Friwa
Domestic hot water technology

Product range Friwa

Technical data and product information

Product range
Friwa

FriwaMini

FriwaMega

Friwa modules heat domestic water comfortably and hygienically operating on the principle of a flow-type water heater.
Other than in conventional domestic hot water tanks, domestic water as food is not used for energy storage and is not stored as domestic hot water for hours or days. An efficient plate heat exchanger heats it when necessary.
The energy required for the hygienic heating of the domestic hot water comes from a buffer tank which can be heated via various systems.

Using efficient plate heat exchangers makes it possible to consistently have low return temperatures, thus increasing the efficiency of systems such as condensing boilers, heat pumps and solar thermal installations.

Advantages of the PAW domestic hot water modules:

- Use in combination with heat pumps possible
- Optional circulation
- Versatile application possibilities due to a great range of performance
- Fast response time thanks to a special control algorithm, greater comfort
- Ideal connection to the building control system via Modbus protocol
- Optional Internet module for system monitoring and parametrisation
- Easy cascadability of the modules thanks to premounted pipe sets
- Special heat exchangers for different water qualities (more information on page 9.)

Components Friwa modules
Micro

FriwaMicro

1 **Primary pump**
High-efficiency pump

2 **Heat exchanger**
Highly efficient plate heat exchanger, coated premium version optionally available for special water qualities. For further information on the product, see page 9.

3 **Connections** (from left to right)
Return to the buffer tank
Cold water inlet
Hot water outlet

4 **Thermostatic valve**
For the setting of the desired temperature range

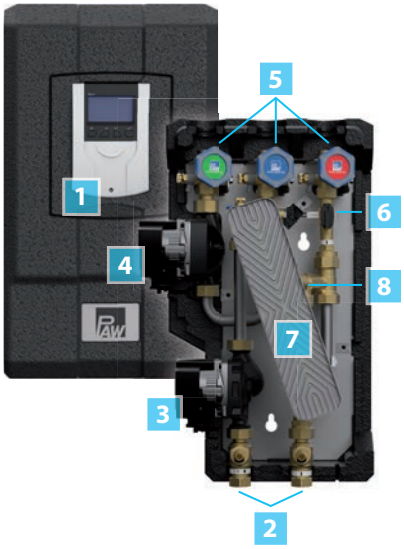
5 **Insulation**

6 **Flow from the buffer tank**

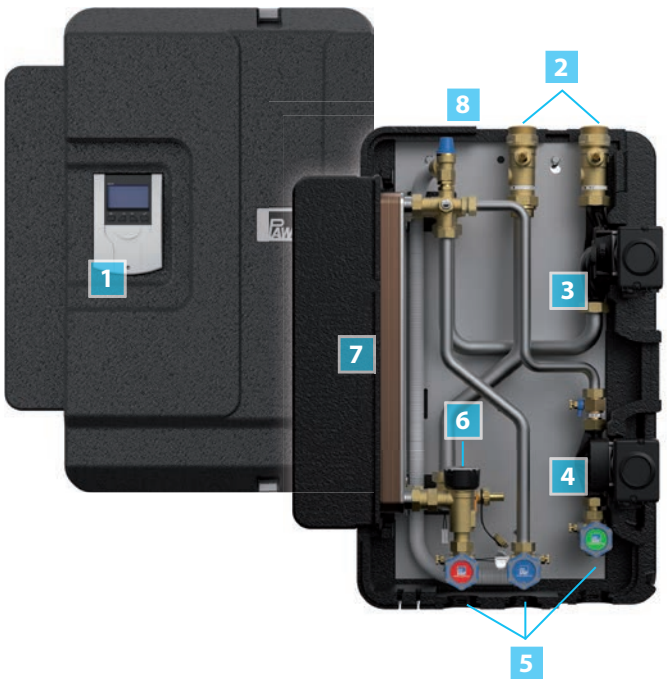
2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Components Friwa modules Mini, Midi, Maxi, Mega

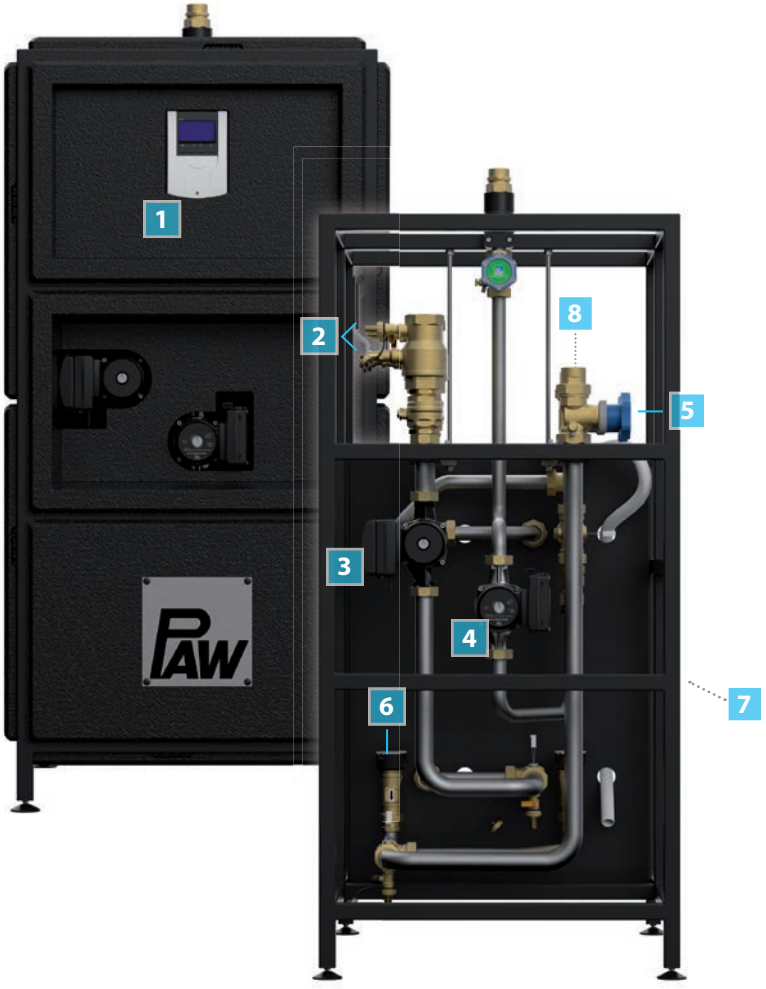
FriwaMini



FriwaMidi/Maxi



FriwaMega



1 **Friwa controller FC3.10**
with connection to the building control system and optional Internet module

2 **Shut-off valve**
ball valve with integrated check valve

3 **Primary pump**
High-efficiency pump

4 **Circulation pump**
High-efficiency pump: optional for Mini, Midi, Maxi and Mega

5 **Piston valves**
maintenance-free and easy to service

6 **Flow rate measurement device**
Measuring range
Mini: 2 – 40 l/min
Midi: 1 – 130 l/min
Maxi: 1 – 130 l/min
Mega: 4 – 260 l/min

7 **Heat exchanger**
Highly efficient plate heat exchanger, coated premium version optionally available for special water qualities. For further information on the product, see page 9.

8 **Pressure relief valve**
integrated pressure relief valve, 10 bar

Product range Friwa

The Friwa product range can be adapted to almost every individual demand for domestic hot water.
From the FriwaMini in a single-family house to the FriwaMega in the hotel industry, any withdrawal flow rates can be covered comfortably.

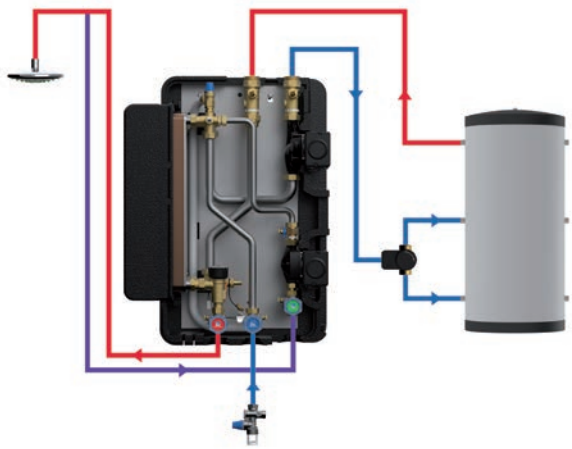
Overview domestic hot water modules and equipment					
Module / type	**FriwaMicro**	**FriwaMini**	**FriwaMidi**	**FriwaMaxi**	**FriwaMega**
Application range*	up to 20 l/min	up to 28 l/min	up to 50 l/min	up to 77 l/min	up to 123 l/min
Basic module without circulation	6400010	6401510	6405511	6406511	6407511
	6400030 (coated heat exchanger)	6401530 (coated heat exchanger)	6405531 (coated heat exchanger)	6406531 (coated heat exchanger)	6407530 (coated heat exchanger)
Module with circulation (internal)**	thermally controlled	6401515	6405516	6406516	6407517
		6401535 (coated heat exchanger)	6405536 (coated heat exchanger)	6406536 (coated heat exchanger)	6407535 (coated heat exchanger)

* Range of application at performance indicator 1 (LK 1, as per SPF test procedure): storage tank 60 °C, hot water = 45 °C, cold water = 10 °C
**Friwa modules can be equipped subsequently with internal circulation lines - see equipment

Product range Friwa:
Cascade solutions

In addition to the Mini, Midi, Maxi and Mega modules, the product range also includes cascade solutions.
To cover larger withdrawal flow rates, such as in the hotel industry or in hospitals, the basic module without a circulation line can be extended to a double, triple or quadruple cascade by using a pipe set.
For retrofitting, the cascade can be subsequently equipped with an external circulation set as needed.
On the right side, the selection options for the cascade solutions are illustrated.

Example FriwaMidi-Kaskade



Cascade solutions
Selection table

Required module and pipe set for double cascade*** - example FriwaMini

Example:

2x

Basic module

+

Pipe set for FriwaMini-Kaskade

+

Return distribution set

+

Circulation line

	FriwaMini			
Basic modules	2x 6401510			
	2x 6401530 (coated heat exchanger)			
Pipe set Friwa cascade	64042933			
Return distribution set	5675431			
Optional: circulation line	6404111			
	Optional accessories: WiFi3.10 Internet Gateway module and MB3.10 Modbus RTU module			

Required module and pipe set for double cascade*** - example FriwaMidi

Example:

2x

Basic module

+

Pipe set for FriwaMidi-Kaskade

+

Return distribution set

+

Circulation line

		FriwaMidi	FriwaMaxi	FriwaMega
Basic modules		2x 6405511	2x 6406511	2x 6407511
		2x 6405531 (coated heat exchanger)	2x 6406531 (coated heat exchanger)	2x 6407530 (coated heat exchanger)
Pipe set Friwa cascade		64042943	64042953	64042963
Return distribution set		5675431	5675531	6404244
Optional: circulation line		6404136GM7	6404136GM7	6404136GM7
		6404136GH10	6404136GH10	6404136GH10
		6404136GH12	6404136GH12	6404136GH12
	Optional accessories: WiFi3.10 Internet Gateway module and MB3.10 Modbus RTU module			

Required module for triple or quadruple cascade*** - example FriwaMidi

Example:

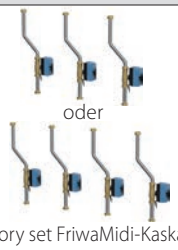
3x

or

4x

Basic module

+


oder
Accessory set FriwaMidi-Kaskade

+

Return distribution set

+

Circulation line

		FriwaMidi	FriwaMaxi	FriwaMega
Basic modules		3x or 4x 6405511	3x or 4x 6406511	3x or 4x 6407511
		3x or 4x 6405531 (coated heat exchanger)	3x or 4x 6406531 (coated heat exchanger)	3x or 4x 6407530 (coated heat exchanger)
Accessory set for Friwa cascade		64042622 (2-fold) 64042632 (3-fold) 64042642 (4-fold)	64042722 (2-fold) 64042732 (3-fold) 64042742 (4-fold)	64042820 (2-fold) 64042830 (3-fold) 64042840 (4-fold)
Return distribution set		5675531	5675531	6404244
Optional: circulation line		6404136GM7	6404136GM7	6404136GM7
		6404136GH10	6404136GH10	6404136GH10
		6404136GH12	6404136GH12	6404136GH12
	Optional accessories: WiFi3.10 Internet Gateway module and MB3.10 Modbus RTU module			

*** The cascade solution is available on request; / = not possible

Controller FC3.10 for DHW modules

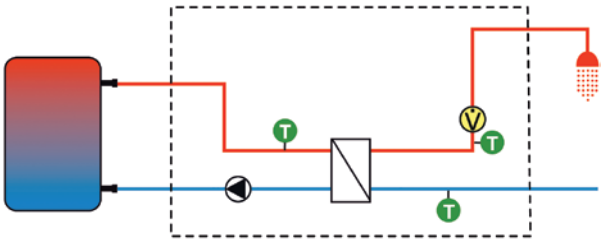
- for FriwaMini up to 28 l/min* / cascade up to 112 l/min*
- for FriwaMidi up to 50 l/min* / cascade up to 200 l/min*
- for FriwaMaxi up to 77 l/min*/ cascade up to 308 l/min*
- for FriwaMega up to 123 l/min* / cascade up to 492 l/min* (as per SPF LK 1)*

The controller FC3.10 sets the hot water temperature of the domestic hot water module via the rotation speed control of the primary pump. During operation, a special algorithm adjusts the control functions even faster to the given system conditions.

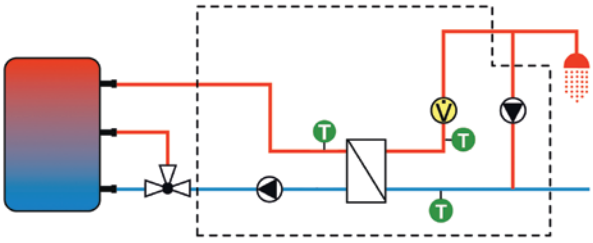
As additional functions, the controller performs the circulation control and the switching of the return distribution valve. Different circulation modes are possible and can be adapted individually to the system requirements. The controller can, for example in a single-family house, be integrated in the BMS without additional hardware.

The optionally available Internet Gateway module WiFi3.10 allows a monitoring and parametrisation of the system. The connection to the building control system is established via the Modbus protocol. For cascade solutions, the integration in the BMS can be carried out via the optional MB3.10 module. See below.

Preset systems:



Friwa basic system



Friwa basic system with circulation and return distribution

*Indication of performance as per SPF test procedure, LK1 = performance indicator 1, at a set hot water temperature of 45 °C, at a primary flow temperature of 60 °C

Function overview controller FC3.10	
Display	Graphically animated LCD display
Operation	4 push buttons
Relay outputs	3 x 230 V, switching relay 2 x PWM signal for speed control
Inputs	4 x Pt1000
Flow rate sensors	yes
Heat quantity balancing	yes
Circulation (time-controlled / temperature-controlled / impulse driven)	yes
Return distribution	yes

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

BMS / Smart Home connection
easy connected

Characteristics WiFI3.10 Internet Gateway Module

- ✓ For the connection of DHW modules to an internet platform with the controller FC3.10
- ✓ System monitoring and parametrisation
- ✓ Display of the alarm history and graphic overview of the nominal values
- ✓ E-mail notification in case of error messages
- ✓ Display of the alarm history

Item no. 1339003

Characteristics MB3.10 Modbus RTU Module

- ✓ Connection of a cascade to a BMS
- ✓ The controller FC3.10 offers 2500 registers that can be processed by means of the MB3.10
- ✓ Communication status visible via LED codification
- ✓ Modbus RTU protocol
- ✓ Modbus specific parameters can be set at the controller – high flexibility and possibility to adapt to an existing BMS

Item no. 1339002

FriwaMicro
up to 20 l/min (according to SPF LK 1)*

Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- in thermal solar installations,
- in systems with a solid fuel boiler, oil or gas boiler,
- connection to a buffer tank

*For information on **design data**, see page 18 to 23.

Operating data

Max. pressure	primary: 3 bar, secondary: 10 bar
Max. operating temperature	2-80 °C
Min. flow rate	2 l/min
Max. flow rate as per SPF LK 1*	20 l/min
Transmission performance 1 as per SPF LK 1*	48 kW

Technical data

Equipment

Heat exchanger	24 plates, type E8ASW-N
Cartridge sensor	30-60 °C
Flow switch	Type 1.3 l/min

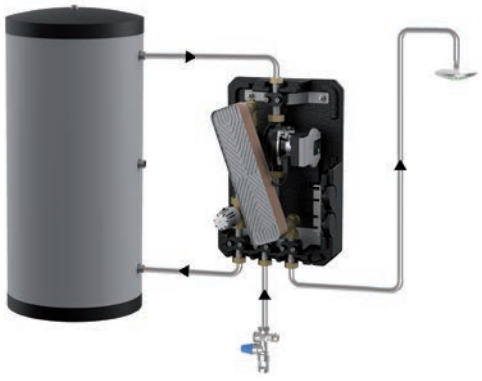
Dimensions

Nominal diameter	DN 15 (½")
Connections	¾ " int. thread, flat sealing
Centre distance	65 mm
Width	282 mm
Height	420 mm
Depth	265 mm
Installation length	418 mm
Height	420 mm

Materials

Valves and fittings	Brass
Seals	EPDM / AFM 34
Insulation	EPP
Cartridge sensor	Stainless steel
Flow switch	Noryl
Thermostatic valve	Housing / valve plate: brass
Heat exchanger	Solder: copper Plates + connecting pieces: stainless steel; Coating (optional): Based on silica

FriwaMicro
Mounting example



Mounting example: FriwaMicro without circulation, with safety group for domestic hot water tank

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

FriwaMicro
Order data

FriwaMicro - DN 15 (½")	Item no.

FriwaMicro, thermally controlled

prim.: Wilo Para SC 15/6-43	**6400010**

FriwaMicro, thermally controlled, with coated heat exchanger

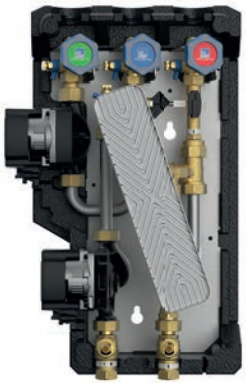
prim.: Wilo Para SC 15/6-43	**6400030**

Accessories	Item no.
	Safety group for domestic hot water tank **563907** Safety group for hot water storage tank, with shut-off valve and adjustable check valve. For horizontal installation. With seat made of stainless steel. Brass housing. Chromed. Certified according to EN 1487. Opening pressure 7 bar, max. power 10 kW
	Accessory set FriwaMicro **64042001** Consisting of: 3x ball valve DN 15 For locking the module during servicing Authorisation according to DVGW Connections: ¾" ext. thread

Coated heat exchangers – premium variant

- ✓ Sealed surface with thin film coating
- ✓ Specifically designed for drinking water applications
- ✓ Additional corrosion protection in case of special water qualities
- ✓ Reduced deposit formation
- ✓ Diffusion barrier
- ✓ Greater durability and therefore longer service life
- ✓ Greater reliability of the system
- ✓ Lower maintenance costs
- ✓ Thermal and hydraulic performance of the heat exchanger remains unchanged

FriwaMini
up to 28 l/min (according to SPF LK 1)*



Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- combined with thermal solar installations,
- in systems with a solid fuel boiler, oil or gas boiler,
- for the connection to a buffer tank

*For information on **design data**, see page 18 to 23.

Operating data

Max. pressure	primary: 3 bar, secondary: 10 bar
Max. operating temperature	95 °C
Min. flow rate	2 l/min
Max. flow rate as per SPF LK 1*	28 l/min
Transmission performance 1 as per SPF LK 1*	69 kW

Technical data

Equipment

Check valve	primary: 1 x 200 mm wc
Circulation line	optional
Heat exchanger	32 plates, type E8ASW-N
Sensors	2 x Pt1000 1 x VFS 2-40 l/min
Controller	FC3.10
WiFi3.10	optional
MB3.10	optional

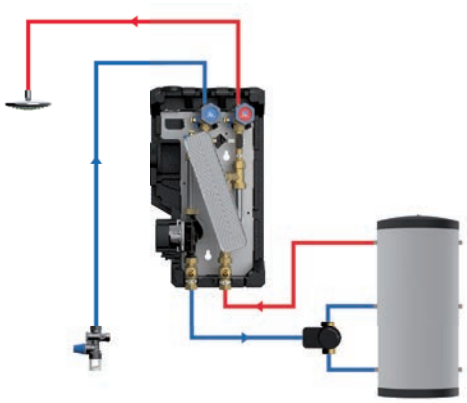
Dimensions

Nominal diameter	DN 15 (½")
Connections	primary: ¾" int. thread secondary: ¾" ext. thread, flat sealing
Circulation line	1" ext. thread
Width	309 mm
Centre distance, prim.	90 mm
Centre distance, sec.	90 mm
Height	539 mm
Installation length	494 mm
Depth	314 mm

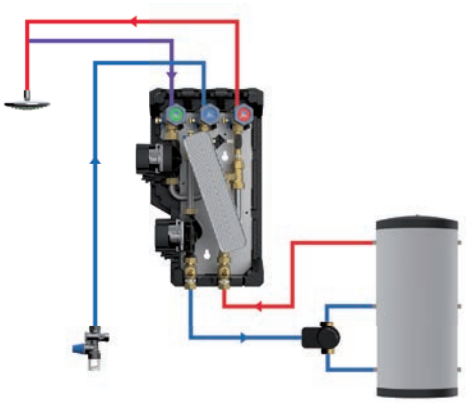
Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Heat exchanger	Solder: copper Plates + connecting pieces: stainless steel Coating (optional): based on silica

FriwaMini
Mounting example



Mounting example: FriwaMini without circulation, with safety group for domestic hot water tank



Mounting example: FriwaMini with circulation, return distribution set and safety group for domestic hot water tank

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

FriwaMini - DN 15 (½")	Item no.

FriwaMini without circulation

prim.: Grundfos UPM4 15-75	**6401510**

FriwaMini with circulation

prim.: Grundfos UPM4 15-75, sec.: Grundfos UPM4 15-70 CIL3	**6401515**

FriwaMini without circulation, coated heat exchanger

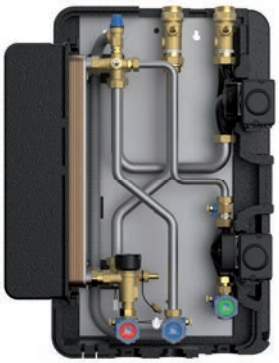
prim.: Grundfos UPM4 15-75	**6401530**

FriwaMini with circulation, coated heat exchanger

prim.: Grundfos UPM4 15-75, sec.: Grundfos UPM4 15-70 CIL3	**6401535**

Accessories	Item no.
	PAW 3-way switch valve PV3 DN 25 **5675431** with 2-point control for managing different temperature zones in the buffer tank, e.g. for return flow distribution or enabling additional buffer tanks Setting time: 13 sec., rotation angle: 90°, torque: 5 Nm, Kvs value: 15.5
	Safety group for domestic hot water tank **563907** Safety group for hot water storage tank, with shut-off valve and adjustable check valve. For horizontal installation. With seat made of stainless steel. Brass housing. Chromed. Certified according to EN 1487. Opening pressure 7 bar, max. power 10 kW
	Withdrawal valve **640422** Flame-treated valves for sterile withdrawal of water. For the subsequent installation inside the Friwa module, on each piston valve of the domestic hot water circuit.
	Pipe set for FriwaMini-Kaskade **64042933** 3-way valve with actuator, Kvs value: 11 for FriwaMini

FriwaMidi
up to 50 l/min (according to SPF LK 1)*



Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- combined with thermal solar installations,
- in systems with a solid fuel boiler, oil or gas boiler,
- for the connection to a buffer tank,
- up to 200 l/min as a quadruple cascade (as per SPF LK 1*)

*For information on **design data**, see page 18 to 23.

Operating data

Max. pressure	primary: 3 bar, secondary: 10 bar
Max. operating temperature	95 °C
Min. flow rate	2 l/min
Max. flow rate as per SPF LK 1*	50 l/min
Transmission performance 1 as per SPF LK 1*	129 kW

Technical data

Equipment

Check valve	primary: 2 x 190 mm wc
Circulation line	optional
Heat exchanger	40 plates, copper solder/coated
Sensors	primary: 1x Pt1000 secondary: 2x Pt1000 1 x flow meter
Controller	FC3.10
WiFi3.10	optional
MB3.10	optional

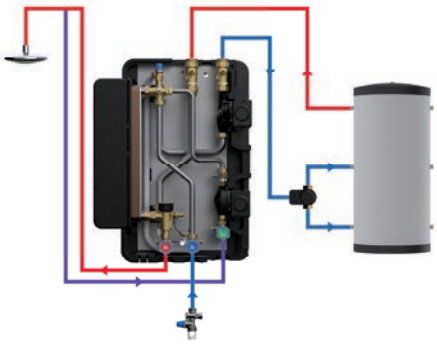
Dimensions

Nominal diameter	DN 20 (¾")
Connections	primary: 1½" ext. thread secondary.: 1" ext. thread
Circulation line	1" ext. thread
Width	602 mm
Centre distance, prim.	120 mm
Centre distance, sec.	100 mm
Height	795 mm
Installation length	711 mm / 757 mm
Depth	298 mm

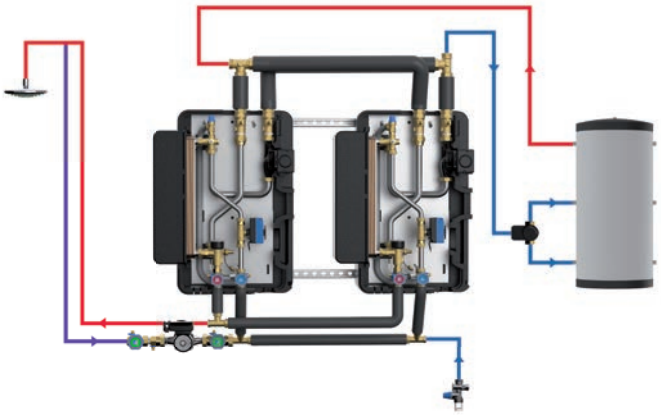
Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Heat exchanger	Solder: copper Plates + connecting pieces: stainless steel Coating (optional): based on silica

FriwaMidi
Mounting example



FriwaMidi with circulation



Cascade with 2 basic modules and pipe set for cascade

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

FriwaMidi – DN 20 (¾")	Item no.
FriwaMidi without circulation	
prim.: Grundfos UPM2 25-75 LowFlow	**6405511**
FriwaMidi with circulation	
prim.: Grundfos UPM2 25-75 LowFlow, sec.: Grundfos UPM2 15-75 CIL2	**6405516**
FriwaMidi without circulation, coated heat exchanger	
prim.: Grundfos UPM2 25-75 LowFlow	**6405531**
FriwaMidi, with circulation, coated heat exchanger	
prim.: Grundfos UPM2 25-75 LowFlow, sec.: Grundfos UPM2 15-75 CIL2	**6405536**

Accessories	Item no.
	Circulation set for internal retrofitting (FriwaMidi/Maxi) **6404123** - with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valve and non-return valve Connection: 1" ext. thread
	Withdrawal valve **640422** Flame-treated valves for sterile withdrawal of water. For the subsequent installation inside the Friwa module, on each piston valve of the domestic hot water circuit.
	Pipe set for FriwaMidi-Kaskade, 2-fold **64042943** Insulated pipe set for the cascading of two DHW modules (item no. 6405511). - with two 2-way valves for switching - with mounting rail for an easy wall assembly
	Accessory set for FriwaMidi-Kaskade, 2-fold **64042622** **Accessory set for FriwaMidi-Kaskade, 3-fold** **64042632** **Accessory set for FriwaMidi-Kaskade, 4-fold** **64042642** Accessory set for cascading of two, three or four identically constructed domestic hot water modules (item no. 6405511 / 6405531). The two-way valves are pre-assembled and can therefore be easily installed in the cold water line. Thanks to the short opening time of the valve, there is no loss of comfort when connecting or disconnecting single cascade modules. ***The pipe set for cascade must be obtained by the customer!***
	PAW 3-way switch valve PV3 DN 25 **5675431** with 2-point control for managing different temperature zones in the buffer tank, e.g. for return flow distribution or enabling additional buffer tanks Setting time: 13 sec., rotation angle: 90°, torque: 5 Nm, Kvs value: 15.5
	Circulation set for Friwa cascade (Midi, Maxi, Mega) **6404136GM7** - with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valves, non-return valve and drain valve Connection: 1" ext. thread **Circulation set for Friwa cascade (Midi, Maxi, Mega)** **6404136GH10** - High-efficiency pump Grundfos UPML 25-105 N - with piston valves, non-return valve and drain valve Connection: 1½" ext. thread

FriwaMaxi
up to 77 l/min (according to SPF LK 1)*

Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- combined with thermal solar installations,
- in systems with a solid fuel boiler, oil or gas boiler,
- for the connection to a buffer tank,
- up to 308 l/min as a quadruple cascade (as per SPF LK 1)*

*For information on **design data**, see page 18 to 23.

Operating data

Max. pressure	primary: 3 bar, secondary: 10 bar
Max. operating temperature	95 °C
Min. flow rate	2 l/min
Max. flow rate as per SPF LK 1*	77 l/min
Transmission performance 1 as per SPF LK 1*	187 kW

Technical data

Equipment

Check valve	primary: 2 x 400 mm wc
Circulation line	optional
Heat exchanger	60 plates, copper solder/coated
Sensors	primary: 1x Pt1000 secondary: 2x Pt1000 1 x flow meter
Controller	FC3.10
WiFi3.10	optional
MB3.10	optional

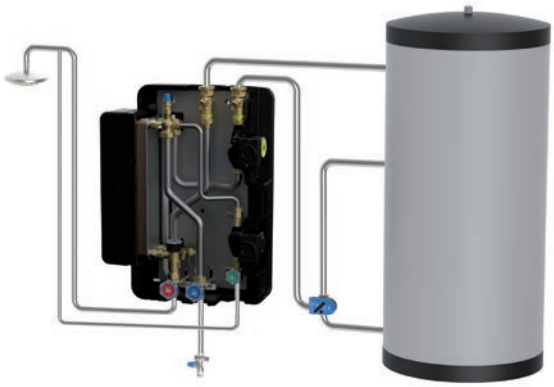
Dimensions

Nominal diameter	DN 25 (1")
Connections	primary: 2" ext. thread secondary: 1¼" ext. thread
Circulation line	1" ext. thread
Width	602 mm
Centre distance, prim.	120 mm
Centre distance, sec.	100 mm
Height	795 mm
Installation length	711 mm / 769 mm
Depth	298 mm

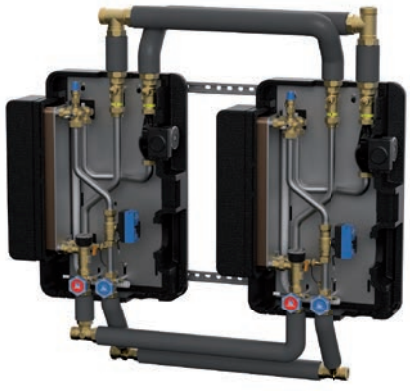
Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Heat exchanger	Solder: copper Plates + connecting pieces: stainless steel Coating (optional): based on silica

FriwaMaxi
Mounting example



FriwaMaxi with circulation



Cascade with 2 basic modules and pipe set for cascade

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

FriwaMaxi
Order data

FriwaMaxi DN 25 (1")	Item no.
FriwaMaxi without circulation	
prim.: Grundfos UPML 25-105	**6406511**
FriwaMaxi with circulation	
prim.: Grundfos UPML 25-105, sec.: Grundfos UPM2 15-75 CIL2	**6406516**
FriwaMaxi without circulation, coated heat exchanger	
prim.: Grundfos UPML 25-105	**6406531**
FriwaMaxi with circulation, coated heat exchanger	
prim.: Grundfos UPML 25-105, sec.: Grundfos UPM2 15-75 CIL2	**6406536**

Accessories	Item no.
	Circulation set for internal retrofitting (FriwaMidi/Maxi) **6404123** - with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valve and non-return valve Connection: 1" ext. thread
	Withdrawal valve **640422** Flame-treated valves for sterile withdrawal of water. For the subsequent installation inside the Friwa module, on each piston valve of the domestic hot water circuit.
	Pipe set for FriwaMaxi-Kaskade, 2-fold **64042953** Insulated pipe set for the cascading of two DHW modules (item no. 6406511). - with two 2-way valves for switching - with mounting rail for an easy wall assembly
	Accessory set for FriwaMaxi-Kaskade, 2-fold **64042722** **Accessory set for FriwaMaxi-Kaskade, 3-fold** **64042732** **Accessory set for FriwaMaxi-Kaskade, 4-fold** **64042742** Accessory set for cascading of two, three or four identically constructed domestic hot water modules (item no. 6406511 / 6406531). The two-way valves are pre-assembled and can therefore be easily installed in the cold water line. Thanks to the short opening time of the valve, there is no loss of comfort when connecting or disconnecting single cascade modules. ***The pipe set for cascade must be obtained by the customer!***
	PAW 3-way switch valve PV3 DN 25 **5675431** with 2-point control for managing different temperature zones in the buffer tank, e.g. for return flow distribution or enabling additional buffer tanks Setting time: 13 sec., rotation angle: 90°, torque: 5 Nm, Kvs value: 15.5
	Circulation set for Friwa cascade (Midi, Maxi, Mega) **6404136GM7** - with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valves, non-return valve and drain valve, connection 1" ext. thread **Circulation set for Friwa cascade (Midi, Maxi, Mega)** **6404136GH10** - High-efficiency pump Grundfos UPML 25-105 N - with piston valves, non-return valve and drain valve, connection 1½" ext. thread **Circulation set for Friwa cascade (Maxi, Mega)** **6404136GH12** - with high-efficiency pump Grundfos UPMXL GEO 25-125 N - with piston valves, non-return valve and drain valve Connection: 1½" ext. thread

FriwaMega
up to 123 l/min (according to SPF LK 1)*

Application range

- Domestic hot water preparation operating on the principle of a flow-type water heater

The CE-conformity of the module has been certified according to DIN EN 60335 and SVGW.

Application range

- combined with thermal solar installations,
- in systems with a solid fuel boiler, oil or gas boiler,
- for the connection to a buffer tank,
- up to 492 l/min as a quadruple cascade (as per SPF LK 1)*

*For information on **design data**, see page 18 to 23.

Operating data

Max. pressure	primary: 3 bar, secondary: 10 bar
Max. operating temperature	95 °C
Min. flow rate	4 l/min
Max. flow rate as per SPF LK 1*	123 l/min
Transmission performance 1 as per SPF LK 1*	300 kW

Technical data

Equipment

Check valve	primary: 2 x 450 mm wc
Circulation line	optional
Heat exchanger	2 x 60 plates, copper solder/ coated
Sensors	primary: 1x Pt1000 secondary: 2x Pt1000 2 x flow meter
Controller	FC3.10
WiFi3.10	optional
MB3.10	optional

Dimensions

Nominal diameter	DN 32 (1¼")
Connections	primary: 1½" int. thread secondary: 1½" ext. thread
Circulation line	1" ext. thread 1¼" ext. thread
Width	660 mm
Centre distance, prim.	158 mm
Centre distance, sec.	158 mm
Height	1423 mm
Installation length	1107 mm / 1205 mm
Depth	920 mm

Materials

Valves and fittings	Brass
Seals	AFM34 / EPDM
Insulation	EPP
Heat exchanger	Solder: copper Plates + connecting pieces: stainless steel Coating (optional): based on silica

FriwaMega
Mounting example

FriwaMega with circulation

Cascade with 2 basic modules, pipe set for cascade and circulation set

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

FriwaMega without circulation	
prim.: Grundfos UPMXL GEO 25-125	**6407511**
FriwaMega with circulation	
prim.: Grundfos UPMXL GEO 25-125, sec.: Grundfos UPML 25-105 N	**6407517**
FriwaMega without circulation, coated heat exchanger	
prim.: Grundfos UPMXL GEO 25-125	**6407530**
FriwaMega with circulation, coated heat exchanger	
prim.: Grundfos UPMXL GEO 25-125, sec.: Grundfos UPML 25-105 N	**6407535**

Accessories	Item no.
Circulation set for internal retrofitting (FriwaMega)	**6404135GH10**
- with high-efficiency pump Grundfos UPML GEO 25-105 N - with piston valve and non-return valve Connection: 1¼" ext. thread	
Withdrawal valve	**640422**
Flame-treated valves for sterile withdrawal of water. For the subsequent installation inside the DHW module, on each piston valve of the domestic hot water circuit.	
Return distribution set, 2" int. thread	**6404244**
3-way valve with actuator, setting time for 90°: 35 sec., Kvs value: 40 for FriwaMega-Kaskade	
Accessory set for FriwaMega-Kaskade - 2-fold	**64042820**
Accessory set for FriwaMega-Kaskade - 3-fold	**64042830**
Accessory set for FriwaMega-Kaskade - 4-fold	**64042840**
Accessory set for cascading of two, three or four identically constructed domestic hot water modules (item no. 6407511 / 6407530). The two-way valves are pre-assembled and can therefore be easily installed in the cold water line. Thanks to the short opening time of the valve, there is no loss of comfort when connecting or disconnecting single cascade modules. ***The pipe set for cascade must be obtained by the customer!***	
Pipe set for FriwaMega-Kaskade, 2-fold	**64042963**
Insulated pipe set for the cascading of two DHW modules (item no. 6407511). - with two 2-way valves for switching	
Pipe set for FriwaMega-Kaskade, 4-fold	**2x 64042963**
Please order 2x 64042963 for a 4-fold FriwaMega-Kaskade.	
Circulation set for Friwa cascade (Midi, Maxi, Mega)	**6404136GM7**
- with high-efficiency pump Grundfos UPM4 15-70 CIL3 - with piston valves, non-return valve and drain valve, connection 1" ext. thread	
Circulation set for Friwa cascade (Midi, Maxi, Mega)	**6404136GH10**
- High-efficiency pump Grundfos UPML 25-105 N - with piston valves, non-return valve and drain valve, connection 1½" ext. thread	
Circulation set for Friwa cascade (Maxi, Mega)	**6404136GH12**
- with high-efficiency pump Grundfos UPMXL GEO 25-125 N - with piston valves, non-return valve and drain valve, connection 1½" ext. thread	

Dimensioning product range Friwa
Domestic hot water technology

The performance of the Friwa primarily depends on the temperature in the buffer tank which delivers the energy to heat up the domestic hot water module.

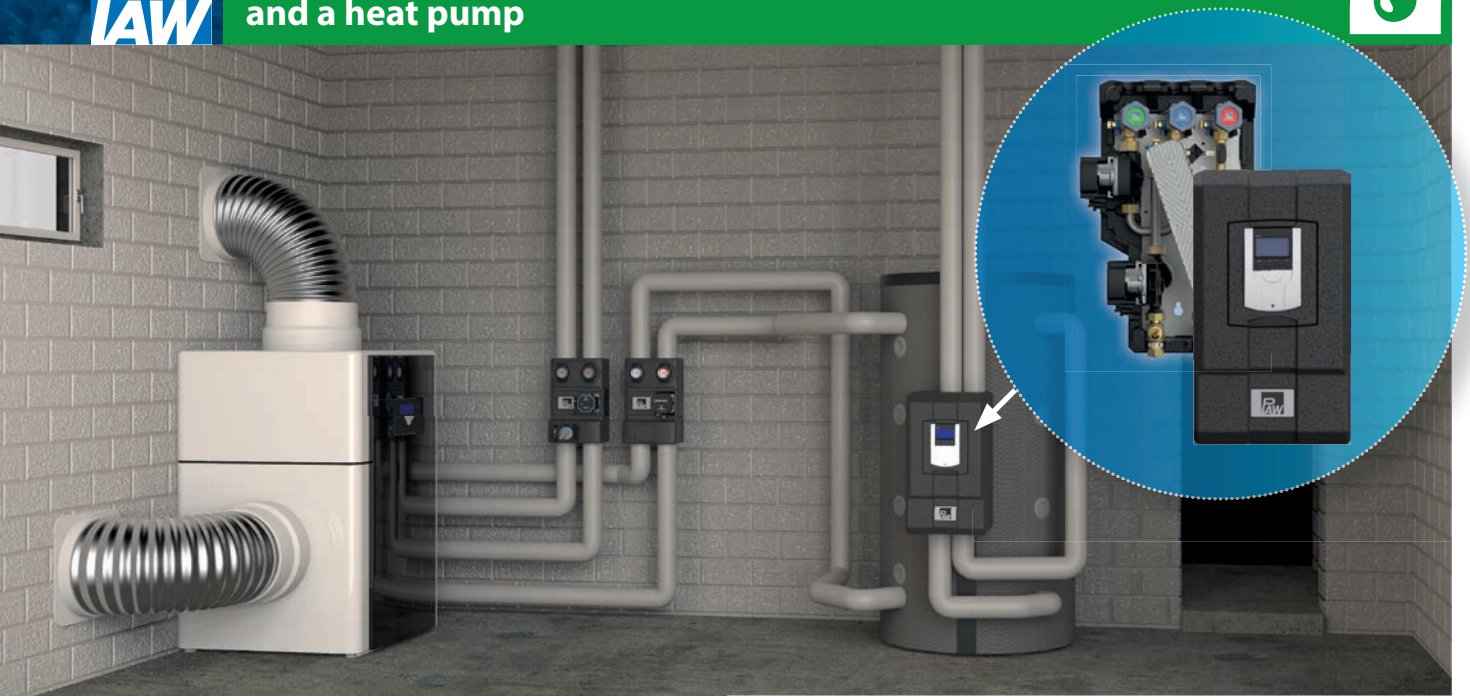
The demand of domestic hot water depends on the flow and the number of consumers. In larger apartment buildings, a certain statistic distribution of withdrawals can be observed. The following table gives a general overview of the application range of the different DHW modules.

Housing unit	70 °C / 60 °C / 10 °C	70 °C / 45 °C / 10 °C ***	60 °C / 50 °C / 10 °C ***
Single-family house (up to two showers)	FriwaMicro	FriwaMicro	FriwaMicro
Single-family house (three or more showers)	FriwaMini	FriwaMini	FriwaMini
Two-family house	FriwaMidi	FriwaMidi	FriwaMidi
3	FriwaMidi	FriwaMidi	FriwaMidi
5	FriwaMidi	FriwaMidi	FriwaMidi
10	FriwaMidi	FriwaMidi	FriwaMidi
15	FriwaMaxi	FriwaMidi	FriwaMaxi
20	FriwaMaxi	FriwaMidi	FriwaMaxi
30	2x FriwaMidi	FriwaMaxi	2x FriwaMidi
50	FriwaMega	2x FriwaMidi	FriwaMega
70	2x FriwaMaxi	FriwaMega	2x FriwaMaxi
100	2x FriwaMega	2x FriwaMaxi	2x FriwaMega

***A DHW temperature below 60 °C during operation does not comply with DVGW 551 (German association for gas and water). The compliance with water quality standards must be observed.

70 °C / 60 °C / 10 °C flow temperature 70 °C / Hot water temperature 60 °C / Cold water temperature 10 °C
The DHW demand of max. 12 l/min and the simultaneity factor according to DIN 4708 represent the basis of calculation.

Example: FriwaMini combined with a mixed CoolBloC C34 and a heat pump



2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Output capacity table FriwaMicro

Temperature of the heating storage tank	Domestic hot water temperature set at the controller	Maximum output capacity* of the Friwa	Transmission performance	Required tank volume per litre of hot water	for an inlet temperature of 10 °C (cold water temperature) - maximum withdrawal quantity** at the mixing valve at				Return temperature to the storage tank
					40 °C	**45 °C**	50 °C	**55 °C**	
45 °C	40 °C	18 l/min	38 kW	1.7 litres	/	/	/	/	23 °C
50 °C	40 °C	19 l/min	40 kW	1.1 litres	/	/	/	/	21 °C
	45 °C	**15 l/min**	**36 kW**	**1.8 litres**	17 l/min	/	/	/	**24 °C**
55 °C	40 °C	23 l/min	48 kW	0.9 litre	/	/	/	/	20 °C
	45 °C	**17 l/min**	**43 kW**	**1.2 litres**	20 l/min	/	/	/	**23 °C**
	50 °C	**15 l/min**	**42 kW**	**1.9 litres**	20 l/min	**17 l/min**	/	/	**26 °C**
60 °C	40 °C	27 l/min	55 kW	0.7 litre	/	**/**	/	/	20 °C
	45 °C	**20 l/min**	**49 kW**	**0.9 litre**	23 l/min	**/**	/	/	**23 °C**
	50 °C	**17 l/min**	**46 kW**	**1.3 litres**	22 l/min	**18 l/min**	/	/	**26 °C**
	55 °C	**13 l/min**	**40 kW**	**2.0 litres**	19 l/min	**16 l/min**	14 l/min	/	**30 °C**
65 °C	40 °C	27 l/min	56 kW	0.6 litre	/	**/**	/	/	19 °C
	45 °C	**20 l/min**	**50 kW**	**0.8 litre**	23 l/min	**/**	/	/	**22 °C**
	50 °C	**18 l/min**	**50 kW**	**1.0 litre**	24 l/min	**20 l/min**	/	/	**25 °C**
	55 °C	**15 l/min**	**46 kW**	**1.3 litres**	21 l/min	**18 l/min**	16 l/min	/	**29 °C**
	60 °C	11 l/min	39 kW	2.1 litres	18 l/min	**15 l/min**	13 l/min	**12 l/min**	33 °C
70 °C	40 °C	27 l/min	56 kW	0.6 litre	/	**/**	/	**/**	19 °C
	45 °C	**23 l/min**	**57 kW**	**0.7 litre**	27 l/min	**/**	/	**/**	**22 °C**
	50 °C	**20 l/min**	**54 kW**	**0.9 litre**	26 l/min	**22 l/min**	/	**/**	**25 °C**
	55 °C	**16 l/min**	**49 kW**	**1.1 litres**	23 l/min	**20 l/min**	17 l/min	**/**	**29 °C**
	60 °C	14 l/min	48 kW	1.4 litres	23 l/min	**19 l/min**	17 l/min	**15 l/min**	33 °C
75 °C	40 °C	27 l/min	57 kW	0.5 litre	/	**/**	/	**/**	18 °C
	45 °C	**25 l/min**	**61 kW**	**0.6 litre**	28 l/min	**/**	/	**/**	**21 °C**
	50 °C	**21 l/min**	**59 kW**	**0.7 litre**	28 l/min	**23 l/min**	/	**/**	**24 °C**
	55 °C	**17 l/min**	**54 kW**	**0.9 litre**	25 l/min	**22 l/min**	19 l/min	**/**	**28 °C**
	60 °C	14 l/min	49 kW	1.1 litres	23 l/min	**19 l/min**	17 l/min	**15 l/min**	32 °C
80 °C	40 °C	28 l/min***	58 kW	0.5 litre	/	**/**	/	**/**	17 °C
	45 °C	**26 l/min**	**64 kW**	**0.6 litre**	30 l/min	**/**	/	**/**	**20 °C**
	50 °C	**23 l/min**	**63 kW**	**0.7 litre**	30 l/min	**25 l/min**	/	**/**	**23 °C**
	55 °C	**19 l/min**	**58 kW**	**0.8 litre**	27 l/min	**23 l/min**	20 l/min	**/**	**27 °C**
	60 °C	15 l/min	51 kW	1.0 litre	24 l/min	**20 l/min**	18 l/min	**16 l/min**	32 °C

* The maximum output capacity depends on the pressure drop on the primary side.
** The maximum withdrawal quantity at the mixing valve depends on the length and the insulation of the pipes.
*** Maximum flow rate: 30 l/min, with pressure drop of the DHW module of 1000 mbar (for hydraulic reasons, higher values are only partly possible)

Example: The temperature in the heating storage tank (primary) is 65 °C and the hot water temperature set at the controller is 50 °C (secondary):
- With 65 °C in the heating buffer tank, a maximum of 18 litres of domestic water per minute can be heated to 50 °C.
- This withdrawal corresponds to a performance of 50 kW.
- In order to obtain 1 litre (or 100 litres) of hot water with a temperature of 50 °C, the heating buffer tank must contain 1 litre (or 100 litres) with a temperature of 65 °C.
- These 18 litres of warm water per minute with 50 °C can be mixed with cold water (10 °C) at the tap (mixing valve) to obtain 20 litres per minute with 45 °C. The primary return temperature for a withdrawal of 18 litres of warm water per minute is about 25 °C.

Output capacity table FriwaMini

Temperature of the heating storage tank	Domestic hot water temperature set at the controller	Maximum output capacity* of the Friwa	Transmission performance	Required tank volume per litre of hot water	for an inlet temperature of 10 °C (cold water temperature) - maximum withdrawal quantity** at the mixing valve at				Return temperature to the storage tank
					40 °C	**45 °C**	50 °C	**55 °C**	
45 °C	40 °C	17 l/min	36 kW	1.8 litres	/	/	/	/	24 °C
50 °C	40 °C	24 l/min	51 kW	1.3 litres	/	/	/	/	22 °C
	45 °C	**16 l/min**	**40 kW**	**1.9 litres**	19 l/min	/	/	/	**27 °C**
55 °C	40 °C	30 l/min	64 kW	1.0 litre	/	/	/	/	20 °C
	45 °C	**23 l/min**	**56 kW**	**1.4 litres**	26 l/min	/	/	/	**24 °C**
	50 °C	**16 l/min**	**44 kW**	**2.0 litres**	21 l/min	**18 l/min**	/	/	**29 °C**
60 °C	40 °C	36 l/min	76 kW	0.9 litre	/	**/**	/	/	20 °C
	45 °C	**28 l/min**	**69 kW**	**1.1 litres**	32 l/min	**/**	/	/	**23 °C**
	50 °C	**22 l/min**	**60 kW**	**1.5 litres**	28 l/min	**24 l/min**	/	/	**26 °C**
	55 °C	**15 l/min**	**48 kW**	**2.1 litres**	22 l/min	**19 l/min**	17 l/min	/	**32 °C**
65 °C	40 °C	42 l/min***	88 kW	0.6 litre	/	**/**	/	/	19 °C
	45 °C	**33 l/min**	**81 kW**	**0.9 litre**	38 l/min	**/**	/	/	**22 °C**
	50 °C	**27 l/min**	**74 kW**	**1.2 litres**	35 l/min	**30 l/min**	/	/	**25 °C**
	55 °C	**21 l/min**	**65 kW**	**1.5 litres**	30 l/min	**26 l/min**	23 l/min	/	**29 °C**
	60 °C	15 l/min	52 kW	2.1 litres	24 l/min	**21 l/min**	18 l/min	**16 l/min**	35 °C
70 °C	40 °C	42 l/min***	88 kW	0.5 litre	/	**/**	/	**/**	19 °C
	45 °C	**38 l/min**	**93 kW**	**0.8 litre**	44 l/min	**/**	/	**/**	**21 °C**
	50 °C	**31 l/min**	**87 kW**	**1.0 litre**	41 l/min	**35 l/min**	/	**/**	**24 °C**
	55 °C	**25 l/min**	**79 kW**	**1.2 litres**	37 l/min	**32 l/min**	28 l/min	**/**	**27 °C**
	60 °C	20 l/min	69 kW	1.6 litres	33 l/min	**28 l/min**	24 l/min	**22 l/min**	31 °C
75 °C	40 °C	42 l/min***	88 kW	0.5 litre	/	**/**	/	**/**	18 °C
	45 °C	**42 l/min***	**102 kW**	**0.6 litre**	49 l/min	**/**	/	**/**	**20 °C**
	50 °C	**36 l/min**	**99 kW**	**0.9 litre**	47 l/min	**40 l/min**	/	**/**	**23 °C**
	55 °C	**29 l/min**	**92 kW**	**1.1 litres**	44 l/min	**37 l/min**	32 l/min	**/**	**26 °C**
	60 °C	24 l/min	84 kW	1.3 litres	40 l/min	**34 l/min**	30 l/min	**26 l/min**	29 °C
80 °C	40 °C	42 l/min***	88 kW	0.4 litre	/	**/**	/	**/**	18 °C
	45 °C	**42 l/min***	**102 kW**	**0.5 litre**	49 l/min	**/**	/	**/**	**20 °C**
	50 °C	**40 l/min**	**111 kW**	**0.8 litre**	52 l/min	**45 l/min**	/	**/**	**22 °C**
	55 °C	**33 l/min**	**105 kW**	**0.9 litre**	50 l/min	**42 l/min**	37 l/min	**/**	**25 °C**
	60 °C	28 l/min	98 kW	1.1 litres	46 l/min	**39 l/min**	34 l/min	**31 l/min**	28 °C
85 °C	40 °C	42 l/min***	88 kW	0.4 litre	/	**/**	/	**/**	18 °C
	45 °C	**42 l/min***	**102 kW**	**0.5 litre**	49 l/min	**/**	/	**/**	**20 °C**
	50 °C	**42 l/min***	**117 kW**	**0.6 litre**	56 l/min	**47 l/min**	/	**/**	**21 °C**
	55 °C	**37 l/min**	**117 kW**	**0.8 litre**	55 l/min	**47 l/min**	41 l/min	**/**	**24 °C**
	60 °C	32 l/min	110 kW	1.0 litre	52 l/min	**45 l/min**	39 l/min	**35 l/min**	26 °C
90 °C	40 °C	42 l/min***	88 kW	0.4 litre	/	**/**	/	**/**	18 °C
	45 °C	**42 l/min***	**102 kW**	**0.4 litre**	49 l/min	**/**	/	**/**	**19 °C**
	50 °C	**42 l/min***	**117 kW**	**0.5 litre**	56 l/min	**47 l/min**	/	**/**	**21 °C**
	55 °C	**41 l/min**	**128 kW**	**0.6 litre**	61 l/min	**52 l/min**	45 l/min	**/**	**23 °C**
	60 °C	35 l/min	122 kW	0.9 litre	58 l/min	**50 l/min**	43 l/min	**38 l/min**	25 °C
95 °C	40 °C	42 l/min***	88 kW	0.3 litre	/	**/**	/	**/**	17 °C
	45 °C	**42 l/min***	**102 kW**	**0.4 litre**	49 l/min	**/**	/	**/**	**19 °C**
	50 °C	**42 l/min***	**117 kW**	**0.5 litre**	56 l/min	**47 l/min**	/	**/**	**20 °C**
	55 °C	**42 l/min***	**132 kW**	**0.6 litre**	63 l/min	**53 l/min**	47 l/min	**/**	**22 °C**
	60 °C	38 l/min	134 kW	0.8 litre	64 l/min	**54 l/min**	47 l/min	**42 l/min**	24 °C

* The maximum output capacity depends on the pressure drop on the primary side.
** The maximum withdrawal quantity at the mixing valve depends on the length and the insulation of the pipes.
*** Maximum flow rate: 42 l/min, with pressure drop of the DHW module of 1000 mbar (for hydraulic reasons, higher values are only partly possible, measuring limit of the flow rate sensor ~42 l/min)

Example: The temperature in the heating storage tank (primary) is 65 °C and the hot water temperature set at the controller is 50 °C (secondary):
- With 65 °C in the heating buffer tank, a maximum of 27 litres of domestic water per minute can be heated to 50 °C.
- This withdrawal corresponds to a performance of 74 kW.
- In order to obtain 1 litre (or 100 litres) of hot water with a temperature of 50 °C, the heating buffer tank must contain 1.2 litres (or 120 litres) with a temperature of 65 °C.
- These 27 litres of warm water per minute with 50 °C can be mixed with cold water (10 °C) at the tap (mixing valve) to obtain 30 litres per minute with 45 °C. The primary return temperature for a withdrawal of 27 litres of warm water per minute is about 25 °C.

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Output capacity table FriwaMidi

Temperature of the heating storage tank	Domestic hot water temperature set at the controller	Maximum output capacity* of the Friwa	Transmission performance	Required tank volume per litre of hot water	for an inlet temperature of 10 °C (cold water temperature) - maximum withdrawal quantity** at the mixing valve at				Return temperature to the storage tank
					40 °C	**45 °C**	50 °C	**55 °C**	
45 °C	40 °C	34 l/min	71 kW	1.2 litres	/	/	/	/	20 °C
50 °C	40 °C	44 l/min	92 kW	0.9 litre	/	/	/	/	18 °C
	45 °C	**32 l/min**	**79 kW**	**1.3 litres**	37 l/min	/	/	/	**22 °C**
55 °C	40 °C	53 l/min	111 kW	0.8 litre	/	/	/	/	16 °C
	45 °C	**42 l/min**	**102 kW**	**1.0 litre**	48 l/min	/	/	/	**19 °C**
	50 °C	**31 l/min**	**87 kW**	**1.3 litres**	41 l/min	**35 l/min**	/	/	**24 °C**
60 °C	40 °C	61 l/min	128 kW	0.7 litre	/	/	/	/	15 °C
	45 °C	**50 l/min**	**121 kW**	**0.8 litre**	58 l/min	/	/	/	**17 °C**
	50 °C	**40 l/min**	**111 kW**	**1.0 litre**	53 l/min	**45 l/min**	/	/	**21 °C**
	55 °C	**30 l/min**	**95 kW**	**1.4 litres**	45 l/min	**39 l/min**	34 l/min	/	**27 °C**
65 °C	40 °C	65 l/min***	135 kW	0.6 litre	/	/	/	/	14 °C
	45 °C	**57 l/min**	**138 kW**	**0.7 litre**	66 l/min	/	/	/	**16 °C**
	50 °C	**47 l/min**	**131 kW**	**0.9 litre**	62 l/min	**53 l/min**	/	/	**19 °C**
	55 °C	**39 l/min**	**120 kW**	**1.1 litres**	57 l/min	**49 l/min**	43 l/min	/	**23 °C**
	60 °C	30 l/min	103 kW	1.4 litres	49 l/min	**42 l/min**	37 l/min	**33 l/min**	29 °C
70 °C	40 °C	65 l/min***	135 kW	0.5 litre	/	/	/	/	13 °C
	45 °C	**64 l/min**	**155 kW**	**0.7 litre**	74 l/min	/	/	/	**15 °C**
	50 °C	**54 l/min**	**149 kW**	**0.8 litre**	71 l/min	**61 l/min**	/	/	**17 °C**
	55 °C	**45 l/min**	**141 kW**	**0.9 litre**	67 l/min	**57 l/min**	50 l/min	/	**20 °C**
	60 °C	37 l/min	129 kW	1.1 litres	62 l/min	**53 l/min**	46 l/min	**41 l/min**	24 °C
75 °C	40 °C	65 l/min***	135 kW	0.5 litre	/	/	/	/	12 °C
	45 °C	**65 l/min*** **	**158 kW**	**0.6 litre**	75 l/min	/	/	/	**14 °C**
	50 °C	**60 l/min**	**166 kW**	**0.7 litre**	79 l/min	**68 l/min**	/	/	**16 °C**
	55 °C	**51 l/min**	**159 kW**	**0.8 litre**	76 l/min	**65 l/min**	57 l/min	/	**19 °C**
	60 °C	43 l/min	151 kW	1.0 litre	72 l/min	**61 l/min**	54 l/min	**48 l/min**	22 °C
80 °C	40 °C	65 l/min***	135 kW	0.5 litre	/	/	/	/	12 °C
	45 °C	**65 l/min*** **	**158 kW**	**0.5 litre**	75 l/min	/	/	/	**13 °C**
	50 °C	**65 l/min**	**181 kW**	**0.6 litre**	87 l/min	**74 l/min**	/	/	**15 °C**
	55 °C	**57 l/min**	**176 kW**	**0.7 litre**	84 l/min	**72 l/min**	63 l/min	/	**17 °C**
	60 °C	49 l/min	169 kW	0.8 litre	81 l/min	**69 l/min**	60 l/min	**54 l/min**	20 °C
85 °C	40 °C	65 l/min***	135 kW	0.4 litre	/	/	/	/	12 °C
	45 °C	**65 l/min*** **	**158 kW**	**0.5 litre**	75 l/min	/	/	/	**13 °C**
	50 °C	**65 l/min*** **	**181 kW**	**0.6 litre**	86 l/min	**74 l/min**	/	/	**14 °C**
	55 °C	**62 l/min**	**192 kW**	**0.7 litre**	92 l/min	**79 l/min**	69 l/min	/	**16 °C**
	60 °C	54 l/min	187 kW	0.8 litre	89 l/min	**76 l/min**	67 l/min	**59 l/min**	18 °C
90 °C	40 °C	65 l/min***	135 kW	0.4 litre	/	/	/	/	11 °C
	45 °C	**65 l/min*** **	**158 kW**	**0.5 litre**	75 l/min	/	/	/	**12 °C**
	50 °C	**65 l/min*** **	**181 kW**	**0.5 litre**	86 l/min	**74 l/min**	/	/	**14 °C**
	55 °C	**65 l/min*** **	**203 kW**	**0.6 litre**	97 l/min	**83 l/min**	72 l/min	/	**15 °C**
	60 °C	59 l/min	203 kW	0.7 litre	97 l/min	**83 l/min**	73 l/min	**65 l/min**	17 °C
95 °C	40 °C	65 l/min***	135 kW	0.4 litre	/	/	/	/	11 °C
	45 °C	**65 l/min*** **	**158 kW**	**0.4 litre**	75 l/min	/	/	/	**12 °C**
	50 °C	**65 l/min*** **	**181 kW**	**0.5 litre**	86 l/min	**74 l/min**	/	/	**13 °C**
	55 °C	**65 l/min*** **	**203 kW**	**0.6 litre**	97 l/min	**83 l/min**	72 l/min	/	**15 °C**
	60 °C	63 l/min	219 kW	0.7 litre	105 l/min	**90 l/min**	78 l/min	**70 l/min**	16 °C

* The maximum output capacity depends on the pressure drop on the primary side.
** The maximum withdrawal quantity at the mixing valve depends on the length and the insulation of the pipes.
*** Maximum flow rate: 65 l/min, with pressure drop of the DHW module of 1000 mbar (for hydraulic reasons, higher values are only partly possible, measuring limit of the flow rate sensor ~133 l/min)

Example: The temperature in the heating storage tank (primary) is 65 °C and the hot water temperature set at the controller is 50 °C (secondary):
- With 65 °C in the heating buffer tank, a maximum of 47 litres of domestic water per minute can be heated to 50 °C.
- This withdrawal corresponds to a performance of 131 kW.
- In order to obtain 1 litre (or 100 litres) of hot water with a temperature of 50 °C, the heating buffer tank must contain 0.9 litre (or 90 litres) with a temperature of 65 °C.
- These 47 litres of warm water per minute with 50 °C can be mixed with cold water (10 °C) at the tap (mixing valve) to obtain 53 litres per minute with 45 °C. The primary return temperature for a withdrawal of 47 litres of warm water per minute is about 19 °C.

Output capacity table FriwaMaxi

Temperature of the heating storage tank	Domestic hot water temperature set at the controller	Maximum output capacity* of the Friwa	Transmission performance	Required tank volume per litre of hot water	for an inlet temperature of 10 °C (cold water temperature) - maximum withdrawal quantity** at the mixing valve at				Return temperature to the storage tank
					40 °C	**45 °C**	50 °C	**55 °C**	
45 °C	40 °C	52 l/min	109 kW	1.2 litres	/	/	/	/	20 °C
50 °C	40 °C	69 l/min	143 kW	0.9 litre	/	/	/	/	18 °C
	45 °C	**50 l/min**	**122 kW**	**1.3 litres**	58 l/min	/	/	/	**22 °C**
55 °C	40 °C	82 l/min	172 kW	0.8 litre	/	/	/	/	16 °C
	45 °C	**65 l/min**	**158 kW**	**1.0 litre**	75 l/min	/	/	/	**19 °C**
	50 °C	**48 l/min**	**135 kW**	**1.3 litres**	64 l/min	**55 l/min**	/	/	**24 °C**
60 °C	40 °C	88 l/min***	183 kW	0.7 litre	/	**/**	/	/	15 °C
	45 °C	**77 l/min**	**187 kW**	**0.8 litre**	89 l/min	**/**	/	/	**17 °C**
	50 °C	**62 l/min**	**172 kW**	**1.0 litre**	82 l/min	**70 l/min**	/	/	**21 °C**
	55 °C	**47 l/min**	**147 kW**	**1.4 litres**	70 l/min	**60 l/min**	52 l/min	/	**26 °C**
65 °C	40 °C	88 l/min***	183 kW	0.6 litre	/	**/**	/	/	14 °C
	45 °C	**88 l/min**	**214 kW**	**0.7 litre**	102 l/min	**/**	/	/	**16 °C**
	50 °C	**73 l/min**	**203 kW**	**0.9 litre**	96 l/min	**83 l/min**	/	/	**19 °C**
	55 °C	**60 l/min**	**186 kW**	**1.1 litres**	89 l/min	**76 l/min**	66 l/min	/	**22 °C**
	60 °C	46 l/min	160 kW	1.4 litres	76 l/min	**65 l/min**	57 l/min	**51 l/min**	28 °C
70 °C	40 °C	88 l/min***	183 kW	0.5 litre	/	**/**	/	**/**	14 °C
	45 °C	**88 l/min*** **	**214 kW**	**0.6 litre**	102 l/min	**/**	/	**/**	**15 °C**
	50 °C	**83 l/min**	**230 kW**	**0.8 litre**	109 l/min	**94 l/min**	/	**/**	**17 °C**
	55 °C	**70 l/min**	**218 kW**	**0.9 litre**	104 l/min	**89 l/min**	78 l/min	**/**	**20 °C**
	60 °C	58 l/min	200 kW	1.1 litres	95 l/min	**82 l/min**	71 l/min	**63 l/min**	24 °C
75 °C	40 °C	88 l/min***	183 kW	0.5 litre	/	**/**	/	**/**	13 °C
	45 °C	**88 l/min*** **	**214 kW**	**0.6 litre**	102 l/min	**/**	/	**/**	**14 °C**
	50 °C	**88 l/min*** **	**244 kW**	**0.7 litre**	116 l/min	**100 l/min**	/	**/**	**16 °C**
	55 °C	**79 l/min**	**246 kW**	**0.8 litre**	117 l/min	**100 l/min**	88 l/min	**/**	**18 °C**
	60 °C	67 l/min	233 kW	1.0 litre	111 l/min	**95 l/min**	83 l/min	**74 l/min**	21 °C
80 °C	40 °C	88 l/min***	183 kW	0.4 litre	/	**/**	/	**/**	13 °C
	45 °C	**88 l/min*** **	**214 kW**	**0.5 litre**	102 l/min	**/**	/	**/**	**14 °C**
	50 °C	**88 l/min*** **	**244 kW**	**0.6 litre**	116 l/min	**100 l/min**	/	**/**	**15 °C**
	55 °C	**87 l/min**	**272 kW**	**0.7 litre**	130 l/min	**111 l/min**	97 l/min	**/**	**17 °C**
	60 °C	75 l/min	262 kW	0.8 litre	125 l/min	**107 l/min**	93 l/min	**83 l/min**	20 °C
85 °C	40 °C	88 l/min***	183 kW	0.4 litre	/	**/**	/	**/**	12 °C
	45 °C	**88 l/min*** **	**214 kW**	**0.5 litre**	102 l/min	**/**	/	**/**	**13 °C**
	50 °C	**88 l/min*** **	**244 kW**	**0.6 litre**	116 l/min	**100 l/min**	/	**/**	**15 °C**
	55 °C	**88 l/min*** **	**274 kW**	**0.7 litre**	131 l/min	**112 l/min**	98 l/min	**/**	**16 °C**
	60 °C	83 l/min	289 kW	0.8 litre	137 l/min	**118 l/min**	103 l/min	**92 l/min**	18 °C
90 °C	40 °C	88 l/min***	183 kW	0.4 litre	/	**/**	/	**/**	12 °C
	45 °C	**88 l/min*** **	**214 kW**	**0.5 litre**	102 l/min	**/**	/	**/**	**13 °C**
	50 °C	**88 l/min*** **	**244 kW**	**0.5 litre**	116 l/min	**100 l/min**	/	**/**	**14 °C**
	55 °C	**88 l/min*** **	**274 kW**	**0.6 litre**	131 l/min	**112 l/min**	98 l/min	**/**	**15 °C**
	60 °C	88 l/min	305 kW	0.7 litre	146 l/min	**125 l/min**	109 l/min	**97 l/min**	17 °C
95 °C	40 °C	88 l/min***	183 kW	0.4 litre	/	**/**	/	**/**	12 °C
	45 °C	**88 l/min*** **	**214 kW**	**0.4 litre**	102 l/min	**/**	/	**/**	**13 °C**
	50 °C	**88 l/min*** **	**244 kW**	**0.5 litre**	116 l/min	**100 l/min**	/	**/**	**14 °C**
	55 °C	**88 l/min*** **	**274 kW**	**0.6 litre**	131 l/min	**112 l/min**	98 l/min	**/**	**15 °C**
	60 °C	88 l/min***	305 kW	0.7 litre	146 l/min	**125 l/min**	109 l/min	**97 l/min**	16 °C

* The maximum output capacity depends on the pressure drop on the primary side. Assumption: 1 m wc
In the case of higher pressure drops, the maximum output capacity drops accordingly.

** The maximum withdrawal quantity at the mixing valve depends on the length and the insulation of the pipes.

*** Maximum flow rate: 88 l/min, with pressure drop of the DHW module of 1000 mbar (for hydraulic reasons, higher values are only partly possible, measuring limit of the flow rate sensor ~133 l/min)

Example: The temperature in the heating storage tank (primary) is 65 °C and the hot water temperature set at the controller is 50 °C (secondary):
- With 65 °C in the heating buffer tank, a maximum of 73 litres of domestic water per minute can be heated to 50 °C.
- This withdrawal corresponds to a performance of 203 kW.
- In order to obtain 1 litre (or 100 litres) of hot water with a temperature of 50 °C, the heating buffer tank must contain 0.9 litre (or 90 litres) with a temperature of 65 °C.
- These 73 litres of warm water per minute with 50 °C can be mixed with cold water (10 °C) at the tap (mixing valve) to obtain 83 litres per minute with 45 °C. The primary return temperature for a withdrawal of 73 litres of warm water per minute is about 19 °C.

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

Output capacity table FriwaMega

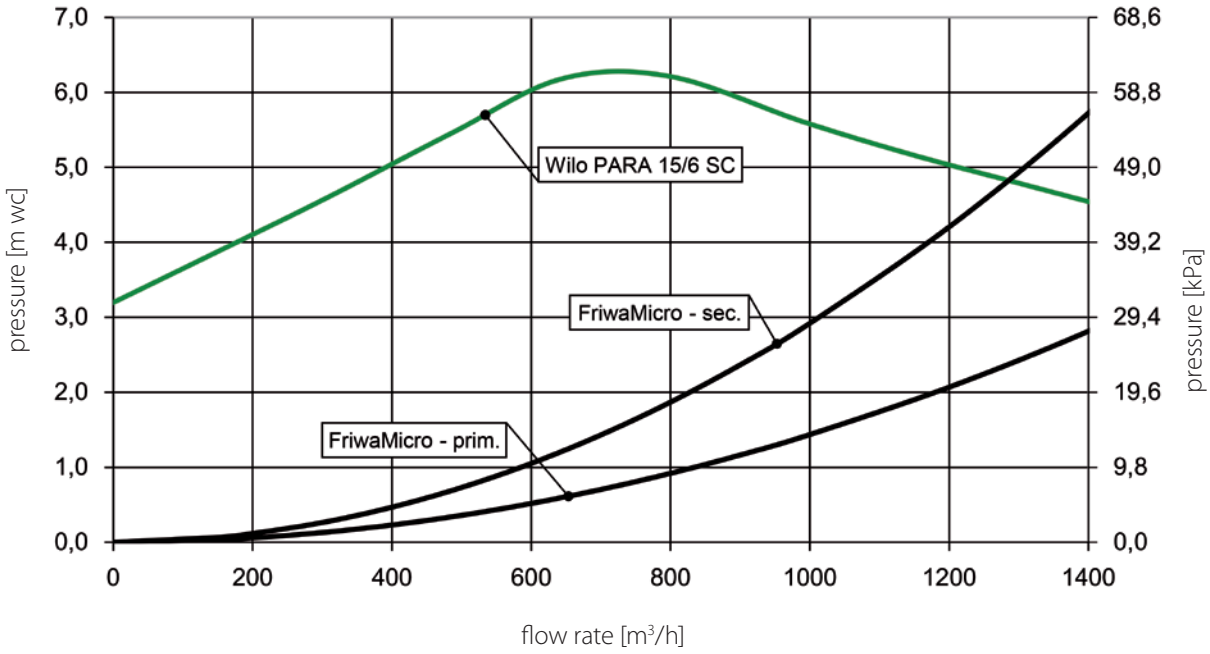
Temperature of the heating storage tank	Domestic hot water temperature set at the controller	Maximum output capacity* of the Friwa	Transmission performance	Required tank volume per litre of hot water	for an inlet temperature of 10 °C (cold water temperature) - maximum withdrawal quantity** at the mixing valve at				Return temperature to the storage tank
					40 °C	**45 °C**	50 °C	**55 °C**	
45 °C	40 °C	85 l/min	178 kW	1.2 litres	/	/	/	/	19 °C
50 °C	40 °C	111 l/min	230 kW	0.9 litre	/	/	/	/	17 °C
	45 °C	**82 l/min**	**199 kW**	**1.2 litres**	95 l/min	/	/	/	**21 °C**
55 °C	40 °C	130 l/min***	271 kW	0.8 litre	/	/	/	/	15 °C
	45 °C	**105 l/min**	**254 kW**	**1.0 litre**	122 l/min	/	/	/	**18 °C**
	50 °C	**79 l/min**	**220 kW**	**1.3 litres**	105 l/min	**90 l/min**	/	/	**23 °C**
60 °C	40 °C	130 l/min***	271 kW	0.7 litre	/	/	/	/	14 °C
	45 °C	**123 l/min**	**300 kW**	**0.8 litre**	143 l/min	/	/	/	**16 °C**
	50 °C	**100 l/min**	**278 kW**	**1.0 litre**	133 l/min	**114 l/min**	/	/	**19 °C**
	55 °C	**77 l/min**	**240 kW**	**1.3 litres**	115 l/min	**98 l/min**	86 l/min	/	**25 °C**
65 °C	40 °C	130 l/min***	271 kW	0.6 litre	/	/	/	/	13 °C
	45 °C	**130 l/min***	**316 kW**	**0.7 litre**	151 l/min	/	/	/	**15 °C**
	50 °C	**117 l/min**	**325 kW**	**0.9 litre**	156 l/min	**133 l/min**	/	/	**17 °C**
	55 °C	**96 l/min**	**301 kW**	**1.0 litre**	144 l/min	**123 l/min**	108 l/min	/	**21 °C**
	60 °C	75 l/min	261 kW	1.3 litres	125 l/min	**107 l/min**	94 l/min	**83 l/min**	27 °C
70 °C	40 °C	130 l/min***	271 kW	0.5 litre	/	/	/	/	12 °C
	45 °C	**130 l/min***	**316 kW**	**0.6 litre**	151 l/min	/	/	/	**14 °C**
	50 °C	**130 l/min***	**361 kW**	**0.8 litre**	173 l/min	**148 l/min**	/	/	**16 °C**
	55 °C	**112 l/min**	**358 kW**	**0.9 litre**	168 l/min	**143 l/min**	125 l/min	/	**19 °C**
	60 °C	94 l/min	324 kW	1.1 litres	155 l/min	**133 l/min**	116 l/min	**103 l/min**	22 °C
75 °C	40 °C	130 l/min***	271 kW	0.5 litre	/	/	/	/	11 °C
	45 °C	**130 l/min***	**316 kW**	**0.6 litre**	151 l/min	/	/	/	**13 °C**
	50 °C	**130 l/min***	**361 kW**	**0.7 litre**	173 l/min	**148 l/min**	/	/	**15 °C**
	55 °C	**126 l/min**	**393 kW**	**0.8 litre**	189 l/min	**161 l/min**	141 l/min	/	**17 °C**
	60 °C	108 l/min	374 kW	0.9 litre	180 l/min	**153 l/min**	134 l/min	**119 l/min**	20 °C
80 °C	40 °C	130 l/min***	271 kW	0.4 litre	/	/	/	/	11 °C
	45 °C	**130 l/min***	**316 kW**	**0.5 litre**	151 l/min	/	/	/	**12 °C**
	50 °C	**130 l/min***	**361 kW**	**0.6 litre**	173 l/min	**148 l/min**	/	/	**14 °C**
	55 °C	**130 l/min***	**406 kW**	**0.7 litre**	195 l/min	**166 l/min**	145 l/min	/	**16 °C**
	60 °C	121 l/min	419 kW	0.8 litre	201 l/min	**172 l/min**	150 l/min	**134 l/min**	18 °C
85 °C	40 °C	130 l/min***	271 kW	0.4 litre	/	/	/	/	11 °C
	45 °C	**130 l/min***	**316 kW**	**0.5 litre**	151 l/min	/	/	/	**12 °C**
	50 °C	**130 l/min***	**361 kW**	**0.6 litre**	173 l/min	**148 l/min**	/	/	**13 °C**
	55 °C	**130 l/min***	**406 kW**	**0.7 litre**	195 l/min	**166 l/min**	145 l/min	/	**14 °C**
	60 °C	130 l/min***	451 kW	0.8 litre	216 l/min	**185 l/min**	162 l/min	**144 l/min**	17 °C
90 °C	40 °C	130 l/min***	271 kW	0.4 litre	/	/	/	/	10 °C
	45 °C	**130 l/min***	**316 kW**	**0.5 litre**	151 l/min	/	/	/	**11 °C**
	50 °C	**130 l/min***	**361 kW**	**0.5 litre**	173 l/min	**148 l/min**	/	/	**12 °C**
	55 °C	**130 l/min***	**406 kW**	**0.6 litre**	195 l/min	**166 l/min**	145 l/min	/	**14 °C**
	60 °C	130 l/min***	451 kW	0.7 litre	216 l/min	**185 l/min**	162 l/min	**144 l/min**	15 °C
95 °C	40 °C	130 l/min***	271 kW	0.4 litre	/	/	/	/	10 °C
	45 °C	**130 l/min***	**316 kW**	**0.4 litre**	151 l/min	/	/	/	**11 °C**
	50 °C	**130 l/min***	**361 kW**	**0.5 litre**	173 l/min	**148 l/min**	/	/	**12 °C**
	55 °C	**130 l/min***	**406 kW**	**0.6 litre**	195 l/min	**166 l/min**	145 l/min	/	**13 °C**
	60 °C	130 l/min***	451 kW	0.6 litre	216 l/min	**185 l/min**	162 l/min	**144 l/min**	14 °C

* The maximum output capacity depends on the pressure drop on the primary side.
** The maximum withdrawal quantity at the mixing valve depends on the length and the insulation of the pipes.
*** Maximum flow rate: 88 l/min, with pressure drop of the DHW module of 1000 mbar (for hydraulic reasons, higher values are only partly possible, measuring limit of the flow rate sensor ~133 l/min)

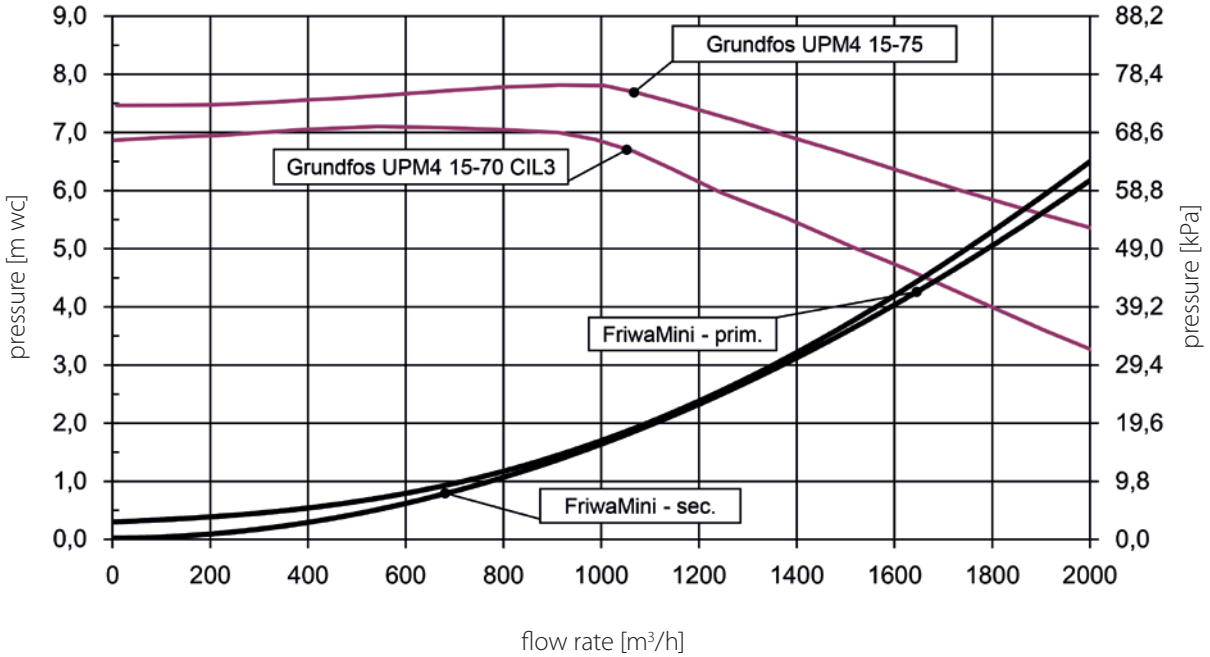
Example: The temperature in the heating storage tank (primary) is 65 °C and the hot water temperature set at the controller is 50 °C (secondary):
- With 65 °C in the heating buffer tank, a maximum of 117 litres of domestic water per minute can be heated to 50 °C.
- This withdrawal corresponds to a performance of 325 kW.
- In order to obtain 1 litre (or 100 litres) of hot water with a temperature of 50 °C, the heating buffer tank must contain 0.9 litre (or 90 litres) with a temperature of 65 °C.
- These 117 litres of warm water per minute with 50 °C can be mixed with cold water (10 °C) at the tap (mixing valve) to obtain 133 litres per minute with 45 °C. The primary return temperature for a withdrawal of 117 litres of warm water per minute is about 17 °C.

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

FriwaMicro
up to 20 l/min

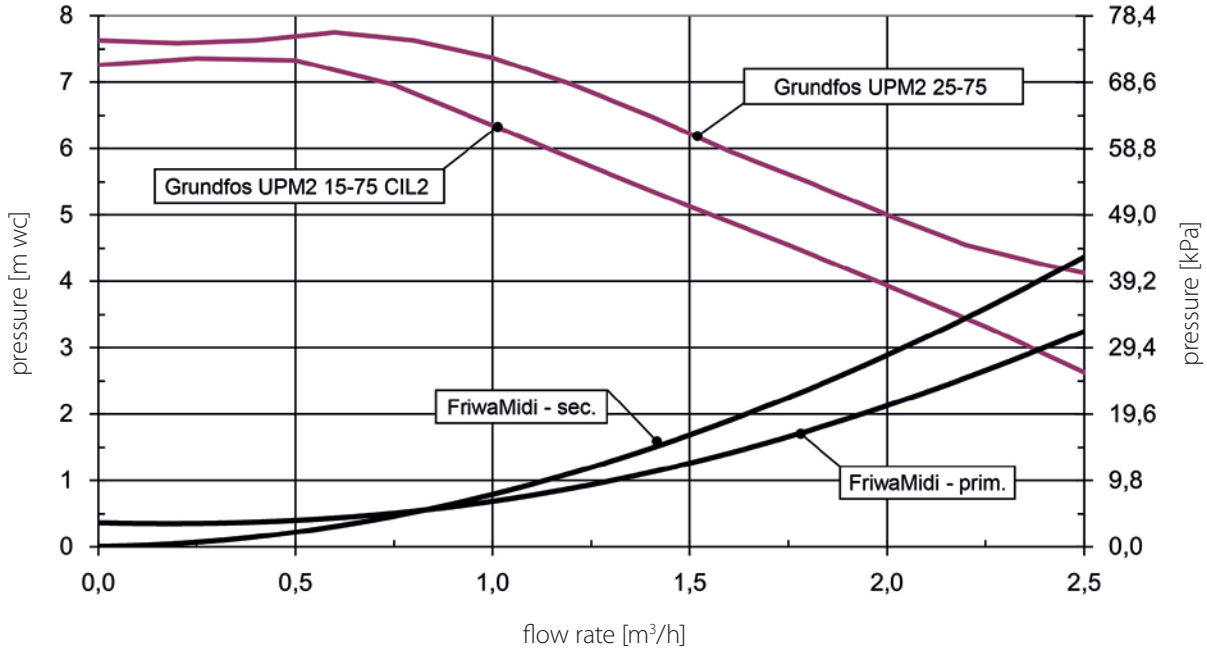


FriwaMini
up to 28 l/min

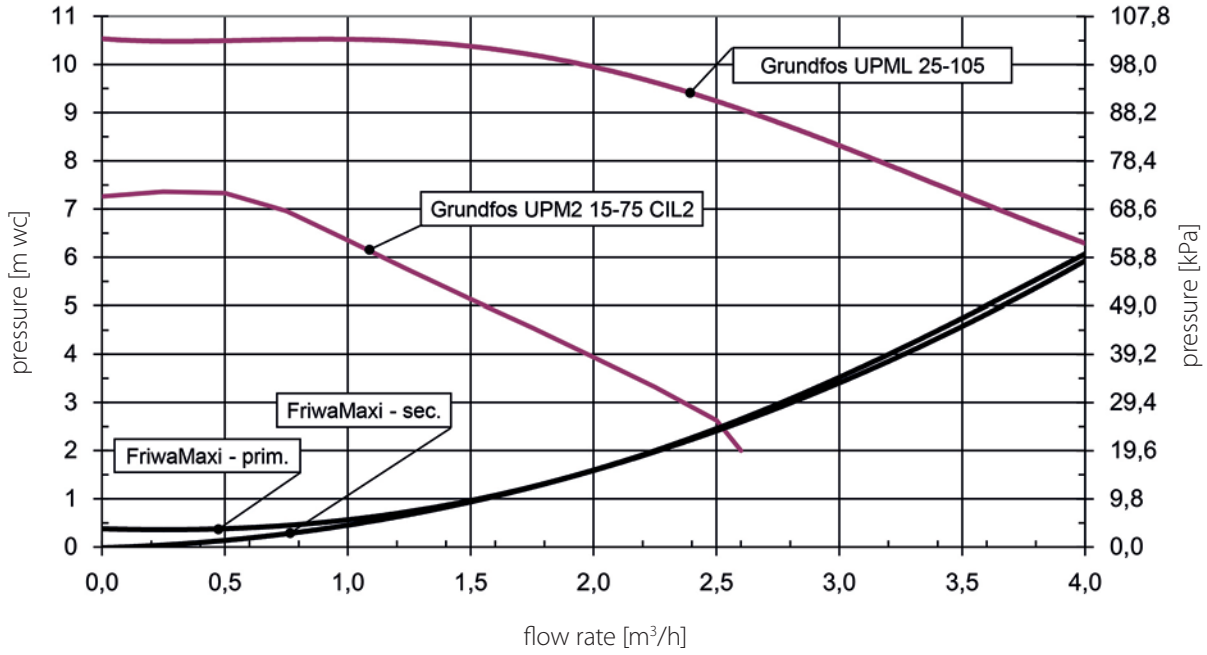


2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

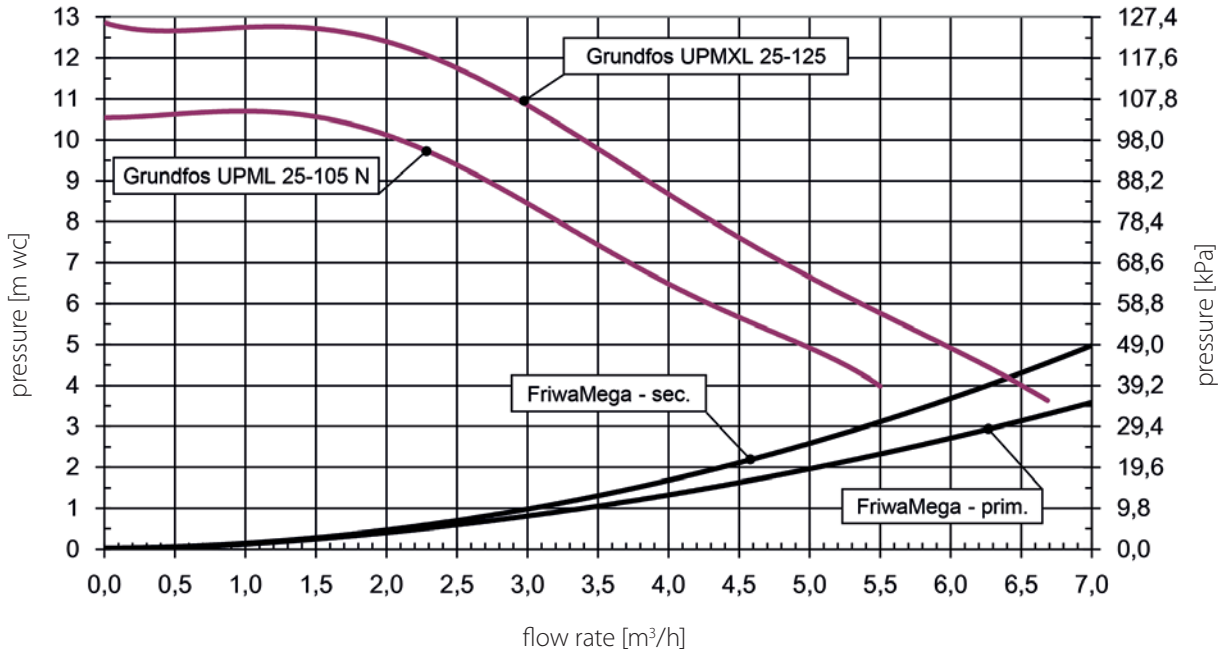
FriwaMidi
up to 50 l/min



FriwaMaxi
up to 77 l/min



FriwaMega
up to 123 l/min



2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

2026/01 • Printed in Germany • We reserve the right to make technical changes without notice
PAW GmbH & Co. KG • 31789 Hameln • Germany • Phone: +49-5151-9856-0 • Fax: +49-5151-9856-98 • info@paw.eu • www.paw.eu

PAW GmbH & Co. KG
Böcklerstraße 11
31789 Hameln
Germany
+49-5151-9856-0
+49-5151-9856-98
info@paw.eu
www.paw.eu

99640xx-fly-en - Version: V06 - Issued: 2026/01
Printed in Germany • We reserve the right to make technical changes without notice!