

# PRODUCT CATALOGUE

**Solar Energy Solutions** 



GERMAN-based company •••



tommatech.de

Generate your electricity with solar energy without damaging the environment.



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TommaTech<sup>®</sup> as a German based company aims to promote the use of solar energy by pioneering new technologies to meet the energy needs of our planet with clean resources, support a sustainable future, contribute to the world economy and leave a livable nature to future generations.

TommaTech<sup>®</sup>, as a credible, innovative and competitive organization, oers solar equipment and solutions that target all segments of society and economy with the ultimate objective to add value to homes and businesses while protecting the environment without compromising on quality and customer satisfaction.

From our headquarters in Garching - Germany we export reliable solar equipment and solutions at aordable prices to more than 57 countries worldwide.





#### German Design

TommaTech<sup>®</sup> aims to extend the use of solar energy around the world by pioneering new technologies to create reliable and financially viable solar products for everybody. Among others, our experienced team of German Engineers recently:

-Launched the next generation of hybrid and on-grid inverters.

-Optimized our plug and play, IP67 protected solar irrigation inverters.

-Developed and designed intelligent solar panels manufactured in Industry 4.0 Euro 1 norm facilities.





TommaTech<sup>®</sup>, as a credible, innovative and competitive organization, offers solar equipment and solutions that target all segments of society and economy with the ultimate objective to add value to homes and businesses while protecting the environment without compromising on quality and customer satisfaction.

From our headquarters in Garching - Germany we export reliable solar equipment and solutions at affordable prices to more than 57 countries worldwide.

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#### German Quality Assurance & Certification

Led by our team of German engineers, we continuously develop our solutions by integrating the latest technologies, increasing our scope and improving the durability, design and performance. However, as assurance of our continuously reliable quality, we were rewarded with many certificates.

Furthermore, and uniquely in solar power industry, our 30-year linear performance guarantee of our solar panels is backed up by SOMPO INSURANCE insurance company, who additionally covers any bodily or material damage caused through our solar panels.

Among others, our products comply with CE, as well as different ISO, VDE and IEC standards, which is confirmed regularly by independent test institutions such as TÜV SÜD, TÜV NORD etc.



TommaTech<sup>®</sup> developed several solar panels optimized for the installation on roofs. Our compact, easy to install and yet powerful solar panels are also available as Dark Series, Black&White or Silver versions.





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"Experience the comfort of the future." Control your home easily with TommaTech PORTAL.





# TOMMATECH RESIDENTIAL ROOFTOP SOLAR PANELS

M10 PERC MONOCRYSTALLINE M10 TOPCON N-TYPE MONOCRYSTALLINE M10 TOPCON N-TYPE MONOCRYSTALLINE DARK SERIES M12 PERC MONOCRYSTALLINE M12 BIFACIAL PERC MONOCRYSTALLINE WATERPROOF SOLAR ROOF TILES TRANSPARENT BIPV FLEXIBLE SMALL SERIES



# **10 Busbar Half-Cut PERC Monocrystalline Solar Panels**

395-410 / 530-550 / 575-595Wp

#### **Kev Facts**

PV Power Range: **Cell Technology:** 

Module Efficiency:

Number of Cells: **Dimensions:** Frame Thickness Weight:

395 - 595Wp PERC Monocrystalline M10 (182x91mm / Half-Cut) 10BB Up to 21.50 108 / 144 / 156 1722mm x 1134mm / 2278mm x 1134mm / 2438mm x1135mm 30mm / 35mm / 35mm 22.0 / 29.0 / 31.0kg

With our TT108PM10 solar panels series manufactured with 108 highly efficient 10 Busbars, MonoPERC Half-Cut cells, we push the limits of rooftop solar installation beyond any borders. Based on selected, high-quality materials coupled with our high manufacturing standards, we offer uniquely reliable solar modules that generate long-term clean energy in minimal space with outputs ranging from 395Wp to 410Wp.

10BB PERC monocrystalline solar panels made of 108, 144 or 156x 182mm solar cells are a solid and economical solution for large scale roof or ground mount solar power plants. The increased useable solar cell area results in high efficiency and improved solar electricity generation while the 10 busbars reduce the resistive losses in the cells significantly making the solar panel the preferred solution for your project.









156PM10

108PM10

#### **Key Facts**

144PM10

**PV Power Range: Cell Technology:** Monocrystalline (182x91mm / Half-Cut) 16BB **Module Efficiency:** Number of Cells: **Dimensions: Frame Thickness** Weight:

435Wp - 450Wp **TOPCon N-Type** Up to 23.04 108 30mm 21.45kg

**10BB** 







**Anti-Reflection Glass** 













X Easv





With our 435 - 450Wp solar modules, we are once

TT108TN10 Solar Panels

435Wp / 440Wp / 445Wp / 450Wp

1722mm x 1134mm again setting new standards and staying true to our promise of continuously providing more efficient products for everyone. Based on the latest TOPCon cell technology in combination with our unique manufacturing process, these solar panels offer up to 25% more yield compared to traditional products resulting in long-term cost Installation savings and reduced environmental impact.



# TT108TNB10 Solar Panels

435Wp / 440Wp / 445Wp / 450Wp

Explore the TommTech BIFACIAL TOPCON MONOCRYSTALLINE 108TNB10 Module with its robust glass-glass design!

Our 108TNB10 module combines state-of-the-art technology with outstanding performance to provide you with the most efficient energy generation. Thanks to the robust glass-glass design, our module ensures long life and reliability. With its high conversion efficiency, you maximize your energy yield and make the most of every ray of sunlight. Even in low light conditions, our unique low-light glass achieves impressive results. Thanks to the dual-layer EVA laminated double glass, you can rely on stable and long-lasting performance. Invest in the future of solar energy with the TommTech BIFACIAL TOPCON MONOCRYSTALLINE 108TNB10 module!

#### **Key Facts**









Easy Installation

6RR



# **TT144TN10** Solar Panels

570Wp / 575Wp / 580Wp / 585Wp / 590Wp / 595Wp

TommaTech®'s TT144TN10 TOPCon solar panels in the 570-595Wp power classes are designed to optimize the generation of renewable, green power. Based on the latest M10 TOPCon cell technology, these modules combine three of the fundamental components of TommaTech®'s product philosophy Maximum conversion rates, innovation drive and robust designs so that everyone can enjoy the full potential of solar energy for the long term.

#### **Key Facts**

**PV Power Range:** 570Wp - 595Wp Cell Technology: **TOPCon N-Type** Monocrystalline M10 (182x91mm / Half-Cut) 16BB **Module Efficiency:** Up to 23.03

Number Cell: **Dimensions: Frame Thickness** Weight:

144 2278mmx1134mm 35mm 29.0kg

 $( \mathbf{f} )$ High Conversion Outstanding Low Efficiency **Irradiation Glass** 

Easy Installation

#### **Key Facts**

PV Power Range: Cell Technology: (182x91mm / Half-Cut) 16BB Module Efficiency: Number of Cells: **Dimensions:** 

Frame Thickness: Weight:

435 - 595 : TOPCon N-Type Monocrystalline M10 Up to 23.03 108 / 120 / 144 1722mm x 1134mm / 1909mm x 1134mm / 2278mm x1134mm 30mm / 35mm / 35mm 22.0 / 24.0 / 29.0kg

# **TOPCon N-TYPE** Monocrystalline Solar Panels

TommaTech®'s Dark Series solar modules add a visual finishing touch to any solar installation, allowing for highly aesthetic projects. Beautify your building, carport or veranda while generating renewable electricity. TommaTech® offers Dark Series versions of all solar modules.

Ð **High Conversion** Efficiency



**16BB** 







108TNFB10 120TNFB10 144TNFB10

#### **Key Facts**

PV Power Range: 530- 675Wp Cell Technology: PERC Monocrystalline M12 (210x105mm / Half-Cut) 12BB Module Efficiency: Up to 21.73 Number of Cells: 108 / 120 / 132 **Dimensions:** 1965mm x1303mm / 2172mm x 1303mm / 2384mm x1303mm Frame Thickness: 35mm Weight: 28.5 / 31.0 / 34.5kg

# **12 Busbar Half-Cut PERC Monocrystalline Solar Panels**

530-550 / 590-610 / 650-675Wp

**12BB** 

TommaTech® new Half Cut solar panels with 108, 120 or 132x 12BB 210mm PERC monocrystalline solar cells combine the latest technologies in solar power industry to guarantee highest efficiency on smaller areas as well as minimal losses due to partly shaded solar panels. Especially, the 12BB technology reduces the electric and optical losses inside the cell, thus maximizing the output. Consequently, they are the most economic choice for ground or the output. roof mount solar power plants of any size.











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108PM12

120PM12

132PM12



530-550 / 590-610 / <u>650-675Wp</u>

#### Key Facts

PV Power Range: Cell Technology:

Module Efficiency: Number of Cells: Dimensions:

Frame Thickness: Weight: 530 - 675Wp Bifacial, PERC Monocrystalline M12 (210x105mm / Half-Cut) 12BB Up to 21.73 108 / 120 / 132 1965mm x1303mm / 2172mm x 1303mm / 2384mm x1303mm 35mm 28.5 / 31.0 / 34.5kg

TommaTech<sup>®</sup> Bifacial solar panels can generate up to 30% additional electricity due to the extra power generated from the rear of the panel depending on the ground and environment. Thus, they are used preferably for facade and other BIPV installations.



**12BB** 

Outstanding Low Irradiation Glass



Self-Cleaning & Anti-Reflection Glass

132PMB12

120PMB12

108PMB12



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# TT144TNBCK10 Waterproof Solar Roof Tiles

#### 570 - 595Wp

**16BB** 

#### **Key Facts**

PV Power Range:570 - 595WpCell Technology:Bifacial, TOPCon N-TypeMonocrystalline M10(182x91mm / Half-Cut) 16BBModule Efficiency:Up to 23.03Number of Cells:144Dimensions:2318mm x 1165.1mmWeight:35.6kg

Replace your tiles, roof sheets or carport covers by clean energy generating solar roof tiles which are equipped with a special frame to close the gap between models thus ensuring a waterproof installation. At TommaTech® we offer Solar Roof Tiles with half-cut of TOPCon monocrystalline solar.









# Multi-Busbar



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#### **Key Facts**

 PV Power Range:
 240 - 400Wp

 Cell Technology:
 BIPV PERC Monocrystalline,

 Half-Cut 12BB
 Up to 16.33

 Module Efficiency:
 Up to 16.44 / 80

 Dimensions:
 1500mm x 980mm / 1750mm x 980mm

 / 2000mm x 980mm / 2500mm x 980mm
 Frame Thickness:

 Thickness:
 7.6mm

 Weight:
 29.13/33.66/38.44/48.10kg

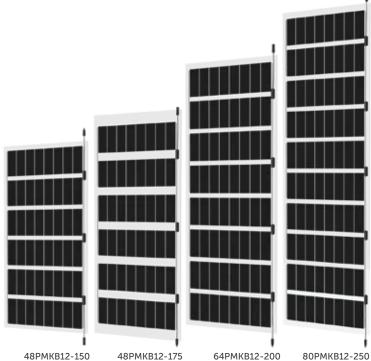
# **Transparent BIPV Solar Panels**

240 / 240 / 320 / 400Wp

With BIPV (Building Integrated Photovoltaic) Solar Panels, TommaTech® enables the conversion of any area such as your roof, facade, balcony or wintergarden into a clean energy generating solar power plant. Due to the twice EVA laminated double glass,TommaTech® BIPV Solar Panels boast excellent durability and stress properties.

# **BIPV Technology**

With the BIPV (Building Integrated PhotoVoltaic) solar panel family, TommaTech® enables new ways to utilize any available area for a maximum clean and free solar power generation. Designed by our team of experienced German engineers, we offer standardized BIPV solar panels of different sizes with 240Wp, 320Wp and 400Wp and are additionally looking forward to manufacture further solar panels tailored to your needs.







## **Flexible Solar Panels**

110- 170Wp

#### Key Facts

PV Power Range: Cell Technology: Module Efficiency: Number of Cells: **Dimensions:** Thickness: Weight:

110 - 170 Wp Back-Contact Up to 18.5 32 / 48 1134x555 / 1134x811 3mm 2.3 / 3.2kg

TommaTech<sup>®</sup>'s next generation flexible solar panels are designed with highly efficient, back contact solar cells. Hence, the flexible panel series stands out in its product class with high power capacity on a small area as well as a high charging capacity. Manufactured using premium lightweight polymer materials, TommaTech®'s flexible panels offer easy handling, fast installation and up to 30° degrees of panel flexibility.

**IP68** 

Rated



IBC Cell Technology

Ultra Lightweight



# **Flexible Technology**

The new generation flexible panels produced by TommaTech® set the latest trend in solar panel technology. TommaTech® flexible solar panels can be installed on curved surfaces without compromising on the efficiency. Flexible panels are ideal for boats, yachts, caravans, automobiles etc. and have been specially designed to adapt to surfaces with restricted, specially shaped or curved areas (up to 30°). In addition, since flexible panels are lighter than other panels, they are ideal for installations on roofs that cannot bear heavy loads.

#### **Key Facts**

**PV Power Range:** Cell Technology: Small Cells M12 (Half-Cut) 36-48PM12 Module Efficiency: Number of Cells: Weight:

60 - 240Wp PERC Monocrystalline Up to 20.77 36 - 48 3.25 - 13.46kg

# **Small Solar Panels**

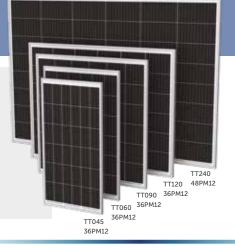
To help everybody enjoying a more comfortable life, we developed Small Solar Panels, which offer a highly economic solution for small power solutions. Based on Multi Busbar PERC monocrystalline solar cells, TommaTech® offers the right solar panels for any project and every electric equipment.











# TOMMATECH INVERTERS

UNO ATOM Single MPPT UNO HOME Dual MPPT TRIO ATOM-K Dual MPPT TRIO PLUS-K Dual / Triple MPPT UNO HYBRID-K Single Phase Hybrid TRIO HYBRID-K Three Phase Hybrid TommaTech® High Voltage Batteries TommaTech® LiFePO4 Batteries

# ON-GRID INVERTERS

TommaTech® Next Generation On-Grid inverters convert solar DC electricity to AC electric energy and power your home from the Sun!

# **UNO ATOM Single MPPT**

0.6kW / 0.7kW / 1.1kW / 1.5kW / 2.0kW / 2.5kW / 3.0kW / 3.3kW / 3.6kW

3kW - 6kW

600V 2

70V

1.5



TommaTech<sup>®</sup> Uno-Atom string inverters are engineered to be installed in the smallest of spaces without lacking performance. With a maximum efficiency of 98% and a market leading low start-up voltage of 55V, Uno-Atom inverters ensure an outstanding performance, allowing you to harvest the maximum amount of energy possible from your PV solution, whether installed inside or outside.

#### **Key Facts**

AC Output Power Range	<b>e:</b> 60	00W - 3.6kW
Max. PV Input Voltage:	45	50 / 550V
Number of MPPTs:	1	
MPPT Starting Voltage:	45	5 / 55V
DC/AC Ratio:	1.	5
Single Phase		
	ৰ্ভুত্ত	
Low Start-Up Voltage	Small & Lightweight	IP66 Rated

#### Key Facts

AC Output Power Range:
Max. PV Input Voltage:
Number of MPPTs:
MPPT Starting Voltage:
DC/AC Ratio:
Single Phase



# **UNO HOME Dual MPPT**

3.0kW / 3.3kW / 3.6kW / 4.2kW / 4.6kW / 5.0kW / 5.5kW / 6.0kW

To offer the best solution for every customer, we developed 8 single phase string inverters ranging from 3kW to 6kW. The wide voltage range of two inbuilt MPPTs allows for harvesting with a maximum efficiency of 97.8%. Additionally, TommaTech<sup>®</sup> Uno-Home plug & play inverters with an LCD touch screen are IP66 rated and can be monitored online with a Wi-Fi accessory.



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# ON-GRID INVERTERS

# **TRIO ATOM-K Dual MPPT**

#### 3.0kW / 4.0kW / 5.0kW / 6.0kW / 8.0kW / 10.0kW/ 12.0kW / 15.0kW

8kW - 30kW 1,100V 2 / 3 160V

1.5

With the latest Trio-Atom K-Series inverters, TommaTech<sup>®</sup> continues to set new standards in the residential solar market. Ranging from 3kW to 15kW and equipped with two highly efficient MPPTs, TommaTech®'s new three-phase inverters maximize solar energy utilization with exceptionally high maximum PV input capacities.

#### **Key Facts**

AC Output Power Range:	3kW - 15kW
Max. PV Input Voltage:	1,000V
Number of MPPTs:	2
MPPT Starting Voltage:	120V
DC/AC Ratio:	2.0
Three Phase	





#### **Key Facts**

AC Output Power Range:
Max. PV Input Voltage:
Number of MPPTs:
MPPT Starting Voltage:
DC/AC Ratio:
Three Phase

**IP66** 

Rated





## **TRIO PLUS-K Dual / Triple MPPT**

Ranging from 8kW to 30kW, TommaTech® Trio Plus K-Series Dual and Triple MPPT on-grid inverters offer maximum flexibility thanks to a market-leading PV input voltage of 1.100V and maximum input currents of 20A for high-power solar panels. This, combined with maximum efficiencies of 98.5%, various communication and online monitoring options as well as IP66 design, make these inverters your preferred choice for any residential solar solution.







# HYBRID INVERTERS

# **UNO HYBRID-K Single Phase Hybrid**

3.0kW / 3.7W / 5.0kW / 6.0kW / 7.5kW



TommaTech®'s Uno-Hybrid K-Series single phase inverters with a maximum efficiency of 97.6%, advanced PV array power, lower start-up voltage of 90V and maximum PV string voltage of 600V are compatible with our high voltage lithium-ion as well as regular lead acid batteries. It offers plug and play installation and optimizes self-consumption through export control. There are five power options between 3.0 kW and 7.5 kW.

#### **Key Facts**

AC Output Power Range:	3kW - 7.5kW
Max. PV Input Voltage:	600V
Number of MPPTs:	2
MPPT Starting Voltage:	70V
DC/AC Ratio:	1.5
Battery Voltage:	80V - 480V



#### **Key Facts**

3- Phase

Unbalance

Output

AC Output Power Range:
Max. PV Input Voltage:
Number of MPPTs:
MPPT Starting Voltage:
DC/AC Ratio:
Battery Voltage:

Lithium-Ion

Battery

5kW - 15kW 1.000V 2 180V 1.2 / 1.5 180V - 800V

Parallel

Function

## **TRIO HYBRID-K Three Phase Hybrid**

5.0kW / 6.0kW / 8.0kW / 10.0kW / 12.0kW / 15.0kW

TommaTech®'s Trio-Hybrid K-Series three phase inverters are the preferred solution for both residential and commercial projects as hey support unbalanced phase output, are equipped with dual protection for the BMS and can be controlled remotely through multiple communication options. The inverters, which are available in six power options between 5.0kW and 15.0kW can be equipped with up to 46kWh storage, each. Furthermore, they can be installed in parallel allowing for solutions of up to 150kWh and 460kWh storage.





# LITHIUM BATTERIES



#### **Key Facts**

5.8kWh - 46.0kWh
LiFePO <sub>4</sub>
100V - 524V
6000
10 Years

6000

Cycles

	100V - 5 6000	
5:		
	10 Years	





#### **TommaTech® High Voltage Batteries**

5.8kWh GeneralPack / BoosterPack

Maximize your solar benefits with our durable and scalable battery solutions. The safest LiFePO<sub>4</sub> technology ensures long term and high-performing operation with more than 6000 life cycles at 90%DoD with marginal self-consumption. Our GeneralPacks with inbuilt BMS can eortlessly be upgraded with up to 3 BoosterPacks to increase backup times and savings.



## **TommaTech® High Voltage Batteries**



Maximize your solar benefits with our durable and scalable battery solutions The safest LiFePO4 technology ensures long term and high-performing operation with more than 6000 life cycles at 90%DoD with marginal self-consumption. Up to 4 of our TT-3.0kWh batteries can be equipped effortlessly with a BMS for maximal customization.

#### **Key Facts**

	Capacity Range:	3.0kWh - 12.0kWh
	Battery Technology:	LiFePO <sub>4</sub>
	Nominal DC Voltage:	90V - 464V
ır	Max. Number of Cycles:	6000
s.	Warranty:	10 Years
S		
n		





#### **Key Facts**

Nominal Voltage [V]: Nominal Capacity [Ah]: Nominal Energy [Wh]:

12.8 / 25.6 102 / 204 1305.6 / 2611.2 /



**Expandable Capacity** Communication

BTR-P-51.2V-102AH



#### BTR-P-12.8V-102AH BTR-P-12.8V-204AH

BTR-P-25.6V-102AH BTR-P-25.6V-204AH



# **TommaTech® LFP Lithium Battery**



BTR-P-51.2V-102AH-R

TommaTech new generation low voltage lithium batteries offer unique solutions for energy storage. With a long life of up to 8000 cycles, high energy density, high quality and performance, TommaTech lithium batteries stand out with their functional and eco-friendly structure.

#### **Key Facts**

Nominal Voltage [V]:	51.2
Nominal Capacity [Ah]:	102
Nominal Energy [Wh]:	5222.4
High Active Sma Performance Management S Expandable Capacity	

functional and eco-friendly structure.



#### **Key Facts**

Phases / Cables:	Single Phase /
	Three Phase
AC Output Power Range:	7.2kW - 22kW
AC Output Voltage:	230V - 400V
Dimensions:	249x370x142 n
Weight:	5.6 - 6.2kg
Warranty:	3 Years



EV - Charger

Uno-Trio

#### 7.2/11.0/22.0

TommaTech® EV Chargers allow quick and nm simple charging of electric vehicles with dierent charging standards via Type II connectors in Eco-Mode, Fast-Charging and Custom-Mode. Based on their smart design, the EV Chargers can be installed indoor and outdoor and operated within a high temperature range, which makes TommaTech® EV Chargers the preferred choice for residential, office or public applications. the Additionally, compatibility with TommaTech<sup>®</sup> Trio and Uno Hybrid Inverters allow the charging of stored solar electricity from the battery at night thus enabling highest utilization of charging assets.



#### TommaTech<sup>®</sup> Monoblock Heat Pump

Heating & Cooling & Hot Water 6 kW MF / 9 kW MF / 13kW MF / 16 kW MF 16kW TF / 20 kW TF / 26 kW TF



TommaTech heat pump meets all your needs in one device: heating, cooling, and hot water. With EVI T technology, it operates stably even at temperatures as low as -25 degrees, and you can manage it with WiFi. Using R32 gas, which does not harm the ozone layer, ensures low global warming potential and high efficiency. With fast heating and a brushless DC fan motor, it delivers excellent performance. Emphasizing energy efficiency, we achieve a high COP up to 6.15 and hold an A+++ ErP rating. It seamlessly integrates with smart grid PV panels and operates quietly with a low noise level of 43 dB. You can adjust the real-time water temperature with our unique control logic.

#### **Key Facts**

Refrigeration gas:	I	R32
Power Supply (V/Ph	ı/Hz):	220-240V~/50Hz //
		380-415V/3N~/ 50Hz
Operating range:		-25 / + 43 degrees
Туре:	I	Monoblock EVI DC
	I	FULL INVERTER
Warranty:	:	2 years
Rest of the second seco	Economical	Energy Class
<b>R32</b>	Ę.	SG

Low Noise

#### **Key Facts**

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Low Noise

Refrigeration	n gas:	R32
Power Suppl	y (V/Ph/H	<b>z):</b> 220-240V~/50Hz //
		380-415V/3N~/ 50Hz
Operating range:		-10 / + 43 degrees
Туре:		Monoblock DC FULL
		INVERTER
Warranty:		2 years
<b>R32</b>	<b>?</b>	
Refrigerant	WI-FI	High Energy Efficiency
		Efficiency

**Fast Heating** 

#### TommaTech<sup>®</sup> Monoblock Pool Heat Pump

Refrigerant

Heating & Cooling

#### 21 kW MF / 28 kW TF

Our TommaTech monobloc pool heat pumps efficiently can heat or cool your swimming pool in a quiet, easy, and energy-saving manner. The majority of the required energy is sourced from the air. Extend your swimming season by up to three months.

Inverter pool heaters are self-regulating, exceptionally quiet, and consume even less electricity.



SG-READY







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