

## Regumaq X-70

### Fresh Water Station



The Regumaq X-70 fresh water station is an electronically controlled product assembly with heat exchanger for hygienic potable water heating according to the continuous flow principle for connection to a buffer storage cylinder. Depending on the temperature and the volume flow on the potable water side, the circulation pump on the heating side is speed-controlled. When selecting the fresh water station, it is necessary to consider the water quality of the area of use.

The stations consist of a plate heat exchanger, a controller, a circulation pump, a throttle valve with actuator, a volume flow sensor, a safety valve, temperature sensors, fill and drain ball valves and ball valves.

The particularly powerful stations are characterised by high draw-off capacities at low excess temperatures. Remote access, networking and visualisation is possible via the CS-BS-1 data logger. The controller data can be set and read out via a web interface or be passed on to the building management system (BMS). With the help of the Regtronic KM-IP communication module, the controller can be integrated into the building automation system via a BACnetIP or a Modbus TCP interface.

### Features

- + Particularly powerful
- + Potable water circulation modularly extendable
- + Monitoring of potable water hygiene vis CS-BS-1 data logger or Regtronic KM-IP communication module possible

### General data

|                                   |                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Variants</b>                   | With copper brazed heat exchanger or copper brazed heat exchanger with Sealix® protective layer |
| <b>Nominal size</b>               | DN 32                                                                                           |
| <b>Max. operating temperature</b> | 95 °C                                                                                           |
| <b>Max. operating pressure</b>    | 10 bar (PN 10)                                                                                  |
| <b>Weight</b>                     | 42 kg                                                                                           |

# Product Details

## Technical Data

### Dimensions and connections

|                                                                      |                          |
|----------------------------------------------------------------------|--------------------------|
| <b>Width x Height x Depth</b>                                        | 660 x 875 x 300 mm       |
| <b>Primary and secondary circuit connections</b>                     | G 1 ½ ET, flat sealing   |
| <b>Circulation connection</b>                                        | G 1 ET, flat sealing     |
| <b>Flush, fill and drain ball valve connections</b>                  | G ¾ ET, for hose fitting |
| <b>Distance between pipe centres – primary circuit connections</b>   | 220 mm                   |
| <b>Distance between pipe centres – secondary circuit connections</b> | 205 mm                   |
| <b>Centre distance to wall – primary circuit</b>                     | 150 mm                   |
| <b>Centre distance to wall – secondary circuit</b>                   | 90 mm                    |
| <b>Distance between sealing surfaces – primary to secondary side</b> | 800 mm                   |

### Hydraulic data: Primary circuit

|                 |                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Medium</b>   | 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. |
| <b>Kv value</b> | 6.9                                                                                                                                                                                 |

### Hydraulic data: Secondary circuit

|                                                |                                                                                                      |
|------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Medium</b>                                  | Potable water. Observe the specifications of the Oventrop information sheet on corrosion protection. |
| <b>Kv value</b>                                | 6.6                                                                                                  |
| <b>Safety valve</b>                            | 10 bar                                                                                               |
| <b>Setting range potable water temperature</b> | 20...75 °C                                                                                           |

### Electrical data: Pump

|                          |                             |
|--------------------------|-----------------------------|
| <b>Pump</b>              | Wilo PARA 25-180/9-87/iPWM2 |
| <b>Power consumption</b> | 3...87 W                    |

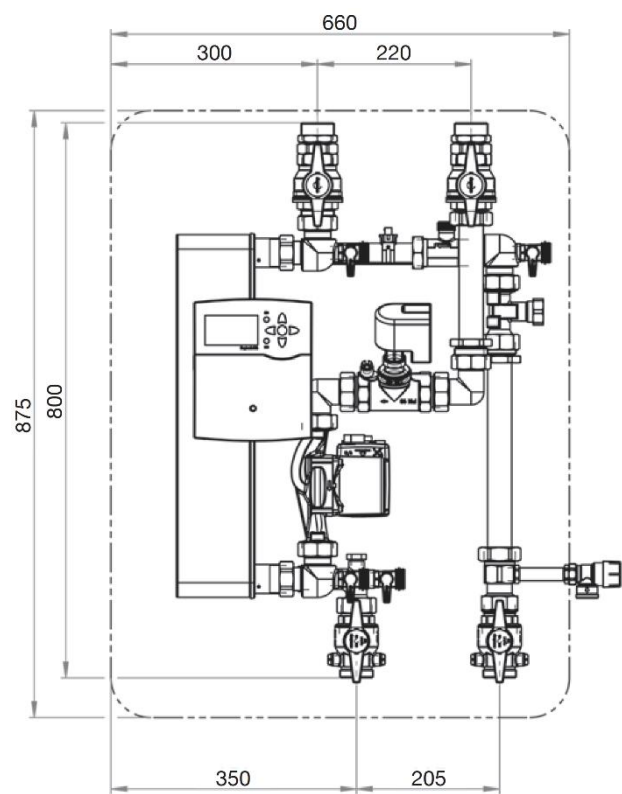
### Material

|                                                                   |                                                                                                                                           |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Heat exchanger copper brazed</b>                               | Plate material: Stainless steel 1.4401<br>Connections: Stainless steel 1.4404<br>Brazing material: Copper                                 |
| <b>Heat exchanger copper brazed with Sealix® protective layer</b> | Plate material: Stainless steel 1.4401<br>Connections: Stainless steel 1.4404<br>Brazing material: Copper<br>Protective layer: SiO2 basis |
| <b>Pipes</b>                                                      | Stainless steel 1.4404                                                                                                                    |
| <b>Valves and fittings</b>                                        | Brass / DZR brass / bronze                                                                                                                |
| <b>Seals</b>                                                      | EPDM                                                                                                                                      |
| <b>Insulation</b>                                                 | EPP                                                                                                                                       |

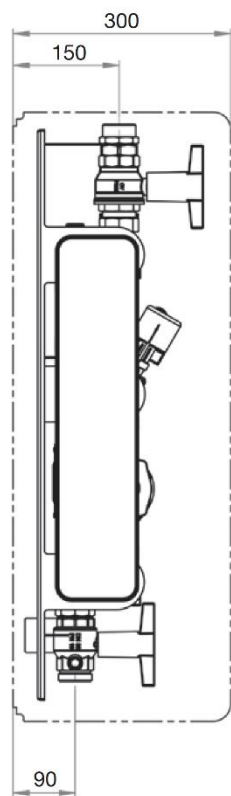
## Applications

The Regumaq X-70 fresh water station is an electronically controlled product assembly with heat exchanger, which is intended exclusively for heating potable water for individual or a large number of draw-off points in building complexes or in the commercial sector. The principle of system separation is effective in the station, i.e. the thermal energy from a storage cylinder circuit is indirectly transferred to the potable water circuit. The thermal energy (max. 95°C) may only be provided by a buffer storage cylinder. Parallel operation of several Regumaq X-70 is permissible. Any use of the fresh water station beyond and/or different from this is considered unintended use. The applies in particular to the passage of media other than heating water in the storage cylinder circuit and fresh water in the potable water circuit. Direct connection of the fresh water station to local and/or district heating networks is not permitted. Parallel operation with other heating system components, such as heating circuit stations is not permitted. The manufacturer is not liable for damage resulting from unintended use of the station. The product is only to be used in a technically perfect condition and in accordance with its intended use, in a safety-conscious and hazard-conscious manner and in compliance with all operating instructions.

# Dimensions



Dimensions Regumaq X-70 (front view)



Dimensions Regumaq X-70 (side view)

# Selection

## Item Numbers

### Regumaq X-70

| Description                                                                         |                                                            | Item no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------|----------|
|  | Heat exchanger copper brazed                               | 1381480  |
|                                                                                     | Heat exchanger copper brazed with Sealix® protective layer | 1381482  |

## Accessories

Selected accessories for the Regumaq X-70 station.

| Designation                                                                                        | Item no. |
|----------------------------------------------------------------------------------------------------|----------|
| Potable water circulation set, without circulation pump                                            | 1381590  |
| High-efficiency circulation pump for potable water circulation set, Wilo PARA BZ Z 15-130/7-50/SC  | 1381591  |
| High-efficiency circulation pump for potable water circulation set, Wilo PARA MAXO-Z 25-180-10-F02 | 1381592  |
| Shutoff unit with Hycocn HTZ DN 40 and Aktor M 2P H                                                | 1381078  |
| Regtronic KM-IP communication module BACnet IP or Modbus TCP                                       | 1159094  |
| Collective fault module                                                                            | 1381594  |
| Return stratification ball valve, DN 32, PN 16, IT, brass                                          | 1381192  |
| Return stratification ball valve, DN 40, PN 16, IT, brass                                          | 1381193  |
| Return stratification ball valve, DN 50, PN 16, IT, brass                                          | 1381194  |
| Actuator for stratification ball valve                                                             | 1381199  |
| Installation relay for connecting high-performance pumps (> 1A)                                    | 1152089  |
| Earthing clamp, DN 20...32                                                                         | 1359995  |
| Earthing clamp, DN 40...50                                                                         | 1359996  |
| Aquastrom P water sampling valve, DN 8, PN 10, flame resistant, bronze/stainless steel, G 1/4      | 4209102  |
| Aquastrom P water sampling valve, DN 10, PN 10, flame resistant, bronze/stainless steel, G 3/8     | 4209103  |

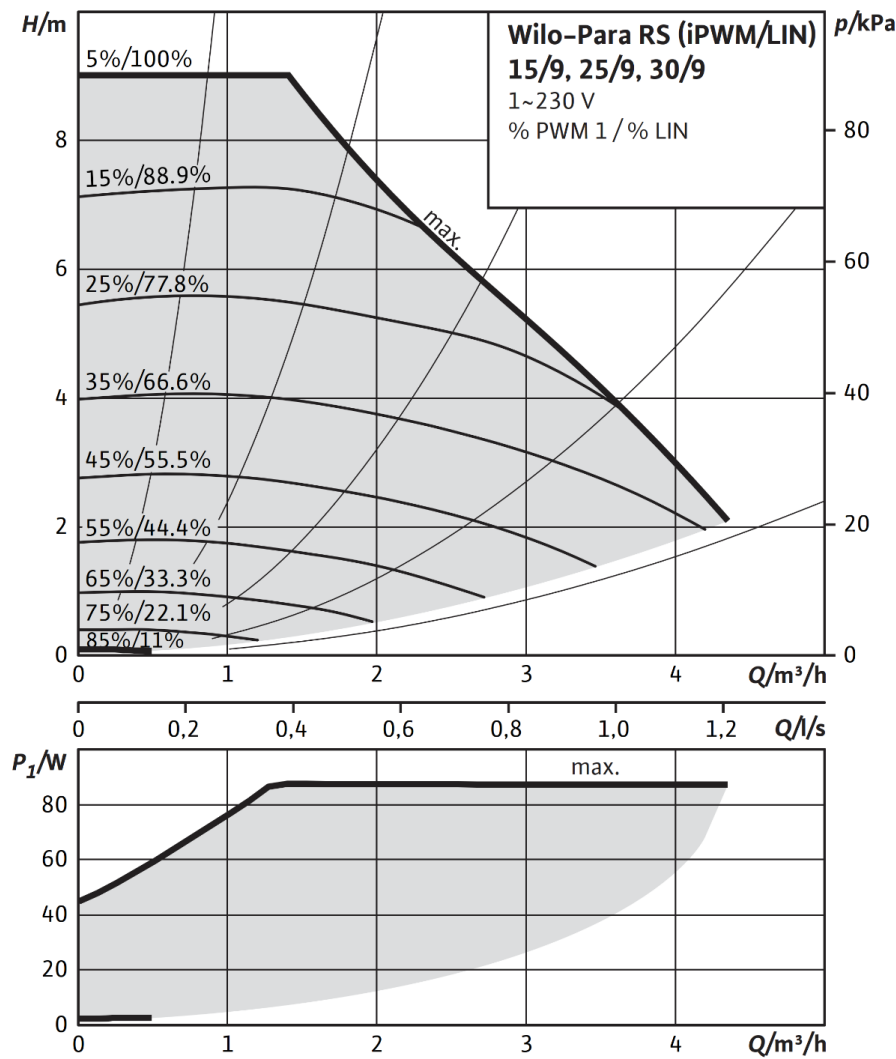
## Spare Parts

Selected spare parts for the Regumaq X-70 station.

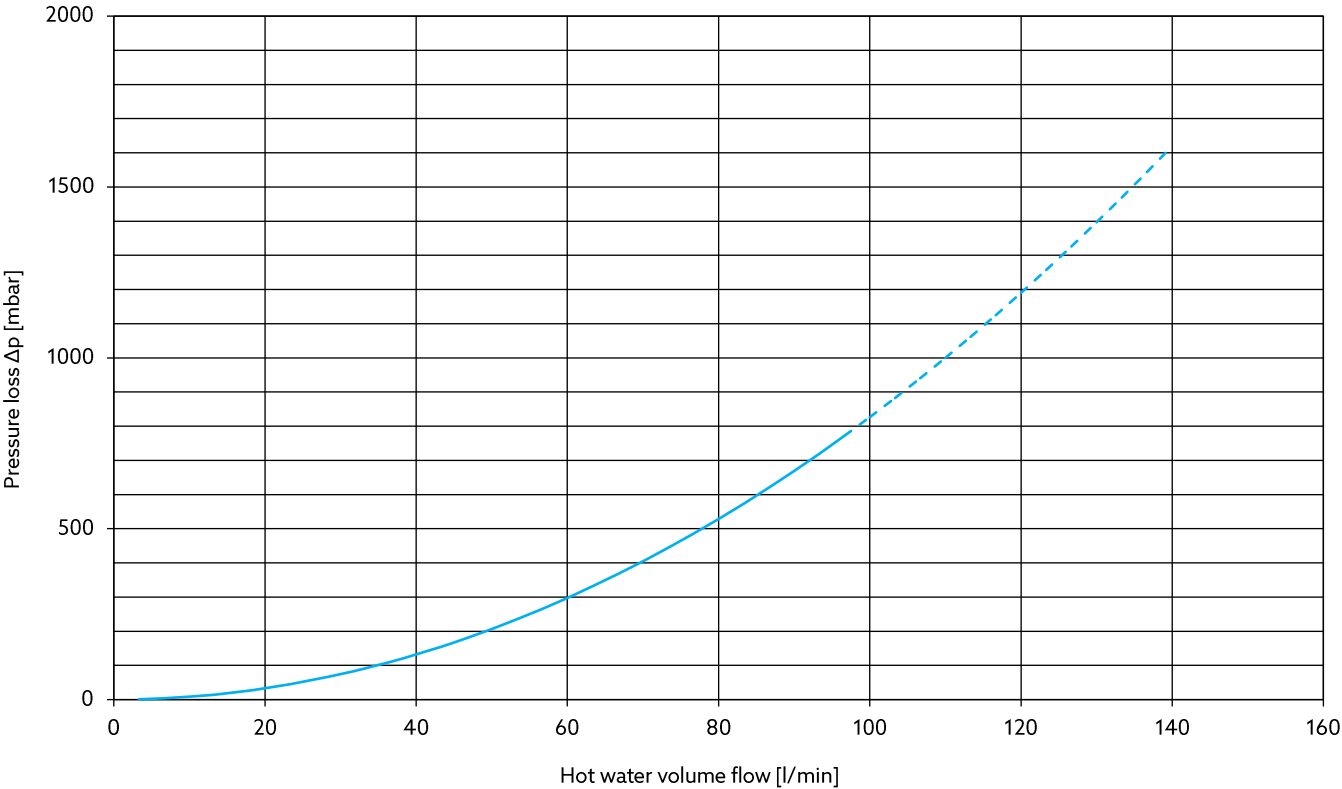
| Designation                                                           | Item no. |
|-----------------------------------------------------------------------|----------|
| Heat exchanger copper brazed                                          | 1381595  |
| Heat exchanger copper brazed with Sealix® protective layer            | 1381584  |
| Ball valve Optibal TW for secondary circuit                           | 4208910  |
| Volume flow sensor (VTY25)                                            | 1381693  |
| Potable water temperature sensor                                      | 1389052  |
| High-efficiency pump for primary circuit, Wilo PARA 25-180/9-87/iPWM2 | 1381499  |
| Valve assembly                                                        | 9010506  |
| Actuator                                                              | 9010507  |
| Regtronic RQ controller                                               | 1381597  |

# Design charts

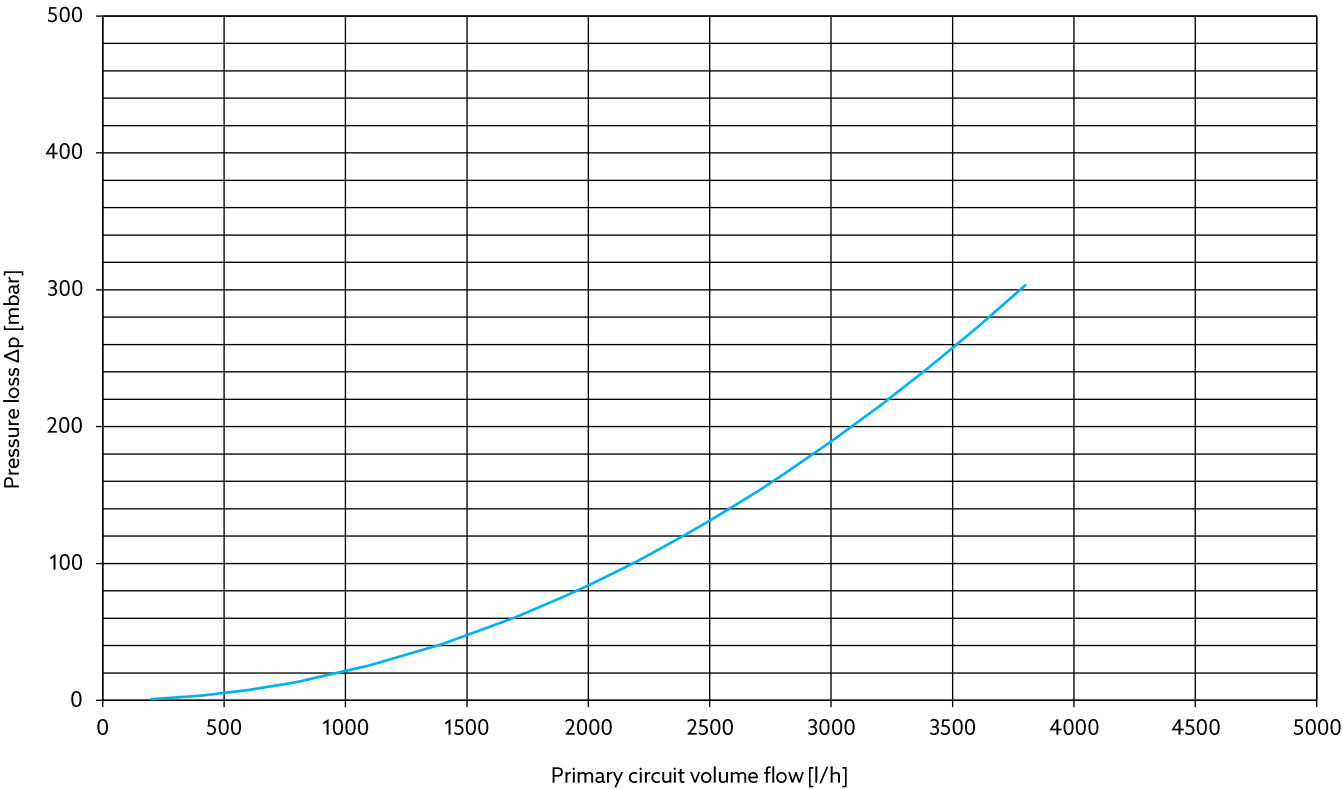
## Characteristic line Wilo PARA 25-180/9-87/iPWM2



Pressure loss of the potable water circuit for potable water heating



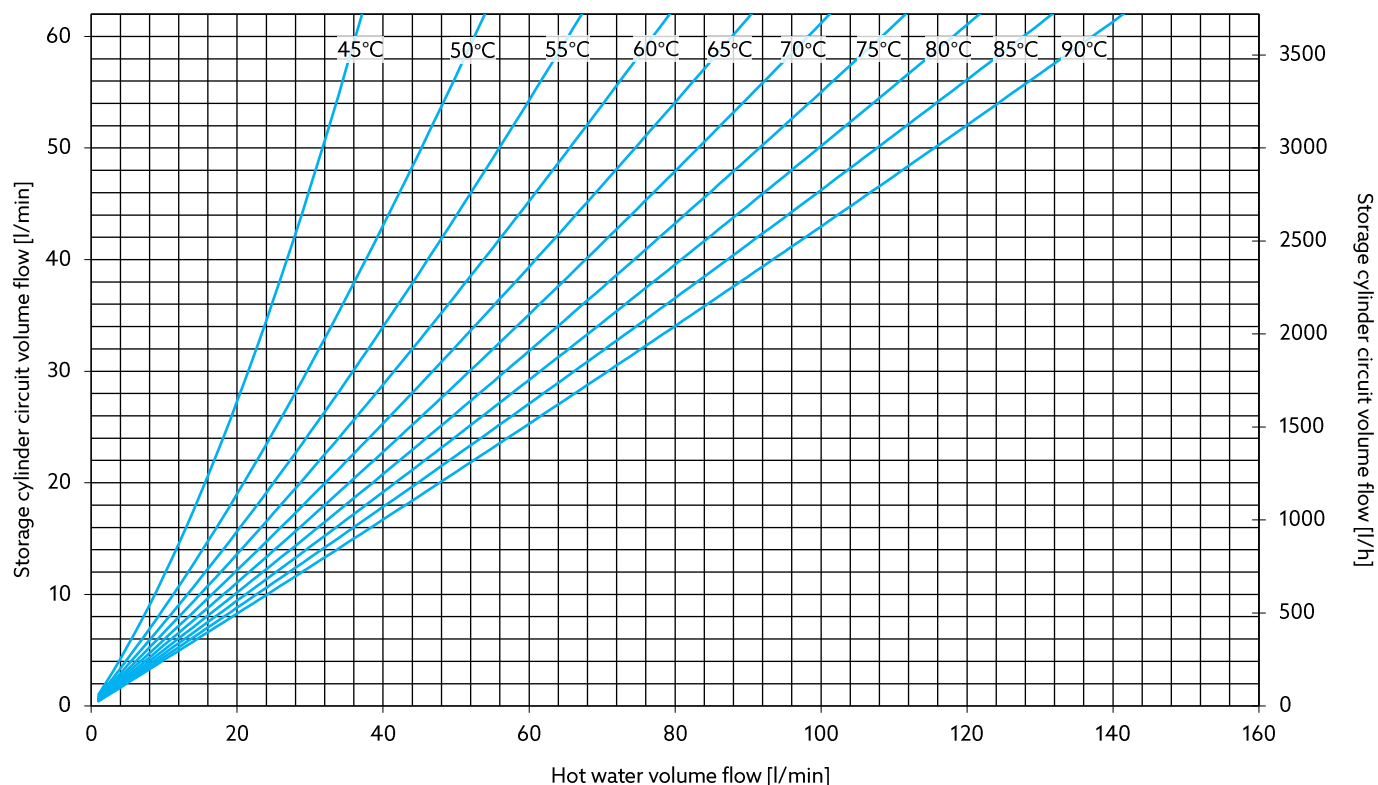
Pressure loss of the primary circuit for potable water heating



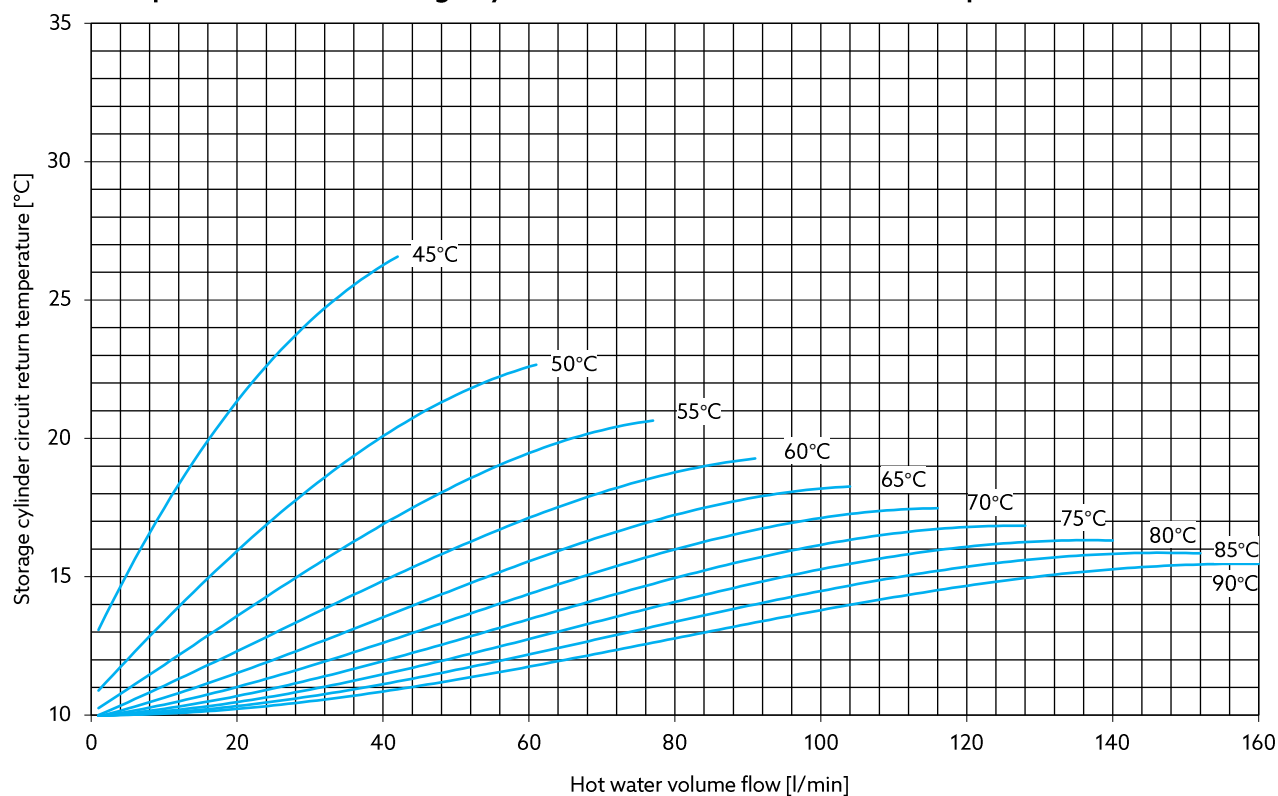
# Heating of potable water from 10 °C to 45 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



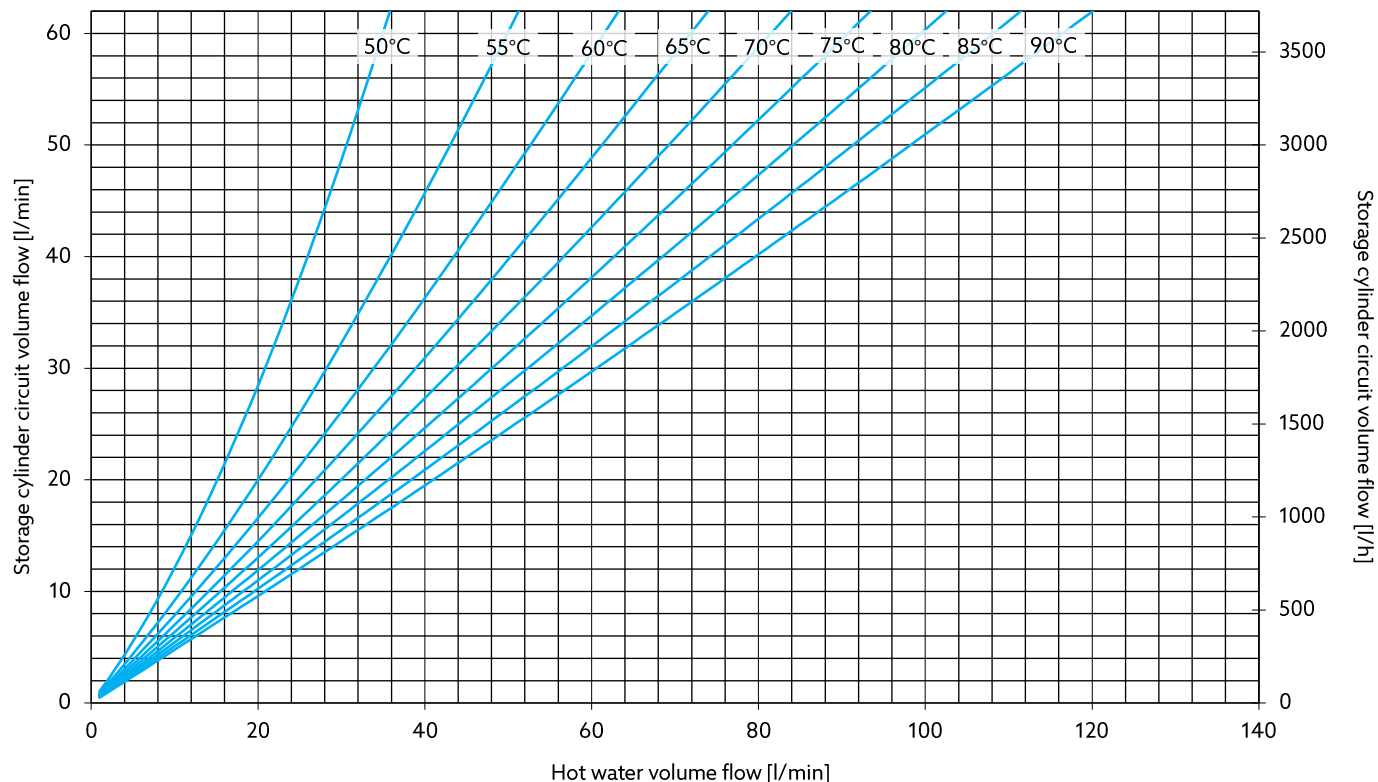
## Return temperature of the storage cylinder circuit at different flow temperatures



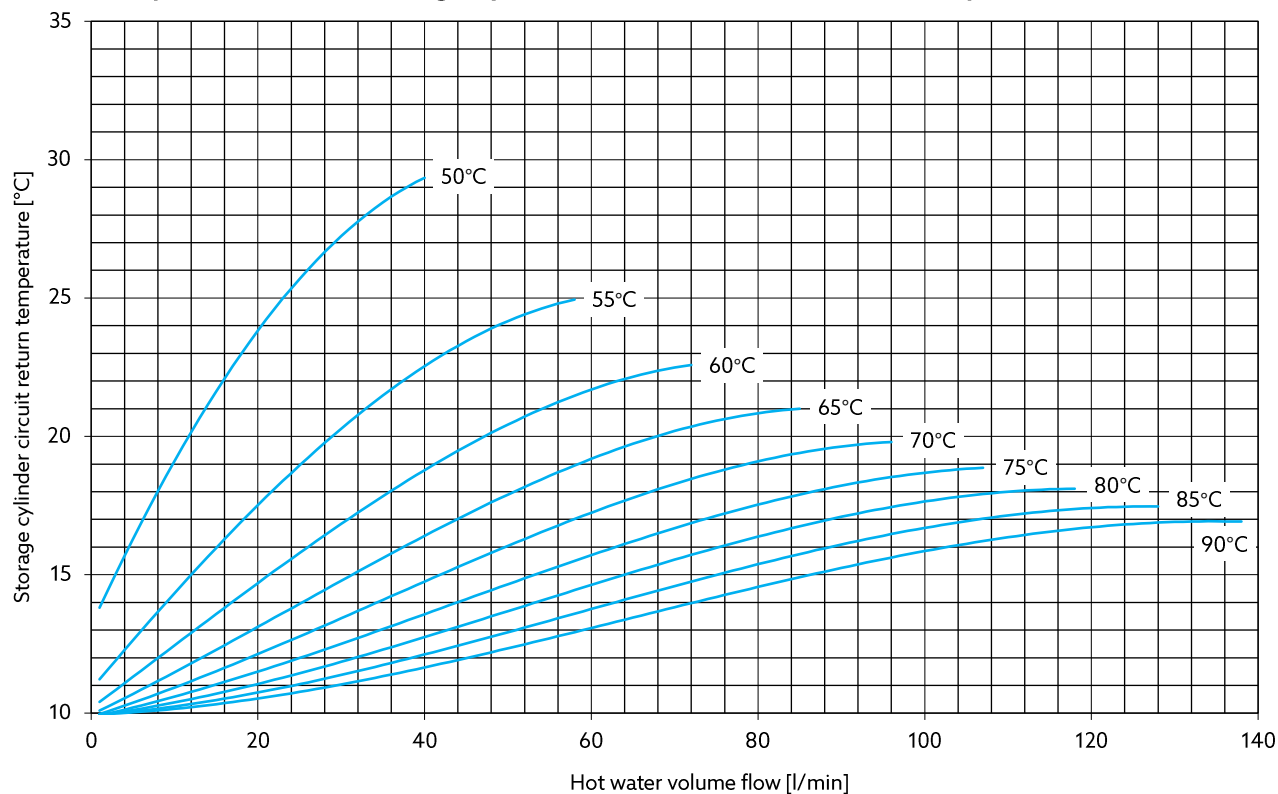
# Heating of potable water from 10 °C to 50 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



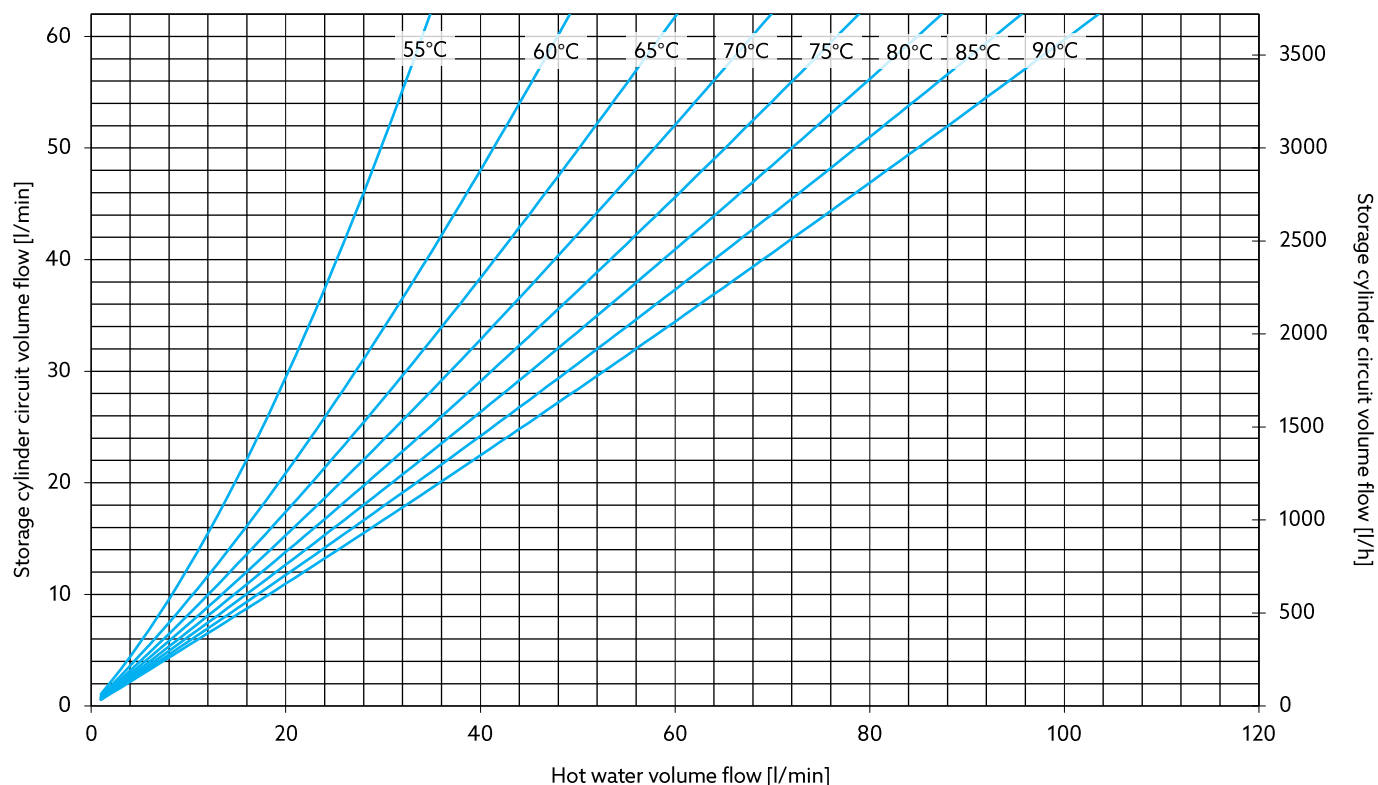
## Return temperature of the storage cylinder circuit at different flow temperatures



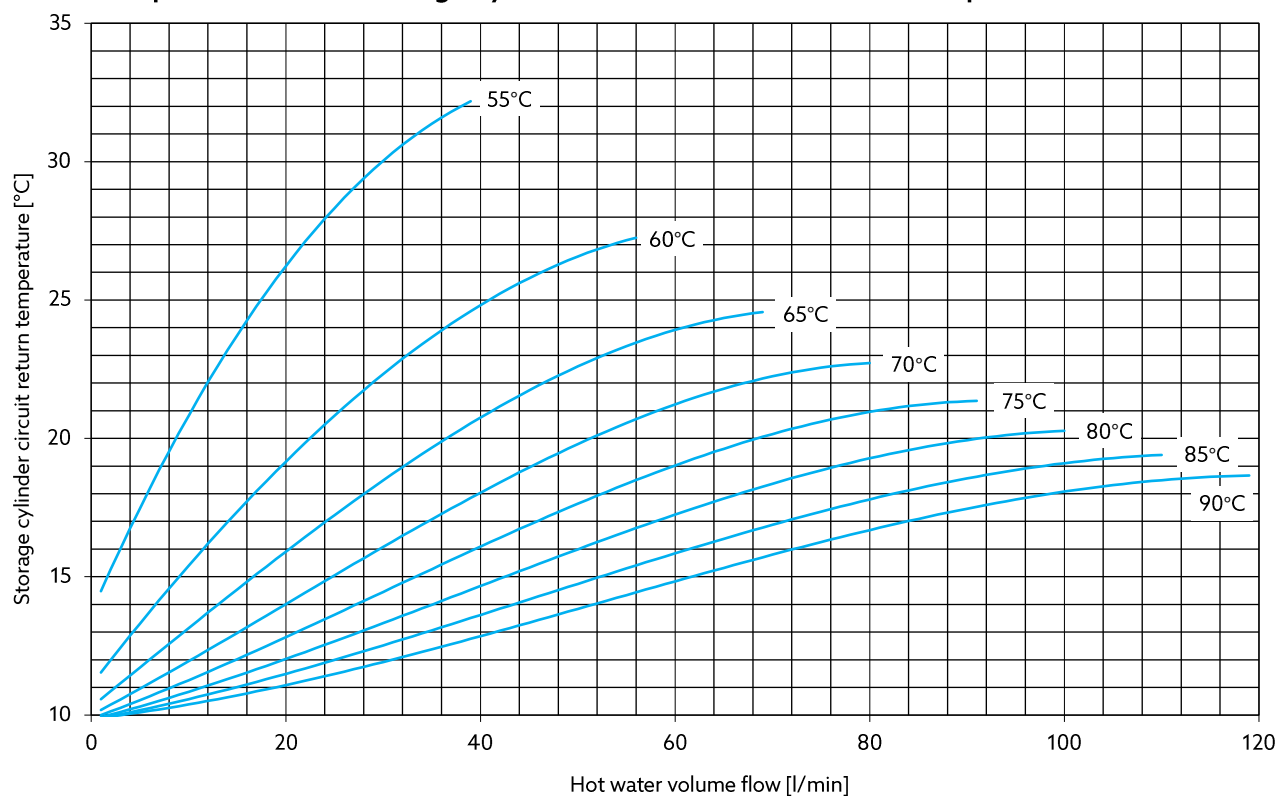
# Heating of potable water from 10 °C to 55 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



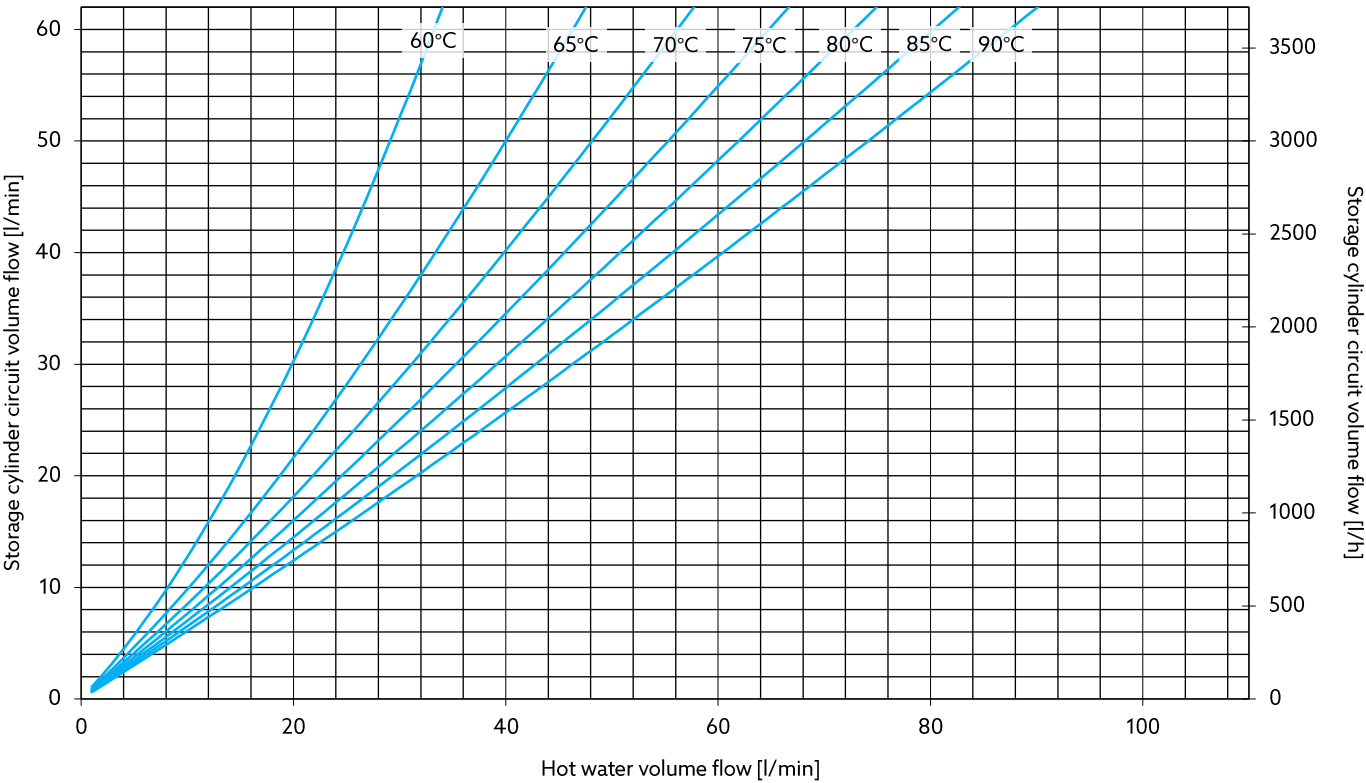
## Return temperature of the storage cylinder circuit at different flow temperatures



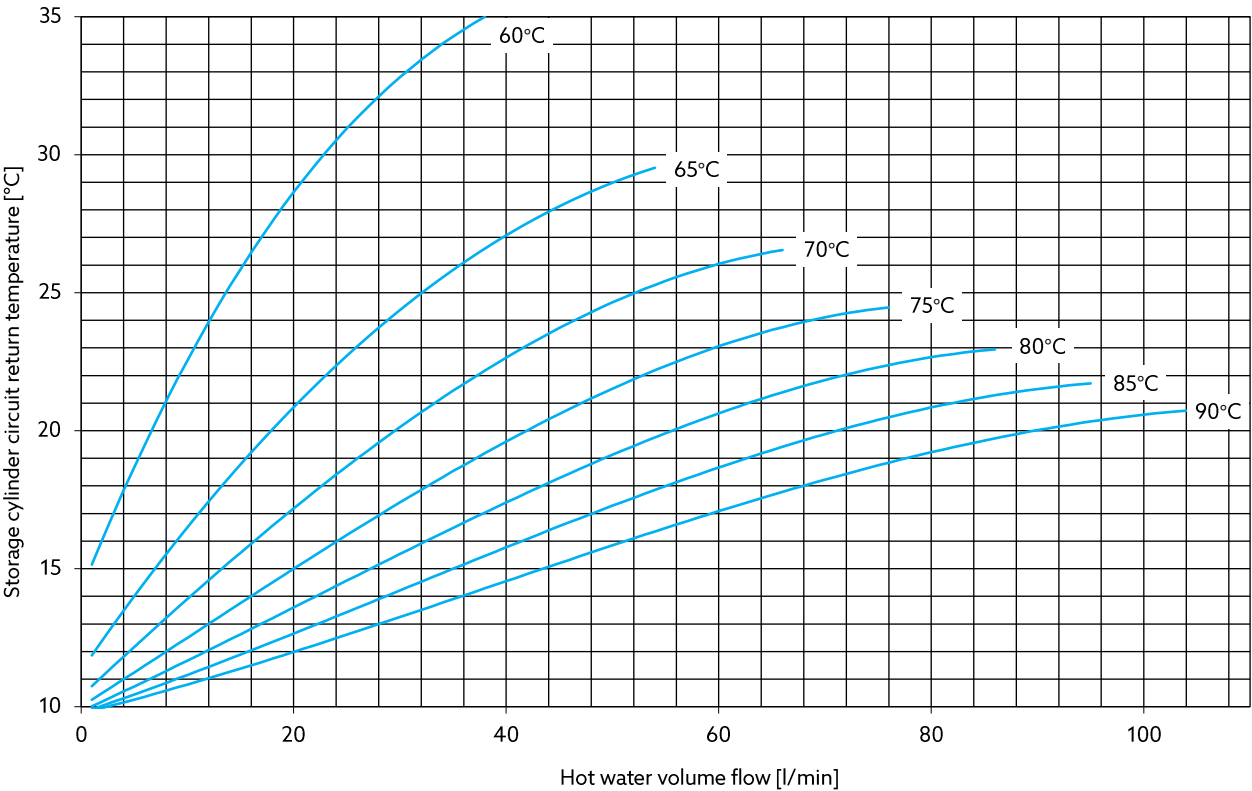
# Heating of potable water from 10 °C to 60 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



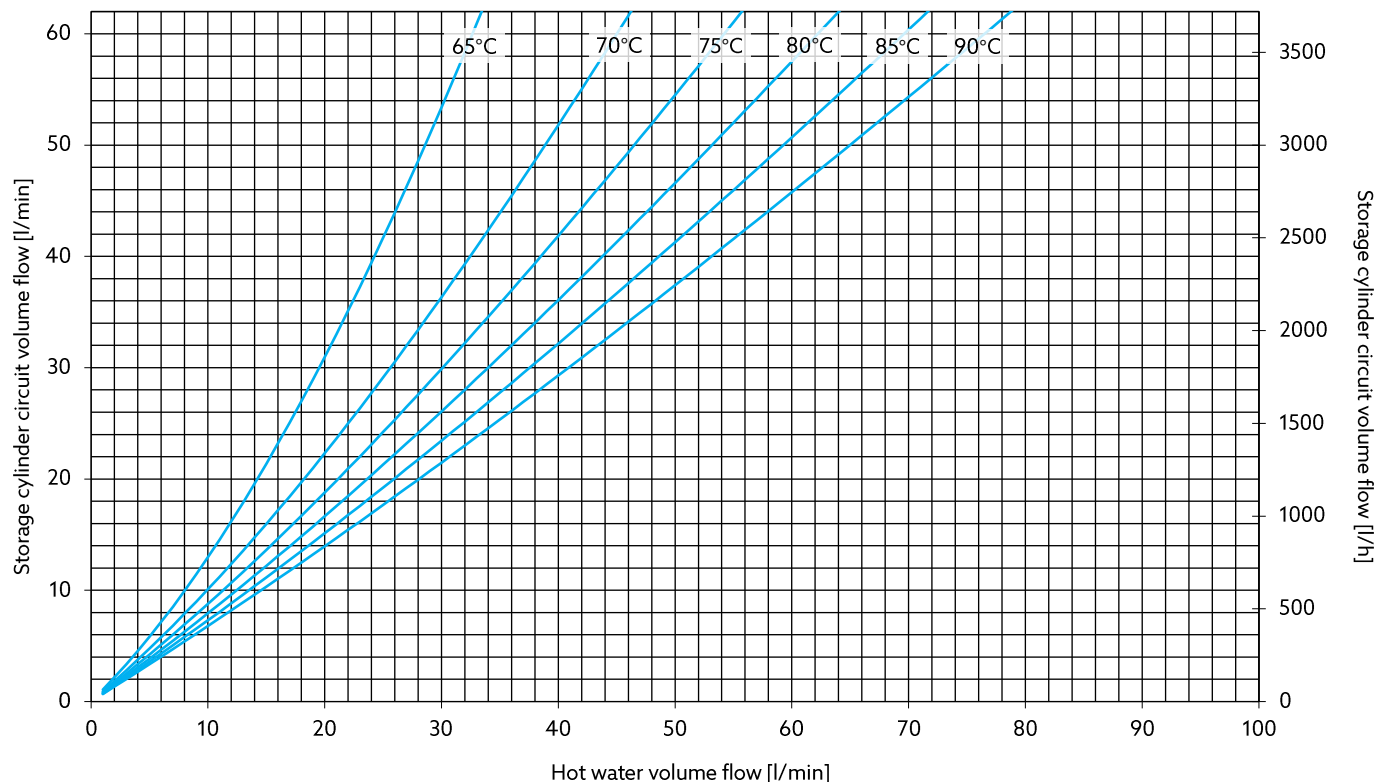
## Return temperature of the storage cylinder circuit at different flow temperatures



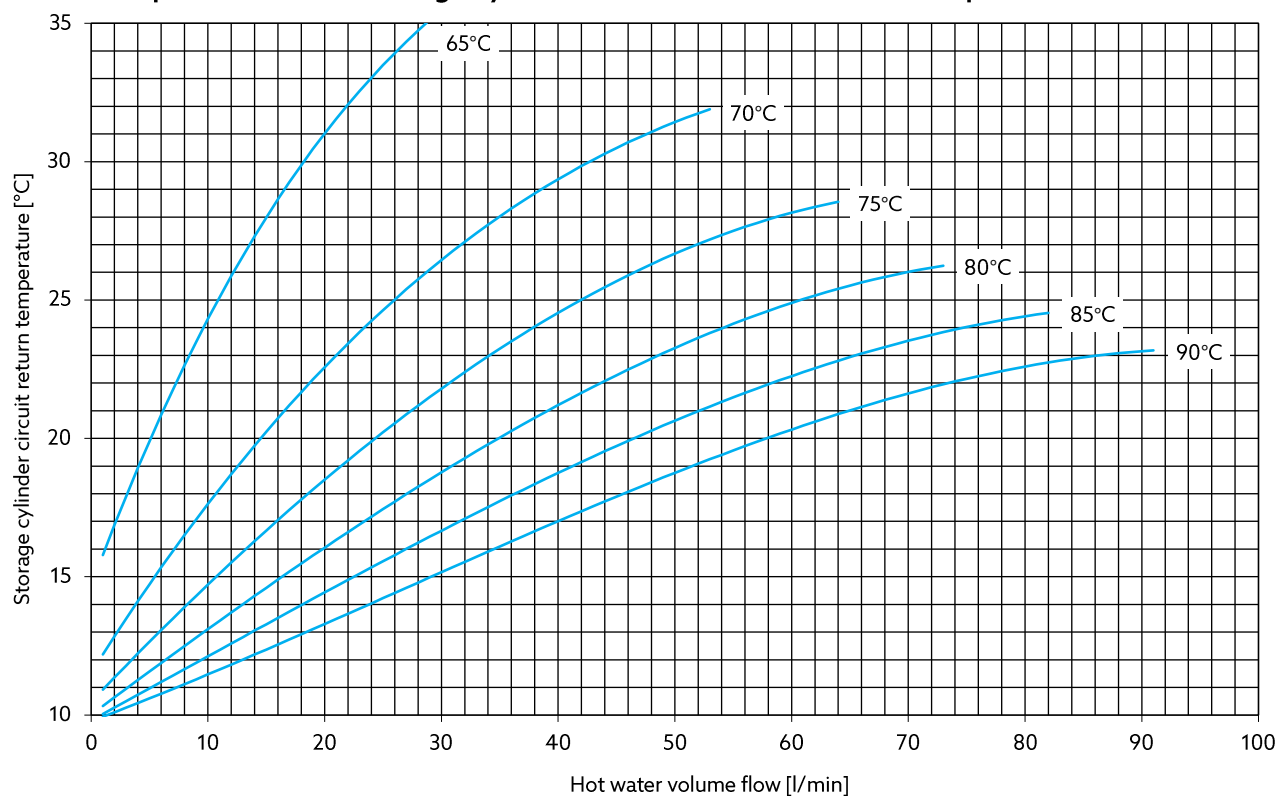
# Heating of potable water from 10 °C to 65 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



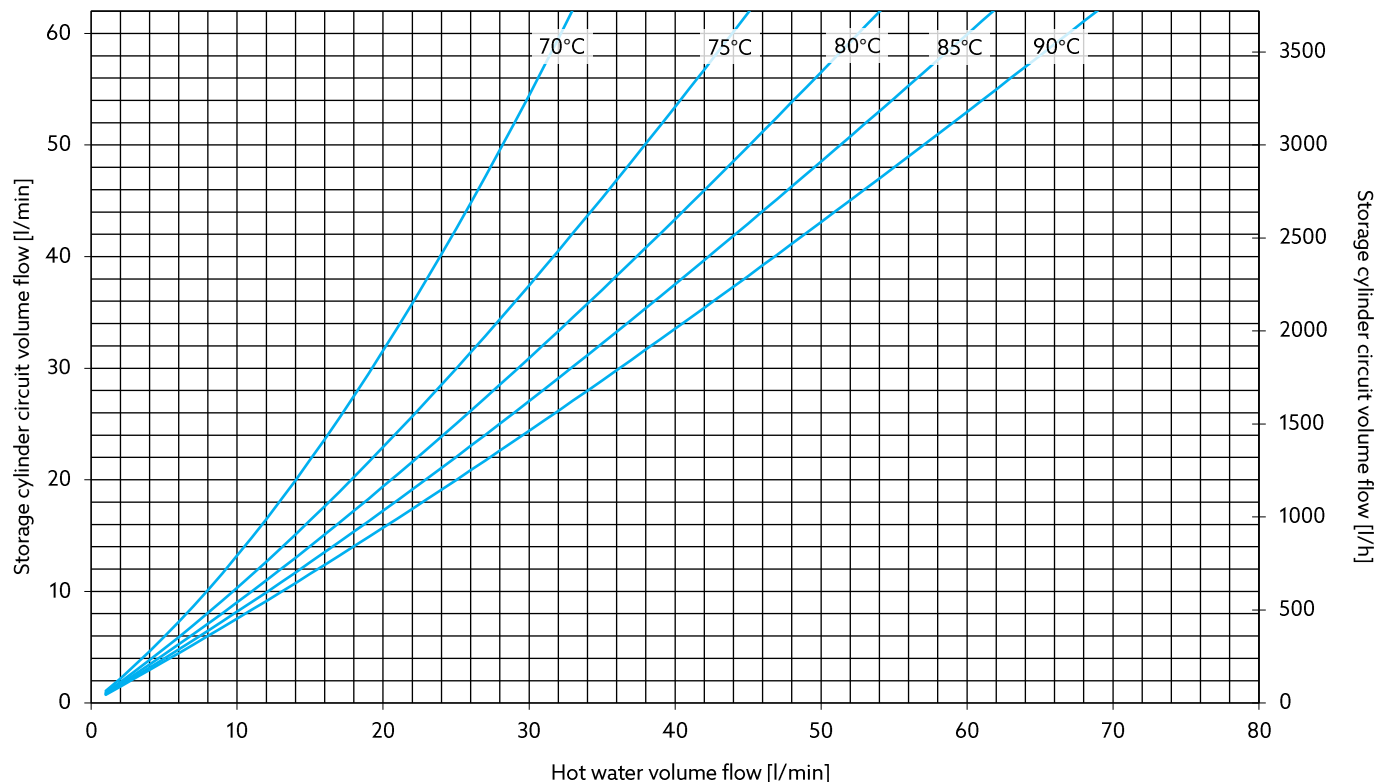
## Return temperature of the storage cylinder circuit at different flow temperatures



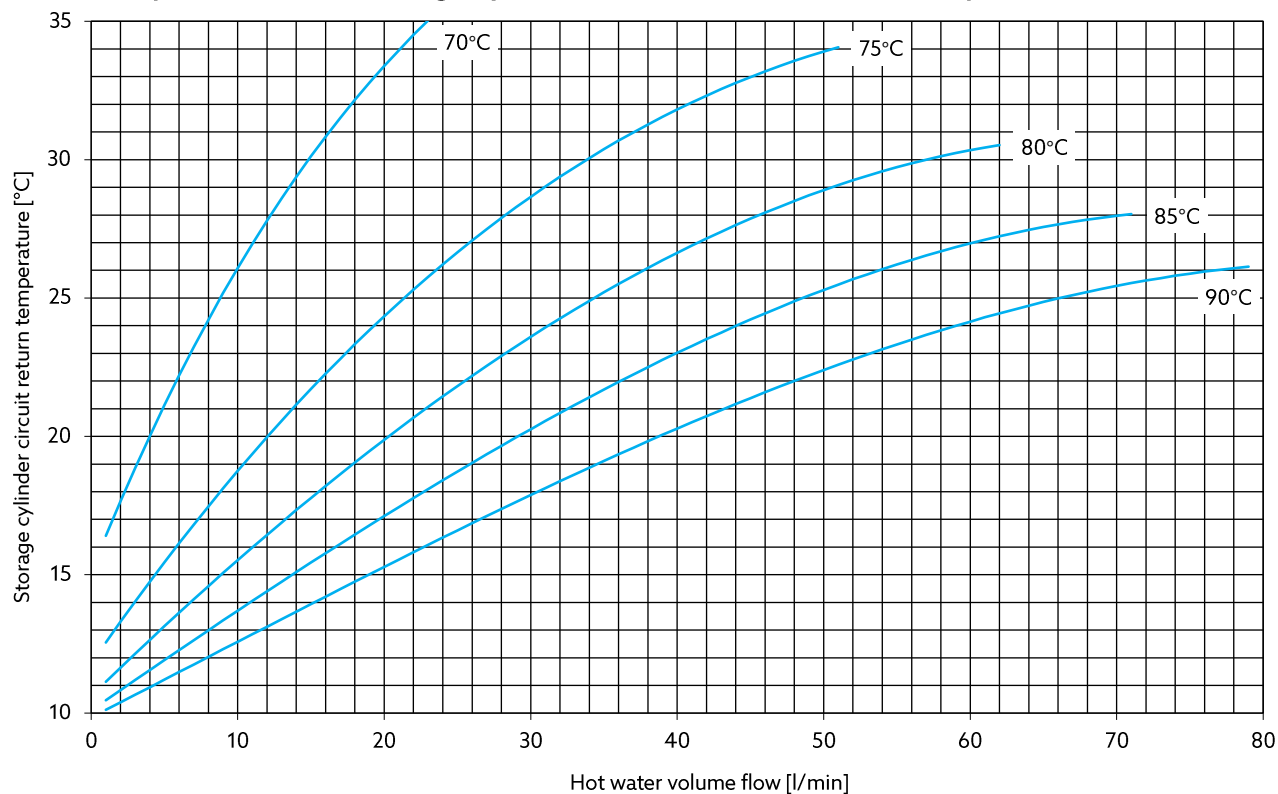
# Heating of potable water from 10 °C to 70 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



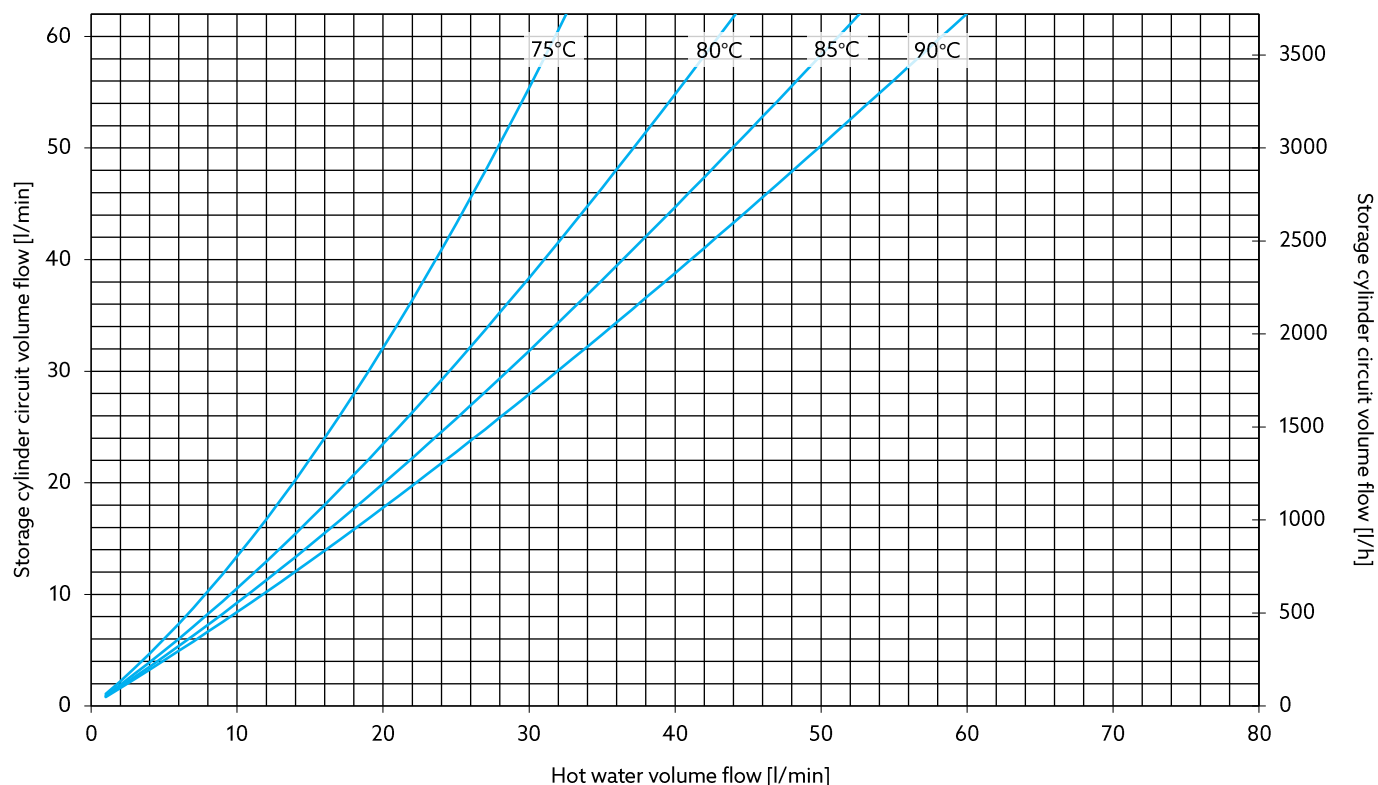
## Return temperature of the storage cylinder circuit at different flow temperatures



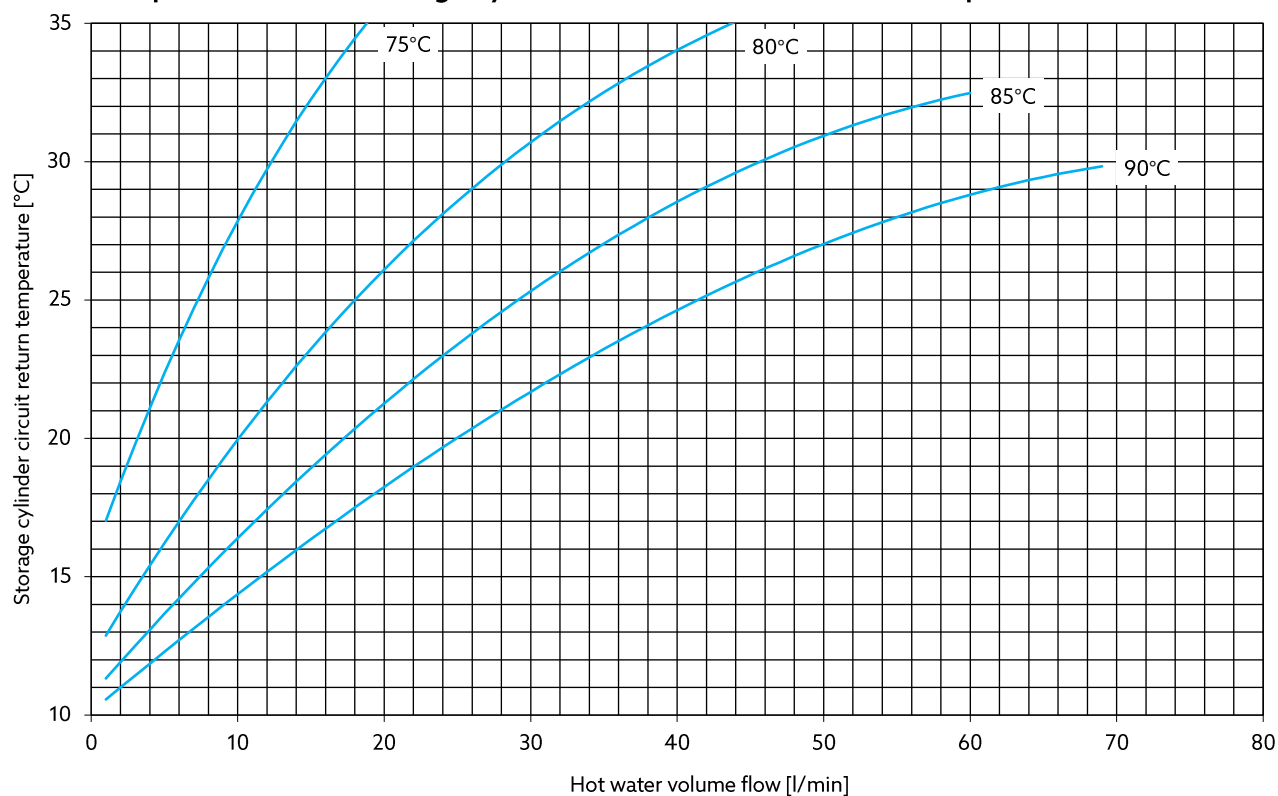
# Heating of potable water from 10 °C to 75 °C

(Performance data according to SPF test procedure)

## Volume flow of the storage cylinder circuit at different flow temperatures



## Return temperature of the storage cylinder circuit at different flow temperatures



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