

SolarMaster

CONDENSING BOILERS



With the future in mind



Integrated solar
and condensing
technology

A complete and fully
preassembled system,
ready for installation

Leading-edge
condensing technology

Maximum heating and
hot water comfort,
minimum energy
consumption

Optimal use of solar
energy

Ready for connection
to a fireplace heating
system or solid fuel
stove (wood or pellets)



MAXIMUM HEATING
COMFORT AND
ABUNDANT HOT
WATER COMBINING
SOLAR ENERGY
AND CONDENSING
TECHNOLOGY

**Certified
performance**
★★★★

**NOx Class 5
rating**



excellence in hot water

SolarMaster

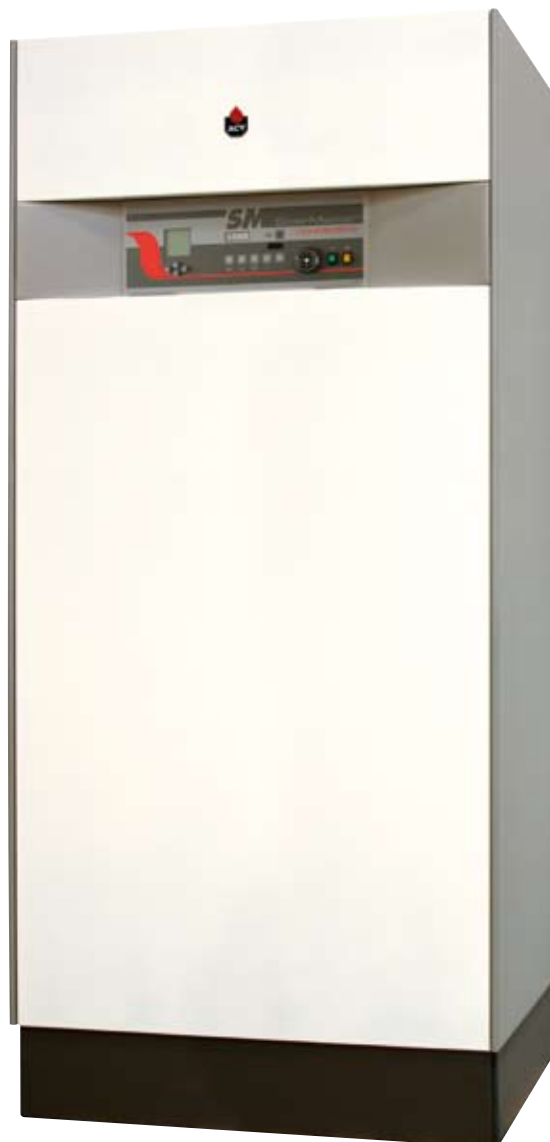


SolarMaster is the new ACV system combining – in a single floor-standing unit – a condensing boiler, multi-energy Tank-in-Tank technology and a comprehensive temperature and solar control system for connection to high- and low-temperature installations. The system can incorporate a range of alternative energy sources for both heating and hot water production.

PRODUCT DESCRIPTION

- Compact domestic heating and hot water production unit integrating solar energy technology
- Condensing boiler comprising the following:
 - Pre-mix burner that can be modulated from 4.1 to 18 kW or from 6.5 to 30 kW.
 - Fully immersed, self-cleaning, stainless steel vapour / water exchanger, for reduced maintenance and high corrosion resistance.
- Multi-energy cylinder for domestic hot water production with stainless steel Tank-in-Tank technology and coil for a solar power source, fully immersed in the primary water of the heating circuit.
- Primary circuit managed by MCBA electronic controller, complete with circulator pump, expansion vessel, hydraulic separator and three-way valve that gives priority to domestic hot water requirements.
- Domestic hot water circuit with thermostatic mixer, expansion vessel and safety system.
- Complete solar circuit including hydraulic system, electronic controller, expansion vessel, safety valve and temperature sensors.
- Integrated solar power, domestic hot water and heating system by means of coil exchanger immersed in the primary water of the cylinder and three-way switch-valve governed by electronic controller
- Ready for connection to solid-fuel boilers (fire-place heating system, wood or pellet stove) or electric heating systems
- Two adjustable-temperature heating circuits – including circulator pump (1 standard plus 1 optional), three-way mixing valve, output sensor and electronic control system – both governed by a single remote control
- Remote control with air temperature regulator and outdoor sensor to programme room temperature
- Two models with outputs of 18 kW and 30 kW respectively

MAXIMUM HEATING COMFORT AND ABUNDANT HOT WATER COMBINING SOLAR ENERGY AND CONDENSING TECHNOLOGY





Simple and comprehensive



The heart of the system is our multi-energy Tank-in-Tank technology, which gathers energy from all available sources and then uses it efficiently, optimising the production of domestic hot water and heat, and reducing energy consumption to a minimum. This is why SolarMaster is the perfect solution for new homes as well as for conversion projects.

SOLARMASTER: THE IDEAL SOLUTION FOR EVERY HOME

Ideal for all detached and semi-detached homes with low-temperature under-floor heating systems and high domestic water requirements, SolarMaster provides low environmental impact and maximum energy efficiency by enabling the use of alternative energy sources, such as solar power, heat pumps, solid-fuel stoves and fireplace heating systems.

CAN BE COMBINED WITH ALL AVAILABLE SOURCES OF ENERGY



**SOLARMASTER
COMBINES
ALL ENERGY
SOURCES TO
HEAT YOUR HOME
COMFORTABLY AND
PROVIDE INSTANT
HOT WATER ON
DEMAND**

SolarMaster, multi-energy condensing boilers



SOLAR PANELS



INTEGRATED CONTROL

Room Unit

Remote control for maximum ease of use in programming and managing the domestic heating and hot water system.

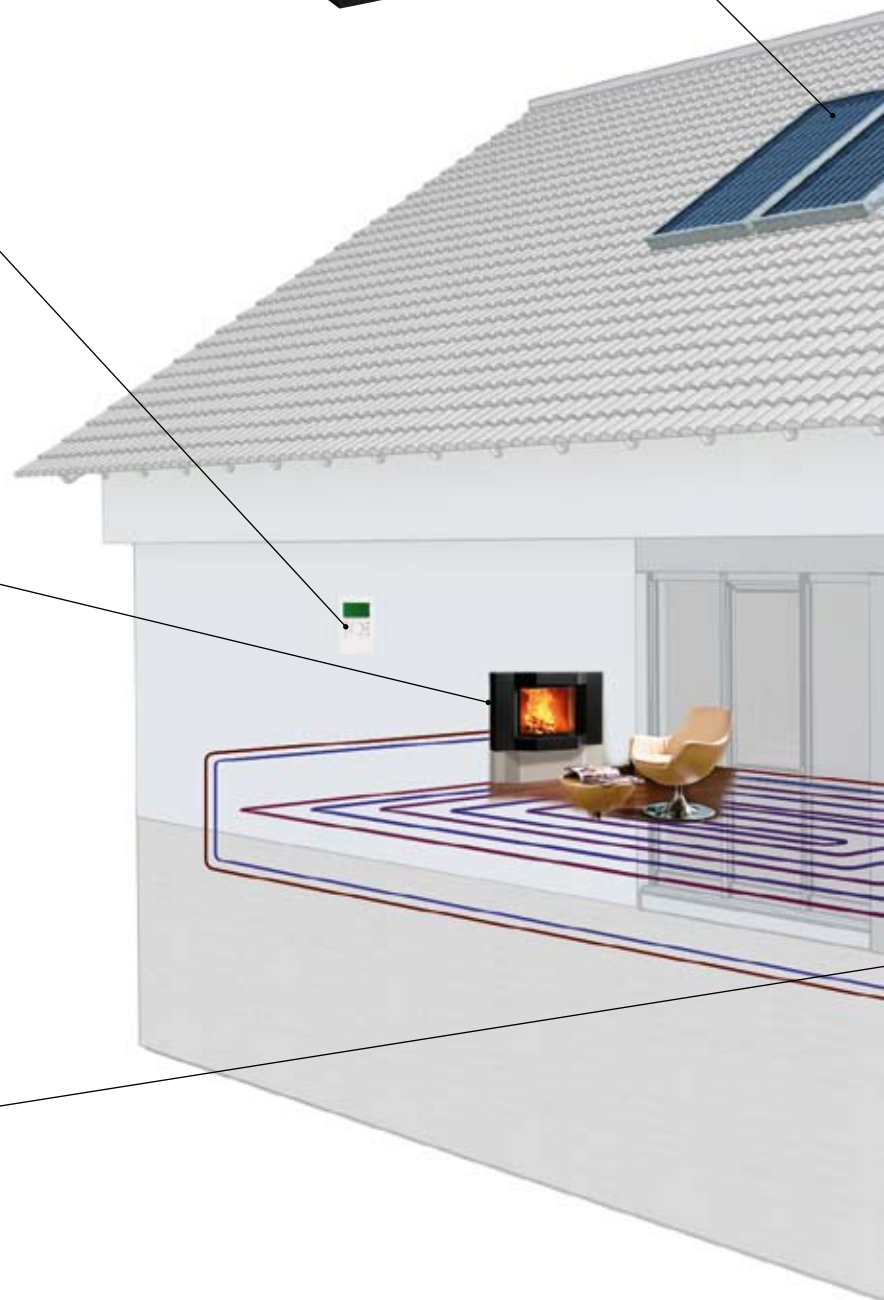


EASY CONNECTION TO FIREPLACE HEATING UNITS AND/OR SOLID-FUEL STOVES

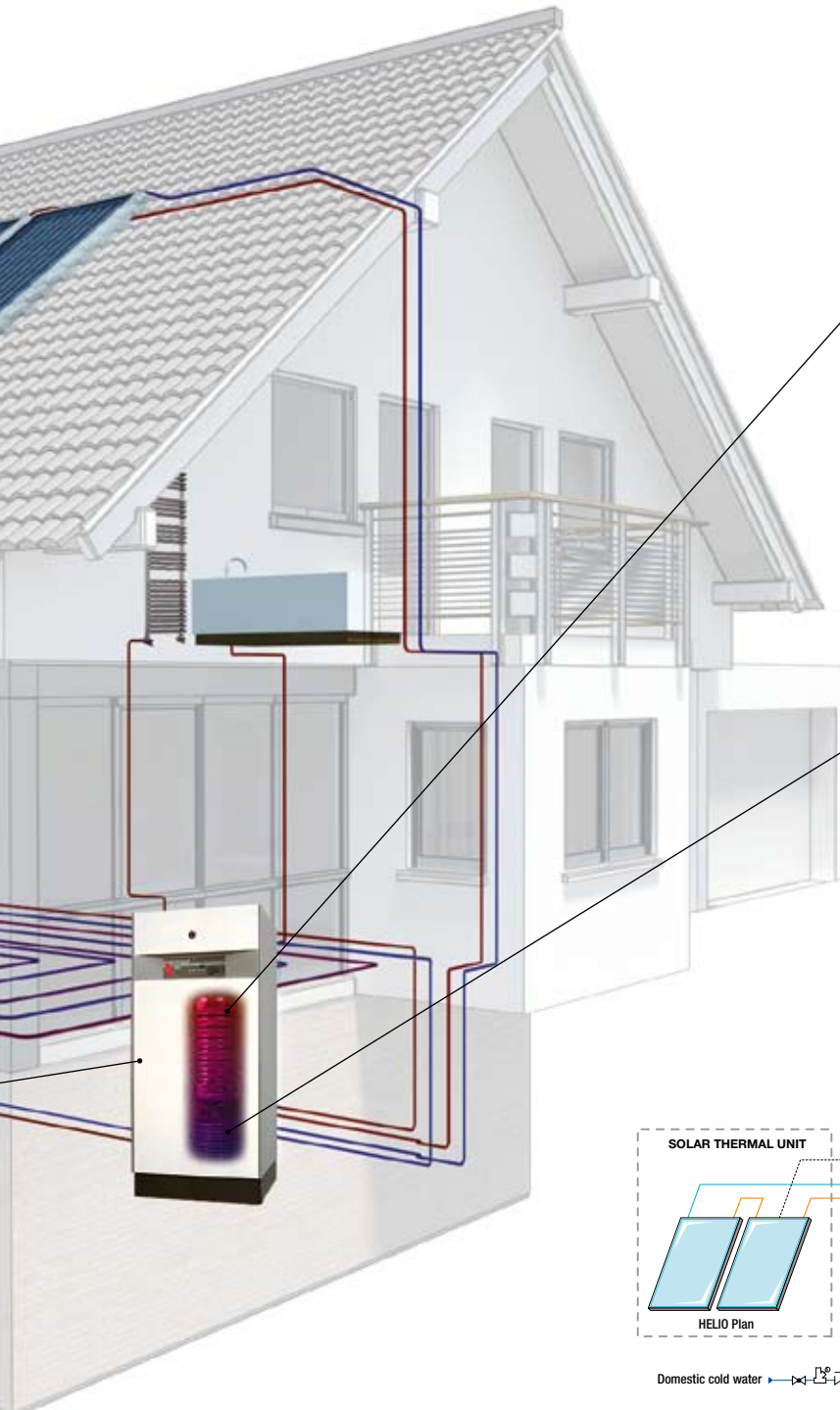
Additional inlets are designed into the lower part of the multi-energy Tank-in-Tank unit, enabling the system to receive heat from additional energy sources (such as fireplaces and wood or pellet stoves) to supplement the energy provided by the condensing boiler.

STATE-OF-THE ART CONDENSATION TECHNOLOGY FOR OUTSTANDING HEATING EFFICIENCY

The ACV condensing boiler makes the most of precious energy, efficiently combining low- and high-temperature heating systems.



SOLARMASTER IS THE ONLY SYSTEM CAPABLE OF MANAGING HEATING SYSTEMS OPERATING AT DIFFERENT TEMPERATURES, DELIVERING A PLENTIFUL SUPPLY OF DOMESTIC HOT WATER AND COMBINING SOLAR POWER AND OTHER ALTERNATIVE SOURCES OF ENERGY.



ABUNDANT HOT WATER ON DEMAND

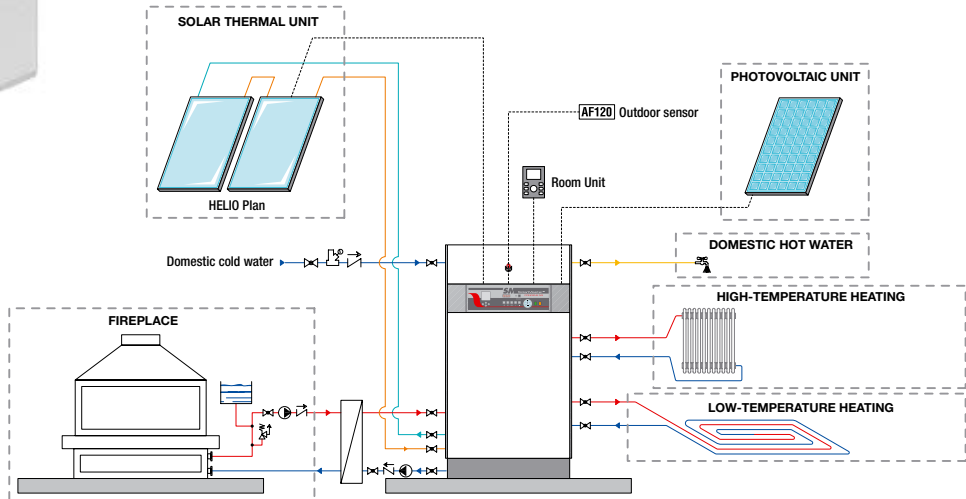


Thanks to its large exchange surface and short refill time, the ACV Tank-in-Tank system delivers outstanding hot water performance, improving overall system efficiency, saving kilowatt upon kilowatt of precious energy.

INTEGRATION OF SOLAR POWER



The coil immersed in the primary water at the bottom of the multi-energy Tank-in-Tank system makes it possible to store solar energy: available for heating the water contained in the stainless steel tank and at the same time supplement the energy requirements of the heating system, thus providing increased energy efficiency, particularly for low-temperature applications.



ACV stainless steel technology



ACV MULTI-ENERGY TANK-IN-TANK SYSTEM

At the core of the SolarMaster system is the Smart Multi-E cylinder, a novel hybrid energy accumulator with all the advantages of Tank-in-Tank technology, which, thanks to its large heat exchange surface, enables a short refill time and maximum energy savings during use.

Self-descaling

Long service life, consistent efficiency
The SMART tank expands and contracts in response to water pressure variations. The unique corrugated design of the tank walls amplifies this movement, preventing lime scale deposits from adhering to the surfaces and ensuring consistent efficiency over time.

Stainless steel

Corrosion resistance

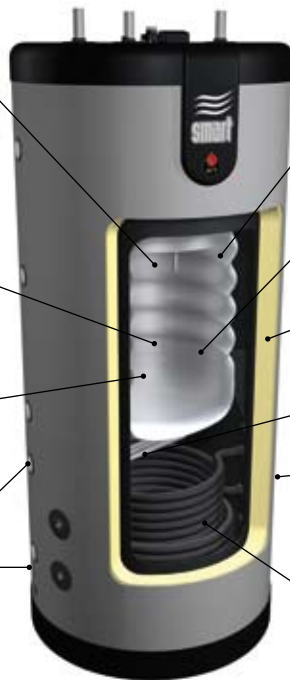
Stainless steel makes the hot water tank extremely resistant to corrosion.

Low maintenance

Because of its stainless steel construction and the exclusive Tank-in-Tank system, the heater does not need a sacrificial anode.

Connection to fireplace heating unit (optional)

The ACV Fireplace Kit is used to connect the system to a fireplace heating system or to a wood or pellet stove, thus making the most of alternative sources of energy to supplement the heating and hot water systems.



Large heat exchange surface

Reduced refill time and energy consumption with minimum space requirements

Protection against Legionella bacteria

High level of hygiene
The domestic hot water tank is fully immersed, enabling the water to be stored at a stable temperature above 60°C.

Optimal insulation

Minimum energy loss and minimum consumption

Electric heating element (optional)

For connection to a photovoltaic array.

Integrated heating

When connected to a low-temperature under-floor heating system, the boiler can use solar energy to raise the temperature of the returning water, thus reducing the running time of the system.

Ideal for connecting to a solar power installation

The carbon steel coil – fully immersed in the primary water of the heating circuit to avoid lime scale deposits – makes it possible to connect the system to alternative energy sources.

STAINLESS STEEL CONDENSATION TECHNOLOGY

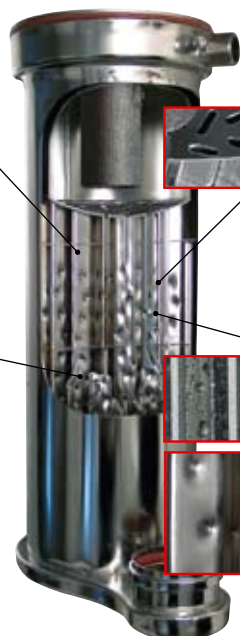
Another key component of the SolarMaster system is the innovative heat exchanger, made of special stainless steel. It has been specially designed to provide a counter-flow exchange between the water and flue gas, with an optimal flow ratio between the two, so as to achieve maximum energy efficiency, uniform stresses on the boiler and a long service life for the exchanger itself.

Unrivalled corrosion resistance

Stainless steel offers unparalleled resistance to corrosion from the acid condensates and additives found in heating systems. The grade of steel chosen for the system is highly resistant to the acidity of the condensates, even when traces of sulphur are present in the natural gas or propane used.

Long service life and low maintenance

The SolarMaster heat exchanger is self-cleaning: The condensates flow along the flue ways and continuously clean any combustion residues. Thus, SolarMaster continues to operate at high efficiency and maintenance is limited to routine annual service calls.



Optimal water volume for more stable operation

The use of fully immersed flue ways in designing the SolarMaster stainless steel heat exchanger maximises the volume of water compared to a traditional heat exchanger with water pipes. The larger volume of water stabilises the boiler temperature controls and minimises the risk of overheating due to an unexpected drop in flow.

High efficiency

The specific geometry of the flue ways is designed to achieve optimal exchange over the total length of the heat exchanger. SolarMaster provides exceptional efficiency that remains stable throughout the system's service life, with no risk of oxidation in the exchanger. Furthermore, energy losses in the flue ways and primary circuit are extremely low.

A single, versatile system providing a comprehensive solution



CONSTRUCTION CHARACTERISTICS

Co-axial flue gas outlet/air inlet

Pre-mix burner

Primary circuit circulator

Diverter valve prioritising domestic hot water

Mixed Circuit 2 circulator (optional)

Circuit 1 mixing valve

Circuit 2 mixing valve (optional)

Mixed Circuit 1 circulator

8-litre Hot water expansion vessel

18-litre Primary expansion vessel

18-litre Solar expansion vessel

Solar system filling unit

Solar electronic control unit

Control panel

Solar circuit circulator

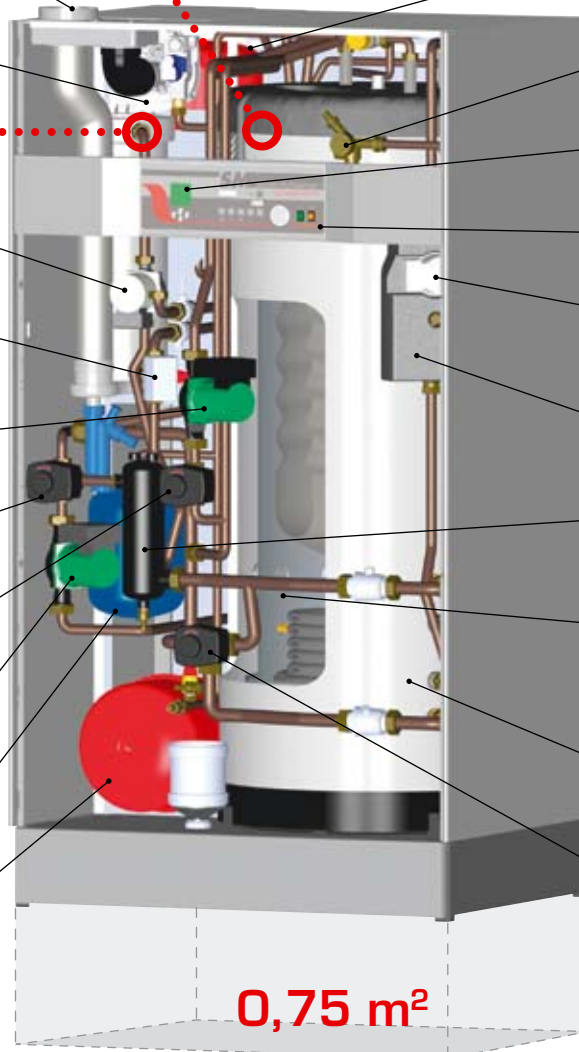
Solar system flow-rate regulator

Hydraulic separator

Electric element (optional)

Additional connections for fireplace heating system

Diverter valve for solar power integration



0,75 m²

**HIGHLY COMPACT SYSTEM:
FOOTPRINT LESS THAN 1 m²**

Maximum comfort, minimum consumption of precious energy



60% of domestic hot water (DHW) requirements are met by solar energy and thus a substantial part of the DHW supply is free of charge. The boiler only switches on when the input of solar energy is insufficient. SolarMaster has proven to be the most efficient and economical system available on the market, using a minimum of precious energy to provide DHW on demand, thanks to ACV's hybrid Tank-in-Tank technology, which, with its large heat exchange surface, enables a short refill time, significantly reducing gas consumption.

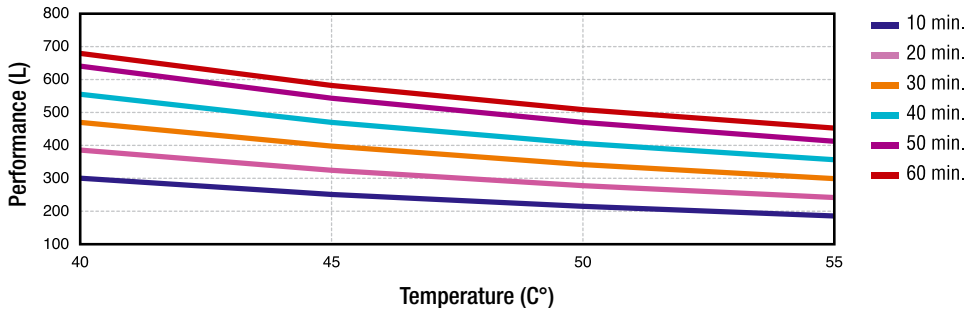
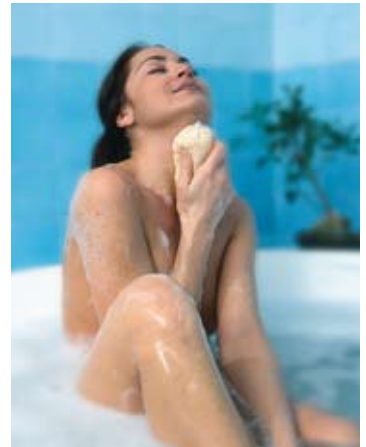
DOMESTIC HOT WATER PERFORMANCE

SolarMaster 18

T° Hot water	Volume drawn						Continuous flow		Refill time at draw temperature (min.)
	L/10'	L/20'	L/30'	L/40'	L/50'	L/60'	L/h	kW	From 10° to 60° C
40	297	381	465	549	633	671	503	17,55	30
45	249	321	393	465	537	575	431	17,55	30
50	213	275	338	401	464	503	377	17,55	30
55	184	240	296	352	408	447	335	17,55	30

Operating temperatures

Boiler primary water temperature: 70°C
Water cylinder storage temperature: 60°C
Cold water temperature: 10°C

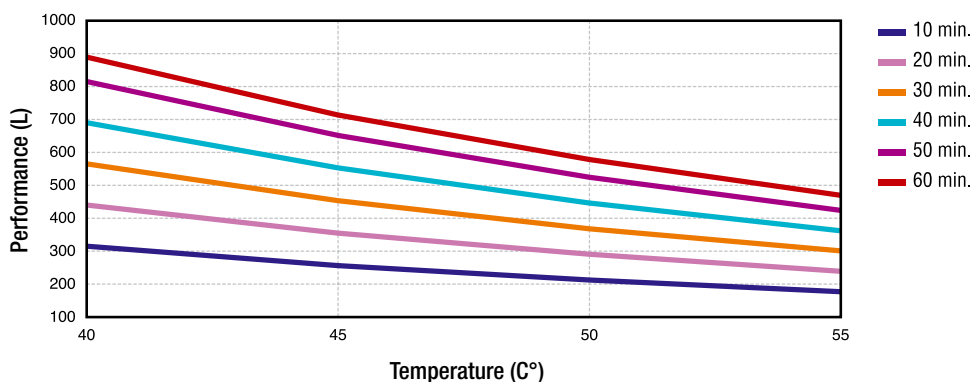


SolarMaster 30

T° Hot water	Volume drawn						Continuous flow		Refill time at draw temperature (min.)
	L/10'	L/20'	L/30'	L/40'	L/50'	L/60'	L/h	kW	From 10° to 60° C
40	319	439	559	679	799	871	721	25	27
45	262	357	452	547	642	702	569	23	27
50	220	295	370	445	520	572	452	21	28
55	186	246	305	364	423	467	357	19	30

Operating temperatures

Boiler primary water temperature: 70°C
Water cylinder storage temperature: 60°C
Cold water temperature: 10°C





SolarMaster: countless advantages

Combining state-of-the-art condensing technology and the efficient use of solar power and other alternative energy sources, SolarMaster reduces energy consumption and harmful emissions to a minimum, lowering your energy bills and helping to protect the environment.

AN ENVIRONMENTALLY FRIENDLY SYSTEM

TAX INCENTIVES

SolarMaster is eligible for many tax incentives, including substantial rebates, a lower VAT rate (depending on national legislation), as well as public grants and incentives provided by regional and local systems for condensing boilers and solar power systems.



EASY INSTALLATION

Because it fully integrates all the components of a complete DHW and heating system into a single unit, SolarMaster can be installed quickly and easily, and eliminates any uncertainty – at the planning stage – about the amount of floor space required (less than 1 m² for the entire system).

SOLARMASTER: THE ONLY SYSTEM THAT REDUCES THE COST OF DOMESTIC HOT WATER EVEN WITHOUT ADDITIONAL ENERGY FROM A SOLAR COLLECTOR

SOLARMASTER INCREASES THE VALUE OF YOUR HOME.

A solar thermal system is a sound investment, not only because it is eligible for substantial public grants and tax rebates, but also because it increases the market value of your home by complying with energy certification requirements.



Technical specifications

AIR INTAKE/ FUME EXHAUST SYSTEM

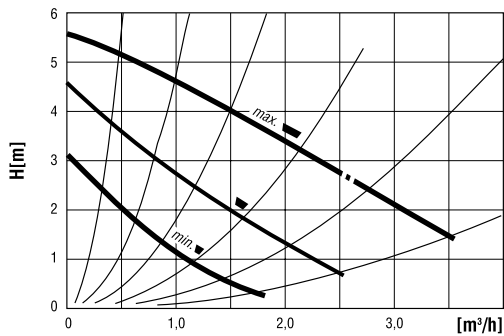
Given that the gas is pre-mixed with air, SolarMaster is largely unaffected by any pressure drops in the combustion air intake/fume exhaust system. However, the pressure should not drop by more than 130 Pa in the air intake/fume exhaust system, since this would reduce the boiler output. The controlled pre-mixing of the gas with air ensures optimal combustion at all times and hence extremely low emission of pollutants.

FUME CIRCUIT PRESSURE DROPS	Coaxial intake/exhaust system		Split intake/exhaust system	
	Coaxial intake/exhaust system		Split intake/exhaust system	
Max. length of air intake/fume exhaust	20 metres		20 metres	
Air intake/fume exhaust system diameter	Ø 80/125 mm		Air intake Ø 80 mm	Exhaust Ø 80 mm
1 m straight pipe	1,0 metres	0,3 metres	0,4 metres	0,4 metres
Resistance length equivalent to 87° curve	1,2 metres	0,4 metres	0,7 metres	0,7 metres
Resistance length equivalent to 45° curve	0,8 metres	0,3 metres	0,5 metres	0,5 metres
Vertical end fitting	4,0 metres	-	-	-
Horizontal end fitting	3,0 metres	-	-	-

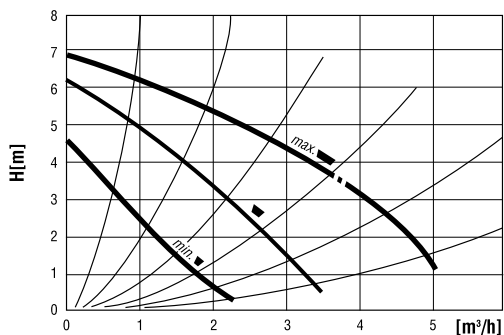
The data in this table are valid for ACV-supplied components and should not be regarded as being generally applicable.

The horizontal sections of the fume exhaust system should always be mounted with a slope in relation to the boiler: 3° slope = 5 mm per metre of pipe.

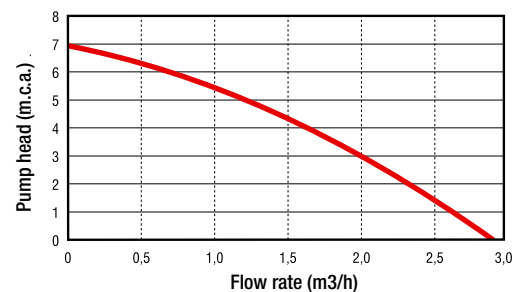
CHARACTERISTICS OF CIRCULATORS



Heating circuit circulator

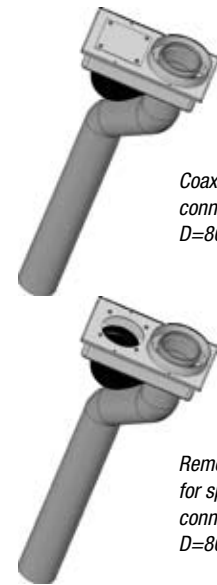


Solar circuit circulator



Residual pump head of heating circuit circulators (at speed 3)

SPLIT INTAKE/EXHAUST SYSTEM (Standard)

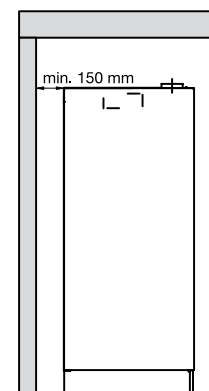
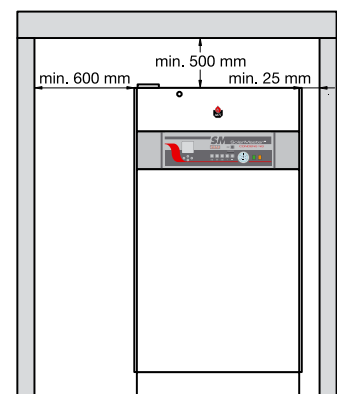


Coaxial fume exhaust connector
D=80/125mm

Removable panel for split air-intake connector
D=80/80 mm

ACCESS

The thermal unit must be installed in an easily accessible place, with the minimum clearances specified in the figure.



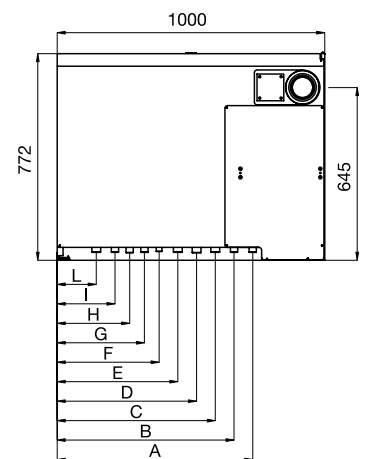
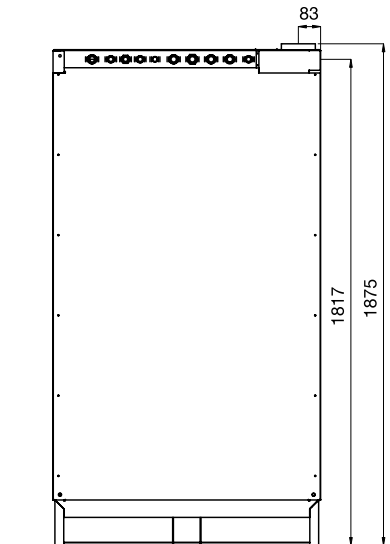
Technical data

		SolarMaster 18	SolarMaster 30
Heating			
Max. thermal output	kW	18	30
Min. thermal output	kW	4,1	6,5
Max. effective output 80/60°C	kW	17,55	29,25
Min. effective output 80/60°C	kW	4,03	6,4
Efficiency at 100% (80/60°C)	%	97,5	97,5
Efficiency at 30% (80/60°C)	%	98,3	98,3
Efficiency at 100% (50/30°C)	%	104,5	104,5
Efficiency at 30% (Tr = 30°C) [EN677]	%	109	109
Fumes			
NOx Class Rating (EN483)	-	5	5
Fumes temperature – Max. output 80/60°C	°C	70	76
Fumes temperature – Max. output 50/30°C	°C	37	39
Fume outlet	mm	80	80
Combustion air inlet	mm	125	125
Gas			
		G 20	G 20
Gas flow rate	m³/h	1,9	3,2
Feed pressure	mbar	20	20
CO2 [Max. output] (with front panel closed)	%	9,4	9,4
CO2 [Min. output] (with front panel closed)	%	9,4	9,4
Gas pipe connector	Ø	3/4"	3/4"
Hydraulic data			
Max. operating temperature	°C	90	90
Primary circuit max. operating pressure	bar	3	3
DHW circuit max. operating pressure	bar	10	10
Primary circuit water volume	L	180	180
DHW circuit water volume	L	126	126
Heating outlet and return pipe connection (M)	Ø	1"	1"
DHW connection (M)	Ø	3/4"	3/4"
Recirculation connection (M)	Ø	3/4"	3/4"
Solar circuit connection (M)	Ø	1"	1"
Electrics			
Protection rating	IP	30	30
Power-supply voltage	V/Hz	230/50	230/50
Rated input	A	400/1,8	400/1,8
Dimensions			
Width	mm	1000	1000
Depth	mm	772	772
Height	mm	1875	1875
Drained weight	kg	210	210

Performance rating: ★★★★★

Thanks to its high efficiency, the SolarMaster range has a 4-star rating at both 100% and 30% output (certified in accordance with European Directive 92/42/EEC).

DIMENSIONS



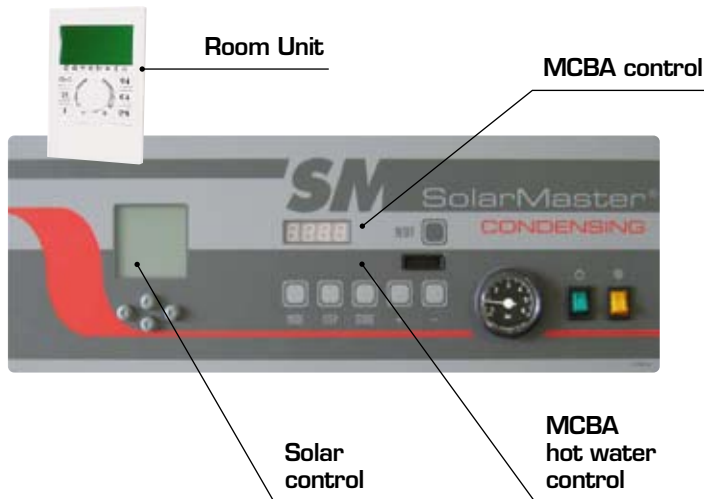
- A = Fuel inlet Ø 3/4" (M)
- B = Mixed circuit outlet 1 Ø 1" (M)
- C = Mixed circuit return pipe 1 Ø 1" (M)
- D = Mixed circuit outlet 2 Ø 1" (M) (optional)
- E = Mixed circuit return pipe 2 Ø 1" (M) (optional)
- F = DHW recirculation inlet Ø 3/4" (M)
- G = Cold water inlet Ø 3/4" (M)
- H = Mixed DHW outlet Ø 3/4" (M)
- I = Solar circuit outlet Ø 1" (M)
- L = Solar circuit return pipe Ø 1" (M)

Total control: smart technology

TOTAL COMFORT CONTROL AS A STANDARD FEATURE

CONTROL

SolarMaster is equipped with an ACV MCBA electronic controller, which handles all the burner and boiler functions, including the safety and flame-control parameters. The MCBA unit measures and controls the various programmed temperatures and therefore also the heating requirements. It varies the output of the burner according to requirements, reducing the number of stop/start cycles and thus enabling fuel savings and less wear to the system components.



1 MCBA control

The MCBA (Microprocessor Burner Automate) controls the boiler, varying its output from 20% to 100% according to heating/DHW requirements and the safety standards established for different functions (ignition, flame control, temperature limitation, etc.).

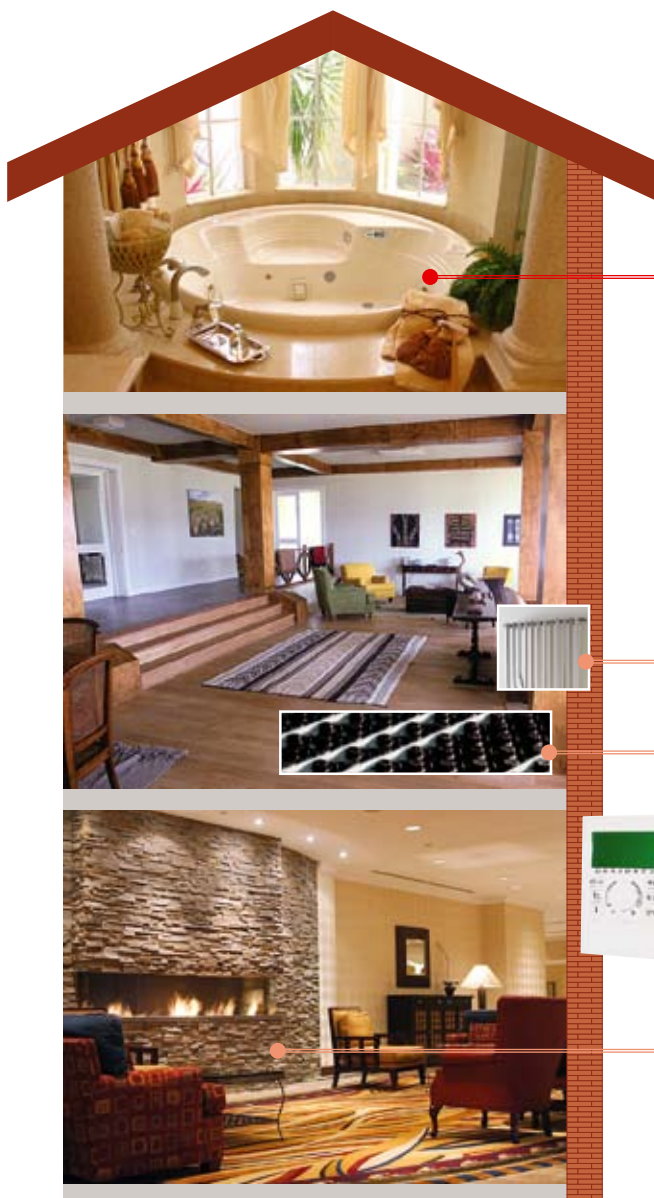
2 Solar control

A dedicated electronic control unit handles the solar thermal system to optimise the production of DHW and supplement the heating capacity.

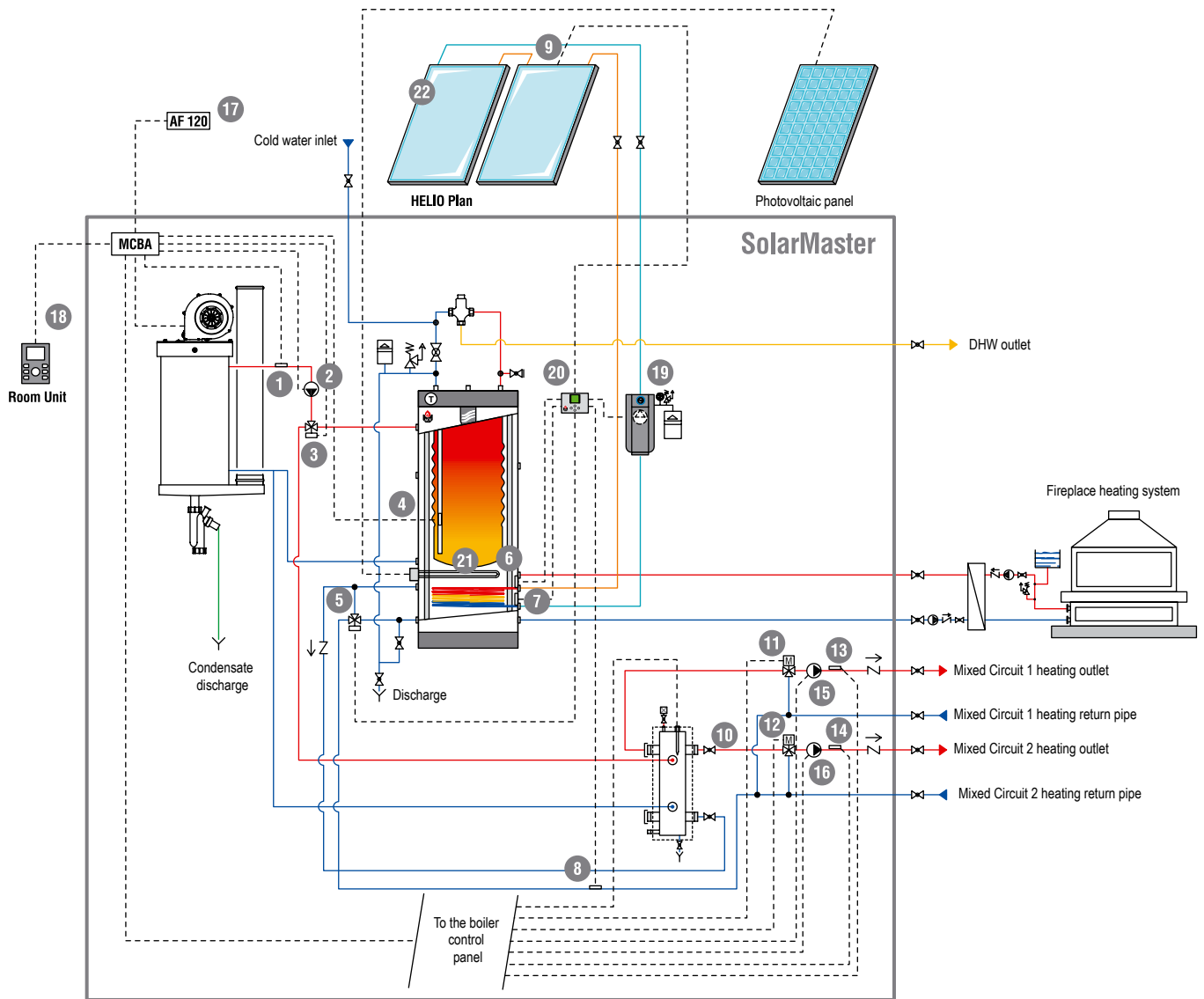
3 Room Unit

This is a remote control enabling users to adjust all boiler functions:

- Adjustment of ambient temperature curve, based on input from outdoor sensor, to maximise the efficiency of the heating system;
- Control of DHW production, including adjustment of hot water priority over heating;
- Thermostat programming, including heating periods and required temperatures.



Operating diagram



LEGEND

- | | |
|--|---|
| 1 Heater outlet temperature sensor | 12 Circuit 2 control mixing valve (optional) |
| 2 Heater circuit circulator | 13 Mixed Circuit 1 outlet temperature sensor |
| 3 Heating/DHW diverter valve | 14 Mixed Circuit 2 outlet temperature sensor (optional) |
| 4 DHW temperature sensor | 15 Mixed Circuit 1 circulator |
| 5 Diverter valve for integrating solar power in the heating system | 16 Mixed Circuit 2 circulator (optional) |
| 6 Primary accumulation (high) temperature sensor | 17 Outdoor temperature sensor |
| 7 Primary accumulation (low) temperature sensor | 18 Room Unit |
| 8 Mixed circuits return pipe sensor | 19 Solar circuit circulator |
| 9 Solar collector temperature sensor | 20 Solar control unit |
| 10 Hydraulic compensator temperature sensor | 21 Electric heating element (optional) |
| 11 Circuit 1 control mixing valve | 22 HELIO Plan solar panel |

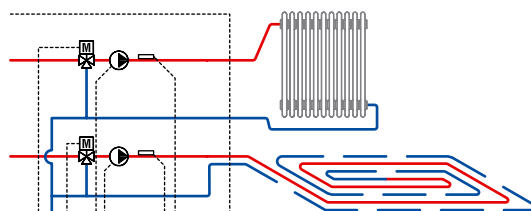
Accessories

FOR USERS WHO WANT THE 'FULL-OPTION' VERSION

ACV has developed a range of accessories to further enhance the unique capabilities of the comprehensive SolarMaster system.

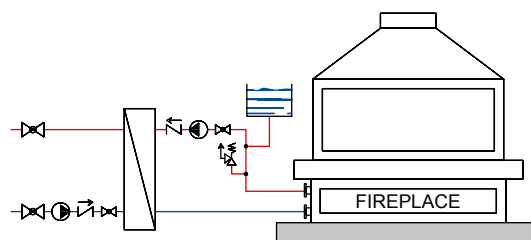
2nd HEATING CIRCUIT KIT

Hydraulic kit including a circulator pump, three-way mixing valve, outlet temperature sensor and pipes to enlarge the installation with a second controlled-temperature heating circuit (kit supplied with two cut-off valves).



FIREPLACE CONNECTION KIT

Hydraulic kit including a primary circulator and braze-welded spiral heat exchanger to connect the installation to solid-fuel heating systems (fireplaces, wood or pellet stoves).

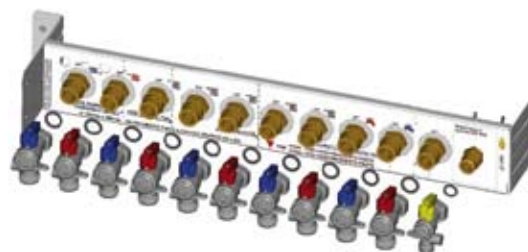


EASY-FIT TEMPLATE

A metal template to facilitate the installation of the boiler.

TAP KIT

Includes 6 taps and 2 connectors to facilitate connecting the boiler to the water pipes of the heating system, the DHW system and the solar thermal system.



3 KW ELECTRIC HEATING ELEMENT

Electric heating element fully immersed in the primary water of the tank to use the additional power supplied by a photovoltaic source.



FUME MEASUREMENT UNIT WITH CONDENSATE COLLECTOR

80/125 mm coaxial connector to be installed directly on the boiler's fume outlet. It is equipped with an integral fume measurement unit and condensate collector.



The ACV technical office is always at your disposal to provide Advice and information.

Product item description



SOLAR MASTER 18-30

Compact heating and domestic hot water system combining solar power and a pressurised condensing boiler (Class C) fuelled by natural gas or propane, comprising the following components:

CONDENSING BOILER

- Self-cleaning primary heat exchanger made of special stainless steel to withstand high temperatures and attack from acid condensates, with fully immersed combustion chamber and tubes.
- Air/gas mixing unit with Venturi system, gas vent and ventilator.
- Pre-mix burner with vertical supply line and variable output (from 20% to 100% of capacity)
- Electronic display with pressure gauge and on/off switch.
- NTC sensor on heating system outlet.
- NTC sensor on heating return pipe.
- NTC sensor for fume temperature.
- Outdoor NTC sensor connector.
- Heating system/boiler circulator pump.
- Air vent.
- Ø 80 connector with fireplace heating system (Ø 80/125 coaxial or Ø 80/80 split connector).
- 6-way hydraulic compensator.
- Kit for connection with controlled-temperature heating circuit.
- Ready for connection with a second controlled-temperature heating circuit (optional kit).
- Multi-function electronic unit to control solar installation.
- Possibility of connecting to heating systems with increased return flow temperature by means of three-way diverter valve.
- MCBA electronic cascade-type controller of ambient temperature and burner, fully adjustable, complete with user and system-installer interfaces, boiler parameters and integral self-diagnosis functions.
- Night-time saving and "Eco" mode.
- Room Unit remote control.
- ZMC-1 controller to simultaneously manage a low-temperature circuit and a circuit functioning at boiler temperature (depending on temperature modulation).
- Availability of "BOOSTER" function to reach normal output capacity more quickly.
- Automatic switching to summer mode (if function is activated).
- Possibility of adjusting post-circulation periods.
- Possibility of adjusting the hysteresis regime.
- Safety and diagnostic functions, including protection against lack of water, sensor control function, antifreeze function and circulator pump anti-blockage function.

CONTROL

MCBA electronic controller with the following features:

- Control of safety functions (ignition, flame control, temperature limits).
- Flame modulation control.
- Ambient temperature electronic control with programmable curve.
- Hot-water priority function.
- Ready for connection of modules AM 3-11, AM 3-2 and AM 4.

ROOM UNIT remote control, with the following functions:

- Remote control of MCBA units via a BUS connection, with thermostat programming function, ambient temperature sensor and display of the parameters programmed at the boiler.
- Weekly programming at three temperature levels.
- Antifreeze function.
- Manual or automatic operation.
- Holiday mode.
- Possibility of adjusting DHW temperature.

MULTI-ENERGY WATER TANK

Hybrid Tank-in-Tank floor-standing water heater to produce DHW.

Main characteristics:

- Tank-in-Tank exchanger/accumulator made from austenitic stainless steel; resistant to high temperatures and fully immersed in the primary circuit. Meets peak water requirements and also functions as an indirect exchanger to provide a plentiful continuous flow when required.
 - Corrugated outer walls across its entire length to prevent lime scale deposits.
 - Water heated throughout and stored at stable temperature to prevent the formation of legionellae bacteria.
 - Ready for connection to additional source of thermal energy (fireplace, wood or pellet stove, etc.) by means of an hydraulic kit with spiral exchanger.
 - Additional steel coil for connection to solar thermal circuit.
 - Closed cell polyurethane insulation, 50 mm thick.
 - Rigid polypropylene casing.
- ### STANDARD EQUIPMENT
- Anti-splash jet-nozzle.
 - Connection for domestic water recirculation.
- ### MAIN TECHNICAL DATA
- Tank-in-tank exchange surface: 1.46 m².
 - Coil heat exchange surface: 1.80 m².
 - Total capacity: 303 L.
 - Domestic water capacity: 126 L.

SOLARMASTER GROUP

- 1 solar load circulator.
 - Safety unit consisting of safety valve and pressure gauge.
 - 1 thermometer.
 - Flow-rate gauge and controller
 - 1 non-return valve.
- ### MAIN TECHNICAL DATA
- Max. operating pressure: 6 bar.
 - Max. operating temperature: 120°C
 - Flow rate controller: 2 - 14 l/min.

SOLAR CONTROL UNIT

Multi-function control unit for solar power installations.

MAIN TECHNICAL DATA

- 6 ports for PT 1000 temperature sensors.
- 1 outlet for variable-flow circulator with revolution counter.
- 2 programmable outlets.
- Function to increase return-flow temperature for connection to heating systems.
- Function to cool solar collector and/or accumulator, based on differential comparison of recorded temperatures.
- System protection function against overheating of solar collectors (programmable safety range: 115°C to 200°C).

MAIN TECHNICAL DATA

SolarMaster 18

- Thermal output: 4.1 - 18 kW.
- Max. effective output 80/60°C: 17.55 kW.
- Min. effective output 80/60°C: 4.03 kW.
- Efficiency at max. capacity 80/60°C: 97.5 %.
- Efficiency at min. capacity 80/60°C: 98.3 %.
- Efficiency at max. capacity 50/30°C: 104.5 %.
- Efficiency at min. capacity 50/30°C: 109 %.
- Performance rating: 4 stars.
- NOx Class rating: 5.
- Fumes temperature at max. capacity 80/60°C: 70°C.
- Max. operating temperature: 90°C.
- Max. operating pressure: 3 bar.
- Primary circuit operating pressure: 3 bar.
- Domestic water operating pressure: 10 bar.
- Coil operating pressure: 10 bar.
- Max. operating temperature: 90°C.
- Power supply voltage: 230V/50Hz.
- Electrical safety rating: IP 30.
- Drained weight: 230 kg
- Dimensions (W x D x H): 1000mm x 772mm x 1875mm

WITH THE FOLLOWING CERTIFICATIONS

- 90/396/EEC (Gas Appliance Directive).
- 92/42/EEC (Efficiency Requirements Directive).

- Broad, lighted and easy-to-read display.
- Error code display.
- 2A/T low-voltage fuse.
- Protection sensor against overload.
- "Triac" electrical switch (consisting of an anti-parallel diode pair) to connect/disconnect 230V outlets from the control unit.

18-LITRE PRIMARY EXPANSION VESSEL

Expansion vessel for heating systems, fitted with a membrane that is compatible with glycolated water.

MAIN TECHNICAL DATA

- Max. operating pressure: 4 bar.
- Expansion volume: 18 L.
- Membrane maximum temperature: 99°C.
- Pre-charge pressure: 1.5 bar.
- CE certified.

8-LITRE DOMESTIC WATER EXPANSION VESSEL

Domestic water expansion vessel for use in hot and cold water circuits and pressure tanks, fitted with:

- Food-safe EPDM membrane.
- Galvanised steel counter-flange with PPE protection.
- Operating temperature: -10°C + 100°C.
- Max. operating pressure: 8 bar.
- Standard pre-charge pressure: 2.5 bar.
- Expansion volume: 08 L.
- CE certified.

18-LITRE SOLAR EXPANSION VESSEL

Expansion vessel for solar power installations, fitted with a membrane that is compatible with glycolated water.

MAIN TECHNICAL DATA

- Max. operating pressure: 10 bar.
- Expansion volume: 18 L.
- Membrane maximum temperature: 100°C.
- System temperature range: -10 / 120°C.
- Pre-charge pressure: 2.5 bar.
- CE certified.

SOLAR THERMOSTATIC MIXER Ø 1/2"

Adjustable temperature thermostatic mixer for solar power systems.

MAIN TECHNICAL DATA

- Max. temperature 100 C.
- Pressure 14 bar.
- Threaded male fitting Ø 1/2".
- Temperature control 30-65°C.
- Kv 2,6 m³/h.

SolarMaster 30

- Thermal output: 6.5 - 30 kW.
- Max. effective output 80/60°C: 29.25 kW.
- Min. effective output 80/60°C: 6.4 kW.
- Efficiency at max. capacity 80/60°C: 97.5 %.
- Efficiency at min. capacity 80/60°C: 98.3 %.
- Efficiency at max. capacity 50/30°C: 104.5 %.
- Efficiency at min. capacity 50/30°C: 109 %.
- Performance rating: 4 stars.
- NOx Class rating: 5.
- Fumes temperature at max. capacity 80/60°C: 76°C.
- Max. operating temperature: 90°C.
- Max. operating pressure: 3 bar.
- Primary circuit operating pressure: 3 bar.
- Domestic water operating pressure: 10 bar.
- Coil operating pressure: 10 bar.
- Max. operating temperature: 90°C.
- Power supply voltage: 230V/50Hz.
- Electrical safety rating: IP 30.
- Drained weight: 230 kg
- Dimensions (W x D x H): 1000mm x 772mm x 1875mm

Make: ACV – Model: SOLARMASTER 18-30



excellence in hot water

ACV UK Ltd

St. David's Business Park
Dalgety Bay, Fife KY11 9PF
Tel : 01383 820100
Fax : 01383 820180
information@acv-uk.com
www.acv-uk.com

ACV INTERNATIONAL nv/sa

Kerkplein, 39
B-1601 RUISBROEK - BELGIUM
TEL.: +32 (0)2 334 82 20 - FAX: +32 (0)2 378 16 49
E-MAIL: international.info@acv.com
www.acv.com

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