



POLYTROPIC

• POOL HEATING SOLUTIONS •



MASTER-INVERTER

The intelligent swimming pool heat pump!



MASTER INVERTER XS,
S and S+

MASTER INVERTER
M and XM

MASTER INVERTER
L+


POLYCONNECT 2.0
INSIDE



4G



Certified
noise levels 
Independent testing laboratory



Technical specifications

1-PHASE MODEL	Master-Inverter XS	Master-Inverter S	Master-Inverter S+	Master-Inverter M	Master-Inverter XM	Master-Inverter L+
SCOP acc. to EN 17645	7,5	8,9	8,3	7,3	7,0	7,0
Classification acc. to EN 17645	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	105-150 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	27,8 kW
COP BOOST Mode	5,5	7,3	6,3	5,3	5,2	5,2
Energy Output SMART mode	9,3 ~ 4,8 kW	10,6 ~ 5,8 kW	13,1 ~ 7,2 kW	16,1 ~ 8,9 kW	20,4 ~ 11,1 kW	27,8 ~ 15,3 kW
COP SMART Mode	5,5 ~ 10,8	7,3 ~ 11,1	6,3 ~ 11,2	5,3 ~ 10,8	5,2 ~ 10,1	5,2 ~ 10,1
Energy Output ECO-Silence mode	4,8 kW	5,8 kW	7,2 kW	8,9 kW	11,1 kW	15,3 kW
COP ECO-Silence Mode	10,8	11,1	11,2	10,8	10,1	10,1
Air 15°C / Water 26°C / Humidity 70 R**						
Energy Output BOOST mode	6,6 kW	7,8 kW	9,8 kW	11,2 kW	14,6 kW	22,9 kW
COP BOOST Mode	5,2	5,6	5,0	4,4	4,5	4,2
Energy Output SMART mode	6,6 ~ 3,7 kW	7,8 ~ 4,3 kW	9,8 ~ 5,4 kW	11,2 ~ 6,4 kW	14,6 ~ 8,3 kW	22,9 ~ 12,2 kW
COP SMART Mode	5,2 ~ 6,4	5,6 ~ 7,1	5,0 ~ 7,1	4,4 ~ 6,4	4,5 ~ 6,3	4,2 ~ 6,8
Energy Output ECO-Silence mode	3,7 kW	4,3 kW	5,4 kW	6,4 kW	8,3 kW	12,2 kW
COP ECO-Silence Mode	6,4	7,1	7,1	6,4	6,3	6,8
Air 7°C / Water 26°C / Humidity 90%						
Energy Output BOOST mode	4,9 kW	6,8 kW	7,9 kW	9,0 kW	11,7 kW	17,6 kW
COP BOOST Mode	3,7	5,1	4,6	3,8	3,8	3,7
Air -7°C / Water 26°C / Humidity 0%						
Energy Output BOOST mode	3,4 kW	4,7 kW	5,5 kW	6,1 kW	8,3 kW	12,0 kW
COP BOOST Mode	2,8	4,0	3,6	3,0	3,0	2,8
Noise level min-max (at 10m) CTTM certified acc. to EN ISO 3741 : 2010 ***	20 ~ 28 dB(A)	28 ~ 30 dB(A)	26 ~ 32 dB(A)	28 ~ 34 dB(A)	28 ~ 34 dB(A)	31 ~ 41 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 ~ 32 dB(A)
Temperature working range	-15°C -> 43°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 10 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 40 A (3G 6 mm ²)
Power Input Max (air 26°C)	1,8 kW	2,0 kW	2,4 kW	3,4 kW	4,1 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	10 m ³ /h
Dimensions in mm (L x l x h)	980 x 411 x 609			1080 x 474 x 715		1178 x 518 x 872
Weight net (gross)	46 kg (58 kg)	48 kg (59 kg)	48 kg (59 kg)	62 kg (72 kg)	63 kg (80 kg)	94 kg (111 kg)

* May to September with cover.

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

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

3-PHASE MODEL	Master-Inverter M 3-phase	Master-Inverter XM 3-phase	Master-Inverter L+ 3-phase	Master-Inverter XL 3-phase
SCOP acc. to EN 17645	7,3	7,0	7,0	9,1
Classification acc. to EN 17645	A	A	A	A
Recommended pool size*	70-85 m ³	85-105 m ³	105-150 m ³	160-190 m ³
Air 26°C / Water 26°C / Humidity 80%				
Energy Output BOOST mode	16,1 kW	20,4 kW	27,8 kW	35,6 kW
COP BOOST Mode	5,3	5,2	5,2	5,6
Energy Output SMART mode	16,1 ~ 8,9 kW	20,4 ~ 11,1 kW	27,8 ~ 15,3 kW	35,6 ~ 12,8 kW
COP SMART Mode	5,3 ~ 10,8	5,2 ~ 10,1	5,2 ~ 10,1	5,6 ~ 13,0
Energy Output ECO-Silence mode	8,9 kW	11,1 kW	15,3 kW	25,6 kW
COP ECO-Silence Mode	10,8	10,1	10,1	13,0
Air 15°C / Water 26°C / Humidity 70 R**				
Energy Output BOOST mode	11,2 kW	14,6 kW	22,9 kW	28,0 kW
COP BOOST Mode	4,4	4,5	4,2	4,7
Energy Output SMART mode	11,2 ~ 6,4 kW	14,6 ~ 8,3 kW	22,9 ~ 12,2 kW	28,0 ~ 9,6 kW
COP SMART Mode	4,4 ~ 6,4	4,5 ~ 6,3	4,2 ~ 6,8	4,7 ~ 6,7
Energy Output ECO-Silence mode	6,4 kW	8,3 kW	12,2 kW	19,4 kW
COP ECO-Silence Mode	6,4	6,3	6,8	6,7
Air 7°C / Water 26°C / Humidity 90%				
Energy Output BOOST mode	9,0 kW	11,7 kW	17,6 kW	23,3 kW
COP BOOST Mode	3,8	3,8	3,7	4,2
Air -7°C / Water 26°C / Humidity 0%				
Energy Output BOOST mode	5,8 kW	8,3 kW	12,0 kW	14,7 kW
COP BOOST Mode	2,8	3,0	2,8	2,9
Noise level min-max (at 10m) CTTM certified acc. to EN ISO 3741 : 2010 ***	28 ~ 34 dB(A)	28 ~ 34 dB(A)	31 ~ 41 dB(A)	35 ~ 44 dB(A)
Noise level min-max (at 10m) acc. to EN ISO 3744 : 2010	25 ~ 30 dB(A)	25 ~ 30 dB(A)	26 ~ 32 dB(A)	32 ~ 38 dB(A)
Temperature working range	-15°C -> 43°C			
Installation				
Hydraulic connections	1,5" / 50 mm			
Power	400 V / 3~N / 50 Hz			
Circuit breaker and cable size (for 20 m)	3°C 16 (5G 2,5 mm ²)	3°C 16 (5G 2,5 mm ²)	3P + N C 20 (5G 2,5 mm ²)	3P + N C 20 (5G 2,5 mm ²)
Power Input Max (air 26°C)	3,4 kW	4,1 kW	6,0 kW	6,9 kW
Minimum water flow	5 m ³ /h	6 m ³ /h	10 m ³ /h	12 m ³ /h
Dimensions in mm (L x l x h)	1080 x 474 x 715		1178 x 518 x 872	1166 x 521 x 1171
Weight net (gross)	62 kg (72 kg)	63 kg (80 kg)	94 kg (111 kg)	123 kg (143 kg)

* May to September with cover.

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

*** Noise levels in BOOST and ECO mode at 10 m, certified by the independent laboratory Centre de Transfert de Technologie du Mans, in accordance with EN ISO 3741: 2010, except XL models.



CONTROL YOUR HEATING IN SILENCE WITH THIS FULL INVERTER TECHNOLOGY HEAT PUMP.

Thanks to its **exclusive intelligent control system**, the **Master-Inverter reversible heat-pump** regulates its output according to the water temperature, but also according to the ambient temperature, to always ensure the **right bathing temperature, the best COP* and the lowest noise level!**



MASTER INVERTER XL 3-phase



85% to 100% of power used to ensure rapid temperature rise.

Mode
BOOST



Mode
SMART

The power and sound level are automatically adjusted according to the temperature outside and in your pool.



Mode
ECO-SILENT

Using 25% to 60% of the power, the COP and the noise level are prioritised, the fan runs at minimum speed and the compressor runs to favour the COP.

Example: simplified operation of the Master-Inverter heat pump 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

SELECTION TABLE

Maximum water volume, for water at 26°C, **from 15 May to 15 September***, water level 1.50 m -

*Cover or roller shutter **MANDATORY**

	1-phase models								3-phase models			
	XXS	XS	S	S+	M	XM	L	L+	M	XM	L+	XL
Hot zone	35 m ³	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	160 m ³	190 m ³
Moderate zone	30 m ³	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	145 m ³	175 m ³
Cold zone	25 m ³	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	130 m ³	160 m ³

CAUTION: This table does not replace a thermal study and is given for information only. For all-season operation, please contact your Polytronic representative.

Features and **benefits**



SIMPLE AND INTUITIVE OPERATION

Color digital touch screen.

3 operating modes : Heating, Cooling and Automatic.



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.



DC Brushless : variable speed fan motor ensures optimal performances.



INTELLIGENT OPERATING MODE

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



LOW NOISE LEVELS

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



CONNECTED SOLUTION

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



RECYCLED MATERIAL

Body in 70% recycled ABS with anti-UV treatment (except XL Tri model in galvanised steel)



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.

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



PolySmart Control : major assets

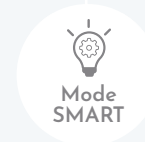
EXCLUSIVE REGULATION AND SAVINGS

- **Optimise the power required to maintain the temperature** of your pool, by cross-referencing ambient temperature and water temperature data.
- **Anticipation of the pool's energy requirements** thanks to advanced dual input regulation.
- **Much higher COP** on average over the season + **low noise level**.
- Inverter compressor with «oversized» heat exchangers = **higher COP**.
- Brushless fan (variable speed) = **lower noise level**.
- Combination of Inverter compressor and Brushless fan = **power regulated** according to pool requirements.

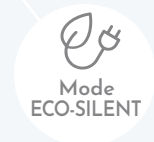
3 OPERATING MODES



We ask the machine for maximum power to heat up quickly.



The power and sound level are automatically adjusted according to the temperature outside and in your pool.



The maximum power delivered by the machine is limited to ensure the lowest noise level and the highest COP at all times.

HIGHER COP



LOWER electricity bill



LOWER noise levels



BETTER user comfort



Color TFT touch screen

A LARGE HIGHLY RESPONSIVE COLOR TOUCH SCREEN

- Large, high-definition capacitive TFT touchscreen for excellent readability (W 72 x H 68 mm, 4» diagonal).
- Protected by a layer of **thermally toughened glass** to ensure **durability**.
- The **opaque protective door** protects the display from weather conditions, dust, scratches and UV rays.

NEW !

Screen protector box - Exclusive development!

- > Waterproof plastic casing with rubber seals and more robust opaque protective door.
- > The door opens and closes with a simple push, and the reinforced plastic hinge is rust-proof and less likely to break.

Intuitive user interface

AN INTUITIVE, MULTILINGUAL CONTROL INTERFACE

Clear operation and easy navigation, responsive to the touch of a finger...



Alarm display, diagnosis and solution



History of the last 50 events



NEW !
Lockable TFT screen
to prevent mishandling

POLYCONNECT 2.0 INSIDE



CONNECTED SOLUTION

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

