

# Solar Compact System RATIOcompact



**Wagner Solar**

ENERGIETECHNIK  
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The **RATIOcompact solar thermal system** supplies freshly prepared hot water and significantly reduces heating costs while meshing well with all common heat generators.

## STANDOUTS

- **Highly efficient all in one unit**
- **Technically optimized**
- **Quick and fail-safe installation**
- **Future safe and compatible**

## DETAILS

A solar thermal DHW and space heating support system. Optimally fine tuned high quality components guarantee outstanding performance and efficiency.

Upgrade o the latest generation of pumps, up to two mixed heating circuits. Web-enabled and extendable controller with advanced functions.

Largely pre-assembled components, well thought out hydronic piping and the readily installed controller simplify the installation and assure prolonged operational safety.

Meshes well with all common heat generators and fuels. Particularly environment friendly in combination with wood pellet boilers, since wood pellets are supplied by local forests.

## Solar Compact System RATIOcompact

RATIOcompact elegantly integrates  
4 functions in a single unit.



### Getting solar heat from your roof

The harvested solar heat is loaded to a RATIO buffer storage via a speed controlled high efficiency pump.



### Freshly prepared domestic hot water

Hot water is freshly prepared by direct flow DHW heating with a generously sized plate heat exchanger - hygienic and on demand.



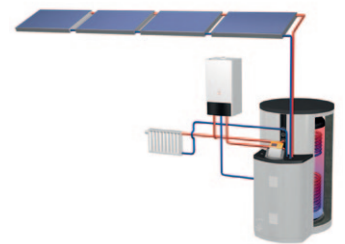
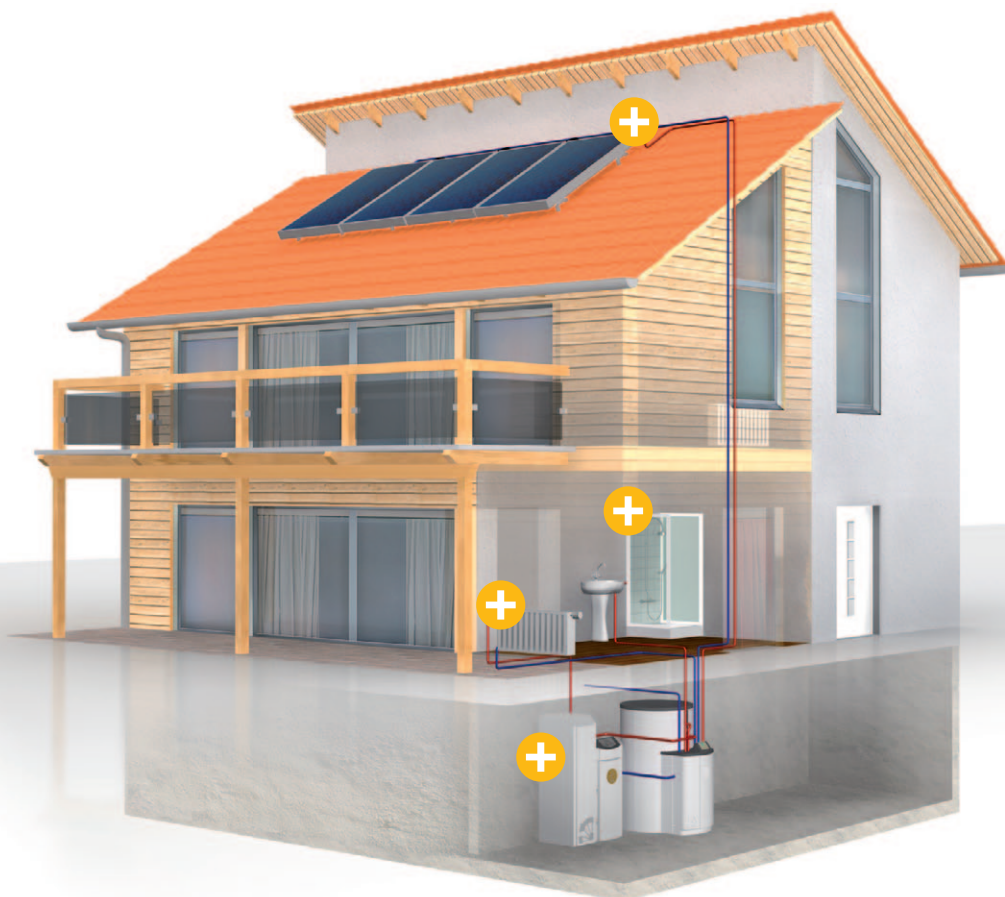
### Solar space heating

The stored solar heat is also made available for space heating and very efficiently transferred to the hydronic heating system when needed.



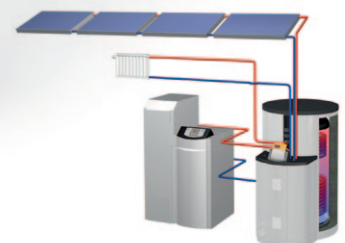
### Backup heating integration

Up to two heat generators can be integrated. For example a gas or oil boiler could be combined with a water heating open fireplace or a wood pellet boiler.



#### Return flow blending with RATIOcompact

Especially well suited for combination with oil, gas or gas condensing boiler. The energy saving return flow blending integrates solar and heating circuits.



#### RATIOcompact buffer system

Ideal solution in connection with wood pellet and solid fuel boiler or water heating fire place. The RATIO buffer storage serves as hydraulic switch.

## Perfection in Detail

### Flexible system controller

The RATIOcompact controller takes care of the heat management in the system. Due to the integrated bus system (Vbus. net) remote monitoring is possible. The range of functions can be extended by additional modules.

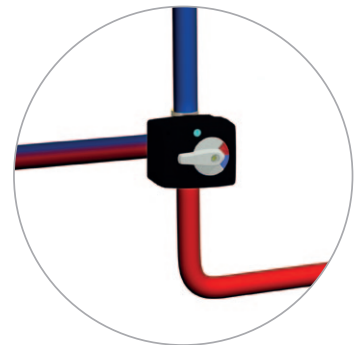
It can be programmed to work equally well with gas condensing boilers, wood pellet boilers and solid fuel heating systems.

Operation of the controller is easy and intuitive.



### Energy saving return flow blending

In contrast to common solar return boost systems the RATIOcompact unit assures by means of return flow blending that the return temperature is properly adjusted to the desired level. Excessive return temperatures and pipe heat loss are thus avoided, and the solar yield increases.



### Energetically optimized storage

The RATIO buffer storage features a removable tightly fitting 120 mm neoprene and polyester fibre fleece insulation jacket.

Additionally the patented CONVECTROL convection brakes prevent heat leakages at all pipe connections on the tank, reducing annual storage losses by another 20%.



### High efficiency pumps in all circuits

Latest pump generation for minimum power consumption.





### APPLICATION

- DHW preparation and space heating support in detached and semi detached single family homes
- Compatible with all common heat generators

### SYSTEM ACCESSORIES

- Heating circuit pump set
- Connection fitting set with CONVECTROL convection brakes
- Expansion set for second mixed heating circuit
- Re-circulation pump set

Technical Data	RATIOcompact 700	RATIOcompact 1000
Solar circuit	10,4 - 13 m <sup>2</sup> gross collector area, 2 integrated vertical check valves (gravity brakes) 2 dial thermometers, volume flow meter	10,4 - 15,7 m <sup>2</sup> gross collector area, 2 integrated vertical check valves (gravity brakes), 2 dial thermometers, volume flow meter
Freshwater unit (DHW)	Stainless steel plate heat exchanger (copper welded), transfer output of 49 kW, nominal flow rate of 20 l/min (10 °C → 45 °C secondary, 55 °C primary)	
Heating circuit	Blending into the heating circuit return or heating circuit subassembly with mixer, optional second mixed heating circuit	
Buffer storage tank	Storage volume 700 l; height 1760 mm with insulation, Ø 790 mm without insulation, energy efficiency class B	Storage volume 1000 l; height 2252 mm with insulation, Ø 800 mm without insulation, energy efficiency class B