

Tender specification:

The Oventrop energy storage centre is a system of modular construction for the solar-assisted supply of detached and semi-detached houses with heat and hot water.

The storage cylinder and add-on groups are co-ordinated functionally and thermodynamically. With integrated piping and plug-in cabling.

In combination with conventional (e.g. gas/oil) and regenerative heat generators (e.g. heat pump / solid fuel) in existing and new buildings.

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
- especially suitable for existing and new detached and semi-detached houses
- system temperatures visible at a glance
- heating circuit group, fresh water station 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 return pipes (heating circuit 1 + 2 and fresh water) are connected to the layering devices of the buffer storage cylinder. A stable temperature layering is thus guaranteed (important during potable water circulation operation!)
- low heat loss as the product group is connected to the lower section of the storage cylinder (lowest temperature level)

Consisting of:

Solar buffer storage cylinder:

System storage cylinder type 800

Nominal content:	770 l
Total height (without insulation):	1775 mm
Total height (with insulation):	1880 mm
Diameter (without insulation):	790 mm
Max. pivot height (without insulation):	1810 mm
Surface plain tube heat exchanger:	3.1 m ²
System storage cylinder type 1000	
Nominal content:	900 l
Total height (without insulation):	2055 mm
Total height (with insulation):	2120 mm
Diameter (without insulation):	790 mm
Max. pivot height (without insulation):	2100 mm
Surface plain tube heat exchanger:	3.4 m ²

Technical data:

Connections: 8 x G 1½ female thread

Max. operating pressure:

Storage cylinder: 3 bar

Solar heating coil: 10 bar

Max. continuous operating temperature:

Storage cylinder: 95 °C

Coil: 110 °C

Insulation:

Material: Fibre fleece

Thickness: 140 mm

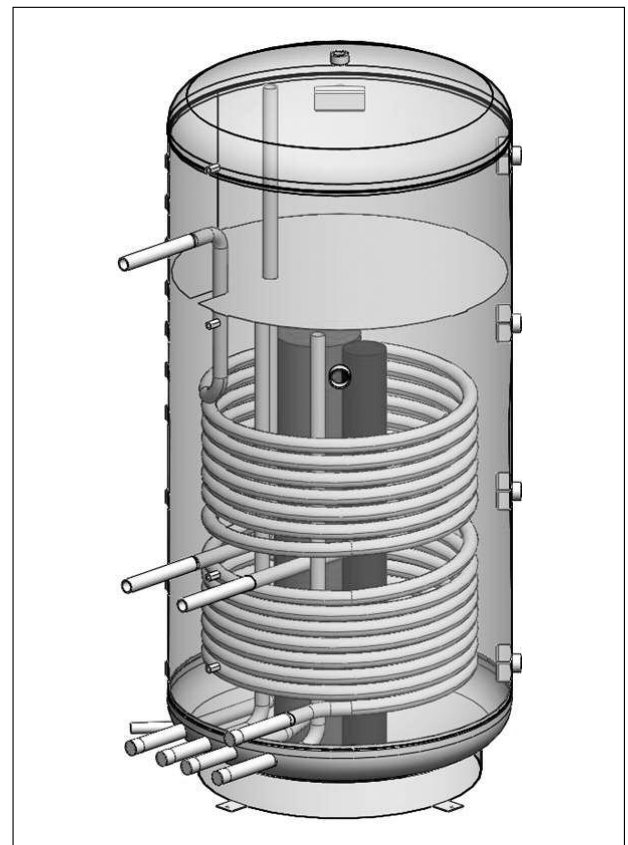
Fire protection class: DIN 4102 B1

Integrated temperature layering devices

Connections and fixing points co-ordinated with the “Regucor” storage cylinder add-on groups.



“Regucor WHS”



Solar buffer storage cylinder

Add-on group: Solar

“Regusol L-130” DN 20, similar to item no. 1360571
Station for the connection of the solar collectors to the system storage cylinder.

Technical data:

Continuous operating temperature: 120 °C
Short-term starting temperature: 160 °C
Max. operating pressure (safety valve): 6 bar
Safety group for riser installation
Opening pressure check valves: 20 mbar
Flow measuring device type: 2-15 l/min
Pump type: Wilo-Yonos PARA
ST 15/7 PWM
3-70 W
Power consumption:
Connections:
Storage cylinder side: G 1 male thread,
flat sealing
Collector side: G ¾ male thread
according to DIN EN
16313
Materials:
Valves and fittings: Brass
Seals: EPDM / KAUTASIT 400
Insulation: EPP
(expanded polypropylene)

Add on group: Fresh water

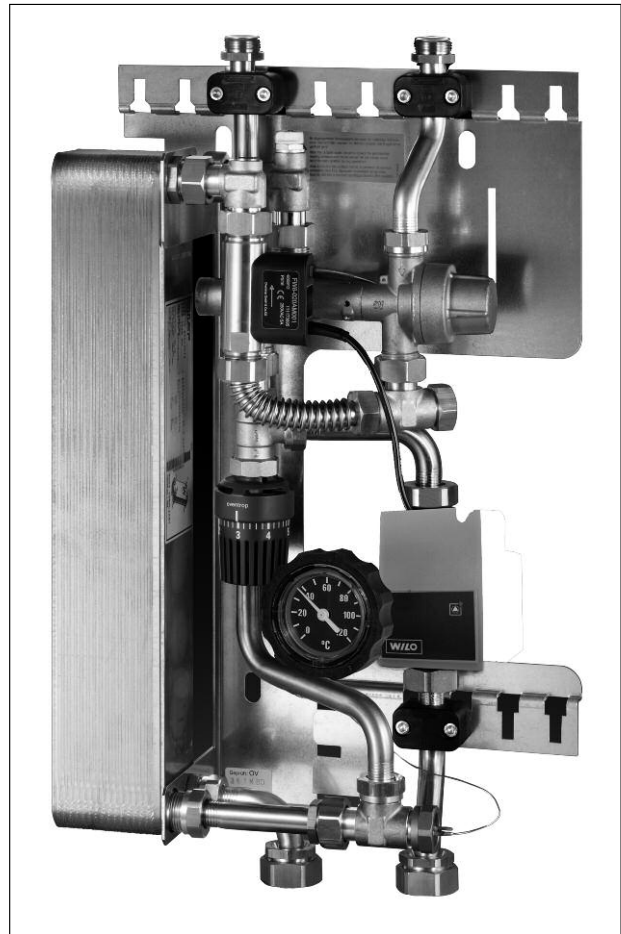
“Regumat XH” DN 20, similar to item no. 1381042
Hydraulically controlled product assembly with heat exchanger for the hygienic heating of potable water on the flow principle.

Technical data:

Max. continuous operating temperature: 95 °C
Control range potable water temperature: 40-70 °C
Max. operating pressure (primary side): 6 bar
Max. operating pressure (secondary side): 10 bar
Max. discharge capacity: 10-25 l/min*
*depending on the set potable water temperature and on the existing storage cylinder temperature
k_{vs} value:
Primary side: 1.85
Secondary side: 0.76
Secondary side-circulation operation: 0.96
Minimum cold water pressure
(with a nominal draw off capacity of 20 l/min): 3.5 bar*
*in case of higher draw off capacities, the potable water pressure has to be increased accordingly – see technical data sheet “Regumaq XH”
Fluid:
Primary side: Heating water
Secondary side: Potable water
Pump type: Wilo-Yonos PARA
RS 130 15/7 PWM2
3-45 W
Power consumption:
Protective system flow switch: IP 67
Number of heat exchanger plates: 30
Connections:
Primary side: G 1 male thread,
flat sealing
Secondary side: G ¾ male thread,
flat sealing
Materials:
Valves and fittings: Brass/dezincification
resistant brass
Seals: EPDM / AFREE 400
Insulation: EPP (expanded
polypropylene)
Pipes: Stainless steel 1.4401/
1.4404
Heat exchanger: Stainless steel 1.4401/
brazed copper (item
no. 1383550/55)
Stainless steel 1.4404/
brazed nickel (item
no. 1383562/67)



Add-on group: Solar



Add-on group: Fresh water

Add-on group: Heating circuit

“Regumat M3-130” DN 20, similar to item no. 1355059
 Station for the connection of the system storage cylinder to the heating circuit and weather guided flow temperature control.

Technical data:

Max. continuous operating temperature: 95 °C
 Max. operating pressure: 10 bar
 Opening pressure check valve: 20 mbar
 kv value: 5.1
 Max. transmission capacity: 37 kW
 ($\Delta t = 20 \text{ K}$,
 $\Delta p = 100 \text{ mbar}$)
 Fluid: Heating water
 Pump type: Wilo-Stratos
 PICO 15/1-6
 Power consumption: 3-40 W
 Actuator: 230 V, 90°/140 sec.,
 5 Nm
 Power consumption: 2.5 W
 Connections:
 Heating circuit side: G 1 male thread,
 flat sealing
 Storage cylinder side: G 1 male thread,
 flat sealing
 Materials:
 Valves and fitting: Brass
 Seals: EPDM / KAUTASIT 400
 Insulation: EPP (expanded
 polypropylene)



Add-on group: Heating circuit

Multifunctional system controller:

Similar to item no. 1369555
 “Regtronic RS-B” for the control of the energy storage centre and further installation components. Up to 13 free inputs and up to 9 free solid-state relay outputs.
 S-bus for the connection to the data logger “CS-BS”, SD-card slot for data recording.
 The SD-card slot is equipped with an SD-card with 9 preloaded system diagrams.

Accessories:

Electrical immersion heater 9 kW, item no. 1383590
 Controller and limiter combination for self-sufficient control of the immersion heater, item no. 1383591
 The following accessories are required for the extension of the loading nipples and the connection of the electrical immersion heater:
 Extension for electrical immersion heater
 G 1½ female thread x G 1½ female thread,
 item no. 1383592
 Extension for loading nipple
 G 1½ male thread x G 1½ male thread,
 item no. 1383593

Two extensions for the loading nipples are included in the delivery!

Note:

A copper or nickel brazed stainless steel heat exchanger is part of the energy storage centre “Regucor WHS”.
 The specifying engineer and the user of the system are responsible to incorporate and evaluate substances and other factors in the water, which influence corrosion and the formation of calcium deposits.
 Please observe the document “Demands on potable water when using Oventrop fresh water and dwelling stations”, see www.ventrop.com.
 Further accessories can be found in the catalogue “Products”.

Further technical data and charts can be found in the technical data sheets of the individual components!

Subject to technical modification without notice.

Product range 6
 ti 302-EN/10/MW
 Edition 2015



System controller

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