

Tender specification:

The Oventrop dwelling stations “Regudis W-HTU” supply heating water as well as cold and hot potable water to individual dwellings without using auxiliary energy. The hot water for heating purposes is provided by a central heat supply. The potable water is heated locally via a heat exchanger according to the continuous flow principle.

Advantages:

- time- and cost-saving installation as only three supply pipes are required in one riser for all dwellings
- hygienic hot potable water preparation according to the continuous flow principle
- no auxiliary energy required for heat distribution
- no potable water reserve required
- hydronic and thermal control of hot potable water preparation
- setting of the potable water temperature at the temperature controller
- piping of the station and heat exchanger made of high-quality stainless steel
- station completely pre-assembled on a base plate, leakage and function tested at works
- heat exchanger resistant to furring due to the thermal compensation which is achieved through the installation position, sufficient thermal length and the type of hydronic connection
- a cold water meter and a heat meter can be integrated into the station and allow for an exact calculation of the water and energy consumption of each dwelling

Function:

The hot potable water preparation is controlled by a proportional flow controller with hydronic control without auxiliary energy. When drawing off water, the heating water of the central heat supply passes across the plate heat exchanger which warms up the potable water. The heating circuit is interrupted during this time (potable water priority function).

Technical data:

Nominal size	DN 20
Max. operating pressure ps:	10 bar
Max. operating temperature ts:	90 °C
(Heating water-supply)	
Min. cold water pressure:	
without flow limiter:	2.0 bar
with flow limiter:	2.5 bar
Min. differential pressure supply:	300 mbar
Draw off temperature $t_{\text{draw off}}$:	40-70 °C
Min. flow temperature:	$t_{\text{draw off}} + 15K$
Connections:	G ¾ collar nut, flat sealing

Performance range 1:	
Nominal draw off capacity (PWH):	12 l/min.
Draw off capacity at dT 35 K:	29 KW
Performance range 2:	
Nominal draw off capacity (PWH):	15 l/min.
Draw off capacity at dT 35 K:	36 KW
Performance range 3:	
Nominal draw off capacity (PWH):	17 l/min.
Draw off capacity at dT 35 K:	42 KW

Fluid primary side:	Heating water
Fluid secondary side:	Potable water

Materials:

Plate heat exchanger:	Stainless steel 1.4401 / brazed copper or nickel
Pipes:	Stainless steel 1.4404 / 1.4401

Valves and fittings: Brass / brass resistant to dezincification

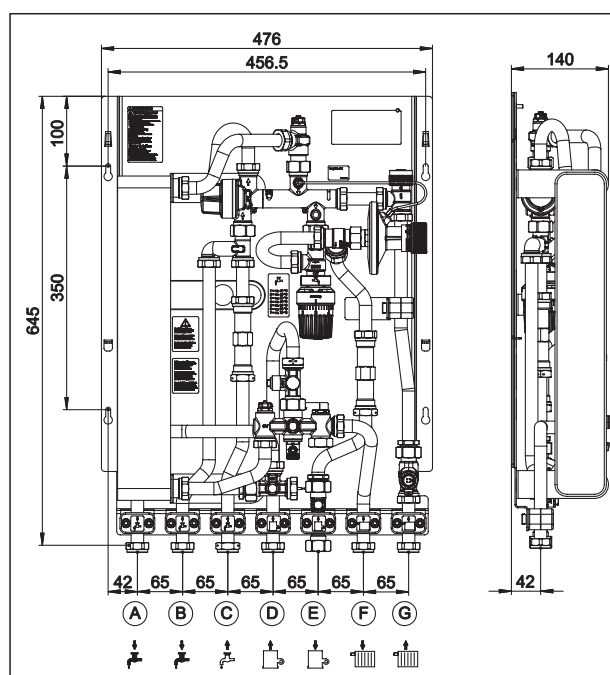
Seals: EPDM / PTFE

Models “Regudis W-HTU”

Performance range		1	2	3
Heat exchanger	Cu	1341030	1341031	1341032
	Ni	1341050	1341051	1341052
	Cu		1341231	
	Ni		1341251	



“Regudis W-HTU”



Dimensions

Note:

- A copper or nickel brazed stainless steel plate heat exchanger is part of the dwelling station “Regudis W-HTU”. 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 the Oventrop fresh water and dwelling stations”, see www.ventrop.com.
- When using a heat meter, it is recommended to only use heat meters with quick sampling rate at one second intervals and with integrated return sensor in the body.
- The installation of a heated potable water system must be carried out in accordance with the valid standards, approved rules of technology and local regulations! The national standards and regulations must be observed!
- According to the DVGW work sheet W551, dwelling stations are small installations if the pipe content of each potable water pipe behind the station does not exceed 3 litres. As a result, the following pipe lengths for copper and stainless steel pipes must not be exceeded:

	da [mm]	di [mm]	V/L [l/m]	lmax [m]
DN 10	12	10	0.08	37.9
DN 12	15	13	0.13	22.6
DN 15	18	16	0.20	14.9
DN 20	22	20	0.31	9.5
DN 25	28	25	0.49	6.1

Nominal draw off capacity

Since 01.04.2016, the Oventrop dwelling stations are no longer supplied with flow limiters for the limitation of the maximum potable water draw off capacity.

The use of different plate heat exchangers allows for the adaptation of the performance range to the individual requirements.

Performance range 1: Nominal draw off capacity 12 l/min.

Performance range 2: Nominal draw off capacity 15 l/min.

Performance range 3: Nominal draw off capacity 17 l/min.

Draw off temperature $t_{draw\ off}$

The draw off temperature is adjustable between 40 °C and 70 °C and remains constant within the performance range. If the nominal draw off capacity is exceeded, $t_{draw\ off}$ may drop below the set value.

The nominal draw off capacity depends on the selected performance range and the flow temperature of the heating water.

The indicated performance range (nominal draw off capacity 12/15/17 l/min) is related to a heating water flow temperature lying 15 K above the set draw off temperature (temperature difference of 15 K). If the temperature difference exceeds 15 K, the effective draw off capacity increases.

Flow limiters for the limitation of the potable water draw off capacity are available as accessory.

OV item number:

Draw off capacity limitation 12 l/min.: 1349980

Draw off capacity limitation 15 l/min.: 1349981

Draw off capacity limitation 17 l/min.: 1349982

Setting of the temperature controller:

When leaving the factory, the temperature controller is set to position 3. This corresponds to a potable water temperature of approx. 50 °C. The setting can be adjusted to the required potable water temperature.

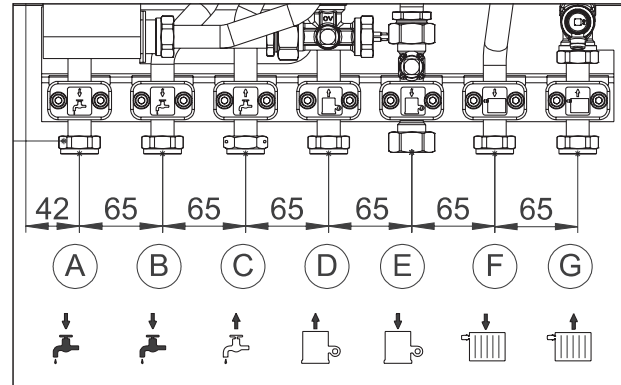
Control range: 40 - 70 °C

Note:

High system temperatures may enhance corrosion and the formation of calcium deposits. The specifying engineer and the user of the system are responsible to evaluate these factors and to take preventive measures if required (e.g. water treatment).

Risk of scalding! Outlet temperatures exceeding 43 °C can lead to scalding.

When leaving the factory, the differential pressure regulator is set to 150 mbar. Higher settings provoke an increase of the draw off capacity but may lead to noises in the heating circuit (the delivery capacity of the supply pump must be observed!).



Connections

Potable water dwelling

A – Potable water hot

B – Potable water cold

Supply

C – Cold water supply

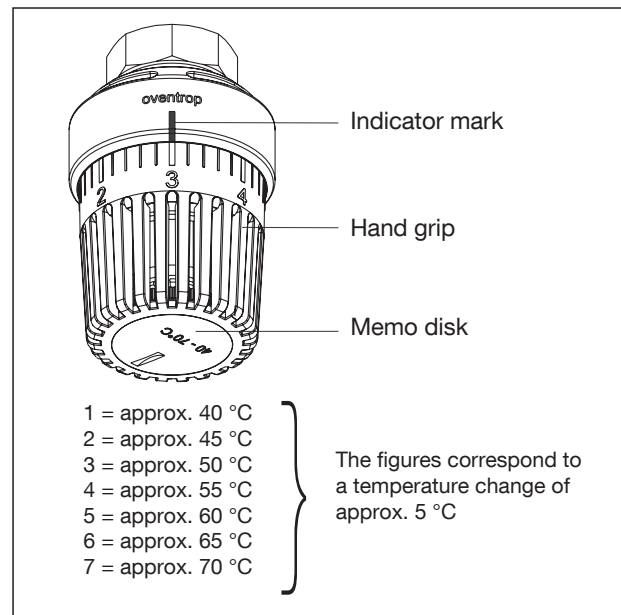
D – Heating water supply

E – Heating water return

Heating circuit dwelling

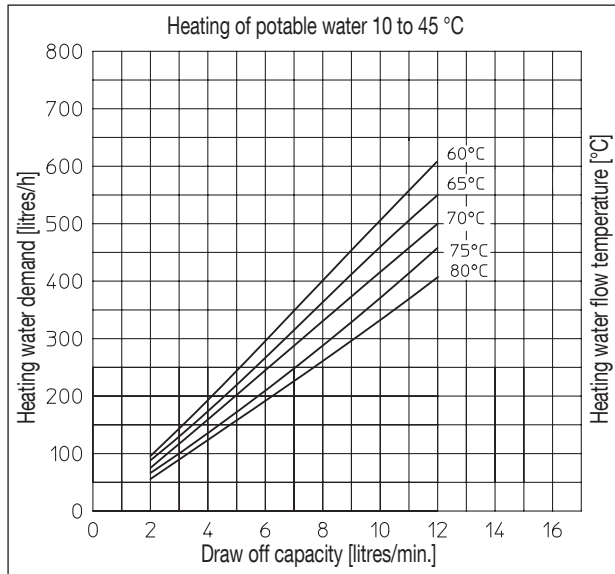
F – Heating circuit supply

G – Heating circuit return

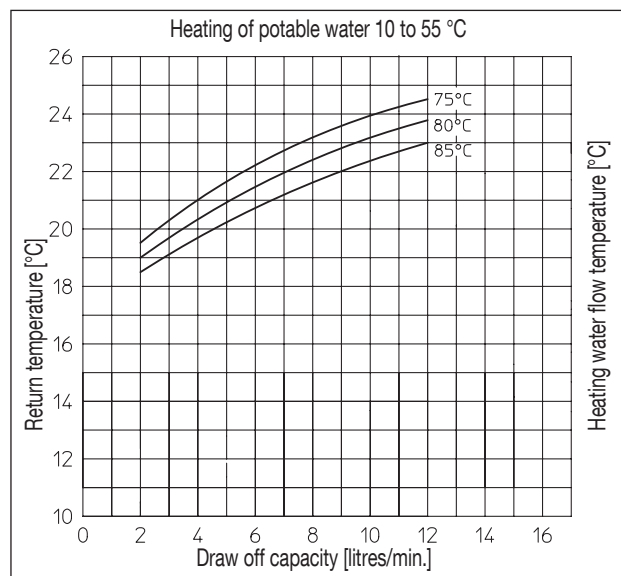
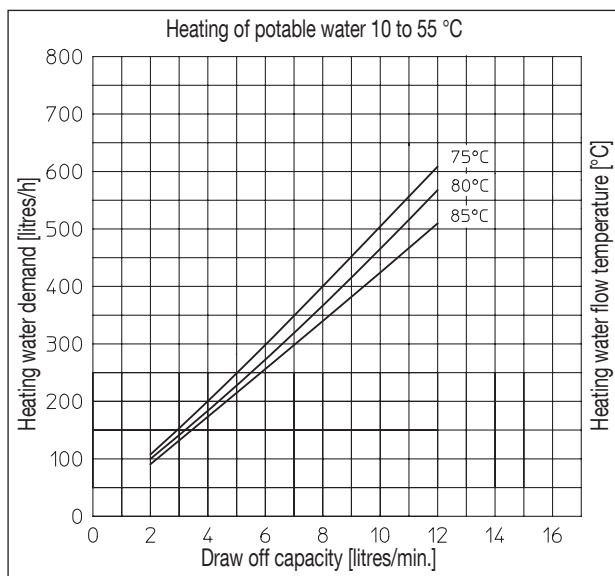
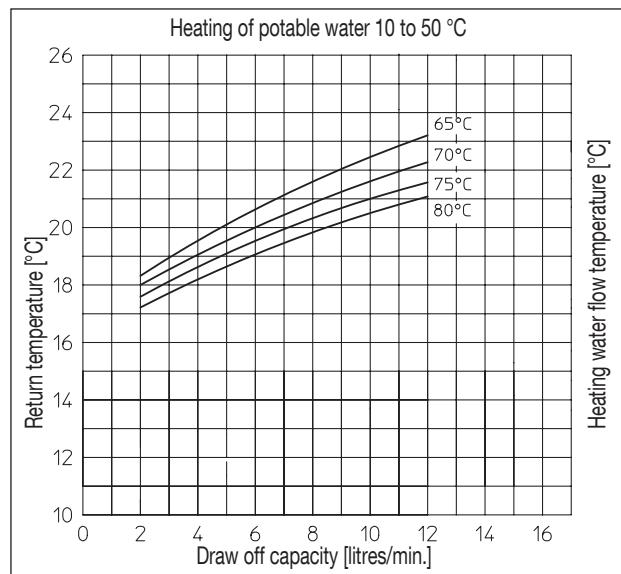
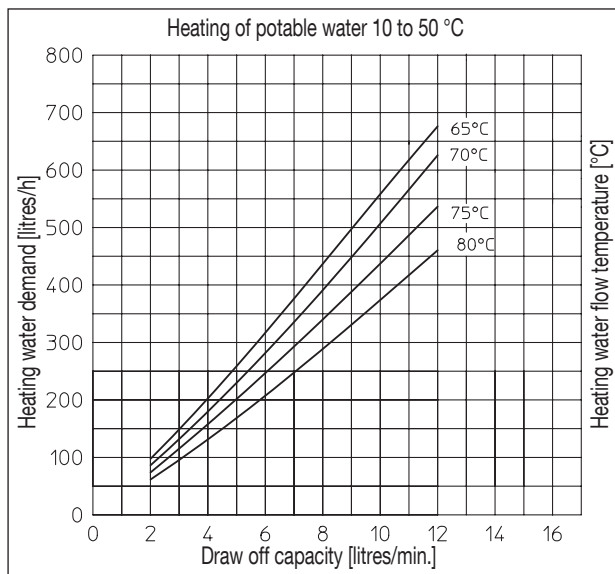
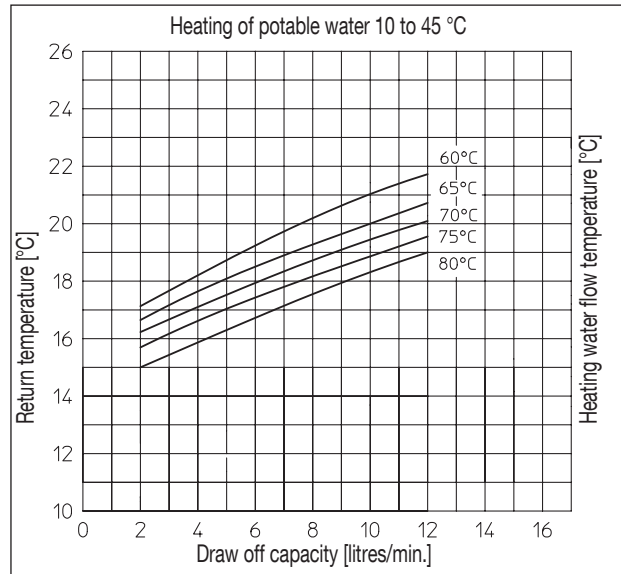


Temperature controller

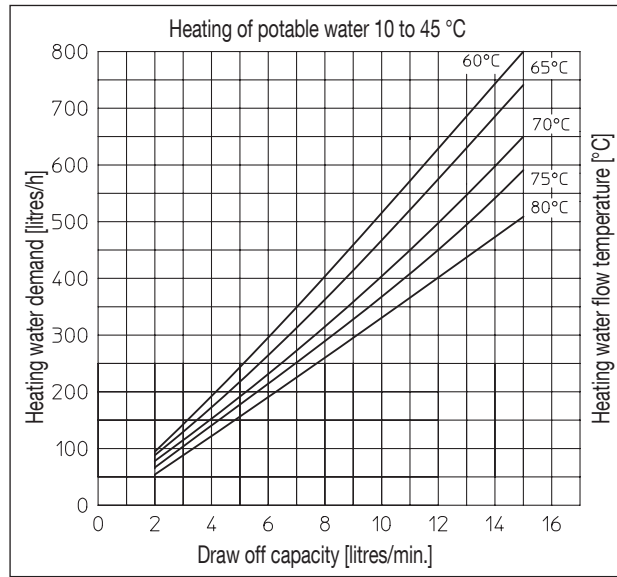
Heating water demand – Performance range 1



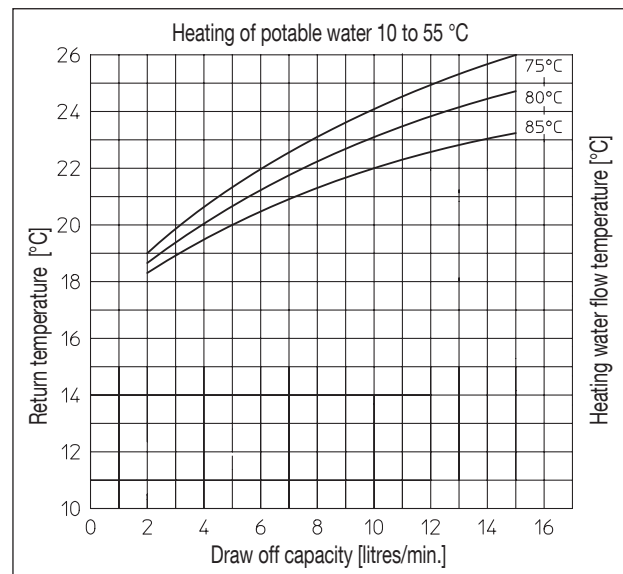
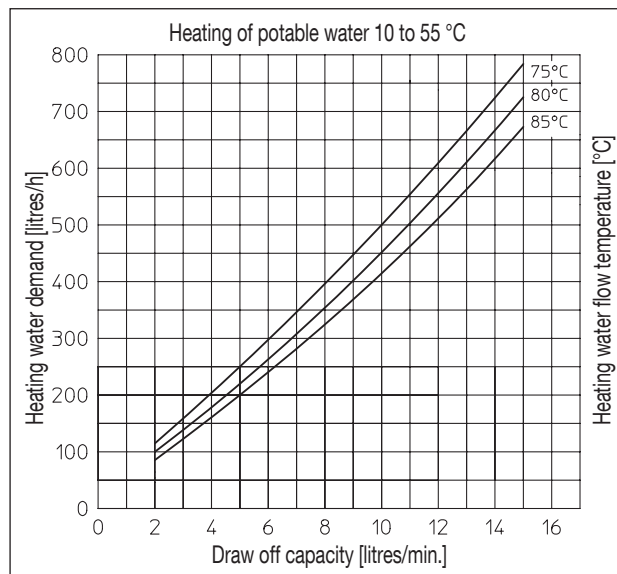
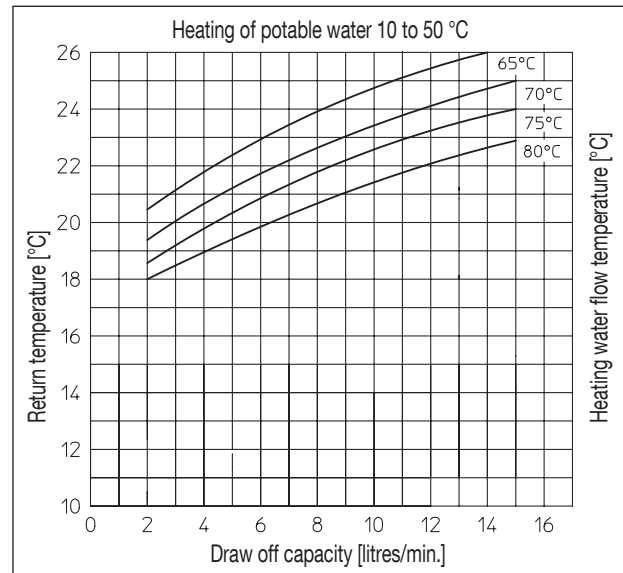
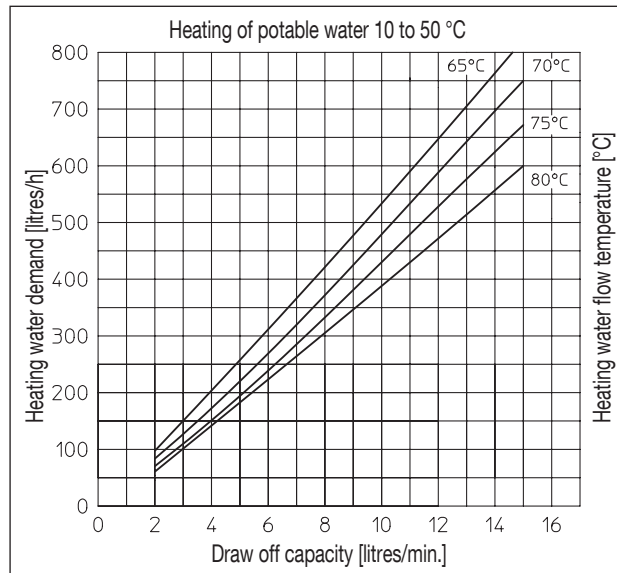
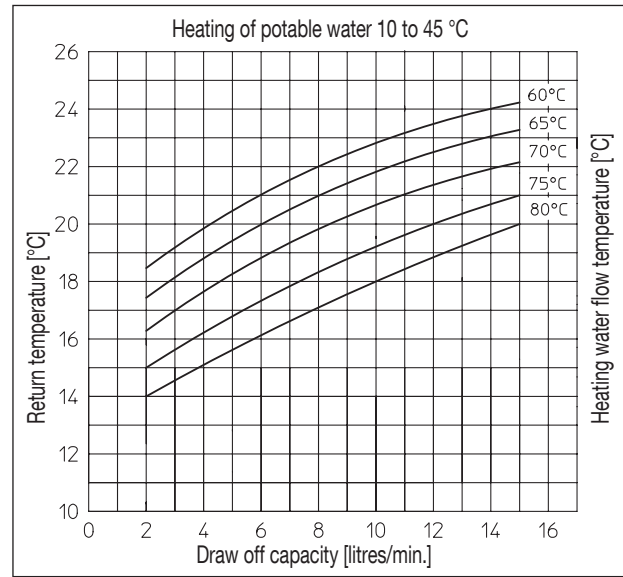
Return temperature – Performance range 1



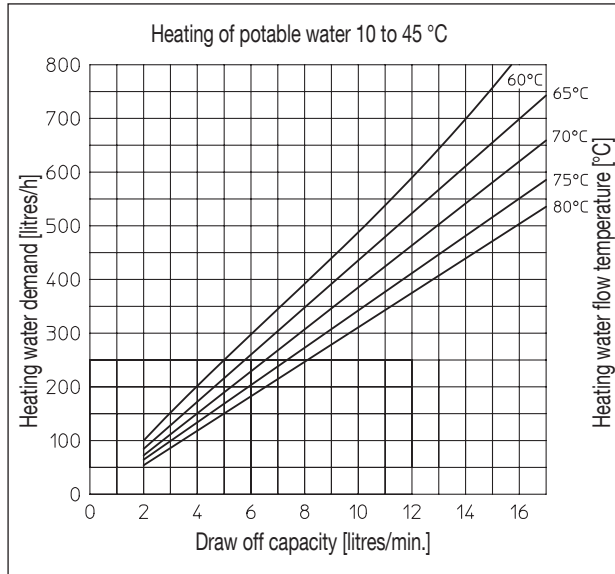
Heating water demand – Performance range 2



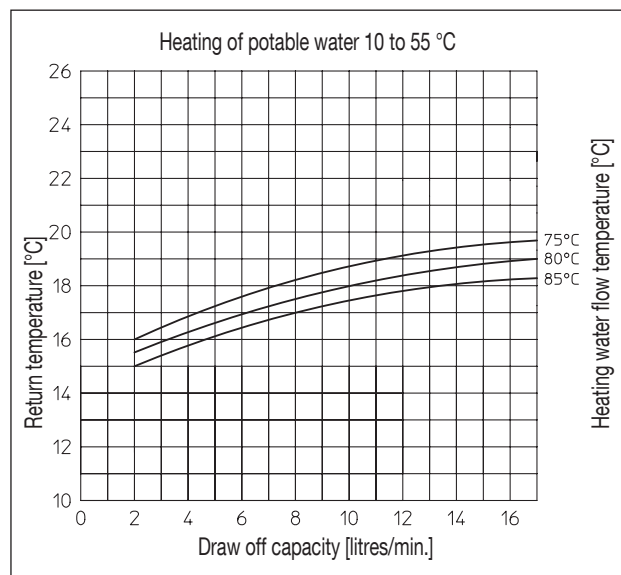
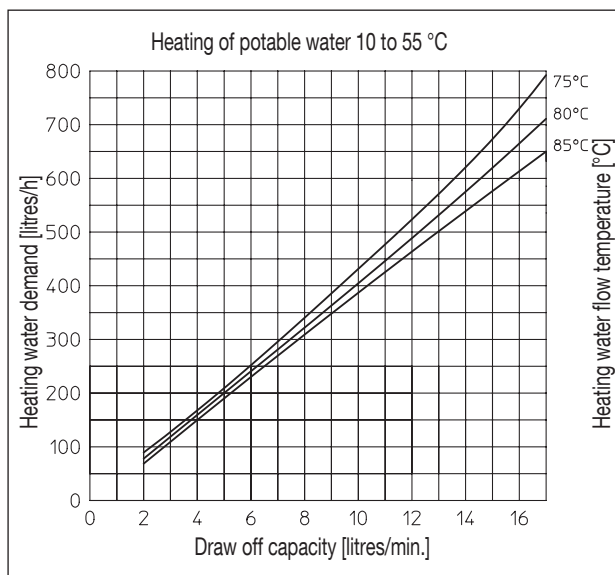
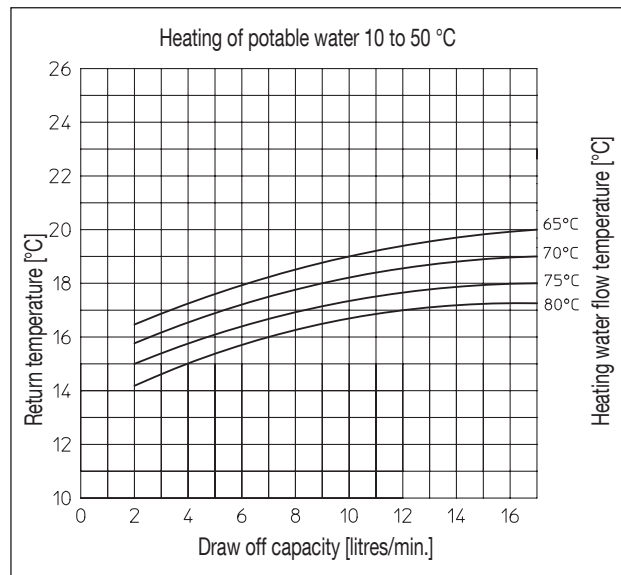
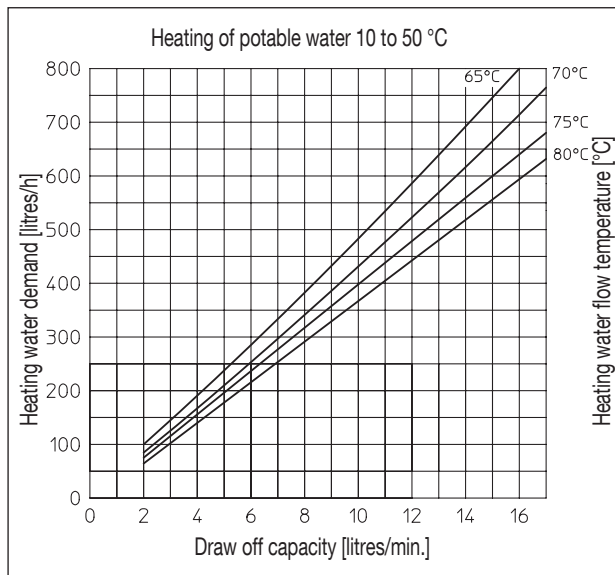
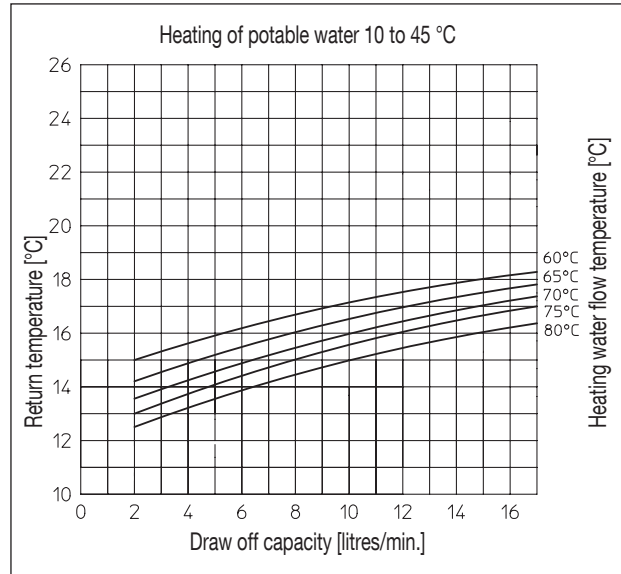
Return temperature – Performance range 2



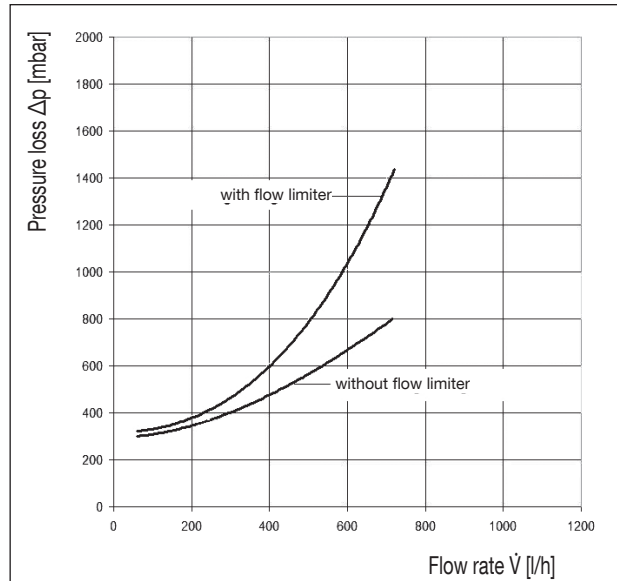
Heating water demand – Performance range 3



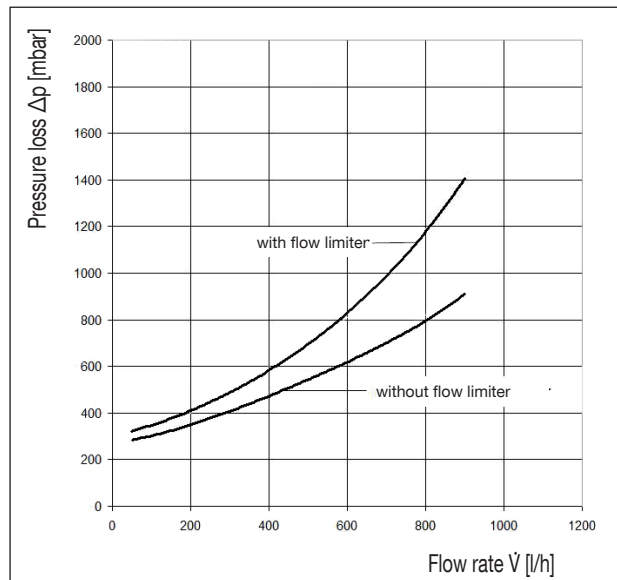
Return temperature – Performance range 3



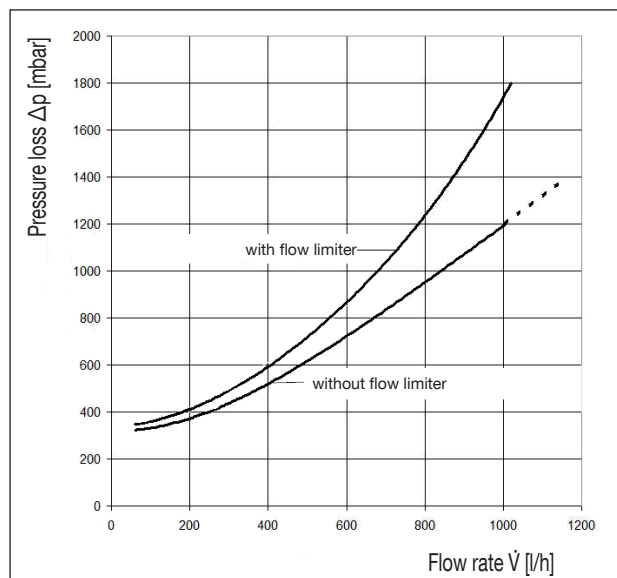
Pressure loss potable water circuit – Performance range 1



Pressure loss potable water circuit – Performance range 2



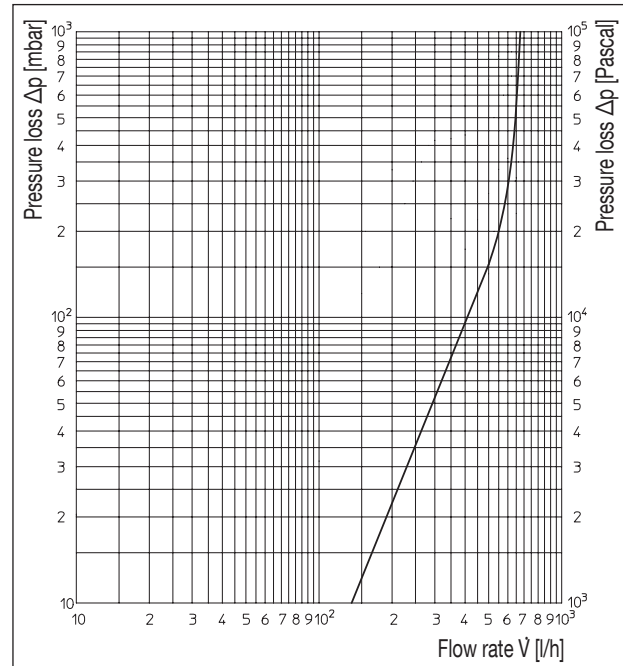
Pressure loss potable water circuit – Performance range 3



Subject to technical modifications without notice.

Product range 3.1
ti 296-EN/10/MW
Edition 2019

Pressure loss heating water circuit



Further models

without differential pressure regulator, without cold water outlet dwelling and without spacer for water meter are available as “Regudis W-HTU Basic”:

Performance range		1	2	3
Heat exchanger	Cu	1340930	1340931	1340932
	Ni	1340950	1340951	1340952

Accessories

Accessories	Item no.:
Flow limiter	
Draw off capacity limitation 12 l/min.	1349980
Draw off capacity limitation 15 l/min.	1349981
Draw off capacity limitation 17 l/min.	1349982
Ball valve connector block	1341080
Derivative temperature control set	1341088
Surface-mounted cover	1341095
Surface-mounted cover	1341071
Surface-mounted cover - long model	1341198
Flush-mounted cabinet	1341070
Flush-mounted cabinet- long model	1341175
Plug for temperature sensor (heat meter)	1349051

The complete range of accessories can be found in the catalogue “Product” or on the Internet under www.oventrop.de.