DHW SYSTEMS AND SOLAR KITS

DHW systems, solar kits with high efficiency panels and vacuum solar manifolds

- **Solar systems complete with storage tank for combination with a heat pump**
- **Solar kits without storage tank for combination with third-party storage tanks**
- **Ultra-high efficiency vacuum solar manifolds**
- **Optional anti-stagnation shading device**

DESCRIPTION

The Aermec GSA °-E series solar systems for domestic hot water are designed for easy interaction with heat pump systems and contain vacuum solar manifolds, a solar station equipped with a high efficiency electronic circulator, solar control unit and double coil storage tank.
The additional coil for the supplementary source is dimensioned with a larger exchange surface and is suitable for combination with heat pumps.
The Aermec GSA °-E series solar systems include ultra-high efficiency vacuum manifolds, which can be equipped with an optional anti-stagnation shading system. The solar manifolds are dimensioned based on the capacities of the storage tanks (300 litres or 500 litres) in order to guarantee a high share of renewable energy for the production of DHW and to optimise the system from an economic point of view.
Solar kits with the same dimensions of the complete systems but in a version without a storage tank are also available in order to combine them with third-party storage tanks (the suitability of the storage tanks must be checked by the designer in this case).
The complete systems and the kits without a storage tank must be completed with the necessary roof manifold clampings, which are available as accessories for the various types of roofs (pitched roof with shingles, with tiles, universal with screw connection and flat roof).

VERSIONS

The vacuum solar manifolds are also available individually, in two sizes with 15 pipes and 21 pipes. Each size is available in the standard ° version and in the E version with the anti-stagnation shading device.

GSA complete solar system

The GSA °-E complete solar systems are available in two sizes - 300 litres combined with a 21-pipe solar manifold and 500 litres combined with two solar manifolds, each with 15 pipes. Each size is available in the ° version (standard) and in the E version (with the anti-stagnation shading system).

Field	Description
1,2,3	**GSA**
4,5,6	**Size** 300, 500
7	**Version**
°	Vacuum solar manifolds
E	Complete solar system with vacuum collector with anti-stagnation

Solar kits without storage tank

The KSA solar kits are available in two sizes (size with a single 21-pipe manifold and size with two manifolds, each with 15 pipes). Each size is available in the standard ° version and in the E version with the anti-stagnation shading device.

Field	Description
1,2,3	**KSA**
4,5	**Size** 21, 30
6	**Version**
°	Solar kit with vacuum collector
E	Complete solar kit with vacuum collector with anti-stagnation darkening device

Vacuum solar manifolds

The vacuum solar manifolds are also available individually, in two sizes with 15 pipes and 21 pipes. Each size is available in the standard ° version and in the E version with the anti-stagnation shading device.

Field	Description
1,2,3	**CXS**
4,5	**Size** 15, 21
6	**Version**
°	Vacuum solar manifolds
E	Complete vacuum solar collector with anti-stagnation shading device

ACCESSORIES

CSB: Basic set + cover.
CSP: Basic set + cover.
KSB: Basic set (for panel string termination; already included in the systems and kits).
KSP: Plus set (for panel connection; already included in the systems and kits).
MIX10: 10 liter tank of pre-mixed antifreeze solution for topping up and/or filling solar systems with vacuum collectors
MIX20: 20 liter tank of pre-mixed antifreeze solution for topping up and/or filling solar systems with vacuum collectors
STC21: Clamping for 1 vacuum manifold with 21 pipes (with or without Eclypse) on a pitched roof with tiles.
STC30: Clamping for 2 vacuum manifold with 15 pipes each (with or without Eclypse) on a pitched roof with tiles.
STC (x1): Clamping for vacuum manifold (with or without Eclypse) on a pitched roof with tiles.
STP21: Clamping for 1 vacuum manifold with 21 pipes (with or without Eclypse) on a flat roof.
STP30: Clamping for 2 vacuum manifold with 15 pipes (with or without Eclypse) on a flat roof.
STP (x1): Clamping for vacuum manifold (with or without Eclypse) on a flat roof.
STT21: Clamping for 1 vacuum manifold with 21 pipes (with or without Eclypse) on a pitched roof with shingles.
STT30: Clamping for 12 vacuum manifolds with 15 pipes each (with or without Eclypse) on a pitched roof with shingles.
STT (x1): Clamping for vacuum manifold (with or without Eclypse) on a pitched roof with shingles.
STV15: Clamping for 1 vacuum manifold with 15 pipes (with or without Eclypse) on a pitched roof with screw connection.
STV21: Clamping for 1 vacuum manifold with 21 pipes (with or without Eclypse) on a pitched roof with screw connection.
STV30: Clamping for vacuum manifold (with or without Eclypse) on a pitched roof with screw connection.

ACCESSORIES COMPATIBILITY

Clamping for a manifold on a pitched roof with shingles

Accessory	GSA300°	GSA300E	GSA500°	GSA500E
STT (x1)	•	•		
STT (x2)			•	•

Accessory	KSA21°	KSA21E	KSA30°	KSA30E
STT (x1)	•	•		
STT (x2)			•	•

Clamping for a manifold on a pitched roof with tiles

Accessory	GSA300°	GSA300E	GSA500°	GSA500E
STC (x1)	•	•		
STC (x2)			•	•

Accessory	KSA21°	KSA21E	KSA30°	KSA30E
STC (x1)	•	•		
STC (x2)			•	•

Clamping for a manifold on a pitched roof with screw connection

Accessory	GSA300°	GSA300E	GSA500°	GSA500E
STV (x1)	•	•		
STV (x2)			•	•

Accessory	KSA21°	KSA21E	KSA30°	KSA30E
STV (x1)	•	•		
STV (x2)			•	•

Clamping for a manifold on a flat roof

Accessory	GSA300°	GSA300E	GSA500°	GSA500E
STP (x1)	•	•		
STP (x2)			•	•

Accessory	KSA21°	KSA21E	KSA30°	KSA30E
STP (x1)	•	•		
STP (x2)			•	•

Basic set (for panel string termination) and plus set (for the connection of two solar panels)

Accessory	CXS15°	CXS15E	CXS21°	CXS21E
CSB	•	•	•	•
CSP	•	•	•	•
KSB	•	•	•	•
KSP	•	•	•	•

The accessories are compatible with the solar manifolds, but are not compatible with the GSA solar systems or with the KSA solar kits because they are already included.

PERFORMANCE SPECIFICATIONS

GSA complete solar system

		GSA300°	GSA300E	GSA500°	GSA500E
Technical features					
Solar manifolds	no./type	1 x CXS21°	1 x CXS21E	2 x CXS15°	2 x CXS15E
Gross surface	m^2	4,45	4,45	6,36	6,36
Opening surface	m^2	4,02	4,02	5,74	5,74
Input current surface	m^2	5,39	5,39	7,70	7,70
Hydraulic components					
Storage tank (DHW)	l	300	300	500	500
Expansion vessel number	no.	1	1	1	1
Expansion vessel capacity	l	24	24	40	40
Recommended dimension based on the number of people	no.	3-5	3-5	5-7	5-7

KSA solar system

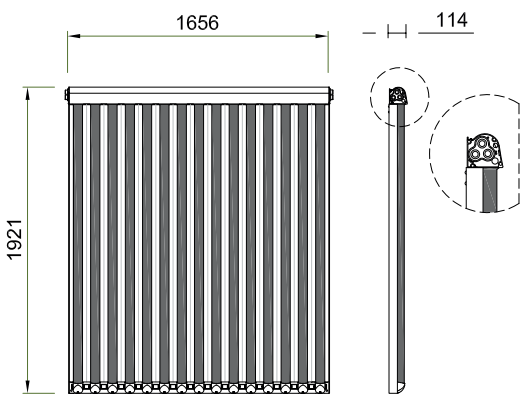
		KSA21°	KSA21E	KSA30°	KSA30E
Technical features					
Solar manifolds	no./type	1 x CXS21°	1 x CXS21E	2 x CXS15°	2 x CXS15E
Gross surface	m^2	4,45	4,45	6,36	6,36
Opening surface	m^2	4,02	4,02	5,74	5,74
Input current surface	m^2	5,39	5,39	7,70	7,70
Hydraulic components					
Expansion vessel number	no.	1	1	1	1
Expansion vessel capacity	l	24	24	40	40

Only the solar panel

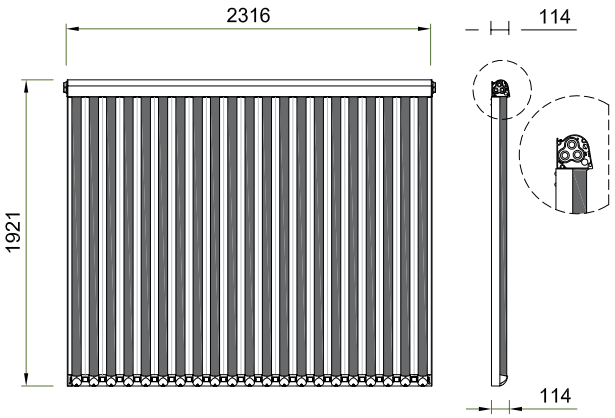
		CXS15°	CXS15E	CXS21°	CXS21E
Technical features					
Vacuum pipes	no.	15	15	21	21
Maximum number of coil manifolds	no.	6	6	6	6
Connections	no.	6	6	6	6
Connection dimensions	Ø inch	3/4"M	3/4"M	3/4"M	3/4"M
Opening surface	m^2	2,87	2,87	4,02	4,02
Input current surface	m^2	3,85	3,85	5,39	5,39
Gross surface	m^2	3,18	3,18	4,45	4,45
Head insulation thickness, aluminised glass wool covering	mm	47	47	30	30
Diameter - Vacuum pipe length	mm	58/47 - 1800	58/47 - 1800	58/47 - 1800	58/47 - 1800
Recommended tilt	°	15 - 75°	15 - 75°	15 - 75°	15 - 75°
Conductor radiator fluid content	l	3,28	3,28	3,75	3,75
Performances					
η0 rendimento ottico (riferimento area lorda)		0,615	0,615	0,609	0,609
K1 transmission coefficient (gross area reference)	W/m^2K	0,850	0,850	0,690	0,690
K2 transmission coefficient (gross area reference)	W/m^2K	0,009	0,009	0,005	0,005
Nominal Power	W	1956	1956	2710	2710
Angle of incidence correction factor	K50°	1.14T/0.9L	1.14T/0.9L	1.14T/0.9L	1.14T/0.9L
Heating capacity (opening ref.)	kJ/m^2K	50,9	50,9	34,0	34,0
Energy produced annually ISO 9806:2013 – Wurzburg – Temperature 50°C	kWh	2371	2371	2884	2884
Energy produced annually ISO 9806:2013 – Wurzburg – Temperature 75°C	kWh	1929	1929	2499	2499
Test Report ISO 9806:2013		Kiwa	Kiwa	Kiwa	Kiwa
DIN CERTCO Registration number		16083 Rev.0	16083 Rev.0	16082 Rev.0	16082 Rev.0
Flow Rate	l/h	127	127	200	200
Stagnation temperature	°C	279	279	176	176
Maximum pressure	bar	10	10	10	10

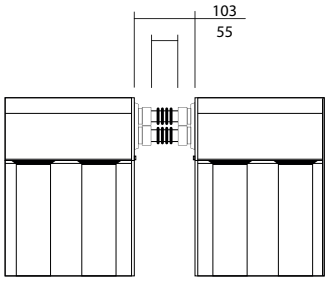
DIMENSIONS

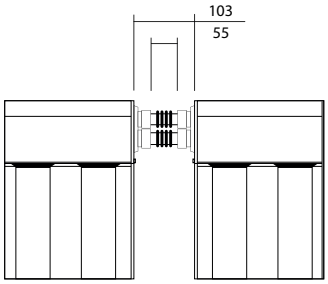
CXS15° - CXS15E



CXS21° - CXS21E







		CXS15°	CXS15E	CXS21°	CXS21E
Dimensions and weights					
A	mm	1656	1656	2316	2316
B	mm	1921	1921	1921	1921
C	mm	114	114	114	114
Empty weight	kg	72	72	80	80

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