



**solimpeks**

**EN**

[solimpeks.com](http://solimpeks.com)



SOLIMPEKS Enerji Paz. Ltd. Şti.  
IZMIR / TURKEY



SOLIMPEKS Solar SL.  
SEVILLE / SPAIN



Solimpeks Solarenergie GmbH  
HANNOVER / GERMANY

## HEADQUARTERS KONYA / TURKEY

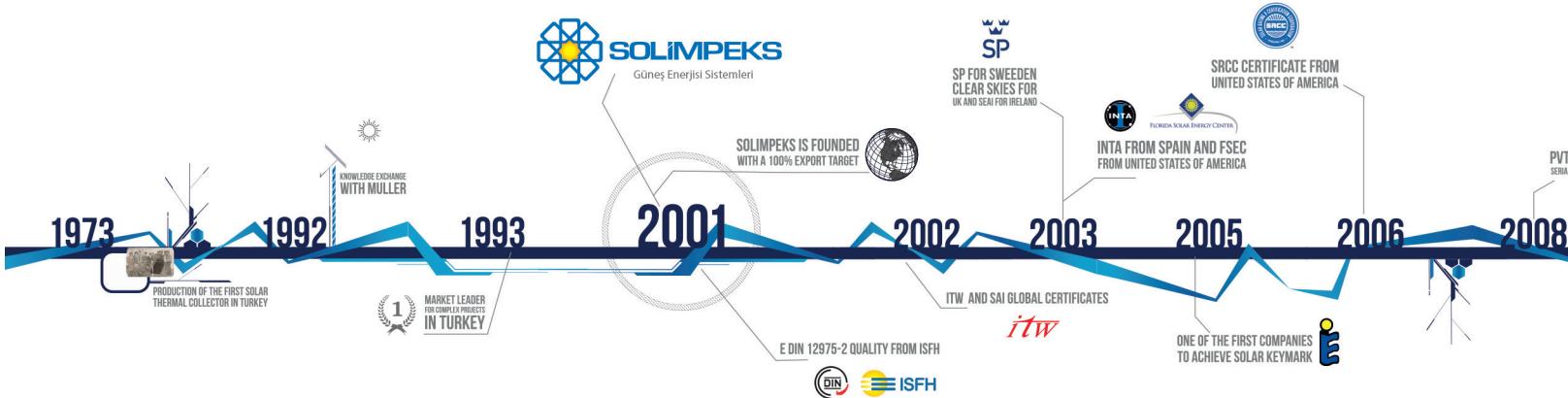


# COMPANY

The origins of Solimpeks solar manufacturing date back to 1977. Through R&D and a strong focus on quality, company growth was accelerated and allowed Solimpeks to drive solar exports to successfully compete in markets all over the world. As a consequence of this expansion Solimpeks now has a reputation as a world leading manufacturer of high-quality solar energy products almost everywhere under the sun. Solimpeks employs over 300 staff in its locations across Turkey, Germany and Spain.



# MILESTONES



# CERTIFICATES



The "Solarkeymark" denotation, is issued by ESTIF and is throughout Europe, has become the most widely accepted certificate for solar thermal products, this has been made obligatory for all goods entering Germany since January 2007 and the favoured certificate to get refund incentive payments EU countries.



The Federal Office of Economics and Export Control (BAFA) is a superior federal authority subordinated to the Federal Ministry of Economics and Technology (BMWI) in Germany. A central task of BAFA in the foreign trade sector is export control. In the energy sector BAFA implements measures to promote a better use of renewable energies, the saving of energy, for the maintenance and extension of the power-heat-linkup and for German coal mining, and participates in crisis-contingency measures in the mineral oil sector.



The German "TÜV" (Technischer Überwachungs Verein) certificate.



SRCC provides authoritative performance ratings, certifications and standards for renewable energy products, with the intention of protecting and providing guidance to consumers, incentive providers, government, and the industry.



IEC (International Electrotechnical Commission) prepares International Standards for systems of photovoltaic conversion of solar energy into electrical energy and for all the elements in the entire photovoltaic energy system.



The "ISFH" (Institute für Solarenergieforschung) certificate issued by the Leibniz University Solar Energy Research Institute.



CSTBat; Worldwide accredited association that promotes the development of France through the culture of quality.



The "ITW" (Institut für Thermodynamik und Wärmetechnik) certification issued by the Thermodynamics and Heating Techniques Institute at Stuttgart University.



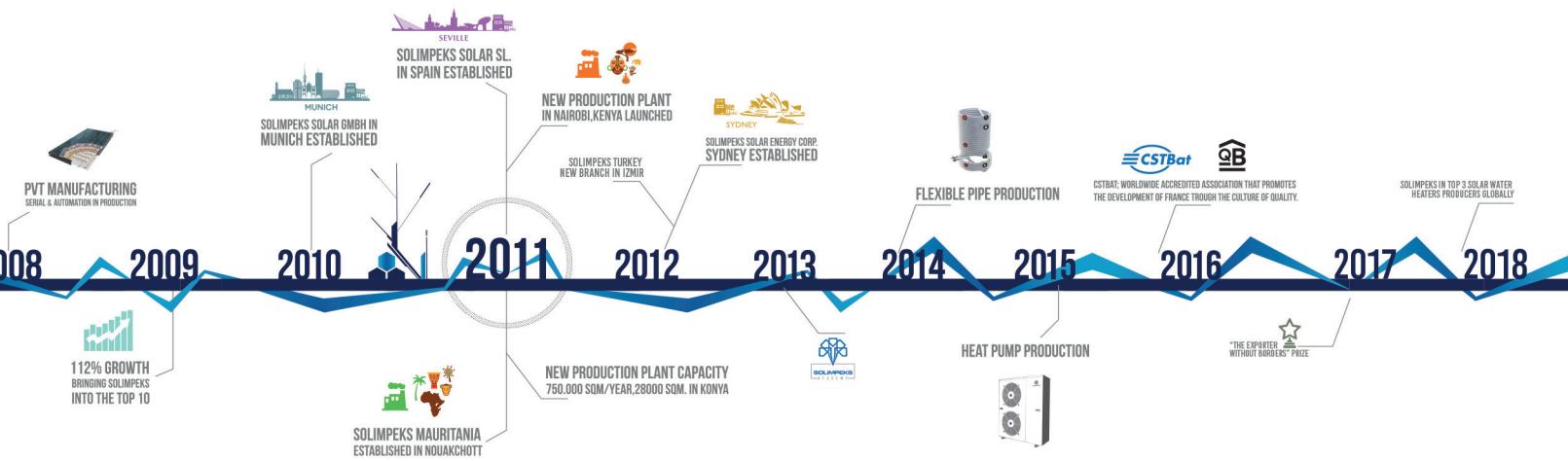
The SEAI (Sustainable Energy Agency of Ireland)



The "CE" (Conformité Européenne) approval certifying health and safety in Europe.



ISO 27001 Information Security Management System certificates; ISO 27001 Information security management system is established by an accredited certification organization to pass through 2 stages of supervision and to prove its continuity.



HYB; states that manufacturing facilities comply to Turkish Standards.



The Turkish Standards Compliance Certificate:  
This certification states that the authorized manufacturer's products comply with Turkish Standards.



The "INTA" (Instituto Nacional De Técnica Aeroespacial) award issued by the Spain's International Quality Institute,



Occupational health and safety management system.



The National Renewable Energy Centre is a technology center specialising in applied research, and the development and promotion of renewable energy. It is highly rated and has acknowledged national and international prestige.



The MCS certifies microgeneration technologies used to produce electricity and heat from renewable sources in the UK.



Worldwide accredited association that promotes the development of Italy through the culture of quality.



Eurofins Scientific is an international life sciences company which provides a unique range of analytical testing services to clients across multiple industries



Fraunhofer is Europe's largest application-oriented research organization based in Munich, GERMANY.

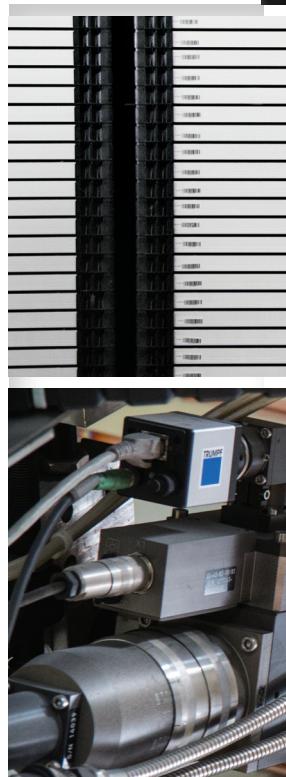
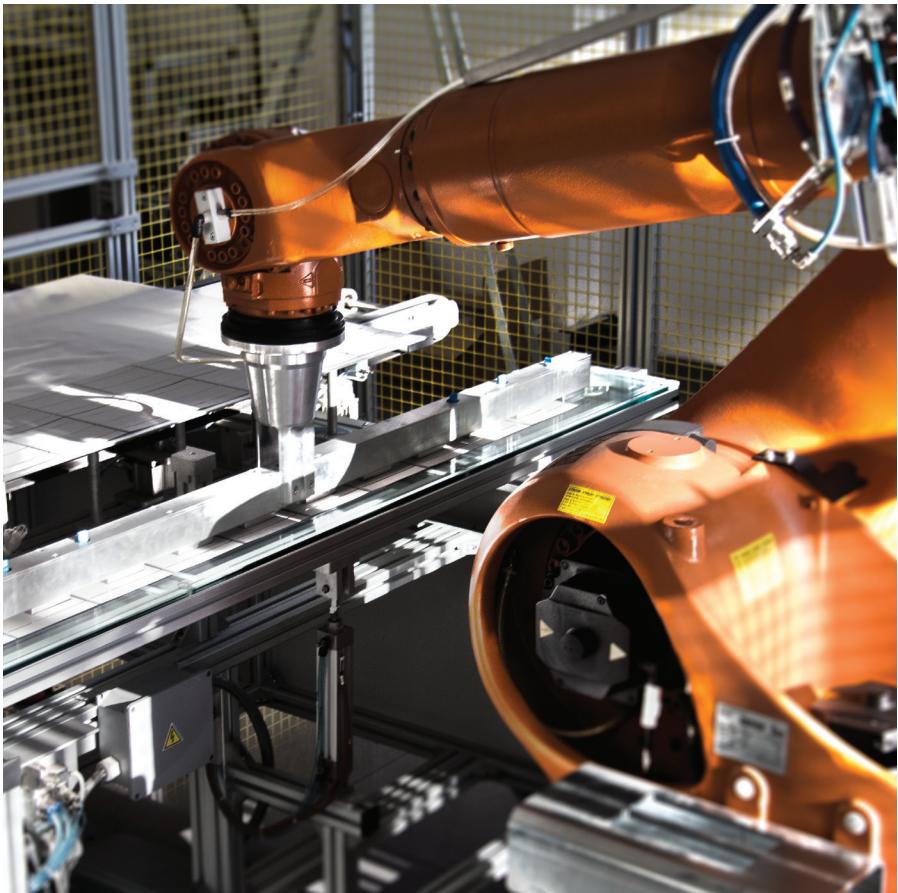


ISO 14001 Environmental Management System (EMS) provides a continuous cycle of planning, implementing, reviewing, and improving the processes and actions that are performed to meet business and environmental goals.

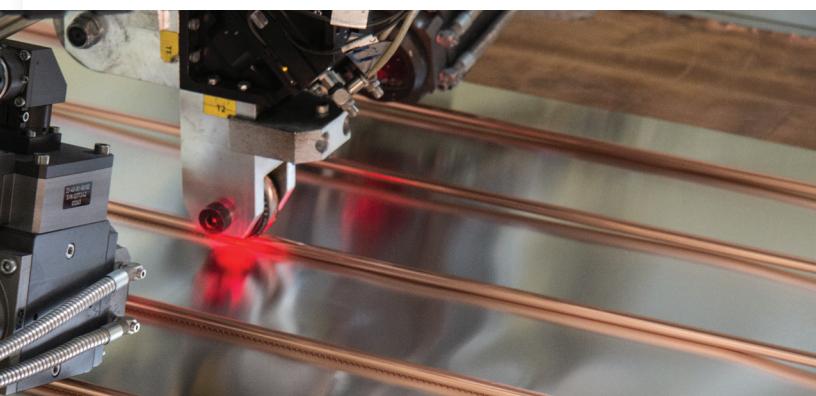


ISO 9001:2015 specifies requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements.

# PRODUCTION



Solimpeks products are manufactured using the latest proven industry methods in order to ensure quality and the lowest failure rates. From robotic production lines with a high level of automation to custom-made product-specific machinery; all our products are manufactured in line with industry standards for quality. At the Solimpeks outdoor testing site, the solar products are subjected to extreme climatic and endurance tests. All of our manufactured products are subjected to above the standard requirements for testing, to ensure the products are of the highest quality before leaving our factory.

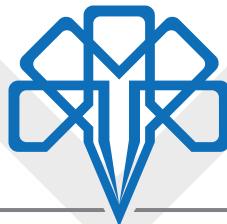


Quality assurance is our main priority at Solimpeks, only the best products bring long-term success for our customers. Solimpeks are certified in accordance with ISO 9001 and ISO 12001. To make sure that only products of the highest quality leave our plant, testing quality begins with semi-finished materials and follows through to packaged products. During production, each product range passes through our multi-stage quality assurance programme of strict monitoring and quality control. The same holds true for our production processes and technologies.

# QUALITY



Solar power is as ancient as the world we live in, so under the sun nothing is new. However, converting sunlight into more useful forms of energy is a constant research and development process, even today. Solimpeks knows very well the importance of R&D for converting solar power into heat and electricity efficiently. We also understand this process must consider the economics and so we are always looking for ways to engineer more cost effective and efficient products.



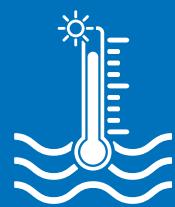
**SOLIMPEKS**  
A C A D E M Y



At Solimpeks we offer a variety of educational opportunities and resources for engineers, designers, contractors, technicians, installers and students. We have developed a wealth of print, video and software resources that provide in-depth information and training on a numerous topics from basic solar design and operation, to detailed technical papers.

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# PRODUCTS

Solar Keymark certified  
Almeco-Tinox highly selective coating

Rock wool insulation

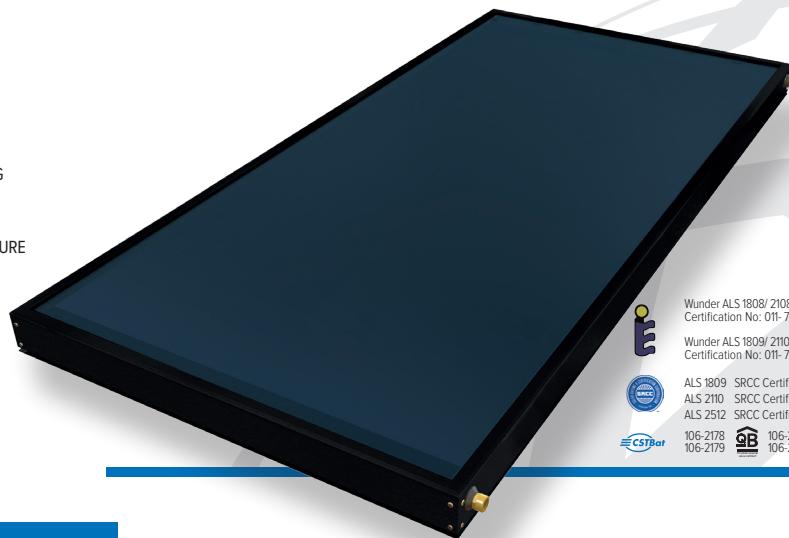
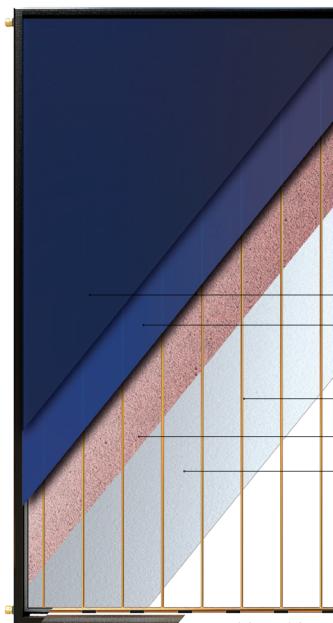
Copper pipe

Low iron tempered glass

Laser welding

10 years warranty

**WUNDER ALS**



Wunder ALS 1808/ 2108/ 2510  
Certification No: 011-752248 F

Wunder ALS 1809/ 2110/ 2512  
Certification No: 011-751941 F

ALS 1808 SRCC Certification No: 10001864  
ALS 2110 SRCC Certification No: 10001864  
ALS 2512 SRCC Certification No: 10001865



106-2178  
106-2179

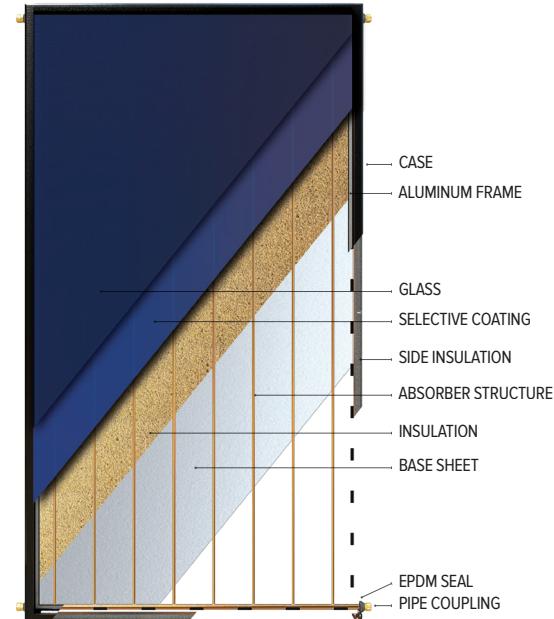
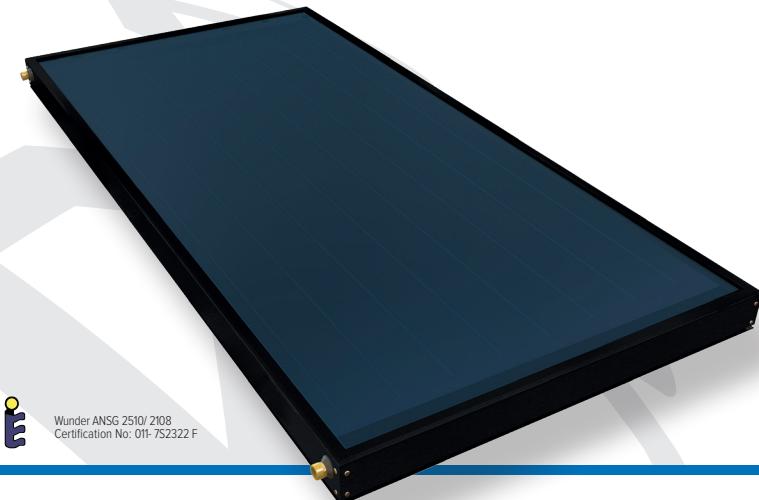
106-2178  
106-2179

## TECHNICAL SPECIFICATIONS

	Wunder ALS 3010	Wunder ALS 2710	Wunder ALS 2510 / 2512	Wunder ALS 2108 / 2110	Wunder ALS 1808 / 1809
TECHNICAL DATA	PRODUCT CODE	MA-0408	MA-1712	MA-0039 / MA- 0041	MA- 0032 / MA- 0034
	DIMENSIONS (mm)	2436x1218x90	2220x1218x90	1988x1218x90	1988x1041x90
	CASING	Electrostatic Painted Aluminum Case			
	WEIGHT (kg)	54	48	44	37,2
	GROSS AREA (m <sup>2</sup> )	2,97	2,70	2,42	2,07
ABSORBER	APERTURE AREA (m <sup>2</sup> )	2,76	2,53	2,24	1,92
	ABSORBER AREA (m <sup>2</sup> )	2,76	2,53	2,23	1,89
	ABSORBER MATERIAL	Almeco-Tinox Highly Selective Aluminum			
COPPER TUBES	ABSORPTANCE / EMITTANCE	95 / 4	95 / 4	0,95 / 0,04	0,95 / 0,04
	WELDING METHOD	Laser Welding	Laser Welding	Laser Welding	Laser Welding
GLASS	HEAT CARRIER VOLUME (lt)	1,57	1,4	1,27	1,07
	DIAMETER OF ABSORBER TUBE/ HEADER TUBE (mm)	8 / 18	8 / 18	8 / 18	8 / 18
INSULATION	NUMBER OF TUBES	12	12	10 / 12	9 / 10
	GLASS MATERIAL	Low Iron Tempered Glass			
MAXIMUM RATING	THICKNESS OF GLASS (mm)	4	4	4	4
	INSULATION MATERIAL	Rock Wool	Rock Wool	Rock Wool	Rock Wool
	DENSITY (kg/m <sup>3</sup> ) / THICKNESS (mm)	50 / 40	50 / 40	50 / 40	50 / 40
	STAGNATION TEMPERATURE (°C)	203	203	194,5 / 203	194,5 / 203
MOUNTING TYPE	MAXIMUM OPERATION PRESSURE (bar)	10	10	10	10
	NOMINAL FLOW RATE (lt/h)	145	130	120	105
	BACK SHEETING	Embossed- Finished Aluminum Sheet			
	MOUNTING TYPE	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof

**WUNDER ANSG**

Solar Keymark certified  
Almeco-Tinox highly selective coating  
Copper pipe  
Glass wool insulation  
Normal iron tempered glass  
Laser welding  
10 years warranty

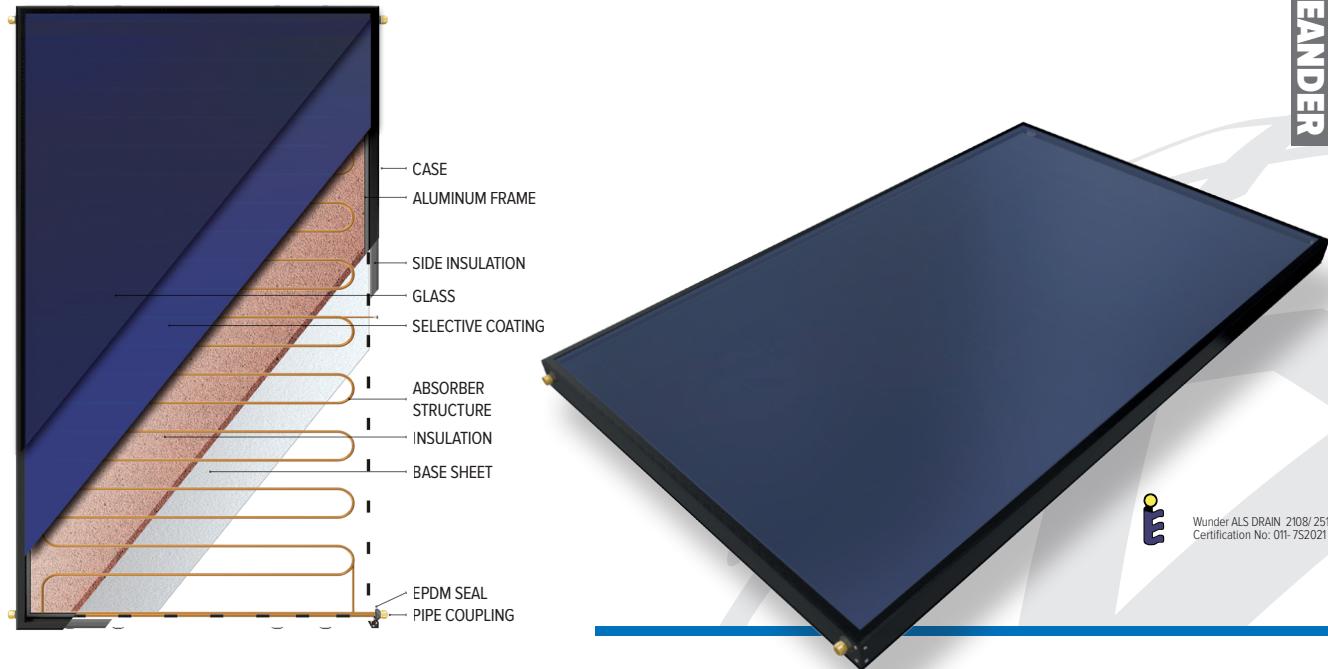


## TECHNICAL SPECIFICATIONS

	Wunder ANSG 2510	Wunder ANSG 2108	Wunder ANSG 1808
TECHNICAL DATA	PRODUCT CODE MA- 0053	MA- 0049	MA- 0045
	DIMENSIONS (mm) 1988x1218x90	1988x1041x90	1927x927x90
	CASING Electrostatic Painted Aluminum Case	Electrostatic Painted Aluminum Case	Electrostatic Painted Aluminum Case
	WEIGHT (kg) 44	37,2	34
	GROSS AREA (m <sup>2</sup> ) 2,42	2,07	1,79
	APERTURE AREA (m <sup>2</sup> ) 2,24	1,92	1,62
ABSORBER	ABSORBER AREA (m <sup>2</sup> ) 2,23	1,89	1,59
	ABSORBER MATERIAL Almeco-Tinox Highly Selective Aluminum	Almeco-Tinox Highly Selective Aluminum	Almeco-Tinox Highly Selective Aluminum
	ABSORPTANCE / EMITTANCE 0,95 / 0,03	0,95 / 0,03	0,95 / 0,03
COPPER TUBES	WELDING METHOD Laser Welding	Laser Welding	Laser Welding
	HEAT CARRIER VOLUME (lt) 1,27	1,07	1
	DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm) 8 / 18	8 / 18	8 / 18
GLASS	NUMBER OF TUBES 10	9	8
	GLASS MATERIAL Normal Iron Tempered Glass	Normal Iron Tempered Glass	Normal Iron Tempered Glass
INSULATION	THICKNESS OF GLASS (mm) 4	4	4
	INSULATION MATERIAL Glass Wool	Glass Wool	Glass Wool
	DENSITY (kg/ m <sup>3</sup> ) / THICKNESS (mm) 14 / 50	14 / 50	14 / 50
MAXIMUM RATING	STAGNATION TEMPERATURE (C) 190	190	190
	MAXIMUM OPERATION PRESSURE (bar) 10	10	10
	NOMINAL FLOW RATE (lt/ h) 120	105	100
	BACK SHEETING Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet
	MOUNTING TYPE In roof - On roof - Flat Roof	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof

Solar Keymark certified  
Almeco-Tinox highly selective coating  
Rock wool insulation  
Copper pipe  
Low iron tempered glass  
Laser welding  
10 years warranty

**WUNDER ALS MEANDER**



## TECHNICAL SPECIFICATIONS

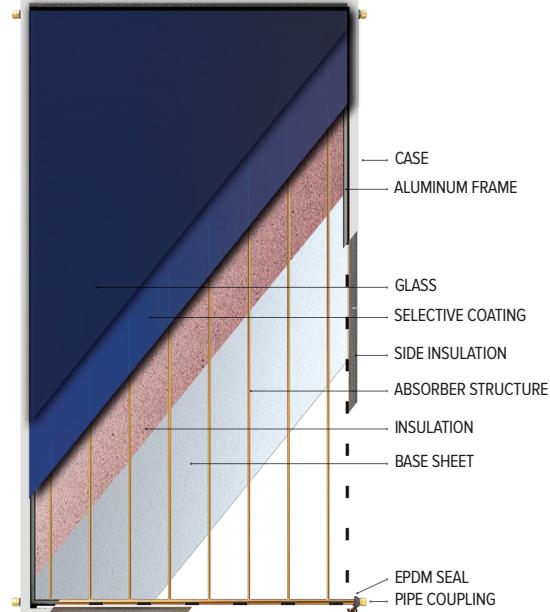
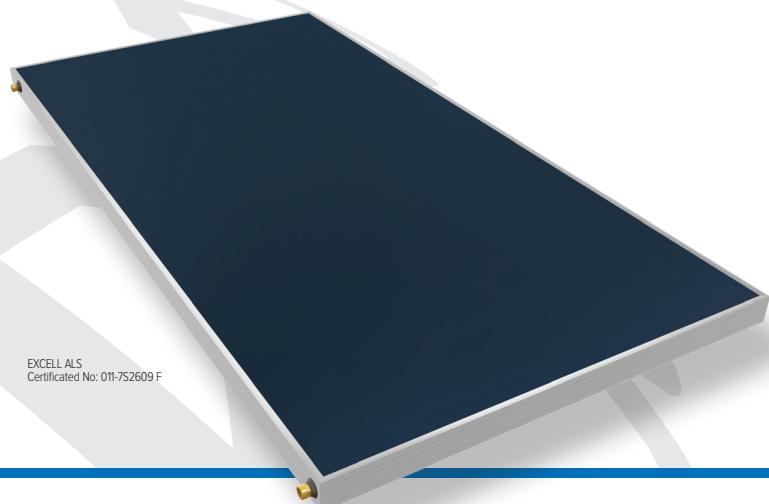
	Wunder ALS 2510 Drain	Wunder ALS 2108 Drain
TECHNICAL DATA	PRODUCT CODE <b>MA- 0044</b>	
	DIMENSIONS (mm) 1988x1218x90	
	CASING Electrostatic Painted Aluminum Case	
	WEIGHT (kg) 44	
	GROSS AREA (m <sup>2</sup> ) 2,42	
	APERTURE AREA (m <sup>2</sup> ) 2,24	
ABSORBER	ABSORBER AREA (m <sup>2</sup> ) 2,23	
	ABSORBER MATERIAL Almeco-Tinox Highly Selective Aluminum	
	ABSORPTANCE / EMMITTANCE 0,95 / 0,03	
COPPER TUBES	WELDING METHOD Laser Welding	
	HEAT CARRIER VOLUME (lt) 1,27	
	DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm) 10 / 18	
GLASS	NUMBER OF TUBES 1	
	GLASS MATERIAL Low Iron Tempered Glass	
	THICKNESS OF GLASS (mm) 4	
INSULATION	INSULATION MATERIAL Rock Wool	
	DENSITY (kg/ m <sup>3</sup> ) / THICKNESS (mm) 50 / 40	
	STAGNATION TEMPERATURE (°C) 192	
MAXIMUM RATING	MAXIMUM OPERATION PRESSURE (bar) 10	
	NOMINAL FLOW RATE (lt/ h) 120	
	BACK SHEETING Embossed- Finished Aluminum Sheet	
	MOUNTING TYPE In roof - On roof - Flat Roof	

**EXCELL ALS**

Solar Keymark certified  
Slim Design  
Low Heat Loss  
High performance  
Compatible with PV Mounting Systems  
Standard PV Dimensions Suitable for Hybrid Installations

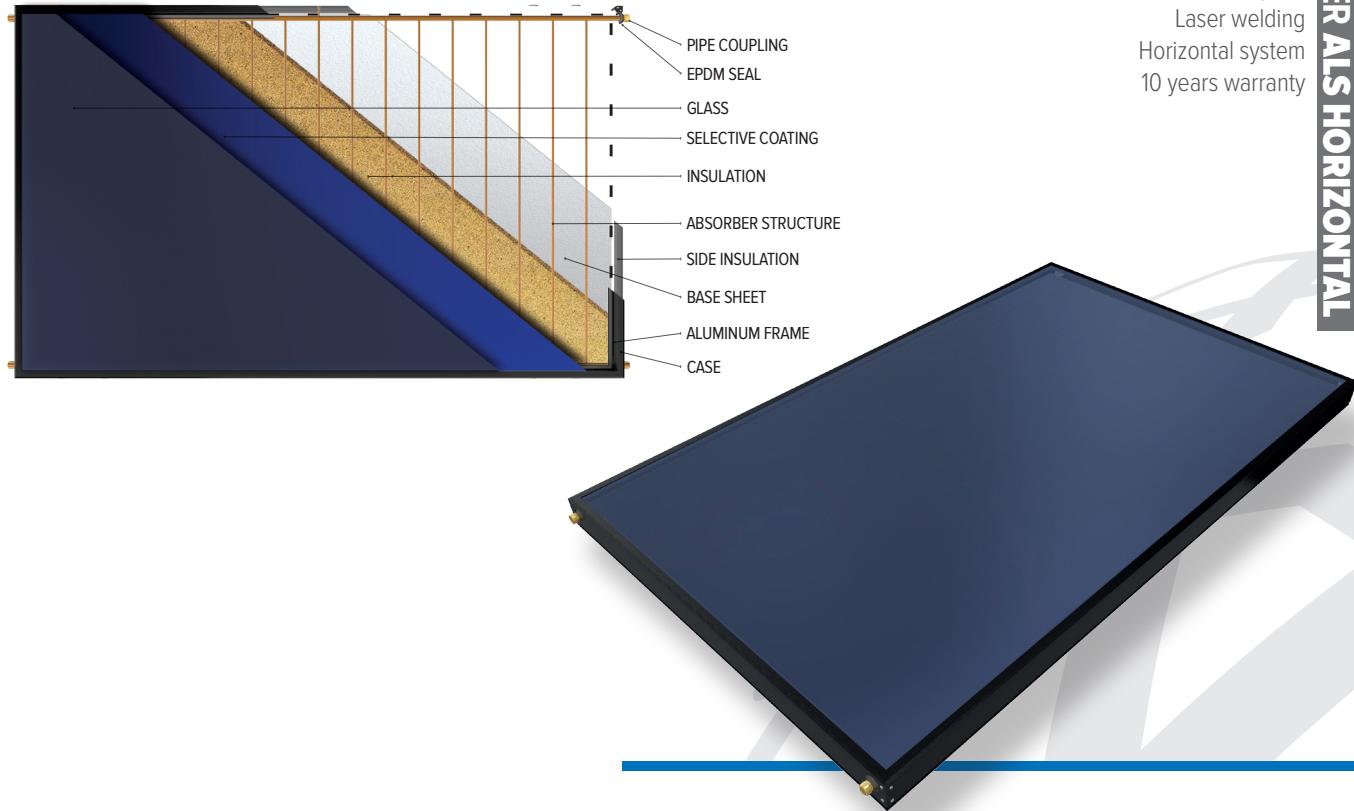


EXCELL ALS  
Certified No: 011-752609 F



## TECHNICAL SPECIFICATIONS

EXCELL ALS	
<b>PRODUCT CODE</b>	MA-0643
DIMENSIONS (mm)	999x1963x60
CASING	Electrostatic Painted Aluminium Case
<b>TECHNICAL DATA</b>	28,5
WEIGHT (kg)	1,96
GROSS AREA (m <sup>2</sup> )	1,85
APERTURE AREA (m <sup>2</sup> )	1,86
ABSORBER AREA (m <sup>2</sup> )	1,86
<b>ABSORBER</b>	Almeco-Tinox Highly Selective Aluminum
ABSORPTANCE / EMITTANCE	0,95 / 0,04
WELDING METHOD	Laser Welding
HEAT CARRIER VOLUME (lt)	1,17
<b>COPPER TUBES</b>	8 / 18
DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm)	10
NUMBER OF TUBES	Low Iron Tempered Glass AR Coated
<b>GLASS</b>	3,2
GLASS MATERIAL	Glass Wool
THICKNESS OF GLASS (mm)	14/15
<b>INSULATION</b>	194,5 / 203
INSULATION MATERIAL	10
DENSITY (kg/ m <sup>3</sup> ) / THICKNESS (mm)	105
STAGNATION TEMPERATURE (°C)	Embossed Finished Aluminum Sheet
<b>MAXIMUM RATING</b>	In roof - On roof - Flat Roof
MAXIMUM OPERATION PRESSURE (bar)	
NOMINAL FLOW RATE (lt/ h)	
BACK SHEETING	
MOUNTING TYPE	



Almeco-Tinox highly selective coating  
Rock wool insulation  
Copper pipe  
Low iron tempered glass  
Laser welding  
Horizontal system  
10 years warranty

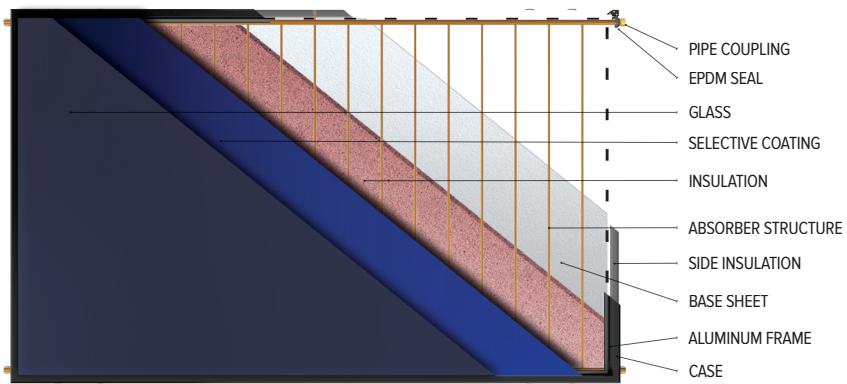
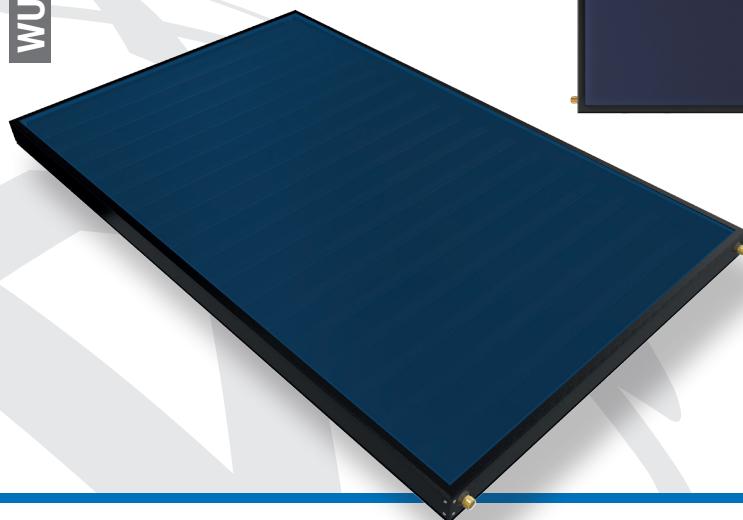
**WUNDER ALS HORIZONTAL**

## TECHNICAL SPECIFICATIONS

	Wunder ALS 2512 Horizontal	Wunder ALS 2110 Horizontal
<b>TECHNICAL DATA</b>		
PRODUCT CODE	MA- 0043	MA- 0036
DIMENSIONS (mm)	1218x1988x90	1041x1988x90
CASING	Electrostatic Painted Aluminum Case	Electrostatic Painted Aluminum Case
WEIGHT (kg)	44	37,2
GROSS AREA (m <sup>2</sup> )	2,42	2,07
APERTURE AREA (m <sup>2</sup> )	2,24	1,92
ABSORBER AREA (m <sup>2</sup> )	2,23	1,89
ABSORBER MATERIAL	Almeco-Tinox Highly Selective Aluminum	Almeco-Tinox Highly Selective Aluminum
ABSORPTANCE / EMMITTANCE	0,95 / 0,03	0,95 / 0,03
WELDING METHOD	Laser Welding	Laser Welding
HEAT CARRIER VOLUME (lt)	1,88	1,6
DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm)	8 / 18	8 / 18
NUMBER OF TUBES	17	17
<b>COPPER TUBES</b>		
GLASS MATERIAL	Low Iron Tempered Glass	Low Iron Tempered Glass
THICKNESS OF GLASS (mm)	4	4
INSULATION MATERIAL	Rock Wool / Glass Wool	Rock Wool / Glass Wool
DENSITY (kg/ m <sup>3</sup> ) / THICKNESS (mm)	50 / 40	50 / 40
STAGNATION TEMPERATURE (°C)	211	211
MAXIMUM OPERATION PRESSURE (bar)	10	10
NOMINAL FLOW RATE (lt/h)	120	105
BACK SHEETING	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet
MOUNTING TYPE	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof

**WUNDER CLS HORIZONTAL**

Almeco-Tinox highly selective copper  
 Rock wool insulation  
 Copper pipe  
 Ultrasonic welding  
 Low iron tempered glass  
 Horizontal system  
 10 years warranty

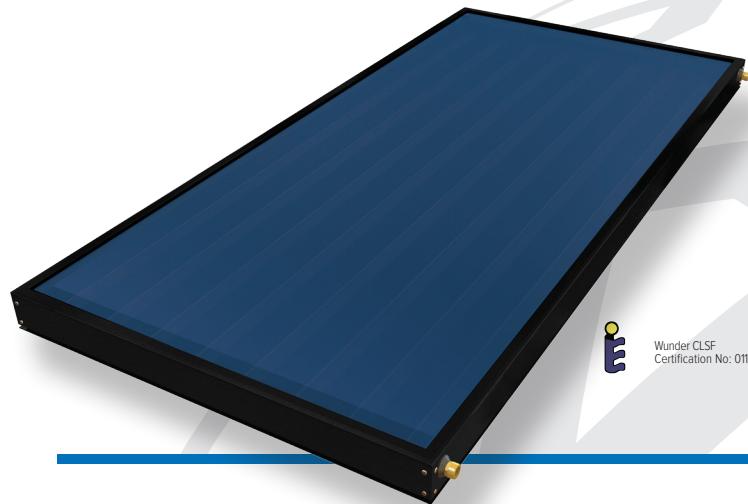
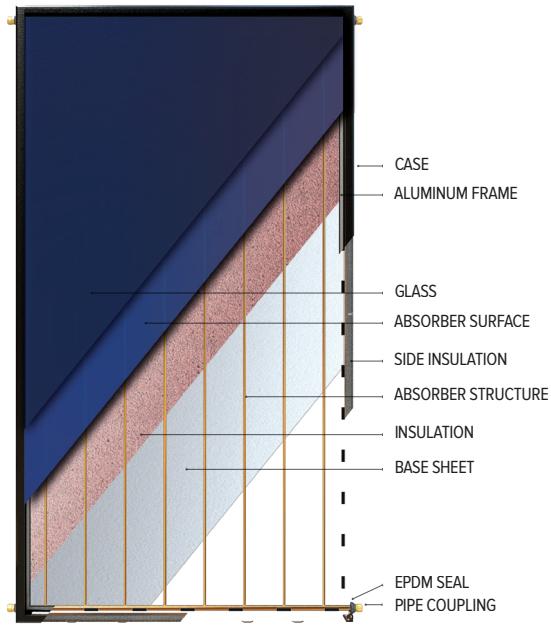


## TECHNICAL SPECIFICATIONS

	Wunder CLS 2510 Horizontal	Wunder CLS 2108 Horizontal
<b>TECHNICAL DATA</b>		
PRODUCT CODE	MA- 0105	MA- 0096
DIMENSIONS (mm)	1218x1988x90	1041x1988x90
CASING	Electrostatic Painted Aluminum Case	Electrostatic Painted Aluminum Case
WEIGHT (kg)	44	37,2
GROSS AREA (m <sup>2</sup> )	2,42	2,07
APERTURE AREA (m <sup>2</sup> )	2,24	1,92
ABSORBER AREA (m <sup>2</sup> )	2,23	1,89
<b>ABSORBER</b>	Almeco-Tinox Highly Selective Copper	Almeco-Tinox Highly Selective Copper
ABSORPTANCE / EMMITTANCE	0,95 / 0,03	0,95 / 0,03
WELDING METHOD	Ultrasonic Welding	Ultrasonic Welding
HEAT CARRIER VOLUME (lt)	1,88	1,6
<b>COPPER TUBES</b>		
DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm)	8 / 18	8 / 18
NUMBER OF TUBES	17	17
<b>GLASS</b>	Low Iron Tempered Glass	Low Iron Tempered Glass
GLASS MATERIAL	Low Iron Tempered Glass	Low Iron Tempered Glass
THICKNESS OF GLASS (mm)	4	4
<b>INSULATION</b>	Rock Wool	Rock Wool
INSULATION MATERIAL	Rock Wool	Rock Wool
DENSITY (kg/ m <sup>3</sup> ) / THICKNESS (mm)	50 / 40	50 / 40
<b>MAXIMUM RATING</b>		
STAGNATION TEMPERATURE (°C)	232	232
MAXIMUM OPERATION PRESSURE (bar)	10	10
NOMINAL FLOW RATE (lt/ h)	120	105
BACK SHEETING	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet
MOUNTING TYPE	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof

Solar Keymark certified  
 Almeco-Tinox highly selective copper  
 Rock wool insulation  
 Copper pipe  
 Low iron tempered glass  
 Ultrasonic welding  
 10 years warranty

**WUNDER CLSF**

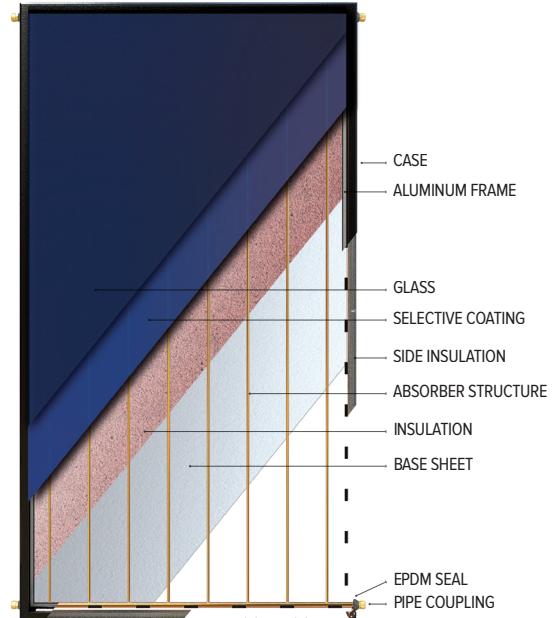
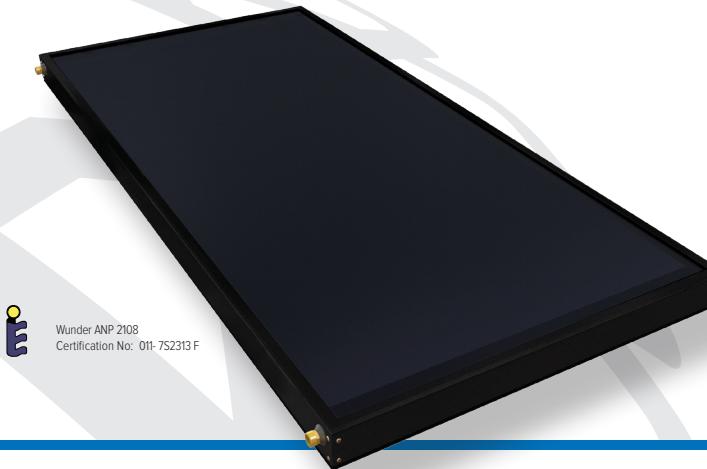


## TECHNICAL SPECIFICATIONS

	Wunder CLSF 2510	Wunder CLSF 2108	Wunder CLSF 1808
TECHNICAL DATA	PRODUCT CODE	MA- 0099	MA- 0091
	DIMENSIONS (mm)	1988x1218x90	1988x1041x90
	CASING	Electrostatic Painted Aluminum Case	Electrostatic Painted Aluminum Case
	WEIGHT (kg)	44	37,2
	GROSS AREA (m <sup>2</sup> )	2,42	2,07
	APERTURE AREA (m <sup>2</sup> )	2,24	1,92
ABSORBER	ABSORBER AREA (m <sup>2</sup> )	2,23	1,89
	ABSORBER MATERIAL	Almeco-Tinox Highly Selective Copper	Almeco-Tinox Highly Selective Copper
	ABSORPTANCE / EMITTANCE	0,95 / 0,03	0,95 / 0,03
	WELDING METHOD	Ultrasonic Welding	Ultrasonic Welding
COPPER TUBES	HEAT CARRIER VOLUME (lt)	1,27	1,07
	DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm)	8 / 18	8 / 18
	NUMBER OF TUBES	10	9
GLASS	GLASS MATERIAL	Low Iron Tempered Glass	Low Iron Tempered Glass
	THICKNESS OF GLASS (mm)	4	4
INSULATION	INSULATION MATERIAL	Rock Wool	Rock Wool
	DENSITY (kg/ m <sup>3</sup> ) / THICKNESS (mm)	50 / 40	50 / 40
	STAGNATION TEMPERATURE (°C)	211	211
MAXIMUM RATING	MAXIMUM OPERATION PRESSURE (bar)	10	10
	NOMINAL FLOW RATE (lt/ h)	120	105
	BACK SHEETING	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet
	MOUNTING TYPE	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof

**WUNDER ANP**

Solar Keymark certified  
Black paint coated aluminum  
Copper pipe  
Glass wool insulation  
Normal iron tempered glass  
Laser welding  
10 years warranty



## TECHNICAL SPECIFICATIONS

	Wunder ANP 2510	Wunder ANP 2108	Wunder ANP 1808
TECHNICAL DATA	PRODUCT CODE	MA- 0023	MA- 0019
	DIMENSIONS (mm)	1988x1218x90	1988x1041x90
	CASING	Electrostatic Painted Aluminum Case	Electrostatic Painted Aluminum Case
	WEIGHT (kg)	44	37,2
	GROSS AREA (m <sup>2</sup> )	2,42	2,07
	APERTURE AREA (m <sup>2</sup> )	2,24	1,92
	ABSORBER AREA (m <sup>2</sup> )	2,23	1,89
ABSORBER	ABSORBER MATERIAL	Black Aluminum	Black Aluminum
	ABSORPTANCE / EMITTANCE	0,74 / 0,26	0,74 / 0,26
	WELDING METHOD	Laser Welding	Laser Welding
COPPER TUBES	HEAT CARRIER VOLUME (lt)	1,27	1,07
	DIAMETER OF ABSORBER TUBE / HEADER TUBE (mm)	8 / 18	8 / 18
	NUMBER OF TUBES	10	9
GLASS	GLASS MATERIAL	Normal Iron Tempered Glass	Normal Iron Tempered Glass
	THICKNESS OF GLASS (mm)	4	4
INSULATION	INSULATION MATERIAL	Glass Wool	Glass Wool
	DENSITY (kg/m <sup>3</sup> ) / THICKNESS (mm)	14 / 50	14 / 50
	STAGNATION TEMPERATURE (°C)	153,6	153,6
	MAXIMUM OPERATION PRESSURE (bar)	10	10
MAXIMUM RATING	NOMINAL FLOW RATE (lt/h)	120	105
	BACK SHEETING	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet
	MOUNTING TYPE	In roof - On roof - Flat Roof	In roof - On roof - Flat Roof

Solar Keymark certified

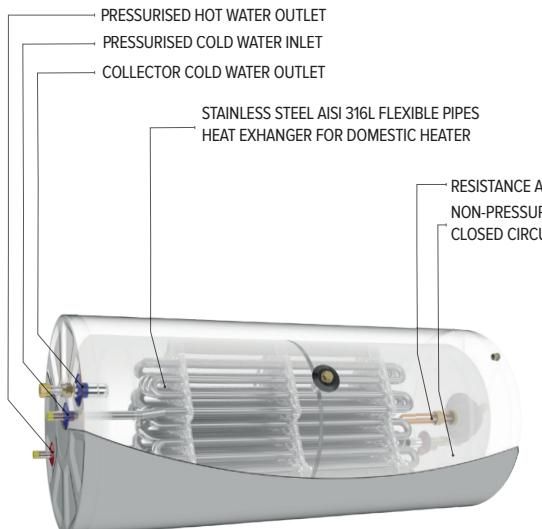


No need magnesium anode and maintenance free

Unpressurized tank, pressurized water

Hidden tank behind panels

5 year warranty



Certification No: 116 BN / 0

## TECHNICAL SPECIFICATIONS

	<b>TSM 120</b>	<b>TSM 150</b>	<b>TSM 200</b>	<b>TSM 300</b>
<b>Product Code</b>	<b>ST-0031</b>	<b>ST-0013</b>	<b>ST- 0016</b>	<b>ST- 0018</b>
Capacity (lt/day)	120	150	200	300
Tank Working Pressure (bar)	0-3	0-3	0-3	0-3
Heat Exchanger Working Pressure (bar)	2-5	2-5	2- 5	2- 5
Maximum Temperature (°C)	95	95	95	95
Insulation	50 mm/ 40 kg/m³/ Polyurethane Insulation (CFC Free)	50 mm/ 40 kg/m³/ Polyurethane Insulation (CFC Free)	50 mm/ 40 kg / m³/ Polyurethane Insulation (CFC Free)	50 mm/ 40 kg / m³/ Polyurethane Insulation (CFC Free)
Heat Exchanger	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel
Boiler Final Dimensions (Length/ Diameter) (mm)	1000 / 540	1115 / 540	1200 / 540	1725 / 540
Outer Cylinder Materials	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel
Outer Sheet	Painted Galvanized Steel Sheet	Painted Galvanized Steel Sheet	Painted Galvanized Steel Sheet	Painted Galvanized Steel Sheet
Boiler Net Weight (kg)	45	45	65	82
	<b>Wunder ALS 1808 / 1809</b>	<b>Wunder ALS 2108 / 2110</b>	<b>Wunder ALS 2510 / 2512</b>	<b>Wunder ALS 2108 / 2110* (2 pcs)</b>
<b>DIMENSIONS (mm)</b>	1927x927x90	1988x1041x90	1988x1218x90	1988x1041x90
<b>WEIGHT(kg)</b>	34	37,2	44	37,2
<b>GROSS AREA (m²)</b>	1,79	2,07	2,42	2,07
<b>APERTURE AREA (m²)</b>	1,62	1,92	2,24	1,92
<b>ABSORBER AREA(m²)</b>	1,59	1,89	2,23	1,89
<b>ABSORBER MATERIAL</b>	Almeco-Tinox Highly Selective Aluminium	Almeco-Tinox Highly Selective Aluminium	Almeco-Tinox Highly Selective Aluminium	Almeco-Tinox Highly Selective Aluminium
<b>ABSORPTANCE / EMITTANCE</b>	0,95 / 0,04	0,95 / 0,04	0,95 / 0,04	0,95 / 0,04
<b>WELDING METHOD</b>	Laser Welding	Laser Welding	Laser Welding	Laser Welding
<b>GLASS MATERIAL</b>	Low Iron Tempered Glass	Low Iron Tempered Glass	Low Iron Tempered Glass	Low Iron Tempered Glass
<b>INSULATION MATERIAL</b>	Rock Wool	Rock Wool	Rock Wool	Rock Wool
<b>BASE SHEETING</b>	Embossed- Finished Aluminium Sheet	Embossed- Finished Aluminium Sheet	Embossed- Finished Aluminium Sheet	Embossed- Finished Aluminium Sheet

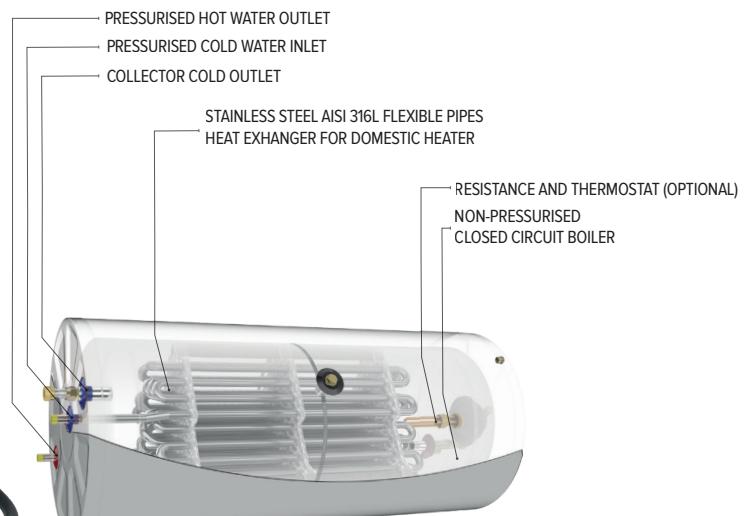
**TSM ECO**

Solar Keymark certified

No need for a magnesium anode and maintenance free

Unpressurized tank, pressurized water

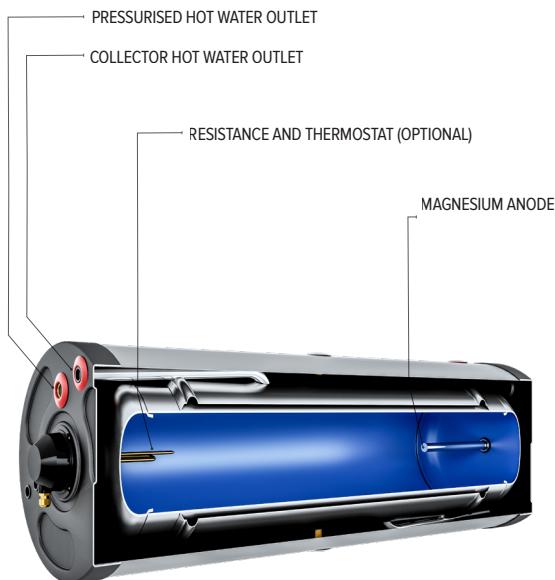
5 year warranty



## TECHNICAL SPECIFICATIONS

	<b>TSM ECO 120</b> <b>ST-0032</b>	<b>TSM ECO 150</b> <b>ST- 0052</b>	<b>TSM ECO 200</b> <b>ST- 0011</b>	<b>TSM ECO 300</b> <b>ST- 0012</b>
<b>Product Code</b>	<b>ST-0032</b>	<b>ST- 0052</b>	<b>ST- 0011</b>	<b>ST- 0012</b>
Capacity (lt/day)	120	150	200	300
Tank Working Pressure (bar)	0-3	0-3	0-3	0-3
Heat Exchanger Working Pressure (bar)	2-5	2- 5	2- 5	2- 5
Maximum Temperature (°C)	95	95	95	95
Insulation	50 mm/ 40 kg/m <sup>3</sup> / Polyurethan Insulation (CFC Free)	50 mm/ 40 kg / m <sup>3</sup> / Polyurethan Insulation (CFC Free)	50 mm/ 40 kg / m <sup>3</sup> / Polyurethan Insulation (CFC Free)	50 mm/ 40 kg / m <sup>3</sup> / Polyurethan Insulation (CFC Free)
Heat Exchanger	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel
Boiler Final Dimensions (Length/ Diameter)	1000 / 540	1115 / 540	1200 / 540	1725 / 540
Outer Cylinder Materials	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel
Outer Sheet	Painted Galvanized Steel Sheet	Painted Galvanized Steel Sheet	Painted Galvanized Steel Sheet	Painted Galvanized Steel Sheet
Boiler Net Weight (kg)	45	45	65	82
	<b>Wunder ANP 1808</b>	<b>Wunder ANP 2108</b>	<b>Wunder ANP 2510</b>	<b>Wunder ANP 2108* (2 pcs)</b>
<b>DIMENSIONS (mm)</b>	1927x927x90	1988x1041x90	1988x1218x90	1988x1041x90
<b>WEIGHT(kg)</b>	34	37,2	44	37,2
<b>GROSS AREA (m<sup>2</sup>)</b>	1,79	2,07	2,42	2,07
<b>APERTURE AREA (m<sup>2</sup>)</b>	1,62	1,92	2,24	1,92
<b>ABSORBER AREA (m<sup>2</sup>)</b>	1,59	1,89	2,23	1,89
<b>ABSORBER MATERIAL</b>	Black Aluminum	Black Aluminum	Black Aluminum	Black Aluminum
<b>ABSORPTANCE / EMITTANCE</b>	0,74 / 0,26	0,74 / 0,26	0,74 / 0,26	0,74 / 0,26
<b>WELDING METHOD</b>	Laser Welding	Laser Welding	Laser Welding	Laser Welding
<b>GLASS MATERIAL</b>	Normal Iron Tempered Glass	Normal Iron Tempered Glass	Normal Iron Tempered Glass	Normal Iron Tempered Glass
<b>INSULATION MATERIAL</b>	Glass Wool	Glass Wool	Glass Wool	Glass Wool
<b>BASE SHEETING</b>	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet	Embossed- Finished Aluminum Sheet

5 year warranty  
Solar Keymark certified  
Titanium Coated Aluminum Surface  
Double Jacket Heat Exchanger  
High Tech Industrial Enameling  
Longlife Sacrificial Anode



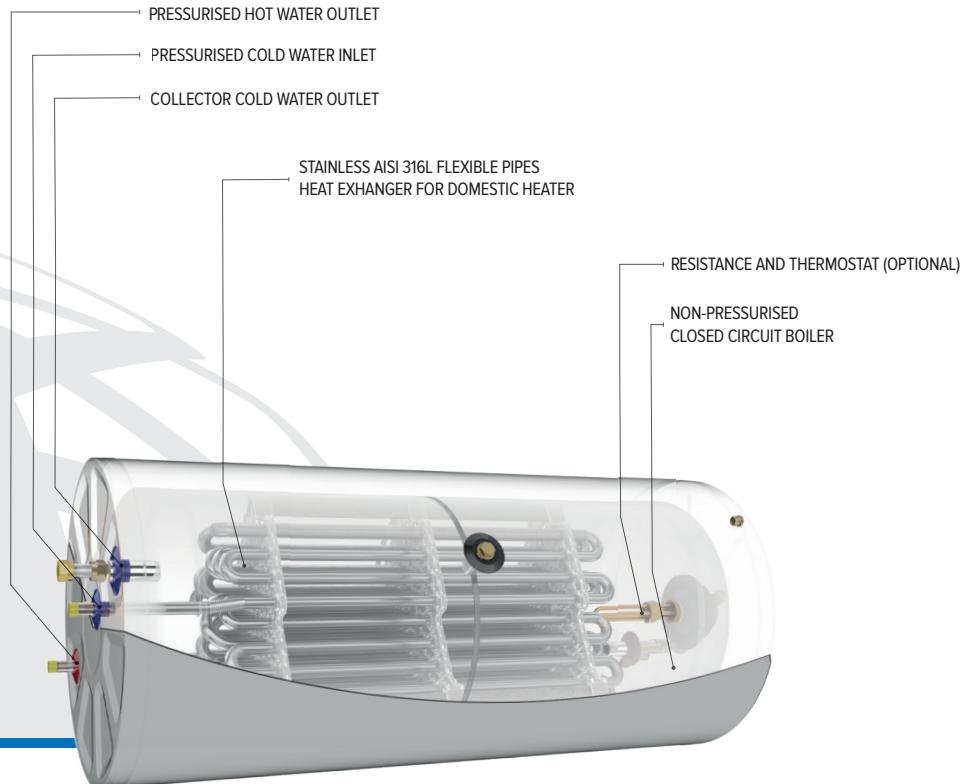
## TECHNICAL SPECIFICATIONS

	<b>TSE 150</b>	<b>TSE 200</b>	<b>TSE 300</b>
<b>Product Code</b>	<b>MA- 1660</b>	<b>MA- 1661</b>	<b>MA- 1662</b>
Capacity (lt/day)	150	200	300
Maximum Tank Operating Pressure (bar)	10	10	10
Maximum Jacket Operating Pressure (bar)	1	1	1
Maximum Temperature (°C)	95	95	95
Insulation	50mm/42 kg /m3	50mm/42 kg /m3	50mm/42 kg /m3
Tank Body Thickness (mm)	2,5	2,5	2,5
Jacket Thickness (mm)	2	2	2
Inner Cylinder Dimensions (mm)	710/480	910/480	1480/480
Boiler Inner Dimensions (Length / Diameter)(mm/mm)	1080/485	1420/585	1850/585
	<b>ANSG 2108</b>	<b>ANSG 2510</b>	<b>ANSG 2108 (2 pcs )</b>
Dimensions (mm)	1988x1041x90	1988x1218x90	1988x1041x90
Weight (kg)	37,2	44	37,2
Gross Area (m2)	2,07	2,42	2,07
Aperture Area (m2)	1,92	2,24	1,92
Absorber Area (m2)	1,89	2,23	1,89
Absorber Material	Almeco – Tinox Highly Selective Aluminum	Almeco – Tinox Highly Selective Aluminum	Almeco – Tinox Highly Selective Aluminum
Absorptance \ Emittance	0,95 / 0,04	0,95 / 0,04	0,95 / 0,04
Welding Method	Laser welding	Laser welding	Laser welding
Glass Material	Normal Iron Tempered Glass	Normal Iron Tempered Glass	Normal Iron Tempered Glass
Insulation Material	Glass Wool	Glass Wool	Glass Wool
Base Sheeting	Embossed-Finished Aluminum Sheet	Embossed-Finished Aluminum Sheet	Embossed-Finished Aluminum Sheet

## SOLAR TANKS

**TSM**

No magnesium anode required and maintenance free  
Unpressurized tank, pressurized water  
5 year warranty



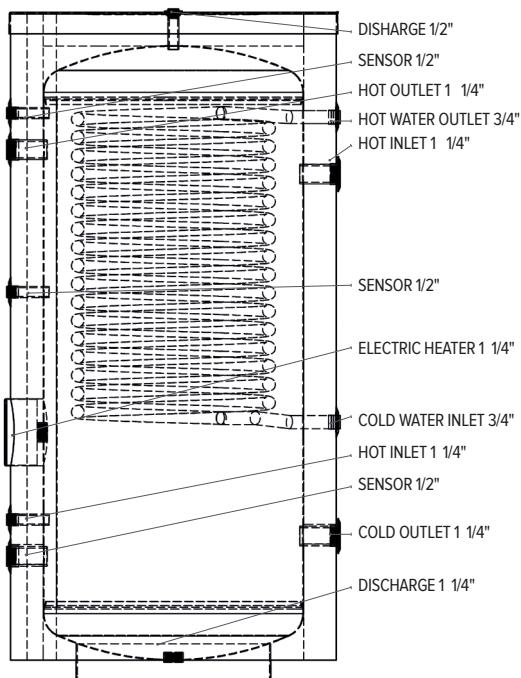
## TECHNICAL SPECIFICATIONS

	<b>TSM 120</b>	<b>TSM 150</b>	<b>TSM 200</b>	<b>TSM 300</b>	<b>TSM 400</b>
<b>Product Code</b>	<b>MA- 0005</b>	<b>MA- 0597</b>	<b>MA- 0006</b>	<b>MA- 0007</b>	<b>MA- 0008</b>
Capacity (lt/day)	120	150	200	300	400
Tank Working Pressure (bar)	0-3	0-3	0-3	0-3	0-3
Heat Exchanger Working Pressure (bar)	2- 5	2- 5	2- 5	2- 5	2- 5
Maximum Temperature (C)	95	95	95	95	95
Insulation	50 mm/ 40 kg/m <sup>3</sup> / Polyurethane Insulation (CFC Free)	50 mm/ 40 kg/m <sup>3</sup> / Polyurethane Insulation (CFC Free)	50 mm/ 40 kg/m <sup>3</sup> / Polyurethane Insulation (CFC Free)	50 mm/ 40 kg/m <sup>3</sup> / Polyurethane Insulation (CFC Free)	50 mm/ 40 kg/m <sup>3</sup> / Polyurethane Insulation (CFC Free)
Thermal Loses (W/K)	2	2	2,5	2	2
Heat Exchanger	AISI 316 L Stainless Steel				
Inner Cylinder Dimensions (mm)	900x480	900x480	900x480	1340x480	1340x480
Cylinder Inner Dimensions (Length / Diameter) (mm/mm)	900 / 446	1015 / 446	1150 / 446	1675 / 446	2115 / 446
Cylinder Final Dimensions (Length/ Diameter) (mm/mm)	1000 / 540	1115 / 540	1200 / 540	1725 / 540	2215 / 540
Outer Cylinder Materials	Electrostatic Powder Painted ST 37 Steel				
Outer Cylinder Thickness (mm)	0,5	0,5	0,5	0,5	0,5
Extra Heater (optional)	2000 W Resistance				
Boiler Net Weight (kg)	45	45	65	82	92
Boiler Full Weight (kg)	177	195	235	327	412

Hygenic water with stainless steel heat exchanger  
Less Lime-scale due to flexible heat exchanger

No sacrificial anode bar  
Pressurized potable water  
Unpressurized tank

Lightweight, aesthetic, long life and maintenance-free  
Compatible with heat pump and hybrid energy system  
Optional immersion heater  
Minimum heat loss - polyurethane insulation  
Easy installation due to compact design  
Compatible with solar energy systems  
5 year warranty



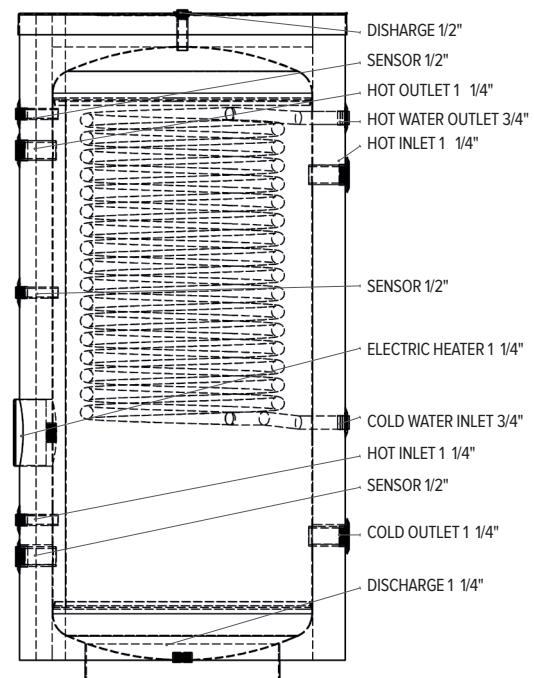
## TECHNICAL SPECIFICATIONS

	<b>SOLIKOMBI 300</b>	<b>SOLIKOMBI 500</b>	<b>SOLIKOMBI 800</b>	<b>SOLIKOMBI 1000</b>
<b>Product Code</b>	<b>MA- 0367</b>	<b>MA- 0494</b>	<b>MA- 0608</b>	<b>MA- 0495</b>
Height (mm)	1770	1653	1733	2033
Diameter (mm)	542	750/807	1017	1017
Net Weight (kg)	85	100	175	190
Volume (lt)	245	454	800	970
Insulation	50 mm /40 kg/m <sup>3</sup>	50 mm /40 kg/m <sup>3</sup> - 80 mm /18 kg/m <sup>3</sup>	80 mm /14 kg/m <sup>3</sup>	80 mm /14 kg/m <sup>3</sup>
Insulating Material	Polyurethane (CFC Free)	18 Density Foam Rubber / Polyurethane (CFC Free)	18 Density Foam Rubber	18 Density Foam Rubber
Outer Cylinder Materials	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel / Leatherette Jacket	Leatherette Jacket	Leatherette Jacket
Materials of Coil	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel
Number of Coils	2	2	2	2
1. Coil Area (m <sup>2</sup> )	3,83	4,81	7,23	8,76
2. Coil Area (m <sup>2</sup> )	1,75	1,75	2,19	2,62

## SOLAR TANKS

### SOLITANK

Hygenic water with stainless steel heat exchanger  
 Less Lime-scale due to flexible heat exchanger  
 No sacrificial anode bar  
 Pressurized potable water  
 Unpressurized tank  
 Lightweight, aesthetic, long life and maintenance-free  
 Compatible with heat pump and hybrid energy system  
 Optional immersion heater  
 Minimum heat loss - polyurethane insulation  
 Easy installation due to compact design  
 Compatible to solar energy systems  
 5 year warranty



## TECHNICAL SPECIFICATIONS

	<b>SOLITANK 200</b>	<b>SOLITANK 300</b>	<b>SOLITANK 500</b>	<b>SOLITANK 1000</b>
<b>Product Code</b>	<b>MA-0001</b>	<b>MA-0002</b>	<b>MA- 0492</b>	<b>Ma- 0493</b>
Height (mm)	1245	1770	1653	2033
Diameter (mm)	542	542	750/807	1017
Net Weight (kg)	75	85	100	190
Volume (lt)	170	245	454	970
Insulation	50 mm /40 kg/m <sup>3</sup>	50 mm /40 kg/m <sup>3</sup>	50 mm /40 kg/m <sup>3</sup> 80 mm /18 kg/m <sup>3</sup>	80 mm /18 kg/m <sup>3</sup>
Insulating Material	Polyurethane (CFC Free)	Polyurethane (CFC Free)	Polyurethane / 18 Density Foam Rubber (CFC Free)	18 Density Foam Rubber
Outer Cylinder Materials	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel	Electrostatic Powder Painted ST 37 Steel / Leatherette Jacket	Leatherette Jacket
Materials of Coil	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel	AISI 316 L Stainless Steel
Number of Coils	1	1	1	1
1. Coil Area (m <sup>2</sup> )	3,83	3,83	5,48	8,76

Minimum heat loss - polyurethane insulation

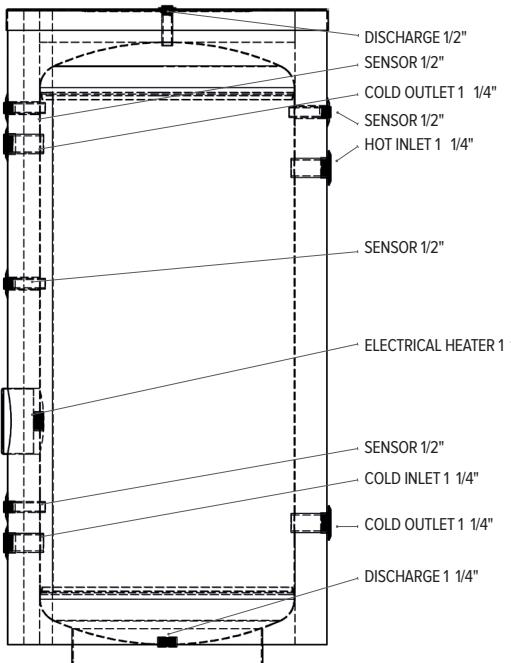
Compatible with heat pump systems

Lightweight, aesthetic, long life and maintenance-free

Optional immersion heater

Easy installation due to compact design

5 year warranty



## TECHNICAL SPECIFICATIONS

	BUFFER 100	BUFFER 200	BUFFER 300	BUFFER 500	BUFFER 1000
Product Code	MA-0004	MA-0003	MA-0360	MA- 0490	MA- 0491
Height (mm)	795	1245	1770	1653	2033
Diameter (mm)	542	542	542	750/807	1017
Net Weight (kg)	50	60	70	90	180
Volume (lt)	132	170	245	454	970
Insulation	50 mm /40 kg/m <sup>3</sup>	50 mm /40 kg/m <sup>3</sup>	50 mm /40 kg/m <sup>3</sup>	50 mm/40 kg/m <sup>3</sup> - 80 mm /18 kg/m <sup>3</sup>	80 mm /18 kg/m <sup>3</sup>
Insulating Material	Polyurethane (CFC Free)	Polyurethane (CFC Free)	Polyurethane (CFC Free)	Polyurethane / 18 Density Foam Rubber (CFC Free)	18 Density Foam Rubber
Outer Cylinder Materials	Electrostatic Powder Painted ST 37 Steel /Leatherette Jacket	Leatherette Jacket			

## SOLAR HOSES

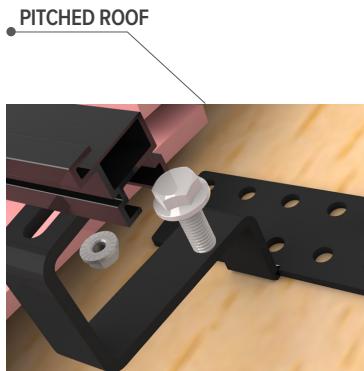
### SOLIFLEX-UVR

SoliFlex AISI 316L Stainless Steel Flexible Hose  
 Designed for effortless installation  
 High pressure and temperature resistance  
 UV resistant outer surface  
 Long working life  
 Designed for small installation areas  
 Low cost installation  
 Easy installation fittings



## TECHNICAL SPECIFICATIONS

DN	CORRUGATION TYPE	Ø DIAMETER(mm)		DIMENSIONS (mm)			TOLERANCE (±mm)	WALL THICKNESS (mm)	NOMINAL PRESSURE (bar)	INTERNAL VOLUME (l)	SURFACE AREA (m²/m)									
		Ø Internal	Ø External	h	t	n														
12	Standard	12,6	16,5	4,12	2,41	1,71	0,2	0,18	18	0,168	0,072									
16	Standard	16,5	21,85	3,6	1,8	1,8	0,2	0,18	11	0,268	0,126									
20	Standard	20,5	26,2	4,82	2,51	2,31	0,3	0,18	14	0,437	0,138									
25	Standard	25,5	31,8	3,3	1,8	1,5	0,3	0,2	10	0,624	0,155									
32	Standard	34,6	41,1	4,82	3,11	1,72	0,4	0,2	2,5	1,125	0,228									
40	Standard	40,7	49,6	6,6	3,82	2,82	0,4	0,25	2,5	1,963	0,272									
50	Standard	50,5	60,3	6,6	3,82	2,62	0,4	0,25	2	2,4	0,355									
Outer Cover		Special Polyamide																		
Insulation		Elastomeric UV Resistance EPDM Rubber								TS EN 14304										
Insulation Thickness		t	mm	13					TS EN 13467											
Thermal Conductivity		°C	-20 0	20	40	60	80	TS EN 12667												
λ		W/m.K	0,034 0,036	0,038	0,04	0,043	0,045	EN ISO 8497												
Fluid Temperature		°C	-50° C to 105° C																	
Length Per Coil		mm	10m - 15m - 20m - 30m																	
Fluid Capacity		l	0,268																	
Bending Radius		Excellent																		
Flammability		B1 CLASS0 CLASS1						DIN 4102 BS 476 Pt6 BS 476 Pt7												
Ozone Resistance		Good																		
Weather Resistance		Good																		
Oil Resistance		Good																		
Corrosion		Conforms						DIN 1988/7												
Steam Diffusion resistance		7000						EN 13469												



<b>MA-0173</b>	2510 Single
<b>MA-0176</b>	2510 Double
<b>MA-0185</b>	2510 Triple
<b>MA-0174</b>	2108 Single
<b>MA-0177</b>	2108 Double
<b>MA-0175</b>	1808 Single
<b>MA-0178</b>	1808 Double
<b>MA-0182</b>	PVT Single
<b>MA-0183</b>	PVT Double



<b>MA-0218</b>	2510 Single
<b>MA-0221</b>	2510 Double
<b>MA-0219</b>	2108 Single
<b>MA-0222</b>	2108 Double
<b>MA-0220</b>	1808 Single
<b>MA-0223</b>	1808 Double
<b>MA-0232</b>	PVT Single
<b>MA-0443</b>	PVT Double

## SPARE PARTS



Tank Holder  
YA- 0321



Roof Hook Painted  
HA- 0527



Roof Hoof Stainless Steel  
HA- 0520



Roof Hook Galvanized Steel  
YA- 0482



Aluminum Profile  
HA- 0544



Aluminum Profile with Holder  
Ha- 0546



M8 Aluminum Clamps  
YA- 0431



Aluminum Profile Connector  
YA- 0225

ACCESSORIES



Pump Station  
TI-0131 et TI-0129



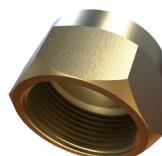
Solar Controller  
TI-0209 et TI-0210



Expansion Vessel  
TI-0531



Air Purger  
HA-1498



End Cap  
HA-0345



Flexible Connection  
YA-0215



Electrical Heater  
Thermostat  
TI-0079 et TI-0080

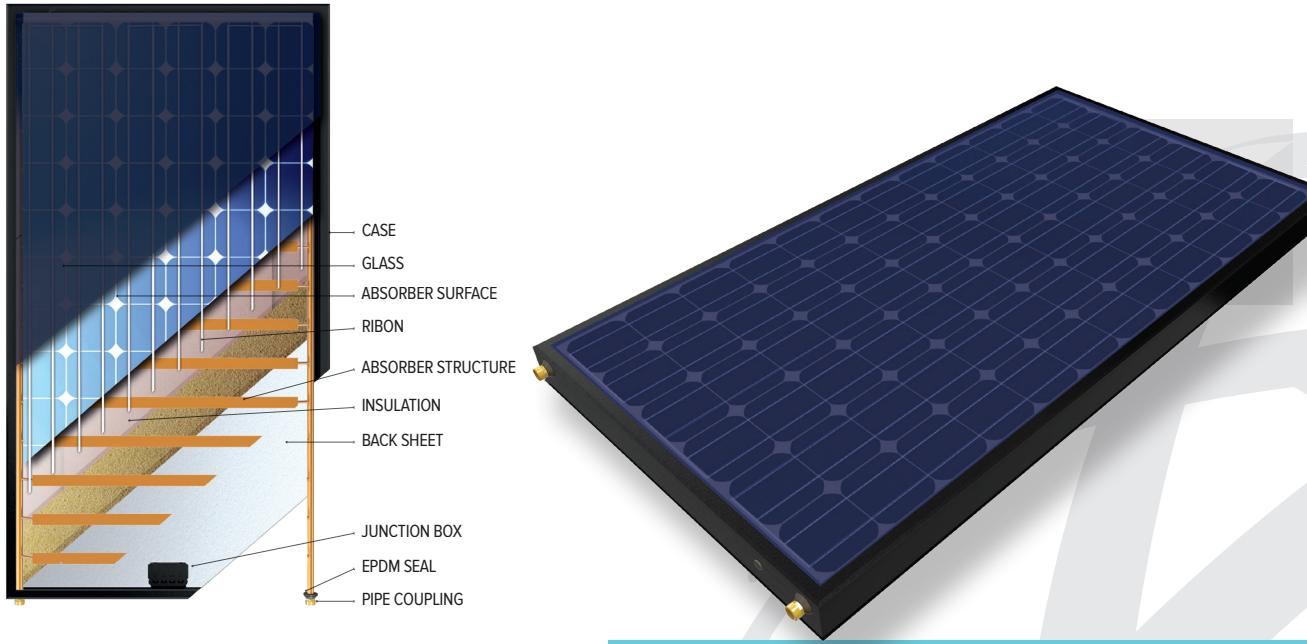


Sensor Set  
TI-0315



End Fittings Pack

Electricity and usable thermal hot water at the same time from one panel Extra electricity production of up to 25% per year with cooled PV cells More electricity with PowerVolt



## TECHNICAL SPECIFICATIONS

### PowerVolt

Product Code	MA- 0013
Dimensions (mm)	828x1601x90
Gross Area (m <sup>2</sup> )	1,326
Aperture Area (m <sup>2</sup> )	1,194
Absorber Area (m <sup>2</sup> )	1,194
Weight (kg)	24,4
Liquid Content	1,125
Absorber Panel	Mono-Crystalline
Number of Cells	72
Cell Dimensions (mm)	125 x 125
WP (W) Nominal Power	200
I <sub>mp</sub> (A) Nominal Current	5,28
I <sub>sc</sub> (V) Short Circuit Current	5,66
V <sub>mp</sub> (V) Nominal Current	37,89
V <sub>oc</sub> (V) Open Circuit Voltage	45,26
Heat Exchanger	Copper
Internal Piping	Copper
Test Pressure (bar)	13
Maximum Operating Pressure (bar)	6
Cover Glass	PV Glass
Sealing	EPDM & Silicone
Maximum Temperature	101°C
Base Sheeting	Embossed - Finished Aluminum
Rear Side	Aluminum
Product Warranty	10 Years
Productivity Guaranty	%90<10 years, %80<20 years

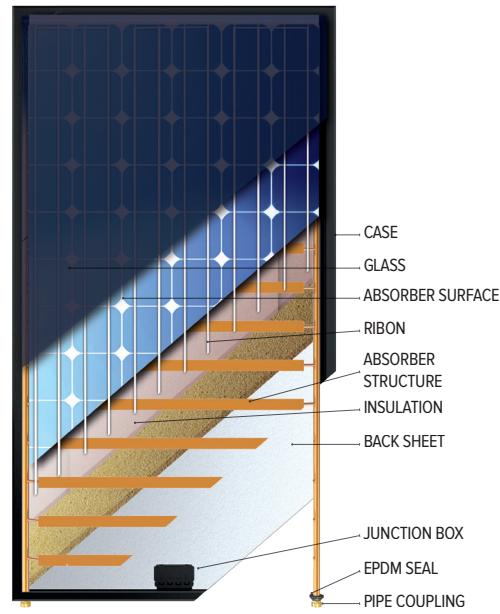
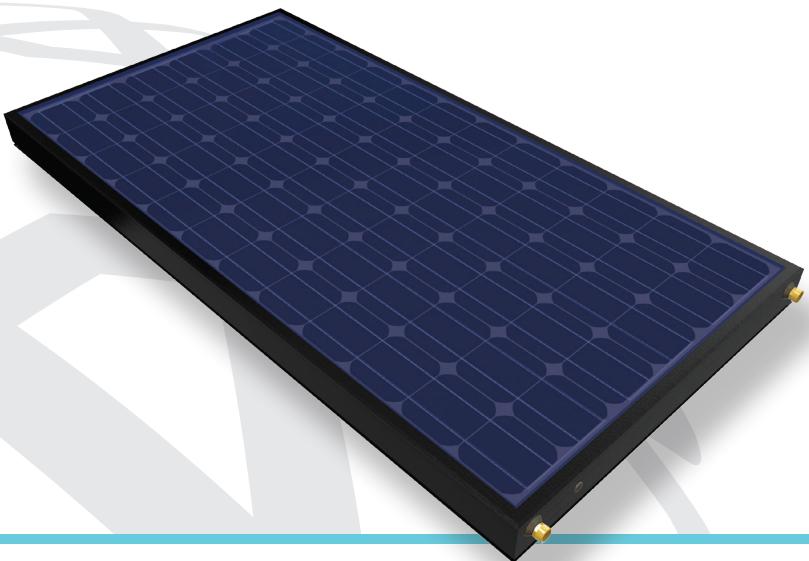
### PowerVolt

Product Code	MA- 0013
Temperature coefficient of I <sub>sc</sub>	0.06%/°C
Temperature coefficient of V <sub>oc</sub>	-0.34%/°C
Temperature coefficient of P <sub>max</sub>	-0.45%/°C
Power Tol erance	±3%
Module electrical effiency	15.08%
$\eta_0$ (Zero Lo ss Collector Efficiency)	0.475
$a_1$ (first order heat loss)	8.37
$a_2$ (second order heat loss)	0.586
MC4 connector (brand / model)	JMTHY / PV-JM601
WP (W) The rmal Power	630
Recommended flow rate (L/Hr)	65
Country of manufacture	Turkey
Manufacturer	Solimpeks Solar Energy Corp.

## PV-T PANELS

**POWERTHERM**

Electricity and usable thermal hot water at the same time from one panel  
 Extra electricity production of up to 20% per year with cooled PV cells  
 More hot water with PowerTherm



## TECHNICAL SPECIFICATIONS

### PowerTherm (PV-T Glazed)

Product Code	MA- 0014
Dimensions (mm)	870x 1640 x 105
Gross Area (m <sup>2</sup> )	1,427
Aperture Area (m <sup>2</sup> )	1,427
Absorber Area (m <sup>2</sup> )	1,27
Weight (kg)	34,4
Liquid Content	1,16
Absorber Panel	Mono-Crystalline
Number of Cells	72
Cell Dimensions (mm)	125 x 125
WP (W) Nominal Power	180
Imp (A) Nominal Current	5,12 A
Isc (V) Short Circuit Current	5,55 A
Vmp (V) Nominal Current	35,15 V
Voc (V) Open Circuit Voltage	43,39
Heat Exchanger	Copper
Internal Piping	Copper
Test Pressure (bar)	13
Maximum Operating Pressure (bar)	6
Cover Glass	Extra Low Iron Tempered Glass
Sealing	EPDM & Silicone
Maximum Temperature	134°C
Base Sheeting	Embossed - Finished Aluminum
Rear Side	Aluminum
Product Warranty	10 Years
Productivity Guaranty	%90<10 years, %80<20 years

### PowerTherm (PV-T Glazed)

Product Code	MA- 0014
Temperature coefficient of Isc	0.06%/°C
Temperature coefficient of Voc	-0.34%/°C
Temperature coefficient of Pmax	-0.45%/°C
Power Tolerance	±3%
Module electrical efficiency	12.90%
(Zero Loss Collector Efficiency)	0.486
$\alpha_0$ (first order heat loss)	4.028
$\alpha_1$ (second order heat loss)	0.067
MC4 connector (brand / model)	JMTHY / PV-JM601
WP (W) Thermal Power	680
Recommended flow rate (L/Hr)	65
Country of manufacture	Turkey
Manufacturer	Solimpeks Solar Energy Corp.



Steel tank with double layer vitrification.

Anti-corrosion magnesium stick for assuring the durability of the tank  
Condenser wrapped externally to the boiler, free from fouling and gas water contamination.

High thickness polyurethane foam (PU) thermal insulation.  
Outer shell made of grey colour RAL 9006 plastic material.

Acoustically isolated top part plastic cover.

Highly efficient compressor with the R134a refrigerant.

High and low gas pressure protections.

Electrical heater available in the unit as a back-up (with integrated thermo cut out with protection set at 90°C), assuring constant hot water even in extreme cold winters.

ON-OFF contact for starting the unit from an external switch.

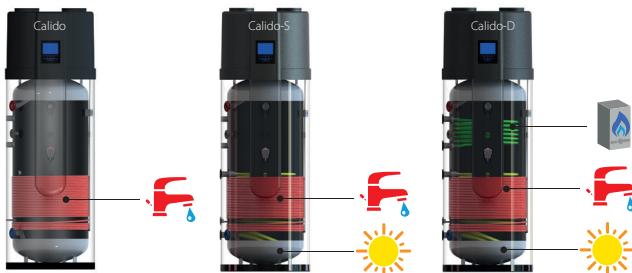
Weekly disinfection cycle.

Possibility of manage hot sanitary water re-circulation or solar water integration  
(presence of a dedicated temperature probe, flow switch input and command for an external pump).

Electronic expansion valve for precise control

The pipeline intake/discharge of the air can be reduced from 177 to 160 mm by a reduction / diaphragm (not provided) inserted into the end of the pipeline.

## TECHNICAL SPECIFICATIONS



### VERSIONS

#### CALIDO

Standard version, heat pump and the electric heater.

#### CALIDO-S

With auxiliary coil for use in combination with solar panels.

#### CALIDO-D

With double auxiliary coil in order to have at the same time three energy sources.

Calido		200	200-S	200-D	300	300-S	300-D
Power supply	V/Ph			220-240/1/50 Hz			
Water tank Volume	l	228	220	217	286	278	273
Capacity	Watt			1870 (+1200*)			
Power input	Watt			503 (+1200*)			
Absorbed current	A			2,23 (+5,2*)			
COP	W/W			3,72			
Energy efficiency				A			
Max. water temp	°C			75*			
Duct diameter	mm			177			
Auxiliary heater	kW			1,2			
Net Weight	kg	98	113	121	106,5	121,5	129,5
Solar exchanger surface	m²	-	1,2	1,2	-	1,2	1,2
Auxiliary exchanger surf	m²	-	-	0,5	-	-	0,8
IP protection class				IPX1			
Sound pressure	dB(A)			26			

## INVERTER MONOBLOCK HEAT PUMP

### i-HWAK

Customized control system with microcontroller regulation, overheating control logic with electronic expansion valve.

DC inverter compressors: twin-rotary Dc Inverte.

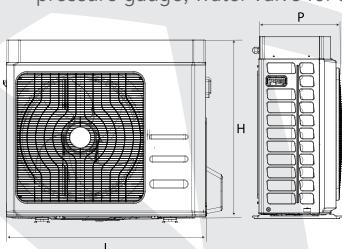
Ventilation: DC inverter with axial fan

Source exchanger: optimized circuit with finned coil, copper pipes and hydrophilic aluminum fins.

Users exchanger. A brazed stainless steel plate AISI 316 with reduced pressure drop on the water side.

Refrigerant circuit: The circuit is made with copper pipes and includes: condensing control, electronic expansion valve, reversing valve, high/low pressure switch, separator and liquid receiver, valves for maintenance and control, double-inlet pressure, high and low pressure transducers.

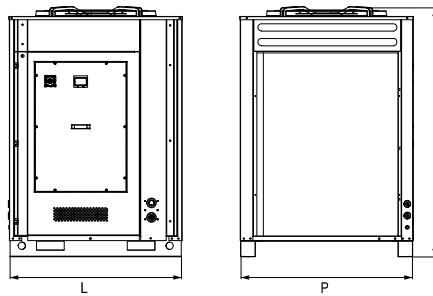
Integral hydraulic system: pump with high efficiency brushless circulator, expansion tank, flow switch, air valve, pressure relief valve (6 bar), pressure gauge, water valve for system charge/discharge.



Dimensioni - Dimensions	06	08	10
L mm	925	925	1047
P mm	380	380	465
H mm	785	785	913

### TECHNICAL SPECIFICATIONS

i-HWAK/V4	06	08	10	12	14 14T	16 16T
Cooling capacity	kW	3,65~6,87 - 7,56*	4,65~8,52 - 9,12*	5,4~10 - 11,35*	5,4~11,9 - 13,1*	6,7~13,8 - 15,2*
Power input	kW	1,69	2,18	2,26	2,65	2,93
E.E.R.	W/W	4,06	3,91	4,43	4,49	4,72
Cooling capacity	kW	2,3~5,07 - 5,58*	2,95~6,12 - 6,73*	3,27~7,56 - 8,83*	3,27~8,49 - 9,6*	5,3~11,46 - 12,05*
Power input	kW	1,74	2,11	2,43	2,74	3,70
E.E.R.	W/W	2,91	2,90	3,11	3,10	3,10
SEER	W/W	3,59	3,61	4,63	4,73	4,51
Heating capacity	kW	2,78~6,57 - 7,23*	3,54~8,01 - 8,81*	4,69~10 - 10,8*	4,69~12,1 - 12,7*	5,5~13,76 - 15,1*
Power input	kW	1,47	1,85	2,26	2,89	3,2
C.O.P.	W/W	4,47	4,33	4,43	4,19	4,3
Heating capacity	kW	2,24~6,15 - 6,76*	2,85~7,92 - 8,71*	3,9~9,51 - 10,3*	3,9~11,3 - 12,1*	5,3~13,55 - 14,9*
Power input	kW	1,83	2,40	2,74	3,32	4,04
C.O.P.	W/W	3,36	3,31	3,47	3,41	3,35
SCOP	W/W	3,84	3,83	4,24	4,31	4,01
Energy efficiency		A++ / A+	A++ / A+	A++ / A+	A++ / A+	A++ / A++
Compressor type		Twin Rotary Dc Inverter				
Fans	n° x kW	1 x 0,15	1 x 0,15	1 x 0,15	1 x 0,15	2 x 0,15
Power supply	V~, Ph, Hz			230V/1/50Hz		
Outdoor temp.	°C			-20 / +46		
Max Running current	A	14,4	21,2	22,4	26,9	32,8
Sound power	dB(A)	62,0	62,5	63,0	63,5	65,5
Sound pressure	dB(A)	34	34,5	35	35,5	37,5
Pump power	kW	0,045	0,045	0,06	0,075	0,14
Water flow	m³/h	1,13	1,38	1,72	2,08	2,37
Pump head	kPa	44,6	34,5	39,4	34,2	63,4
Water connections	inch	1" M	1" M	1" M	1" M	1" M
Min. volume of water	l	31	37	46	51	69
Net weight	kg	63,4	63,4	95,5	95,5	115,5
Operation weight	kg	67	67,5	97	97	119



Dimensioni - Dimensions		0125	0135	0250F	0250	0260	0270	Dimensioni - Dimensions		0125	0235	0250
L	mm	1198	1198	1198	1198	1198	1198	L	mm	1198	1198	1198
P	mm	1198	1198	1198	1198	1198	1198	P	mm	1198	1198	1198
H	mm	1673	1673	1745	1745	1745	1745	H	mm	1673	1673	1745
H (SSL)	mm	1906	1906	1906	1906	1906	1906	H (SSL)	mm	1906	1906	1906
Peso versione standard Standard version weight	kg	355	382	428	428	454	465	Peso versione LT LT version weight	kg	371	440	448

The series i-HP reaches high values of SEER and SCOP thanks to DC inverter scroll compressors, the EC fan exchangers and high efficiency.

DC Inverter compressor can save till 25% of power input.

The installation inside the unit of high efficiency DC inverter scroll compressors optimized for working under heavy conditions as a heat pump and to use of an economizer, allows to obtain a high level of comfort in low-energy consumes rooms even during the coldest season (until a temperature of -25°).

The injectiont echnology involves injecting the refrigerant, in the vapour status, in the middle of the compression process to implement significantly the capacity and efficiency of the compressor improve the performances of this system compared to all conventional gas compression technologies.

With this kind of unit it is possible to produce hot water up to 60°C even with very low outside temperatures. The heat pumps are particularly suitable to be combined with radiating panels heating systems or for applications where a top efficiency heating mode is needed.

## TECHNICAL SPECIFICATIONS

### VERSIONS

**i-HP**  
reversible inverter heat pump

**i-HP LT**  
reversible inverter heat pump with steam injection

### i-HP LT Con iniezione di vapore

i-HP	0125	0135	0250F	0250	0260	0270	0125	0235	0250	
Cooling capacity	kW	30,65 (33,5*)	36,37 (39,3*)	49,32 (51,8*)	49,32 (51,8*)	57,14 (60,6*)	70,76 (72,2*)	30,67	36,37	47,56
Power input	kW	6,62	8,91	12,06	12,06	17,07	18,62	7,34	8,91	12,52
E.E.R.	W/W	4,63	4,08	4,09	4,09	4,06	3,80	4,18	4,08	3,83
Cooling capacity	kW	21,15 (23,1*)	27,04 (29,1*)	36,36 (38,3*)	36,36 (38,3*)	42,97 (45,6*)	53,40 (55,0*)	22,50	26,90	37,6
Power input	kW	6,35	8,96	12,45	12,45	13,75	17,25	7,26	9,1	12,83
E.E.R.	W/W	3,33	3,02	2,92	2,92	3,12	3,10	3,10	2,96	2,93
SEER	W/W	3,98	4,00	3,95	4,03	4,16	4,05	3,93	4,04	3,91
ESEER	W/W	5,34	5,32	4,98	5,04	6,07	5,37	5,28	5,47	5,30
Heating capacity	kW	24,57 (27,1*)	32,65 (35,3*)	48,25 (51,2*)	48,25 (51,2*)	52,04 (55,1*)	65,20 (66,5*)	25,80	32,50	49,26
Power input	kW	5,47	7,89	11,42	11,42	12,64	16,1	6,17	7,98	12,93
C.O.P.	W/W	4,49	4,14	4,22	4,22	4,12	4,05	4,18	4,07	3,81
Heating capacity	kW	22,05 (24,4*)	32,33 (35,1*)	41,07 (43,5*)	41,07 (43,5*)	49,33 (52,3*)	60,45 (62,25*)	25,65	32,50	47,29
Power input	kW	6,33	9,80	12,07	12,07	15,15	18,90	7,27	9,97	14,40
C.O.P.	W/W	3,49	3,30	3,40	3,40	3,26	3,20	3,53	3,26	3,28
SCOP	W/W	3,83	3,82	3,82	3,82	4,00	3,82	4,02	4,03	3,82
Energy efficiency		A+								
		A++								
Compressor type	Dc Inverter	Dc Inverter	Dc Inverter +On-Off	2 Dc Inverter	2 Dc Inverter	2 Dc Inverter	DC Inverter	2 Dc Inverter	2 Dc Inverter	
Sound pressure	dB(A)	42,1	45,6	48,5	48,5	50,3	50,9	42,1	45,6	48,5
Sound pressure	dB(A)	40,3	43,8	46,5	46,5	48,5	49,1	40,3	43,8	46,5
Sound pressure	dB(A)	39,4	42,9	45,6	45,6	47,6	48,3	39,4	42,9	45,6
Outdoor temp	°C	-15/+46			-15/+46			-25/+46		

## HEATING PIPE

### SOLIMPEX-A

#### Pex-a EVOH

Crosslinked polyethylene pipes Pex-a. Oxygen barrier EVOH in 3 layers.

Maximum flexibility.

Polyethylene resistant to High Temperatures. Pipes for systems pressure 6 bar.

Quality Certified,

European Quality Certification Institutions.

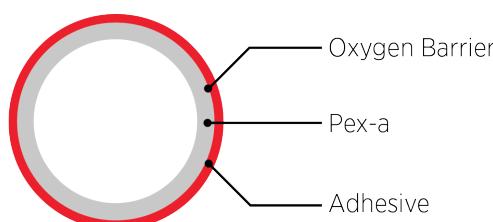
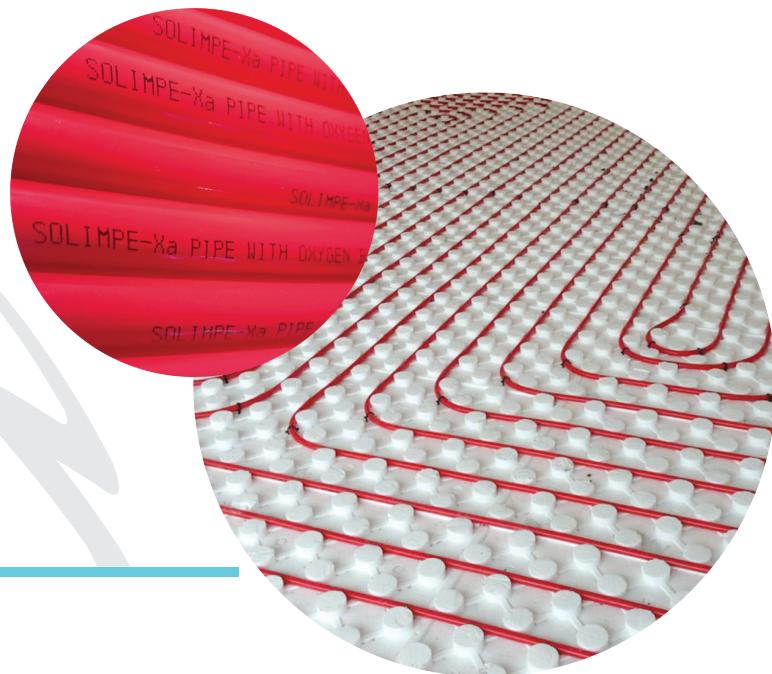
AENOR (Spain)

SKZ (Germany)

CSTB (France)

IIP (Italy)

GOST (Russia)



## TECHNICAL SPECIFICATIONS

### Pex-A Oxygen Barrier EVOH Range

	Wall Thickness (mm)
8 mm	1,1
10 mm	1,2
12 mm	1,1-2,0
16 mm	1,8-2,0
17 mm	2,0
18 mm	2,0
20 mm	1,9-2,0
25 mm	2,3



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