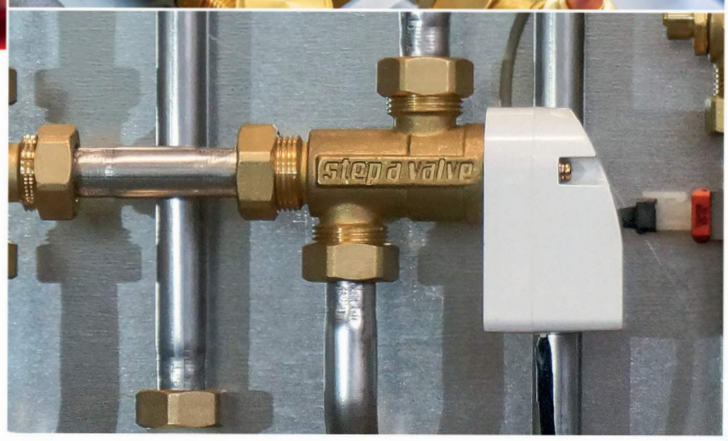
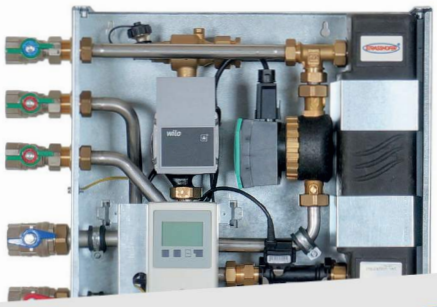
Product catalogue 2019

System technology





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1 | North-western Poland
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Content

eFWZ 25 / eFW 25 for centralized DHW heating with flow principle

- ☑ With high-efficiency pumps
- ☑ Inexpensive
- ☑ Simple control

Application:

Our DHW units eFWZ 25 and eFW 25 are heating the domestic water centrally and are supplying it via hot water pipeline to the domestic water tapping points.
A thermal storage tank is necessary in order to provide the required heating water quantity for heating the domestic water! The DHW water is only heated when "Just in Time" is requested. There is no storage of hot water!

Water heating:

The DHW water is heated in the flow-through principle only during the request via **a stainless steel plate heat exchanger**. A special heat exchanger design allows high tap rates and a low return temperature to the buffer tank.

High efficiency pump:

The DHW volume flow (speed controlled) is delivered by **a high-efficiency pump** from the buffer storage to the plate exchanger for the heating of water.

Control function:

The central control element is the **electronic controller**. This ensures a constant hot water temperature.

Sensors:

Fast and very precise control processes are made possible by the use of state-of-the-art sensors. **A flow sensor according to the vortex principle**, determines the flow rate and the hot water temperature. Accurate and fast reacting **PT-1000 temperature sensors** measure the temperatures of: cold water, buffer storage flow and circulation return.

Housing:

Stylish **EPP insulating housing**.

Circulation module (only for eFWZ 40):

A high efficiency circulation pump for drinking water is controlled by the electronic control system intelligently (according to pulse, time and temperature) and speed-controlled.

Specifications				
Connections:	**Left**		**Right**	
Type:	**eFWZ 25L**	**eFW 25L**	**eFWZ 25R**	**eFW 25R**
Art-Nr.	**1630007**	**1630006**	**1630005**	**1630004**
	Primary		**Secondary**	
	Heating		**Drinking water**	
Pressure rating:	PN 6		PN 10	
Max. Temperature:	110 °C		75 °C	
Connection dimensions:	DN 25		DN 20	
Connection threads:	1" female		3/4" male	
Dimensions (WxHxD):	430 x 400 x 155 mm + 100 mm ball valves			

Performance characteristics:	PI1 *
DHW Capacity:	51 kW
Mass Flow Primary:	1240 kg/h
Supply temperature:	60 °C
Return temperature:	19 °C
DCW / DHW temperature:	10 °C / 45 °C
Tap performance:	23 l/min

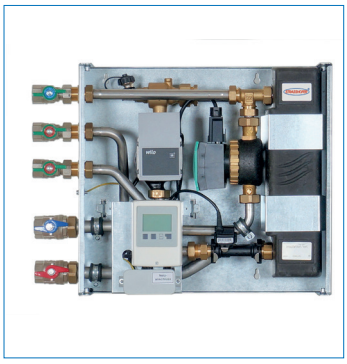
*** PI 1 = Performance indicator 1**
Water temperature set to 45 °C
Primary supply temperature 60 °C
Cold water temperature 10 °C

Specifications

Service:	• Clearly written illuminated full text LCD display and graphic modus • Internationally understandable with up to 6 languages included • Self-explanatory operation: The assigned functions are shown in the display right above the respective input key • Easy and quick installation with the integrated setup wizard
Operating mode:	DHW control with circulation (eFWZ 25) DHW control without circulation (eFW 25)
Plate exchanger:	Long thermal length, low pressure loss Stainless steel AISI 316, copper soldered
Piping:	Stainless steel AISI 316, 22x1 mm
Pump:	Heating pump WILO Yonos PARA PWM 15/6 DHW circulation pump WILO Star Z Nova **(eFWZ 25 only)**
Sensors:	HW temperature and flow: Grundfos direct sensor VFS 2-40 CW/Buffer/Circulation temperature (eFWZ 25): Plug-in sensor PT1000/B/2 with plug and cable
Insulation:	EPP, black
Dimensions: (WxHxD)	400 x 430 x 155 mm + 100 mm ball valves
Delivery:	Pre-assembled, wired and leak tested With operating instructions, drinking water safety valve and mounting accessories packed in a cardboard box.

eFWZ 25R Art-Nr. 1630005

eFW 25R Art-Nr. 1630004



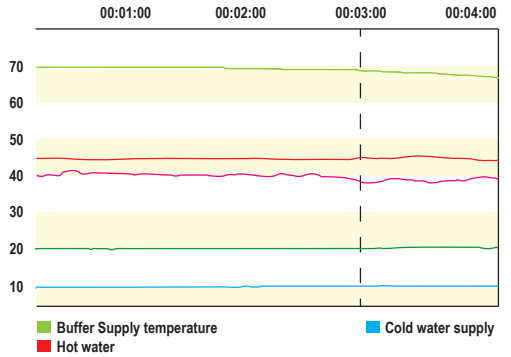
eFWZ 25L Art-Nr. 1630007

eFW 25L Art-Nr. 1630006

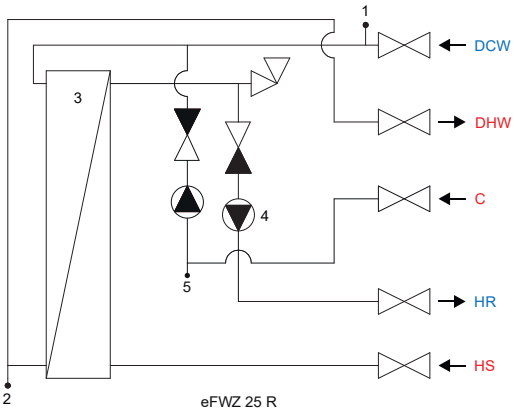
Description

1	Temperature sensor KW
2	Vortex sensor Temperature + Flow
3	Plate heat exchanger
4	Circulation pump
5	Temperature sensor Z

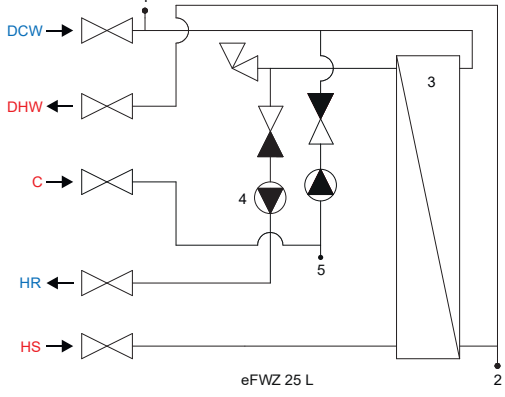
Performance diagram: Full load



DHW = Domestic hot water
DCW = Domestic cold water
HS = Heating Supply
HR = Heating Return
C = Circulation



eFWZ 25 R



eFWZ 25 L

eFWZ 40 / eFW 40 for centralized DHW heating with flow principle

- ☑ With high-efficiency pumps
- ☑ Inexpensive
- ☑ Simple control

Application:
Our DHW units eFWZ 40 and eFW 40 are heating the domestic water centrally and are supplying it via hot water pipeline to the domestic water tapping points.
A thermal storage tank is necessary in order to provide the required heating water quantity for heating the domestic water! The DHW water is only heated when "Just in Time" is requested. There is no storage of hot water!

Water heating:
The DHW water is heated in the flow-through principle only during the request via **a stainless steel plate heat exchanger**. A special heat exchanger design allows high tap rates and a low return temperature to the buffer tank.

High efficiency pump:
The DHW volume flow (speed controlled) is delivered by **a high-efficiency pump** from the buffer storage to the plate exchanger for the heating of water.

Control function:
The central control element is the **electronic controller**. This ensures a constant hot water temperature.

Sensors:
Fast and very precise control processes are made possible by the use of state-of-the-art sensors. **A flow sensor according to the vortex principle**, determines the flow rate and the hot water temperature. Accurate and fast reacting **PT-1000 temperature sensors** measure the temperatures of: cold water, buffer storage flow and circulation return.

Housing:
Stylish **EPP insulating housing**.

Circulation module (only for eFWZ 40):
A high efficiency circulation pump for drinking water is controlled by the electronic control system intelligently (according to pulse, time and temperature) and speed-controlled.

Specifications		
Type:	**eFWZ 40 / eFW 40**	
Art-Nr.	**1630003 / 1630001**	
	Primary	**Secondary**
	Heating	**Drinking water**
Pressure rating:	PN 6	PN 10
Max. Temperature:	110 °C	75 °C
Connection dimensions:	DN 25	DN 20
Connection threads:	1" female	1" male
Dimensions (WxHxD):	480 x 675 x 240 mm	

Performance characteristics:	PI2 *	PI1 *
DHW Capacity:	100 kW	90 kW
Mass Flow Primary:	1769 kg/h	1745 kg/h
Supply temperature:	70 °C	60 °C
Return temperature:	22 °C	16 °C
DCW / DHW temperature:	10 °C / 60 °C	10 °C / 45 °C
Tap performance:	28 l/min	36 l/min

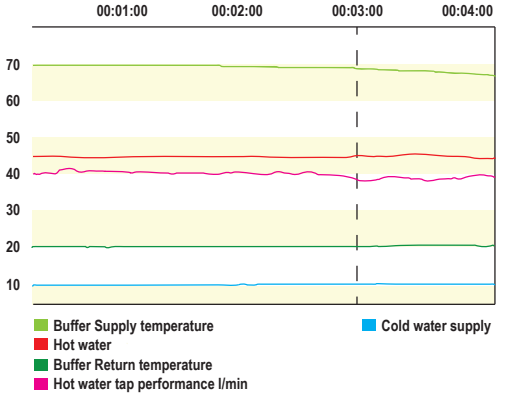
*** PI 1 = Performance indicator 1**
Water temperature set to 45 °C
Primary supply temperature 60 °C
Cold water temperature 10 °C

*** PI 2 = Performance indicator 2**
Water temperature set to 60 °C
Primary supply temperature 70 °C
Cold water temperature 10 °C

Specifications

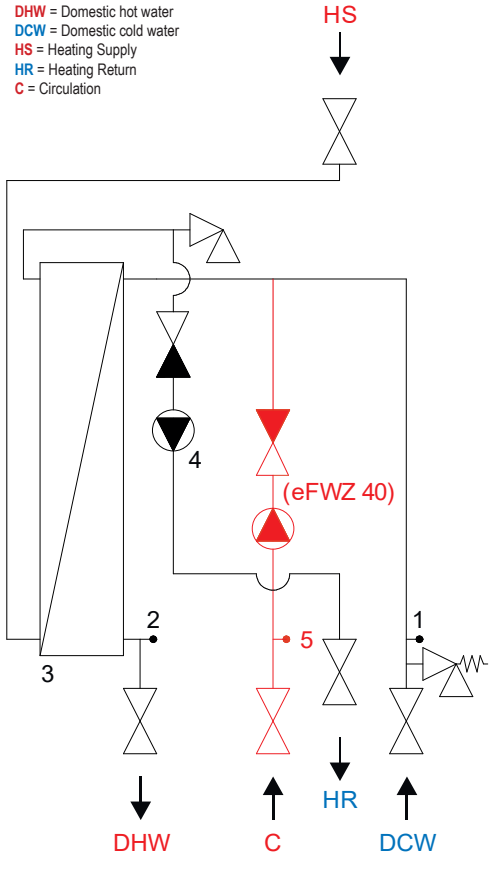
Service:	● Clearly written illuminated full text LCD display and graphic modus ● Internationally understandable with up to 6 languages included ● Self-explanatory operation: The assigned functions are shown in the display right above the respective input key ● Easy and quick installation with the integrated setup wizard
Operating mode:	DHW control with circulation (eFWZ 40) DHW control without circulation (eFW 40)
Additional functions:	Buffer charge, cascade
Plate exchanger:	Long thermal length, low pressure loss Stainless steel AISI 316, copper soldered
Piping:	Stainless steel AISI 316, 22x1 mm
Pump:	Heating pump WILO Yonos PARA PWM 15/6 DHW circulation pumpe WILO Yonos PARA Z PWM 15/7 **(eFWZ 40 only)**
Sensors:	HW temperature and flow: Grundfos direct sensor VFS 2-40 CW/Buffer/Circulation temperature (eFWZ 25): Plug-in sensor PT1000/B/2 with plug and cable
Insulation:	EPP, black
Dimensions: (WxHxD)	480 x 675 x 240 mm
Delivery:	Pre-assembled, wired and leak tested With operating instructions, drinking water safety valve and mounting accessories packed in a cardboard box.

Performance diagram: Full load



eFWZ 40 Art-Nr. 1630003

eFW 40 Art-Nr. 1630001



Description

1	Temperature sensor KW
2	Vortex sensor Temperature + Flow
3	Plate heat exchanger
4	Heating pump
5	Backflow preventer
6	Circulation pump
7	Temperature sensor Z

FW-EZ 40 / FW-E 40 for centralized DHW heating with flow principle

- ☑ With high-efficiency pumps
- ☑ With high-quality sanitary balancing valves
- ☑ All drinking water outlets going off to the top
- ☑ Stable instrument holder made of galvanized sheet steel
- ☑ With counter pass piece
- ☑ Design front
- ☑ Cascades capable

Design front

Application:

Our DHW units FW-EZ 40 and FW-E 40 are heating the domestic water centrally and are supplying it via hot water pipeline to the domestic water tapping points.
A thermal storage tank is necessary in order to provide the required heating water quantity for heating the domestic water! The DHW water is only heated when "Just in Time" is requested. There is no storage of hot water!

Water heating:

The DHW water is heated in the flow-through principle only during the request via **a stainless steel plate heat exchanger**. A special heat exchanger design allows high tap rates and a low return temperature to the buffer tank.

High efficiency pump:

The DHW volume flow (speed controlled) is delivered by **a high-efficiency pump** from the buffer storage to the plate exchanger for the heating of water.

Control function:

The central control element is the **electronic controller**. This ensures a constant hot water temperature.

Sensors:

Fast and very precise control processes are made possible by the use of state-of-the-art sensors. **A flow sensor according to the vortex principle**, determines the flow rate and the hot water temperature. Accurate and fast reacting **PT-1000 temperature sensors** measure the temperatures of: cold water, buffer storage flow and circulation return.

Housing:

Stylish **EPP insulating housing with Design front**.

Circulation module (only for FW-EZ 40):

A high efficiency circulation pump for drinking water is controlled by the electronic control system intelligently (according to pulse, time and temperature) and speed-controlled.

Specifications		
Type:	FW-EZ 40 / FW-E 40	
Art-Nr.	1630003 / 1630001	
	Primary	Secondary
	Heating	Drinking water
Pressure rating:	PN 6	PN 10
Max. Temperature:	110 °C	75 °C
Connection dimensions:	DN 25	DN 20
Connection threads:	1" female	1" male
Dimensions (WxHxD):	480 x 675 x 240 mm	

Performance characteristics:	PI2 *	PI1 *
DHW Capacity:	100 kW	90 kW
Mass Flow Primary:	1769 kg/h	1745 kg/h
Supply temperature:	70 °C	60 °C
Return temperature:	22 °C	16 °C
DCW / DHW temperature:	10 °C / 60 °C	10 °C / 45 °C
Tap performance:	28 l/min	36 l/min

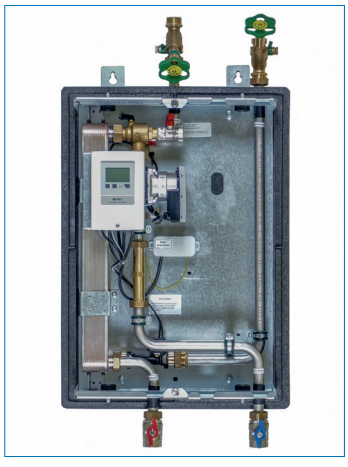
*** PI 1 = Performance indicator 1**
Water temperature set to 45 °C
Primary supply temperature 60 °C
Cold water temperature 10 °C

*** PI 2 = Performance indicator 2**
Water temperature set to 60 °C
Primary supply temperature 70 °C
Cold water temperature 10 °C

Specifications

Service:	• Clearly written illuminated full text LCD display and graphic modus • Internationally understandable with up to 6 languages included • Self-explanatory operation: The assigned functions are shown in the display right above the respective input key • Easy and quick installation with the integrated setup wizard
Operating mode:	DHW control with circulation (FW-EZ 40) DHW control without circulation (FW-E 40)
Additional functions:	Buffer charge, cascade
Plate exchanger:	Long thermal length, low pressure loss Stainless steel AISI 316, copper soldered
Piping:	Stainless steel AISI 316, 22x1 mm
Pump:	Heating pump WILO Yonos PARA PWM 15/6 DHW circulation pumpe WILO Yonos PARA Z PWM 15/7 **(FW-EZ 40 only)**
Sensors:	HW temperature and flow: Grundfos direct sensor VFS 2-40 CW/Buffer/Circulation temperature (eFWZ 25): Plug-in sensor PT1000/B/2 with plug and cable
Insulation:	EPP, black
Dimensions: (WxHxD)	480 x 675 x 240 mm
Delivery:	Pre-assembled, wired and leak tested With operating instructions, drinking water safety valve and mounting accessories packed in a cardboard box.

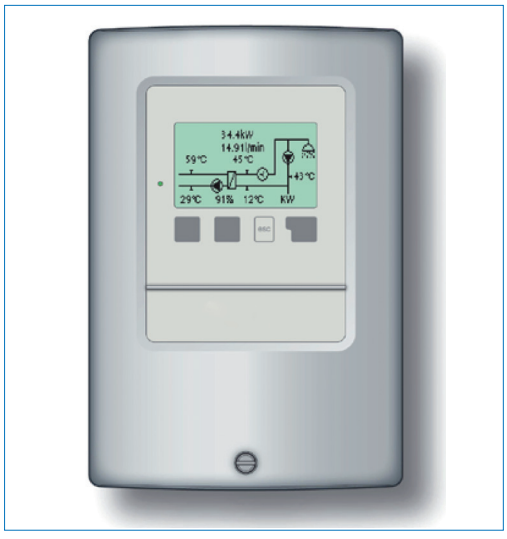
FW-EZ 40 Art-Nr. 1610003



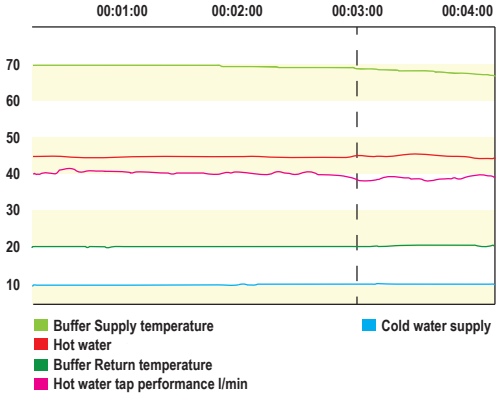
FW-E 40 Art-Nr. 1610001

Description

1	Temperature sensor KW
2	Vortex sensor Temperature + Flow
3	Plate heat exchanger
4	Heating pump
5	Temperature sensor Z
6	Circulation pump (FW-EZ 40 only)
7	Backflow preventer
8	Fitting WMZ 130 mm
9	Direct measuring point WMZ



Performance diagram: Full load



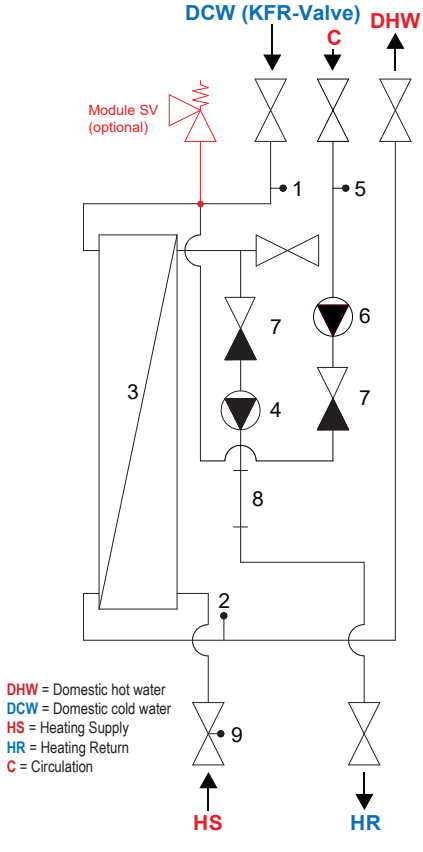
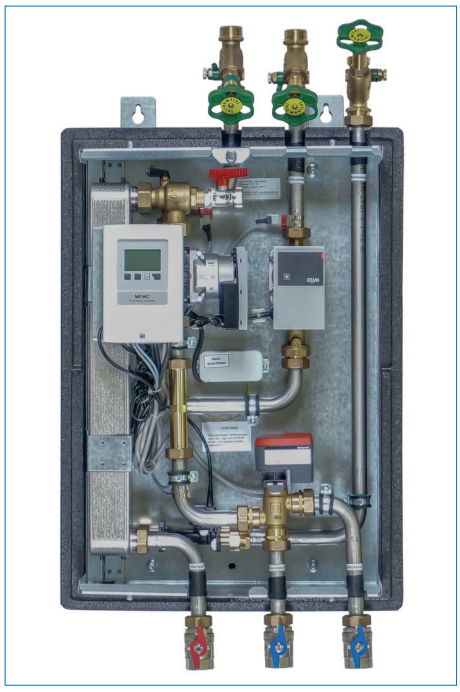


Image: FW-EZ 40

FW-D 40 for centralized DHW heating with flow principle



- ☑ With high-efficiency pumps
- ☑ With high-quality sanitary balancing valves
- ☑ All drinking water outlets going off to the top
- ☑ Stable instrument holder made of galvanized sheet steel
- ☑ Design front
- ☑ With counter pass piece

Application:
Our DHW unit FW-D 40 heats the domestic water centrally and supplies it via hot water pipeline to the domestic water tapping points.
A thermal storage tank is necessary in order to provide the required heating water quantity for heating the domestic water! The DHW water is only heated when "Just in Time" is requested. There is no storage of hot water!

Water heating:
The DHW water is heated in the flow-through principle only during the request via **a stainless steel plate heat exchanger**. A special heat exchanger design allows high tap rates and a low return temperature to the buffer tank.

High efficiency pump:
The DHW volume flow (speed controlled) is delivered by **a high-efficiency pump** from the buffer storage to the plate exchanger for the heating of water.

Control function:
The central control element is the **electronic controller**. This ensures a constant hot water temperature.

Sensors:
Fast and very precise control processes are made possible by the use of state-of-the-art sensors. **A flow sensor according to the vortex principle**, determines the flow rate and the hot water temperature. Accurate and fast reacting **PT-1000 temperature sensors** measure the temperatures of: cold water, buffer storage flow and circulation return.

Variable Return stratification:
The heating return to the buffer store is variably connected with **an integrated 3-way switching valve**. At higher return temperatures (for example, longer circulating operation without tapping), the stacking in the buffer store takes place in the center. In standard operation (with tapping), with a very low return temperature, the layering in the buffer storage takes place at the bottom.
The stratification in the buffer memory is retained. The low buffering temperatures required for the solar yield in the lower buffer storage area are remaining fully preserved!

Circulation module:
A high efficiency circulation pump for drinking water is controlled by the electronic control system intelligently (according to pulse, time and temperature) and speed-controlled.

Housing:
Stylish **EPP insulating housing** with **Design front panel.**

Specifications		
Type:	**FW-D 40**	
Art-Nr.	**1610002**	
	Primary	**Secondary**
	Heating	**Drinking water**
Pressure rating:	PN 6	PN 10
Max. Temperature:	110 °C	75 °C
Connection dimensions:	DN25	DN20
Connection threads:	1" female	1" male
Dimensions (WxHxD):	480 x 675 x 240 mm	

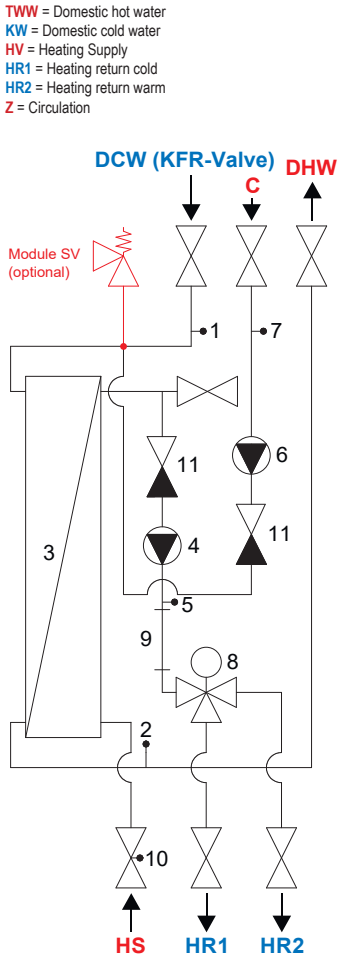
Performance characteristics:	PI2 *	PI1 *
DHW Capacity:	100 kW	90 kW
Mass Flow Primary:	1769 kg/h	1745 kg/h
Supply temperature:	70 °C	60 °C
Return temperature:	22 °C	16 °C
DCW / DHW temperature:	10 °C / 60 °C	10 °C / 45 °C
Tap performance:	28 l/min	36 l/min

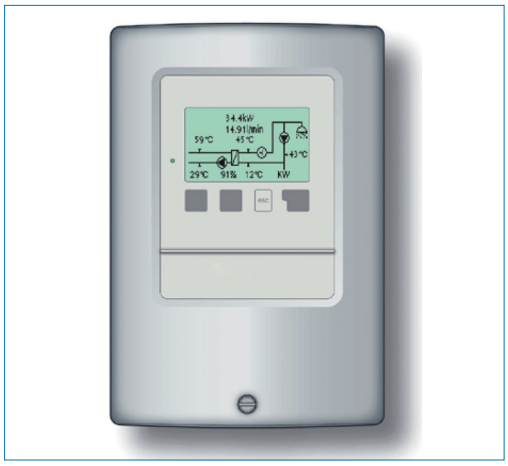
*** PI 1 = Performance indicator 1**
Water temperature set to 45 °C
Primary supply temperature 60 °C
Cold water temperature 10 °C

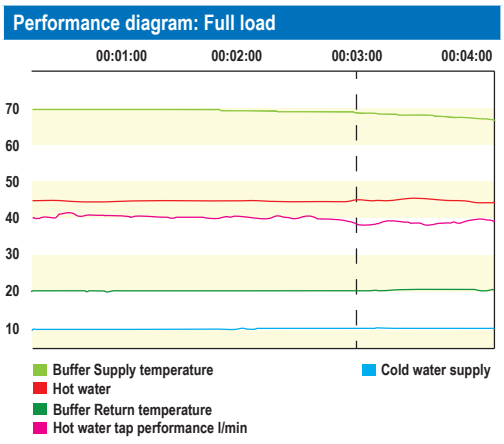
*** PI 2 = Performance indicator 2**
Water temperature set to 60 °C
Primary supply temperature 70 °C
Cold water temperature 10 °C

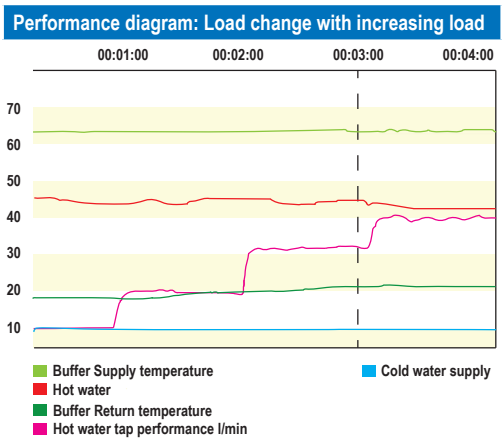
Specifications	
Service:	• Clearly written illuminated full text LCD display and graphic modus • Internationally understandable with up to 6 languages included • Self-explanatory operation: The assigned functions are shown in the display right above the respective input key • Easy and quick installation with the integrated setup wizard
Operating mode:	Fresh water control with circulation and variable storage stratification
Additional functions:	Buffer charge, cascade
Plate exchanger:	Long thermal length, low pressure loss Stainless steel AISI 316, copper soldered
Piping:	Stainless steel AISI 316, 22x1 mm
Pump:	Heating pump WILO Yonos PARA PWM 15/6 DHW circulation pumpe WILO Yonos PARA Z PWM 15/7
3-way switching valve:	Honeywell DN20, extra short term
Sensors:	HW temperature and flow: Grundfos direct sensor VFS 2-40 CW/Buffer/Circulation temperature (eFWZ 25): Plug-in sensor PT1000/B/2 with plug and cable
Insulation:	EPP, black
Dimensions: (WxHxD)	480 x 675 x 240 mm
Delivery:	Pre-assembled, wired and leak tested With operating instructions, drinking water safety valve and mounting accessories packed in a cardboard box.

Design-Front



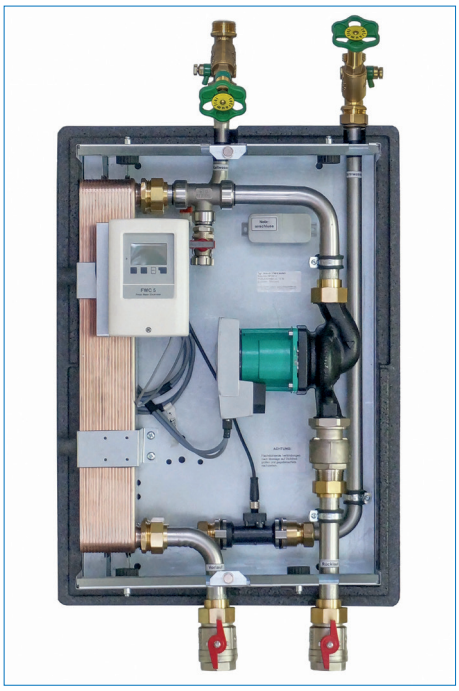






Description	
1	Temperature sensor KW
2	Vortex sensor Temperature + Flow
3	Plate heat exchanger
4	Circulation pump
5	Temperature sensor HR
6	Circulation pump
7	Temperature sensor Z
8	3-way switching valve
9	Fitting WMZ 130 mm
10	Direct measurement point WMZ
11	Backflow preventer

FW-E 60 for centralized DHW heating with flow principle



- ☑ With high-efficiency pumps
- ☑ With high-quality sanitary balancing valves
- ☑ All drinking water outlets going off to the top
- ☑ Stable instrument holder made of galvanized sheet steel
- ☑ Design front
- ☑ Cascades capable

Design front

Application:

Our DHW unit FW-E 60 heats the domestic water centrally and supplies it via hot water pipeline to the domestic water tapping points.
A thermal storage tank is necessary in order to provide the required heating water quantity for heating the domestic water! The DHW water is only heated when "Just in Time" is requested. There is no storage of hot water!

Water heating:

The DHW water is heated in the flow-through principle only during the request via **a stainless steel plate heat exchanger**. A special heat exchanger design allows high tap rates and a low return temperature to the buffer tank.

High efficiency pump:

The DHW volume flow (speed controlled) is delivered by **a high-efficiency pump** from the buffer storage to the plate exchanger for the heating of water.

Control function:

The central control element is the **electronic controller**. This ensures a constant hot water temperature.

Sensors:

Fast and very precise control processes are made possible by the use of state-of-the-art sensors. **A flow sensor according to the vortex principle**, determines the flow rate and the hot water temperature. Accurate and fast reacting **PT-1000 temperature sensors** measure the temperatures of: cold water, buffer storage flow and circulation return.

Housing:

Stylish **EPP insulating housing** with **Design front panel.**

Circulation module Z3 / Z4 (optional):

A high efficiency circulation pump for drinking water is controlled by the electronic control system intelligently (according to pulse, time and temperature) and speed-controlled. (Integration on-site).

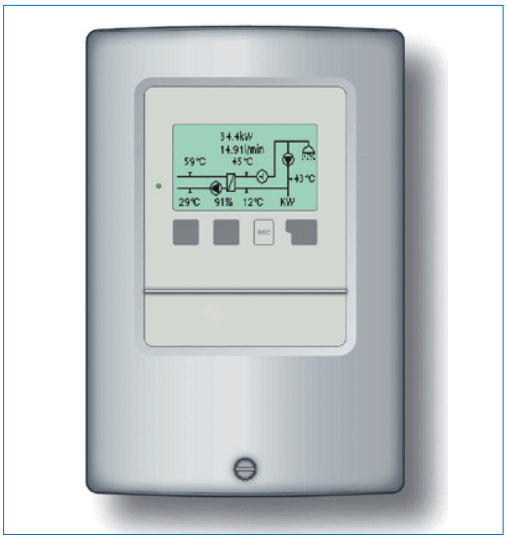
Specifications		
Type:	**FW-E 60**	
Art-Nr.	**1620001**	
	Primary	**Secondary**
	Heating	**Drinking water**
Pressure rating:	PN 6	PN 10
Max. Temperature:	110 °C	75 °C
Connection dimensions:	DN32	DN20
Connection threads:	1¼" female	1" male
Dimensions: (WxHxD)	480 x 675 x 240 mm	

Performance characteristics:	PI2 *	PI1 *
DHW Capacity:	150 kW	150 kW
Mass Flow Primary:	2628 kg/h	2922 kg/h
Supply temperature:	70 °C	60 °C
Return temperature:	21 °C	16 °C
DCW / DHW temperature:	10 °C / 60 °C	10 °C / 45 °C
Tap performance:	42 l/min	61 l/min

*** PI 1 = Performance indicator 1**
Water temperature set to 45 °C
Primary supply temperature 60 °C
Cold water temperature 10 °C

*** PI 2 = Performance indicator 2**
Water temperature set to 60 °C
Primary supply temperature 70 °C
Cold water temperature 10 °C

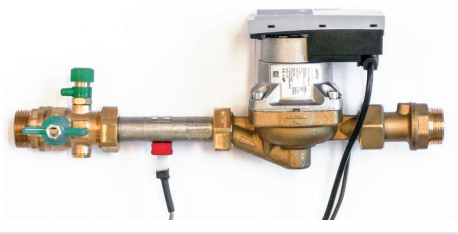
Specifications	
Service:	• Clearly written illuminated full text LCD display and graphic modus • Internationally understandable with up to 6 languages included • Self-explanatory operation: The assigned functions are shown in the display right above the respective input key • Easy and quick installation with the integrated setup wizard
Operating mode:	DHW control without circulation DHW control with external circulation Variable storage (with 3 Ways switching valve)
Additional functions:	Buffer charge, cascade
Plate exchanger:	Long thermal length, low pressure loss Stainless steel AISI 316, copper soldered
Piping:	Stainless steel AISI 316, 28x1.5 mm / 22x1 mm
Pump:	Heating pump WILO Stratos PARA PWM 25/1-8
Sensors:	HW temperature and flow: SIKA VVX20 HR/KBuffer/Circulation temperature: Plug-in sensor PT1000/B/2 with plug and cable
Insulation:	EPP, black
Dimensions (WxHxD):	480 x 675 x 240 mm
Delivery:	Pre-assembled, wired and leak tested With operating instructions, drinking water safety valve and mounting accessories packed in a cardboard box.

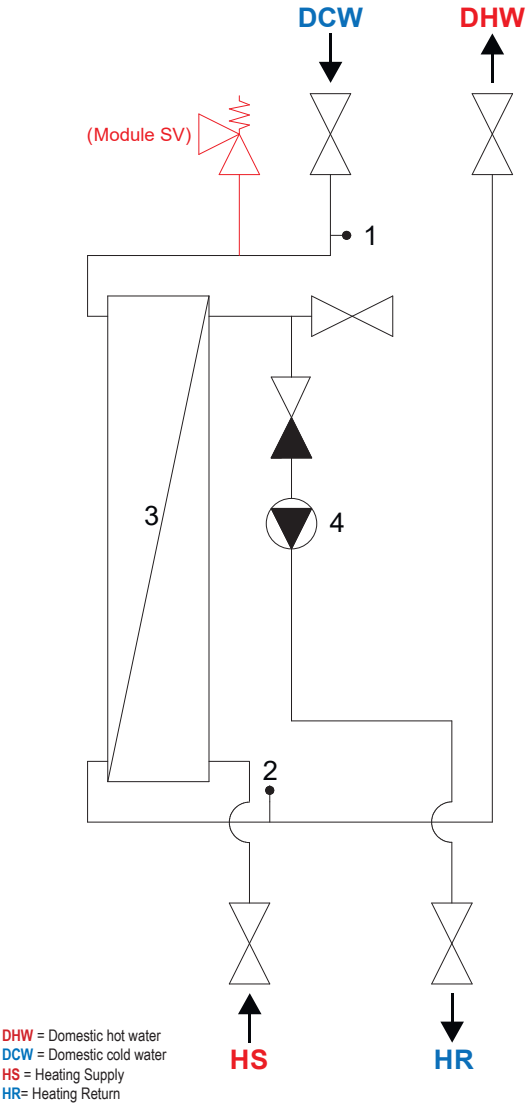


Description	
1	Temperature sensor CW
2	Vortex sensor Temperature + Flow
3	Plate heat exchanger
4	Circulation pump
5	Backflow preventer

Options

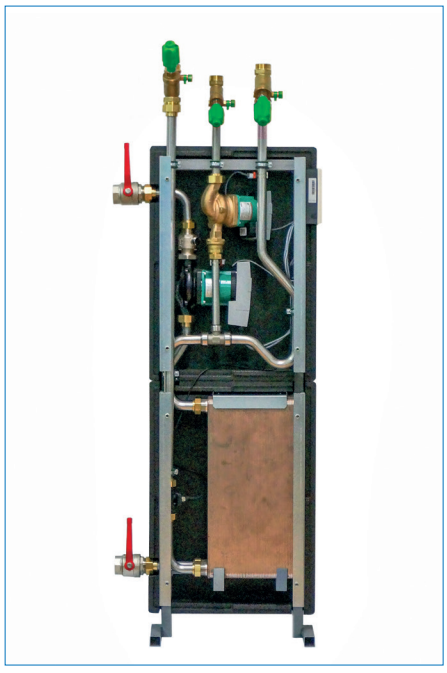
Type	Module SV
	
	Drinking water safety valve DN15 with connecting line 10 bar. for FW-E/EZ/D 40 and FW-E 60
Art-Nr.	**1000113**

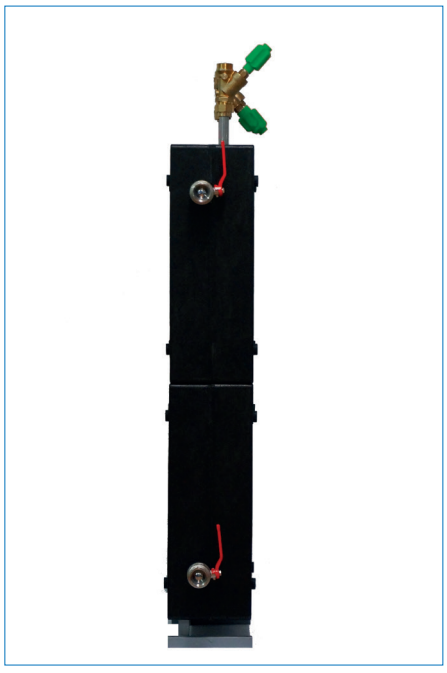
Type	Module Z3
	
	Drinking water circulation externally High efficiency circulation pump Yonos Para Z PWM 15/7 with non-return and 1" Ball valve.
Art-Nr.	**1000125**



DHW = Domestic hot water
DCW = Domestic cold water
HS = Heating Supply
HR= Heating Return

FW-E 90 / 120 for centralized DHW heating with flow principle





- ☑ With high efficiency pumps
- ☑ With high-quality plumbing balancing valves
- ☑ All drinking water outlets going upwards
- ☑ With sturdy valve / pump / heat exchanger carrier made of galvanized steel sheet
- ☑ Stable tube frame
- ☑ Accessible on both sides

Application:
Our DHW units FW-E 90 / E 120 are heating the domestic water centrally and are supplying it via hot water pipeline to the domestic water tapping points. A thermal storage tank is necessary in order to provide the required heating water quantity for heating the domestic water! The DHW water is only heated when "Just in Time" is requested. There is no storage of hot water!

Water heating:
The DHW water is heated in the flow-through principle only during the request via a **stainless steel plate heat exchanger**.
A special heat exchanger design allows high tap rates and a low return temperature to the buffer tank.

High efficiency pump:
The DHW volume flow (speed controlled) is delivered by **a high-efficiency pump** from the buffer storage to the plate exchanger for the heating of water.

Control function:
The central control element is the **electronic controller**. This ensures a constant hot water temperature.

Sensors:
Fast and very precise control processes are made possible by the use of state-of-the-art sensors. **A flow sensor according to the vortex principle**, determines the flow rate and the hot water temperature. Accurate and fast reacting **PT-1000 temperature sensors** measure the temperatures of: cold water, buffer storage flow and circulation return.

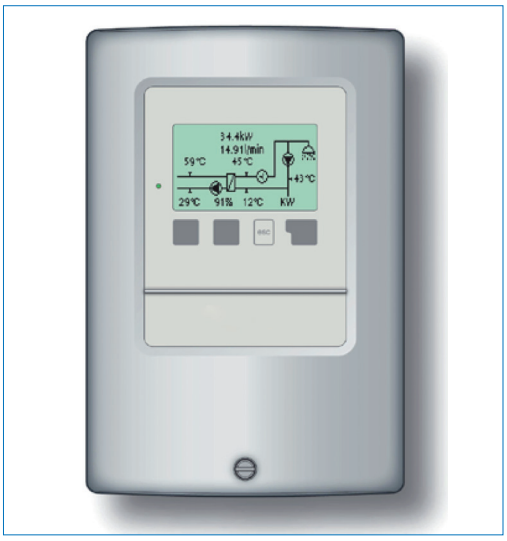
Housing:
Stylish **EPP insulating housing.**

Circulation:
A high efficiency circulation pump for drinking water is controlled by the electronic control system intelligently (according to pulse, time and temperature) and speed-controlled.

Specifications		
Type:	**FW-E 90 / E 120**	
Art-Nr.	**1620002 / 1620003**	
	Primary	**Secondary**
	Heating	**Drinking water**
Pressure rating:	PN 6	PN 10
Max. Temperature:	110 °C	75 °C
Connection dimensions:	DN32 / DN40	DN25 / DN32
Connection threads:	1¼ " f / 1½ " f	1¼ " m / 1½ " m
Dimensions (WxHxD):	480 x 1430 x 240 mm	

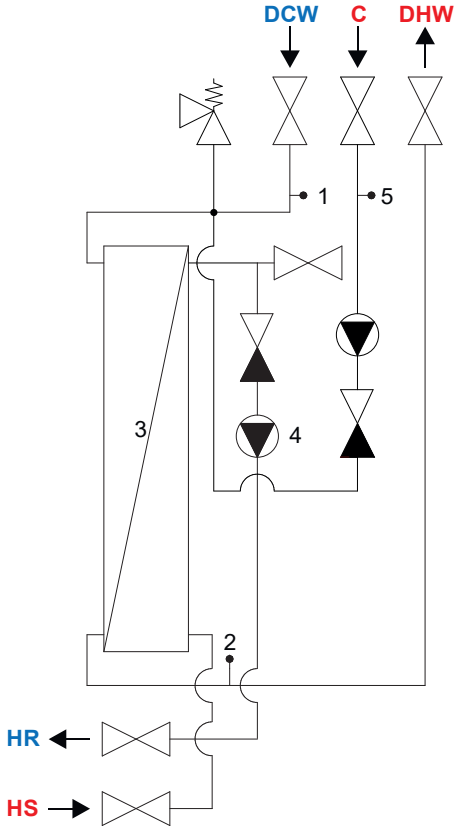
Performance characteristics:	FW-E 90	FW-E 120
DHW Capacity:	315 kW	415 kW
Mass Flow Primary:	4932 kg/h	6498 kg/h
Supply temperature:	75 °C	75 °C
Return temperature:	20 °C	20 °C
DCW / DHW temperature:	10 °C / 60 °C	10 °C / 60 °C
Tap performance:	90.48 l/min	119.16 l/min

Specifications	
Service:	• Clearly written illuminated full text LCD display and graphic modus • Internationally understandable with up to 6 languages included • Self-explanatory operation: The assigned functions are shown in the display right above the respective input key • Easy and quick installation with the integrated setup wizard
Operating mode:	DHW control without circulation DHW control with external circulation DHW control, Circulation, Variable storage (with 3 Ways switching valve)
Additional functions:	Buffer charge, cascade
Plate exchanger:	Long thermal length, low pressure loss Stainless steel AISI 316, copper soldered
Piping:	Stainless steel AISI 316, 28x1.5 mm / 22x1 mm
Pumpe:	Heating pump WILO Stratos PARA PWM 25/1-8 (FW-E 90) Heating pump WILO Stratos PARA PWM 25/1-12 (FW-E 120)
Sensoren:	HW temperature and flow: SIKA VVX20 (FW-E 90) / SIKA VVX25 (FW-E 120) CW/Buffer/Circulation temperature Plug-in sensor PT1000/B/2 with plug and cable
Insulation:	EPP, black
Delivery:	Pre-assembled, wired and leak tested With operating instructions, drinking water safety valve and mounting accessories packed in a cardboard box.

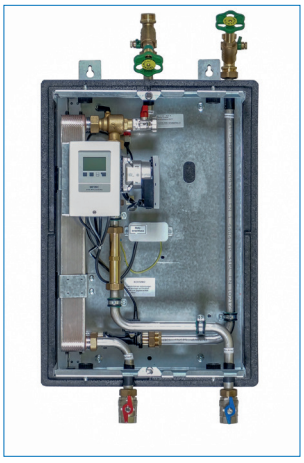


Description	
1	Temperature sensor CW
2	Vortex sensor Temperature + Flow
3	Plate heat exchanger
4	Circulation pump
5	Temperature sensor HR

DHW = Domestic hot water
DCW = Domestic cold water
HS = Heating Supply
HR= Heating Return
C = Circulation

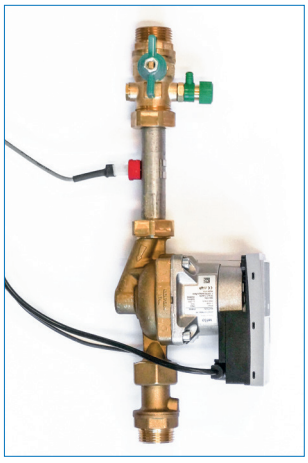


Example configuration of a 3-cascade				
	Type:		Number:	Art-Nr.:
1	FW-E 40	DHW module	3 x	1610001
2	Module Z3 / Z4	Circulation	1 x	1000125 / 1000126
3	FWK data cable	Connection cable	2 x	1000127
4	MAG 20	Soleonid valve 3/4" - 230 V	3 x	1000130



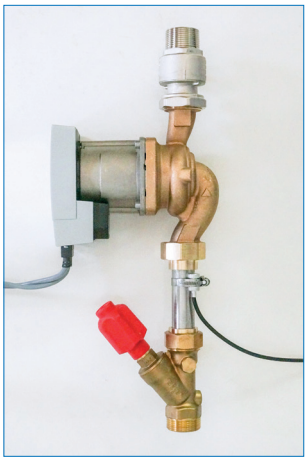
FW-E 40
1610001

+



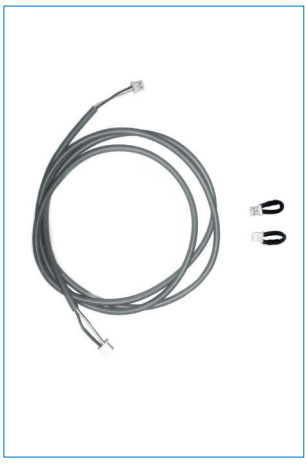
Modul Z3
1000125

or



Modul Z4
1000126

+



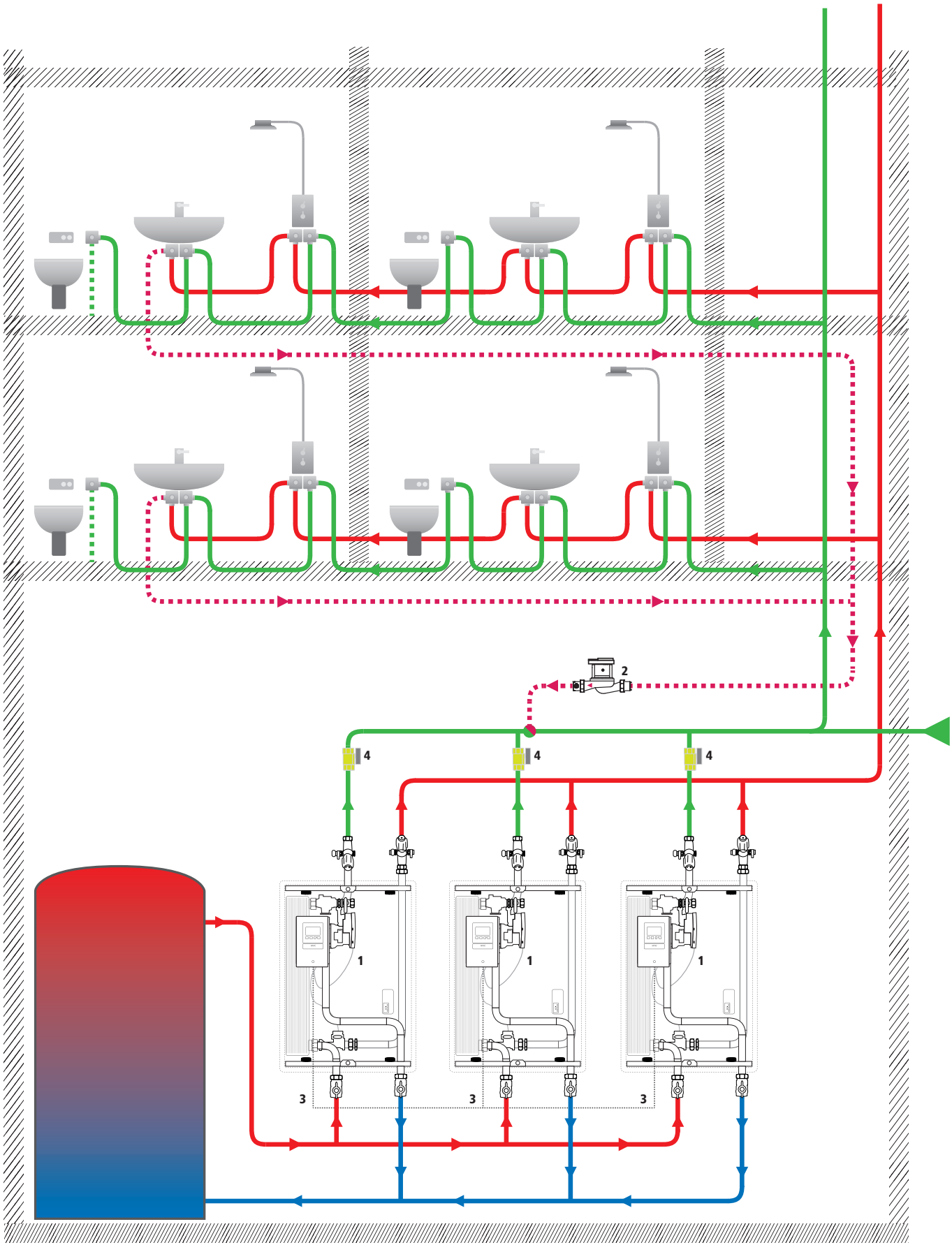
FWK Datenkabel
1000127

+

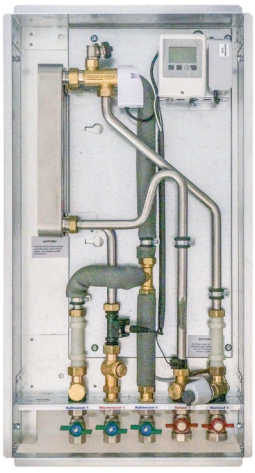
MAG 20
1000130

= Cascade

Hot water always fresh!


2
4
4
4
1
1
1
3
3
3

DHW station **BM-T** with ***step a valve*** technology



and microprocessor regulated controller

- ☑ Controlled by stepper motor valve hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input
- ☑ Piping in stainless steel 18 x 1 mm
- ☑ Low profile design 110 mm

A microprocessor regulated controller in conjunction with a *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a ***step a valve*** stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Controller:

- Temperature setting of domestic hot water
- Provision Yes / No
- Provision time (= night reduction)

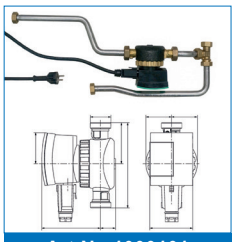
Specifications		
	Heating primary	
	Buffer memory	Drinking water
Pressure rating:	PN 6	PN 10
Temperature max.:	90 °C	75 °C
Connection dimensions:	DN 25	DN 20
Thread:	1" female	¾" female
Dimensions: (WxHxD)	435 x 800 x 110-150 mm	
Niche size: (WxHxD)	min. 455 x 805 x 112 mm	

Example performance heat exchanger								
DHW performance:	**S**		**M**		**L**		**XL**	
	29 kW		36 kW		45 kW		51 kW	
Flow / return temperature primary:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
KW entry / DHW outlet temperature:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
DHW tap load max.:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure drop TWW:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar
Pressure drop heating *:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Flow Primary:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h

*** without heat meter**

(at 2 bar KW Druck and 350 mbar HZ)

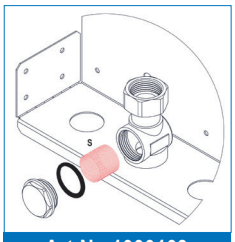
Options



Art-Nr. 1000101

Circulation module Z:

A drinking water high-efficiency
circulation pump Wilo Nova Z15 with backflow
preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm
and ball valve 3/4".
The circulation pump comes with mains plug.



Art-Nr. 1000103

Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).

Art-Nr. 1000122

Module W - Water damper:

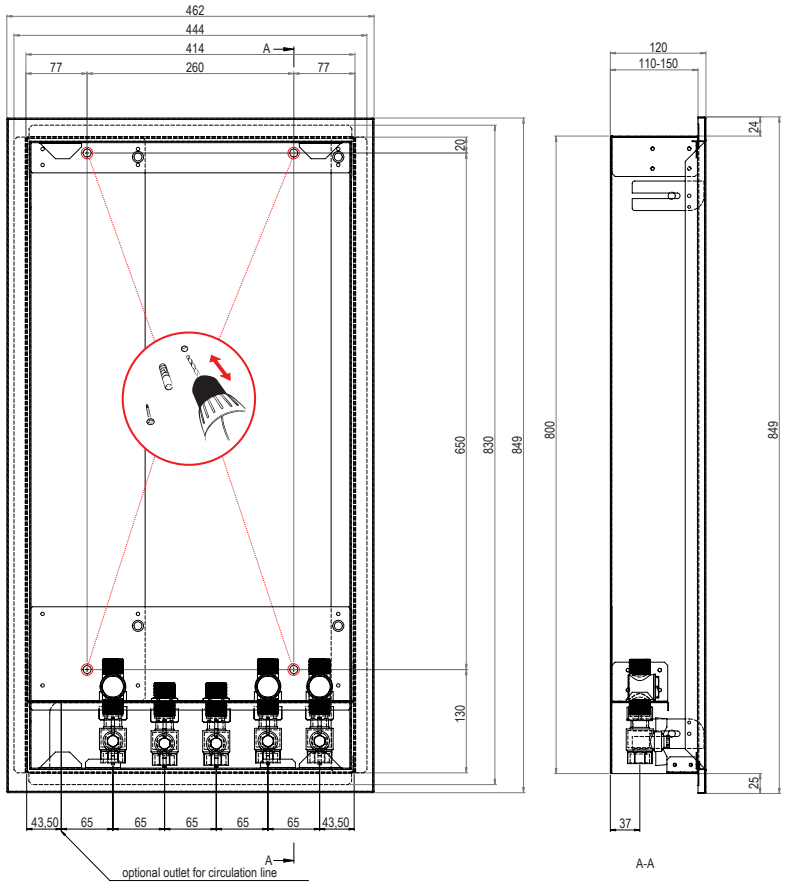
The water damper prevents
Waterhammer and thus the
Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves
in the drinking water installation.

Art-Nr. 1000150

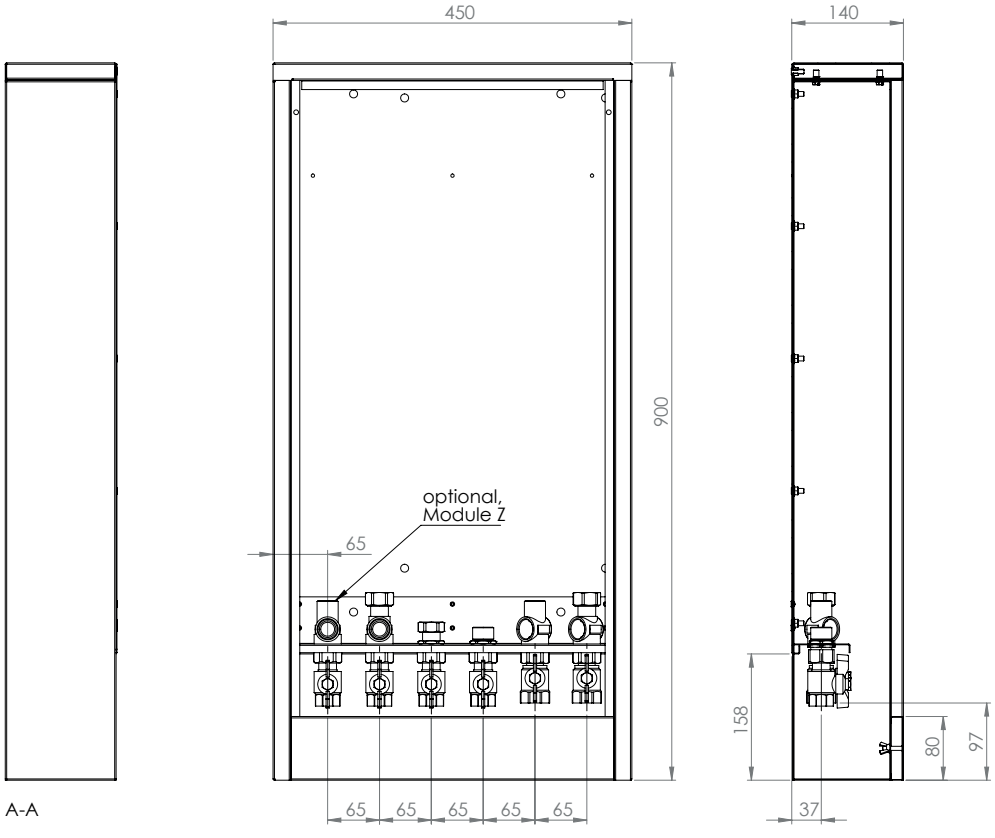
Module ISO T:

Insulation cover for BM-T.

Dimensions flush-mounted



Dimensions on-wall mounted



Selection criteria:

1. Installation:

2. PHE*:

DHW station BM-T

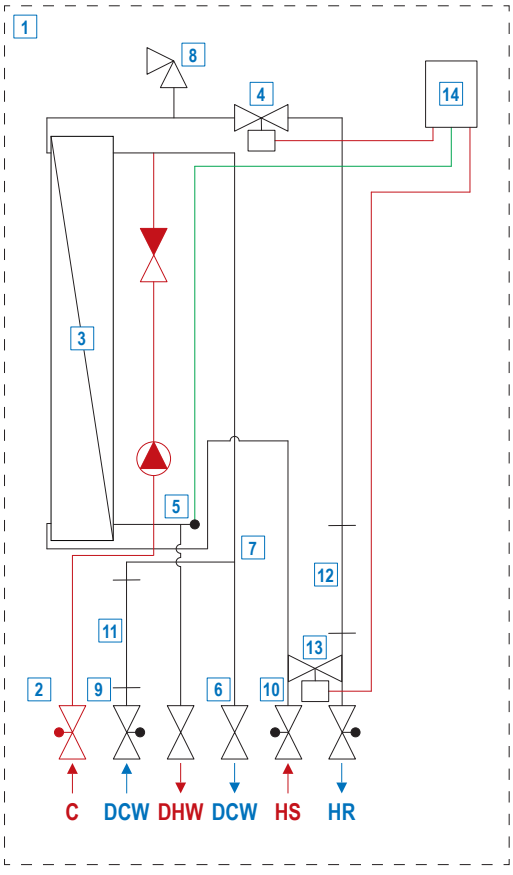
	Flush-mounted		On-wall mounted	
	Cu soldered PHE	S.S. soldered PHE	Cu soldered PHE	S.S. soldered PHE
S small	Art-Nr. 1000001	Art-Nr. 1000101	Art-Nr. 1000011	Art-Nr. 1000111
M medium	Art-Nr. 1000002	Art-Nr. 1000102	Art-Nr. 1000012	Art-Nr. 1000112
L large	Art-Nr. 1000003	Art-Nr. 1000103	Art-Nr. 1000013	Art-Nr. 1000113
XL extra large	Art-Nr. 1000004	Art-Nr. 1000104	Art-Nr. 1000014	Art-Nr. 1000114

DHW performance

Example categorization of Art-Nr. PHE*: Plate heat exchanger

Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	0	0	0	0	0	3
					CU	UP	L

Circuit diagram BM-T



1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controller

DHW station **BM-WP 4** with ***step a valve*** technology

and microprocessor regulated controller

50 °C

- ☑ Controlled by stepper motor valve hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input
- ☑ Additional heating circuit with one heat meter installation path for floor distributor / radiator heating
- ☑ Piping in stainless steel 18 x 1 mm

A microprocessor regulated controller in conjunction with a *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a ***step a valve*** stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Controller:

- Temperature setting of domestic hot water
- Provision Yes / No
- Provision time (= night reduction)

4-wire system:

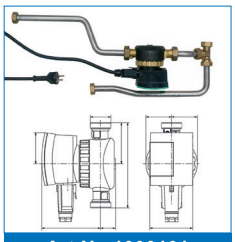
For the consumption recording of underfloor heating / radiator heating there is an extra heat meter installation section integrated in the cabinet.

Specifications			
	Heating primary	Heating secondary	
	Buffer memory	Heating	Drinking water
Pressure rating:	PN 6	PN 6	PN 10
Temperature max.:	90 °C	90 °C	75 °C
Connection dimensions:	DN 25	DN 20	DN 20
Thread:	1" female	¾" female	¾" female
Dimensions: (WxHxD)	710 x 1275-1375 x 130-180 mm		
Niche size: (WxHxD)	min. 730 x 1310-1455 x 132 mm		

Example performance heat exchanger	
DHW performance:	XL
	51 kW
Flow / return temperature primary:	50 °C / 20 °C
KW entry / DHW outlet temperature:	10 / 45 °C
DHW tap load max.:	15 l/min
Pressure drop TWW:	135 mbar
Pressure drop heating *:	350 mbar
Flow Primary:	1100 l/h
* without heat meter	(at 2 bar KW Druck and 350 mbar HZ)

50 °C

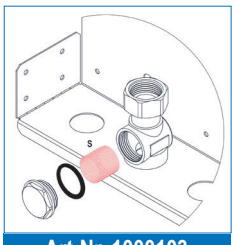
Options



Art-Nr. 1000101

Circulation module Z:

A drinking water high-efficiency
circulation pump Wilo Nova Z15 with backflow
preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm
and ball valve 3/4".
The circulation pump comes with mains plug.



Art-Nr. 1000103

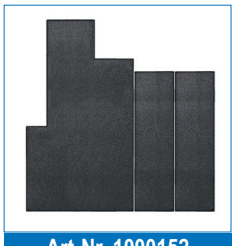
Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).

Art-Nr. 1000122

Module W - Water damper:

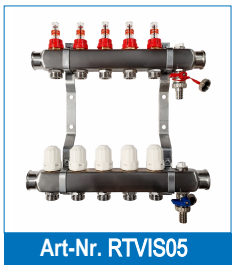
The water damper prevents
Waterhammer and thus the
Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves
in the drinking water installation.



Art-Nr. 1000152

Module ISO F/HF/WP:

Insulation cover for BM-F/HF/WP.



Art-Nr. RTVIS05

RTVIS05 manifold - 5 circuits:

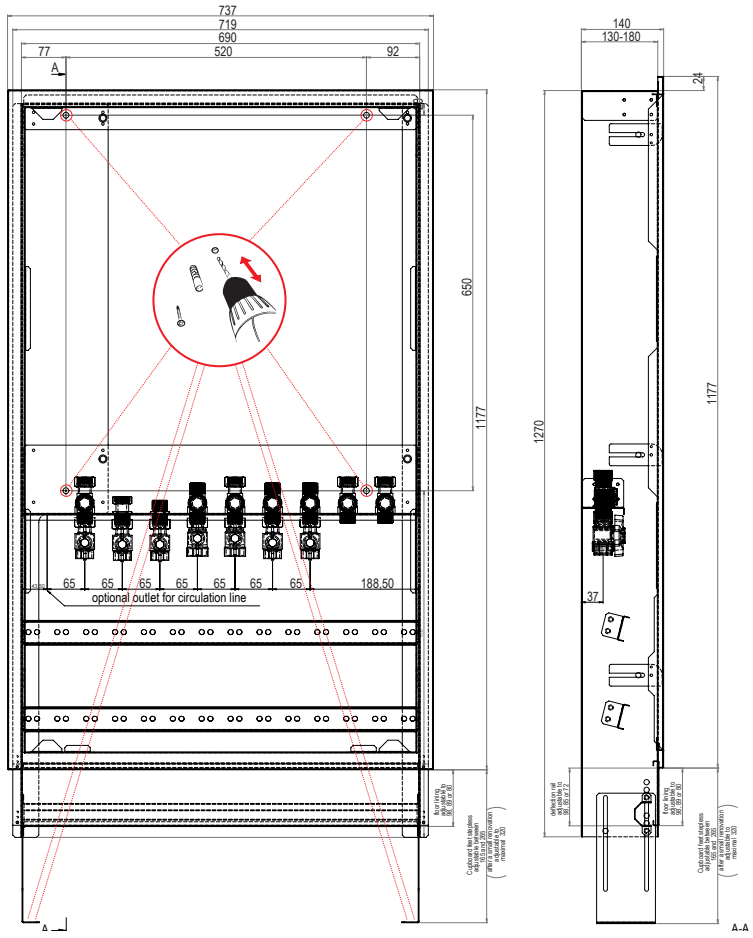
The INOX manifold of RTVIS type is used in surface
heating systems, especially in floor heating
systems. Valve and metering valves of the
distributor enable regulation of flow in particular
loops of surface heating - underfloor and wall
heating.

Art-Nr. 257.2855.000

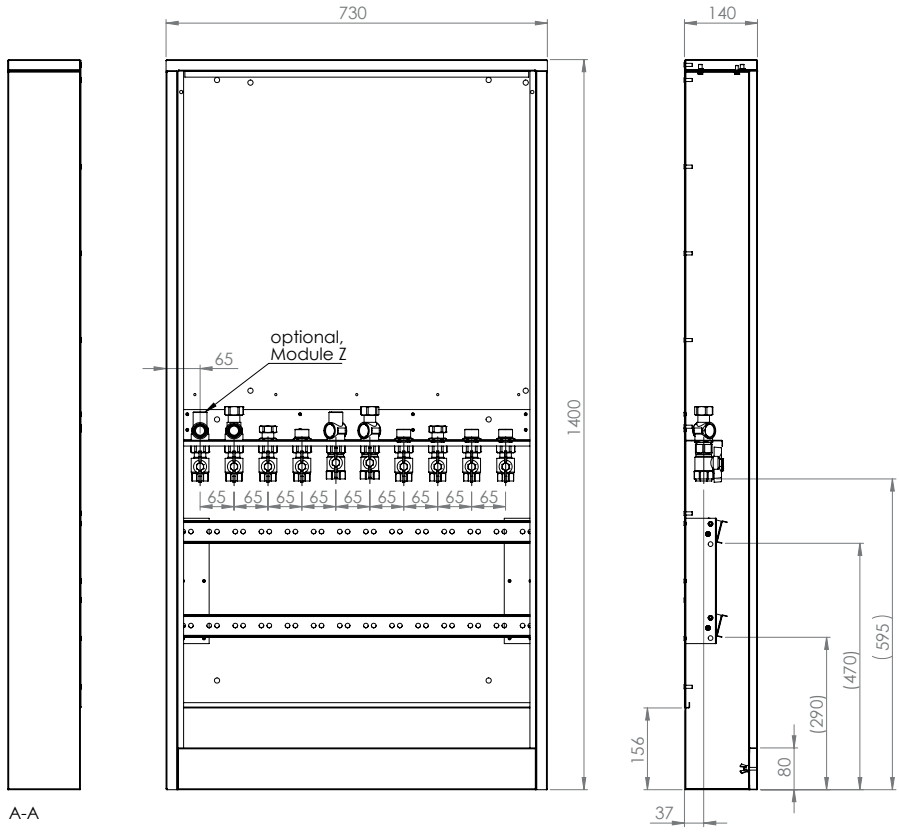
NovaDrive electrothermal actuator:

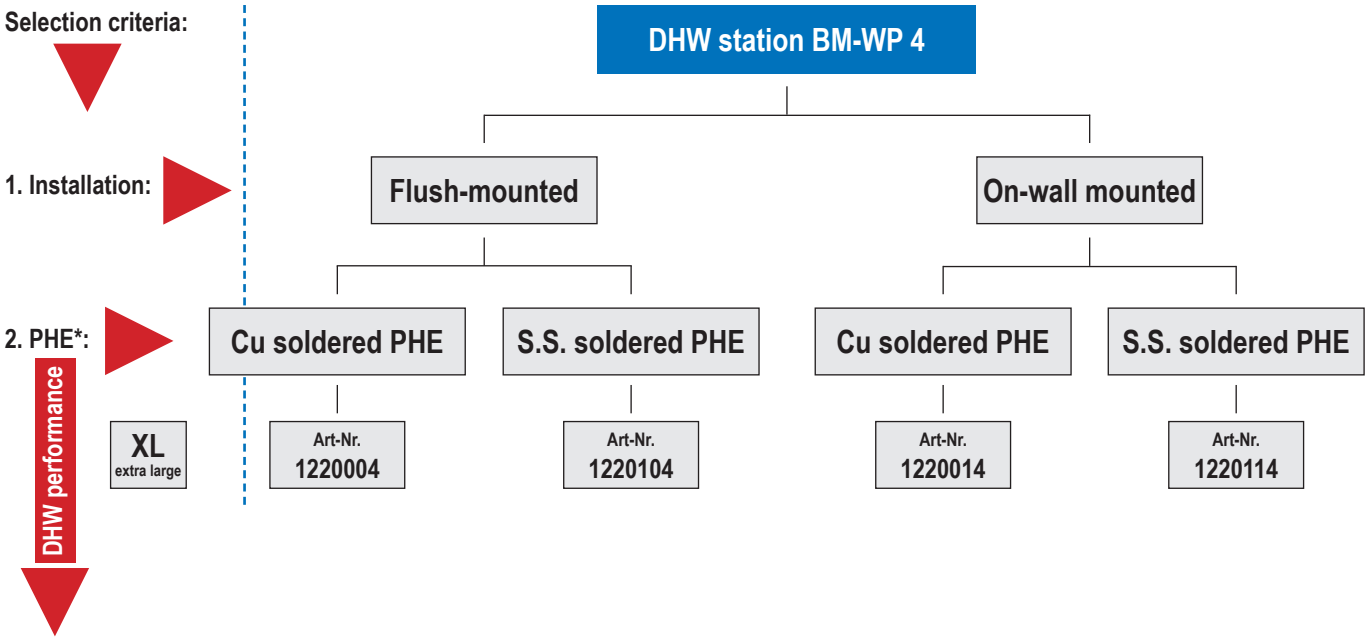
Electrothermal actuator for heating circuit
distributors and radiator valves.

Dimensions flush-mounted



Dimensions on-wall mounted

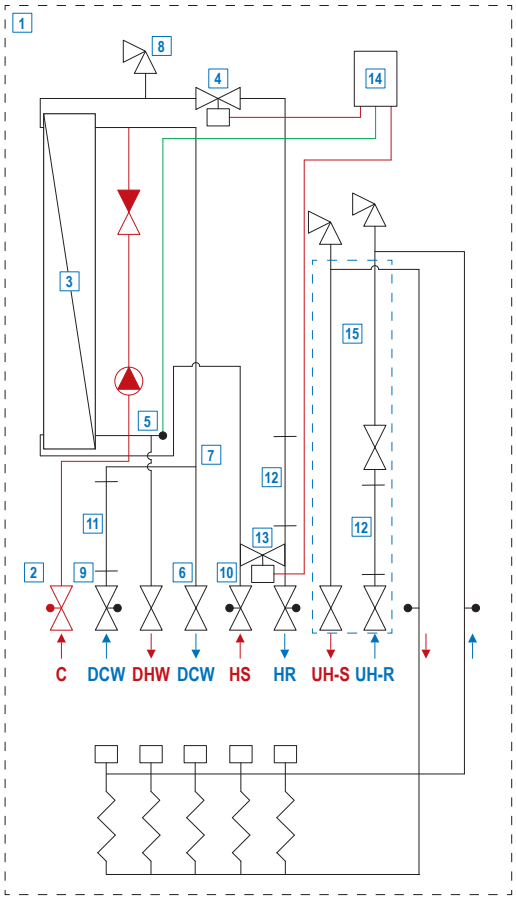




Example categorization of Art-Nr. PHE*: Plate heat exchanger

Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	2	2	0	0	0	4
					CU	UP	XL

Circuit diagram BM-WP 4



1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controller
15	Underfloor heating and Heating radiator

DHW station BM-WP 3 with *step a valve* technology

and microprocessor regulated controller

55 °C

- ☑ Controlled by stepper motor valve hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input
- ☑ Additional heating circuit with one heat meter installation path for floor distributor / radiator heating
- ☑ Piping in stainless steel 18 x 1 mm

A microprocessor regulated controller in conjunction with a *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a *step a valve* stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Controller:

- Temperature setting of domestic hot water
- Provision Yes / No
- Provision time (= night reduction)

3-wire system:

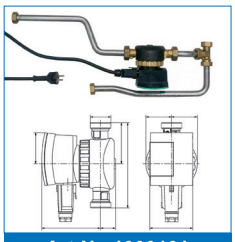
For the consumption of the underfloor heating / radiator heating and the heating of drinking water is a common heat meter installation section integrated in the cabinet.

Specifications			
	Heating primary	Heating secondary	
	Buffer memory	Heating	Drinking water
Pressure rating:	PN 6	PN 6	PN 10
Temperature max.:	90 °C	90 °C	75 °C
Connection dimensions:	DN 25	DN 20	DN 20
Thread:	1" female	¾" female	¾" female
Dimensions: (WxHxD)	710 x 1275-1375 x 130-180 mm		
Niche size: (WxHxD)	min. 730 x 1310-1455 x 132 mm		

Example performance heat exchanger	
DHW performance:	XL
	51 kW
Flow / return temperature primary:	55 °C / 19 °C
KW entry / DHW outlet temperature:	10 / 45 °C
DHW tap load max.:	18 l/min
Pressure drop TWW:	200 mbar
Pressure drop heating *:	350 mbar
Flow Primary:	1100 l/h
* without heat meter	(at 2 bar KW Druck and 350 mbar HZ)

55 °C

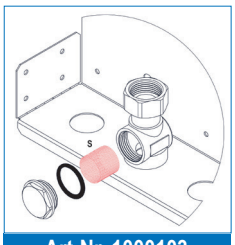
Options



Art-Nr. 1000101

Circulation module Z:

A drinking water high-efficiency
circulation pump Wilo Nova Z15 with backflow
preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm
and ball valve 3/4".
The circulation pump comes with mains plug.



Art-Nr. 1000103

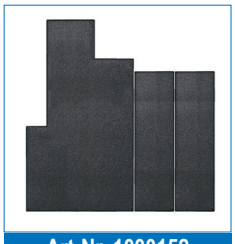
Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).

Art-Nr. 1000122

Module W - Water damper:

The water damper prevents
Waterhammer and thus the
Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves
in the drinking water installation.



Art-Nr. 1000152

Module ISO F/HF/WP:

Insulation cover for BM-F/HF/WP.

Art-Nr. RTVIS05

RTVIS05 manifold - 5 circuits:

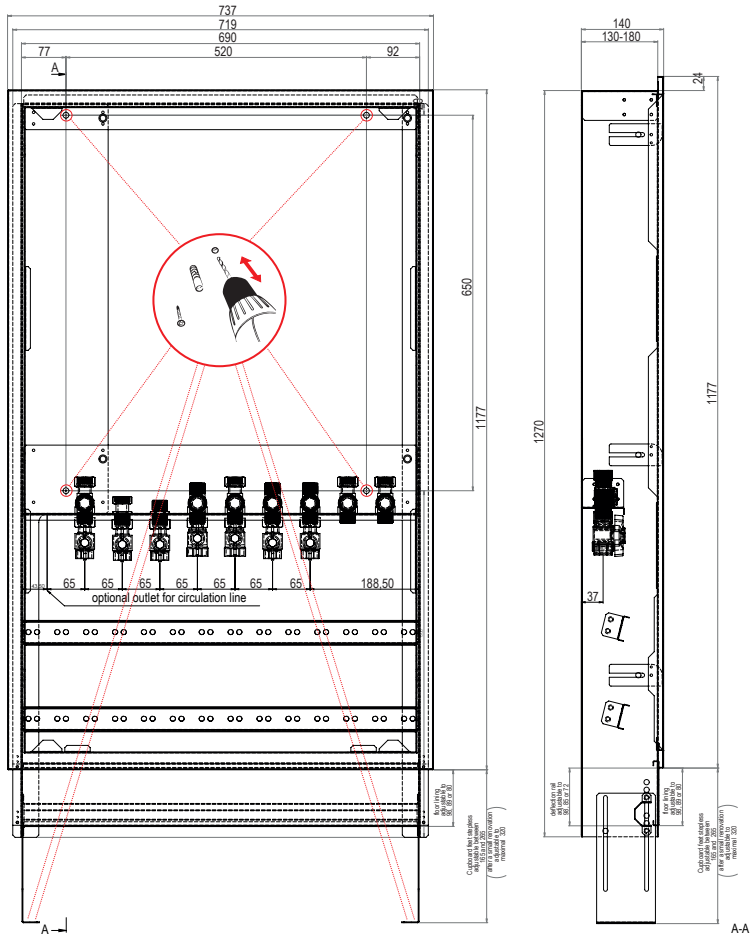
The INOX manifold of RTVIS type is used in surface heating systems, especially in floor heating systems. Valve and metering valves of the distributor enable regulation of flow in particular loops of surface heating - underfloor and wall heating.

Art-Nr. 257.2855.000

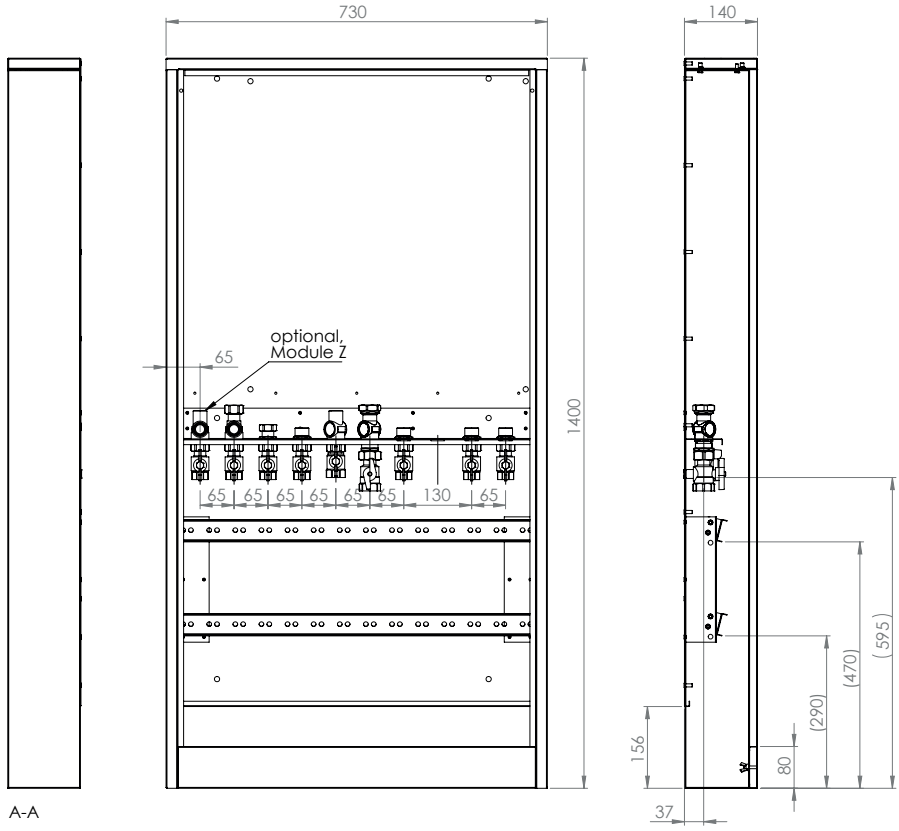
NovaDrive electrothermal actuator:

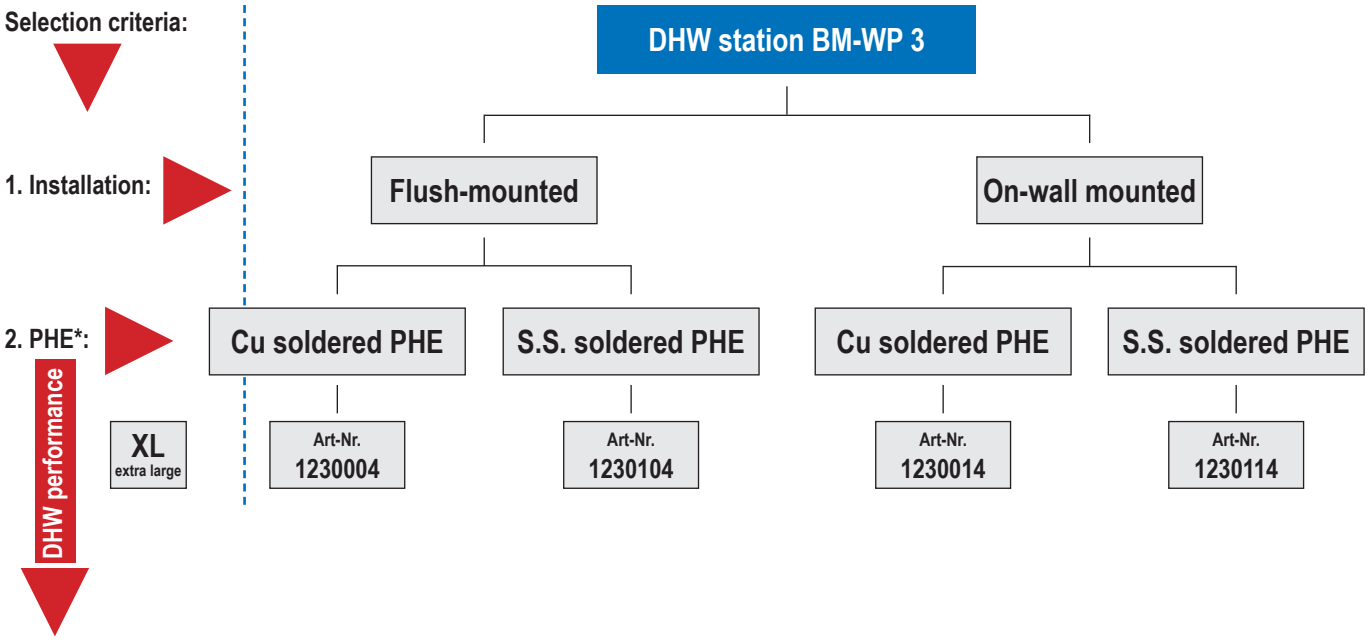
Electrothermal actuator for heating circuit distributors and radiator valves.

Dimensions flush-mounted



Dimensions on-wall mounted

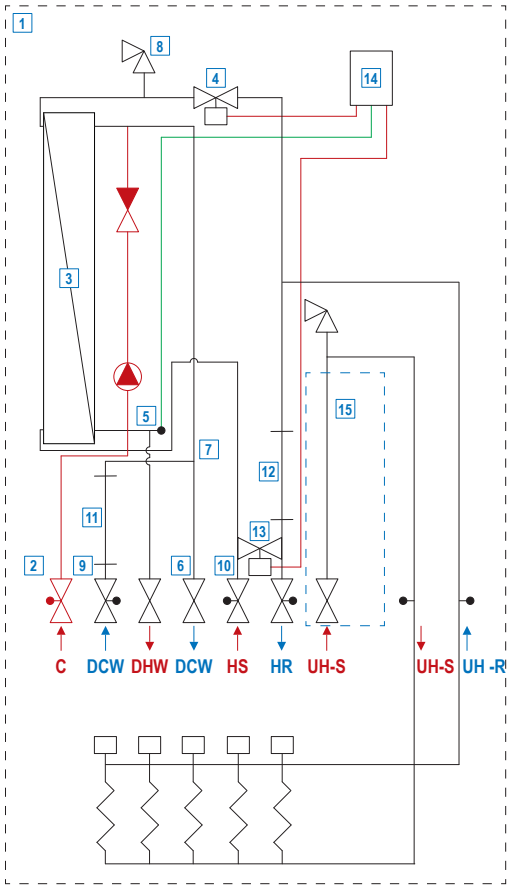




Example categorization of Art-Nr. PHE*: Plate heat exchanger

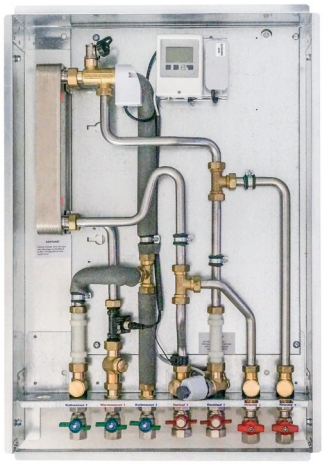
Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	2	3	0	0	0	4
					CU	UP	XL

Circuit diagram BM-WP 3



1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controller
15	Underfloor heating and Heating radiator

DHW station **BM-H** with ***step a valve*** technology



and microprocessor regulated controller

- ☑ Controlled by stepper motor valve hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input
- ☑ Modular design - individually expandable with e.g. Secondary differential pressure module
- ☑ Radiator connection prepared
- ☑ Piping in stainless steel 18 x 1 mm
- ☑ Low profile design 110 mm

A microprocessor regulated controller in conjunction with a *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a ***step a valve*** stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Controller:

- Temperature setting of domestic hot water
- Provision Yes / No
- Provision time (= night reduction)

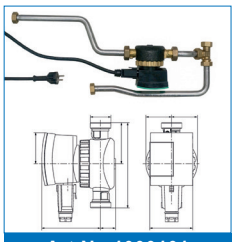
Specifications			
	Heating primary	Heating secondary	
	Buffer memory	Heating	Drinking water
Pressure rating:	PN 6	PN 6	PN 10
Temperature max.:	90 °C	60 °C	75 °C
Connection dimensions:	DN 25	DN 20	DN 20
Thread:	1" female	¾" female	¾" female
Dimensions: (WxHxD)	565 x 800 x 110-150 mm		
Niche size: (WxHxD)	min. 585 x 805 x 112 mm		

Example performance heat exchanger								
DHW performance:	**S**		**M**		**L**		**XL**	
	29 kW		36 kW		45 kW		51 kW	
Flow / return temperature primary:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
KW entry / DHW outlet temperature:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
DHW tap load max.:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure drop TWW:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar
Pressure drop heating *:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Flow Primary:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h

*** without heat meter**

(at 2 bar KW Druck and 350 mbar HZ)

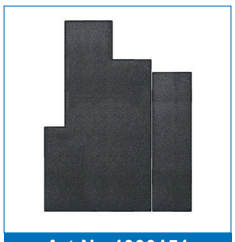
Options



Art-Nr. 1000101

Circulation module Z:

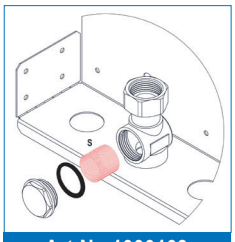
A drinking water high-efficiency
circulation pump Wilo Nova Z15 with backflow
preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm
and ball valve 3/4".
The circulation pump comes with mains plug.



Art-Nr. 1000151

Module ISO H:

Insulation cover for BM-H.



Art-Nr. 1000103

Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).

Art-Nr. 1000121

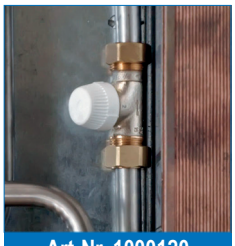
Module VOR:

DHW priority circuit
in the return.

Art-Nr. 1000112

Module D2 - Differential pressure regulator:

Combi-auto for maintaining the differential pressure
at strong load changes. Continuously adjustable
from 50 to 350 mbar (Factory setting 150 mbar).
Complete with connection capillary tube 3 mm,
mounted in radiator return.



Art-Nr. 1000120

Module ZV - Zone valve:

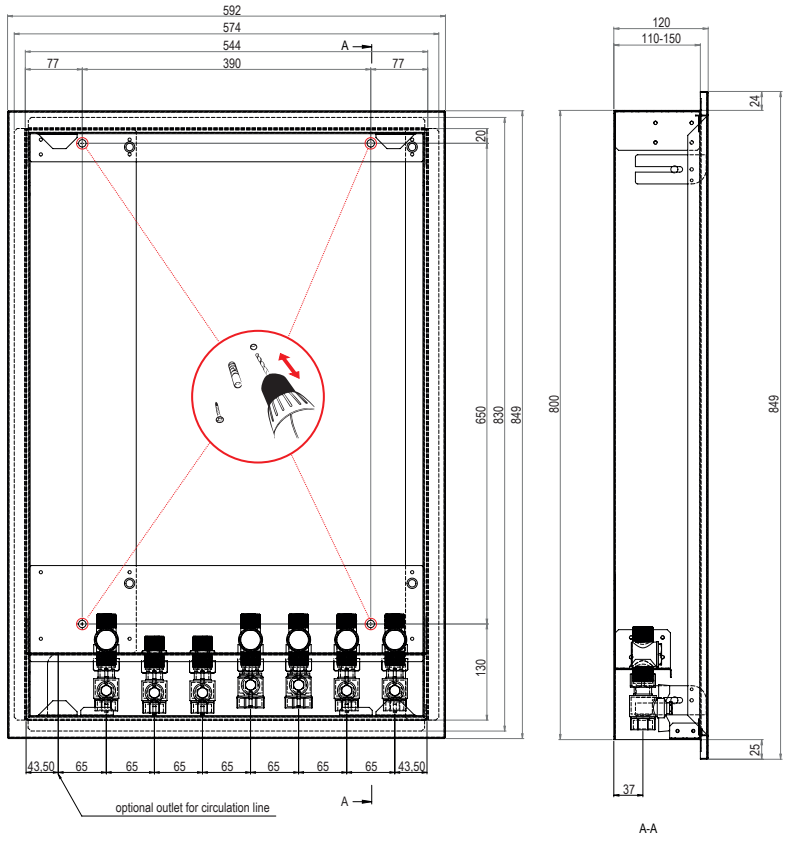
Zone valve 1/2" with the possibility to
assembly of an actuator with M30x1.5 mm.
Secondarily mounted in the heating circuit.

Art-Nr. 1000122

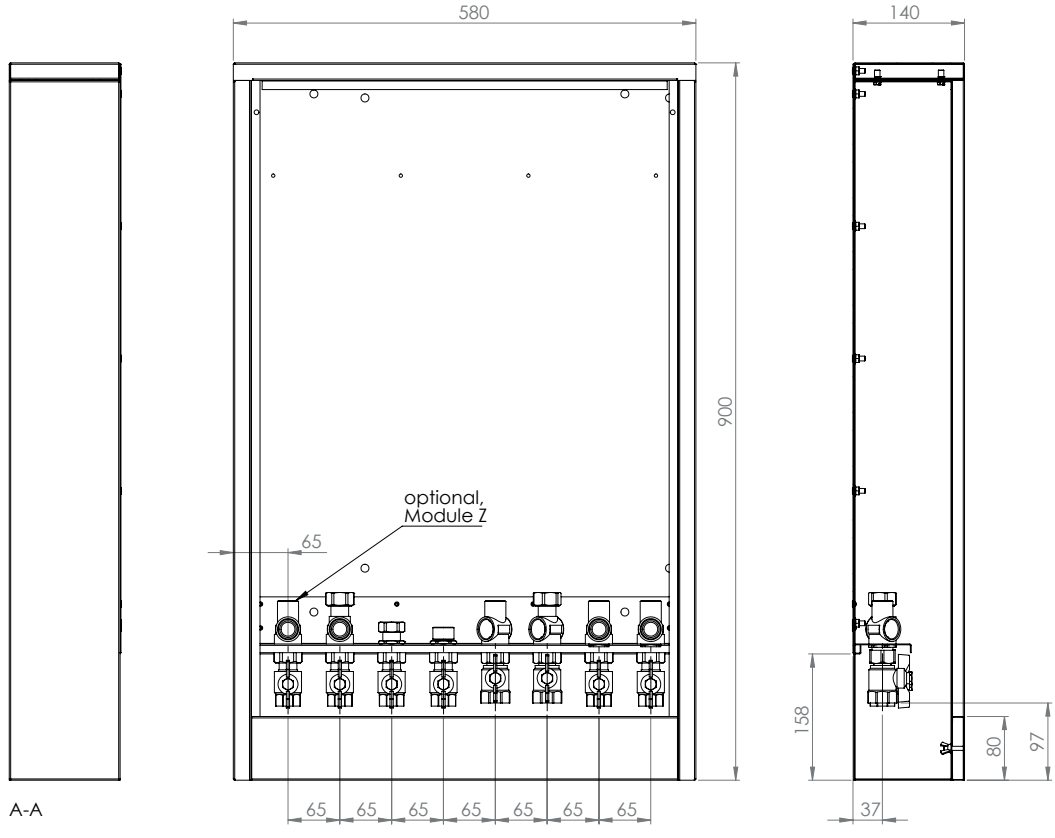
Module W - Water damper:

The water damper prevents
Waterhammer and thus the
Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves
in the drinking water installation.

Dimensions flush-mounted



Dimensions on-wall mounted



Selection criteria:

1. Installation:

2. PHE*:

DHW station BM-H

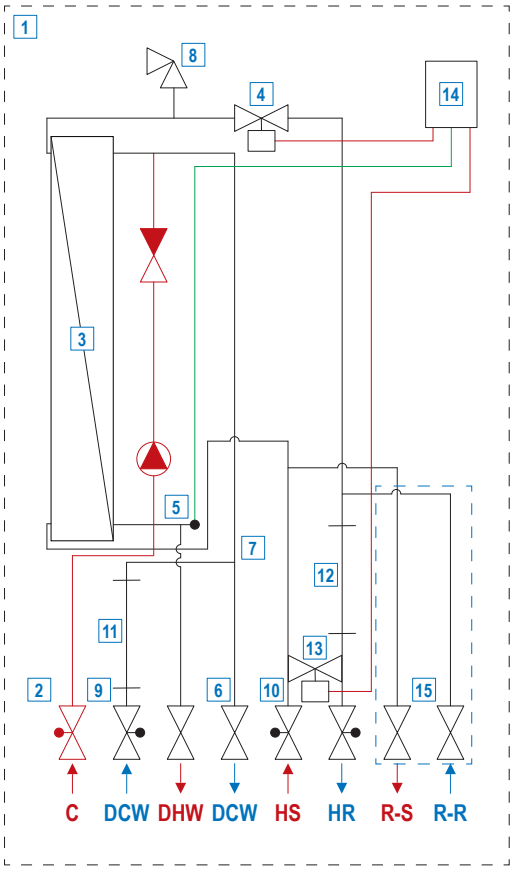
	Flush-mounted		On-wall mounted	
	Cu soldered PHE	S.S. soldered PHE	Cu soldered PHE	S.S. soldered PHE
S small	Art-Nr. 1100001	Art-Nr. 1100101	Art-Nr. 1100011	Art-Nr. 1100111
M medium	Art-Nr. 1100002	Art-Nr. 1100102	Art-Nr. 1100012	Art-Nr. 1100112
L large	Art-Nr. 1100003	Art-Nr. 1100103	Art-Nr. 1100013	Art-Nr. 1100113
XL extra large	Art-Nr. 1100004	Art-Nr. 1100104	Art-Nr. 1100014	Art-Nr. 1100114

DHW performance

Example categorization of Art-Nr. PHE*: Plate heat exchanger

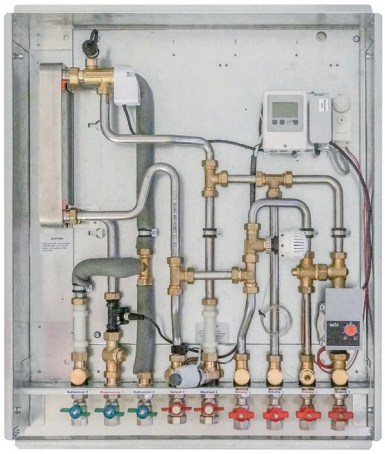
Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	1	0	0	0	0	3
					CU	UP	L

Circuit diagram BM-H



1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controller
15	Radiator outlet (high temperature HT)

DHW station **BM-HF** with ***step a valve*** technology



and microprocessor regulated controller

- ☑ controlled by stepper motor valve
  hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input
- ☑ Unregulated heating circuit
- ☑ Regulated heating circuit
- ☑ Piping in stainless steel 18 x 1 mm

A microprocessor regulated controller in conjunction with a *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a ***step a valve*** stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Controller:

- Temperature setting of domestic hot water
- Provision Yes / No
- Provision time (= night reduction)

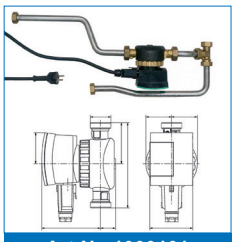
Technische Daten				
	Heating primary	Heating secondary	Heating secondary	
	Buffer memory	UF Heating	Radiator Heating	Drinking water
Pressure rating:	PN 6	PN 6	PN 6	PN 10
Temperature max.:	90 °C	60 °C	90 °C	75 °C
Connection dimensions:	DN 25	DN 20	DN 20	DN 20
Thread:	1" female	¾" female	¾" female	¾" female
Dimensions: (WxHxD)	710 x 800 x 130-180 mm			
Niche size: (WxHxD)	min. 730 x 805 x 132 mm			

Example performance heat exchanger								
DHW performance:	**S**		**M**		**L**		**XL**	
	29 kW		36 kW		45 kW		51 kW	
Flow / return temperature primary:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
KW entry / DHW outlet temperature:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
DHW tap load max.:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure drop TWW:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar
Pressure drop heating *:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Flow Primary:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h

*** without heat meter**

(at 2 bar KW Druck and 350 mbar HZ)

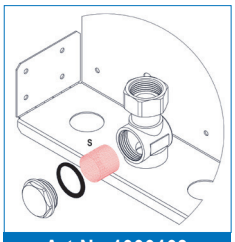
Options



Art-Nr. 1000101

Circulation module Z:

A drinking water high-efficiency
circulation pump Wilo Nova Z15 with backflow
preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm
and ball valve 3/4".
The circulation pump comes with mains plug.



Art-Nr. 1000103

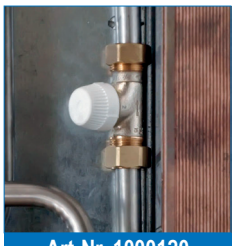
Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).

Art-Nr. 1000121

Module VOR:

DHW priority circuit
in the return.



Art-Nr. 1000120

Module ZV - Zone valve:

Zone valve 1/2" with the possibility to
assembly of an actuator with M30x1.5 mm.
Secondarily mounted in the heating circuit.

Art-Nr. 1000122

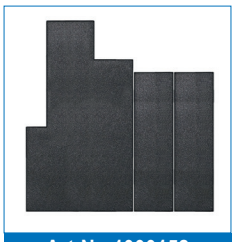
Module W - Water damper:

The water damper prevents
Waterhammer and thus the
Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves
in the drinking water installation.

Art-Nr. 1203000

Module TT-MHCC:

Weather-compensated
mixer control
Type TT-MHCC
with servomotor.
see also page 37

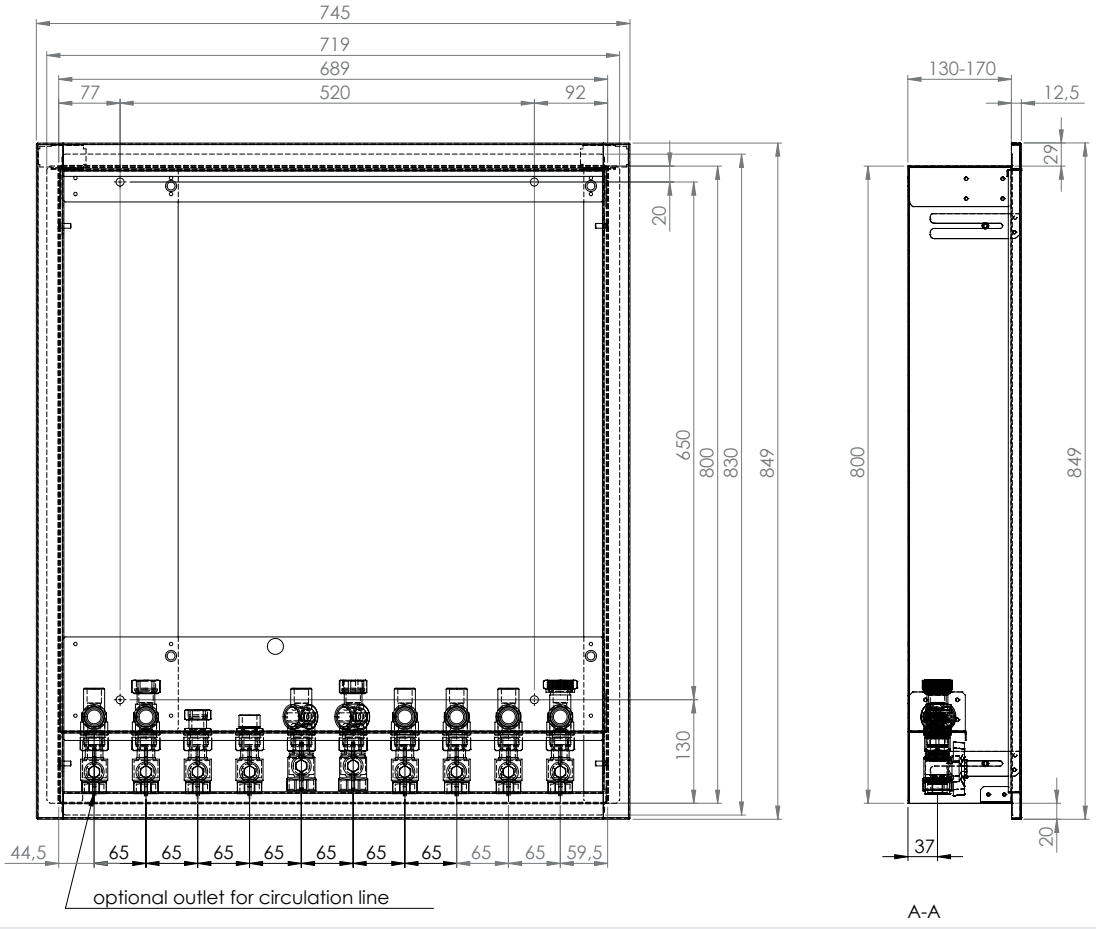


Art-Nr. 1000152

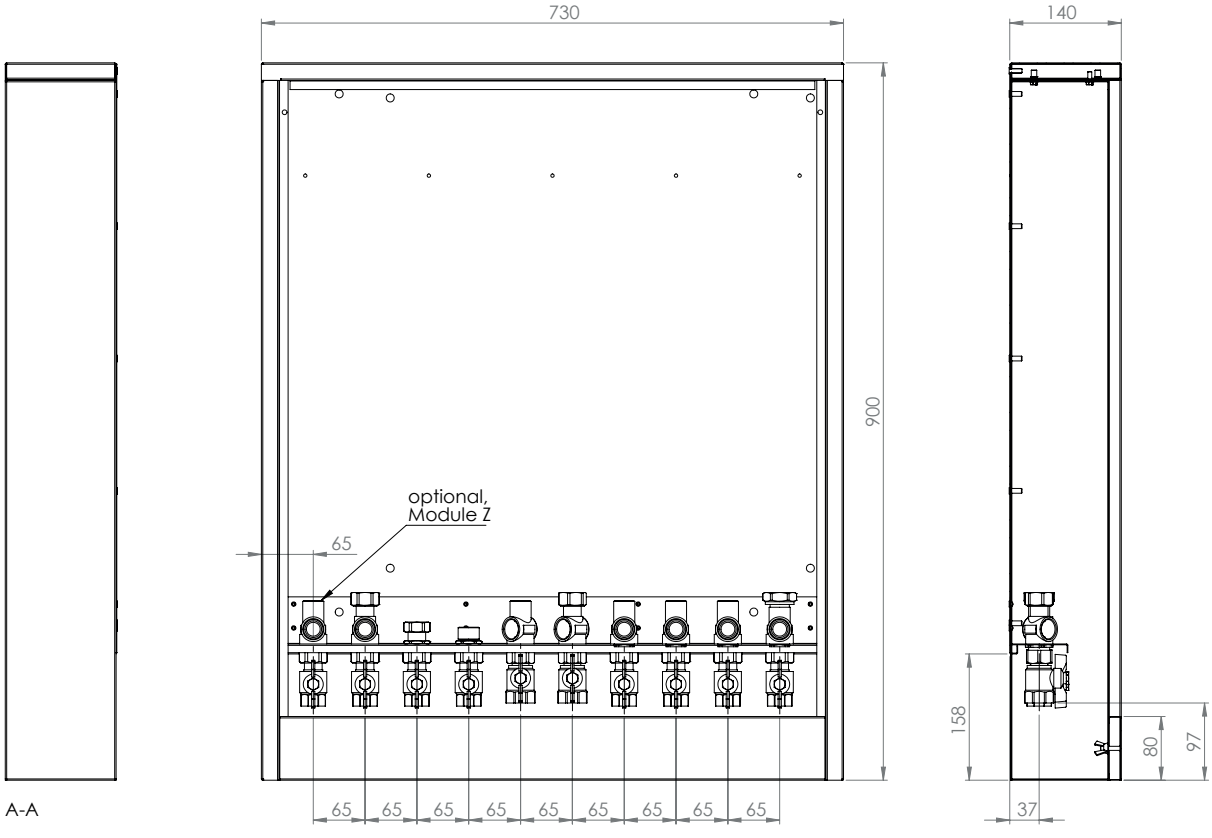
Module ISO F/HF/WP:

Insulation cover for
BM-F/HF/WP.

Dimensions flush-mounted



Dimensions on-wall mounted



Selection criteria:

1. Installation:

2. PHE*:

DHW station BM-HF

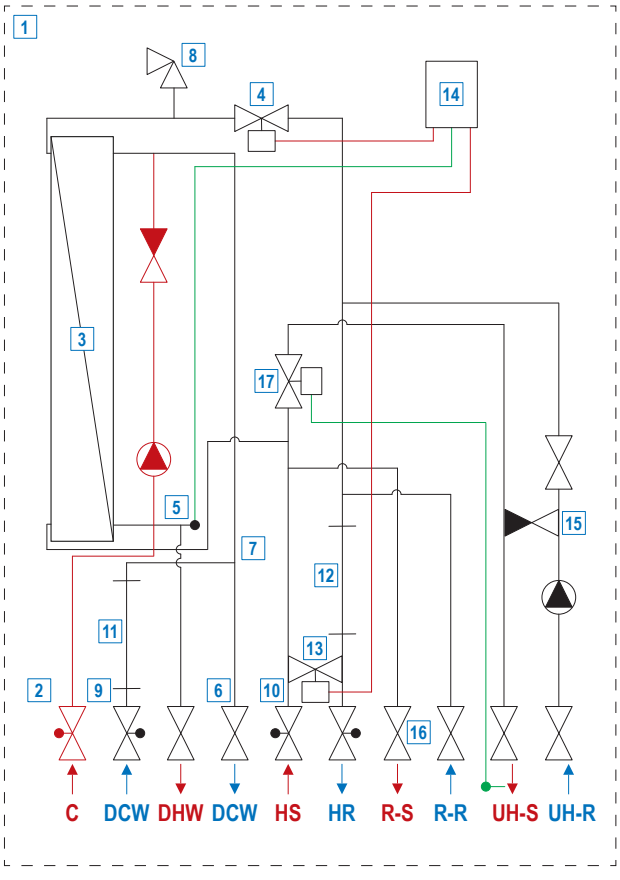
	Flush-mounted		On-wall mounted	
	Cu soldered PHE	S.S. soldered PHE	Cu soldered PHE	S.S. soldered PHE
S small	Art-Nr. 1240001	Art-Nr. 1240101	Art-Nr. 1240011	Art-Nr. 1240111
M medium	Art-Nr. 1240002	Art-Nr. 1240102	Art-Nr. 1240012	Art-Nr. 1240112
L large	Art-Nr. 1240003	Art-Nr. 1240103	Art-Nr. 1240013	Art-Nr. 1240113
XL extra large	Art-Nr. 1240004	Art-Nr. 1240104	Art-Nr. 1240014	Art-Nr. 1240114

DHW performance

Example categorization of Art-Nr. PHE*: Plate heat exchanger

Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	2	4	0	0	0	3
					CU	UP	L

Circuit diagram BM-HF



1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controller
15	Floor control group (low temperature NT)
16	Radiator outlet (high temperature HT)
17	Thermostatic control valve

DHW station **BM-F** with ***step a valve*** technology

and microprocessor regulated controller

- ☑ Controlled by stepper motor valve hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input
- ☑ Unregulated heating circuit
- ☑ Regulated heating circuit
- ☑ Piping in stainless steel 18 x 1 mm

A microprocessor regulated controller in conjunction with a *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a ***step a valve*** stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Controller:

- Temperature setting of domestic hot water
- Provision Yes / No
- Provision time (= night reduction)

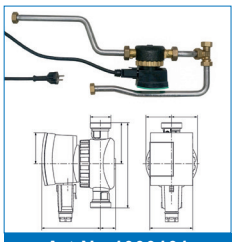
Specifications			
	Heating primary	Heating secondary	
	Buffer memory	UF Heating	Drinking water
Pressure rating:	PN 6	PN 6	PN 10
Temperature max.:	90 °C	60 °C	75 °C
Connection dimensions:	DN 25	DN 20	DN 20
Thread:	1" female	¾" female	¾" female
Dimensions: (WxHxD)	710 x 1275-1375 x 130-180 mm		
Niche size: (WxHxD)	min. 730 x 1310-1455 x 132 mm		

Example performance heat exchanger								
DHW performance:	S		M		L		XL	
	29 kW		36 kW		45 kW		51 kW	
Flow / return temperature primary:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
KW entry / DHW outlet temperature:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
DHW tap load max.:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure drop TWW:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar
Pressure drop heating *:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Flow Primary:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h

*** without heat meter**

(at 2 bar KW Druck and 350 mbar HZ)

Options



Art-Nr. 1000101

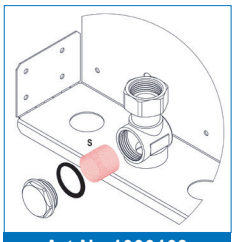
Circulation module Z:

A drinking water high-efficiency
circulation pump Wilo Nova Z15 with backflow
preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm
and ball valve 3/4".
The circulation pump comes with mains plug.

Art-Nr. 1000121

Module VOR:

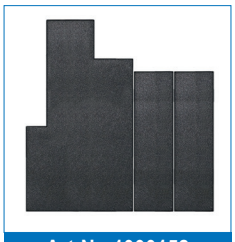
DHW priority circuit
in the return.



Art-Nr. 1000103

Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).



Art-Nr. 1000152

Module ISO F/HF/WP:

Insulation cover for
BM-F/HF/WP.

Art-Nr. 1000122

Module W - Water damper:

The water damper prevents
Waterhammer and thus the
Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves
in the drinking water installation.

Art-Nr. 1203000

Module TT-MHCC:

Weather-compensated
mixer control
Type TT-MHCC
with servomotor.
see also page 37

Art-Nr. 1000123

Module HF:

Additional supply and return connection piping
each with a shut-off ball valve ¾" and
Strainer housing.
The stainless steel piping is attached to the to
the high temperature outlets of the station and
the ball valves are integrated in the bar.

Art-Nr. RTVIS05

RTVIS05 manifold - 5 circuits:

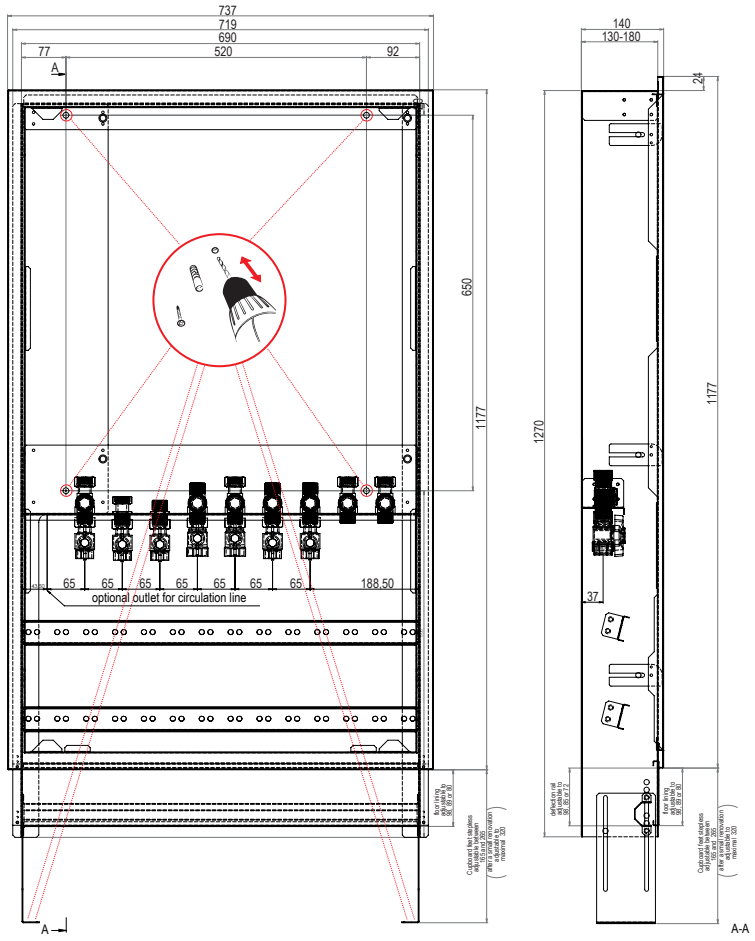
The INOX manifold of RTVIS type is used in surface
heating systems, especially in floor heating
systems. Valve and metering valves of the
distributor enable regulation of flow in particular
loops of surface heating - underfloor and wall
heating.

Art-Nr. 257.2855.000

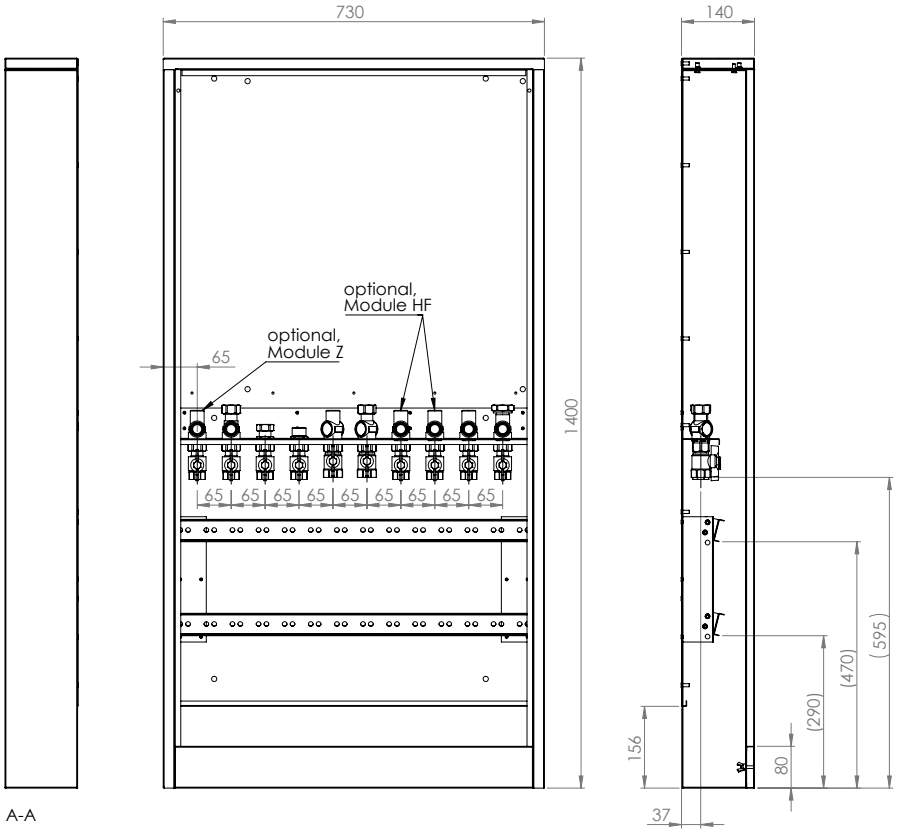
NovaDrive electrothermal actuator:

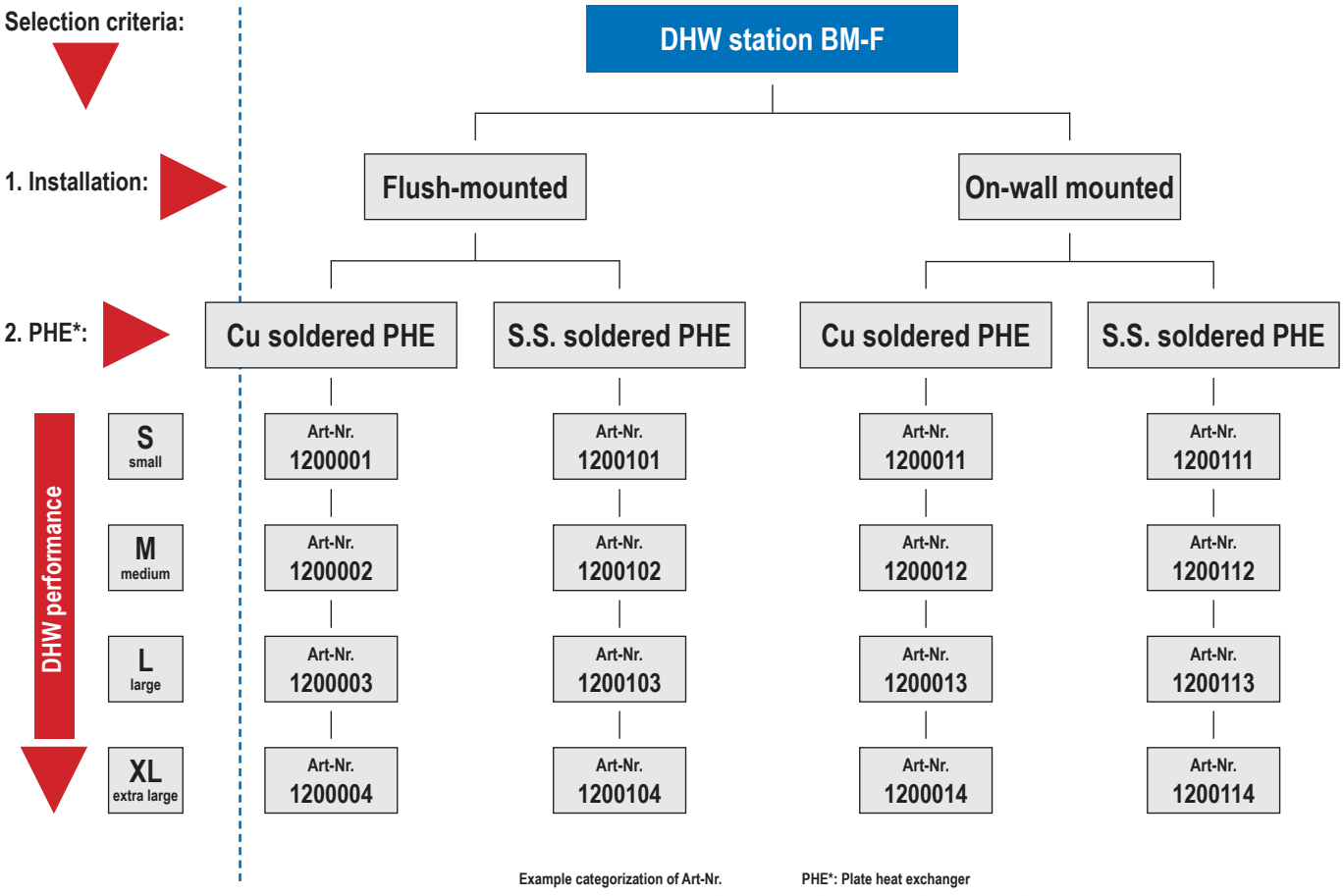
Electrothermal actuator for heating circuit
distributors and radiator valves.

Dimensions flush-mounted



Dimensions on-wall mounted

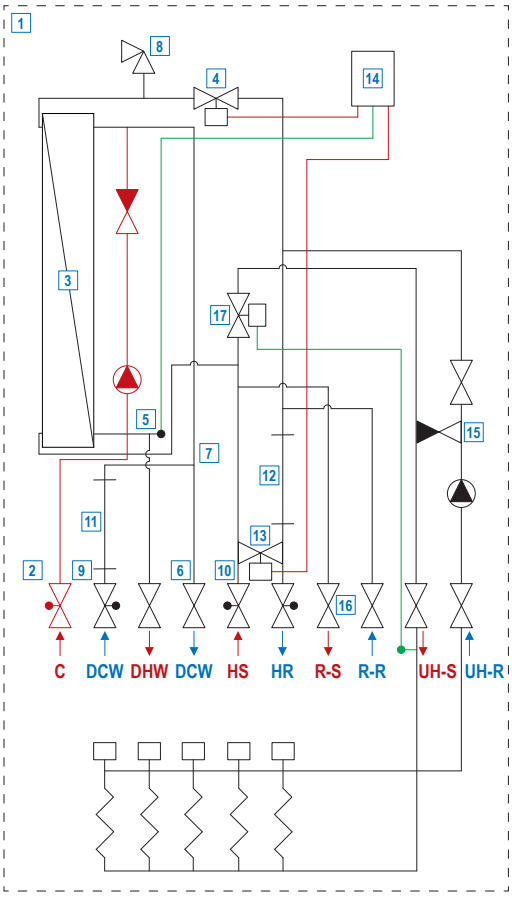




Example categorization of Art-Nr. PHE*: Plate heat exchanger

Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	2	0	0	0	0	3
					CU	UP	L

Circuit diagram BM-F



1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controller
15	Floor control group (low temperature NT)
16	Radiator outlet (high temperature HT) - optional
17	Thermostatic control valve

DHW station **BE-F** with ***step a valve*** technology - "Smart Home"

and microprocessor regulated controller

- ☑ with an EnEV compliant single room control for underfloor heating
- ☑ With an EnEV compliant, weathered outdoor mixer control for underfloor heating
- ☑ Controlled by stepper motor valve hot water preparation in the flow principle
- ☑ Temperature maintenance valve integrated with actuator
- ☑ Cold water pipes insulated against heat input

A microprocessor regulated controller in conjunction with two *step a valve* stepper motor valve replaces the previous one usual proportional controller at DHW stations.

EnEV compliant individual room control:

The use of individual room control is mandatory for old and new buildings in the Energy Saving Ordinance.
The built-in controller in the DHW station takes over this function. The desired room temperatures are simply entered in the ***step touch*** module. The controller then controls the electrothermal actuators on the floor manifold.
In addition, a remote control is possible via an intuitive smartphone app.

Outdoor weather control of underfloor heating:

The flow temperature of the underfloor heating is regulated depending on the outside weather.
In colder temperatures, the flow temperature is raised, lowered in warmer.
Thus, the regulation fully complies with the Energy Saving Ordinance! (a fixed value regulation does not correspond to this)

DHW heating in the flow principle:

The domestic hot water is heated in the flow principle only during the request via a stainless steel plate heat exchanger.
A temperature and flow sensor according to the vortex principle detects the temperatures and flows.
The controller regulates the necessary heating energy for the plate exchanger by means of a ***step a valve*** stepper motor valve.
The plate exchanger is not kept warm.
Unnecessary circulation loss is avoided and an increased legionella production effectively prevented.

Specifications			
	Heating primary	Heating secondary	
	Buffer memory	Floor Heating	Drinking water
Pressure rating:	PN 6	PN 6	PN 10
Temperature max.:	90 °C	60 °C	75 °C
Connection dimensions:	DN 25	DN 20	DN 20
Thread:	1" female	¾" female	¾" female
Dimensions: (WxHxD)	710 x 1275-1375 x 130-180 mm		
Niche size: (WxHxD)	min. 730 x 1310-1455 x 132 mm		

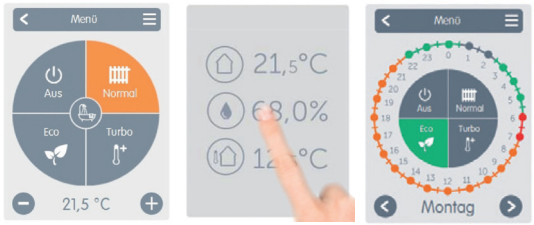
Example performance heat exchanger								
DHW performance:	S		M		L		XL	
	29 kW		36 kW		45 kW		51 kW	
Flow / return temperature primary:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
KW entry / DHW outlet temperature:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
DHW tap load max.:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure drop TWW:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar
Pressure drop heating *:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Flow Primary:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h

*** without heat meter** (at 2 bar KW Druck and 350 mbar HZ)

Intuitive remote control PC & Smartphone App

You come home from work and your apartment is already warmed up!

You adjust your room temperature, without moving from the cozy couch!



You control your heating simply from everywhere!

Options

Module *step touch:*

- Always keep an eye on all relevant values
- Simple setting of the room temperatures
- Energy-saving lowering mode
- Weekly program
- Vacation switching
- Data recorder

Module *step touch +:*

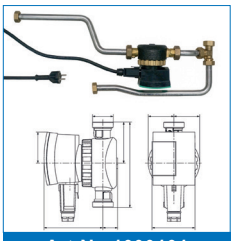
- Same Features as **Module *step touch***
- With remote access

RTVIS05 manifold - 5 circuits:

The INOX manifold of RTVIS type is used in surface heating systems, especially in floor heating systems. Valve and metering valves of the distributor enable regulation of flow in particular loops of surface heating - underfloor and wall heating.

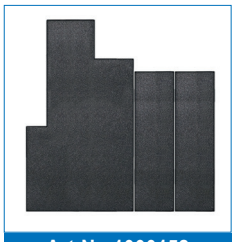
Room sensor *step room*:

1-Wire room sensor
in shapely On-wall mounted housing.
WxHxD: 95x75x20 mm



Circulation module Z:

A drinking water high-efficiency circulation pump Wilo Nova Z15 with backflow preventer enables an internal circulation.
Fully assembled with stainless steel piping 18x1 mm and ball valve 3/4".
The circulation pump comes with mains plug.



Module ISO F/HF/WP:

Insulation cover for BM-F/HF/WP.

Module W - Water damper:

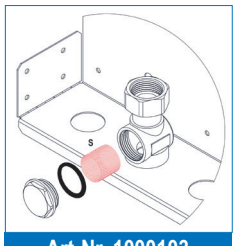
The water damper prevents Waterhammer and thus the Damage to components within the station.
Recommended e.g.
with single-lever mixers or solenoid valves in the drinking water installation.

NovaDrive electrothermal actuator:

Electrothermal actuator for heating circuit distributors and radiator valves.

Module HF:

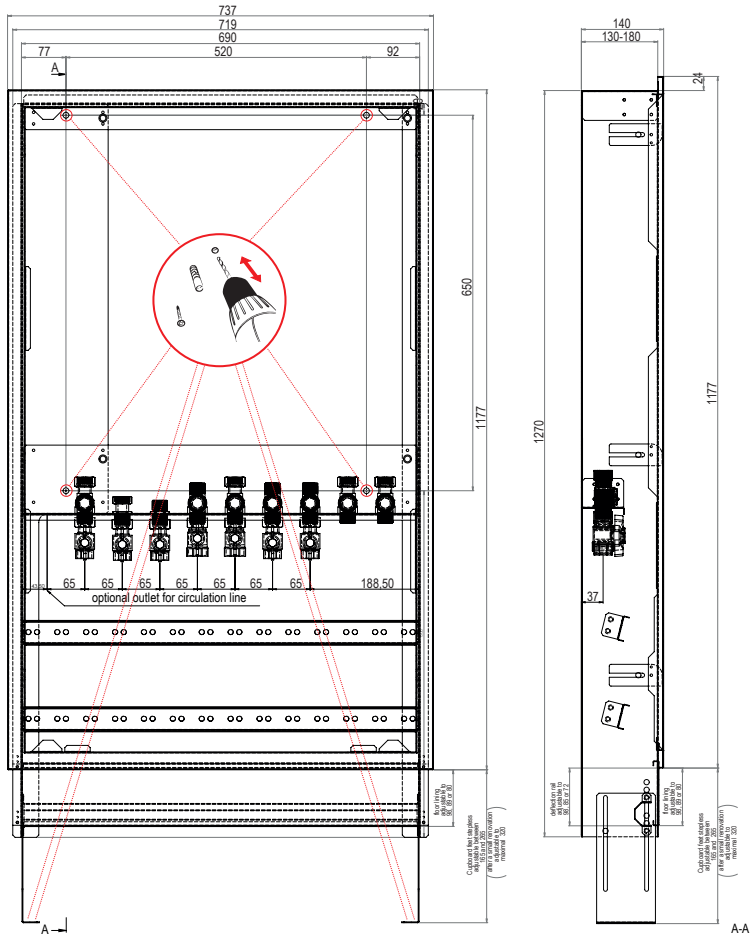
Additional supply and return connection piping each with a shut-off ball valve ¾" and Strainer housing.
The stainless steel piping is attached to the to the high temperature outlets of the station and the ball valves are integrated in the bar.



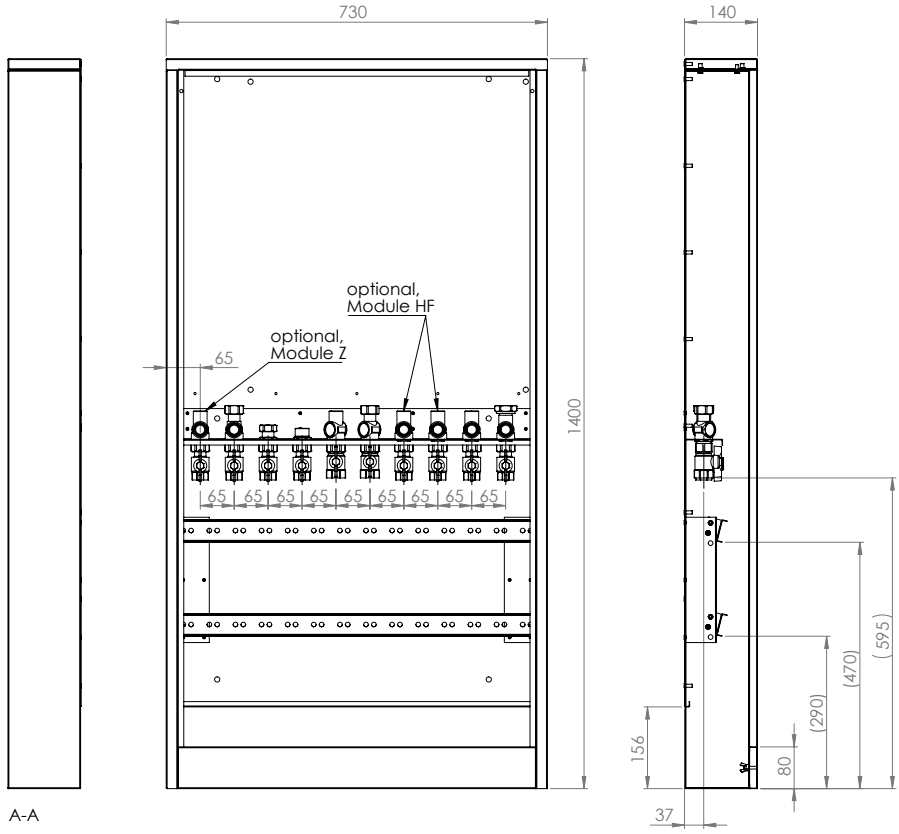
Module S1 - Strainer insert:

Strainer
(80 mbar pressure drop).

Dimensions flush-mounted



Dimensions on-wall mounted



Selection criteria:

1. Installation:

2. PHE*:

DHW station BE-F

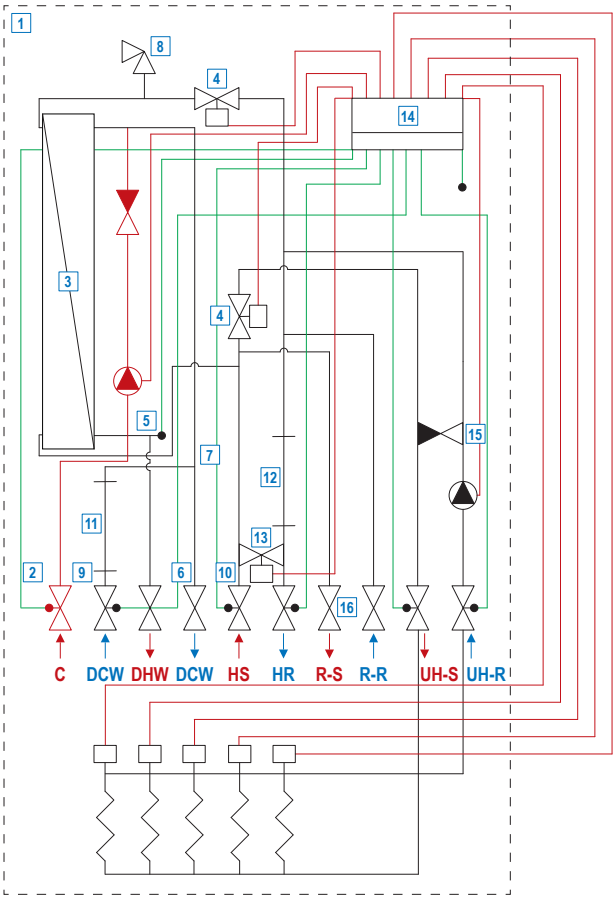
	Flush-mounted		On-wall mounted	
	Cu soldered PHE	S.S. soldered PHE	Cu soldered PHE	S.S. soldered PHE
S small	Art-Nr. 1250001	Art-Nr. 1250101	Art-Nr. 1250011	Art-Nr. 1250111
M medium	Art-Nr. 1250002	Art-Nr. 1250102	Art-Nr. 1250012	Art-Nr. 1250112
L large	Art-Nr. 1250003	Art-Nr. 1250103	Art-Nr. 1250013	Art-Nr. 1250113
XL extra large	Art-Nr. 1250004	Art-Nr. 1250104	Art-Nr. 1250014	Art-Nr. 1250114

DHW performance

Example categorization of Art-Nr. PHE*: Plate heat exchanger

Example:	Type DHW station				Solder material	Installation	DHW perf.
Art-Nr.	1	2	5	0	0	0	3
					CU	UP	L

Circuit diagram BE-F



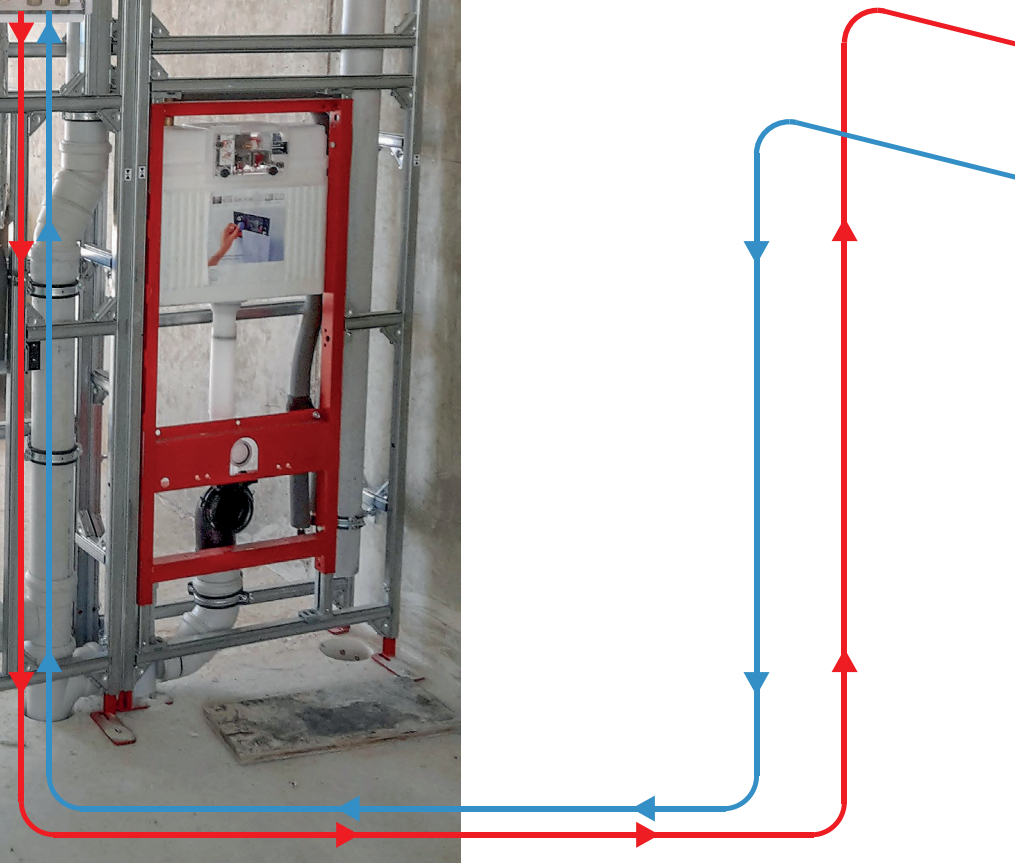
1	Cabinet
2	Connecting rail with ball valves
3	Plate heat exchanger
4	***step a valve*** stepper motor valve
5	Temperature and flow sensor (vortex principle)
6	Cold water outlet
7	Maximum cold water limiter (optional)
8	Fill and Drain
9	Strainer CW
10	Strainer HV
11	Fitting cold water meter ¾ " - 110 mm
12	Fitting heating meter ¾ " - 110 mm
13	Temperature maintenance valve (bypass) with actuator
14	Controllerbox with terminal strip
15	Floor control group (low temperature NT)
16	Radiator outlet (high temperature HT) - optional

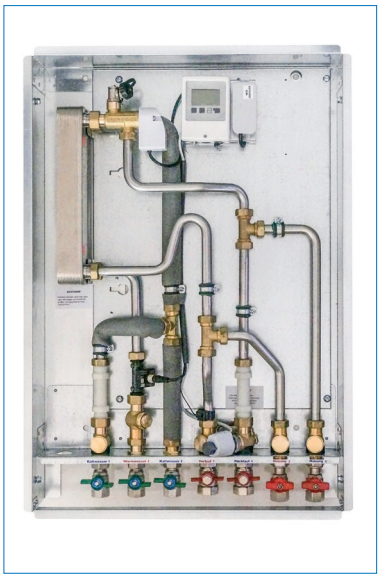
DHW station **BM-H** + Mixing station

Example configuration				
	Type:		Number:	Art-Nr.:
1	BM-H	DHW station	1 x	1100004
2	RTVIS	Floor manifold	1 x	RTVIS05
2	Wilo/ESBE or Taco/ESBE	Mixing group	1 x	110.1000.000 or 110.3000.000

DHW station BM-H

in the pre-wall system:
Can be installed close to the taps. This results in a lower waiting time for hot water!





BM-H
Art-Nr. 1100004

+

RTVIS + Wilo/ESBE or Taco/ESBE
Art-Nr. RTVIS05 + 110.1000.000 or 110.3000.000

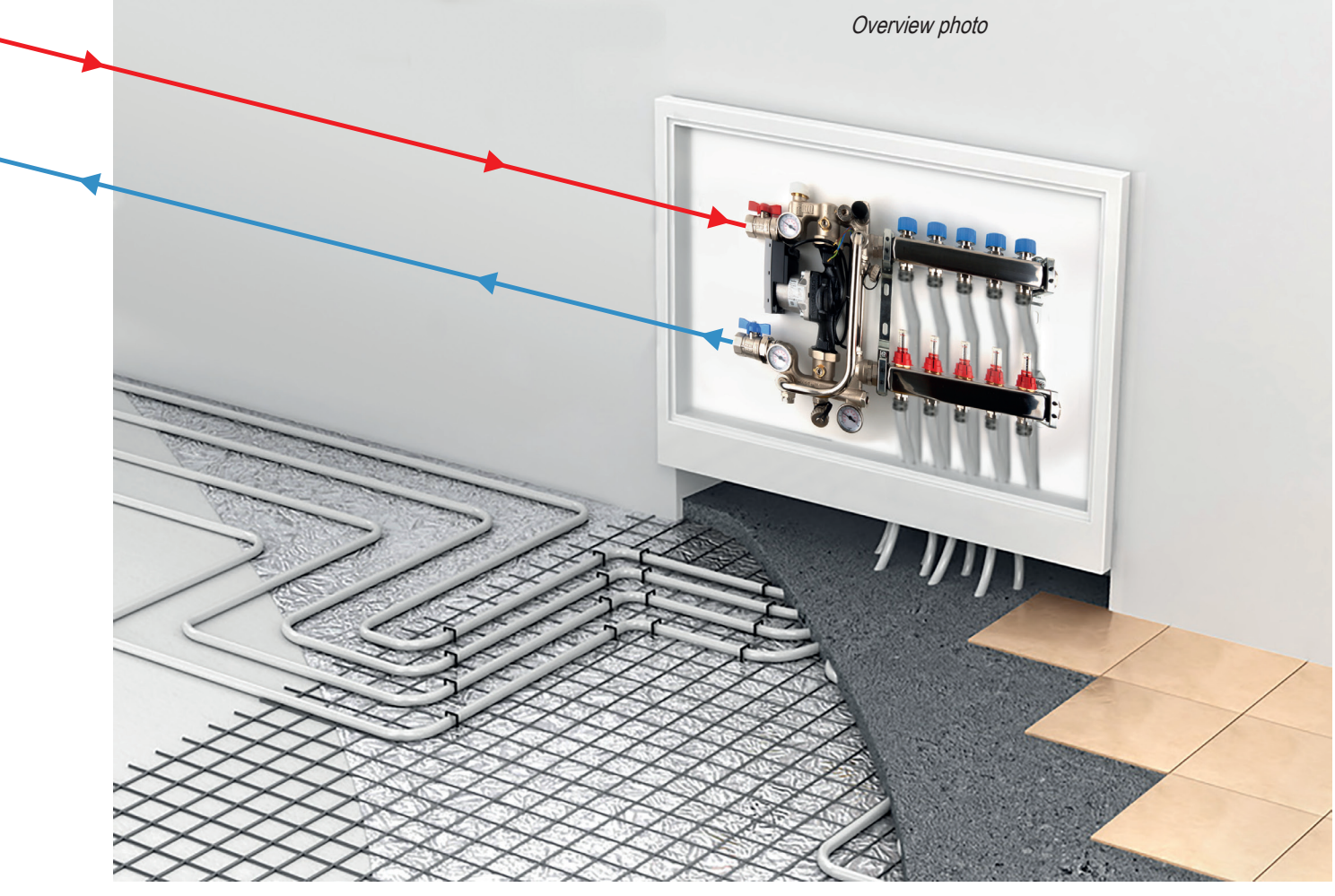
= BM-F in split construction

Mixing station

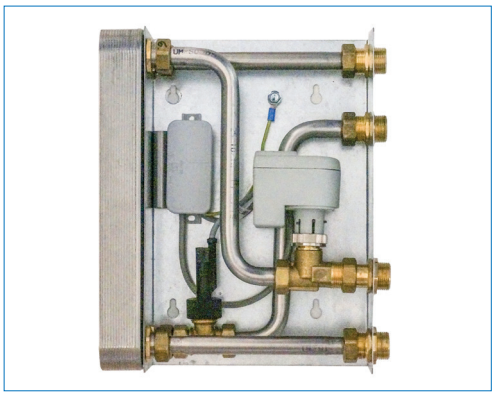
e.g. installed in the hallway

From a central point, all rooms can be better connected.

Overview photo



System exchanger station **BM-piccolo**



for heat or cold transmission of two hydraulic systems

- ☑ Transmission via a stainless steel plate heat exchanger
- ☑ Easy ON/OFF function
- ☑ Piping in stainless steel 18 x 1 mm
- ☑ Mounted on carrier plate

Application:
The system exchanger station BM-piccolo is used in hydraulic systems for the transmission of heat or cold.

Heat and cold transmission:
The heat or cold is transferred in the flow principle only during the request via a stainless steel plate heat exchanger.
One or two circulation pumps are necessary to transport the media in both circuits

ON / OFF function:
Upon request, the flow switch in circuit 2 opens the motor valve * in circuit 1. The flow switch can be used in addition to switch a circulating pump in circuit 1.

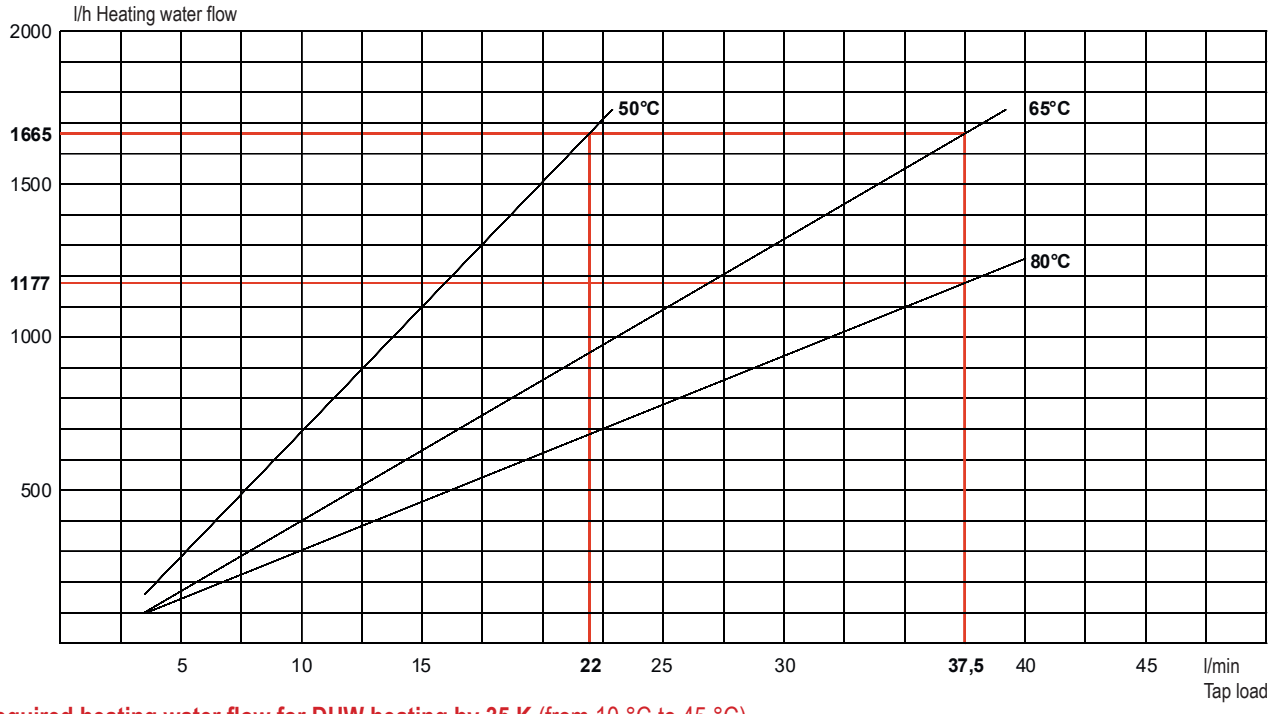
Specifications				
DHW performance:	**S**	**M**	**L**	**XL**
Art-Nr.:	**1099001**	**1099002**	**1099003**	**1099004**
Carrier plate: WxHxD	270 x 320 x 100 mm			
Pressure rating:	PN 10	PN 10	PN 10	PN 10
Flow temperature heating water:	max. 90 °C	max. 90 °C	max. 90 °C	max. 90 °C
Setpoint temperature:	0 - 99 °C			

Example performance heat exchanger								
DHW performance:	**S**		**M**		**L**		**XL**	
	29 kW		36 kW		45 kW		51 kW	
Inlet / outlet temperature ciruit 1:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
Inlet / outlet temperature ciruit 2:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
Volume flow circuit 1:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h
Volume flow circuit 2:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure loss circuit 1:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Pressure loss circuit 2:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar

*** Operating voltage 230 V**

(at 2 bar KW Druck and 350 mbar HZ)

Heating water flow for DHW FW-E / FW-D 40



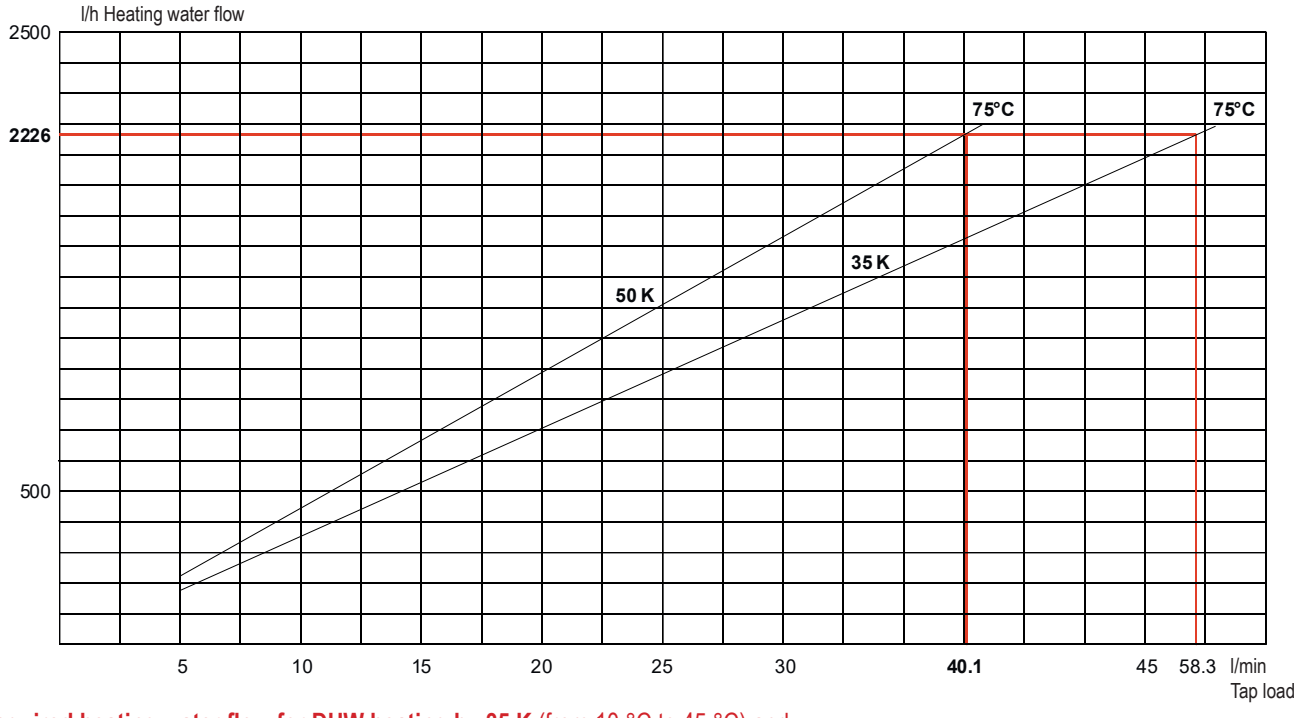
Required heating water flow for DHW heating by 35 K (from 10 °C to 45 °C) dependent on Supply temperature primary.

Supply temperature Primary:	50 °C
Hot water tap load:	22 l/min
DHW heating:	35 K
Result:	**1665 l/h**

Supply temperature Primary:	65 °C
Hot water tap load:	37.5 l/min
DHW heating:	35 K
Result:	**1665 l/h**

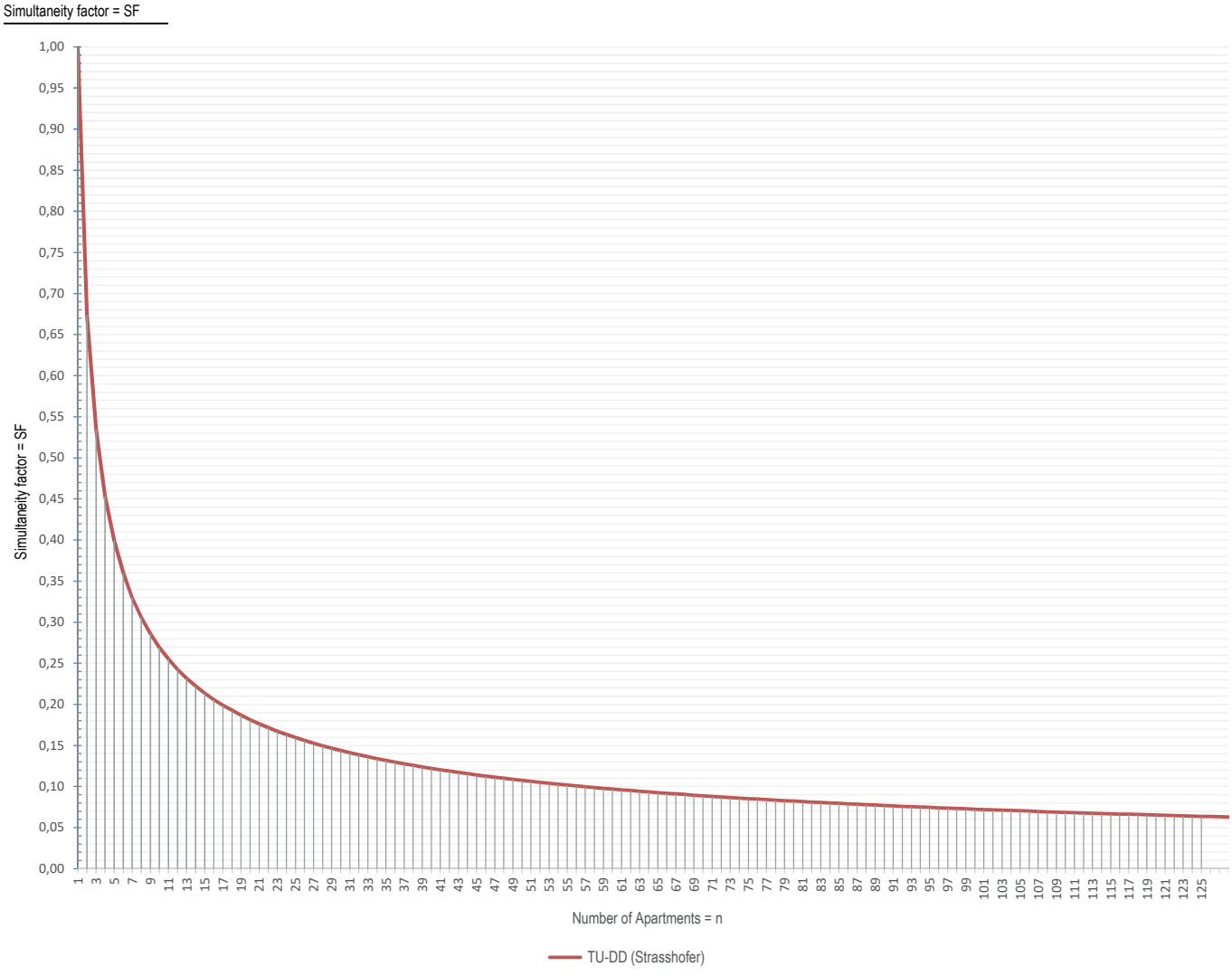
Supply temperature Primary:	80 °C
Hot water tap load:	37.5 l/min
DHW heating:	35 K
Result:	**1177 l/h**

Heating water flow for DHW FW-E 60



Required heating water flow for DHW heating by 35 K (from 10 °C to 45 °C) and **by 50 K** (from 10 °C to 60 °C) dependent on Supply temperature primary.

Simultaneity table



Our simultaneity table corresponds to the practice and is the sum of current investigations.

Specifications **BM - series**

Example performance heat exchanger								
DHW performance:	**S**		**M**		**L**		**XL**	
	29 kW		36 kW		45 kW		51 kW	
Flow / return temperature primary:	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C	60 / 21 °C	60 / 17 °C
KW entry / DHW outlet temperature:	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C	10 / 50 °C	10 / 45 °C
DHW tap load max.:	10,5 l/min	12 l/min	13 l/min	15 l/min	16 l/min	18,5 l/min	18 l/min	21 l/min
Pressure drop TWW:	140 mbar	175 mbar	155 mbar	200 mbar	200 mbar	250 mbar	210 mbar	280 mbar
Pressure drop heating *:	260 mbar	220 mbar	345 mbar	265 mbar	290 mbar	255 mbar	345 mbar	310 mbar
Flow Primary:	660 l/h	600 l/h	840 l/h	720 l/h	900 l/h	840 l/h	1020 l/h	960 l/h

*** without heat meter**

(at 2 bar KW Druck and 350 mbar HZ)

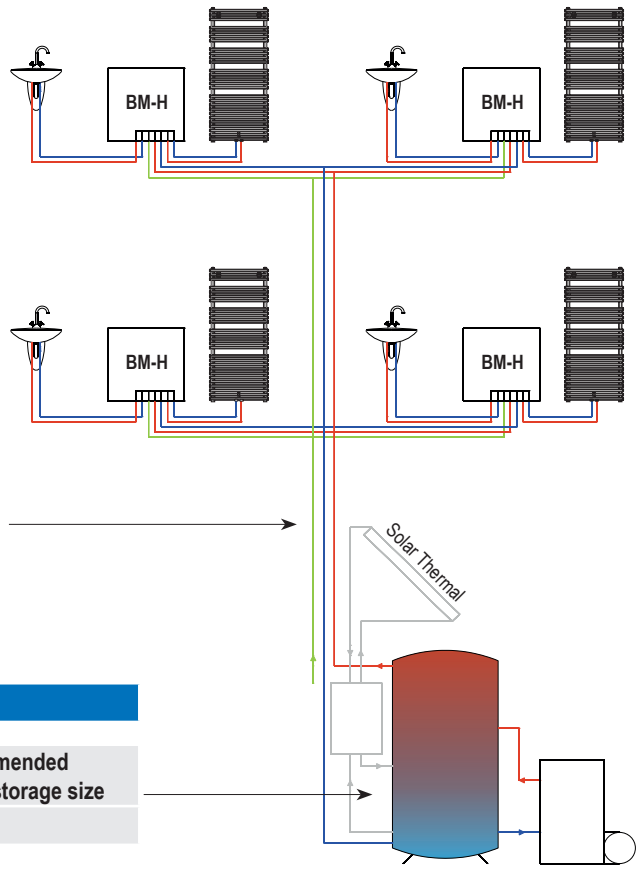
Calculation example: House with 4 apartments equipped with TWW station BM-HS/UP

1. Simultaneity calculation

Number of Apartments		Simultaneity factor	At the same time tapping apartments
4	x	0.4	1.60 (~ 2)

2. Heating water flow - total - without DHW priority switching!

	Number of Apartments		Heating water flow	Total
DHW:	2	x	600 l/h	1200 l/h
Radiator:	4	x	155 l/h	620 l/h
Total:				1820 l/h



3. Buffer storage size

Time of Tap operation	Heating water flow		Needed Heating water at 60 °C	Recommended Buffer storage size
10 min	1820 l/h	(:6)	304 l	500 l

Buffer storage rapid selection

Primary temperature	Number of Apartments	1	2	3	4	5	6	7	8	9	10	15	30	45	60	75
50 °C	Buffer storage	350l	500l	750l	1000l	1500l	2000l	3000l	4000l							
60 °C	Buffer storage	350l	500l	750l	1000l	1500l	2000l	3000l	4000l							
80 °C	Buffer storage	350l	500l	750l	1000l	1500l	2000l									

Basis for each apartment: Tap load 12 l/min at 45 °C, Tap duration 10 min

About Strasshofer

Strasshofer is one of the most innovative companies in the market for heating and DHW.

As a family run business, we have been more than 40 years in the international market as a supplier of drinking water stations, heating manifolds and accessories.

We offer due to respect future market requirements constantly innovative and durable products and combine them successfully with extensive services.

Our corporate philosophy is defined by a fair and communicative interaction with our business partners and employees, community involvement and the assumption of entrepreneurial responsibility.

For four decades, we provide national and international construction projects, renovations and refurbishments with qualitative and innovative heating and DHW products.

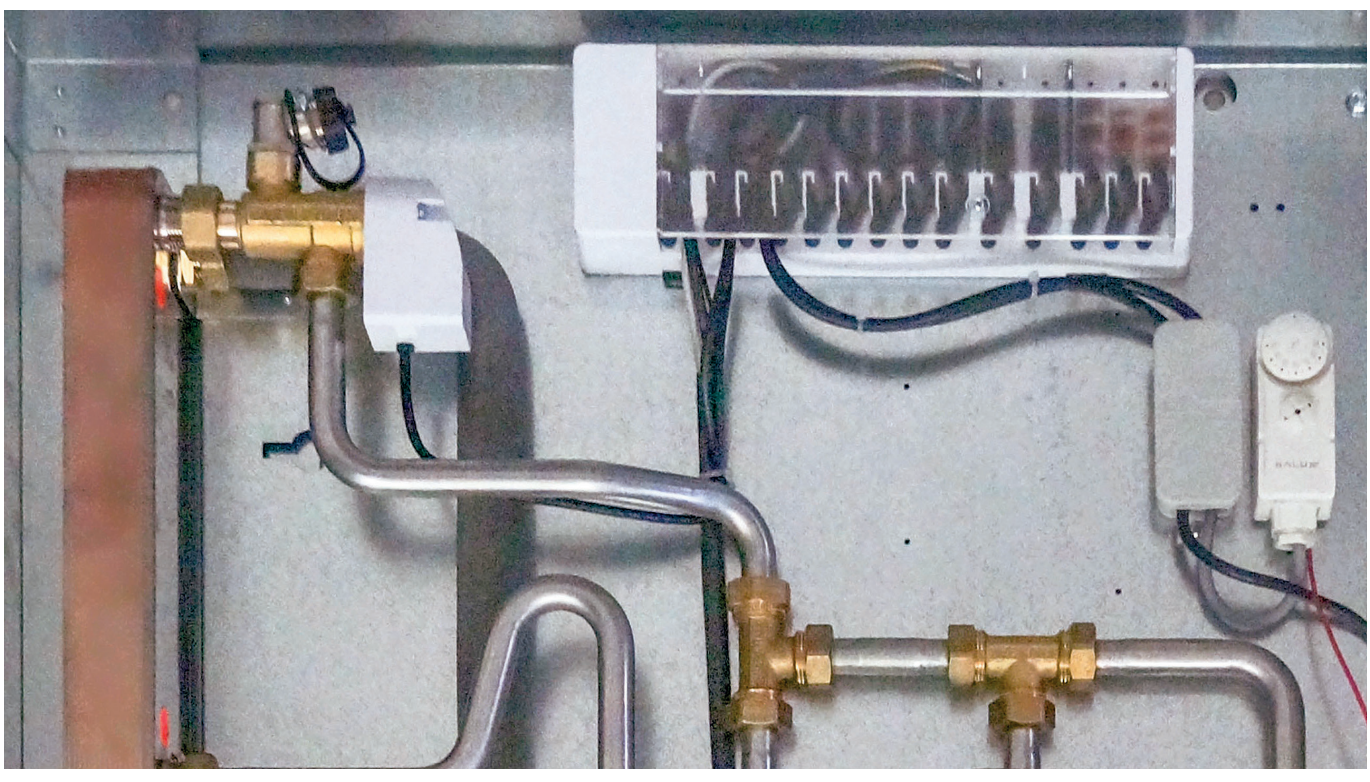
To accompany , we offer our customers and business partners our special know-how from brainstorming and product development through to customized product manufacture, always paired with technical advice and support.

The partnership with our customers means for us:

- build up a long relationship based on partnership with our customers
- to provide a high level of quality and innovation
- to offer clients customized, high quality and durable solutions
- Customer service at the highest level

We offer our customers and partners:

- professional technology and innovative products at reasonable prices
- a high level of quality and know-how
- solid technical advice and support
- individual solutions with efficient systems and services



GT | TERMOVENT grupa

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