an electronic controller in order to control:
 - Compressor operation
 - Defrost cycles
 - Humidity levels
 - Air heating levels
 - Alarms

AVAILABLE ACCESSORIES:

- Integrated electronic sensor for humidity and temperature control.
- Remote hygro thermostat controller
- Remote thermo-hygro thermostat controller
- Electrical air heater
- Hot water coil and regulation
- Condensation heat recovery

DIFFERENT DPG-BC CONFIGURATIONS:



RI
Straight Horizontal
discharge

VE
Vertical discharge
(standard)

LE
Left side return
discharge

TECHNICAL SPECIFICATIONS

RANGE		DPG				
Model		50 1-Phase	75 1-Phase	100 1-Phase	150 1-Phase	200 1-Phase/3-Phase
Dehumidification capacity	30°C / 80% HR	2,0 l/h	3,0 l/h	4,0 l/h	6,5 l/h	7,9 l/h
	30°C / 70% HR	1,9 l/h	2,8 l/h	3,5 l/h	5,9 l/h	7,2 l/h
	30°C / 60% HR	1,6 l/h	2,4 l/h	3,2 l/h	4,9 l/h	6,1 l/h
Operating range		50 to 100% humidity and 20°C to 35°C				
Max air flow		500 m³/h	800 m³/h	1000 m³/h	1400 m³/h	1650 m³/h
Power supply		230V / 1~ + N / 50Hz				
Energy input (maximum)		5,2 A (6,5 A)	7,0 A (8,2 A)	9,6 A (10,9 A)	11,3 A (12,5 A)	14,9 A (16,8 A) or 6,6 A (7,5 A)
Refrigerant		R410a				
Noise level (at 1m)		50 dB(A)	52 dB(A)	54 dB(A)	60 dB(A)	62 dB(A)
Weight		40 kg	50 kg	55 kg	73 kg	79 kg
AVAILABLE OPTIONS						
Electrical heater		3 kW	3 kW	3 kW	6 kW	6 kW
Hot water coil * and regulation		3,5 kW	3,5 kW	8,5 kW	13 kW	14 kW
Remote hygro-thermostat		wireless	wireless	wired	wired	wired

* Performance with water 80/70 °C – air 30°C

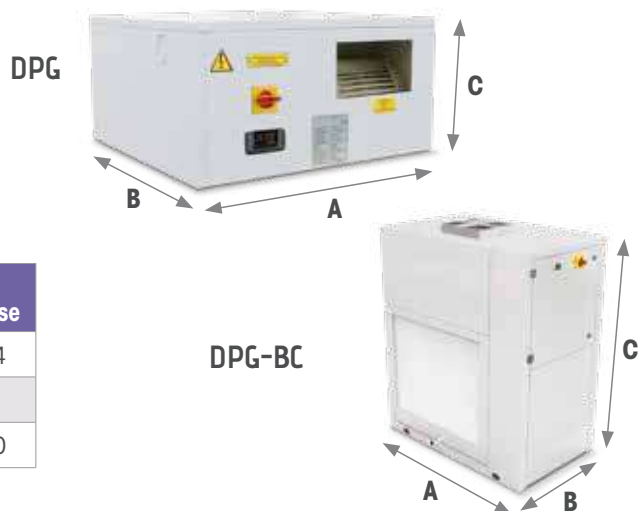
RANGE		DPG-BC					
Model		270 3-Phase	350 3-Phase	450 3-Phase	550 3-Phase	750 3-Phase	950 3-Phase
Dehumidification capacity	30°C / 80% HR	11,0 l/h	14,2 l/h	17,5 l/h	23,6 l/h	31,3 l/h	39,1 l/h
	30°C / 70% HR	9,4 l/h	12,6 l/h	15,8 l/h	20,7 l/h	28,1 l/h	35,4 l/h
	30°C / 60% HR	7,7 l/h	10,9 l/h	14,0 l/h	17,7 l/h	24,9 l/h	31,7 l/h
Operating range		50 to 100% humidity and 20°C to 35°C					
Max air flow		3800 m³/h	4200 m³/h	4200 m³/h	5500 m³/h	7000 m³/h	8500 m³/h
Power supply		400V / 3~ + N / 50Hz					
Energy input (maximum)		8,8 A (12,0 A)	11,3 A (14,2 A)	15,5 A (17,9 A)	16,2 A (22,0 A)	20,9 A (27,0 A)	28,0 A (38,3 A)
Refrigerant		R410a					
Noise level (at 1m)		63 dB(A)	64 dB(A)	64 dB(A)	66 dB(A)	66 dB(A)	66 dB(A)
Weight		207 kg	211 kg	215 kg	415 kg	423 kg	430 kg
AVAILABLE OPTIONS							
Electrical heater		9 kW	9 kW	9 kW	9 ou 18 kW	9 ou 18 kW	9 ou 18 kW
Hot water coil * and regulation		22,8 kW	24,0 kW	24,0 kW	42,0 kW	49,0 kW	56,0 kW
Remote hygro-thermostat		wired	wired	wired	wired	wired	wired

* Performance with water 80/70 °C – air 30°C

DIMENSIONS

Model DPG	50 1-Phase	75 1-Phase	100 1-Phase	150 1-Phase	200 1-Phase/3-Phase
A (mm)	710	980	980	1160	1160
B (mm)	700	900	900	1050	1050
C (mm)	360	460	460	530	530

Model DPG-BC	270 3-Phase	350 3-Phase	450 3-Phase	550 3-Phase	750 3-Phase	950 3-Phase
A (mm)	1154	1154	1154	1504	1504	1504
B (mm)	704	704	704	854	854	854
C (mm)	1378	1378	1378	1750	1750	1750



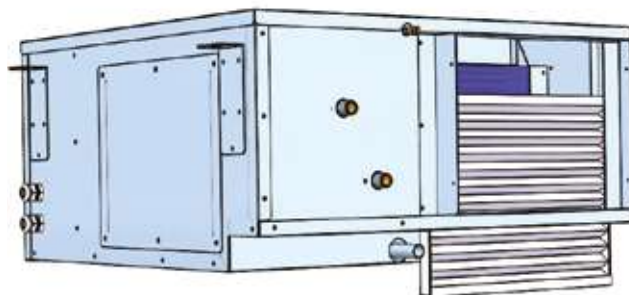
INSTALLATION

DGP ONLY

The **DPG models are very compact** and particularly well suited to installations where unit dimensions are critical:

- The unit is designed to be installed in the ceiling with special fixation brackets.
- You can change the filter from the top or the bottom of the unit using a designated trap.
- The unit may be hidden in a suspended ceiling if there is sufficient space.

This solution allows **to clear the floor space** if it is limited of for other equipments.



DPG AND DPG-BC

For flexibility purposes, the fans have an admissible air pressure **discharge rating of 150 Pa** (300 Pa as an option).

All the exchangers have a specific surface treatment **to resist to chemical corrosion** in the pool environment (chlorine, salt...).



For air warming purposes, the units can be equipped with the following options:

- **Standard heater** (anodized aluminum electric heater integrated in the unit) controlled by the dehumidifier. The unit circulates air in order to measure the temperature and heats up the air if required
- **Hot water battery** – it is an air/water coil which is also treated to resist to a corrosive environment (connected to the house warming system)

The unit can also control (as an option) a 3-way valve which will regulate the unit to heat the air in the room, like a thermostatic valve on a radiator.

It is possible to **connect all house warming heating solutions** to the hot water battery:

- Fuel gas heater
- Gas heater
- Heat pump
- Wood granulate heater

Beware, the power of the battery will depend on the inflowing water temperature (between 55°C and 80°C).

For the users, it is simple and **only two parameters require setting to regulate the unit: humidity and temperature.**

The unit self regulates to reach the required set-points.

It is also possible to have a **remote display for the unit** as an option (cable of 50 meters maximum)



DEHUMIDIFIER range

DUCTABLE CABINETS



DPA



IDEAL FOR POOLS SMALLER THAN 40/50 M²

This clever and quick-to-install range saves time and money.

FEATURES AND BENEFITS



- **QUICK AND CUSTOMISABLE INSTALLATION**

Ductable with 6 or 8 flexible insulated ducts depending on the model. Standard installation or installation on the lower level. Supplied with its accessories according to the options chosen.



- **EFFICIENT AND QUIET**

Anti-vibration mounts
Variable speed EC fan
Copeland scroll compressor (except for Ref O2 and O3)
AREA rotary compressor (for Ref O2 and O3)
10 mm insulation



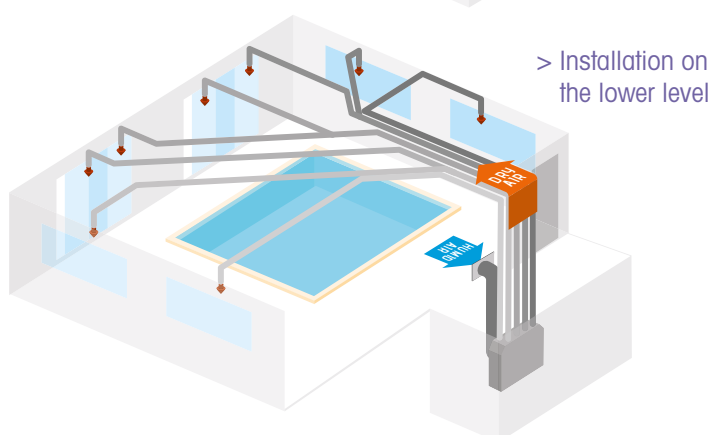
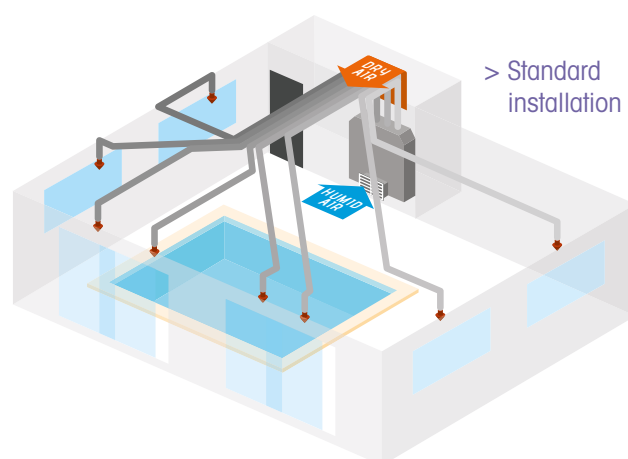
- **A ROBUST RANGE**

10/10th pre-painted epoxy sheet metal (int ext) RAL 9010
Finned epoxy-treated aluminium heat exchangers 5-year parts warranty



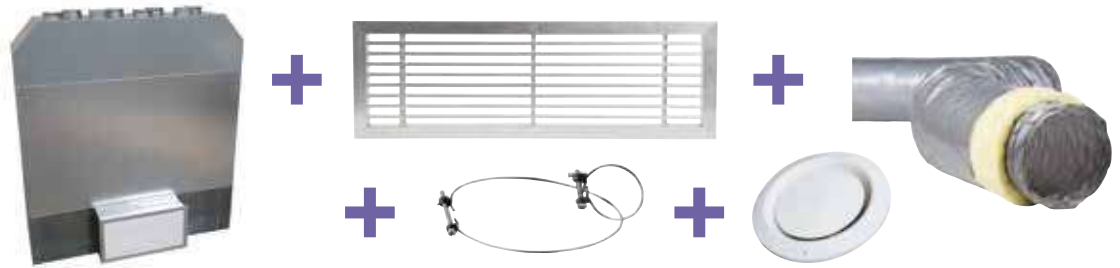
- **COMPONENT QUALITY**

Complete Eliwell set up
Basic integrated filter
Supplied with its accessories according to the selected options.



CHARACTERISTICS

The DPA PACK includes:
 the device
 + 1 supply grill
 + flexible ducts
 + clamps
 + nozzles

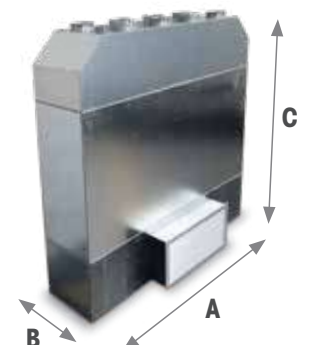


TECHNICAL SPECIFICATIONS

Range		DPA				
Model		50 1-Phase	60 1-Phase	100 1-Phase/3-phase	150 1-Phase/3-phase	200 1-Phase/3-phase
Dehumidification capacity	30°C / 80% Hr	2.16	3.38	6	7.25	8.14
	30°C / 70% Hr	1.86	2.91	5.2	6.23	7
	30°C / 60% Hr	1.56	2.44	4.35	5.21	5.86
Operating range		35 to 100% RH and 20°C to 35°C				
Adjustable speed fan		yes				
Nominal air flow		715 m3/h	715 m3/h	1,050 m3/h	1,050 m3/h	1,050 m3/h
Pressure available at the nominal air flow		110 Pa	110 Pa	60 Pa	60 Pa	60 Pa
Power		230 V / 50 Hz		400 V / 3 ph+N / 50 Hz		
Nominal current in MONO (Imax)		5.9 A (7 A)	7.50 A (9.2 A)	9.79 A (12.7 A)	11.62 A (16.2 A)	13.51 A (18.7 A)
Nominal three-phase intensity (Imax)				4.40 A (5.53 A)	5.24 A (6.43 A)	6.06 A (7.63 A)
Number of nozzles provided with d160 ducts		6	6	8	8	8
Refrigerant		R407C				
Noise level (at 1 m)		46	46	54	54	57
Weight		151	156	197	200	203
AVAILABLE OPTIONS						
Electric heating		3 KW or 6 KW		4 KW or 6 KW or 12 KW		
Hot water coil heating and V3V regulation		7 KW		10 KW		
Feet for installation on the ground		Contact us				
Room hygrothermostat		Wired	Wired	Wired	Wired	Wired
Remote control screen		Wired	Wired	Wired	Wired	Wired
ACCESSORIES						
Aluminium suction grill		Included				
Pack of 6 ml insulated aluminium ducts with nozzles		Included				
9 ml duct with nozzles		Contact us				
12 ml duct with nozzles		Contact us				
Kit to install the device other than on the ground		Contact us				

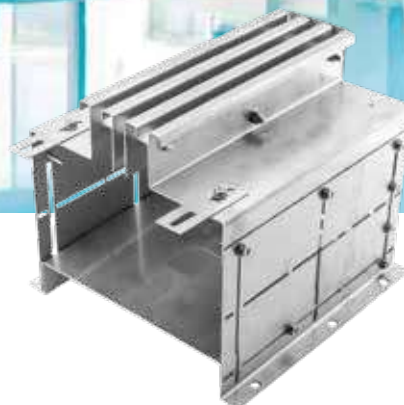
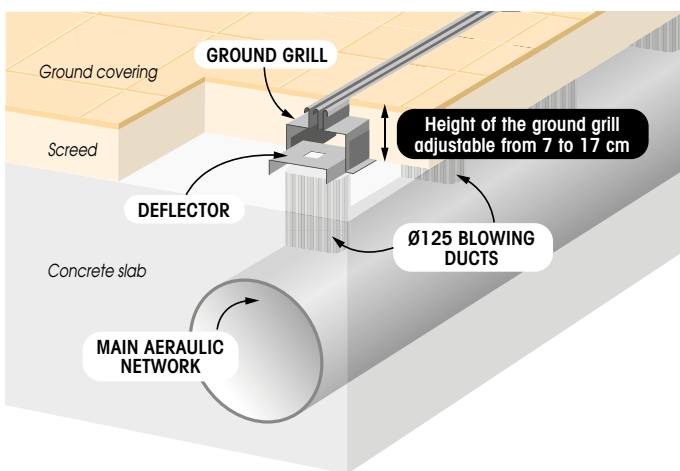
DIMENSIONS

Model	50 1-Phase	60 1-Phase	100 1-Phase/3-Phase	150 1-Phase/3-Phase	200 1-Phase/3-Phase
A (mm)	1150	1150	1500	1500	1500
B (mm)	370	370	370	370	370
C (mm)	1136	1136	1136	1136	1136



VENTILATION and DISTRIBUTION

DISTRIBUTION



• BLOWING RAIL

An aesthetic and discreet solution for blowing along the glass walls.

- Easy to use, the blowing rails integrate perfectly flush into the ground. Compatible with a heated floor.
- Adjustable length and height. Blowing is carried out over the entire length of the bay, whatever its dimensions. Ideal for effectively treating condensation.
- Deflectors to be positioned on site for a good distribution of the air flow along the rail.

VENTILATION: CRITICAL REQUIREMENT

Swimming pool water treatment releases toxic emissions (Chlorine, pH ...) in the air. It is imperative to refresh part of the air in order to maintain a healthy atmosphere in the room.

Furthermore, French legislation requires the addition of a minimum of fresh air (depending on number of users).

• THROUGH THE WALL FANS

- Helicoid fan to be integrated through the wall
- Suction or discharge modes
- Variable speed
- Very silent
- Delivered with grills and through the wall kit (200 up to 380 mm)

It is possible to control several fans with the same controller if high air flow is required (up to 5 fans).

Fan	Air flow	Hole diameter
Energy 500	245 up to 445 m ³ /h	260 x 260 mm
Energy 900	820 up to 920 m ³ /h	330 x 330 mm
Energy 1800	1340 up to 1820 m ³ /h	410 x 410 mm



• FAN FOR DUCTS

- Compact centrifuge fan for ducts
- Suction or discharge modes
- Variable speed
- Easy installation
- Electronic speed variator

Fan	Air flow	Duct
Canalfast 125	285 up to 345 m ³ /h	Ø 125
Canalfast 160	467 up to 552 m ³ /h	Ø 160
Canalfast 200	820 up to 1040 m ³ /h	Ø 200
Canalfast 250	1100 up to 1400 m ³ /h	Ø 250
Canalfast 315	1760 up to 2350 m ³ /h	Ø 315



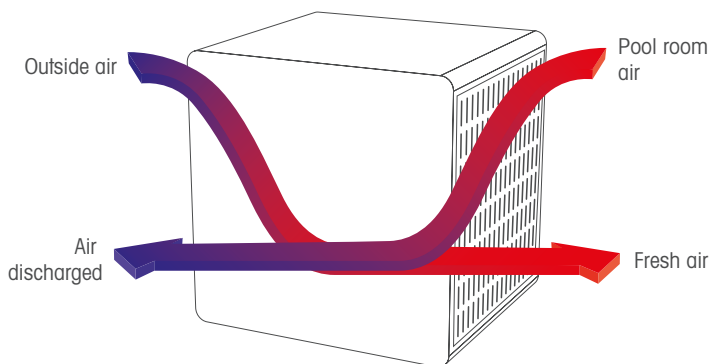
DUCTED DOUBLE FLOW

DEHUMIDIFIERS



The high efficiency double flow dehumidifiers DPG-DF range are designed to offer great quality with the following features:

- Complete insulation for indoor use
- Especially designed for high humidity level environments such as indoor swimming pools
- Operating range up to 36°C
- Ability to mix fresh air flow up 30% of overall air flow to facilitate dehumidification
- Wide range of units from 800 to 14 000 m³/h of air flow
- Heat recovery which can help reduce by up to 20% the total dehumidification needs
- The energy recovery system (air flow is doubled up) helps to significantly increase the overall efficiency of the unit
- The double flow system helps save a lot of energy.



When dehumidifying an indoor pool room, the easiest and most economical way is to inject outside air in the room (it has almost no humidity).

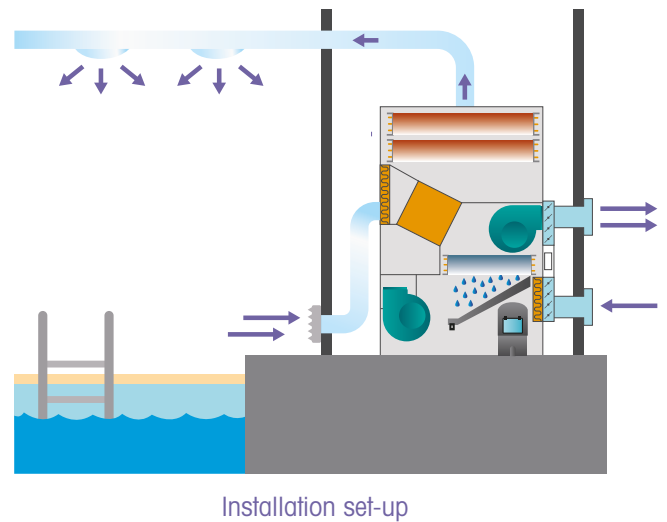
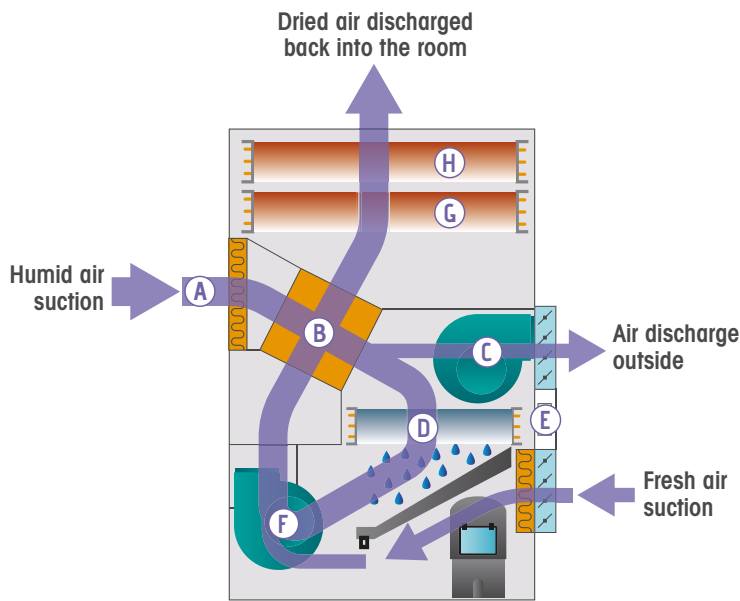
The downside is that outside air (especially in winter) is cold, so the energy savings can be lost as you need to heat this air.

The double flow dehumidifier resolves this issue. Indeed, the outside air passes through an exchanger before being discharged in the pool room.

As the outside air passes through the exchanger, it recovers the energy from the air in the pool room. This efficient process (90% efficiency) allows to limit the potential energy loss as the cool outside air is warmed up and the air dehumidified.

- A motorized damper system allows the openings to be fully closed when fresh air is not required to control temperatures
- An optional energy recovery kit allows to recover the remaining heat in the air that is sent outside and reconstitute it to the injected air, further improving energy savings and allowing the unit to operate with outside air temperatures down to 0 °C.

HOW DOES IT WORKS?



- A) Hot and humid air sucked through the filter.
- B) Part of the air energy is recovered before the air is discharged into the pool room
- C) A small part of the air volume (up to 30%) is discharged outside by the fan.
- D) The remaining air volume passes through the evaporator where it is cooled to condensate the humidity into water and thus dry the air.
- E) Untreated fresh air (up to 30%) is simultaneously added
- F) The fresh air and dried air are mixed and pass through the energy recovery exchanger to be warmed
- G) the air is warmed up by the condenser.
- H) If required, the air is heated a second time by a hot water coil (optional) to heat the room.

SPECIFICATIONS

• FRAME

All DPG- units are made from hot-galvanized thick sheet metal, painted with polyurethane epoxy paint making them corrosion resistant.
The drip-tray is in Stainless-Steel.

• REFRIGERANT CIRCUIT

The refrigerant circuit is made in Italy according to ISO 97/23 standards and includes the following:

- Thermostatic expansion valve
- Security elements in line with PED Standards
- Scroll Compressor
- Corrosion-proof evaporators
- Automatic anti-freeze sensors

• HEAT RECOVERY SYSTEM

The static cross flow system is made from anti-corrosion aluminium plates and the drip tray is in Stainless Steel.

• FANS

All the fans are high variable frequency fans (DC type or brushless), treated against corrosion and electronically regulated to reduce noise levels and improve efficiency.

• AIR DAMPERS AND FILTERS

The air dampers are made of aluminum and nylon and are electronically regulated.
The units are equipped with synthetic fiber G5 Class filters (non-electrostatic), easily accessible.

• ELECTRIC AND ELECTRONICS

- All units are equipped with state of the art Carel controllers for complete control of all devices with only one microprocessor.
- The Sensors mounted on the unit allow for accurate readings of the temperature and humidity (from 0 to 50°C and from 10 to 90%HR).
- Electric box in conformity with CE 73/23 and 89/336 standards.
- Every component has its own independent circuit breaker.

• AVAILABLE OPTIONS

Low temperature kit

For outside working temperatures below 5°C and down to -20°C.

Remote exchanger

Allows to avoid overheating of the technical room and having to cool it in summer.

Remote controller kit



FEATURES AND BENEFITS

The main benefit of double flow dehumidifiers resides in energy savings.

Compared to a classic dehumidifier:

- 30% energy savings compared to classic dehumidification
- up to 50% energy savings on dehumidification when coupled with 30% fresh air addition
- 90% energy savings on fresh air inflow

Example:

A DPG-BC 270 consumes 7,5 kW to condensate 7,7l/h (at 30°C / humidity 60%).

In the same conditions, a DPG-DF 28 consuming 7,4 kW (almost the same power) can condensate from 10l/h and up to 15 l/h.

TECHNICAL SPECIFICATIONS

RANGE		DPG-DF						
Model		15 3-Phase	20 3-Phase	28 3-Phase	35 3-Phase	42 3-Phase	52 3-Phase	60 3-Phase
Dehumidification capacity	30°C/humidity 60%/ fresh air 0%	5,5 l/h	6,8 l/h	10,4 l/h	12,9 l/h	15,7 l/h	19,4 l/h	23,6 l/h
	30°C/humidity 60%/ fresh air 30%	9,3 l/h	12,1 l/h	15,3 l/h	23,0 l/h	24,5 l/h	31,1 l/h	37,8 l/h
Operating range		50 to 100% humidity and 10°C to 36°C						
Air flow		1500 m³/h	2000 m³/h	2800 m³/h	3500 m³/h	4200 m³/h	5200 m³/h	6000 m³/h
Fresh air flow		450 m³/h	600 m³/h	845 m³/h	1050 m³/h	1260 m³/h	1560 m³/h	1800 m³/h
Power		400V / 3~ + N / 50Hz						
Energy input (maximum)		7,2 A (18,5 A)	8,5 A (21,0 A)	13,4 A (22,0 A)	16,2 A (24,0 A)	19,8 A (25,0 A)	25,3 A (31,0 A)	28,3 A (33,3 A)
Refrigerant		R410a						
Noise level (at 1m)		63 dB(A)	63 dB(A)	66 dB(A)	66 dB(A)	68 dB(A)	69 dB(A)	69 dB(A)
Hot water coil power (water 80/70°C)		18 kW	23 kW	28 kW	33 kW	53 kW	64 kW	70 kW
Weight		290 kg	305 kg	400 kg	420 kg	570 kg	590 kg	620 kg

DIMENSIONS

Model DPG-DF	15 3-Phase	20 3-Phase	28 3-Phase	35 3-Phase	42 3-Phase	52 3-Phase	60 3-Phase
A (mm)	1006	1006	1600	1600	1960	1960	1960
B (mm)	638	638	733	733	1236	1236	1236
C (mm)	1766	1766	1766	1766	1951	1951	1951

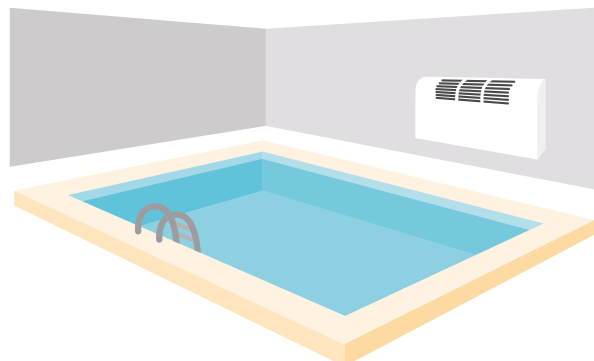


HOW TO SELECT YOUR DEHUMIDIFIER

Every installation is different and requires some specific needs. Hence, we offer different models to suit all configurations:

• WALL-MOUNTED OR FLOOR-STANDING MODELS

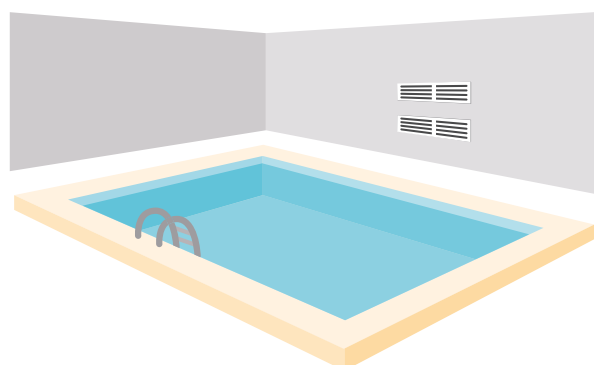
Especially designed for swimming pools, these models are « Plug and Play », easy to install without particular technical knowledge required. Unfortunately, these models do not guarantee perfect dehumidification, in particular on windows (and other cold areas).



• THROUGH THE WALL MODELS

In some cases, it is impossible to install the dehumidifier directly in the room. To solve this issue, the built-in models are installed in an adjacent room in order to directly dehumidify via grills.

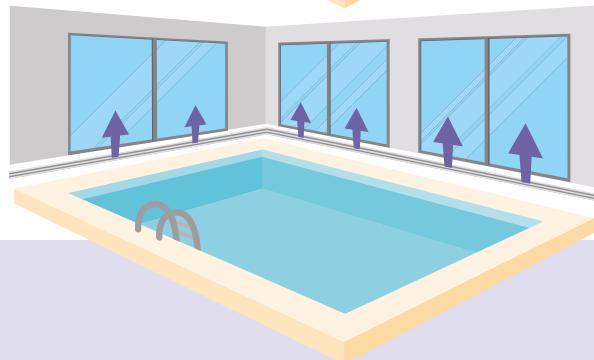
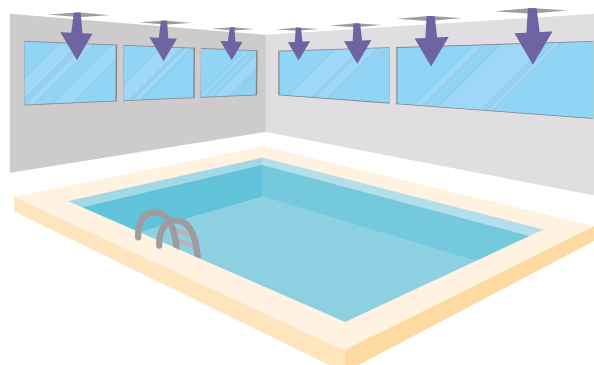
Unfortunately, these units have the same inconvenience as wall-mounted units in the sense that they cannot guarantee full dehumidification.



• DUCTED MODELS

Based on industrial dehumidification, these models are installed in a technical room close to the swimming pool and are connected via ducts and suction and discharge grills. As a result, the air dehumidification will be more efficient.

Only ducted models guarantee full dehumidification by blowing directly on windows.



The **technical design office** is available to **help you choose your dehumidification system** and install it.

The aeraulic experience of a team of trained technicians can advise you in the sizing and location of ducts and grills.

You will be guaranteed an **optimal operation** and a **solution perfectly adapted** to the specificity of the project, and at your customer's request!

POLYCONNECT PRO

THE POOL MADE EASY!

Much more than a simple remote control or a measuring device, POLYCONNECT PRO is a complete pool management and supervision system for your business.

A connected solution for the professional and pool owner too!



MANAGE AND SUPERVISE YOUR POOLS FROM A DISTANCE

POLYCONNECT Pro centralises and allows the visualization of real time data on all the connected equipment: heat pump, automatic cover, filtration, water treatment, cleaner, lighting, counter current system, but also your garden lighting, fountains and automatic sprinkling system!

Data visualisation and piloting is possible with a computer, tablet or smartphone.

POLYTROPIC's technical team and the pool builder can visualize the pool parameters and anticipate the needs or potential issues.

Our technicians will be informed in real-time and will be able to remotely manage technical issues.

THIS MEANS LESS TIME ON THE ROAD TO DISCOVER THE ISSUES

BENEFITS



REMOTE MANAGEMENT

Our technicians are able to remotely access the settings to improve, optimize, update the heat pump or the water treatment system.



PROACTIVITY

Notifications allow immediate and relevant servicing actions, even before the pool owner notices anything.



EFFICIENCY

No need to waste resources sending someone to check on a unit's parameters, it can all be done from the office.

POLYCONNECT already has all the information!

HOW DOES IT WORK?



POLYCONNECT PRO, THE PERFECT ASSISTANT!

In case of a defect, an alert is automatically sent to inform:

- Chemical needs (empty pH jerrycan, low salt level, ...)
- Maintenance required (dirty filter, ...)
- Failures of various sorts
- Discrepancy in operating mode (heating on when pool is not covered at night)
- And many more !

POLYCONNECT Pro collects all the data on a permanent basis and this data is accessible to the pool owner and the installer (pool owner must accept the transfer of data) allowing him to have a clear and timely vision on whole of the supervised pools

It is possible to include the model and serial numbers of all installed equipment in order to serve as 'log-book' for pool servicing.

INSTALLATION

THE GATEWAY

All the pool equipment is connected directly to the control box in the pool house. Each equipment is identified in the App, opening up varying management possibilities.

An Evolutionary system: It is possible to connect at a later date some equipment allowing for upgrade and the number of equipment is almost limitless (depending on options chosen).

An Open system: connection is possible with all POLYTROPIC products but also with other compatible products on the market.

- For equipment for which the program has been opened-up by the manufacturer: connection on bus RS485 (2 wires).
- For equipment electrically piloted: 6 relays 16A included in the control box (2,5 mm² wires). The control box can pilot equipment requiring less than 16A without additional relay (filtration pump, lighting, cleaner, blower, sprinkler system).
- For sensors (simple contacts that open or close): connection is made to the input terminal block which ensures connection of simple multiple sensors (pressure sensor for the filter, end of course sensor for cover, water level sensor, water flow sensor...).



THE MINIBOX

This is the module that you connect to the Internet box. Easy connection via RJ45 cable. No set up action is required (no password, no WiFi connection, ...).



REINFORCED SECURITY

The gateway communicates with the Minibox using the crypted protocole LoRa, through high and private radio frequencies.

Communication between both boxes is guaranteed over hundreds of meters, even in old constructions and metallic buildings.

The communication between the boxes is private and exclusive, **there is no risk of outside interference and no risk of data loss.**



EASY CONNECTION

The **set up between the gateway and the Minibox is simply done** by pushing on 2 bottons during set-up.

In the application you create the customer's profile (responsive direct webpage HTML5) on a computer, tablet or smartphone (Windows/Apple/Android)

The next step is to complete the installation fields and register all the equipment connected to POLYCONNECT Pro.

Ready for action! The installation of your customer is connected to Polytronic's server via POLYCONNECT Pro.

THE BENEFITS OF POLYCONNECT

Not only do you have **on-time data transmission** of all the pool equipment, POLYCONNECT PRO offers a multitude of solutions in order **to optimize the pool parameters** and **anticipate the needs or issues** of your customer.

-> Every connected equipment can be **manually controlled or set to operate in a programming agenda** (daily or weekly)

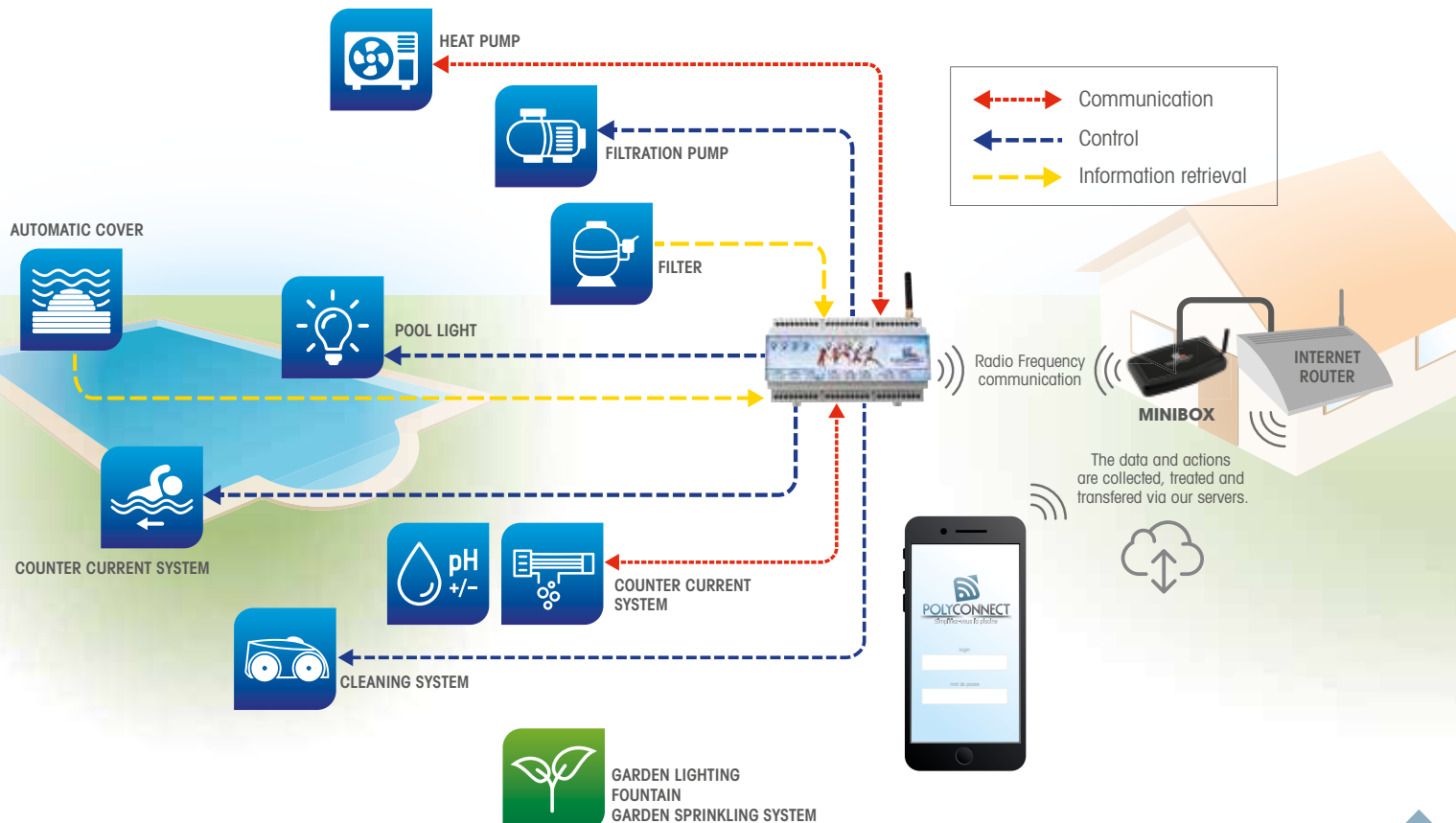
- No more control box clock required, it is integrated in the system
- Starting up of robots during off-peak hours for electricity savings
- Programming pool and garden lighting

-> **Different operating scenarios** are proposed depending on the equipment:

- Heating priority: if the pool has to maintain the set water temperature, POLYCONNECT Pro controls the filtration pump.
- Energy savings: plan weekly activities (maintain the water temperature at 24°C during the week and increase the temperature on Friday for the weekend)

-> At any time, you can **intervene directly on your tablet or your laptop** in order to stop or start up the operation of an equipment, change the settings, alert a customer...

- Adjust the pH and O.R.P. values
- Change filtration times
- Stop the salt water chlorine generator when the cover is in 'Close' position
- Inform the customer when the filter is dirty
- Adapt the speed of the variable speed pump according to the needs of the other equipment



WHY CHOOSE POLYCONNECT PRO?



All your customers' pools are visible **AT THE SAME TIME ON THE APP.**

BECAUSE IT IS MORE THAN JUST A SIMPLE TOOL TO MEASURE AND SET THE POOL PARAMETERS!

Polyconnect Pro also means offering a variety of services to your customers:



EXPERTS ADVICE
in terms of energy savings and pool management



RAPID AND REMOTE INTERVENTIONS
for resolving or limiting potential issues



SAVINGS
with different programs **STANDARD / ECO / INTENSIVE** modes according to the pool usage

PERFECT SOLUTION FOR SECONDARY HOMES, BED & BREAKFASTS, WELLNESS CENTERS, COMMERCIAL SWIMMING POOLS AND FOR ALL THOSE WHO WANT TO SIMPLIFY THEIR POOL!

FEATURES FOR YOUR CUSTOMERS



• REMOTE CONTROL

Ability to pilot different equipments with his mobile or tablet.



• REMOTE MANAGEMENT

Perfect for overlook and manage secondary homes from a distance.



• SUPPORT, OPTIMISATION

Users often complain about the technicity and expertise required to operate their installation. Our different programs will help the user to best use his equipment and avoid issues.



• AN INFORMED TECHNICAL SERVICE TEAM AVAILABLE

Our technicians are able to observe in real time your pool and react prior or during issues : the pool made easy!

BENEFITS FOR YOUR CUSTOMERS

- + **COMFORT:** pool ownership and management becomes easier and fun
- + **ENERGY SAVINGS:** pool data analysis will allow pool optimization and savings
- + **ECO-FRIENDLY:** better water chemistry and healthier water
- + **PEACE OF MIND:** access to the pool any-time, any-where



RESULT

The pleasure of **healthy, trouble-free** pools

SOME CASE STUDIES FOR YOUR CUSTOMERS



PROGRAMMING POOL HEATING

Your customer is on holiday for a couple of weeks. The best advice to give your customer: lower the heating set point to 22°C instead of 28°C, the heat pump will thus operate in economic mode... he can even do this on arrival at his destination, via internet and program it to 28°C in time for his return.

>> **RESULT FOR YOUR CUSTOMER:**
Energy savings and ideal pool water temperature!



ADAPT FILTRATION TIME FOR ENERGY SAVINGS

Your customer organises a pool party on Saturday night with friends and filtration will need to be more intensive during the weekend. No problem: advise him to change the filtration times on the Polyconnect App on his smartphone!

>> **RESULT FOR YOUR CUSTOMER:**
A clean pool at all times and lower electricity bills the rest of the year.



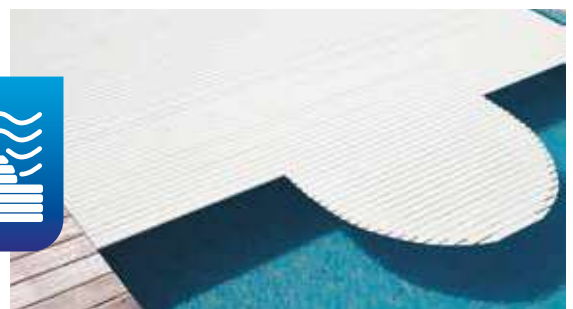
You and your customer will be able **TO REMOTELY CHECK AND CONTROL THE POOL'S PARAMETERS** via a smartphone, any-time, any-where!



DETECT A DIRTY FILTER

You receive a notification on your POLYCONNECT PRO application: the filter of one of the pools you supervise is dirty and less efficient ... You can inform your customer to do it or include it in your rounds. But in case an automatic filtration valve is installed, filter cleaning can even be triggered remotely via the application.

>> **RESULT FOR YOUR CUSTOMER:**
Clean healthy water for pure fun!



OPTIMISE POOL HEATING AN AUTOMATIC COVER

Data transmission and analysis on the operating times of the automatic cover will allow you to better inform your customer to optimise pool heating.

>> **RESULT FOR YOUR CUSTOMER:**
A covered pool means savings on heating!

SELECTION/SIZING SHEET SWIMMING POOL HEATING

INFORMATION REQUIRED FOR A HEATING STUDY

Dealer name:

File Reference name:

LOCATION OF POOL

- City / postal code:
- Altitude:

SWIMMING POOL DETAILS

- Surface area:
- Volume:
- Desired water temperature:
- Pool cover type:
- Pool type: Skimmer Infinity Mirror

FOR INDOOR POOLS

- Room air temperature:
- Insulation type:

INSTALLATION DETAILS

- Available electric power: Single phase 230 V
 Three phase 400V

USAGE

- Pool use Private Commercial/semi-commercial Campsite
 Leisure center Other:
- Number of bathers per day:
- Pool bathing period desired:

OTHER INFORMATIONS:

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SELECTION/SIZING SHEET DEHUMIDIFIER FOR INDOOR POOLS

INFORMATION REQUIRED FOR A DEHUMIDIFICATION STUDY

Dealer name:

File Reference name:

LOCATION OF POOL

- City / postal code:
- Altitude:

SWIMMING POOL DETAILS

- Surface area:
- Volume:
- Water temperature:
- Pool cover type:

POOL ROOM DETAILS

- Surface area:
- Volume:
- Air temperature (1 or 2°C higher than water temperature)*:
- Humidity rate desired (in general 65% humidity rate):
- In case of fresh air renewal (flow):
- Insulation type (construction date/renovation):

INSTALLATION DETAILS

- Desired installation Floor-mounted Wall-mounted
- Through the wall Ducted
- Power supply: Single phase 230V Three phase 400V
- Air heating required? Yes No
- Existing heating? Yes, type of heating: No

USAGE

- Pool use Private Commercial/semi-commercial Campsite
- Leisure center Others:
- Maximum number of bathers who are in the room at the same time:
- Pool bathing period:



OTHER INFORMATIONS:

*The air temperature needs to be superior to the water temperature, otherwise you will need to install an airconditioning system

**PLEASE ATTACH DRAWINGS OF THE INSTALLATION AND DIMENSIONS PLUS ANY OTHER INFORMATION
FOR A MORE ACCURATE SELECTION.
(mainly to identify the number and the position of window surfaces)**



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