



POLYTROPIC

Pool Heating Solutions



MASTER-INVERTER

The intelligent swimming pool heat pump!

NEW
DESIGN




POLYCONNECT 2.0
INSIDE



4G



MASTER INVERTER XS,
S and S+

MASTER INVERTER M
and XM



Certified
noise levels 
Independent testing laboratory



Features and benefits



SIMPLE AND INTUITIVE OPERATION

Color digital touch screen.
Three operating modes:
Heating, Cooling and Automatic.
[see p.10](#)



INTELLIGENT OPERATING MODE

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

OPTIMAL PERFORMANCES



Optimal Twist: Titanium exchanger in a PVC housing, efficient and corrosion resistant.
2D Technology: inverter compressor,



higher COP thanks to the Hz by Hz variable speed motor.



LOW NOISE LEVELS

Noise reduction insulation on all panels and rotation speed of the compressor and fan automatically adjusted to reduce noise to the minimum.



CONNECTED SOLUTION

PolyConnect inside : wifi module and 4G card included allowing for remote control and supervision from our Technicenter
[See p.11](#)



DC Brushless: variable speed fan motor ensures optimal performances.



EXCLUSIVE «LOW TEMPERATURE» SYSTEM

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



RECYCLED MATERIAL

Casing made from 70% recycled material and UV treated

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

PolySmart Control: a sizeable asset

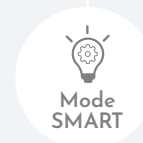
EXCLUSIVE REGULATION AND ENERGY SAVINGS

- Optimization of the power required for maintaining the temperature of the pool by cross-referencing air temperature with water temperature data
- Anticipation of the pool's energy needs thanks to an advanced double-entry regulation.
- An overall higher COP during the season and lower noise levels.
- Inverter compressor with «oversized» exchangers = higher COP.
- Brushless variable speed fan = lower noise levels
- Combination of the Inverter compressor and the Brushless fan motor = automatic regulation of the power when the pool does not require full power.

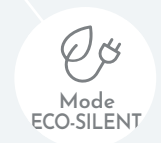
3 OPERATING MODES



The heat pump will raise its heating capacity to near full capacity in order to heat the pool water rapidly.



The output and the noise levels are automatically optimized by taking into account both the air and water temperatures.



the maximum power output is limited in order to prioritize noise over heating power.

HIGHER COP



LOWER electricity bill



LOWER noise levels



BETTER user comfort



CONTROL YOUR HEAT PUMP IN SILENCE WITH THIS SWIMMING POOL HEAT PUMP WITH INTEGRATED FULL INVERTER TECHNOLOGY.

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



MASTER INVERTER XL Tri



The heat pump will raise its heating capacity to near full capacity in order to heat the pool water rapidly.



The output and the noise levels are automatically optimized by taking into account both the air and water temperatures.



The maximum power output is limited in order to prioritize noise over heating power.

e.g.: simplified operation of the Master-Inverter heat pump in SMART mode

Cold air and cold water
Cold air and warm water
Warm air and warm water

Power	COP	Noise levels
high	standard	standard
average	average	low
minimum	maximum	minimum

Selection table

FROM MAY 15TH TO SEPTEMBER 15TH, water depth 1.50 m *cover or automatic pool cover required

	3-phase models											
	XS	S	S+	M	XM	L	L+	M	XM	L	L+	XL
Warm zone	45 m ³	55 m ³	70 m ³	85 m ³	105 m ³	130 m ³	160 m ³	85 m ³	105 m ³	130 m ³	160 m ³	190 m ³
Moderate zone	40 m ³	50 m ³	65 m ³	80 m ³	100 m ³	115 m ³	145 m ³	80 m ³	100 m ³	115 m ³	145 m ³	175 m ³
Cold zone	35 m ³	45 m ³	55 m ³	70 m ³	85 m ³	105 m ³	130 m ³	70 m ³	85 m ³	105 m ³	130 m ³	160 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 Polytronic for information regarding all seasons heating solutions.

Technical specifications

1-PHASE MODEL	Master-Inverter XS	Master-Inverter S	Master-Inverter S+	Master-Inverter M	Master-Inverter XM	Master-Inverter L	Master-Inverter L+
SCOP according to EN 17645	7,5	8,9	8,3	7,3	7,0	7,8	7,0
Classification acc. to EN 17645	A	A	A	A	A	A	A
Recommended pool size*	35-45 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 26°C / Water 26°C / Humidity 80%							
Energy Output BOOST mode	9,3 kW	10,6 kW	13,1 kW	16,1 kW	20,4 kW	24,2 kW	27,8 kW
COP BOOST Mode	5,5	7,3	6,3	5,3	5,2	6,0	5,2
Energy Output SMART mode	9,3 ~ 3,5 kW	10,6 ~ 3,9 kW	13,1 ~ 4,2 kW	16,1 ~ 5,5 kW	20,4 ~ 6,5 kW	24,2 ~ 7,8 kW	27,8 ~ 10,5 kW
COP SMART Mode	5,5 ~ 10,8	7,33 ~ 10,8	6,3 ~ 11,2	5,3 ~ 10,8	5,2 ~ 10,1	6 ~ 10,8	5,2 ~ 10,1
Energy Output ECO-Silence mode	3,5 kW	3,9 kW	4,2 kW	5,5 kW	6,5 kW	7,8 kW	10,5 kW
COP ECO-Silence Mode	10,8	10,8	11,2	10,8	10,1	10,8	10,1
Air 15°C / Water 26°C / Humidity 70%**							
Energy Output BOOST mode	6,6 kW	7,8 kW	9,8 kW	11,5 kW	14,8 kW	18,2 kW	22,9 kW
COP BOOST Mode	5,2	5,6	4,7	4,4	4,5	4,4	4,2
Energy Output SMART mode	6,6 ~ 3,2 kW	7,8 ~ 3,5 kW	9,8 ~ 3,7 kW	11,5 ~ 4,2 kW	14,8 ~ 4,9 kW	18,2 ~ 6,8 kW	22,9 ~ 8,1 kW
COP SMART Mode	5,2 ~ 6,7	5,6 ~ 7,1	4,7 ~ 7,1	4,4 ~ 6,7	4,5 ~ 6,6	4,4 ~ 6,7	4,2 ~ 6,5
Energy Output ECO-Silence mode	3,2 kW	3,5 kW	3,7 kW	4,2 kW	4,9 kW	6,8 kW	8,1 kW
COP ECO-Silence Mode	6,7	7,1	7,1	6,7	6,6	6,7	6,5
Air 7°C / Water 26°C / Humidity 90%							
Energy Output BOOST mode	3,6 kW	4,9 kW	7,9 kW	9,0 kW	11,7 kW	15,0 kW	17,6 kW
COP BOOST Mode	3,7	3,6	3,8	3,8	3,8	3,7	3,7
Air -7°C / Water 26°C / Humidity 0%							
Energy Output BOOST mode	3,4 kW	4,7 kW	5,5 kW	6,8 kW	8,3 kW	9,7 kW	12,0 kW
COP BOOST Mode	2,8	3,9	3,6	2,8	3,0	3,0	2,8
Noise level min-max (at 10m) CTTM certified acc. to EN ISO 3741 : 2010 ***	22 ~ 28 dB(a)	26 ~ 30 dB(a)	26 ~ 31 dB(a)	27 ~ 33 dB(a)	27 ~ 34 dB(a)	28 ~ 35 dB(a)	28 ~ 35 dB(a)
Noise level min-max (at 10m) acc. to EN ISO 3744 : 2010	21 ~ 25 dB(a)	23 ~ 26 dB(a)	23 ~ 28 dB(a)	25 ~ 30 dB(a)	25 ~ 30 dB(a)	26 ~ 31 dB(a)	26 ~ 32 dB(a)
Temperature working range	-15°C -> 38°C						
Installation							
Hydraulic connections	1,5" / 50 mm						
Power	230V / 1~+N / 50 Hz						
Circuit breaker and cable size (for 20 m)	C 10 A (3G 2,5 mm ²)	C 16 A (3G 2,5 mm ²)	C 16 A (3G 2,5 mm ²)	C 20 A (3G 4 mm ²)	C 20 A (3G 4 mm ²)	C 25 A (3G 4 mm ²)	C 32 A (3G 6 mm ²)
Power Input Max (air 28°C)	1,8 kW	2,0 kW	2,4 kW	3,4 kW	4,1 kW	4,6 kW	6,0 kW
Minimum water flow	3 m ³ /h	3 m ³ /h	4 m ³ /h	5 m ³ /h	6 m ³ /h	8 m ³ /h	10 m ³ /h
Dimensions in mm (L x l x h)	980 x 419 x 584	980 x 419 x 584	980 x 419 x 584	1080 x 479 x 707	1080 x 479 x 707	1178 x 525 x 569	1178 x 525 x 569
Weight net (gross)	46 kg (58 kg)	48 kg (59 kg)	48 kg (59 kg)	62 kg (72 kg)	63 kg (80 kg)	93 kg (111 kg)	94 kg (111 kg)

* May to September with cover.

** Tests run with air temperature of 59°F, water inlet temperature of 78.8°F and water outlet temperature of 82.4°F in order to define the required water flow, heating capacity and consumption. In accordance with FPP recommendations (French Pool Federation).

***The BOOST and ECO mode noise levels at 10.9 yards are certified by the independent testing laboratory of Centre de Transfert de Technologie du Mans (CTTM) according to EN ISO 3741 : 2010.

3-PHASE MODEL	Master-Inverter M Tri	Master-Inverter XM Tri	Master-Inverter L Tri	Master-Inverter L+Tri	Master-Inverter XL Tri
SCOP according to EN 17645	7,3	7,0	7,8	7,0	9,1
Classification acc. to EN 17645	A	A	A	A	A
Recommended pool size*	70-85 m ³	85-105 m ³	105-130 m ³	130-160 m ³	160-190 m ³
Air 26°C / Water 26°C / Humidity 80%					
Energy Output BOOST mode	16,1 kW	20,4 kW	24,2 kW	27,8 kW	35,6 kW
COP BOOST Mode	5,3	5,2	6,0	5,2	5,6
Energy Output SMART mode	16,1 ~ 5,5 kW	20,4 ~ 6,5 kW	24,2 ~ 7,8 kW	27,8 ~ 10,5 kW	35,6 ~ 12,8 kW
COP SMART Mode	5,3 ~ 10,8	5,2 ~ 10,1	6 ~ 10,8	5,2 ~ 10,1	5,6 ~ 13
Energy Output ECO-Silence mode	5,5 kW	6,5 kW	7,8 kW	10,5 kW	12,8 kW
COP ECO-Silence Mode	10,8	10,1	10,8	10,1	13,0
Air 15°C / Water 26°C / Humidity 70%**					
Energy Output BOOST mode	11,5 kW	14,8 kW	18,2 kW	22,9 kW	28,0 kW
COP BOOST Mode	4,4	4,5	4,4	4,2	4,7
Energy Output SMART mode	11,5 ~ 4,2 kW	14,8 ~ 4,9 kW	18,2 ~ 6,8 kW	22,9 ~ 8,1 kW	28 ~ 9,6 kW
COP SMART Mode	4,4 ~ 6,7	4,5 ~ 6,6	4,4 ~ 6,7	4,2 ~ 6,5	4,7 ~ 6,7
Energy Output ECO-Silence mode	4,2 kW	4,9 kW	6,8 kW	8,1 kW	9,6 kW
COP ECO-Silence Mode	6,7	6,6	6,7	6,5	6,7
Air 7°C / Water 26°C / Humidity 90%					
Energy Output BOOST mode	9,0 kW	11,7 kW	15,0 kW	17,6 kW	23,3 kW
COP BOOST Mode	3,8	3,8	4,2	3,69	4,2
Air -7°C / Water 26°C / Humidity 0%					
Energy Output BOOST mode	5,8 kW	8,3 kW	9,7 kW	12,0 kW	14,7 kW
COP BOOST Mode	2,8	3	2,98	2,81	2,9
Noise level min-max (at 10m) CTTM certified acc. to EN	27 ~ 33 dB(a)	27 ~ 33 dB(a)	28 ~ 34 dB(a)	28 ~ 34 dB(a)	35 ~ 41 dB(a)
Noise level min-max (at 10m) acc. to EN ISO 3744 : 2010	25 ~ 30 dB(a)	25 ~ 30 dB(a)	26 ~ 31 dB(a)	26 ~ 32 dB(a)	32 ~ 38 dB(a)
Temperature working range	-15°C -> 38°C				
Installation					
Hydraulic connections	1,5" / 50 mm				
Power	400 V / 3~+N / 50 Hz				
Circuit breaker and cable size (for 20 m)	3P +N C16 (5G 2,5 mm ²)	3P +N C16 (5G 2,5 mm ²)	3P +N C20 (5G 2,5 mm ²)	3P +N C20 (5G 2,5 mm ²)	3P +N C20 (5G 2,5 mm ²)
Power Input Max (air 28°C)	3,4 kW	4,1 kW	4,6 kW	6,0 kW	6,9 kW
Minimum water flow	5 m ³ /h	6 m ³ /h	8 m ³ /h	10 m ³ /h	12 m ³ /h
Dimensions in mm (L x l x h)	1080 x 479 x 707	1080 x 479 x 707	1178 x 525 x 569	1178 x 525 x 569	1167 x 498 x 1171
Weight net (gross)	62 kg (72 kg)	63 kg (80 kg)	93 kg (111 kg)	94 kg (111 kg)	123 kg (143 kg)

* May to September with cover.

** Tests run with air temperature of 59°F, water inlet temperature of 78.8°F and water outlet temperature of 82.4°F in order to define the required water flow, heating capacity and consumption. In accordance with FPP recommendations (French Pool Federation).

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Color TFT touch screen

A LARGE HIGHLY RESPONSIVE COLOR TOUCH SCREEN

- High capacitive TFT touch screen with a 480x480 resolution IPS panel
- Protected by a layer of thermal toughened glass to ensure maximal resistance
- Large size for good readability: L 72 x H 68 mm, 4" diagonal (over 10.5 cm)
- 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 MULTILINGUAL CONTROL INTERFACE

Intuitive navigation for an ease of operation, settings and all information are simultaneously viewed.



Access the 3 intuitive operating modes in a single gesture!



Alarm messages, diagnostics and problem resolutions, hotline contact



Access to the last 50 log-book events



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



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



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