

Why Vaillant?

Because it's the best solar system for the sun.



■ Solar thermal systems for warm water generation and central heating support

Because  **Vaillant** thinks ahead.

Why a Vaillant Solar System?

Because not only our environment



Sun sends warmth... but no bill

Global temperatures are continuously rising whilst traditional energy resources are declining - therefore it is no wonder that domestic energy conservation remains of universally high priority. The development of innovative and effective renewable energy solutions is critical for our future and environmental well-being.

Your choice for your customers comfort as well as our nature: Vaillant

With over 135 years experience in developing heating products, Vaillant is well placed to offer solar heating technology. As one of Germany's and Europe's leading boiler manufacturers, Vaillant sets the standards for performance, efficiency, quality and reliability. With the focus on new technologies we continue to consolidate our position in this segment.

More importantly, it's about working with our customers to deliver exactly what they require and to delight them with our products.

By incorporating the most modern technology, Vaillant's unique Total Solar System Solution intelligently blends solar and conventional energy supplies to optimise domestic heating and domestic warm water efficiency for our environment and our customers.



benefits but also our customers



Vaillant strives to offer you more than a high-value product. It is our aim to create components for you which fit together in a well-concepted and reliable system.

Vaillant's range of high efficient flat plate collectors has been designed to achieve the maximum solar energy. Produced in one of our German factories, high quality comes as standard.

With our easy mounting concept the collectors are suitable for a variety of applications. Given that the panels absorb diffused light as well as direct sunlight, they gain solar energy even on cloudy days. Multiple panels can be easily fitted together for larger and large systems.

Our high-efficiency auroTHERM plus collector is made with high selective absorber and anti-reflex solar glass to ensure for receiving the maximum solar gain. With our range of mounting systems the collectors can be used for pitched roofs, flat roofs or even be integrated into the roof in a highly aesthetic way. For pitched roofs Vaillant offers a wide range of roof brackets suitable for all common anchor types.

The sun's energy heats solar fluid in the solar collector. The solar fluid is then pumped by the solar pump unit to a coil designed to heat water in a dedicated enamelled steel storage or even transfer the solar energy with plate heat exchangers to buffer storages

A second coil in the storage can be connected to a conventional heating source, such as a gas boiler. Therefore additional heating can be provided even where there is insufficient solar energy available.

Thanks to our solar control, auroMATIC, the system can automatically switch between solar energy and the auxiliary energy heat source. It ensures that there is always hot water and / or heating on demand, whatever the weather.

**A complete system all from one source:
Vaillant solar thermal technology.**

Solar thermal collector auroTHERM VFK

Elegant efficiency made in Germany

Performance made in Germany

In order to offer you high-class collectors which work efficiently in each and every system combination, Vaillant has developed the flat plate collector auroTHERM. Available in several different versions, the auroTHERM is produced at Vaillant's modern facilities in Germany. The Vaillant solar domestic hot water system is a sealed, pressurised system with unique features in every component. It is consistent with our commitment to provide maximum efficiency, high performance and total reliability.

auroTHERM flat plate collectors

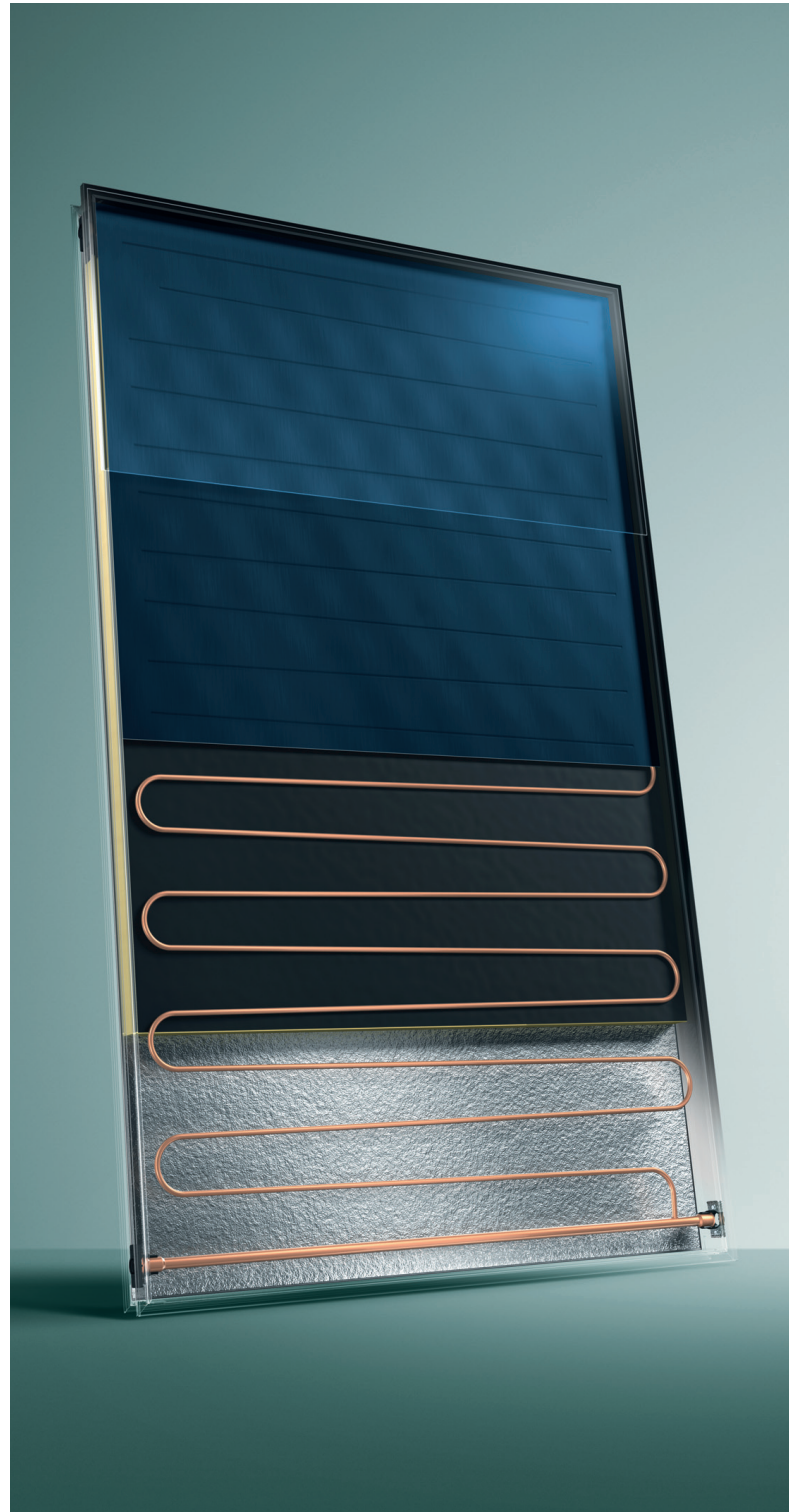
Vaillant auroTHERM collectors are embedded in an aluminium frame and thereby also meet customer wishes concerning design and integration into the roof aesthetics. Despite their low weight and their small depth, Vaillant auroTHERM collectors reach an absorption rate of 95% due to their highly-selective coated aluminium-copper-absorber.

The auroTHERM pro VFK 125 with its silver-coloured aluminium frame is equipped with clear safety solar glass and designed for vertical installation stands, for a basic solution for solar thermal applications.

Vertical as well as horizontal installations are possible with our VFK 145 V/H and 155 V/H. These are embedded in black anodized aluminium frames. With their homogeneous surface of 3,2 mm solar safety structure glass, our auroTHERM flat plate collector VFK 145 reaches a transmission value of 91%. Our auroTHERM plus flat plate collector VFK 155 V/H has a special anti-reflex solar glass which reaches a transmission value of 96%.

auroTHERM VFK at a glance:

- Solar warm water generation, heating of swimming pools and/or support of central heating
- Compatible for on-roof installation, homogenous in-roof installation and for remote mounting on a flat roof or other area
- VFK 145 and VFK 155 are available in horizontal and vertical installation versions
- For solar earnings even on cloudy days or days with low irradiation
- Laser-welded aluminium-copper serpentine absorber ensures optimal heat transfer
- Highly efficient insulation of rear panel
- Please kindly see technical data on page 14



Construction of flat plate collector auroTHERM plus VFK 145/V



Solar thermal collector auroTHERM exclusive VTK

Optimum use of solar energy

Tried and tested technology

Even the smallest ray of sunlight reaches the absorber via the mirrors behind the tubes. Therefore even when diagonal radiation occurs, the vacuum collector still achieves constantly high solar earnings and energy yield.

auroTHERM exclusive collectors are manufactured using toughened glass and have a glass vacuum seal for longevity. The tubes are internally coated with an aluminium nitride absorber for maximum solar efficiency.

Each collector is delivered with 6 (VTK 570) or 12 (VTK 1140) tubes per collector. They can easily be fitted in series if required. The appealing design of the Vaillant mounting brackets create a neat and attractive installation.

auroTHERM exclusive VTK at a glance:

- Vacuum tube collectors with 6 or 12 tubes
- For application in systems for solar domestic hot water generation but also for solar-supported heating systems
- Fast and safe installation on tilt or flat roofs, alongside each other or above one another
- Low weight and compact dimensions
- Easy-to-replace tubes
- For both small and large buildings
- Please kindly see technical data on page 14



Vaillant auroTHERM exclusive VTK 1140 - 12 vacuum tubes



Solar system auroSTEP plus

Modern technology for your independence



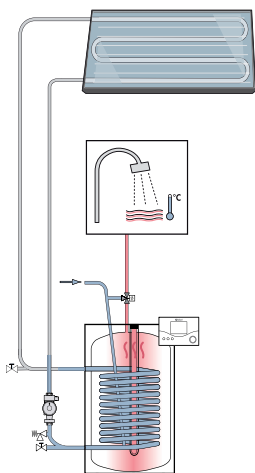
Drainback system auroSTEP plus

The solar system auroSTEP plus offers the opportunity to use new solar thermal technology for warm water generation in your home, without having to deal with the problems that are usually associated with solar systems. Vaillant presents a system that is easy to implement and offers calculable costs. The solar system package auroSTEP plus contains a solar storage with a pre-mounted solar pump, an integrated solar control, a corresponding

auroTHERM flat plate collector (or collectors - depending on the system) and the compatible installation accessories for the particular type of roof.

This is a well adjusted system for standard installations which does not require detailed planning.

The auroSTEP plus storage is available with 150, 250 and 350 litres volume.



Solar system without expansion vessel

Drainback technology

When the auroSTEP plus system is switched off the solar liquid "drains back" to the bottom of the solar coil in the storage and in the upper pipes there remains nothing but air. The system is pre-mounted and pre-filled which makes planning and installation very easy and also reduces the margin for error. The "plug'n flow" system enables you to enjoy the hot water produced by your solar system almost immediately.

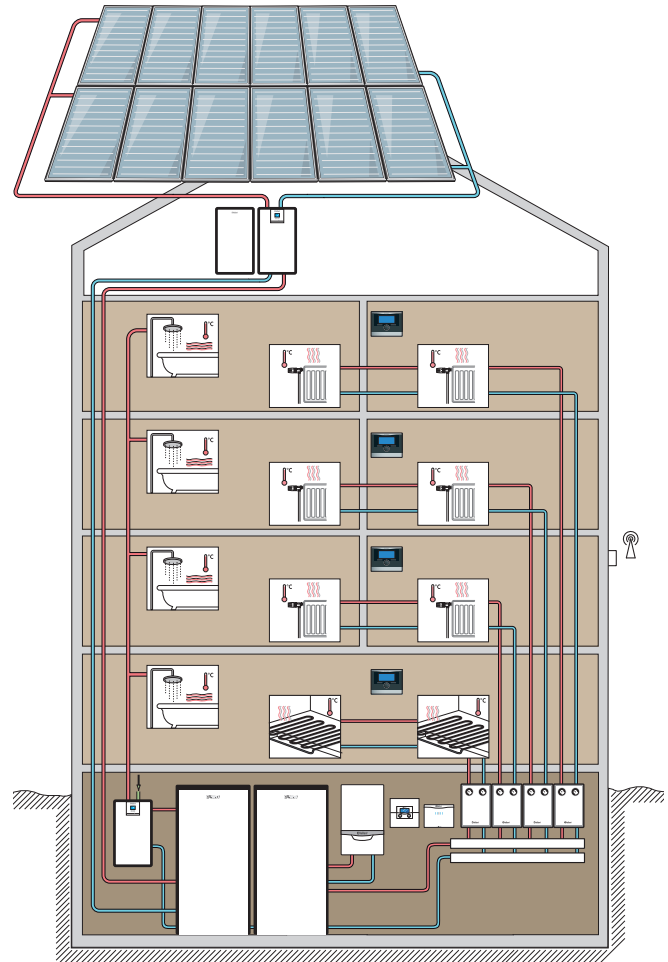
auroSTEP plus at a glance:

- Well-adjusted pre-assembled and pre-filled drainback system for the generation of solar domestic hot water
- For one / two-family houses
- Tank volumes 150, 250 and 350 litres
- For loading charges of up to 12m
- High efficiency pump for energy savings
- Minimal planning effort required
- Little effort needed for installation and maintenance effort
- Protected from stagnation and frost damage
- Ideal solution especially for areas with high solar radiation
- Please kindly see technical data on page 16



Drainback Split

Solution for high and variable demands without stagnation



The auroFLOW plus system is a modular drainback system designed for safety stagnation free operation for high and variable demands. High and variable demand with a suitable solar fraction can't be covered by pressurized solar systems because stagnation (steam in the collectors) will block delivery of solar energy.

The auroFLOW plus system can be used for 112 m² collector surface which can provide the DHW demand of a 200 bed hotel with 0 to 100 % occupation and is our solution for commercial usage.

For using the auroFLOW plus system is no rework of existing DHW solutions necessary, it is designed for using it as an add on application with integrated plate heat exchanger and own controller which takes also the functionality for cascading the modules.

Solar gain is 20% more than with pressurized systems. For low maintenance cost the auroFLOW plus system is an intrinsically safe solar system with several safety functions. High efficiency pumps will reduce running costs 1:10 compared to normal pumps. For best solar gain the circulations pumps have frequency speed control. The module has its own controller which is easy to use and no additional controller is needed.

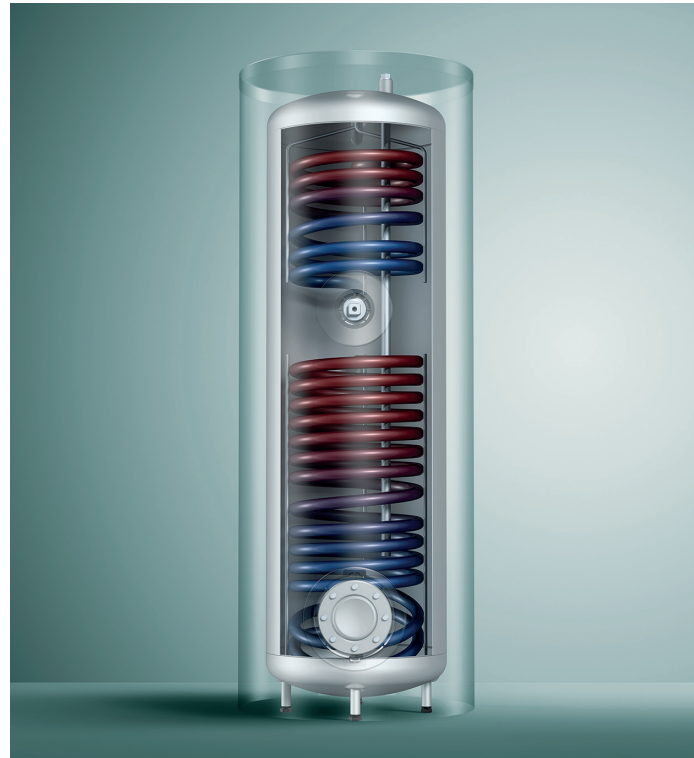
At a glance:

- Solar thermal application
- Drainback System, no stagnation, no steam in the collectors, pressureless operation
- All components mounted in the module: solar pump, controller, safety valve
- Modules are cascadeable up to 4 x 2 units
- Up to 112 m² collector surface
- Suitable for high variable demand of DHW and heating energy
- Capable of being integrated of existing systems
- 20% more solar gain
- Intrinsically safe solar system
- Powerful high efficiency pumps
- Integrated plate heat exchanger
- Integrated controller
- Less maintenance



auroSTOR VIH S

For long hot showers



The range of Vaillant auroSTOR cylinders: 800 L, 1000 L, 1500 L, 2000 L

Vaillant auroSTOR VIH S storage tank provides the ultimate in hot water comfort for one or two family homes. With its 300 up to 500 l tank volumes it is perfectly suited for the supply of domestic hot water in combination with solar thermal energy.

The bivalent solar storages manufactured from stainless steel stand in a vertical position. The casing comes with a removable synthetic envelope and CPC-free 75mm warmth insulation. Furthermore the auroSTOR contains a cleaning lid as well as an integrated thermometer and the connection for an electric heating rod.

The auroSTOR VIH is extremely reliable thanks to high quality enameling on the warm water circuit.

auroSTOR VIH S at a glance:

- Domestic hot water for one / two-family homes
- Bivalent solar thermal storage technology
- Tank volumes 300, 400 and 500 litres
- Combinable into a system with Vaillant heating appliances and controls
- Suitable for use of electric back-up heater (as accessory storage is equipped with the connection)
- Removable heat insulation for easier transport and installation
- Magnesium anode as corrosion protection
- Low standby losses
- Please kindly see technical data on page 14



The perfect system solution

aIISTOR VPS



VPS storage with modules VPM S and VPM W

Great solution in a system

An aIISTOR system usually consists of the storage tank itself, a Vaillant solar pumping station for the more efficient use of solar energy and / or a Vaillant drinking water station for the highest possible hot water comfort. These system parts are both complete ready-to-plug modules which can be installed beside each other or above one another on the front of the storage: quick, easy and aesthetically pleasing. An on-wall installation is also possible, if desired.

In multi-family-homes and other big buildings the aIISTOR system which consists of the multi function storage and the drinking water station provides of optimal warm water comfort:

The VPS /2 stores the warm heating water and the drinking water station passes it through its own heat exchanger so that it can be used either for taking a bath or a shower or for washing, for example.

The drinking water station is available in two sizes and can thus supply to the tapping points either up to 25 or up to 35 litres of domestic hot water per minute. In this way even the biggest buildings can be quickly and effortlessly supplied with a high level of hot water comfort.

An aIISTOR system usually consists of the storage tank itself, a Vaillant solar station (VPM S) for the more efficient use of solar energy and / or a Vaillant instantaneous water heater module (VPM W) for the highest possible hot water comfort. These system parts are both complete ready-to-plug modules which can be installed beside each other or above one another on the front of the storage: quick, easy and aesthetically pleasing. An on-wall installation is also possible, if desired.

In multi-family-homes and other big buildings the aIISTOR system which consists of the multi function storage and the module VPM W provides of optimal warm water comfort: The VPM W module is an instantaneous water heater which is using hot system water for preparing DHW instantaneously.

Wherever high hygienic of DHW is needed, this is the solution for because DHW is not stored in a tank.

The VPM W module is designed for residential and commercial use also. For commercial use a cascade of max. 4 modules can provide up to 180 l/min with 60°C which allows to provide 40 showers at once. Circulation functionality is integrated in the modules controller. Cascade functionality is given by modules controller. Plate heat-exchanger, high efficiency pumps, sensors and mixing valve are integrated in the module. Preassembled manifolds as accessory. DHW temperature can be adjusted by customer. Easy access to the controller.

The VPM S solar module is designed for pressurized system which needs a separation of the systems.

The VPM S module has an integrated controller which don't need additional controllers. For separation of systems the module has a plate heat exchanger and two high efficiency pumps integrated. No special design is required for these modules. Installation costs will be 40% less to solar installation without premounted solar modules. For best solar gain the circulations pumps have frequency speed control. Safety valve, pressure gauge, thermometer, check-, service valve, air separator and connection for expansion vessel are integrated and premounted. The VPM S module is suitable up to 60 m² collector surface and suitable up to 8 m³ storage with solarisation approx. 1800 kWh/m²*a.

Standard Solar Station

The Standard Solar Station for pressurized standard systems with coil storages and suitable up to 50 m² absorber surface.

Safety valve, thermometer, pressure gauge, check-, service valve and connection for expansion vessel and system flush are integrated. The VMS module needs an additional solar controller.



Automatically calculate your own energy yield

The auroMATIC solar control

Vaillant solar systems controls enables user-defined system combinations. The auroMATIC 620 allows not only the solar system but the whole heating system to be regulated. Taking into consideration the outside temperature, it adjusts the temperature level of the system and monitors the interplay of all components. The auxiliary heating unit is only activated when the collectors cannot deliver sufficient warmth.

The auroMATIC 560 is the perfect system solution for the generation of solar domestic hot water only and independently controls up to two collector fields.

auroMATIC 620

Busmodular control system for solar supported heating which can be extended up to 14 heating circuits and up to 8 remote control appliances.

auroMATIC 620 at a glance:

- For control of the generation of solar domestic hot water and solar-supported heating
- Weather-guided control of the system
- For up to 2 heating circuits, 1 direct heating circuit, 1 mixing circuit (f.ex. for underfloor heating), extendable up to 14 heating circuits
- Comfortable text display with graphical visualizations
- Constant indication of solar earnings
- Option for remote control
- Control for heating cascades
- Easy to install with ProE connection plugs and ample inner space
- Internet gateway
- Please kindly see technical data on page 14

auroMATIC 560

Application in the solar supported creation of warm water with option of auxiliary heating tailored to specific requirements.

auroMATIC 560 at a glance:

- For solar domestic hot water generation systems
- Vaillant user comfort "turn and click"
- Fast and safe installation thanks to System Pro E
- Symbol display, indication of operation status and cycle times
- Detection of solar earnings, indicated over the graphical display
- Up to 2 independent collector fields
- Option to connect a 2nd storage or swimming pool heating
- Please kindly see technical data on page 14



Vaillant auroMATIC 620 with graphical solar yield display



Solar system auroSTEP pro

proven concept in compact design



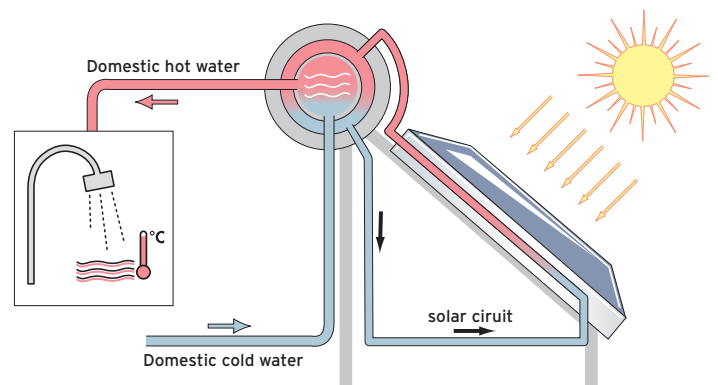
Vaillant's auroSTEP pro system contains a storage which is installed on the roof directly above the collector/s. Well crafted collectors, enamelled "tank-in-tank" storages and a coated mounting bracket give the system the known Vaillant quality.

The storages are available in the capacities of 150, 200 and 300 litres of domestic hot water.

When the solar earnings are not sufficient to cover the warm water demand, electrical backups of 2 or 3 kW can be added to the system. You can obtain further warm water comfort without great installation effort.

auroSTEP pro at a glance:

- For supply of domestic hot water in one-family houses
- Tank volumes 150, 200 and 300 litres
- No additional energy costs for the pump function
- Reduced maintenance costs
- Corrosion protection
- Electrical back-up can be added to the system
- Please kindly see technical data on page 16

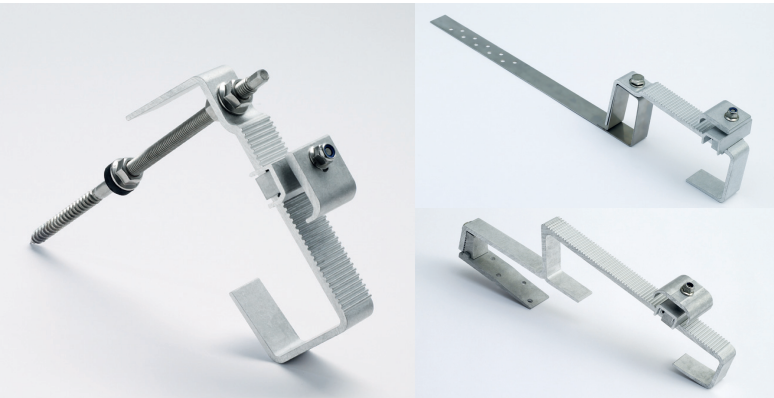


auroSTEP pro functional scheme



Solar installed easily

Our new range of mounting accessories



The new Vaillant mounting accessory range makes the installation of solar thermal collectors faster, easier and safer than ever before. Only one tool is required to fix and connect the panels onto the roof.

Mounting bracket for on-roof installation

The fastest installation without compromising safety: our new mounting brackets for on-roof installation. Delivered pre-assembled, the brackets are ready for use. No further tools are needed other than an Allen key.



A-frame with gravel plates for flat roof installation

The pre-screwed A-frames just have to be swung open and fastened with two bolts and pins - all necessary items are delivered as part of our installation package. No other tools are needed for the reliable fixing of your collectors.



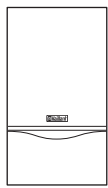
Hydraulic connection for collectors

No more than a few stainless-steel connections are needed for the hydraulic connection between two collectors. With very little effort, the collectors can be quickly linked together and installed either alongside or above one another.

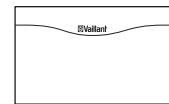
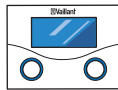


Extensive range of products for all needs

Perfect solution for every requirements



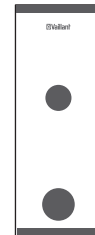
ecoTEC plus VU
turboTEC



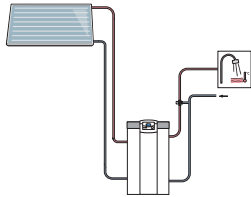
calorMATIC 470
VR 68



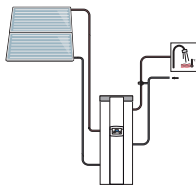
auroTHERM



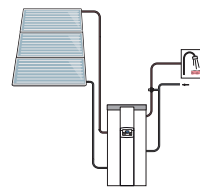
auroSTOR
VIH S



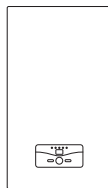
auroSTEP plus 1.150



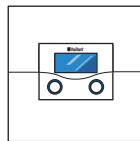
auroSTEP plus 2.250



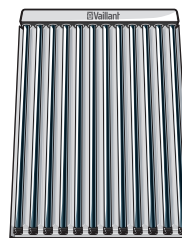
auroSTEP plus 3.350



eloBLOCK



auroMATIC 620/3



auroTHERM exclusiv



aIISTOR exclusive
VPS/3

Technical data

Product properties collectors	unit	VFK 125 *	VFK 145 V	VFK 145 H	VFK 155 V	VFK 155 H
Surface (gross / aperture)	m ²	2,51 / 2,35	2,51 / 2,35	2,51 / 2,35	2,51 / 2,35	2,51 / 2,35
Absorber content	l	1,85	1,85	2,16	1,85	2,16
Stainless steel flat sealing connection	diameter	3/4"	3/4"	3/4"	3/4"	3/4"
Insulation thickness	mm	40	40	40	40	40
Operational pressure max.	bar	10	10	10	10	10
Light transmittance of the solar glass	%	91	91	91	96	96
Absorber absorption	%	94	94	94	94	94
Absorber emission	%	5	5	5	5	5
Stagnation temperature (accord. to prEN 12975-2, c <1m/s)	°C	118	171	171	172	172
Degree of efficiency (accord. to EN 12975)	%	75,2	79,1	80,1	83,3	84,2
Coefficient of efficiency k ₁	W / (m ² k)	3,98	2,41	3,32	2,33	3,82
Coefficient of efficiency k ₂	W / (m ² k ²)	0,02	0,049	0,023	0,049	0,018
Dimensions: Height / Width	mm	2033 / 1233	2033 / 1233	1233 / 2033	2033 / 1233	1233 / 2033
Depth	mm	80	80	80	80	80
Weight	kg	38	38	38	38	38

* VFK 125 for vertical installation only.

Product properties vacuum tube collectors	unit	VTK 570	VTK 1140
Area (gross / aperture)	m ²	1,16 / 1	2,3 / 2
Collector content	l	0,9	1,8
Insulation high vacuum	bar	10 ⁻⁸	10 ⁻⁸
Max. function pressure	bar	10	10
CPC mirror, grade of reflection	%	85	85
Absorber absorption α	%	93,5	93,5
Absorber emission ε	%	6	6
Shutdown temperature	°C	272	272
Efficiency factor k ₁	W / (m ² k)	0,885	0,885
Efficiency factor k ₂	W / (m ² k ²)	0,001	0,001
Dimensions: Height / Width / Depth	mm	1652 / 702 / 111	1652 / 1392 / 111
Weight	kg	19	37

Product properties controls	unit	auroMATIC 560	auroMATIC 620
Nominal voltage	V	220-230	220-230
Frequency	Hz	50	50
Power consumption	W	3	3
Breaking capacity		250 V AC 2A	250 V AC 2A
Ambient temperature (min./max.)	°C	0-40	0-40
Protection degree	IP	IP 40 as per DIN 40050	

Product properties warm water storages	unit	VIH S 300	VIH S 400	VIH S 500
Nominal storage capacity	l	300	400	500
Max. storage pressure	bar	10	10	10
Max. heater pressure	bar	10	10	10
Max. primary circuit temperature	°C	110	110	110
Max. hot water temperature	°C	85	85	85
Heat loss	l	1,9	2,1	2,3
Primary solar exchanger:				
Area	m ²	1,6	1,5	2,1
Volume	l	10,7	9,9	14,2
Primary heat exchanger:				
Area	m ²	0,7	1	1
Volume	l	4,7	4,5	6,6
Hot water power	l / 10min	195	190	215
Continuous power	kW	20	21	29
Continuous power	l / h	491	516	712
Dimensions:				
Diameter without insulation / Width with cover / Height	mm	500 / 660 / 1775	650 / 810 / 1470	650 / 810 / 1775
Weight incl. insulation and packing	kg	150	169	198

Technical data

Product storage auroSTOR	unit	VPS SC 700	VPS SC 1000
Volume storage (total / DHW / buffer) net	l	670 / 180 / 490	1112 / 192 / 920
Continuous power DHW (80/10/45°C/24 kW)	l/h	610	-
Continuous power DHW (80/10/45°C/34 kW)	l/h	-	830
Net. Volume DHW output power	l/10 min	280	296
Key performance power	N _L	4,0	4,5
Max. operating pressure heating	bar	3	3
Max. operating pressure DHW	bar	10	10
Max. operating pressure solar	bar	6	6
Solar heat exchanger:			
Heat exchanger surface	m ²	2,7	3,0
Volume of the coil	l	17,5	19,2
Max. flow temperature	°C	95	95
Max. DHW temperature	°C	95	95
DHW-heat exchanger:			
Heat exchanger surface	m ²	0,82	1,2
Volume of the coil	l	4,8	7,0
Dimensions:			
Outside diameter with insulation	mm	950	940 x 1230
Height with insulation	mm	1895	2050
Weight: Combistorage without insulation and package	kg	190	295

Product multifunction storage allSTOR	unit	VPS 300/3	VPS 500/3	VPS 800/3	VPS 1000/3	VPS 1500/3	VPS 2000/3
Nominal storage capacity	l	303	491	778	962	1505	1917
Approv. heating function overpressure	bar	3	3	3	3	3	3
Max. heating water temp.	°C	95	95	95	95	95	95
Standby energy loss	kWh / 24h	< 1,7	< 2,0	< 2,4	< 2,5	< 2,9	< 3,3
Dimensions:							
Height with insulation	mm	1833	1813	1944	2324	2362	2485
Height without insulation	mm	1735	1715	1846	2226	2205	2330
Diameter with heat insulation	mm	780	930	1070	1070	1400	1500
Diameter without heat insulation	mm	500	650	790	790	1000	1100
Weight	kg	70	90	130	145	210	240

Product properties solar loading station	unit	VPM 20/2 S	VPM 60/2 S
Solar collector area flat		for 4 - 20 m ² flat plate collector	for 20 - 60 m ² flat plate collector
Solar collector area tube		for 4 - 14 m ² vacuum tube collector	for 14 - 28 m ² vacuum tube collector
Heat exchanger		21 plates	49 plates
Max. water temperature	°C	99	99
Approv. function pressure solar side	bar	6	6
Approv. function pressure secondary	bar	3	3
Electric connection		230 V / 50 Hz	230 V / 50 Hz
Dimensions: Height / Width / Depth	mm	750 / 450 / 250	750 / 450 / 250
Weight	kg	15	16

Product properties drinking water station	unit	VPM 20/25/2 W	VPM 30/35/2 W	VPM 40/45/2 W
Output @ 60 / 65 °C storage temperature	l/min	20 / 25	30 / 35	40 / 45
Warm water temperature	°C	40 - 75	40 - 75	40 - 75
Approv. system pressure heating side	bar	3	3	3
Approv. system pressure water side	bar	10	10	10
Electric connection		230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz
Dimensions: Height / Width / Depth	mm	750 / 450 / 250	750 / 450 / 250	750 / 450 / 250
Weight	kg	16	16	19

Product	unit	VPM 15 D	VPM 30 D
Collector surface	m ²	≤ 15	≤ 30
Counts of collectors		≤ 6	≤ 12
Power of plate heat exchanger	kW	16	16
Power solar pump	W	≤ 65	≤ 130
Power storage loading pump	W	≤ 65	≤ 65
Volume storing vessel	l	20	40
Dimensions: Height / Width / Depth	mm	750 / 450 / 250	750 / 900 / 250

Technical data: auroSTEP pro system - collector and storages

Product properties collectors	unit	VFK 135 D	VFK 135 VD *
Gross collector area / Gross collector area	m ²	2,51 / 2,35	2,51 / 2,35
Fuid content	l	1,35	1,46
Insulation thickness	mm	40	40
Operational pressure max.	bar	10	10
Light transmittance of the solar glass	%	91	91
Absorption coefficient	%	94	95
Shutdown temperature (accord. to prEN 12975-2, c <1m/s)	°C	176	170
Coefficient of efficiency k ₁	W / (m ² k)	3,7	2,6
Coefficient of efficiency k ₂	W / (m ² k)	0,012	0,033
Direction of installation		horizontal	vertical
Dimensions: Height / Width / Depth	mm	2033 / 1233 / 80	2033 / 1233 / 80
Weight	kg	37	37,5

* Available from early 2011 onwards.

Product properties warm water storages	unit	VIH SN 150i	VIH SN 250i	VIH SN 350i
Nominal storage capacity	l	150	253	389
Max. storage pressure	bar	10	10	10
Voltage	V AC / Hz	230 / 50	230 / 50	230 / 50
Primary solar heat exchanger: area	m ²	1,3	1,3	1,6
Solar liquid demand	l	8,5	8,5	8,5
Max. flow temperature solar	°C	110	110	110
Max. hot water temperature	°C	90	90	90
Dimensions: Diameter / Depth / Height	mm	605 / 772 / 1082	605 / 772 / 1692	814 / 969 / 1592
Weight with isolation, empty	kg	110	140	210

Product properties collectors	unit	VFK 750 T
Area (gross, aperture / net)	m ²	1,97 / 1,77
Efficiency	%	η ₀ = 75
Stagnation temperature	°C	120
Operating pressure	bar	10
Volume	l	1,1
Tranmission	%	88,5
Dimensions: Width / Depth / Height	mm	990 / 79 / 1990
Net weight	kg	42

Product properties warm water storages	unit	VIH S 150 T	VIH S 200 T	VIH S 300 T
Nominal storage capacity	l	141	178	285
Max. operating pressure storage	bar	10	10	10
Max. hot water temperature	°C	85	85	85
Stand-by energy loss	W / K	1,8	2	2,9
Area heat exchanger	m ²	0,8	0,9	1,67
Volume heat exchanger	l	7,7	8,7	19,5
Dimensions: Outer diameter / Height	mm	500 / 1323	530 / 1323	530 / 2083
Weight	kg	59	67	106
Weight ready for operation	kg	208	254	411

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