S170 - SOLAR STORAGE-TO-BOILER CONNECTION KIT WITH THERMAL INTEGRATION

TECHNICAL SPECIFICATION 04/2018 - ENG

FUNCTION

The solar storage-to-boiler connection kits automatically control and optimize the terminal energy contained in a solar water storage, ensuring that domestic hot water is distributed throughout the system at the controlled optimum temperature.
They ensure that users always receive hot water at the set temperature and switch the boiler on if the temperature of the water coming from the solar storage falls below the set point.

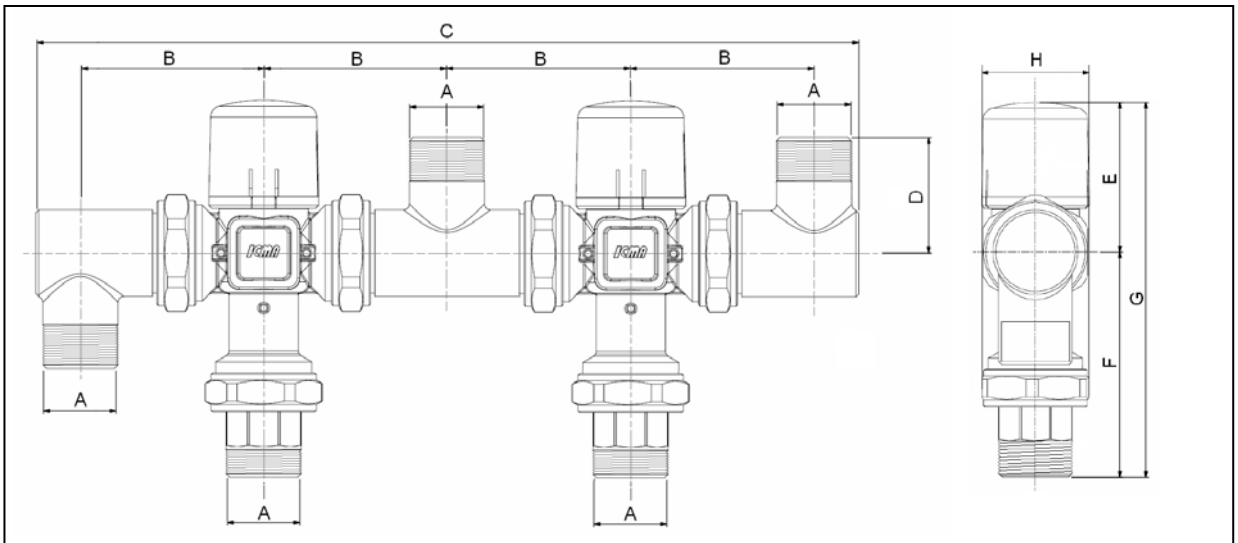
PRODUCT

CODE	*SIZE*
93S170AE06	*G ¾"*

TECHNICAL SPECIFICATIONS

Body:	Brass EN12165 – CW617N, chrome plated
Springs:	stainless steel
Seals:	EPDM PEROX (high thermal resistance)
Max. working pressure:	10 bar (static); 5 bar(dynamic)
Adjustment temperature range:	30-60°C
Factory set:	38±2 °C
Max. inlet temperature	110 °C
Max. inlet pressure ratio:	2:1 bar
Connections:	G3/4" M
Union seals:	fibre high thermal resistance
Diverter setting:	45°C±2 °C
Max. working pressure:	10 bar

DIMENSIONS

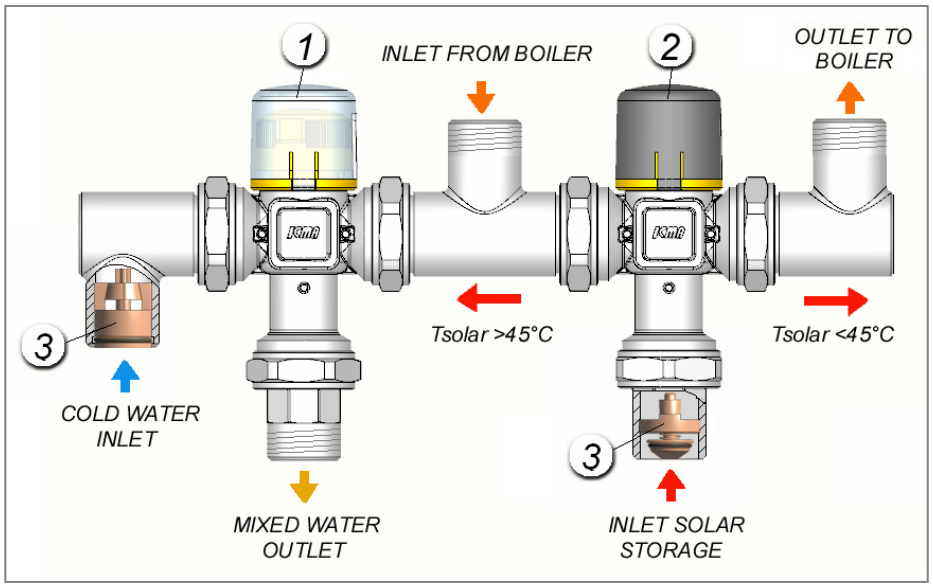


CODE	A	B	C	D	E	F	G	H	Weight (Kg)
S170	G ¾"	63.5	285	40	53	80	132	38	1.6

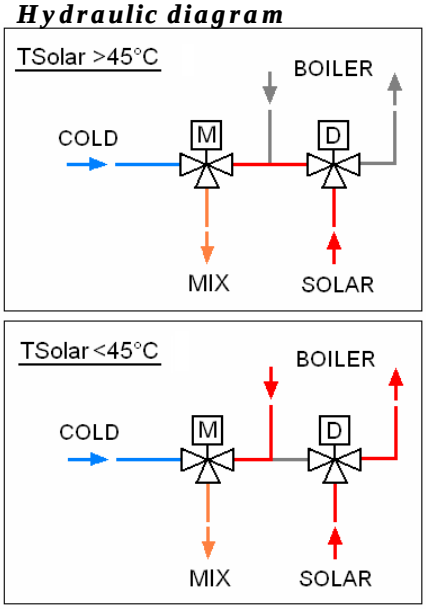
ATTENTION!: LOCK THE NUTS BEFORE STARTING-UP THE HYDRAULIC SYSTEM

ICMA S.p.a. via Garavaglia, 4 20012 Cuggiono (MI) – ITALIA
Tel. +39 02 97249134 / +39 02 97249135 Fax +39 02 97241550
www.icmaspa.it e-mail: sales@icmaspa.it

OPERATING PRINCIPLE



Hydraulic diagram



1)Solar Thermostatic mixing valve
2)Solar Diverting valve
3) Non-Return valves

NON-RETURN VALVES

To prevent undesired backflows of fluid in systems with mixing valves we recommend using non-return valves.
Our kit S170 includes a non-return valve at the entrance of cold and hot water systems (see sketch above, part. 3)

INSTALLATION

Before using the mixing valve, make sure all pipes are clean to prevent equipment malfunctions; we also recommend installing water filters.

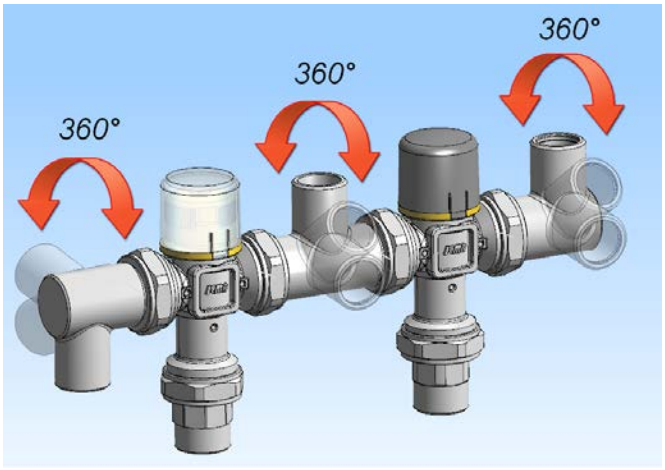
ASSEMBLY

The assembly of the mixing valve requires qualified personnel in accordance with the current regulations and using adequate temperature measurement tools.

CONSTRUCTION DETAILS

The product design guarantees a 360° connection thanks to its rotating connections which suit any system needs, as shown in the picture.

Art. S170 is made by exposing each component to thermal stress tests to avoid malformations due to hot temperatures which compromise their function.
All materials used also guarantee drinkable water.



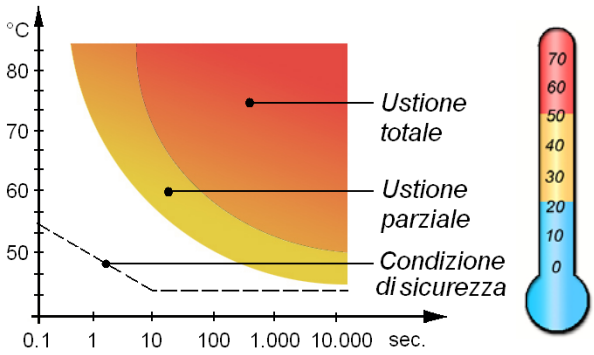
ICMA S.p.a. via Garavaglia, 4 20012 Cuggiono (MI) – ITALIA
Tel. +39 02 97249134 / +39 02 97249135 Fax +39 02 97241550
www.icmaspa.it e-mail: sales@icmaspa.it

OPERATING PRINCIPLE

The diverting valve is located at the entrance of the kit receiving hot water coming from solar panels. According to the temperature calibration the valve automatically diverts the water between the domestic system and the hot-water heater.
The valve provides the water flow by exploiting solar energy and reducing as much as possible the use of the hot-water heater.
At the exit of the kit there is an anti-burn thermostatic mixing valve which sends the water to the users controlling and restricting the temperature.

DISPOSITIVO ANTISCOTTATURE

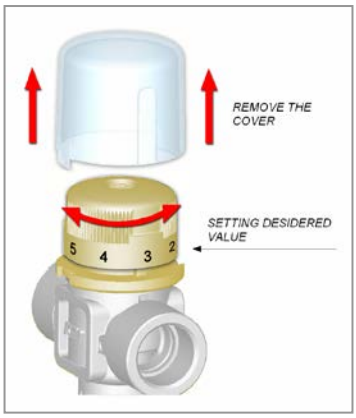
Negli impianti di produzione di acqua calda per uso sanitario con accumulo, al fine di prevenire la pericolosa infezione chiamata "legionellosi" è necessario mantenere l'acqua ad una temperatura minima di 60°C per inibire totalmente la crescita del batterio che causa questa infezione. Ovviamente l'acqua, a questa temperatura, non può essere utilizzata in maniera diretta in quanto può provocare ustioni. Per garantire l'opportuna sicurezza è consigliabile installare un miscelatore termostatico capace di mantenere costante il valore preimpostato al variare delle condizioni di temperatura e pressione in ingresso. Il disegno a lato riportato descrive il grado di ustione in cui si può incorrere in base al tempo di esposizione e alla temperatura. Per ovviare a questo problema il miscelatore interviene in caso di eccessiva mancanza di acqua fredda in ingresso chiudendo il passaggio di acqua calda.

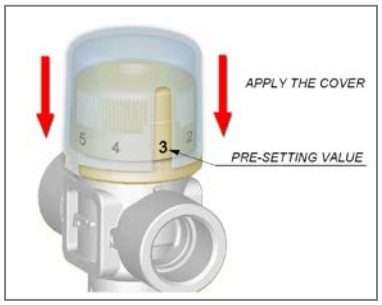


TEMPERATURE REGULATION

The temperature is adjusted using the mixing valve regulating knob.

Reference conditions:
Thot: 68°C
Tcold: 13°C
Inlet pressure:
3+3 balanced





TEMPERATURE RANGE

Position	1	2	3	4	5	6
°C	30	35	40	45	50	60

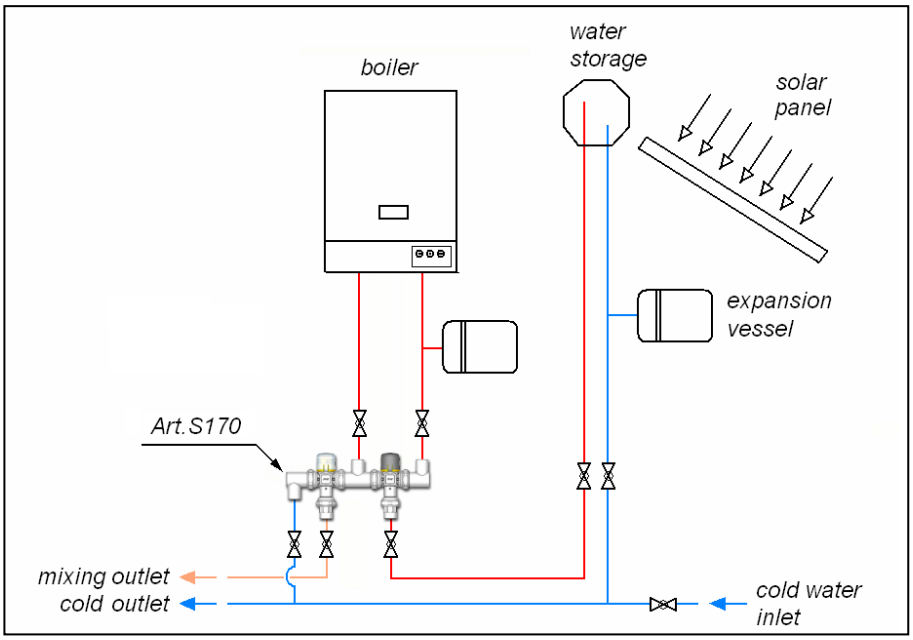
SAFETY

Use the filter in perfect condition for its intended purpose, taking into account safety legislation and any hazards that may be present.

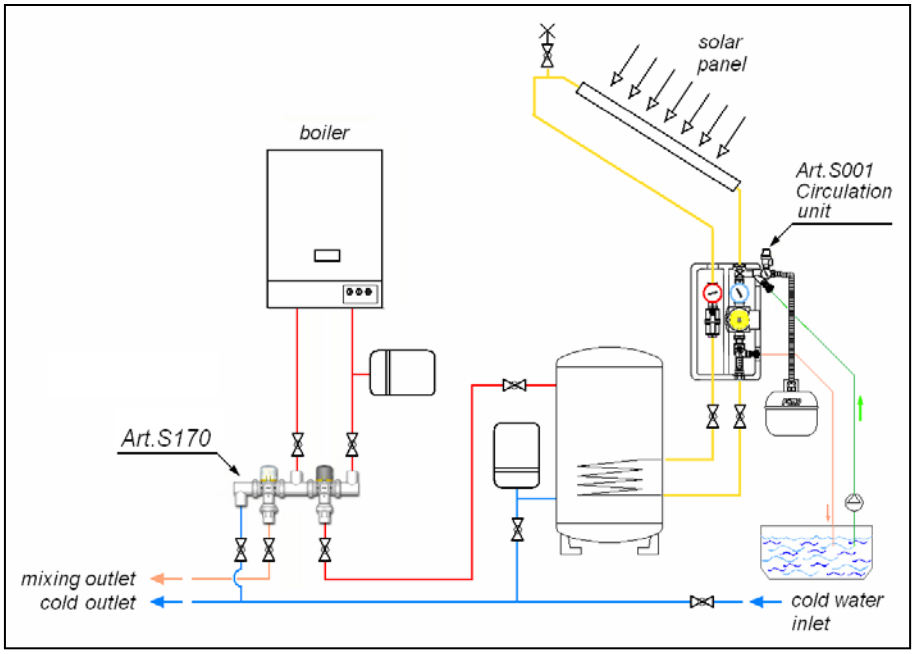
Read the assembly and start-up instructions and comply with them scrupulously before starting the system to prevent accidents and damage to the system caused by improper use. Remember that the guarantee will be forfeited in the event of any unauthorised changes or tampering with the device during assembly and construction. Comply with all safety warnings, and if you have any doubts about use or changes to parameters or functions, request the assistance of qualified service personnel.
Assembly and inspection operations must absolutely be performed by qualified, authorised personnel aware of the instructions contained herein. Make sure that the equipment is turned off before beginning any work on it.

APPLICATION DIAGRAM

SOLAR SYSTEM WITH ART.S170 SOLAR STORAGE-TO-BOILER CONNECTION KIT WITH THERMAL INTEGRATION – NATURAL CONDITION



SOLAR SYSTEM WITH PUMP UNIT AND ART.S170 SOLAR STORAGE-TO-BOILER CONNECTION KIT WITH THERMAL INTEGRATION



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LOAD LOSS DIAGRAM