Regudis W-HTE

Electronic Dwelling Station

For the supply of individual dwellings with heating water, as well as with hot and cold potable water. The required heat is provided by a central heat supply. Hot potable water is prepared decentrally via a plate heat exchanger according to the continuous flow principle. When selecting the dwelling station, it is necessary to consider the water quality of the area of use.

The stations consist of a plate heat exchanger, a control valve with integrated differential pressure and volume flow control, an actuator with integrated potable water temperature control, a zone valve, a volume flow sensor, a temperature sensor, a filter insert, spacers for heat and water meters, vent valves and drain valves.

The Regudis W-HTE stations are designed for unmixed heating circuits and can also be used for mixed heating circuits with an optional flow temperature control module. The range of functions can also be extended in a modular way using extension modules. The stations are characterised by high draw-off capacities at low excess temperatures, are optimised in terms of pressure loss and offer a conclusive insulation concept.

Features

+ Modularly extendable
+ High draw-off capacity at low excess temperature
+ Optimised in terms of pressure loss

General data

Variants	Performance range 1-3 with copper brazed heat exchanger or copper brazed heat exchanger with Sealix® protective layer Double-walled version with copper-brazed heat exchanger, double-walled
Empty weight	Performance range 1: 7.7 kg Performance range 2: 8.8 kg Performance range 3: 10.2 kg Doubel-walled version: 13.3 kg
Max. operating temperature	90 °C
Max. operating pressure	10 bar
Ambient temperature	2...35 °C
Medium	Heating water according to VDI 2035/Ö-Norm H 5195-1, fluid category ≤ 3 according to EN 1717. Observe the specifications of the Oventrop information sheet on corrosion protection.

Product Details

Technical Data

Dimensions and connections

Width x Height x Depth	600 x 455 x 110 mm
Connections	G ¾ union nut, flat sealing
Centre distance of the connections	65 mm
Centre distance to wall	26.5 mm

Hydraulic data: Primary circuit (buffer storage cylinder)

Medium	Heating water according to VDI 2035/Ö-Norm H 5195-1, fluid category ≤ 3 according to EN 1717. Observe the specifications of the Oventrop information sheet on corrosion protection.
Min. differential pressure	150 mbar
Max. differential pressure	2.0 bar
Min. flow temperature	See charts in the appendix

Hydraulic data: Heating circuit (radiators)

Medium	Heating water according to VDI 2035/Ö-Norm H 5195-1, fluid category ≤ 3 according to EN 1717. Observe the specifications of the Oventrop information sheet on corrosion protection.
Max. volume flow	600 l/h
Differential pressure control	150 mbar

Hydraulic data: Potable water circuit

Medium	Potable water. Observe the specifications of the Oventrop information sheet on corrosion protection.
Min. cold water pressure	See charts in the appendix
Control range	40…70 °C
Max. hot water volume flow	See charts in the appendix

Electrical data: Power supply unit

Mains input voltage	100…240 V AC ±10 %
Mains input frequency	50…60 Hz
Output voltage	5 V DC +7.5 %, -5 %
Rated output current	Max. 1200 mA
Protection type: connection box	IP65
Protection class	II
Overvoltage category	III
Ambient temperature	0…60 °C

Electrical data: Actuator

Input voltage	5 V DC +7.5 %, -5 %
Power consumption	0.15…3 W
Protection type	IP54
Ambient temperature	0…60 °C

Material

Heat exchanger copper brazed	Plate material: Stainless steel 1.4401 Connections: Stainless steel 1.4404 Brazing material: Copper
Heat exchanger copper brazed with Sealix® protective layer	Plate material: Stainless steel 1.4401 Connections: Stainless steel 1.4404 Brazing material: Copper Protective layer: SiO2 basis
Pipes	Stainless steel 1.4404
Valves and fittings	Brass
Temperature sensor	Stainless steel 1.4404
Volume flow sensor	Brass and plastic
Meter spacers	Plastic
Seals	EPDM and fibre material
Thermal insulation	EPP

Functions

The dwelling station is an electronically controlled product assembly with heat exchanger intended for use in domestic areas. The product assembly provides heated potable water (hot water) within a residential unit and distributes the heating water (max. 90° C) to radiators. With an optional flow temperature control module, heating water distribution to a surface heating system (e.g. underfloor heating) is also possible.

The decentralised hot water preparation of the station makes the storage of hot potable water unnecessary.

In the heat exchanger, potable water is heated according to the continuous flow principle only when it is needed. The demand for hot water is detected by the volume flow sensor.

The setpoint temperature for the hot water is adjusted with the rotary knob on the actuator. During operation, the temperature sensor continuously measures the temperature of the hot water at the hot water outlet of the heat exchanger. The temperature sensor forwards this information to the electronic control.

The information from the volume flow sensor and the temperature sensor is passed on to the actuator by the electronic control.

The actuator opens and closes the control valve. Depending on the position of the control valve, more or less hot heating water flows from the primary supply into the heat exchanger as required. In addition, the control valve keeps the necessary differential pressure in the system constant.

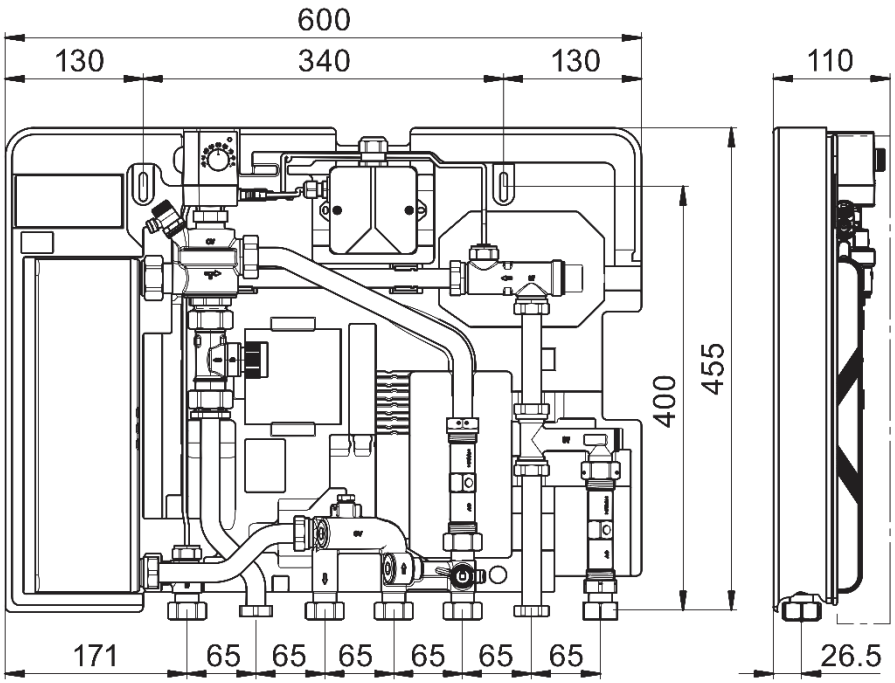
The heat output transferred to the potable water depends on the heating water quantity and the heating water temperature supplied to the heat exchanger. The control valve features a potable water priority function ensuring the supply of the required hot water quantity even in heating mode.

Optionally, an actuator can be mounted on the zone valve. This offers you the possibility to close the zone valve time-controlled.

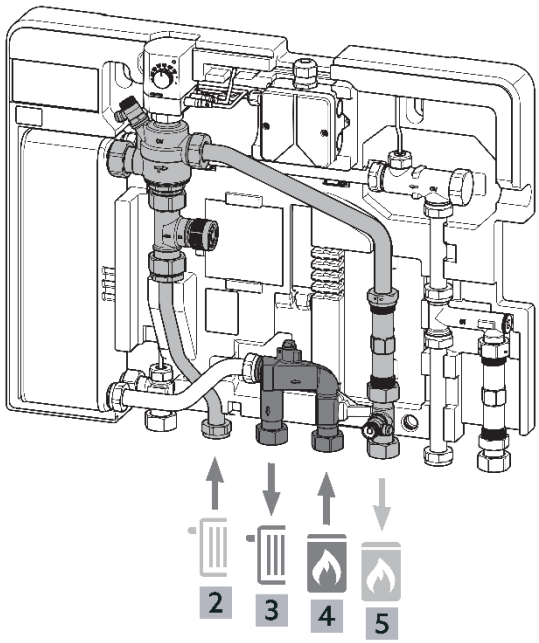
The Regudis W-HTE dwelling station is available in different performance ranges. The performance ranges differ in the size of the heat exchanger (see charts in the appendix).

The double-walled version of the dwelling station is equipped with a double-walled heat exchanger and has a leakage detection device on the underside. As soon as there is a leak in one of the plates of the heat exchanger, water escapes through the leakage detection device.

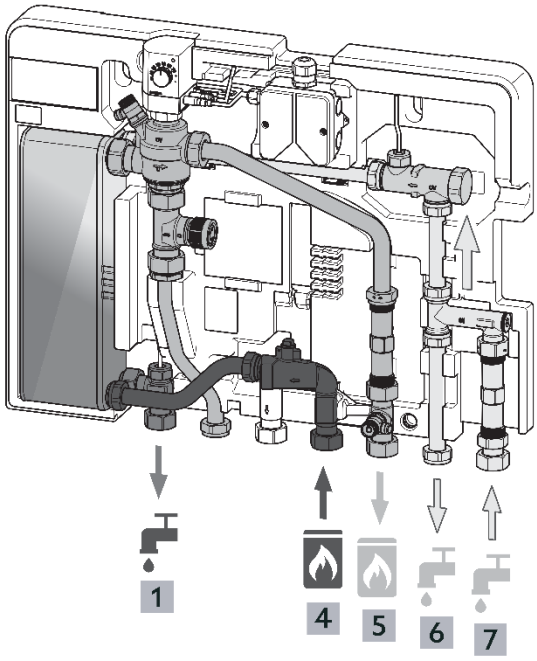
Dimensions



Connections



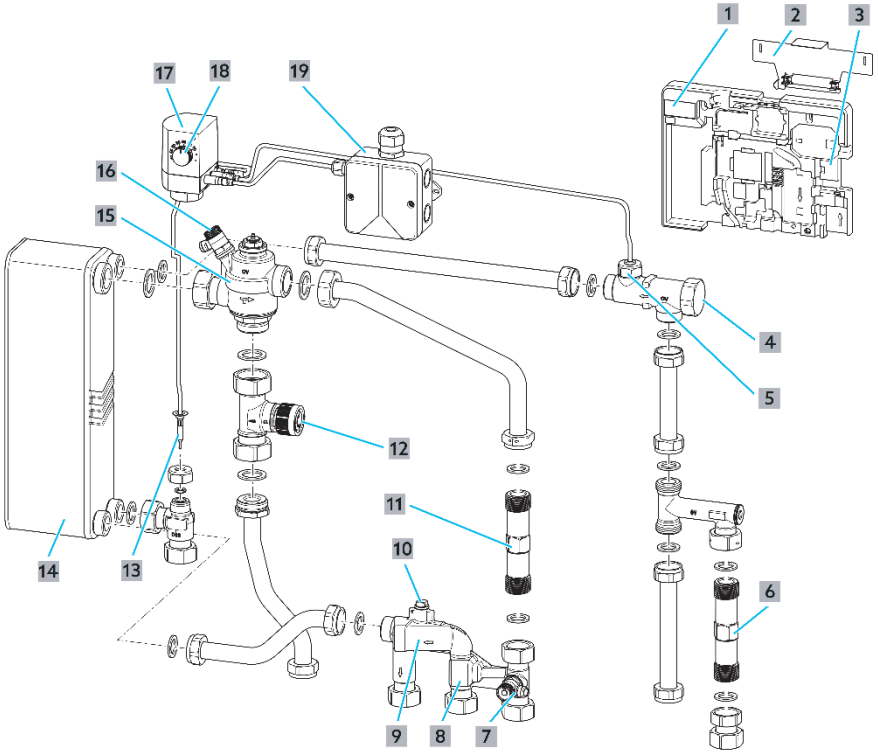
Heating mode



Hot water mode

	Description
1	Hot water outlet
2	Heating circuit return
3	Heating circuit supply
4	Primary supply from the buffer storage cylinder
5	Primary return to the buffer storage cylinder
6	Cold water outlet
7	Cold water inlet from the house connection

Design



	Description
1	Type plate
2	Angled wall bracket
3	Thermally insulated lower shell
4	Connection for the circulation pipe
5	Volume flow sensor
6	Spacer for water meter
7	Drain valve in the primary circuit
8	Connection for the derivative temperature control set
9	Filter insert in the primary supply
10	Connection in the primary supply for the temperature sensor of the heat meter
11	Spacer for heat meter
12	Zone valve for heating circuit control
13	Hot water temperature sensor
14	Heat exchanger
15	Control valve with integrated differential pressure and volume flow control
16	Vent valve in the heating circuit
17	Actuator with integrated potable water temperature control
18	Rotary knob
19	Connection box for the power supply

Selection

Item Numbers

Regudis W-HTE

	Performance range	Heat exchanger	Item no.
	Performance range 1	Copper brazed	1344030
	Performance range 2	Copper brazed	1344031
	Performance range 3	Copper brazed	1344032
	Performance range 1	Copper brazed with Sealix® protective layer	1344050
	Performance range 2	Copper brazed with Sealix® protective layer	1344051
	Performance range 3	Copper brazed with Sealix® protective layer	1344052
	Double-walled version	Copper brazed, double-walled	1344070

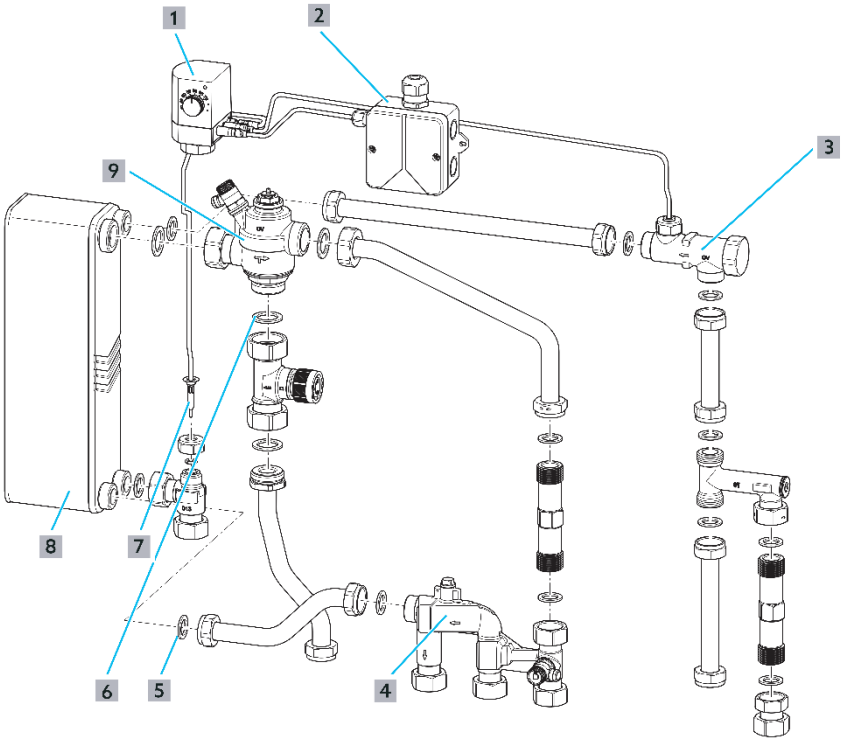
Accessories and Spare Parts

Accessories

Selected accessories for the Regudis W-HTE station. For a complete overview, see product catalogue.

Description	Item no.
Flow temperature control module	1344550
Heating circuit connection fitting	1344551
Potable water circulation module	1344555
Instantaneous water heater module	1344560
Connection and piping set for Regudis W-HTE instantaneous water heater module	1344561
Duo heating circuit separation module	1344576
Connection module for Regudis W-HTE for flexible hydronic connection from above and/or below	1344570
Front thermal insulation shell	1344470
Derivative temperature control set	1344490
Connection and shutoff set for Regudis W-HTE	1344680
Connection and shutoff set for Regudis W-HTE potable water circulation module	1344684
Connection and shutoff set for Regudis W-HTE with flushing function	1344685
Flushing and mounting bridge for Regudis W-HTE	1344489
Sealing plug set	1344481
Electrical connecting block for surface heating with integrated time switch	1400983
Flush-mounted cabinet, standard model	1344596
Flush-mounted cabinet, long model for heating circuit manifolds up to 8 circuits	1344598
Flush-mounted cabinet, long model for heating circuit manifolds up to 12 circuits	1344599
Revision frame	1344098
Surface-mounted cabinet, standard model	1344697
Surface-mounted cabinet, long model for heating circuit manifolds up to 8 circuits	1344698
Surface-mounted cabinet, long model for heating circuit manifolds up to 12 circuits	1344699
Regubox exclusive surface-mounted bonnet	1344595

Spare Parts



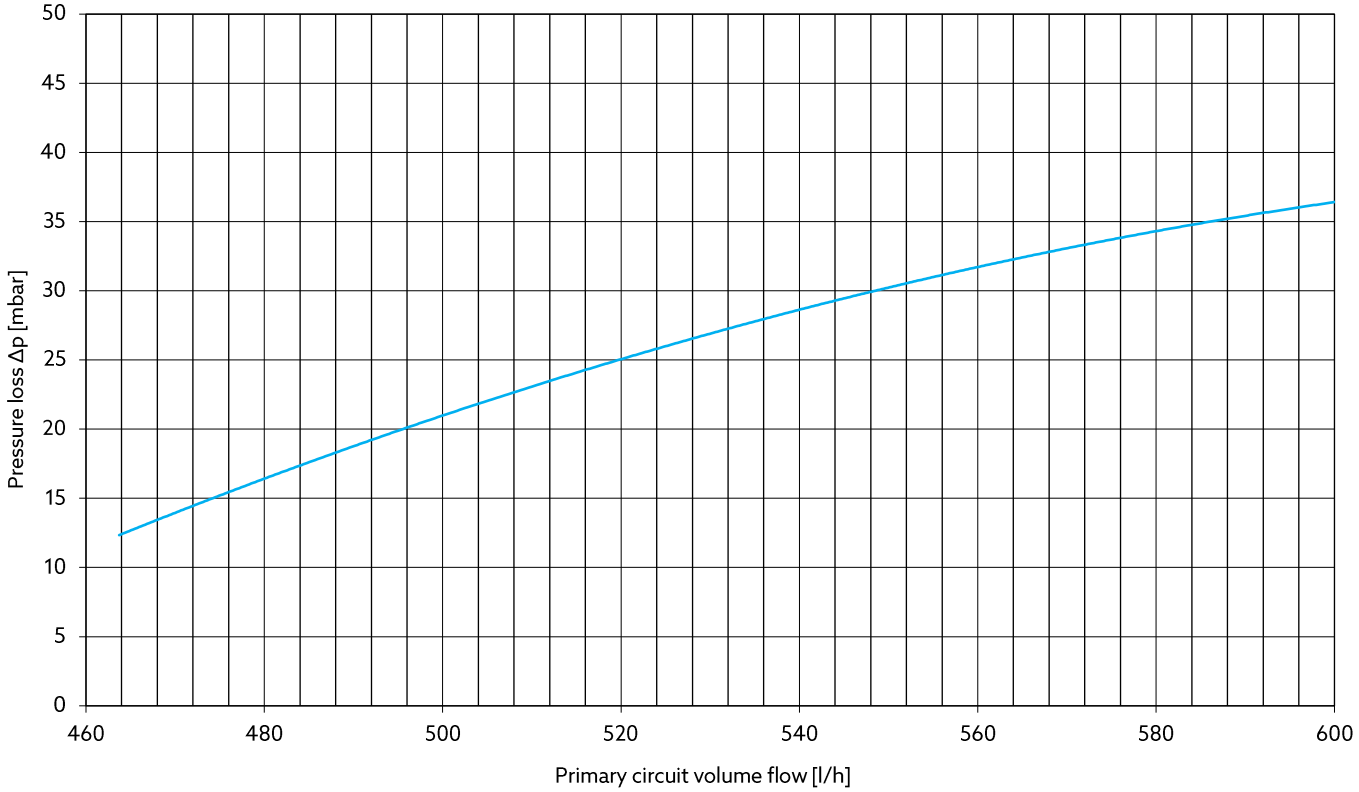
	Description	Item no.
1	Actuator with integrated potable water temperature control	1344491
2	Power supply unit	1344496
3	Volume flow sensor	1344693
4	Distributor	1344486
	Filter insert	1344495
5	Sealing ring for junction G ¾	1344497
6	Sealing ring for junction G 1	1344498
7	Potable water temperature sensor	1344494
8	Heat exchanger copper brazed, performance range 1	1344083
	Heat exchanger copper brazed, performance range 2	1344084
	Heat exchanger copper brazed, performance range 3	1344085
	Heat exchanger copper brazed with Sealix® protective layer, performance range 1	1344093
	Heat exchanger copper brazed with Sealix® protective layer, performance range 2	1344094
	Heat exchanger copper brazed with Sealix® protective layer, performance range 3	1344095
9	Control valve with integrated differential pressure and volume flow control	1344492

Suitable component for cabinet mounting

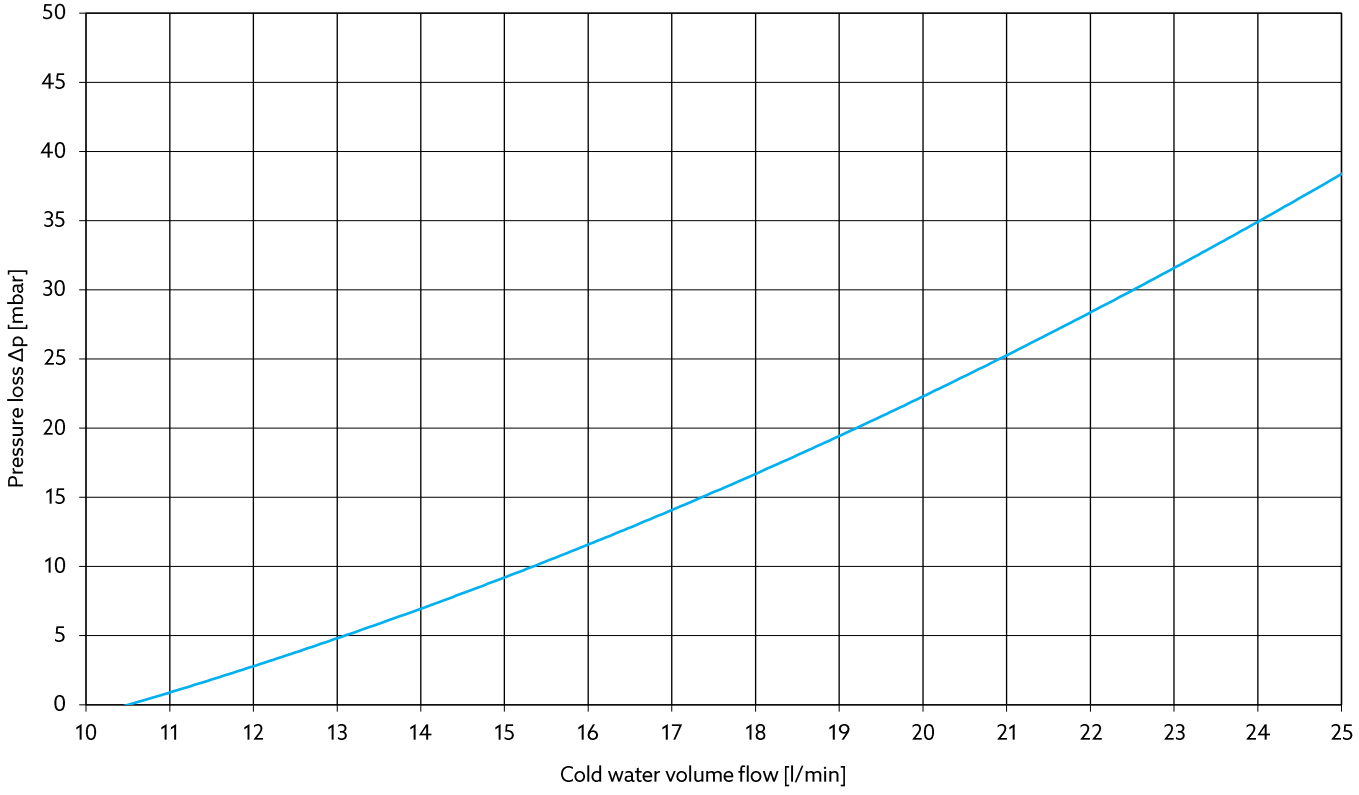
Product	Item no.
Surface- / flush-mounted cabinet for Regudis W-HTE	1344699 / 1344599
Electronic dwelling station Regudis W-HTE	1344030 - 32 / 1344050 – 52 / 70
Derivative temperature control set for Regudis W-HTE	1344490
Connection and shutoff set for Regudis W-HTE	1344680
Flow temperature control module for für Regudis W-HTE	1344550
Heating circuit connection fitting for Regudis W-HTE	1344551
Potable water circulation module for Regudis W-HTE	1344555
Connection and shutoff set for potable water circulation module	1344684
Multidis SF heating circuit manifold	1406352 - 1406362
Aktor T 2P actuator	1012452
Electrical connecting block for surface heating	1400983

Design Charts

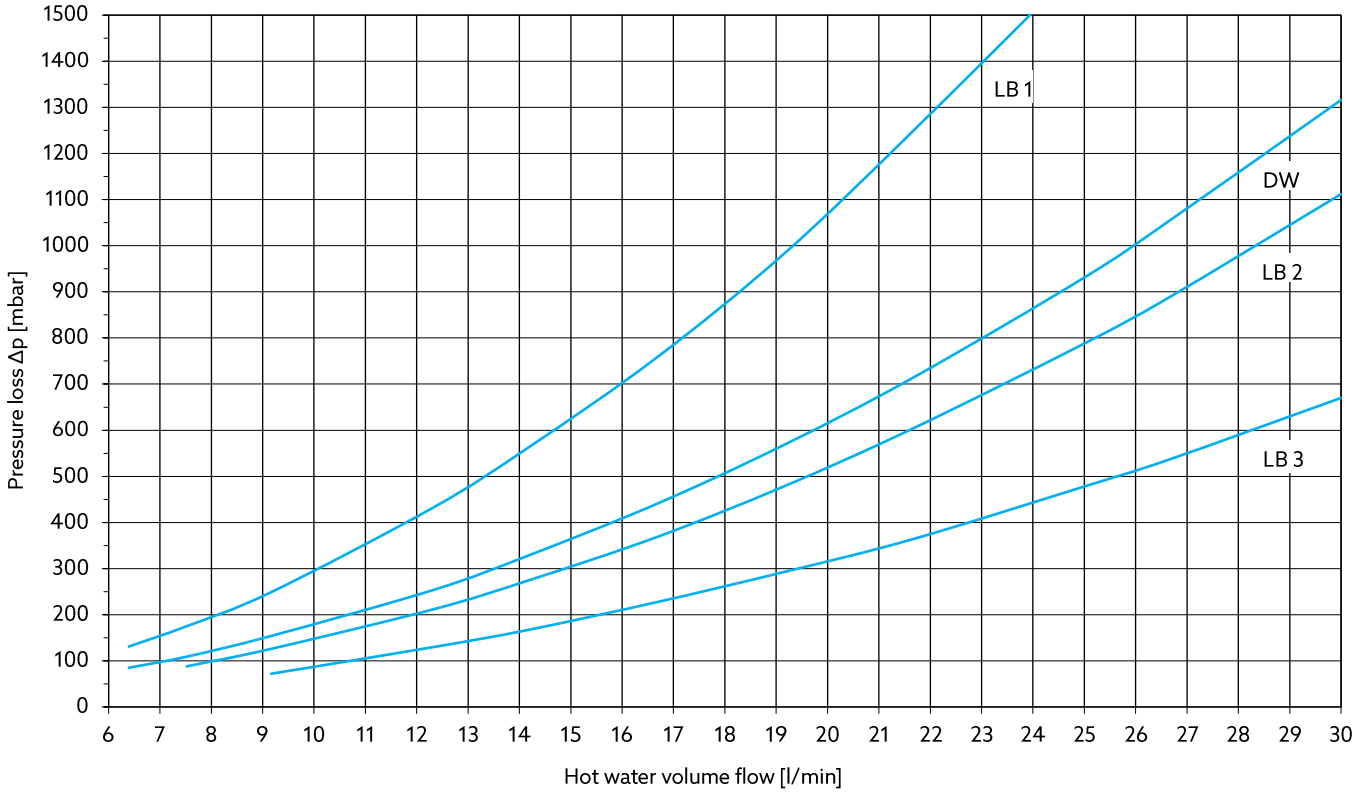
Pressure loss of the primary circuit during heating mode for performance ranges 1-3 and double-walled version



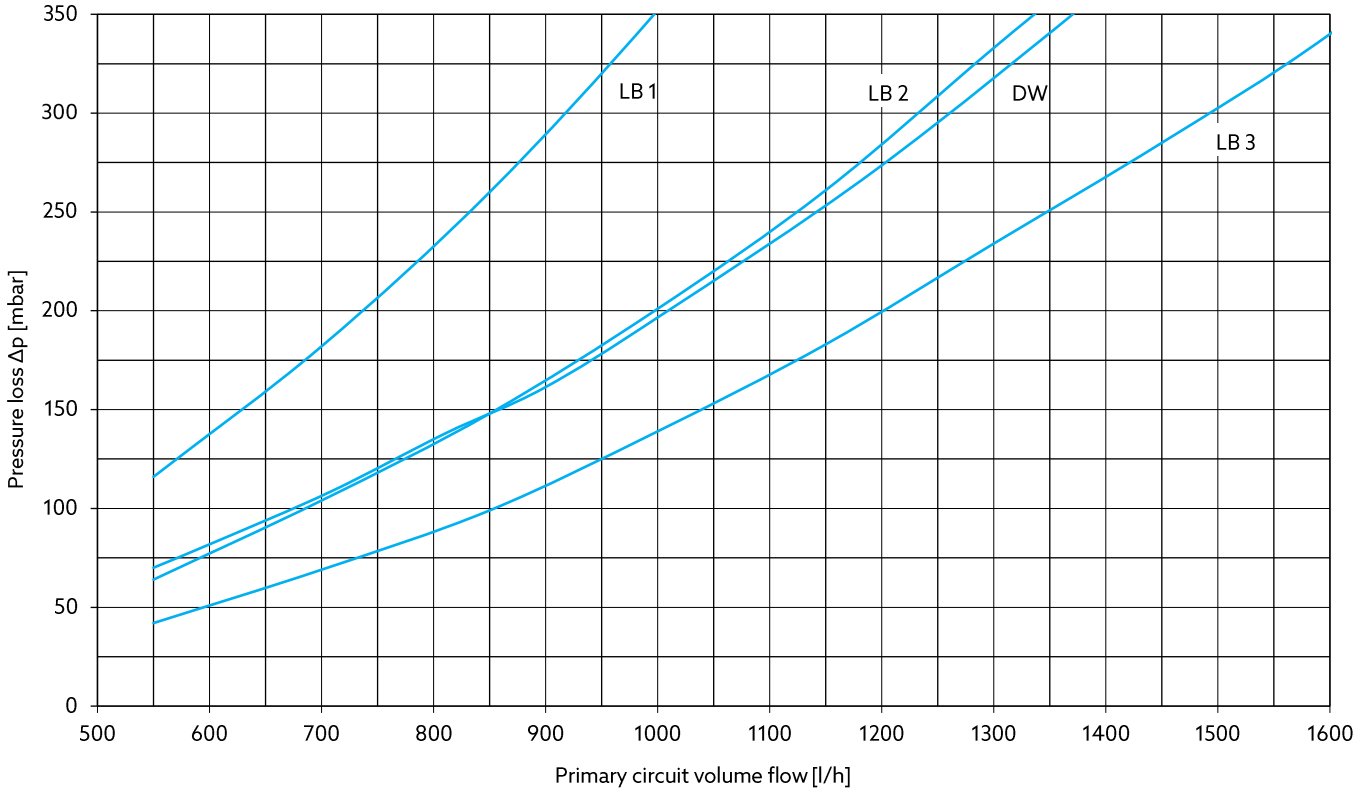
Pressure loss of the cold water outlet for performance ranges 1-3 and double-walled version



Pressure loss of the potable water circuit for potable water heating for performance ranges (LB) 1-3 and double-walled version



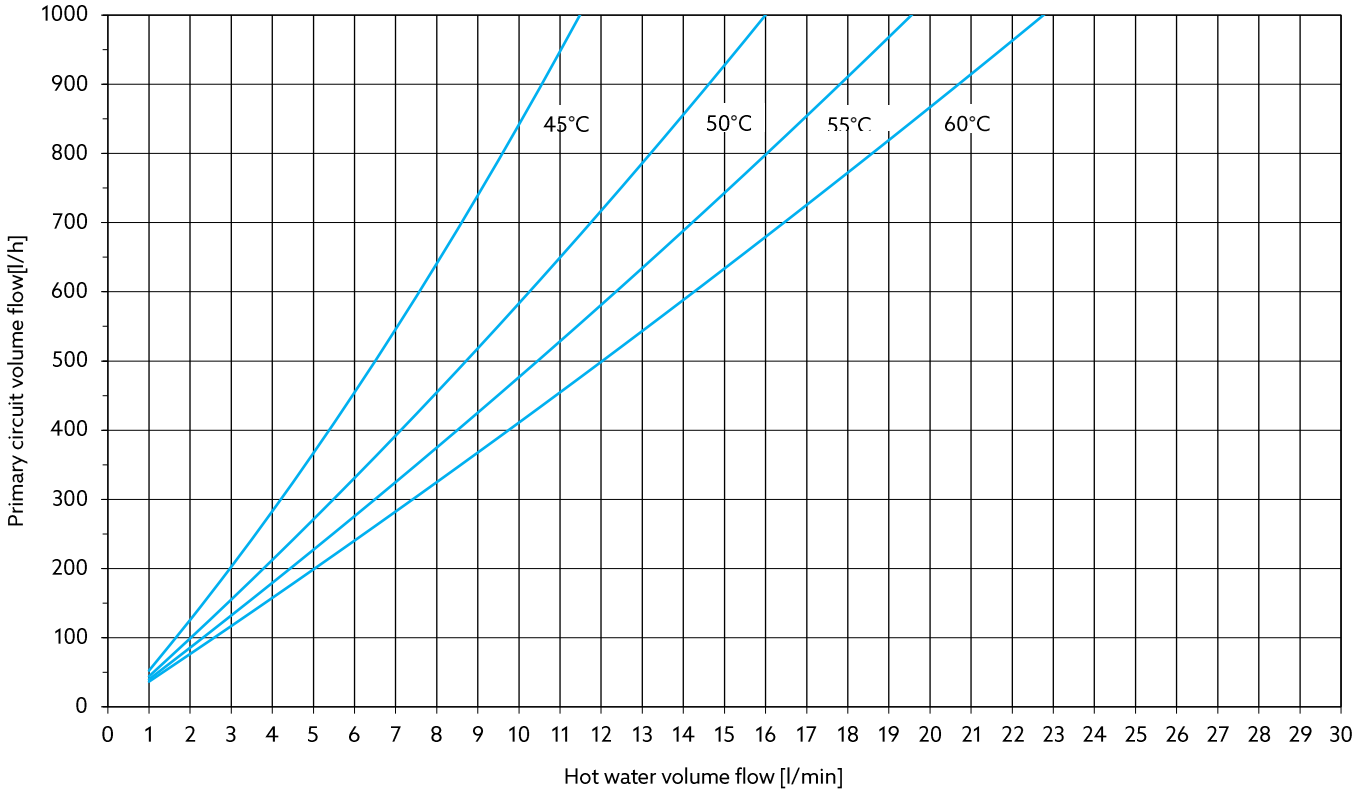
Pressure loss of the primary circuit for potable water heating for performance ranges (LB) 1-3 and double-walled version



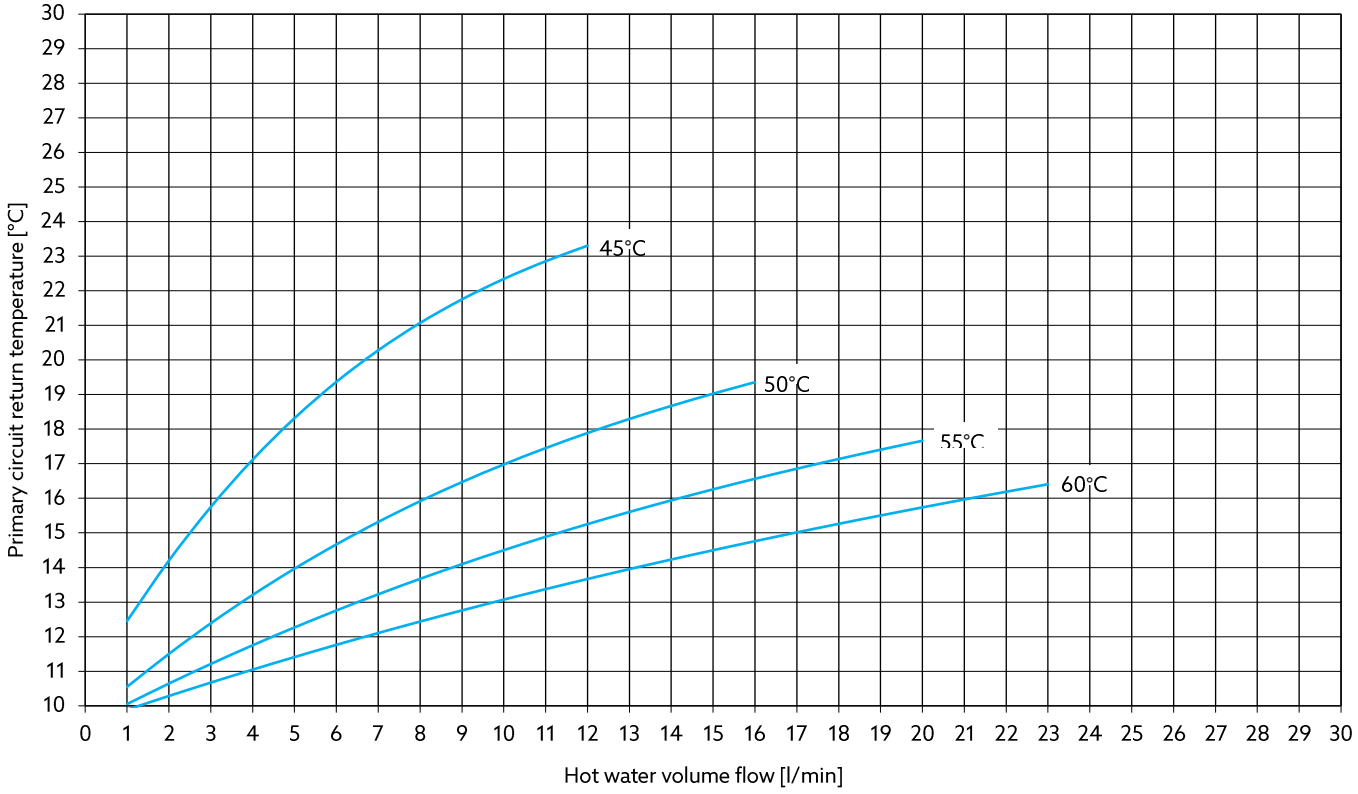
Performance range 1: Heating of potable water from 10 °C to 45 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



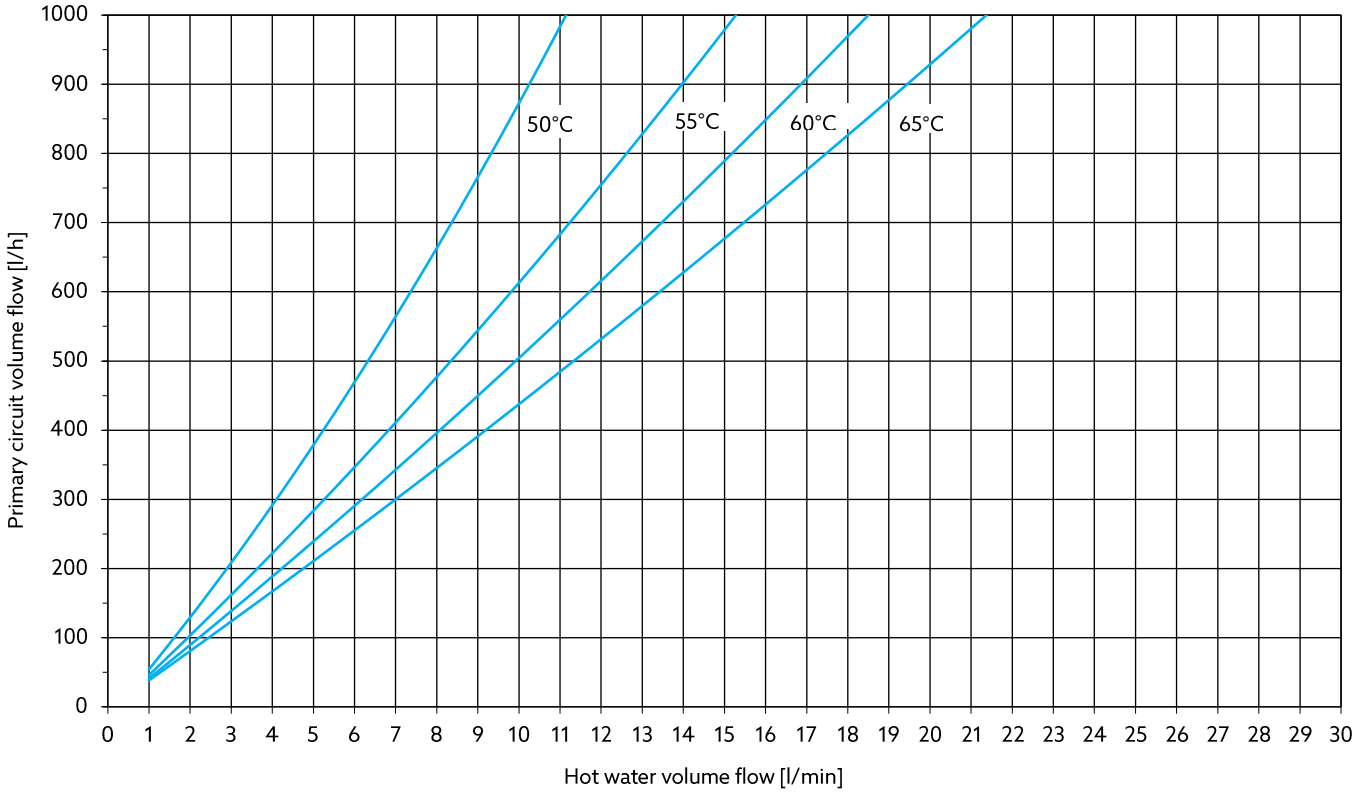
Return temperature of the primary circuit at different flow temperatures



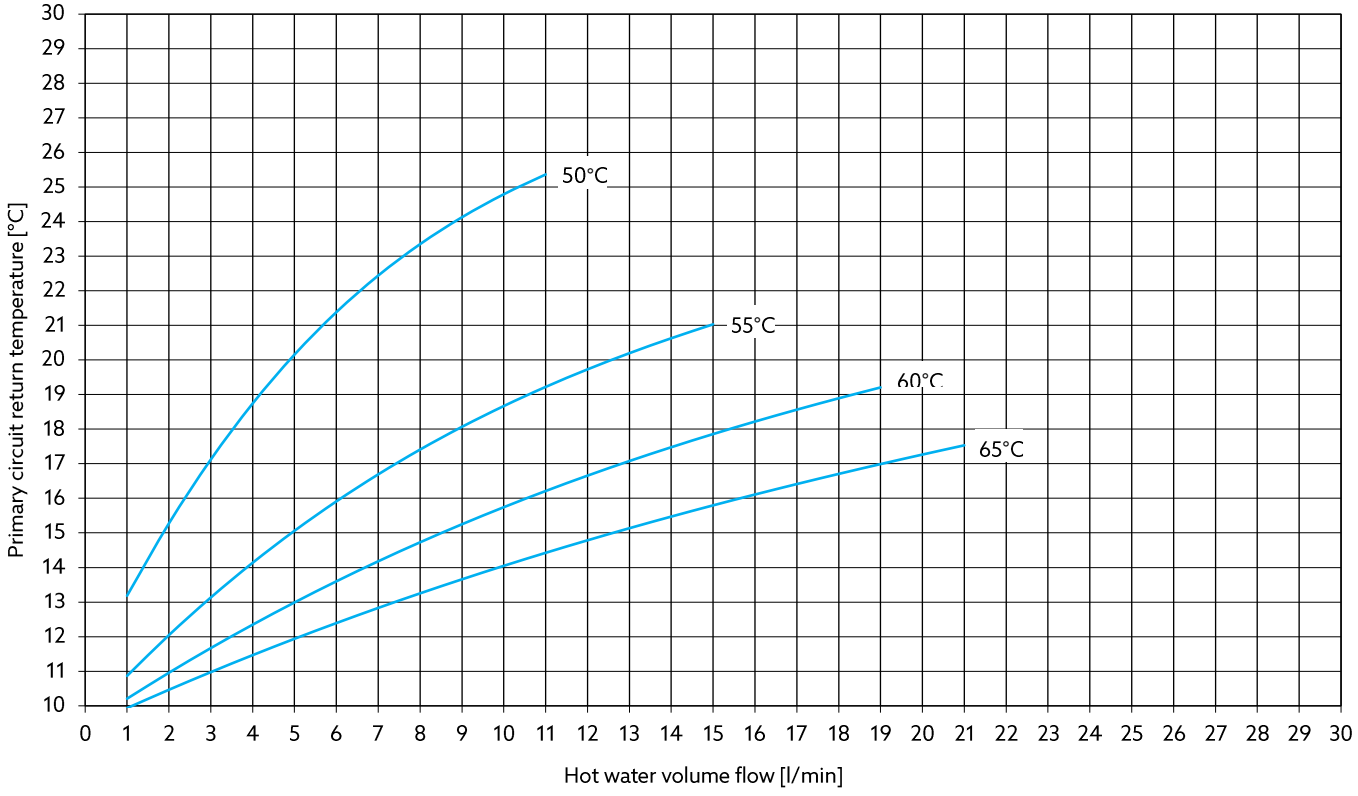
Performance range 1: Heating of potable water from 10 °C to 50 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



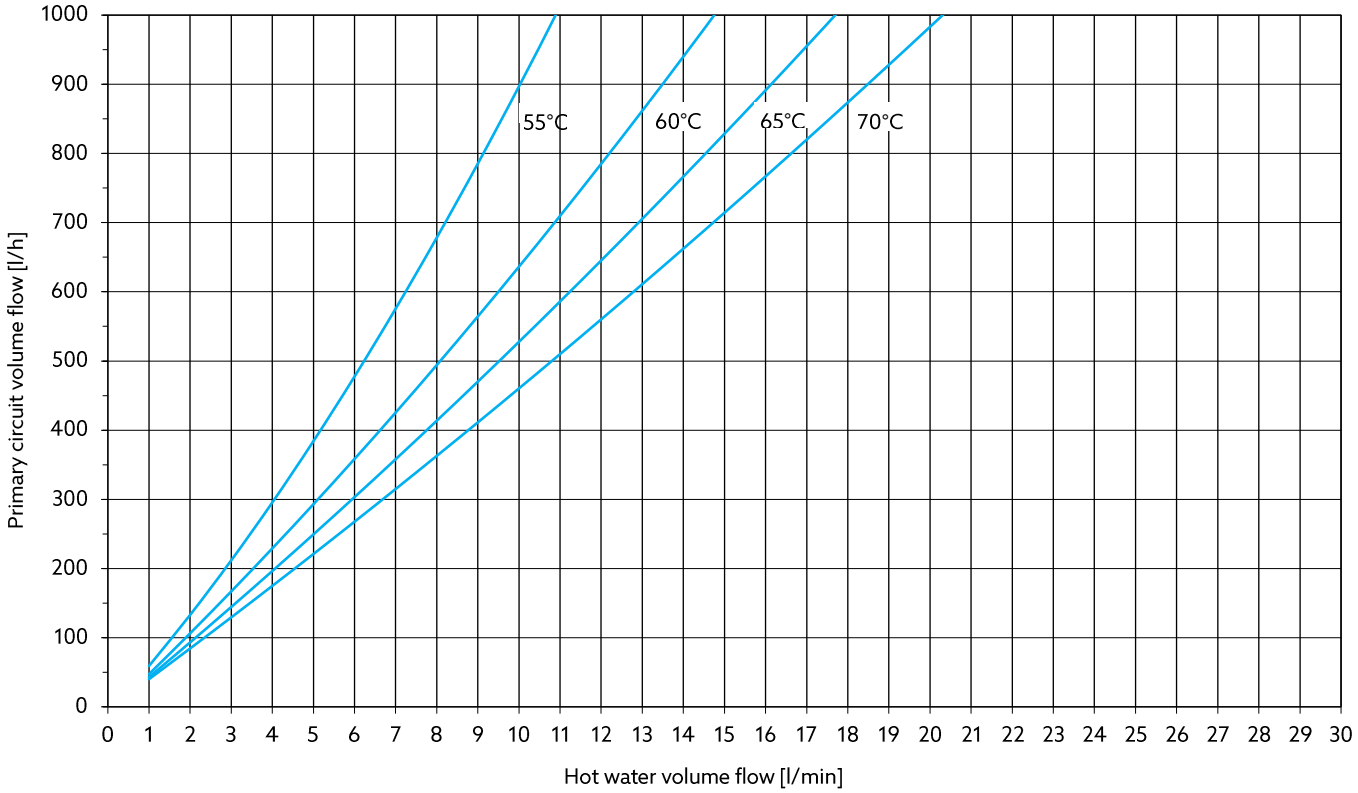
Return temperature of the primary circuit at different flow temperatures



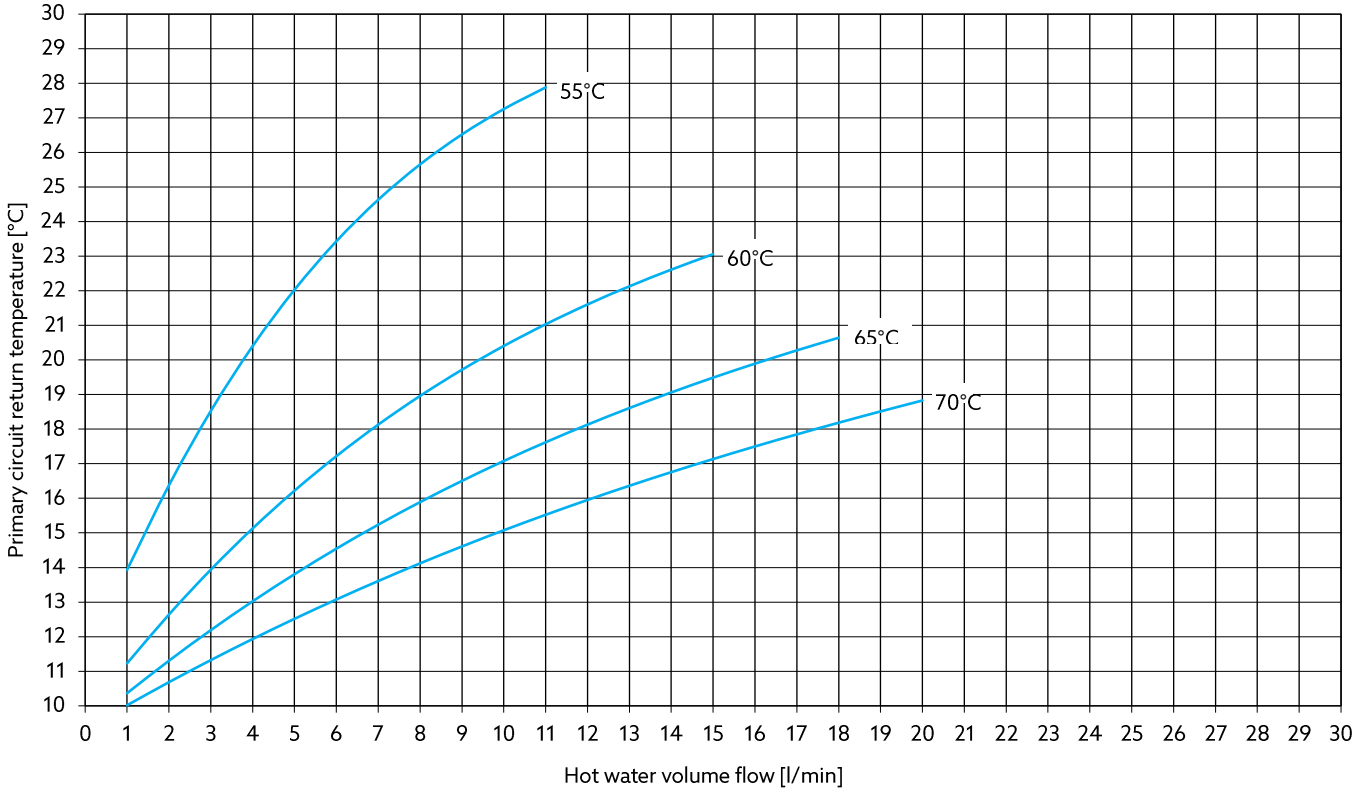
Performance range 1: Heating of potable water from 10 °C to 55 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



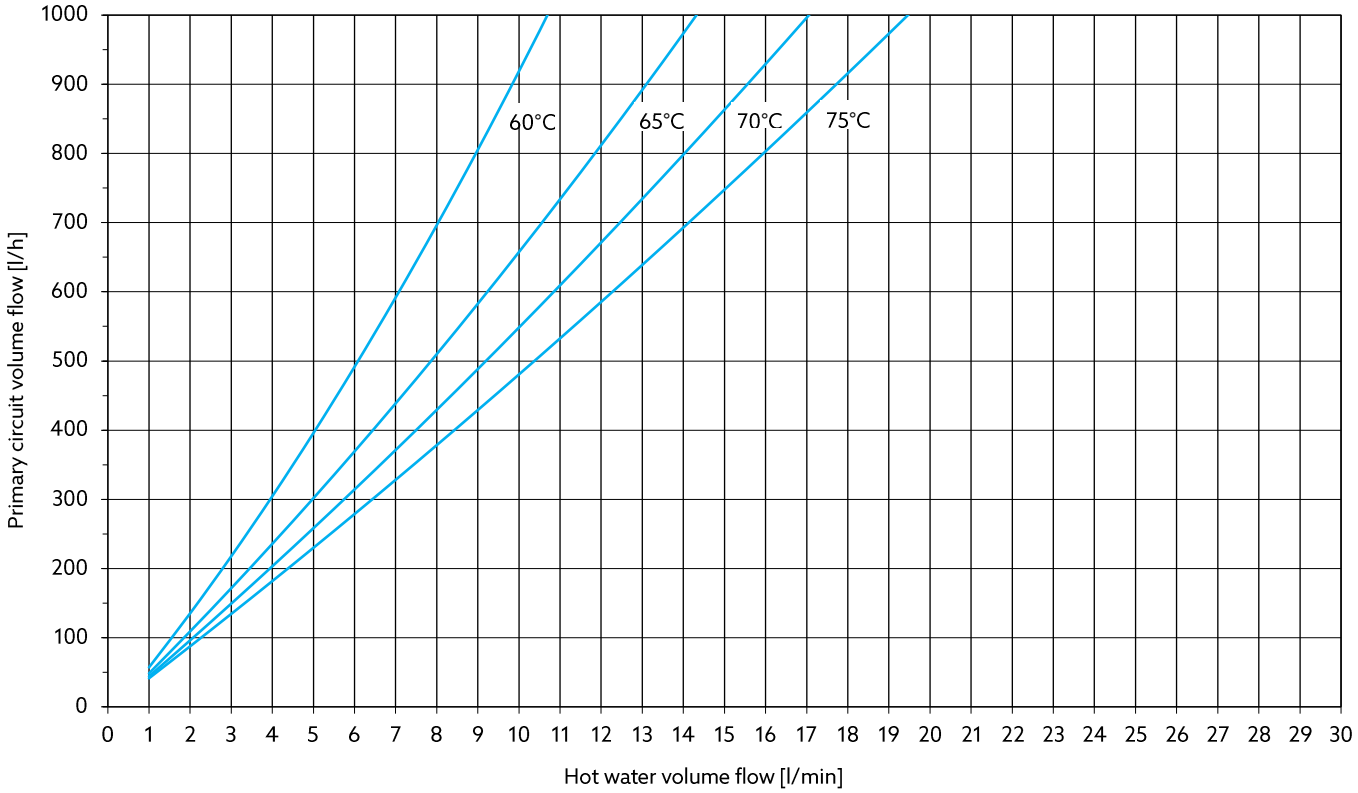
Return temperature of the primary circuit at different flow temperatures



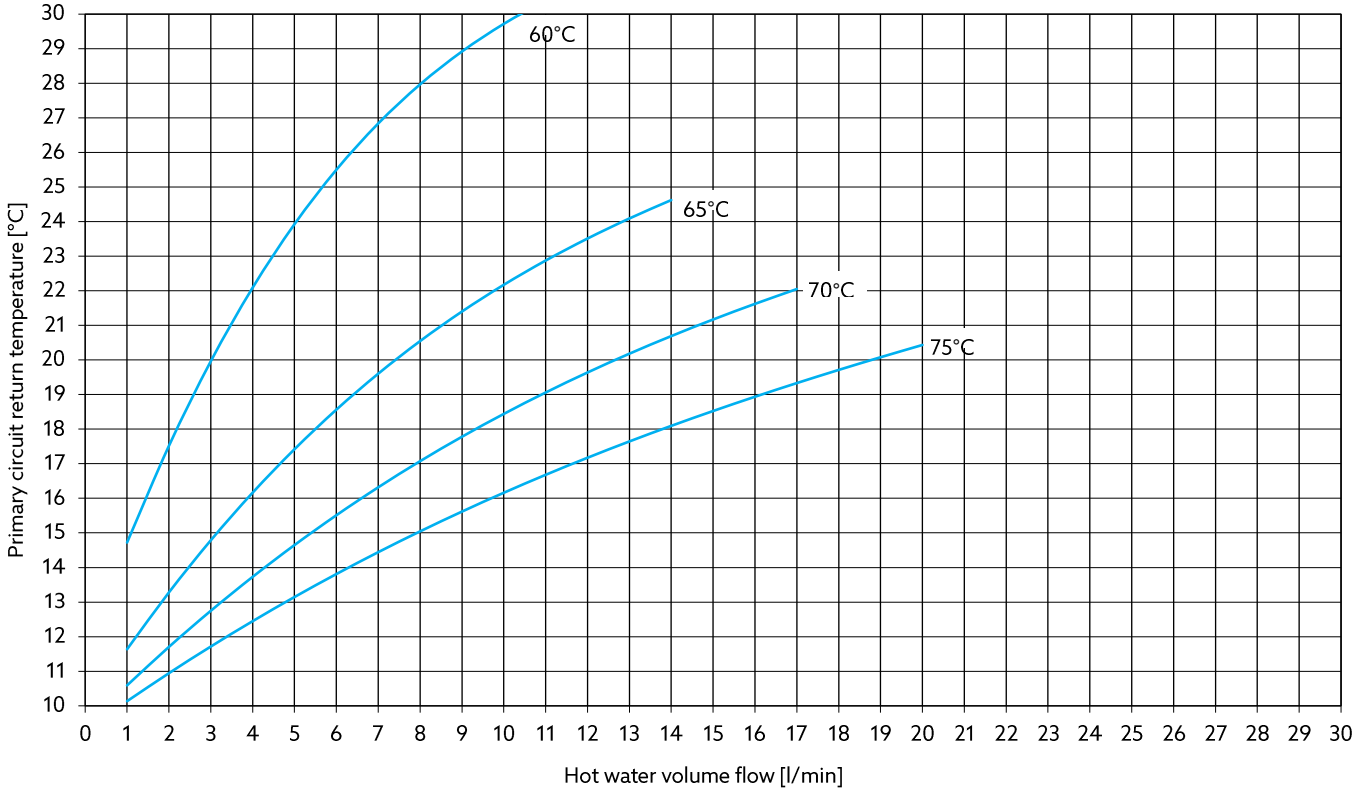
Performance range 1: Heating of potable water from 10 °C to 60 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



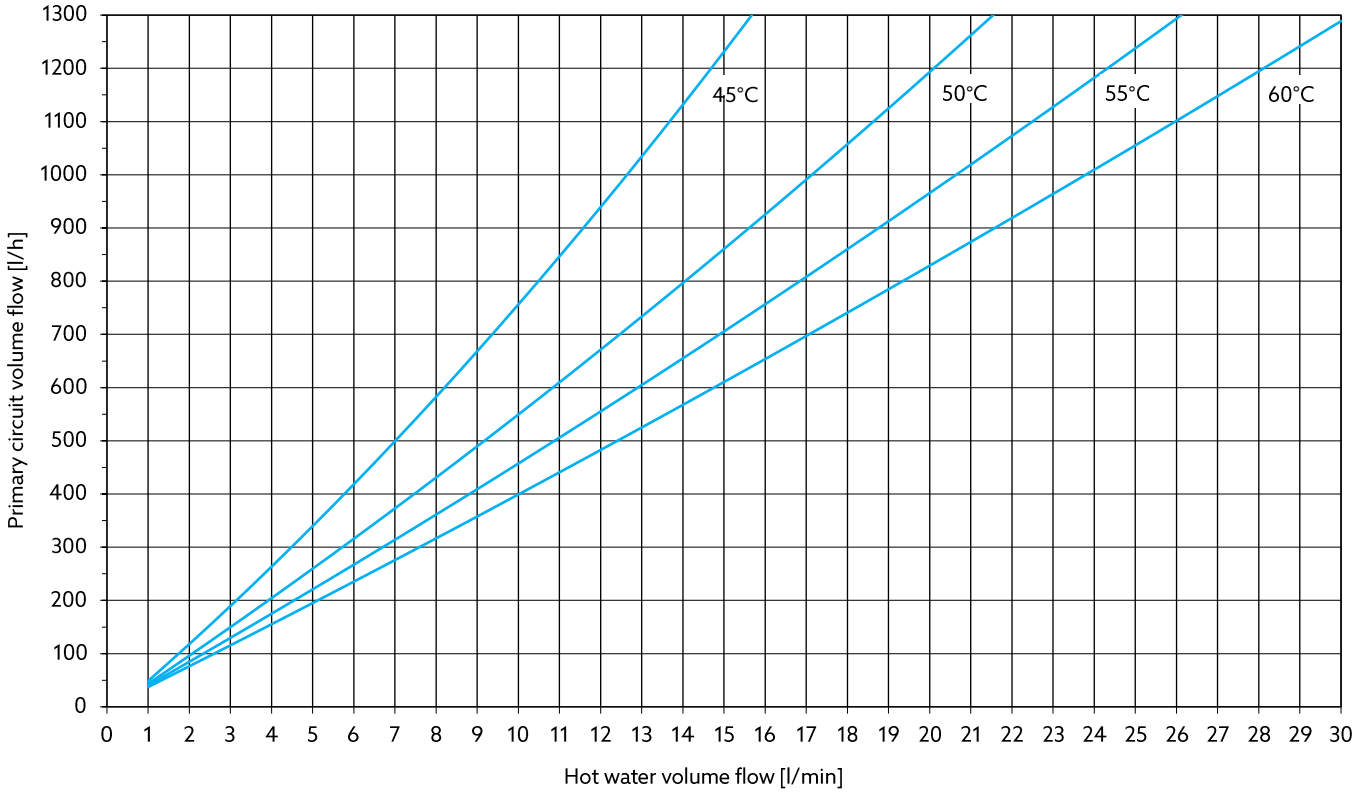
Return temperature of the primary circuit at different flow temperatures



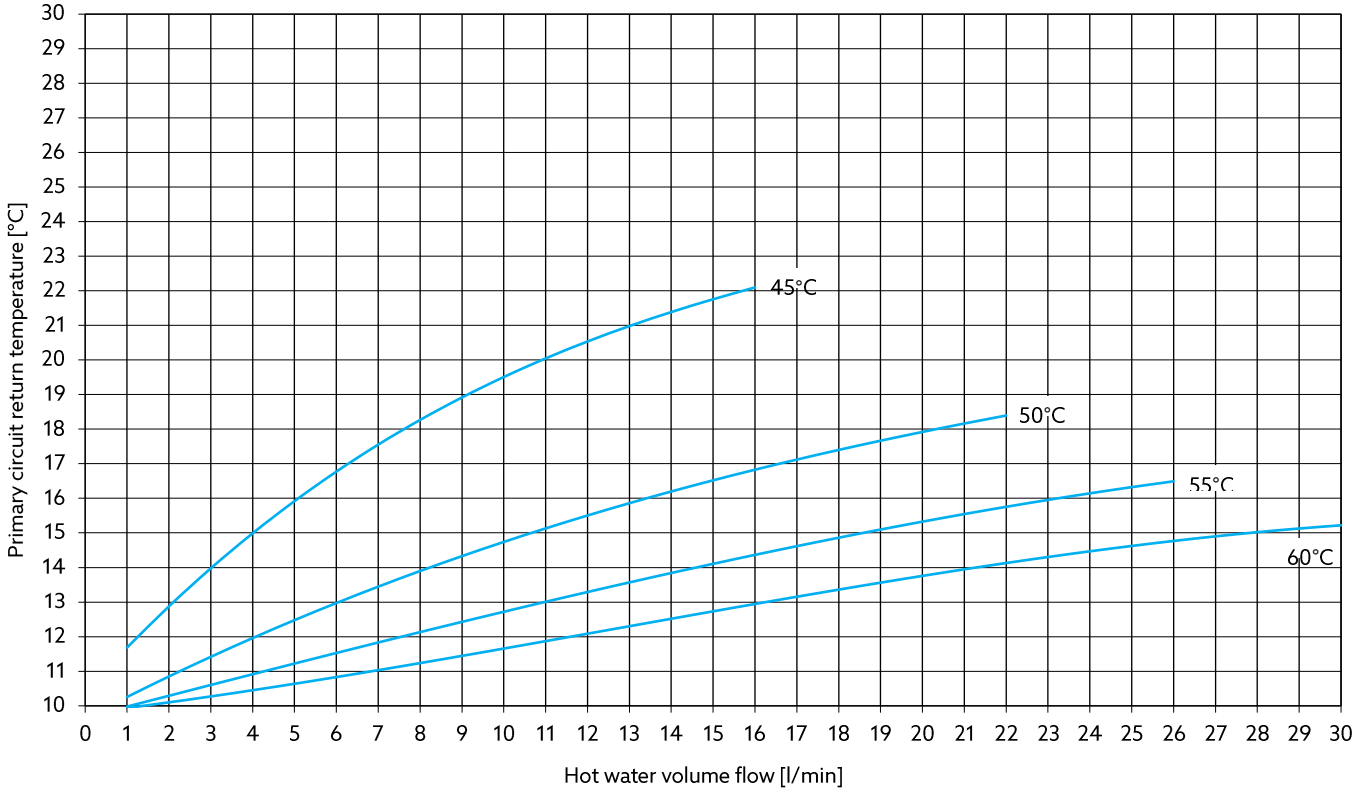
Performance range 2: Heating of potable water from 10 °C to 45 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



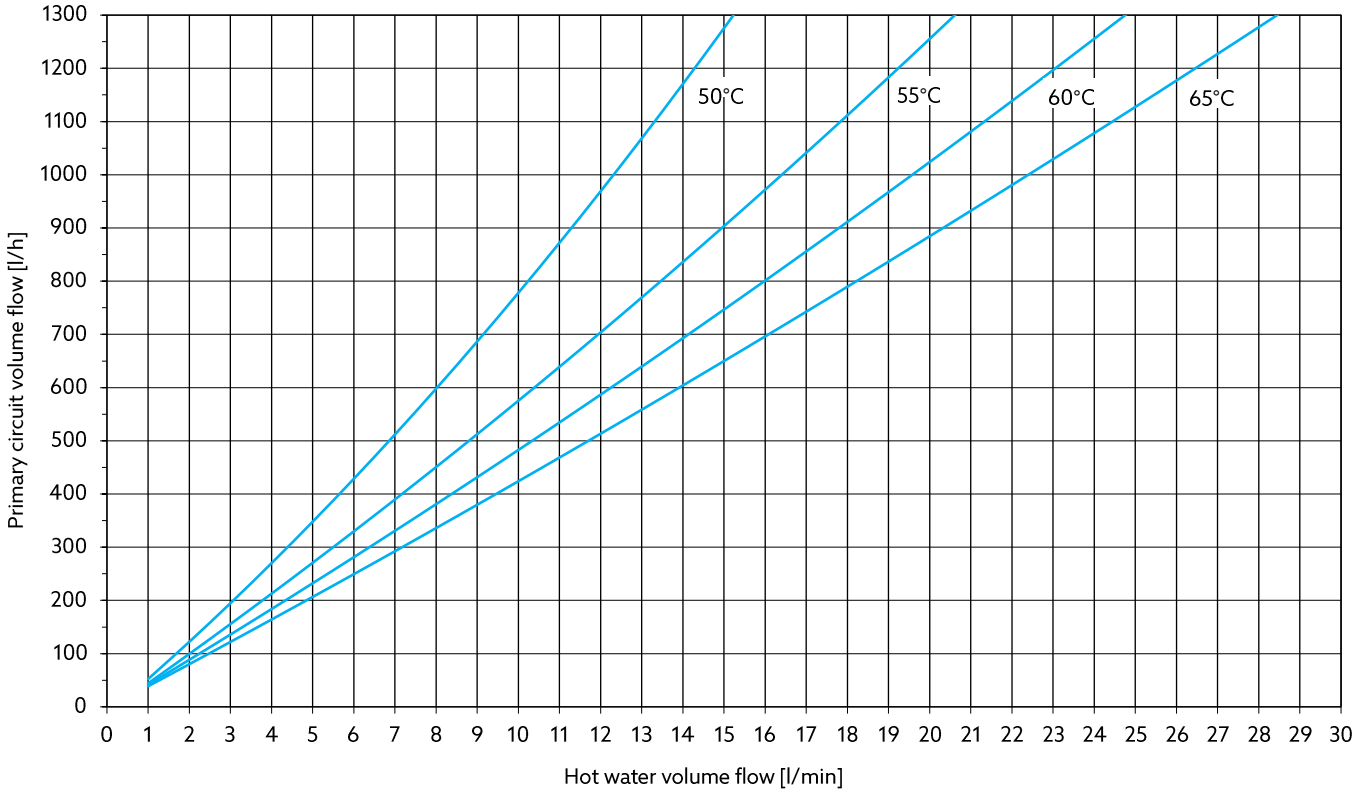
Return temperature of the primary circuit at different flow temperatures



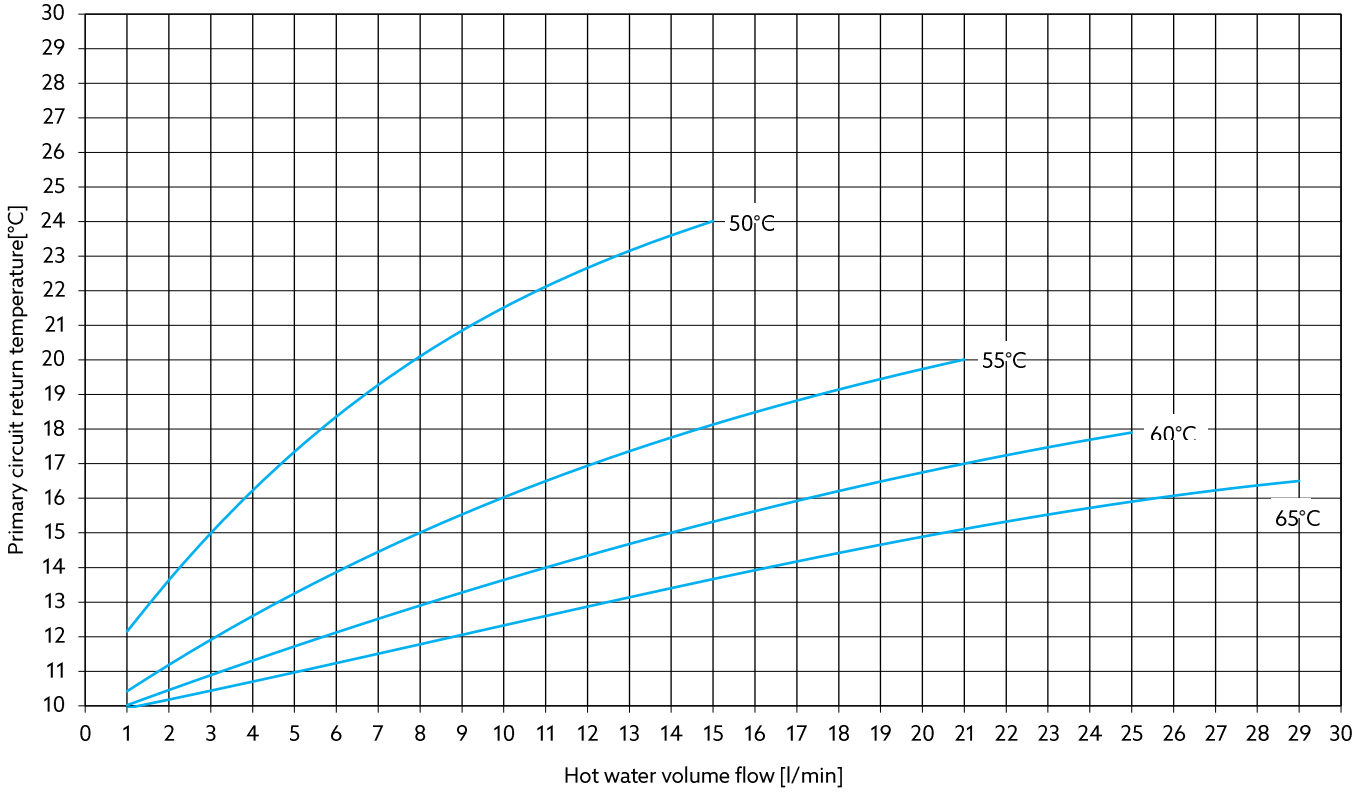
Performance range 2: Heating of potable water from 10 °C to 50 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



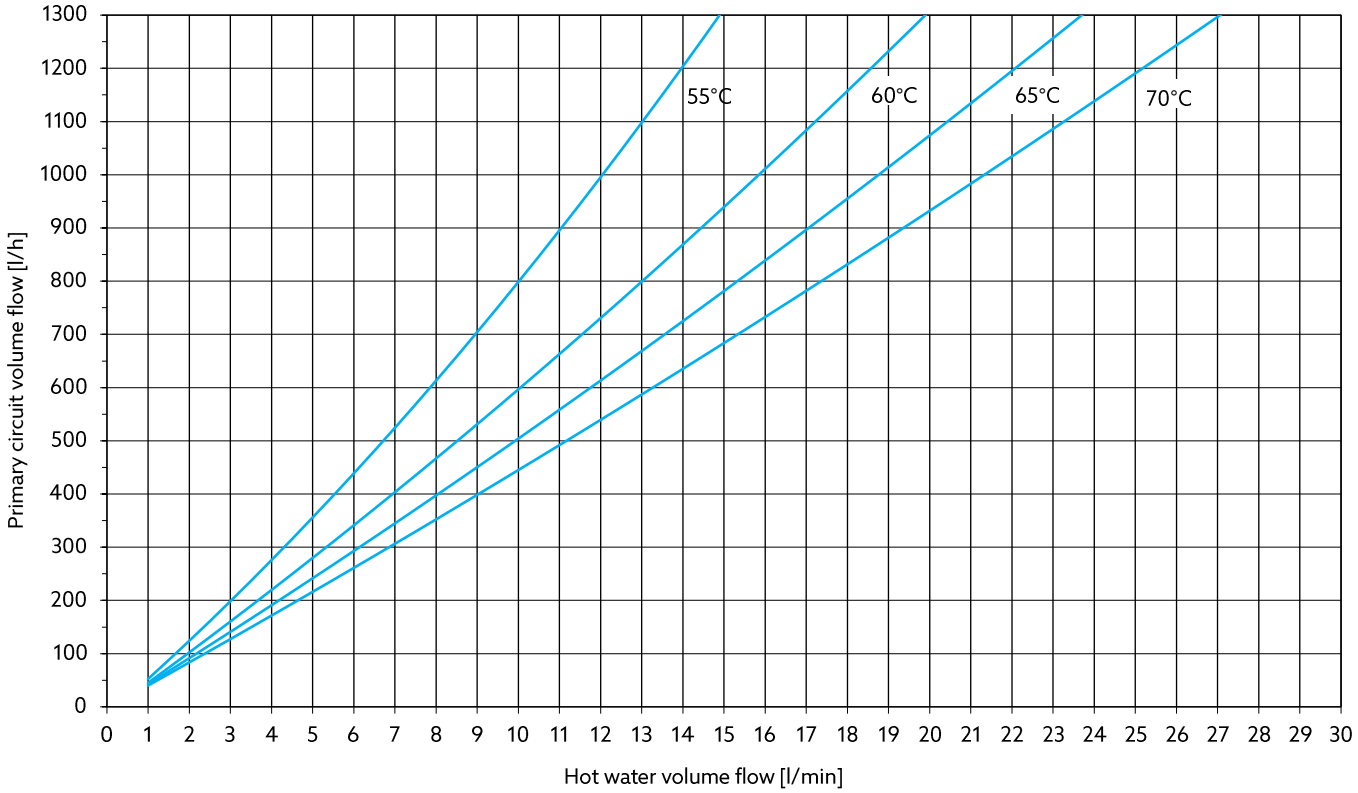
Return temperature of the primary circuit at different flow temperatures



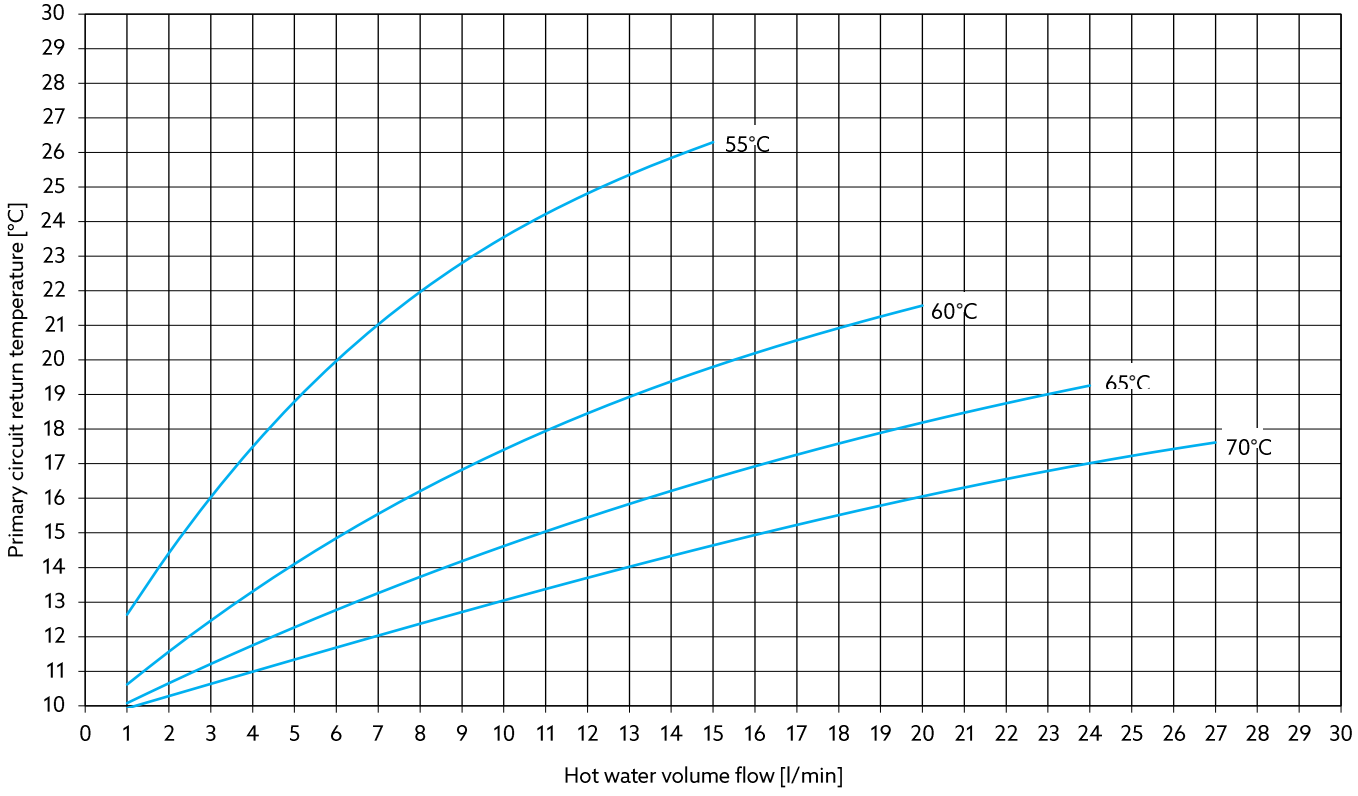
Performance range 2: Heating of potable water from 10 °C to 55 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



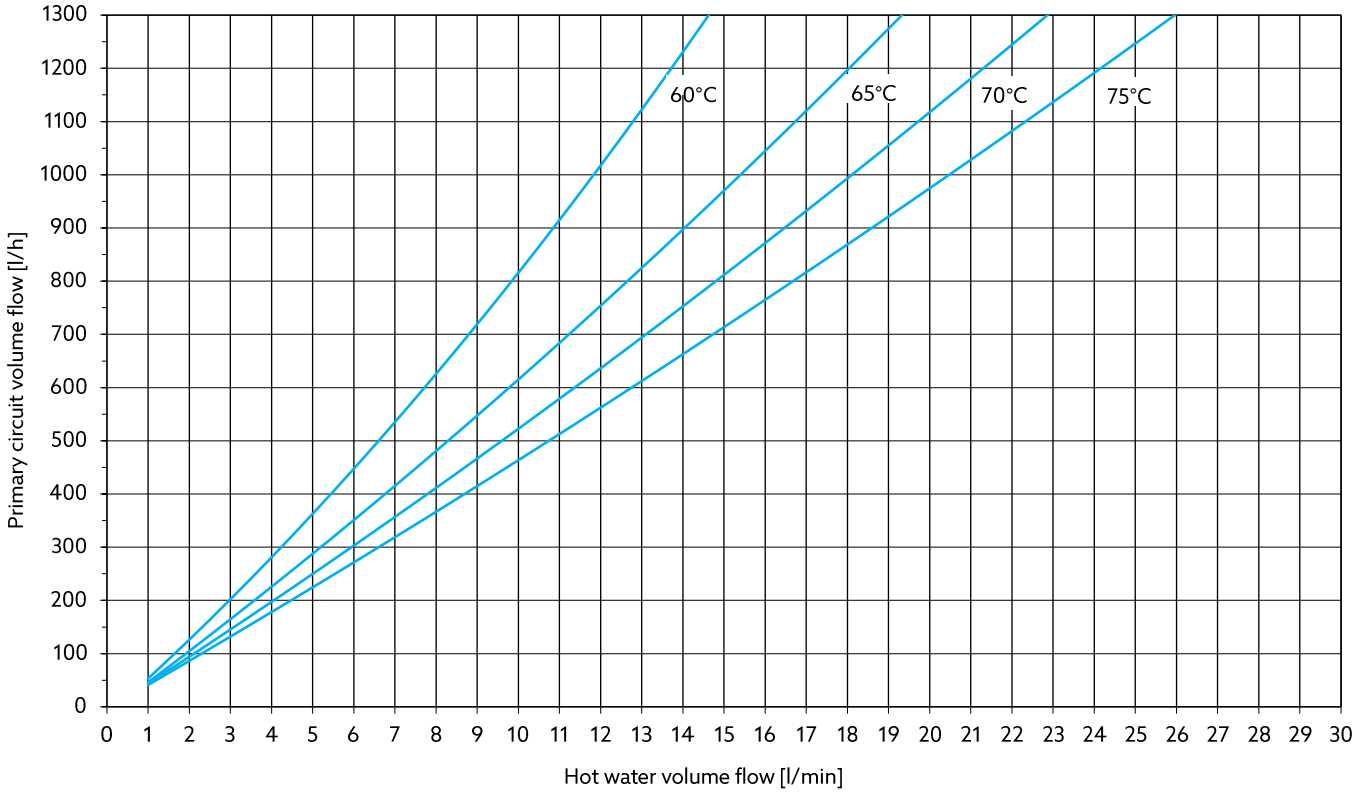
Return temperature of the primary circuit at different flow temperatures



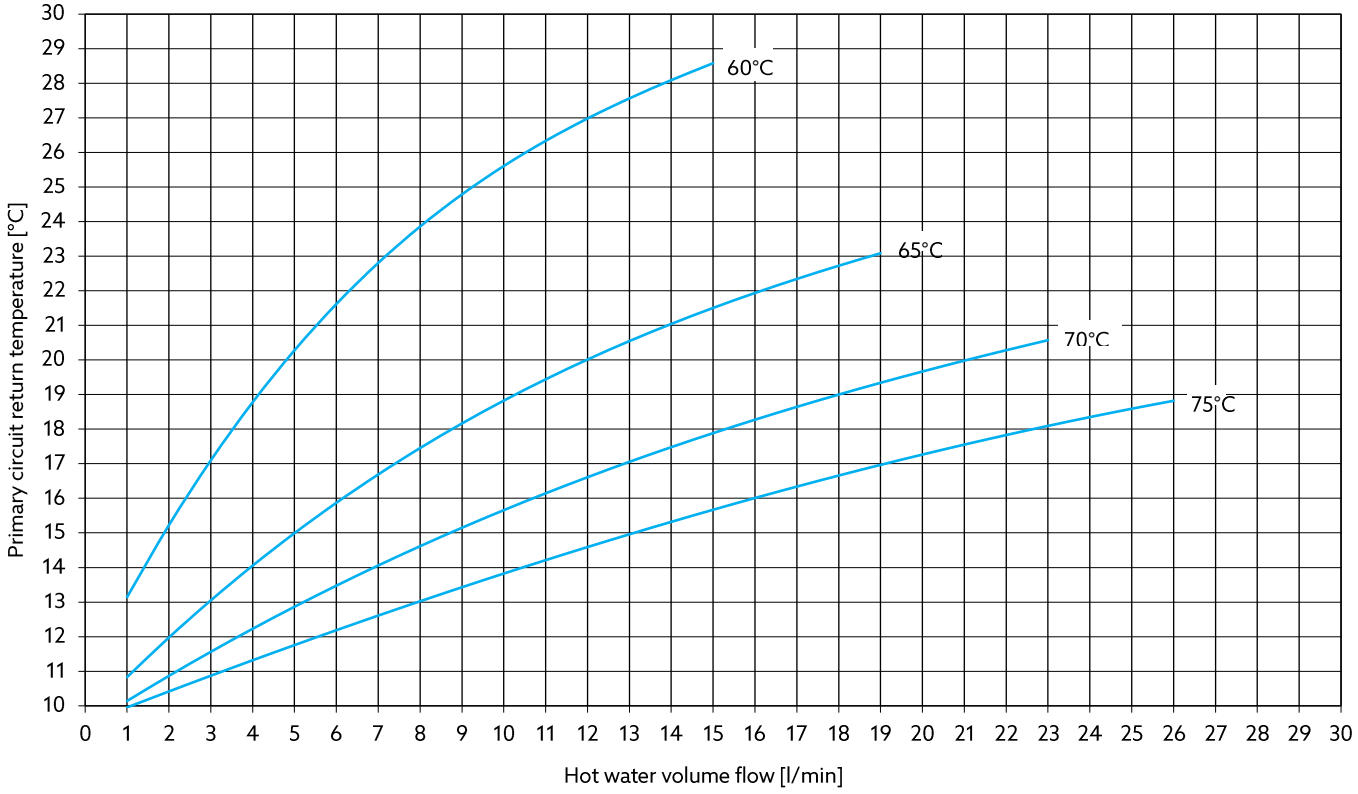
Performance range 2: Heating of potable water from 10 °C to 60 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



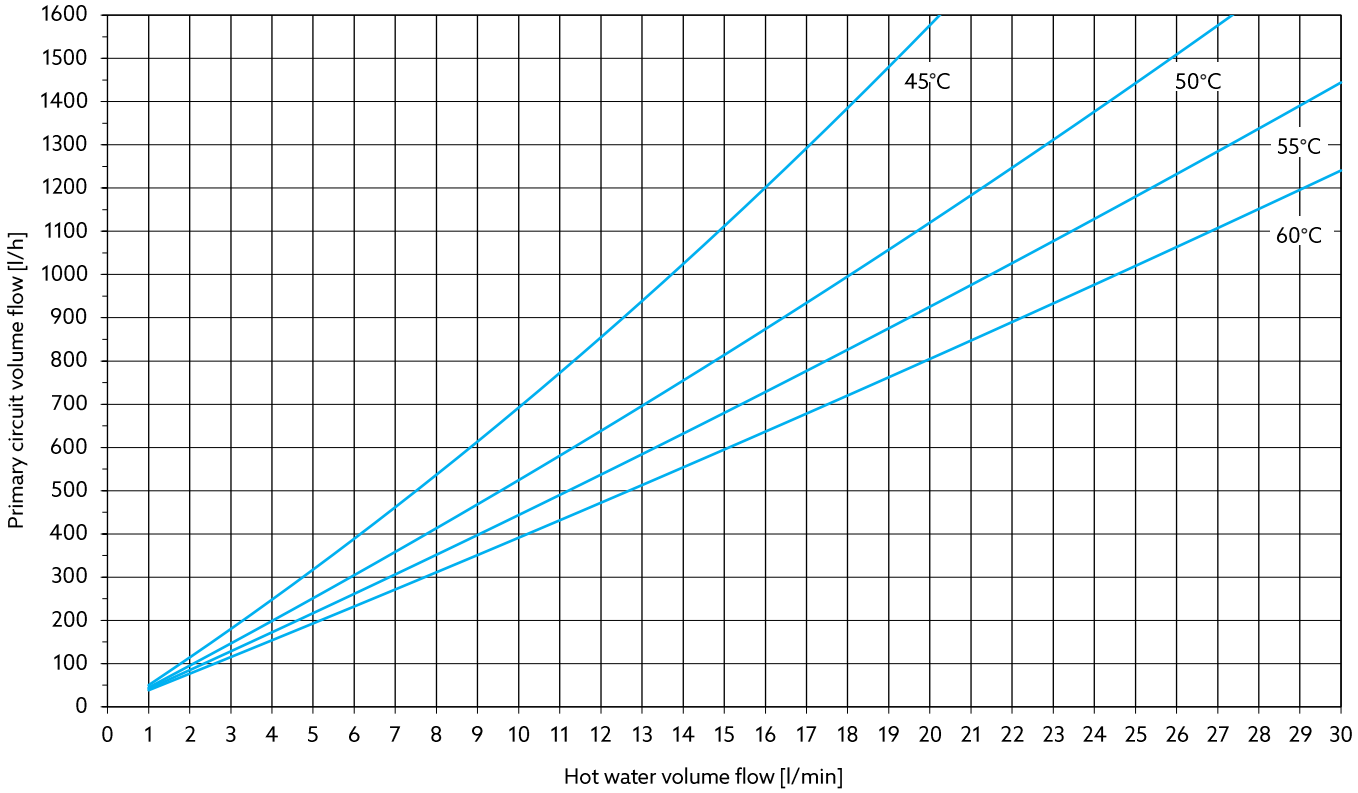
Return temperature of the primary circuit at different flow temperatures



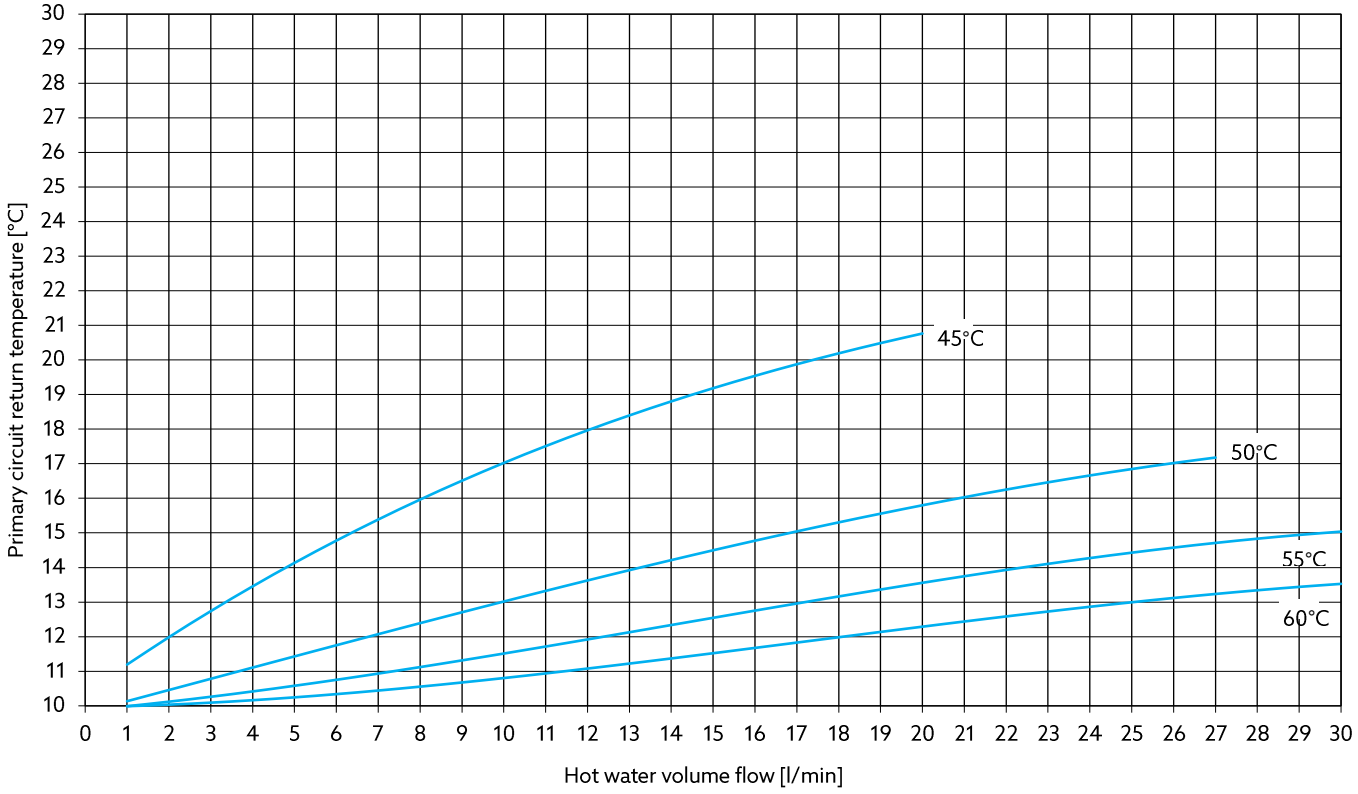
Performance range 3: Heating of potable water from 10 °C to 45 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



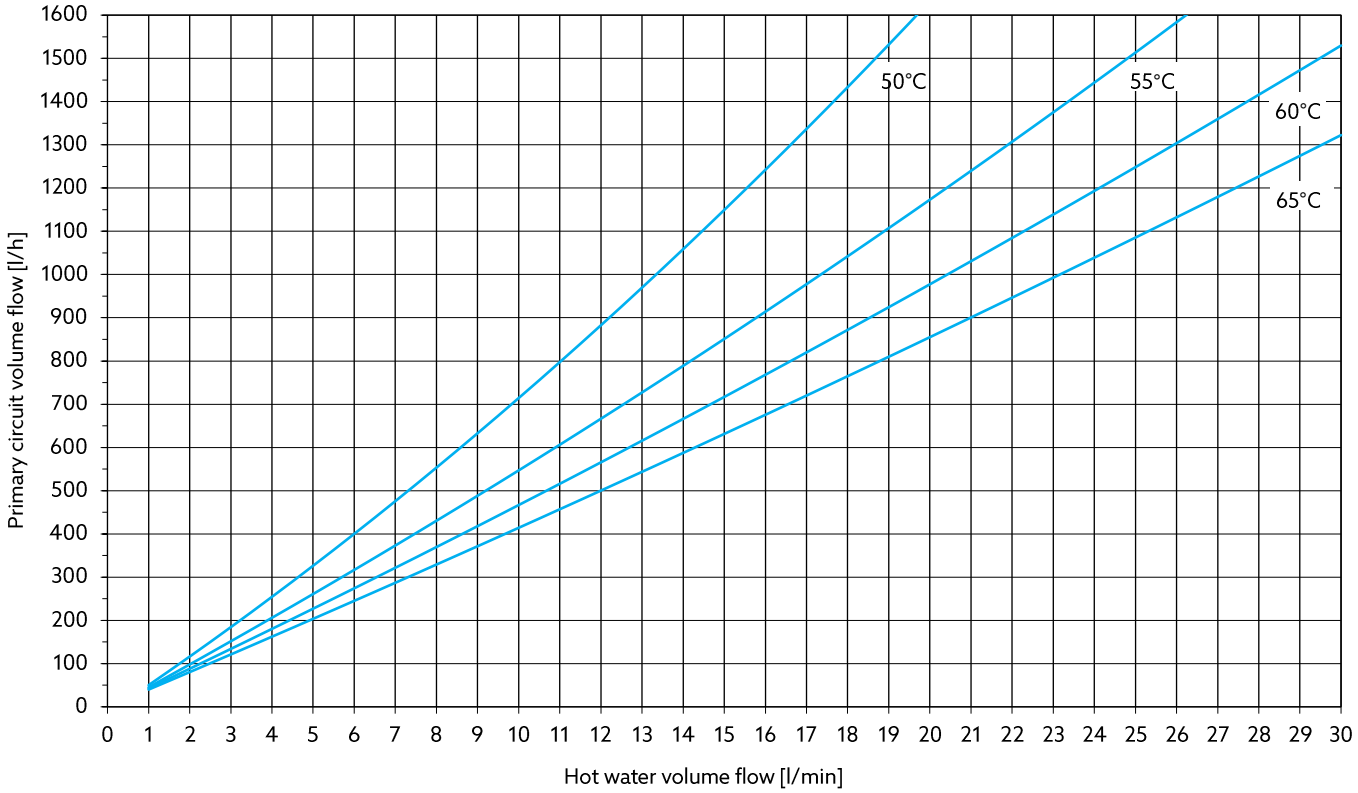
Return temperature of the primary circuit at different flow temperatures



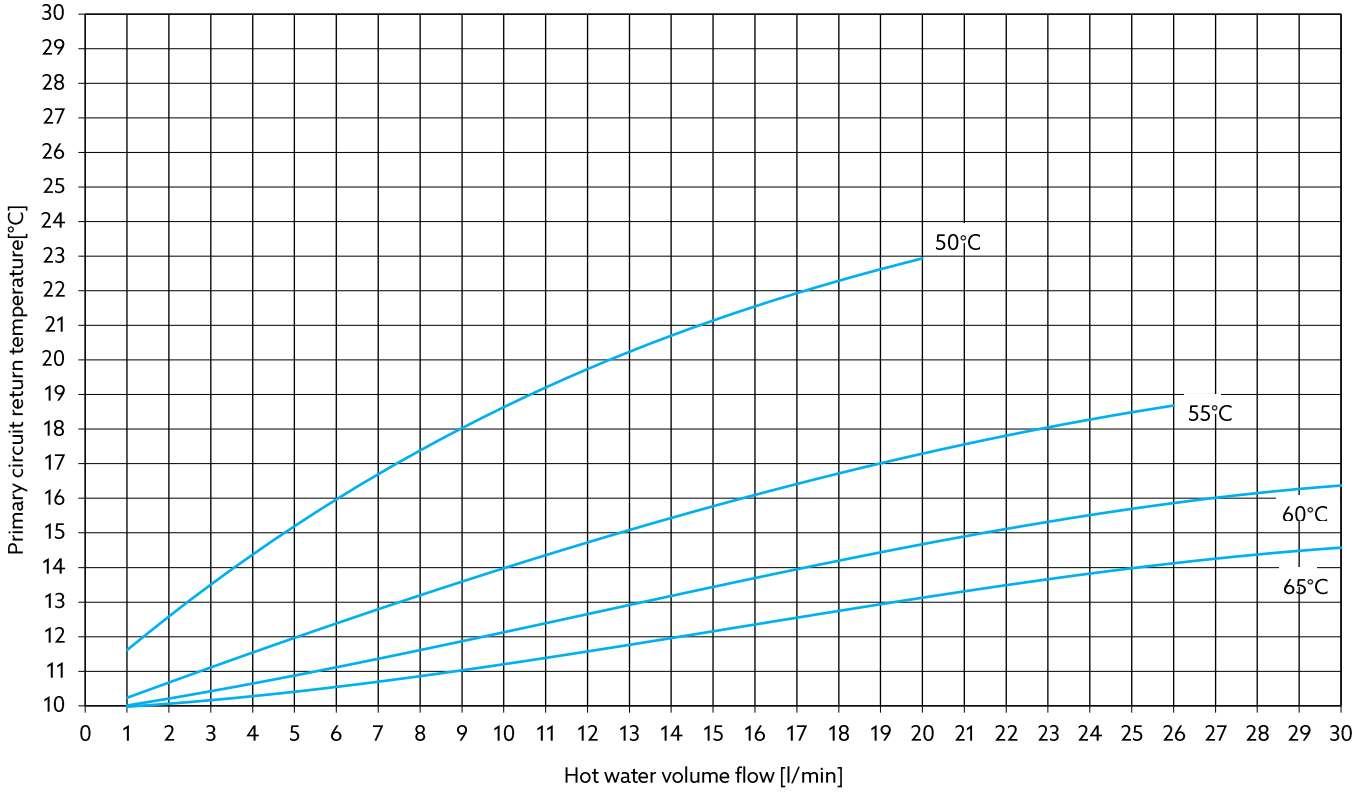
Performance range 3: Heating of potable water from 10 °C to 50 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



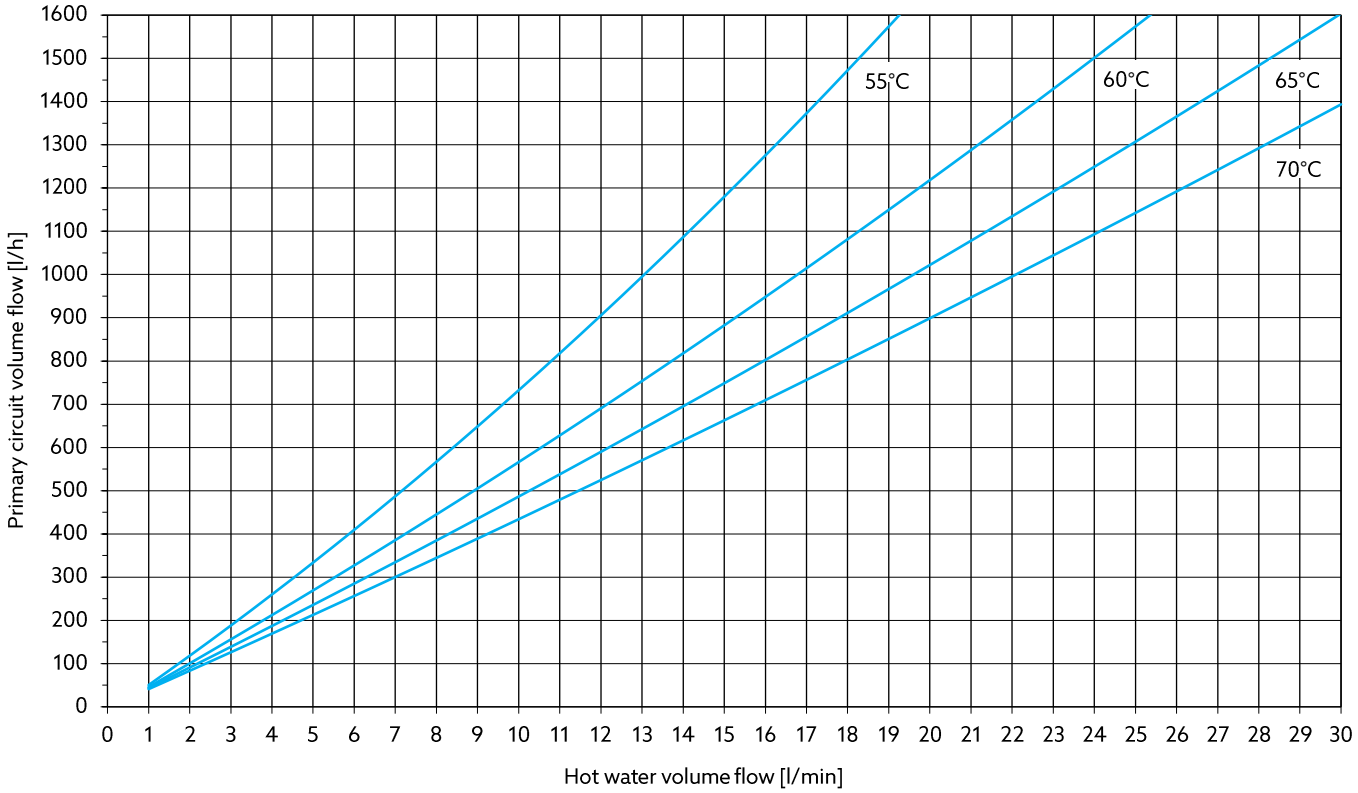
Return temperature of the primary circuit at different flow temperatures



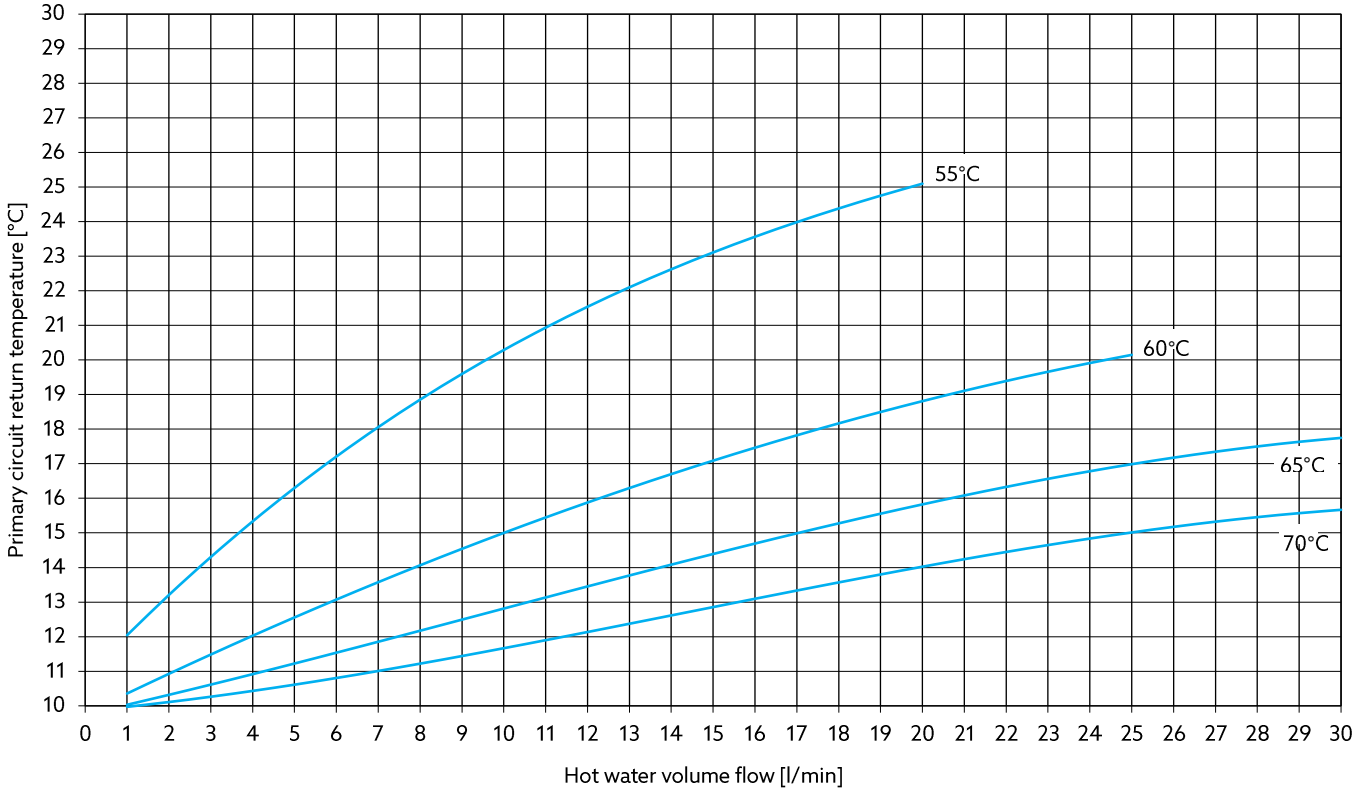
Performance range 3: Heating of potable water from 10 °C to 55 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



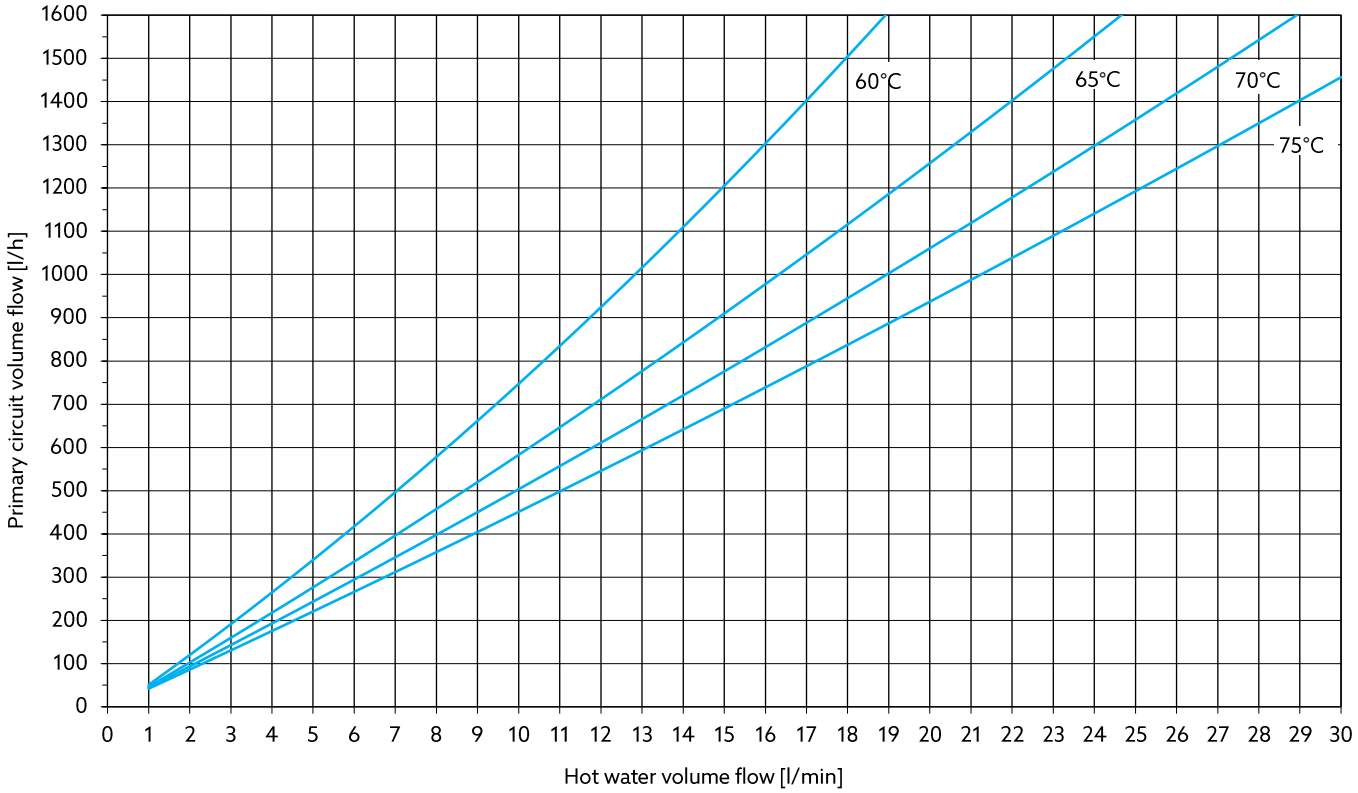
Return temperature of the primary circuit at different flow temperatures



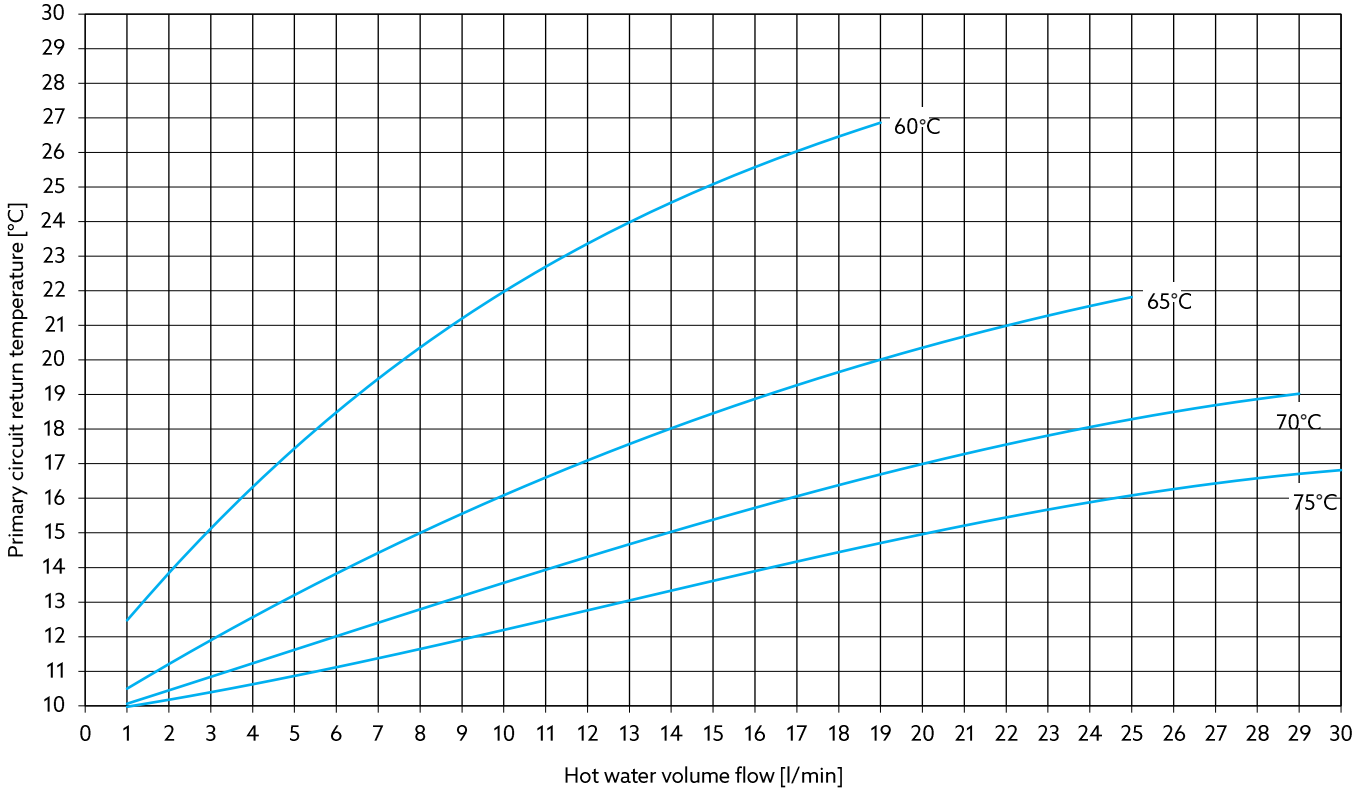
Performance range 3: Heating of potable water from 10 °C to 60 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



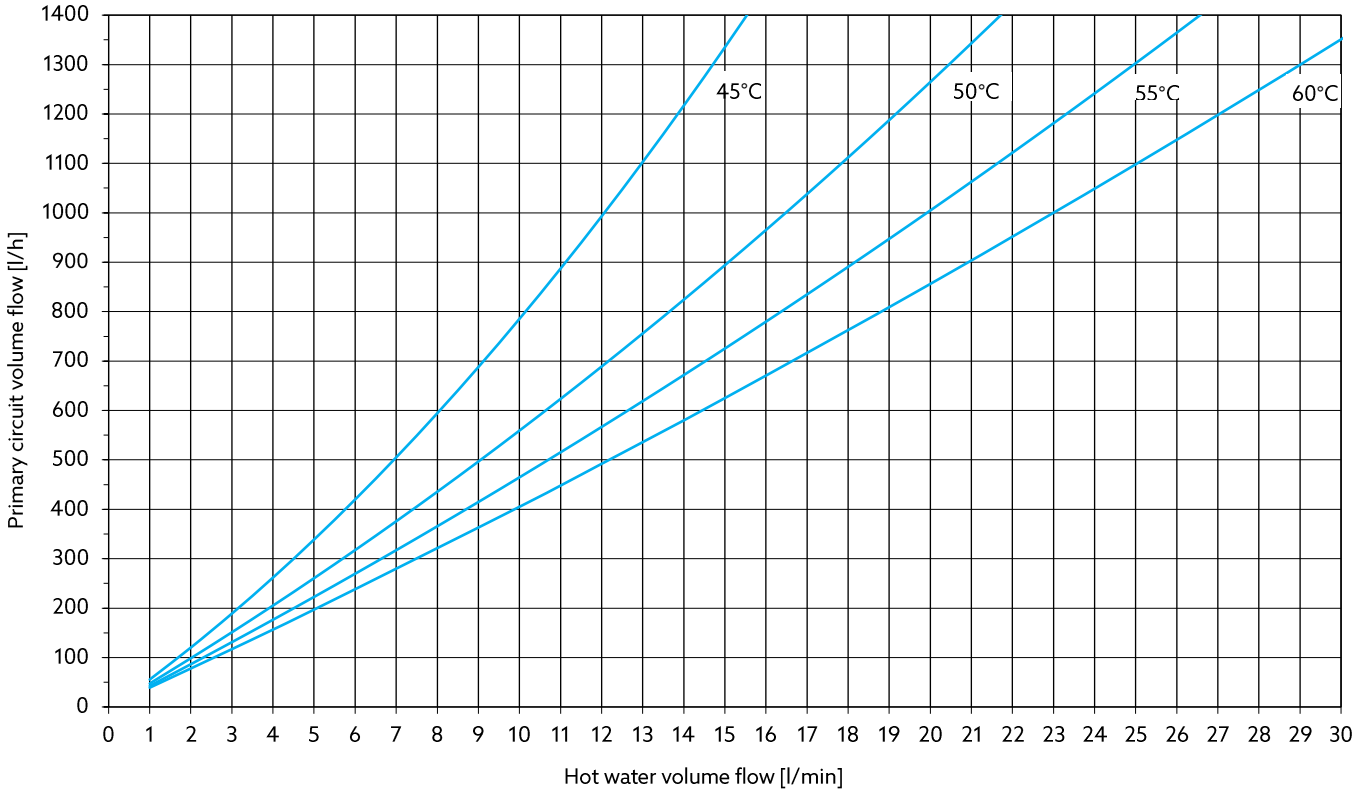
Return temperature of the primary circuit at different flow temperatures



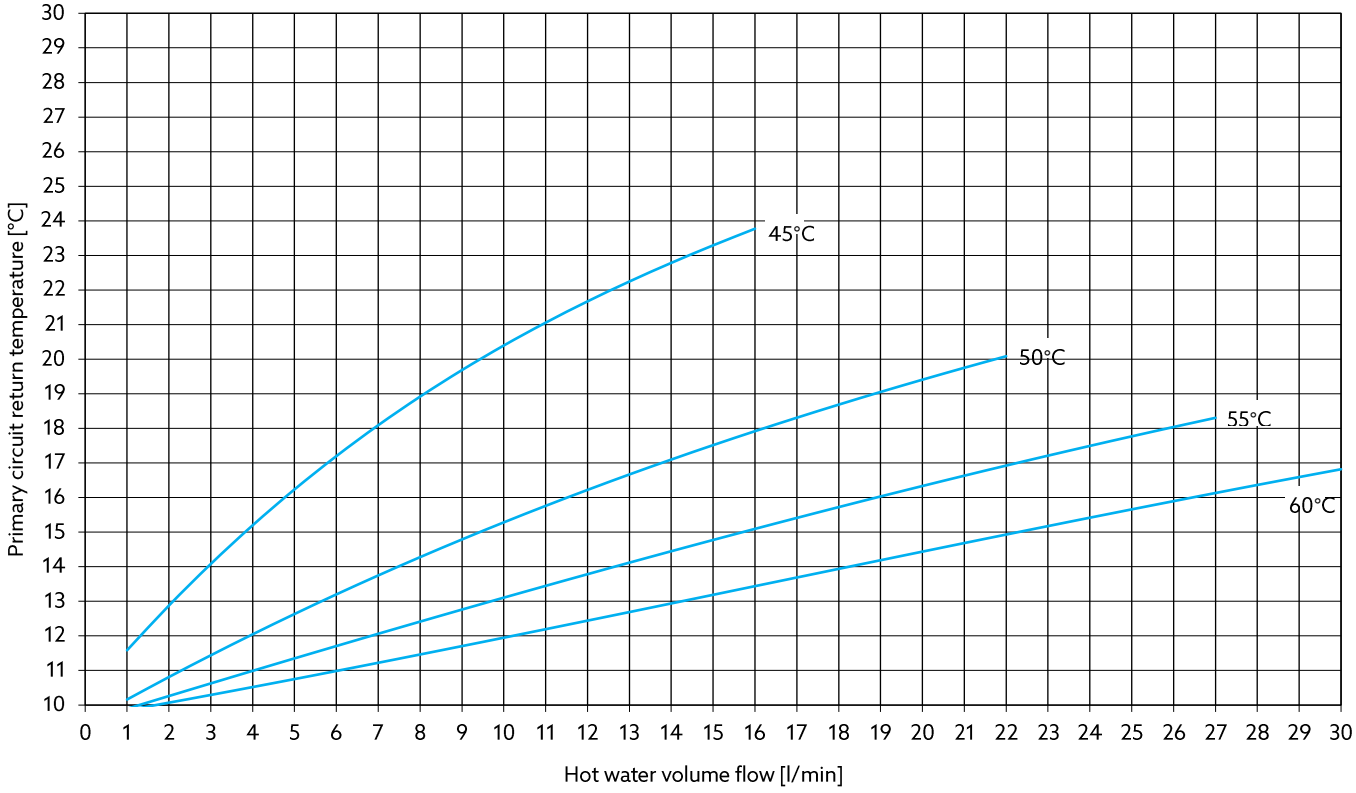
Double-walled version: Heating of potable water from 10 °C to 45 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



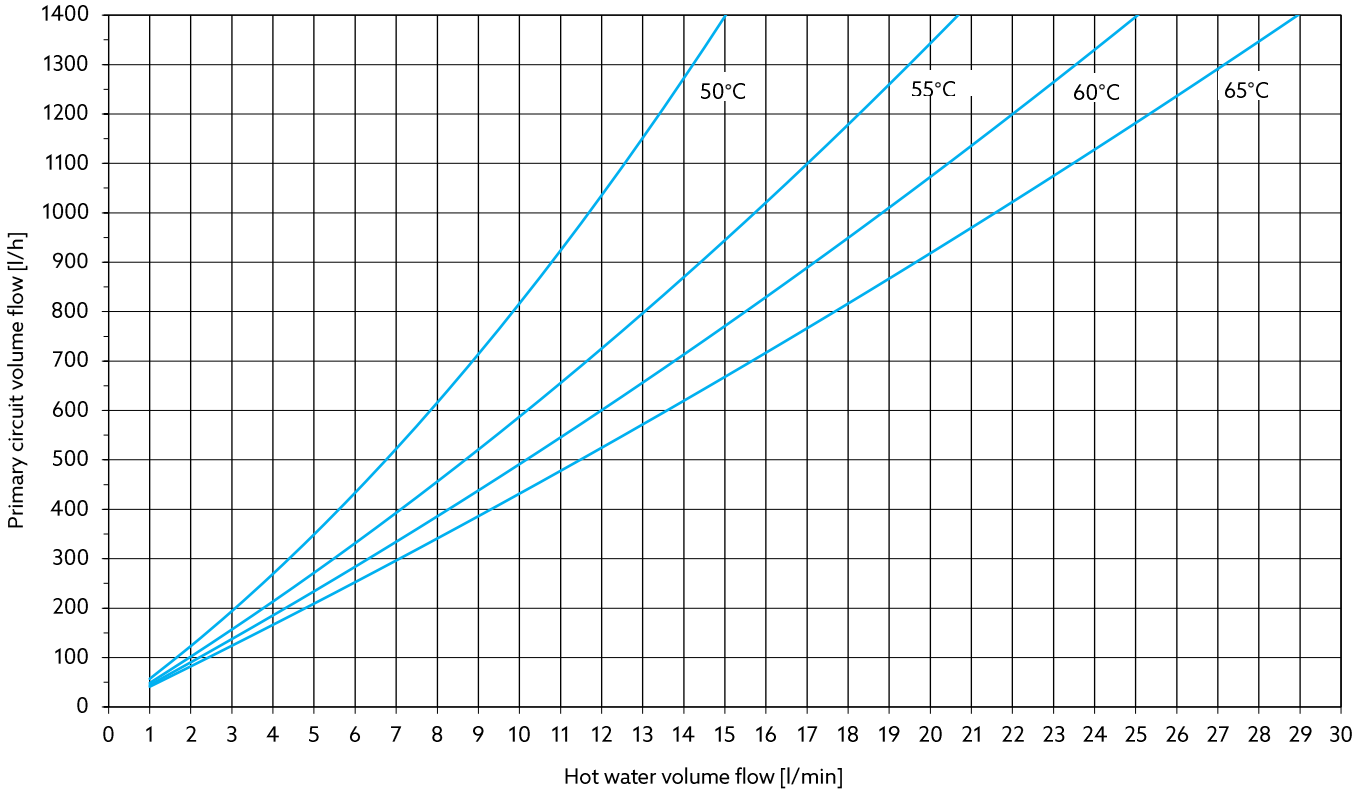
Return temperature of the primary circuit at different flow temperatures



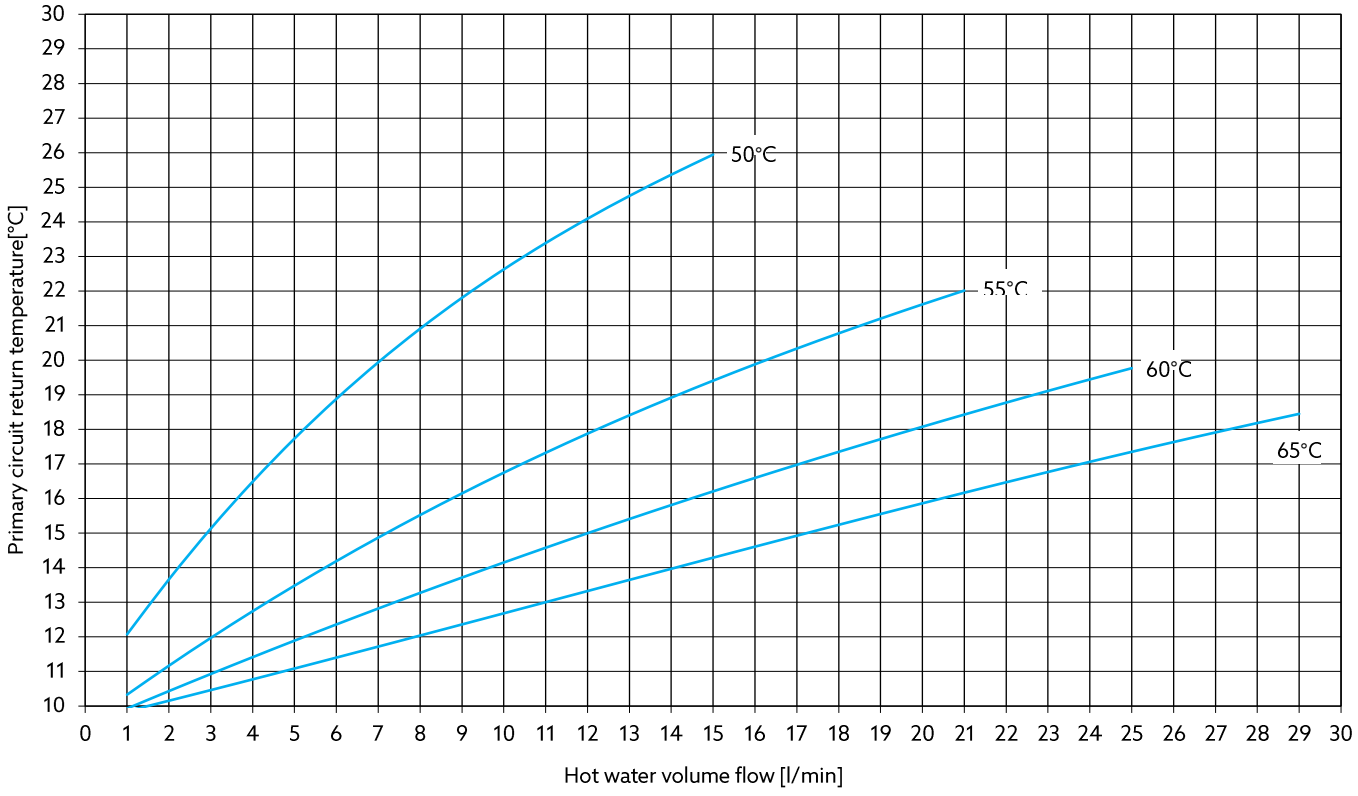
Double-walled version: Heating of potable water from 10 °C to 50 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



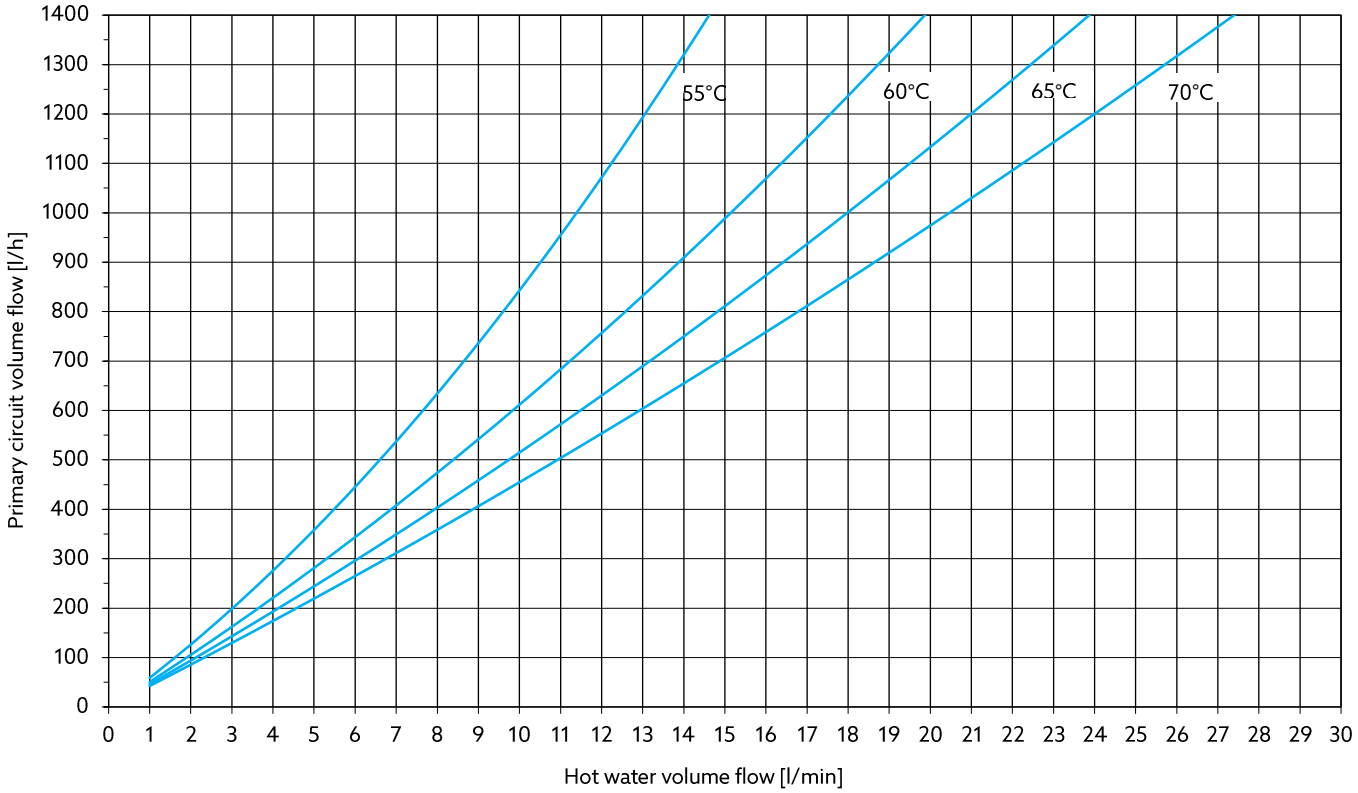
Return temperature of the primary circuit at different flow temperatures



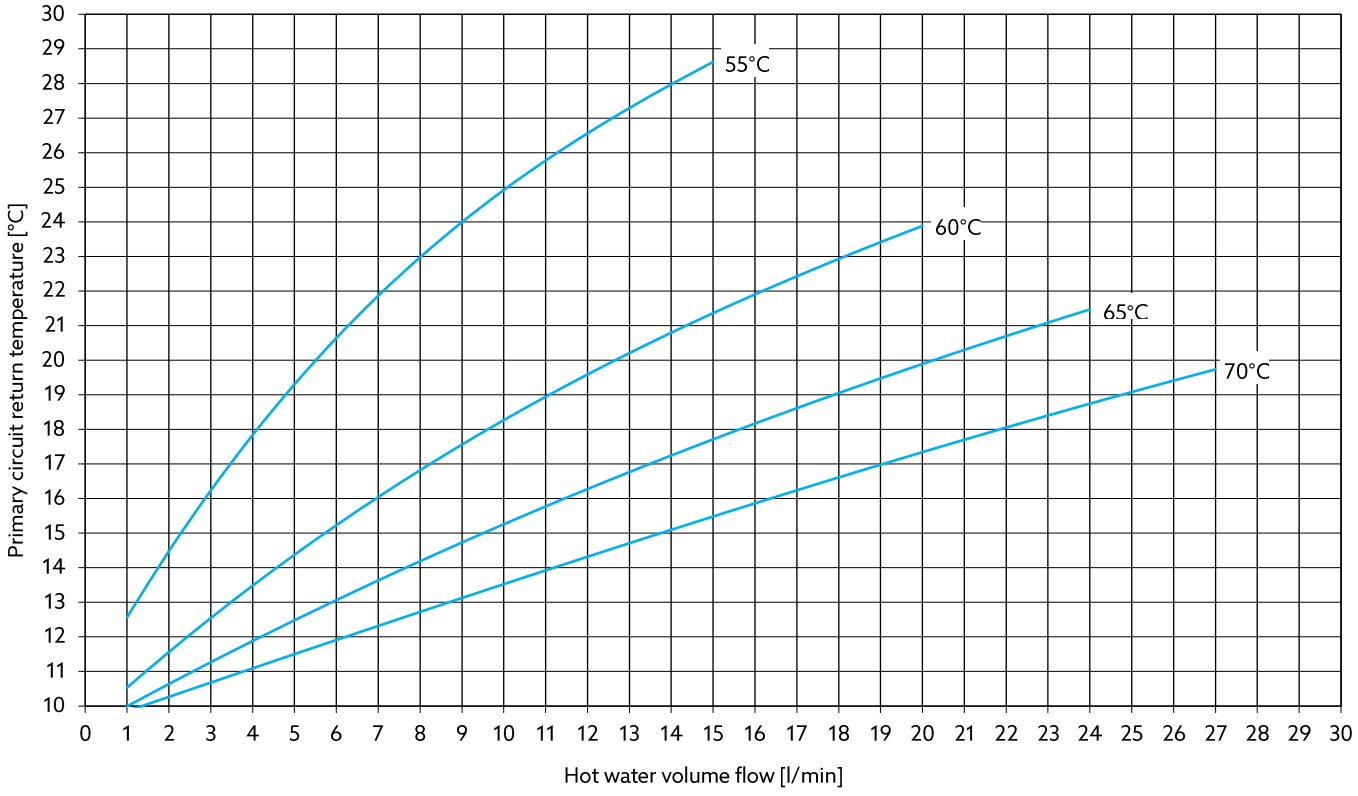
Double-walled version: Heating of potable water from 10 °C to 55 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



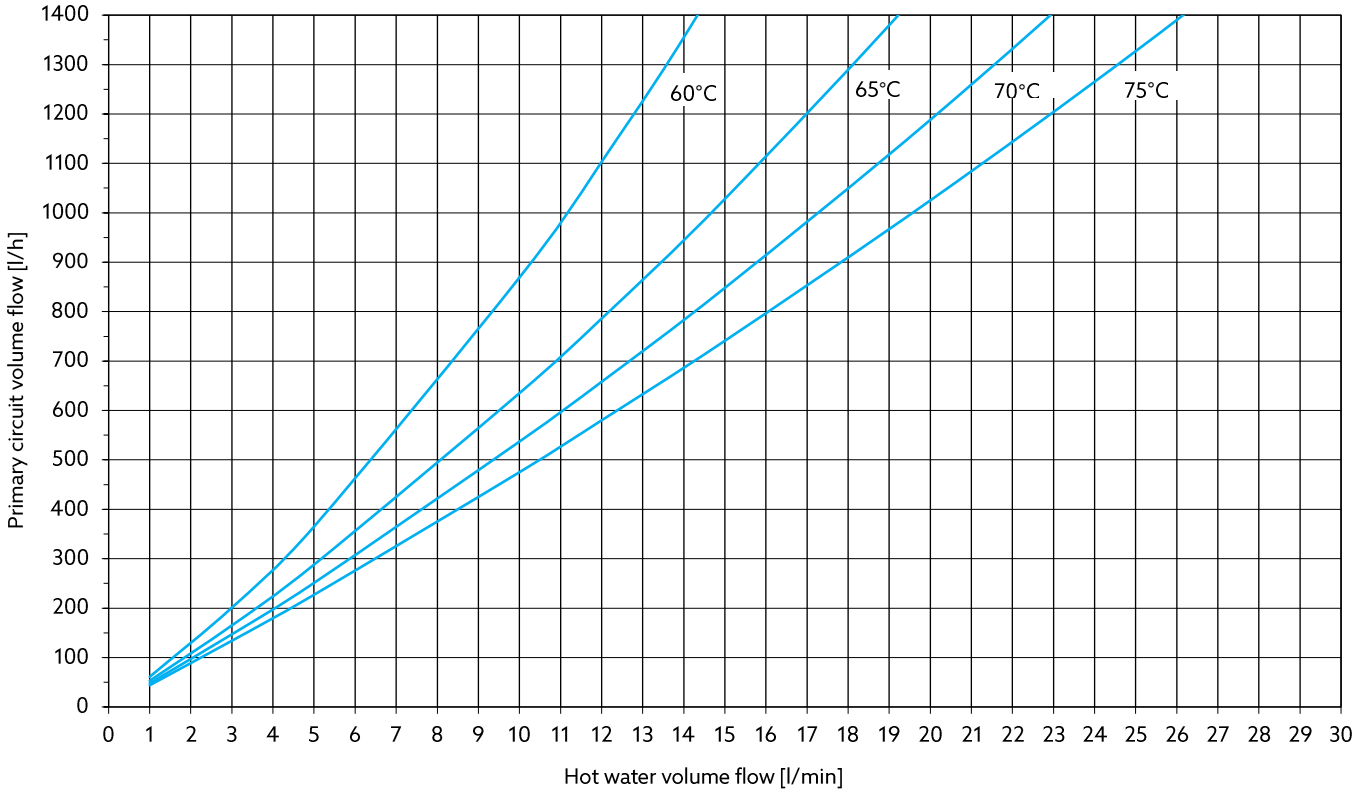
Return temperature of the primary circuit at different flow temperatures



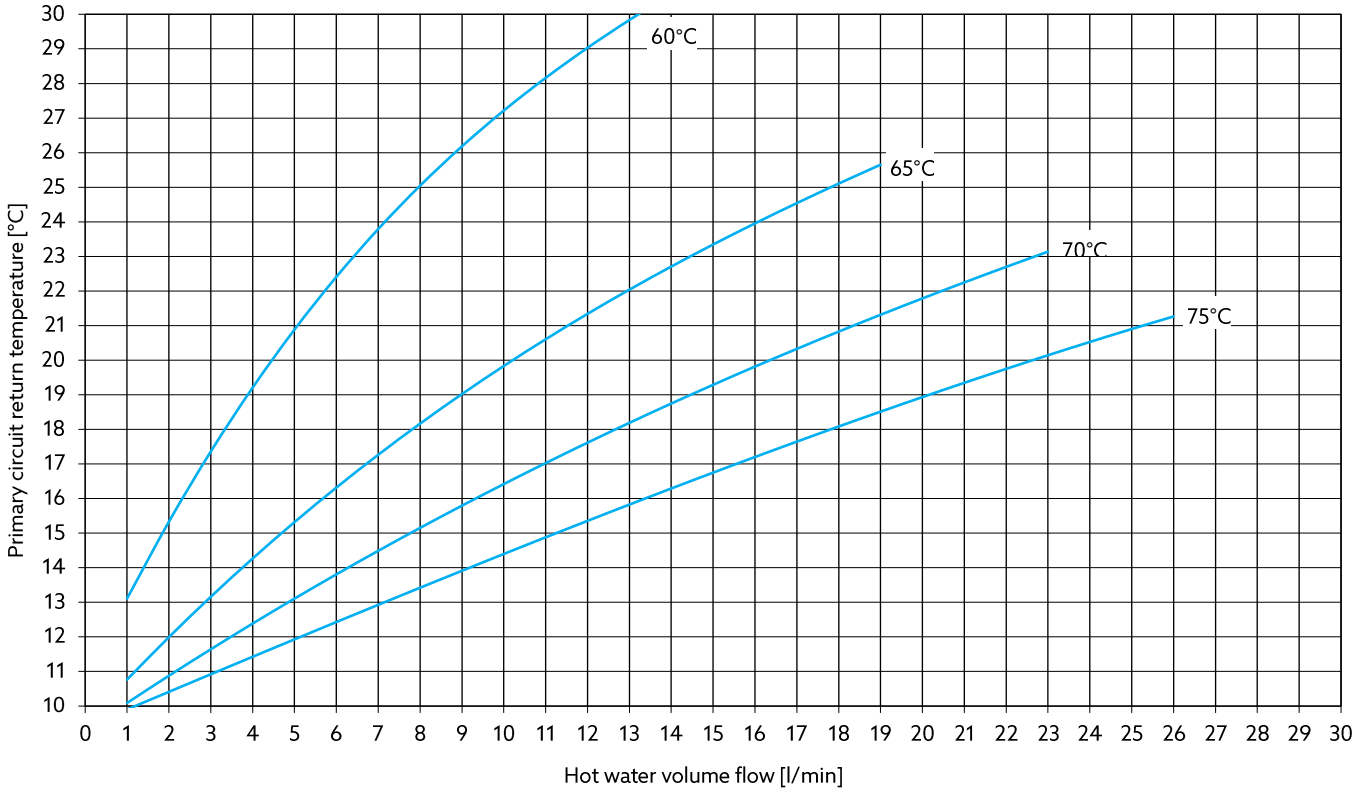
Double-walled version: Heating of potable water from 10 °C to 60 °C

(Performance data according to SPF test procedure)

Volume flow of the primary circuit at different flow temperatures



Return temperature of the primary circuit at different flow temperatures



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