

# oventrop

Innovation + Quality

Valves, controls + systems

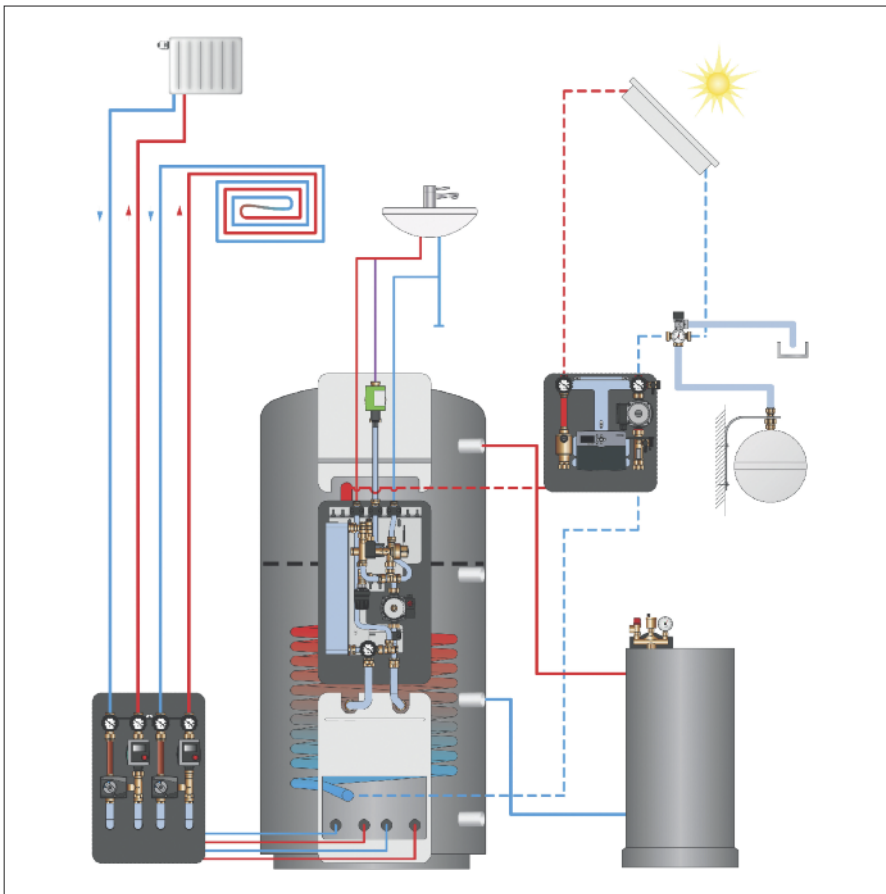
“Regucor WHS”  
Energy storage centre

Product range

*for an improved  
energy efficiency ...*

Awards:





1



2

2

Heating systems with regenerative energy sources consist of various components. They are often installed separately and have to be co-ordinated.

This problem is solved by the Oventrop energy storage centre “Regucor WHS”. It consists of a heating water storage cylinder for efficient heat storage and components which are hydraulically co-ordinated. The heat management of the integrated system controller guarantees an optimum interaction between the heating water storage cylinder and all other components.

The “Regucor WHS” which allows a time- and space-saving installation can be connected to different heat generators. The Oventrop energy storage centre “Regucor WHS” consists of:

- Solar station
- Hot water preparation
- Heating circuit connection
- Heat storage
- Heat generator connection (e.g. boiler, heat pump etc.)

#### Advantages:

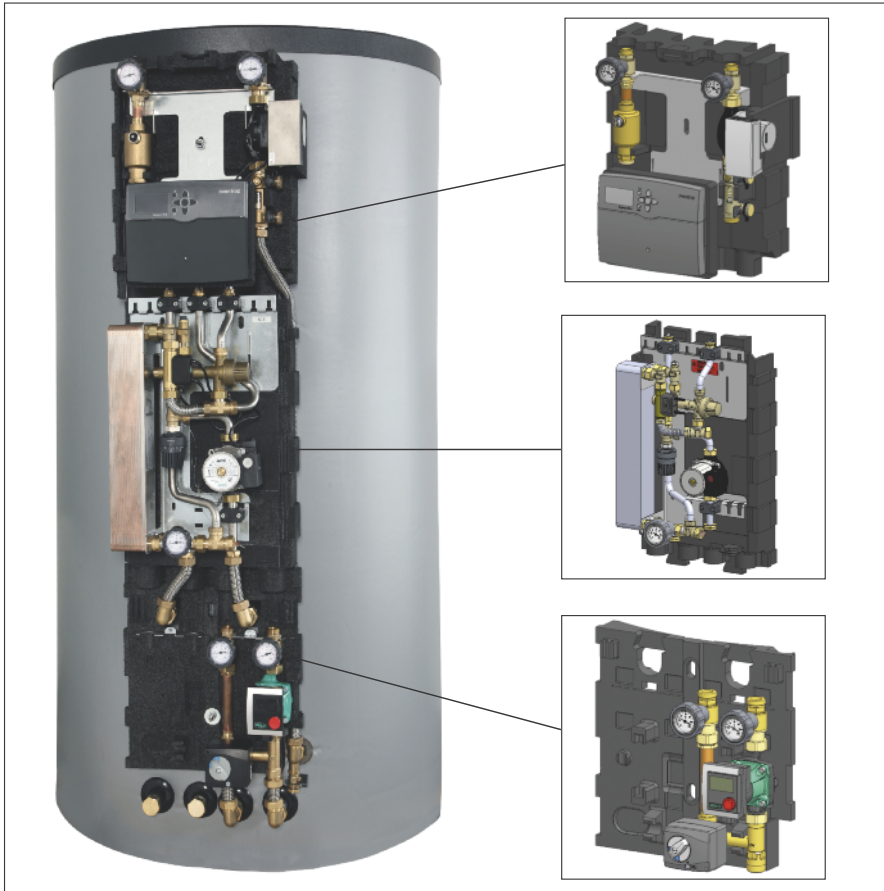
- high energy efficiency during heat storage and heat supply
- time- and cost-saving assembly and pipe installation due to internal pipework, pre-assembled product groups and only one connection level to the domestic installation
- insulation of the product group complying with the Energy Saving Directive
- especially suitable for existing detached and semi-detached houses and new buildings
- system temperatures visible at a glance
- heating circuit group and solar station with high-efficiency pumps
- hydraulically co-ordinated components for heat storage and heat supply
- realization of regenerative pipework configurations (solar, solid fuel etc.)
- all three returns (heating circuit 1 + 2 and fresh water) are connected to the loading device of the buffer storage cylinder. A stable temperature layer is guaranteed (important during potable water circulation operation!)
- low heat losses as the product group is connected to the lower section of the storage cylinder (lowest temperature level)

The system controller “Regtronic RS-B” controls all functions of the energy storage centre “Regucor WHS”. The integration of the “Regucor WHS” into different systems requires further functions. For this purpose, the system controller offers a free choice of additional functions (e.g. solid fuel boiler, re-loading function, circulation, thermal disinfection etc.):

- up to 12 free inputs (e.g. for temperature measurement)
- up to 9 free solid-state relay outputs (e.g. connection of an existing heat generator)
- “S-bus” for the connection to the data logger “CS-BS” (visualization and monitoring of energy efficiency)
- SD card slot (e.g. for data recording)

**1** System illustration of the energy storage centre for heating and potable water

**2** “Regucor WHS” energy storage centre



1

The Oventrop "Regucor WHS" consists of the following components respectively can be extended by the following accessories:

**Solar product assembly:**

- "Regusol L-130" DN 20, consisting of:
- Circulation pump: Wilo TEC 15/7 PWM
  - Flow meter: 2-14 l/min
  - Safety group for riser installation 6 bar

**Fresh water product assembly:**

- "Regumaq XH" DN 20, consisting of:
- Hydraulically controlled product group with heat exchanger for hygienic hot water preparation on the flow principle
  - Max. discharge capacity: 10-25 l/min, depending on the set potable water temperature and the existing buffer storage temperature
  - Connections: G 3/4 male thread flat sealing
  - Circulation pump: Wilo RS 15/6, temperature controller: 40-60°C
  - Heat exchanger made of stainless steel, alternatively cooper or nickel brazed

Extension set for potable water circulation (item no. 138 10 47)

**Heating circuit product assembly:**

"Regumat M3-130" DN 20 for weather dependent flow temperature control, consisting of:

- Connections: G 1 male thread flat sealing
- Pump: Wilo Stratos PICO 25/1-6
- Three-way mixing valve with actuator

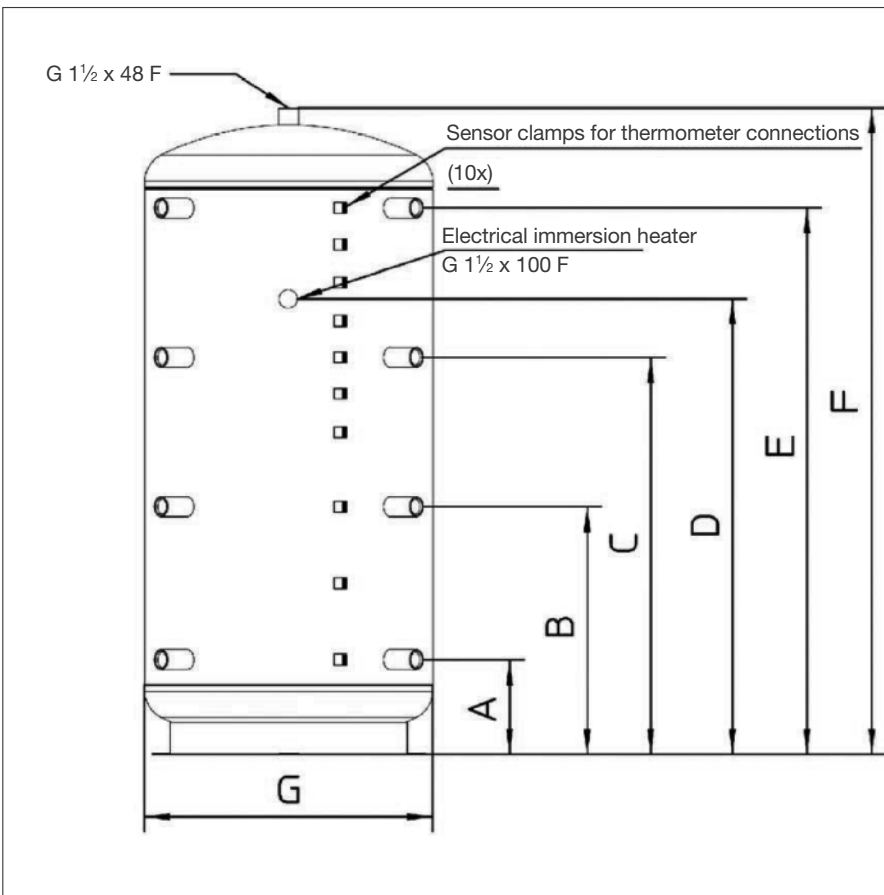
The extension by an additional variable temperature circuit (item no. 138 35 70) is possible.

**Connection sets** consisting of flat sealing stainless steel pipe

- for one heating circuit and fresh water station, item no. 138 35 80
- for one additional heating circuit, item no. 138 35 81

**Solar buffer storage cylinder:**

With removable 100 mm fleece insulation and integrated temperature loading unit. The connections and fixing positions are adjusted to the product assemblies of the energy storage centre "Regucor WHS".

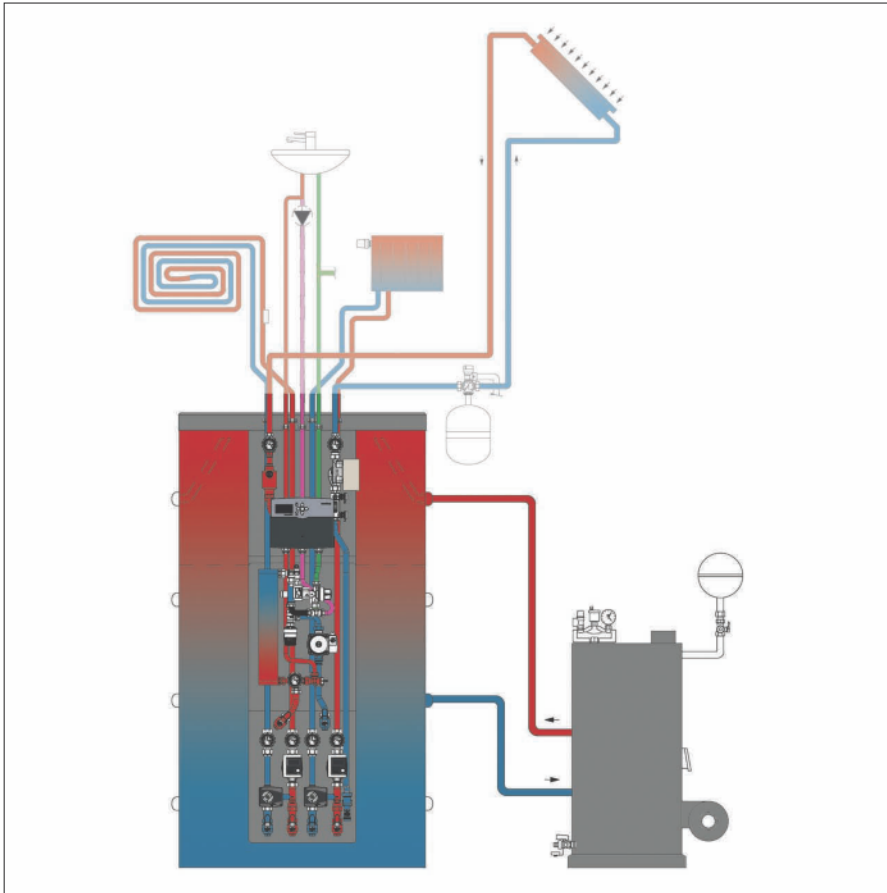


2

Nr.	Technical data	Unit	Type 800	Type 1000	Connection size
A	Connection	mm	260	260	DN 40 G 1 1/2 F
B	Connection	mm	680	760	DN 40 G 1 1/2 F
C	Connection	mm	1090	1260	DN 40 G 1 1/2 F
D	Electrical immersion heater	mm	1250	1250	DN 40 G 1 1/2 F
E	Connection 8, 9, 10	mm	1500	1770	DN 40 G 1 1/2 F
F	Total height	mm	1775	2055	
G	Diameter (without insulation)	mm	790	790	
	Max. pivot height (without insulation)	mm	1810	2100	
	Thickness of storage cylinder insulation	mm	100	100	
	Permissible operating pressure	bar	3	3	
	Permissible operating pressure (coil)	bar	10	10	
	Permissible operating temperature	°C	95	95	
	Permissible operating temperature (coil)	°C	110	110	
	Solar heating coil	m²	3.1	3.4	
	Weight (including insulation)	kg	approx. 166	approx. 186	

1 "Regucor WHS" energy storage centre with product assemblies

2 "Regucor WHS" dimensions



1

Solar energy utilization is not the only design intent of the “Regucor WHS”. It can also be combined with different existing heat generators and features all necessary connections.

**1 “Regucor WHS” in conjunction with conventional heat generators, for instance oil or gas boilers and miniature CHP.**

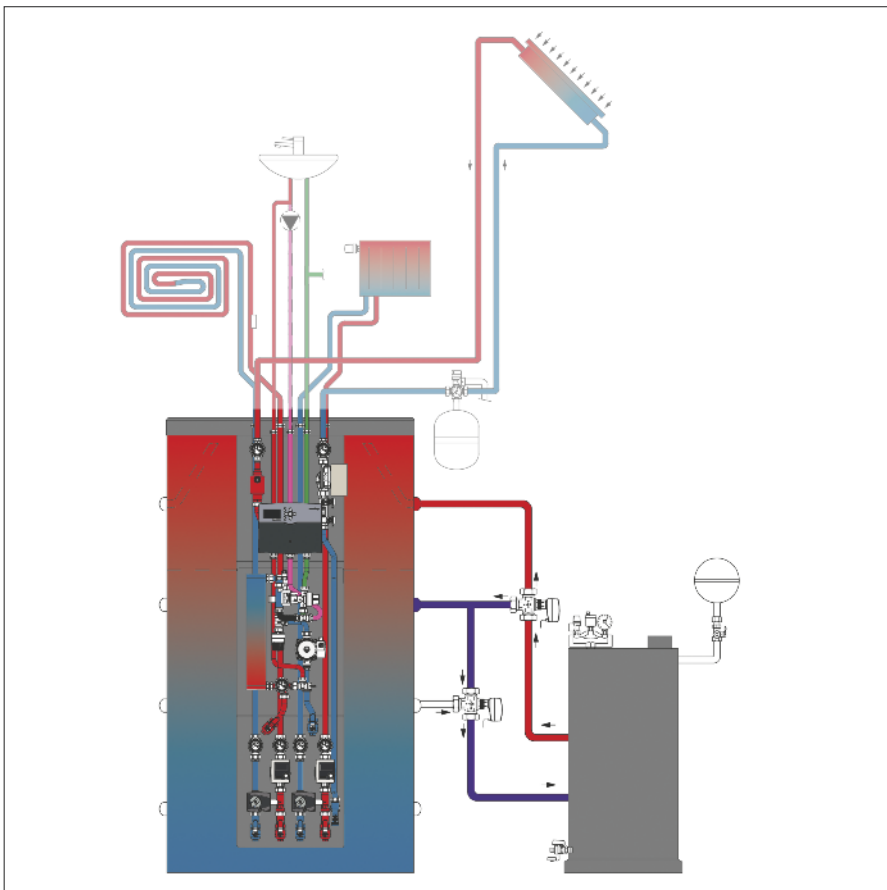
Oil or gas boilers are connected via the upper storage cylinder connection. The boiler return has to be positioned in the lower third to make sure that there is enough space for solar heat return.

Re-loading of the boiler can be controlled via the system controller “Regtronic RS-B”. A maximum of two heating circuits can be connected.

The volume in stand-by motion can be defined via a temperature sensor in the storage cylinder.

Re-loading of the storage cylinder can be suppressed when it is loaded by solar energy.

This way, solar heat return is increased and fossil fuels are saved.



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**2 “Regucor WHS” in conjunction with heat pumps.**

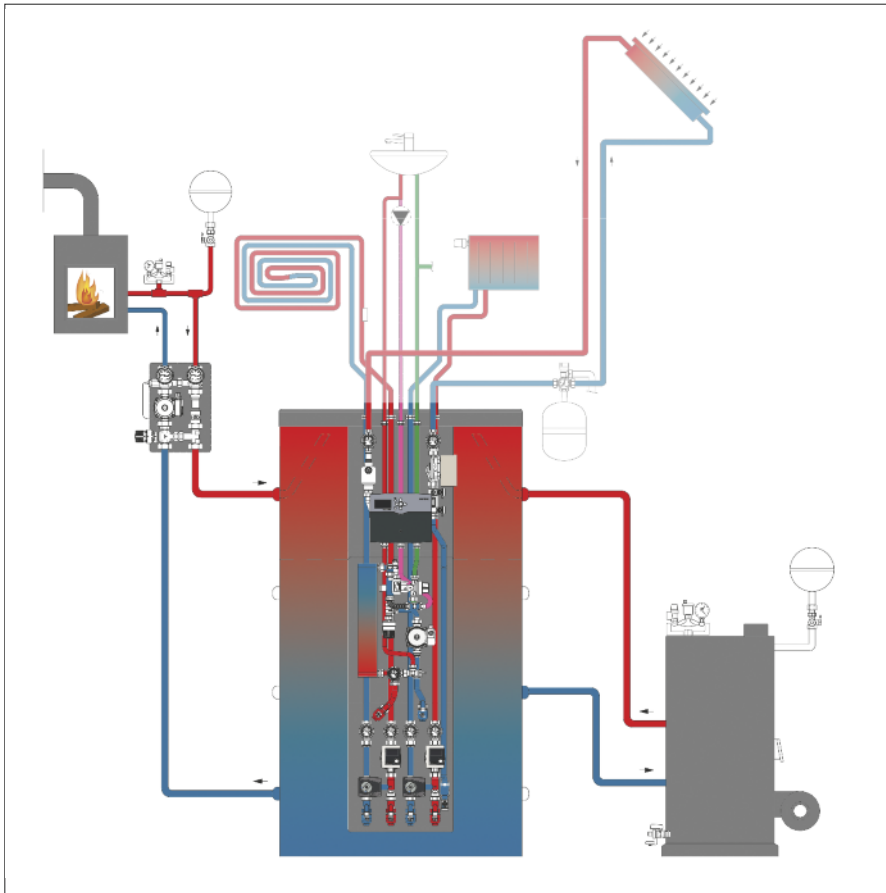
The storage cylinder can be loaded in two temperature zones via diverting and mixing valves (priority, secondary). Changeover is carried out by the system controller “Regtronic RS-B”.

Re-loading of the boiler can be controlled via the system controller “Regtronic RS-B”. A maximum of two heating circuits can be connected.

Re-loading of the storage cylinder can be suppressed when it is loaded by solar energy.

This way, solar heat return is increased and fossil fuels are saved.

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**3** “Regucor WHS” in conjunction with conventional heat generators, for instance **oil or gas boilers** with additional water heating stove.

In installations with oil or gas boilers with additional water heating stove, the order of the corresponding return pipes must be observed.

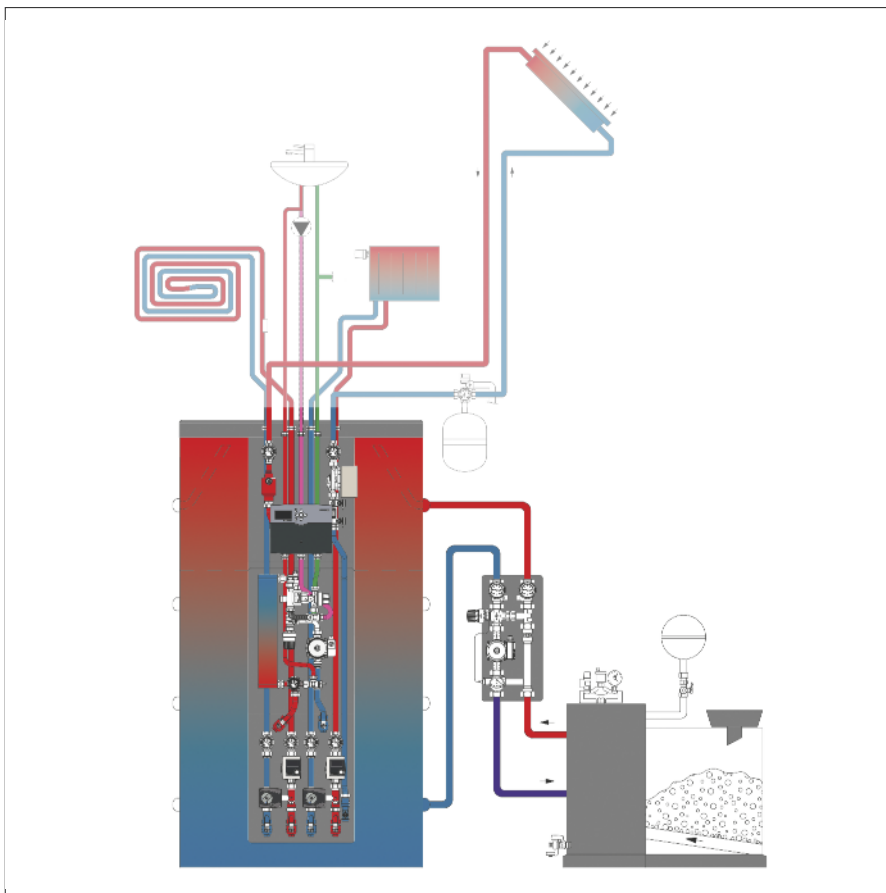
Re-loading of the boiler can be controlled via the system controller “Regtronic RS-B”. Control of both, the main heat generator and the water heating stove is possible.

The volume in stand-by motion can be defined via a temperature sensor in the storage cylinder.

When using the “Regumat RTA” stations for return temperature increase, the minimum return temperature amounts to approx. 55°C and thus lies above the dew point. The formation of pitch is avoided.

Re-loading of the storage cylinder can be suppressed when it is loaded by solar energy.

This way, solar heat return is increased and fossil fuels are saved.



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**4** “Regucor WHS” in conjunction with **solid fuel boilers**, for instance pellet or billet wood boilers.

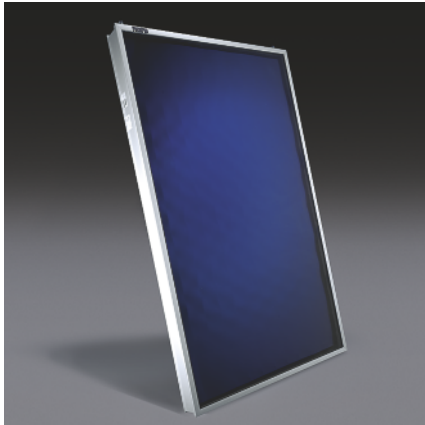
The heating return should be connected to the lower storage cylinder nipple so that a maximum volume can be used for the solid fuel boiler.

Re-loading of the boiler can be controlled via the system controller “Regtronic RS-B”. A maximum of two heating circuits can be connected.

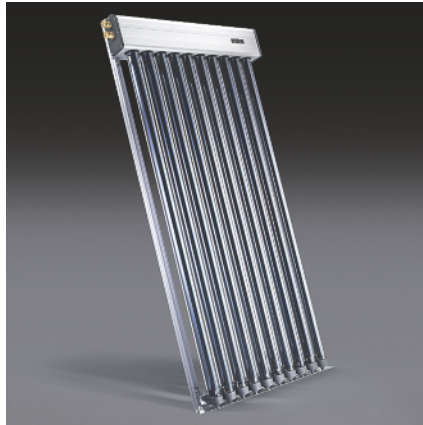
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4

The "Regucor WHS" and the following Oventrop solar component compliment each other usefully:

**1** "OKF-CK 22" and "OKF-CS22" flat plate collectors are tested according to EN 12975 and certified according to "SolarKeymark".

**2** "OKP-10/20" tube collectors are tested according to EN 12975 and certified according to "SolarKeymark".

**3** Special expansion tank for solar plants with a volume of 18, 25, 33, 50 and 80 l.

Permissible operating temperature: 70°C

Max. operating pressure: 10 bar

The diaphragm is tested according to DIN 4803 T3 (approval according to Pressure Equipment Directive 97/23 EG).

**4** Oventrop offers various accessories for the connection of the collectors (e.g. stainless steel corrugated pipes for roof conduit, connection fittings etc.).

**5** Combination possibilities "Regucor WHS" with solar systems (roof hooks, etc. are to be chosen separately).

	Item no.	"OKP-20"		"OKF CK-22"		"OKF CS-22"	
		Item no. 1361231	Item no. 1361240	Item no. 1361240	Item no. 1361245	Item no. 1361245	Item no. 1361245
Number of collectors		4	5	4	5	4	5
<b>Collector connection set "OKP"</b>							
Connection set 100 mm (set = 2 pcs.)	136 16 22	3	4				
U-bend for the connection of supply and return	136 12 95	1	1				
DN 20 roof conduit G 1 collar nut	136 16 72	1	1				
<b>"OKF" rooftop installation incl. accessories</b>							
Basic set for two collectors	136 12 80			1	1	1	1
Extension set	136 12 81			2	3	2	3
<b>Insulation</b>							
Insulation set (set = 2 x 0,5 m)	136 16 23	2	2	1	2	1	2
<b>Connection fittings</b>							
DN 20, G 1 x G 1 (set = 2 pcs.)	136 90 78	1	1				
G ½ Ø 18 mm solder tailpipe (2 pcs. included in the basic set 136 12 80)				1	1	1	1
<b>Expansion tank</b>							
25 l	136 14 22			1		1	
33 l	136 14 23	1	1		1		1
<b>Solar liquid</b>							
10 l	136 16 90	1		1	1	1	1
25 l	136 16 91	1	2	1	1	1	1
<b>"Regucor WHS"</b>							
800 l (2-4 persons)	138 35 60 138 35 62	1		1		1	
1000 l (4-6 persons)	138 35 65 138 35 67		1		1		1

5

6

Further information regarding boiler and pump fittings as well as solar thermal energy can be found in the catalogue "Products" and on the internet under product ranges 6 and 7.

Subject to technical modifications.

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