



Flat Stations

EvoFlat 4.0 M - Demand control

Domestic hot water and direct heating with mixing loop

Description

Product

The EvoFlat 4.0 M combined with the ICON2 floor heating controller provides intelligent, demand controlled regulation for apartment and room heating. Using a self-learning, patented algorithm, the system continuously evaluates actual heat demand and automatically adjusts the supply temperature for optimal comfort, energy efficiency, and hydraulic balance. It responds quickly to changing conditions, integrates seamlessly with modern heat sources, and supports remote monitoring and control via the Ally app. Fully compliant with European energy performance standards, it offers a scalable, future-proof solution for both small and multi-zone installations.

The innovative unit sets new standard. It consists of functional blocks made of a specially reinforced PPS composite material. This makes the station extremely lightweight and limits internal heat emission. The smooth surface reduces the risks of scaling and clogging. All components are assembled with newly designed click-fit connections.

Primary side (DH)

The flat station is equipped with two differential pressure controller and a central strainer. A summer bypass keeps the supply line warm during standstill. This ensures a fast response time for DHW during the summer. The bypass is thermostatically controlled.

Heating (HE)

Supply temperature is adjusted according to the actual heating demand from all connected rooms, ensuring optimal comfort. The controller identifies misbalanced loops and adjusts the opening cycles according to this (automatic hydraulic balancing). A safety thermostat closes the flow at 55°C. A highly efficient circulation pump is installed. A bathroom radiator or towel dryer can be connected using an optional high-temperature connection set.

Domestic hot water (DHW)

Four sizes of heat exchanger are available to cover all requirements from 45 kW up to 70 kW. The EvoFlat 4.0 M is equipped with an intelligent controller that regulates the supply side flow based on the domestic hot water temperature and the volume of water drawn. The station features an integrated differential pressure controller on the supply side of the domestic hot water heating system. This eliminates the need for hydraulic balancing of the station. If necessary, the station can be expanded with a hot water circulation set.

Features & benefits

- Low energy consumption
- Optimal room comfort
- Lightweight
- Easy installation, maintenance and operation
- Durable composite material
- Minimum space required for installation
- Minimal heat loss thanks to EPP insulation cover
- Prepared for build-in heat meter
- Prepared for build-in water meter
- Compatible with various heat sources, such as district heating, heat pumps, biomass etc

Demand-Controlled Regulation with EvoFlat 4.0 M and ICON2 Floor Heating Controller

The EvoFlat 4.0 M in combination with the ICON2 floor heating controller provides intelligent, self-learning demand control for apartment and room heating. The system continuously evaluates the actual heat demand in each room and automatically adjusts the supply (flow) temperature to match the highest current demand. This ensures optimal comfort, energy efficiency, and compliance with modern building regulations.

Key Features

Room-by-Room Demand Control – Adjusts supply temperature based on real-time heating demand from all connected rooms.

Automatic Hydraulic Balancing – Detects and corrects mis-balanced loops by adjusting valve opening cycles.

Energy Efficiency – Lowers supply temperature when demand is low, reducing heat losses and improving efficiency of heat pumps and condensing boilers.

Fast Response – Reacts quickly to indoor temperature changes, occupancy variations, and solar gains.

Automatic Optimization – Patented control algorithm calculates and maintains the optimal supply temperature without manual heating curve adjustments.

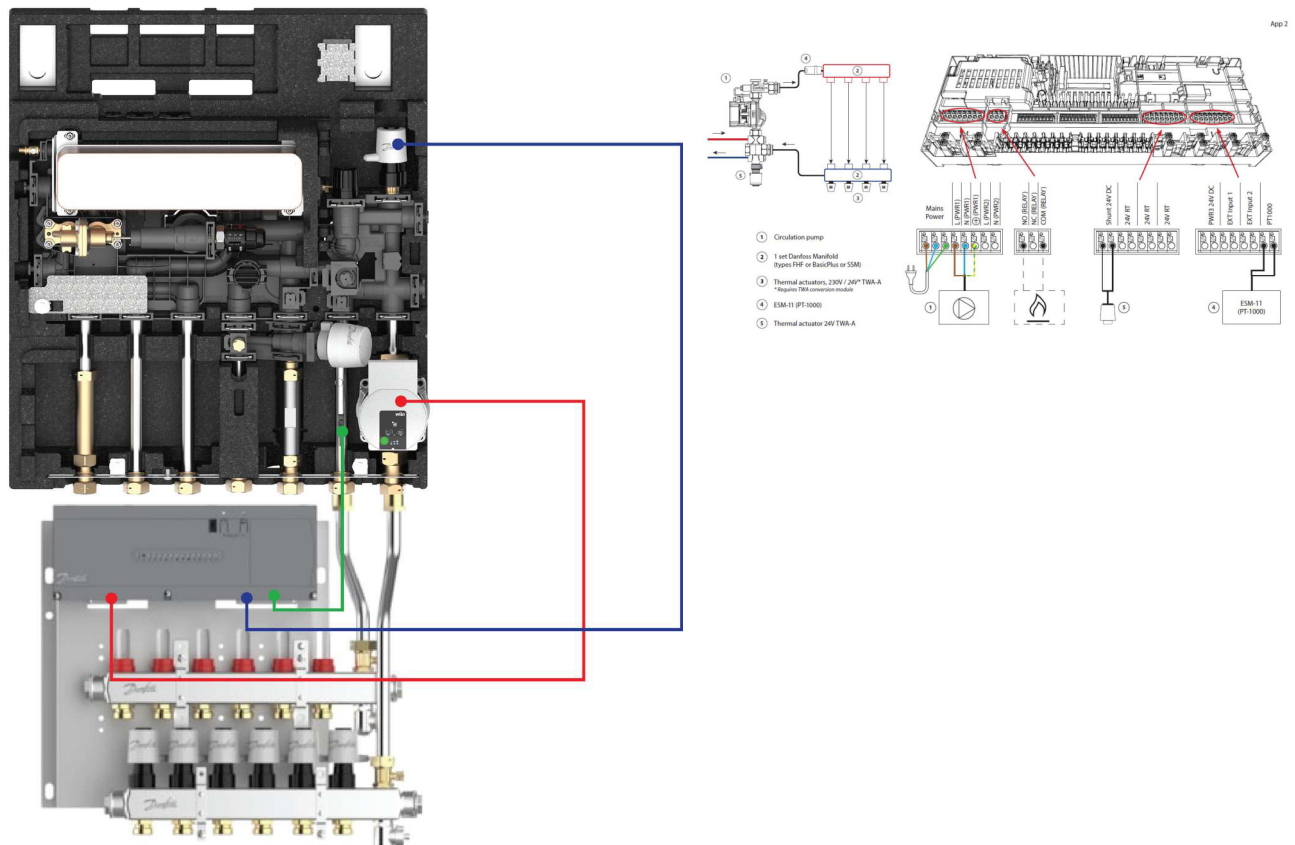
Balanced Comfort – Prevents overheating or underheating by matching supply temperature to the highest demand zone.

Integration with Modern Heat Sources – Maximizes COP for heat pumps and efficiency for condensing boilers by keeping flow temperatures as low as possible.

Scalable and Flexible – Suitable for small residential systems up to large multi-zone installations.

Remote Access Option – Optional module enables control and monitoring via the Ally app.

Regulatory Compliance – Meets key European standards and is future-proof for upcoming building energy performance directives.



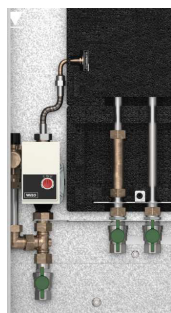
Ordering

Product code numbers

Flat station	Brazing (HEX) copper	Brazing (HEX) Stainless steel
EvoFlat 4.0 M Type 1	183B2028	183B2528
EvoFlat 4.0 M Type 2	183B2029	183B2529
EvoFlat 4.0 M Type 3	183B2030	183B2530
EvoFlat 4.0 M Type 4	183B2031	183B2531

Accessories code numbers

Domestic hot water circulation



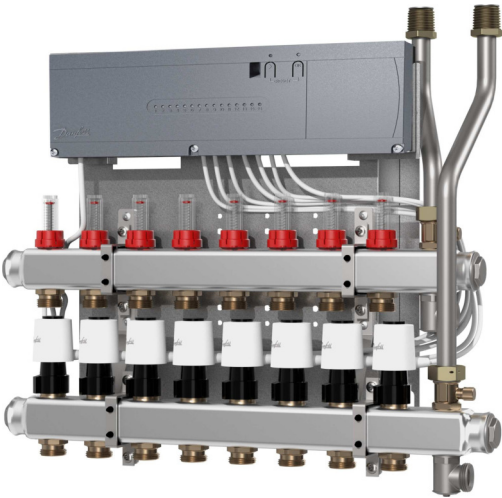
If required a set with pump and safety valve (10 bar) can be ordered for easy connection to the flat station. This increases the width of the recess box to at least 690 mm.

Code number	
183B0500	Circulation set EvoFlat 4.0
183B0547	Circulation set EvoFlat 4.0 with insulation shell for circulation pump

High temperature connection set



Code number	
183B0501	HTC set for EvoFlat 4.0, with ball valves 3/4" and console
183B0539	HTC flex pipe set for EvoFlat 4.0, connection 3/4"



Distribution units SGCI

Plug and play for easy and quick installation. Finished stainless steel manifold especially de-signed for Danfoss flat stations. The back plate is mounts directly into the Recess box with pre-drilled screw holes. It includes manual vent valves, drain valves and flow meters. The heating circuit manifolds are available for 2 to 12 heating circuits.

The Danfoss ICON2™ Advanced Master Controller installed. 230V TWA NC thermotic actuators, pre-wired, for controlling the underfloor heating with automatic hydronic balancing. Connected to wireless and/or wired room thermo-stats and can be connected to Danfoss Ally™ for end user control via the Ally Gateway. Easy commissioning via the Danfoss ICON2 app, which allows the installer to generate a commissioning report.

Distribution unit SGCI

Code number	Description
145H1942	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1943	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1944	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1945	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1946	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1947	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1948	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1949	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1950	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1951	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V
145H1952	Distribution unit SGCI with 2 heating circuits, ICON2 and TWA NC 230V

Room thermostats for Danfoss ICON2 Advanced Master controller

Wired or wireless room sensors are available for built-in or on wall installation.

If wired room thermostats are used, they can be connected in a Daisy chain, as registration is done via their MAC address.

An Ally™ gateway can be purchased, allowing the user to control the room heating via a Danfoss Ally™ user app.

Wireless/wired solution – Distribution unit SGCI - CDM with ICON2 Advanced Master controller

Code number		
088U2121	Danfoss ICON2™ RT display thermostat Wireless	
088U2122	Danfoss ICON2™ Featured RT display thermostat with infrared floor sensor Wireless	
088U2120	Danfoss ICON2™ Sensor, no settings or display Wireless	
088U2128	Danfoss ICON2™ On-wall thermostat 2-wire 24V	
088U2125	Danfoss ICON2™ In-wall thermostat 2-wire 24V	
014G2400	Danfoss Ally™ Gateway (for user-app)	
088U1131	Zigbee repeater to extend range between Zigbee devices	
088U2141	External Antenna for ICON2™	

Recess boxes



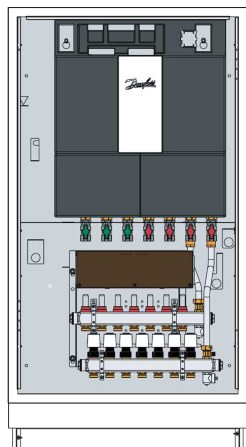
Recess boxes for installation of flat station and distribution unit in same cabinet.

Recess boxes				
Code number		Wide	Height	Depth
183U6030	Recess box w/mounting rail and loose ball valves	610	1350	150
145H4905	Door + frame for Recess box 183U6030			
183U6031	Recess box w/mounting rail and loose ball valves	690	1350	150
145H4907	Door + frame for Recess box 183U6031			
183U6032	Recess box w/mounting rail and loose ball valves	850	1350	150
145H4909	Door + frame for Recess box 183U6032			
183U6033*	Feet set for recess box			
183L5142*	Ball valve set 3/4" 7 connections			

*Spare parts

On wall panels for recess boxes

Code number		Wide	High	Depth
183U6013	On wall panels	610	1350	150
183U6015	On wall panels	690	1350	150
183U6020	On wall panels	850	1350	150



Recess boxes 1350 mm height are available in three sizes:

2-9 heating circuits suitable for:

Recess box W 610 / H 1350 / D 150 mm

2-9 heating circuits with HTC and/or DHW circulation sets suitable for:

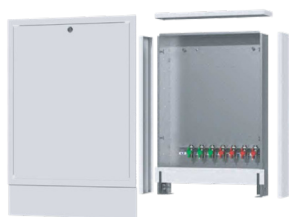
Recess box W 690 / H 1350 / D 150 mm

10 heating circuits with or without HTC and/or DHW circulation sets suitable for:

Recess box W 690 / H 1350 / D 150 mm

11-12 heating circuits with or without HTC and/or DHW circulation sets suitable for:

Recess box W 850 / H 1350 / D 150 mm

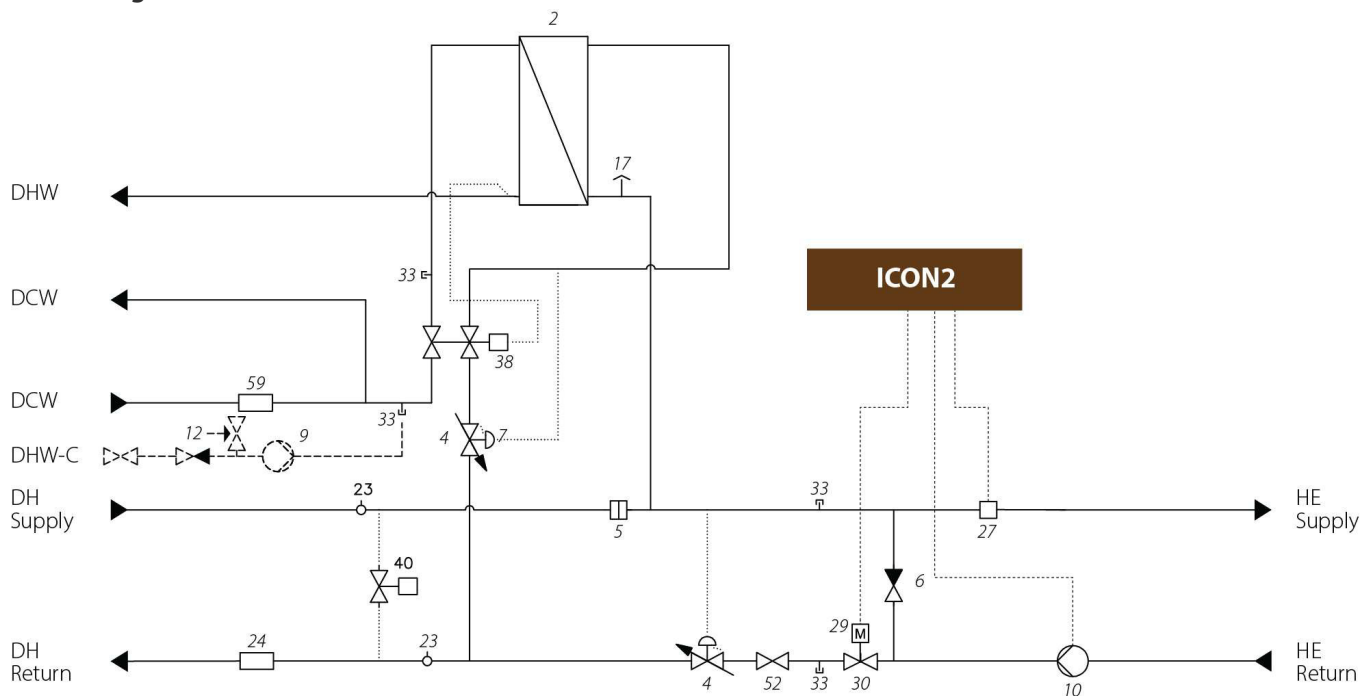


For on-wall installation, Danfoss Recess boxes can be mounted directly onto the wall and covered with suitable on-wall panels. The on-wall panels are attached magnetically.

Product details

General data

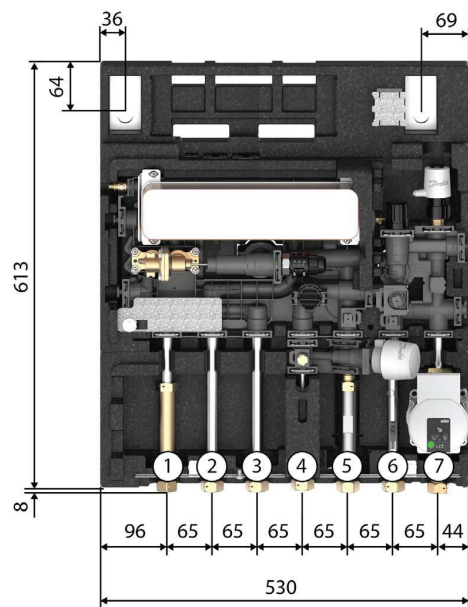
Circuit diagram



2	DHW plate heat exchanger
4	Differential pressure controller
5	Strainer
6	Check valve
7	Ball valve*
9	DHW circulation pump*
10	Heating pump mixing circuit
12	Safety valve*
17	Air vent
23	Sensor pocket
24	Fitting piece for energy meter 3/4" x 110 mm
27	Temperature sensor (supply flow)
29	TWA-A for controlling supply flow temperature
30	Valve HE
33	Plug for high temperature circuit (HTC)
38	Hot water controller
40	Summer bypass
52	Zone valve
59	Fitting piece for water meter 3/4" x 110 mm

*Optional

Connections:



1	Domestic cold water (DCW) inlet
2	Domestic hot water (DHW) supply
3	Domestic cold water (DCW) outlet
4	Heating source (DH) supply
5	Heating source (DH) return
6	Floor heating (HE) supply
7	Floor heating (HE) return

Technical data

Domestic hot water controller	TPC-M
Nominal pressure	PN10
Max. supply temperature (DH)	95 °C
DCW static cold water	P _{min} = 1.5 bar
Brazing (HEX)	Copper or stainless steel
Insulation	EPP λ 0.039
Electrical supply	230 V AC
Connection sizes	G ¾" internal thread
Pressure nominal primary	10 bar
Pressure nominal secondary	10 bar
Weight without accessories - Type 1 HEX	12.2 kg
Weight without accessories - Type 2 HEX	13.3 kg
Weight without accessories - Type 3 HEX	13.8 kg
Weight without accessories - Type 4 HEX	14.6 kg

Capacity

DHW capacity examples at 10/50°C

Unit type HEX	DHW capacity [kW]	Temperature DHS/DHR [°C]	Flow rate primary [l/h]	Pressure loss Primary* [kPa]	Tap load 50 °C [l/min]
Type 1	37	65/15	637	25	13.3
	45	65/17	820	31	16.2
Type 2	45	65/15	770	29	16.2
	50	65/17	896	33	18.0
Type 3	55	65/17	978	39	19.8
	40	53/24	1205	57	14.4
Type 4	60	65/16	1056	38	21.6
	45	53/23	1310	63	16.2

*Energy meter not included

Heating capacity examples

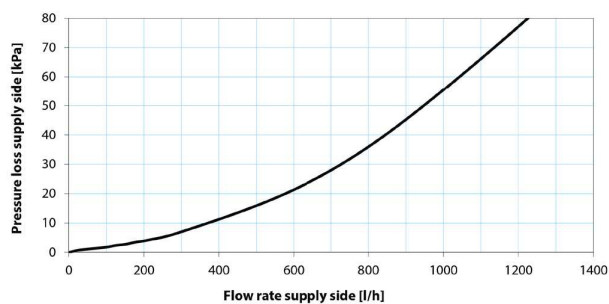
Heating capacity [kW]	Heating circuit ΔT [°C]	Total pressure loss primary* [kPa]	Flow rate supply [l/h]
10	20	12	430
10	25	8	344
10	30	6	287
10	35	5	246
10	40	4	215
17.5	30	20	500**

*Energy meter and DHW heating not included

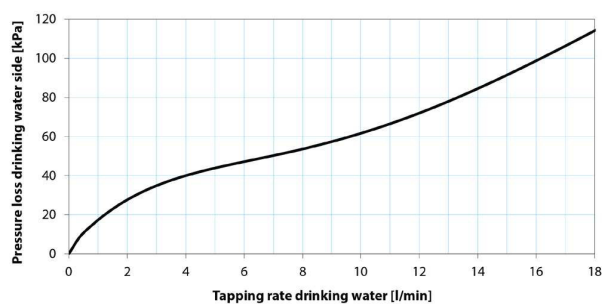
**Max. flow

Flowrate type 1 HEX

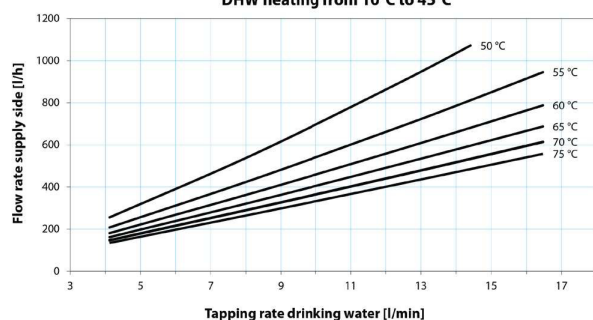
Pressure loss supply side (primary heating water)



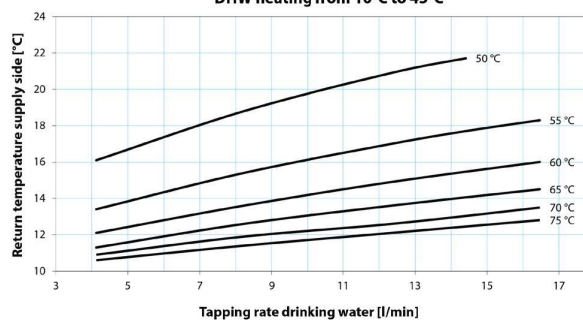
Pressure loss drinking water side (secondary)



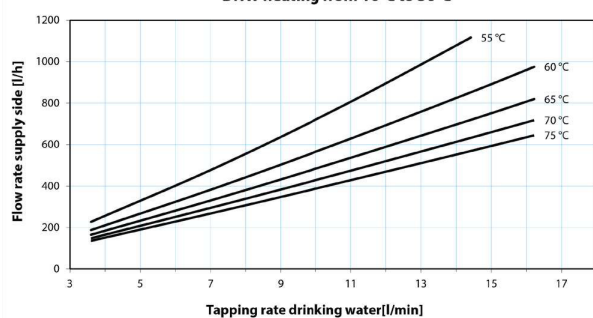
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 45°C



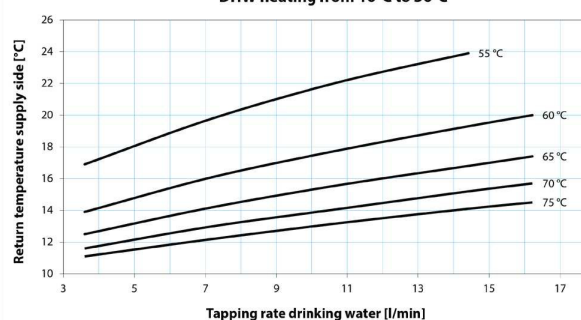
Return temperature supply side at different supply temperatures
DHW heating from 10°C to 45°C



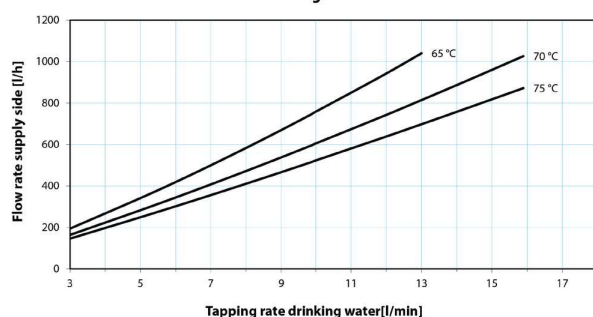
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 50°C



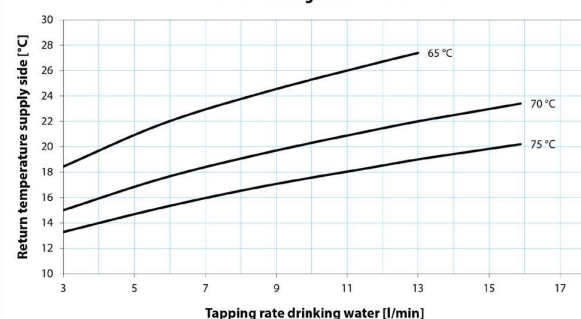
Return temperature supply side at different supply temperatures
DHW heating from 10°C to 50°C



Flow rate supply side at different supply temperatures
DHW heating from 10°C to 60°C

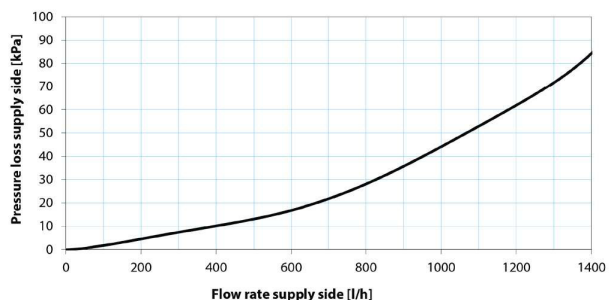


Return temperature supply side at different supply temperatures
DHW heating from 10°C to 60°C

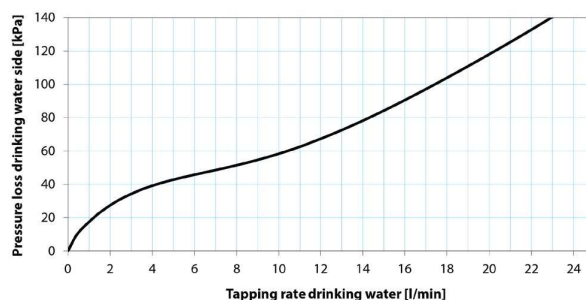


Flowrate type 2 HEX

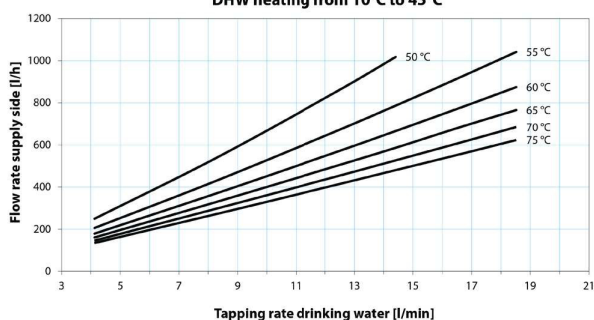
Pressure loss supply side (primary heating water)



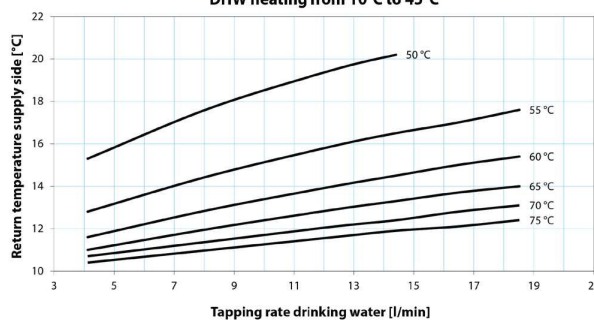
Pressure loss drinking water side (secondary)



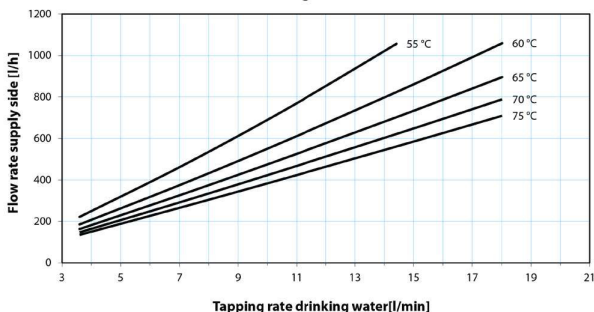
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 45°C



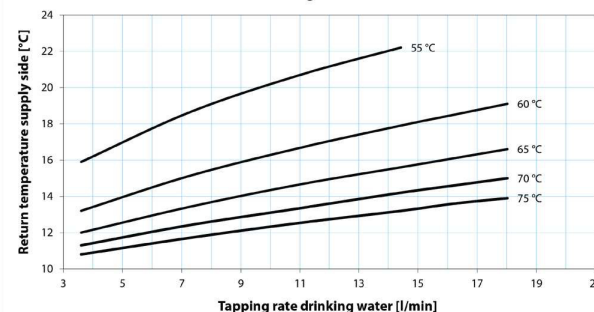
Return temperature supply side at different supply temperatures
DHW heating from 10°C to 45°C



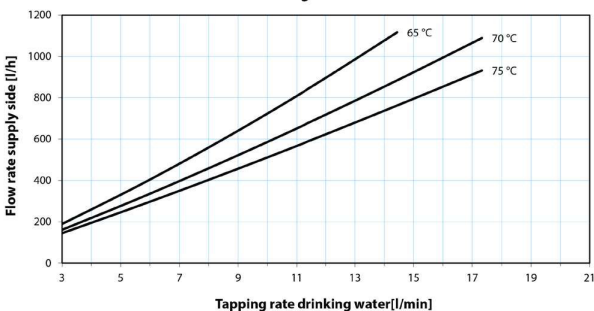
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 50°C



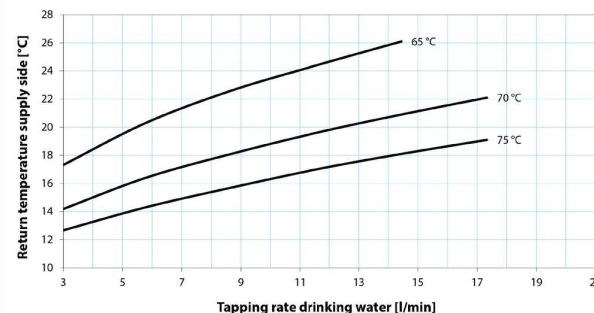
Return temperature supply side at different supply temperatures
DHW heating from 10°C to 50°C



Flow rate supply side at different supply temperatures
DHW heating from 10°C to 60°C

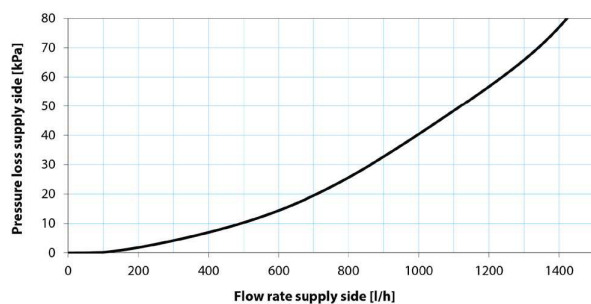


Return temperature supply side at different supply temperatures
DHW heating from 10°C to 60°C

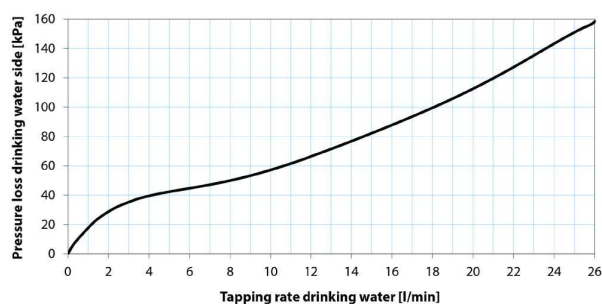


Flowrate type 3 HEX

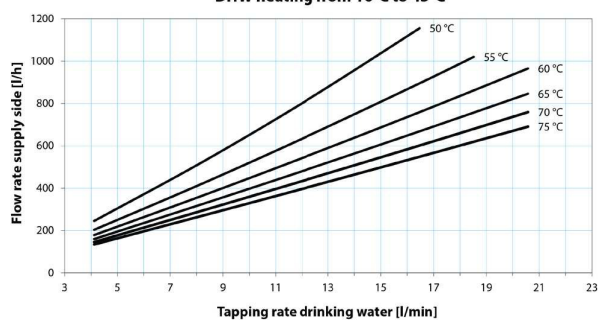
Pressure loss supply side (primary heating water)



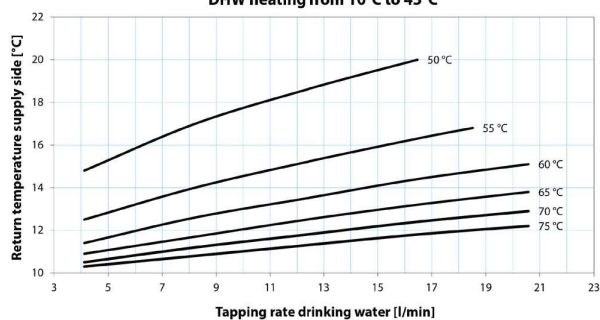
Pressure loss drinking water side (secondary)



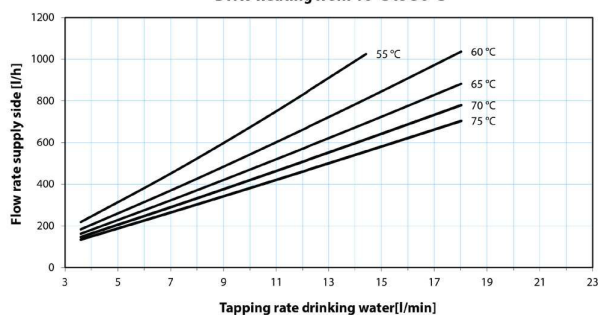
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 45°C



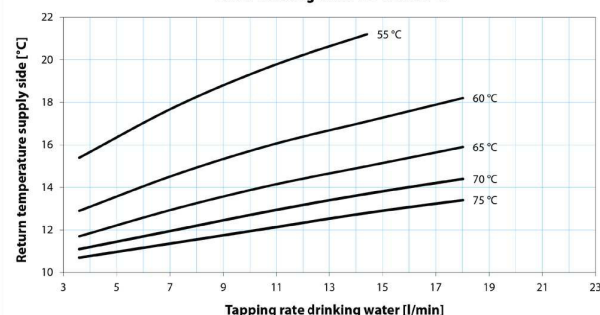
Return temperature supply side at different supply temperatures
DHW heating from 10°C to 45°C



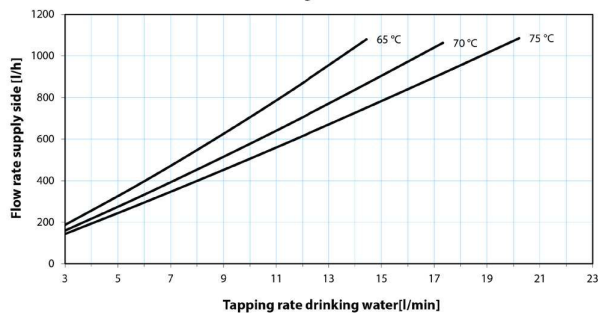
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 50°C



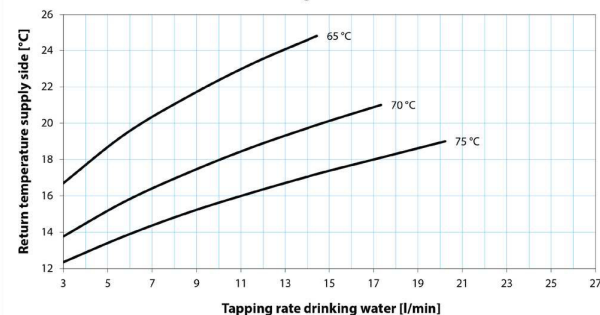
Return temperature supply side at different supply temperatures
DHW heating from 10°C to 50°C



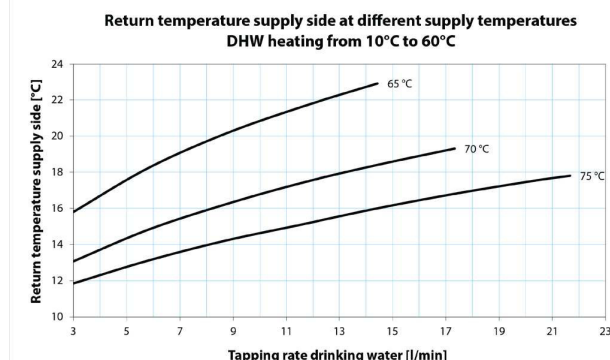
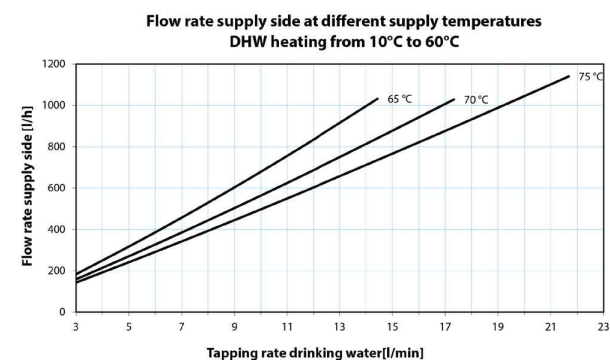
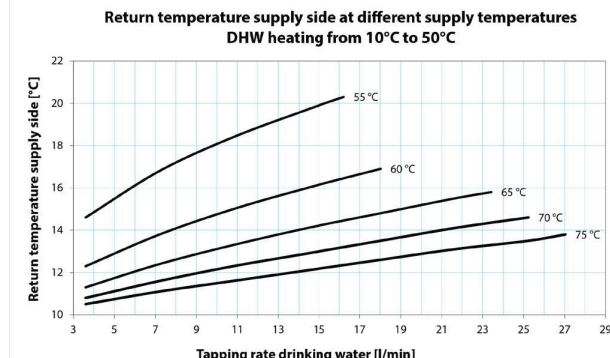
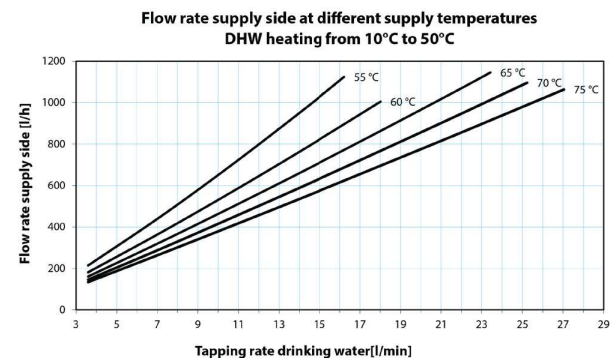
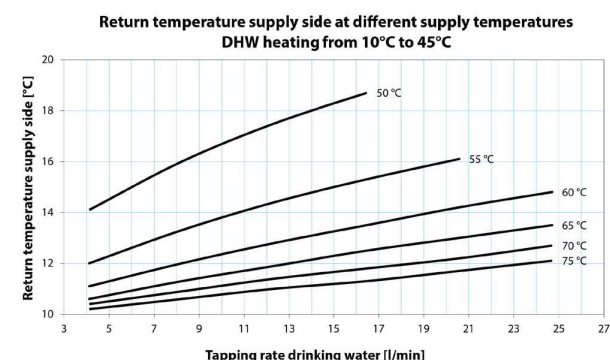
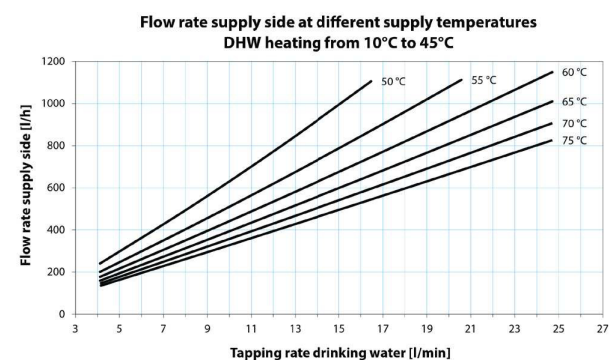
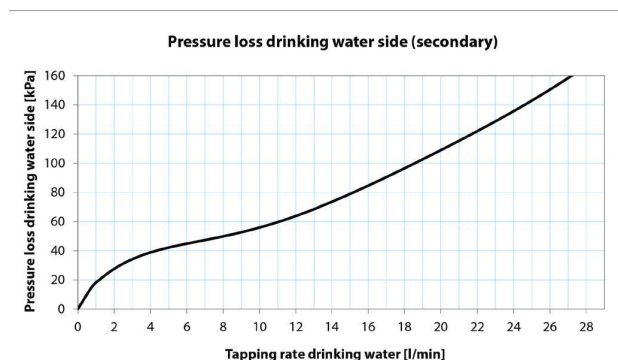
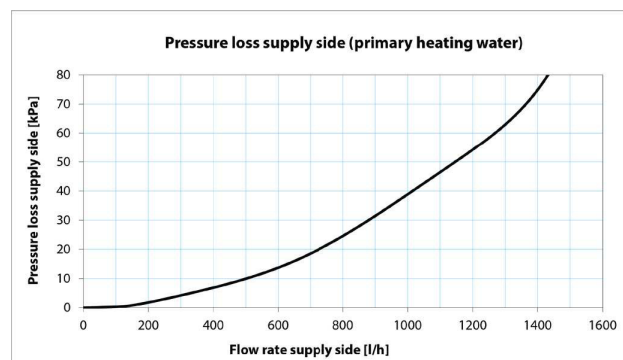
Flow rate supply side at different supply temperatures
DHW heating from 10°C to 60°C



Return temperature supply side at different supply temperatures
DHW heating from 10°C to 60°C



Flowrate type 4 HEX



Guidelines for water quality

Danfoss has prepared this guideline for the water quality of tap water and district heating water used in plate heat exchangers of stainless steel (EN 1.4404 ~ AISI 316L) brazed with pure Copper (Cu), CoResist (Cn) or Stainless Steel (StS). It is important to point out that the water specification is not a guarantee against corrosion, but it must be considered as a tool to avoid the most critical water applications.

Parameter	Unit	Value or concentration	Plate	Brazing material	
			AISI 316L W. Nr. 1.4404	Cu	StS
pH		< 0.6	o	-	o
		6.0 - 7.5	+	o/-	+
		7.5 - 10.5	+	+	+
		> 10.5	+	o	+
Conductivity	µS/cm	< 10	+	+	+
		10 - 500	+	+	+
		500 - 1000	+	o	+
		> 1000	+	-	+
Free Chlorine	mg/l	< 0.5	+	+	+
		0.5 - 1	o	+	+
		1 - 5	-	o	o
		> 5	-	-	-
Ammonia (NH ₃ , NH ₄ ⁺)	mg/l	< 2	+	+	+
		2 - 20	+	o	+
		> 20	+	-	+
Alkalinity (HCO ₃ ⁻)	mg/l	< 60	+	+	+
		60 - 300	+	+	+
		> 300	+	o	+
Sulphate (SO ₄ ²⁻)	mg/l	< 100	+	+	+
		100 - 300	+	o/-	+
		> 300	+	-	+
HCO ₃ ⁻ / SO ₄ ²⁻ 4	mg/l	< 1.5	+	+	+
		> 1.5	+	o/-	+
Nitrate (NO ₃)	mg/l	< 100	+	+	+
		> 100	+	o	+
Manganese (Mn)	mg/l	< 0.1	+	+	+
		> 0.1	+	o	+
Iron (Fe)	mg/l	< 0.2	+	+	+
		> 0.2	+	o	+
[Ca ²⁺ , Mg ²⁺]/[HCO ₃ ⁻]*		0 - 0.3	+	-	+
		0.3 - 0.5	+	o/-	+
		> 0.5	+	+	+

+	Good corrosion resistance
o	**Corrosion could happen when more parameters are evaluated with o
o/-	Risk of corrosion
-	Use is not recommended

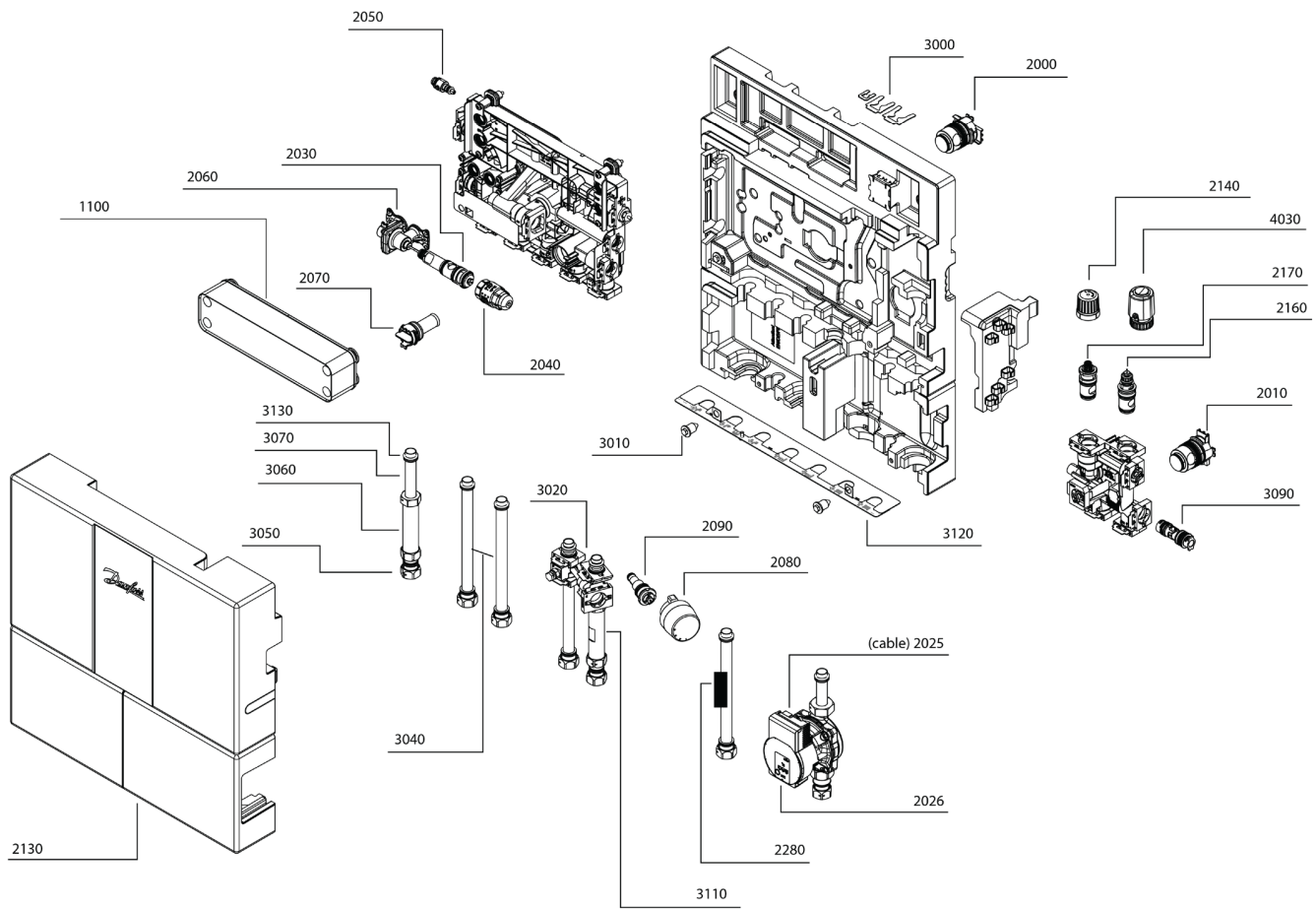
* Hardness ration limits defined per experience and internal tests in Danfoss laboratory

** In case of three or more parameters evaluated with o consultancy is needed with Consultant for Corrosion & Microbiology or BU HHE Representative

Recommended Chloride concentration to avoid Stress Corrosion Cracking (SCC) in the stainless-steel plates:

Application temperature	Chloride concentration
at $T \leq 20\text{ }^{\circ}\text{C}$	max 1000 mg/l
at $T \leq 50\text{ }^{\circ}\text{C}$	max 400 mg/l
at $T \leq 80\text{ }^{\circ}\text{C}$	max 200 mg/l
at $T \geq 100\text{ }^{\circ}\text{C}$	max 100 mg/l

Spare parts



Pos.	Code number	Description
1100	183B0503	Service kit type 1 heat exchanger in copper
1100	183B0504	Service kit type 2 heat exchanger in copper
1100	183B0505	Service kit type 3 heat exchanger in copper
1100	183B0506	Service kit type 4 heat exchanger in copper
1100	183B0507	Service kit type 1 heat exchanger in stainless steel
1100	183B0508	Service kit type 2 heat exchanger in stainless steel
1100	183B0509	Service kit type 3 heat exchanger in stainless steel
1100	183B0510	Service kit type 4 heat exchanger in stainless steel
2000	183B0563	Dp regulator DHW EvoFlat 4.0 SAC
2010	183B0564	Dp regulator HE EvoFlat 4.0 SAC
2025	145H4074	Plug for Wilo Yonos Para 1.5 m cable
2026	145H4296	Wilo pump Yonos Para RS 15/61"
2030	183B0511	DHW control valve set EvoFlat 4.0 SAC
2040	183B0512	DHW control thermostat set EvoFlat 4.0 SAC
2050	183B0513	Air vent set Danfoss EvoFlat 4.0
2060	183B0514	Flow activator with screws and gaskets
2070	183B0515	Strainer set EvoFlat 4.0
2080	183B0516	Bypass valve set manuel EvoFlat 4.0 SAC
2090	183B0517	Bypass valve set thermostatic EvoFlat 4.0 SAC
2130	183B0521	EPP cover set Danfoss EvoFlat 4.0
2160	183B0527	HE valve set EvoFlat 4.0 SAC
2170	183B0529	Zone valve set EvoFlat 4.0 SAC
2280	087N0011	Temperature sensor
3000	183B0552	Bracket kit for EvoFlat 4.0
3010	183B0553	Plast screw 15x25
3020	183B0554	Block for bypass EvoFlat 4.0
3030	183B0555	Pipe Ø18 - 171 mm
3040	183B0556	Pipe Ø18 - 223 mm
3050	183B0557	Bushing w/nuts 3/4" x 3/4" x 32 mm
3060	183B0558	Fitting piece 3/4" x 110 mm - DHW
3070	183B0559	Pipe Ø18 - 77 mm
3090	183B0561	Checkvalve for EvoFlat 4.0
3110	183B0565	Fitting piece 3/4" x 110 mm - HE
3120	183B0566	Mounting rail with symbols for EvoFlat 4.0
3130	183B0560	Clips, O-rings & washers for EvoFlat 4.0
4030	088H3249	Flow controller TWA-A NC 24V
	183B0533	Flushing Tool EvoFlat 4.0 HEX

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Export Control Declaration	Export Control Declaration - Small stations	Danfoss	
Hygienic Certificate	Eurofins Certificate No 014-01	eurofin - eurofin Product Service GmbH	Drinking Water

Tender text

Copper HEX

Design

Danfoss EvoFlat™ flat station for direct heating and hygienic safe hot water provision with a control valve without auxiliary energy in the continuous flow system. Mounted on a heat-insulated base plate including EPP heat insulation hood, for flush or surface mounting.

Domestic hot water (DHW)

Tap water is heated by means of heat exchangers based on the continuous flow principle. The tap water temperature is regulated by the self-acting controller. These controllers ensure outstanding ease of use. The flow-controlled part allows primary and secondary flow through the heat exchanger only during hot water tapping. The flow is blocked immediately after completion of hot water tapping. The thermostat part in turn regulates the hot water temperature.

Thanks to the fast-acting control valve, limescale deposits and bacteria growth are largely avoided.

The controller in combination with the differential pressure controller ensures a constant DHW temperature even with varying flow temperatures and differential pressures.

The primary line is kept warm by a thermostatically controlled bypass valve (summer bypass).

The flat station is equipped with a connection for domestic hot water circulation. The circulation kit is available as an option.

Heating (HE)

The mixing circuit for surface heating temperature is controlled by the connected ICON2 floor heating controller. An optimum supply temperature is determined based on the rooms' need for heat.

The system uses a PT1000 sensor to detect the supply temperature. This sensor also ensures that the temperature does not exceed the maximum allowable temperature set as the safety temperature. The system will control the circulation pump.

The Danfoss ICON2™ makes use of automatic balancing. During periods with a greater need for heat, this decreases the time spent "on" for shorter pipes in small rooms and prioritizes longer pipes in large rooms within the system. The process is automatic and continuous. It ensures more efficient energy consumption and greater comfort.

The flat station is equipped with a connection for a second heating circuit on the high temperature circuit. The high temperature connection set is available as an option.

Supply-side equipment

Temperature and pressure regulators, two differential pressure regulators, strainer and air vent.

Fitting piece for heat meter G $\frac{3}{4}$ "x110mm in return flow, sensor holder as direct immersion sensor M10x1mm

Heat exchanger

Seal less stainless steel plate heat exchanger, copper brazed under vacuum to form a compact unit. New Micro Plate™ heat exchanger technology with unique plate structure for more effective heat transfer, lower pressure losses and longer service life. Corrosion resistant design.

Calculation and materials according to AD data sheets. Manufactured in accordance with DIN ISO 9001, CE tested in accordance with Pressure Equipment Directive 97/23/EC (PED).

Mark: Danfoss Type: XB05H

Consumer-side equipment

Connection for static heating circuit (high temperature circuit) speed-controlled high-efficiency circulation pump:

Mark: Wilo

Type: Para 15-130/6 Non-return valve in bypass.

Fixed value controller without auxiliary energy Mark: Danfoss TWA-A NC 24V

Tap-water-side equipmentFitting piece for cold water meter G $\frac{3}{4}$ "x110mm (CW inlet)**Technical data**

Heating	
max. capacity [kW]:	17.5
at max. volume flow [m ³ /h]:	0.5 (supply side) / 1.29 (consumer side)
Tap water heating	
max. capacity [kW]:	45 @ VL65 °C (Type 1 HEX)
at max. tapping capacity [l/min]:	13.2
max. capacity [kW]:	53 @ VL65 °C (Type 2 HEX)
at max. tapping capacity [l/min]:	15.4
max. capacity [kW]:	60 @ VL65 °C (Type 3 HEX)
at max. tapping capacity [l/min]:	17.4
max. capacity [kW]:	80 @ VL65 °C (Type 4 HEX)
at max. tapping capacity [l/min]:	28.3
Pressure level (tap water side):	PN10
Pressure level (supply side):	PN10
DH network, max. differential pressure [bar]:	4
CW network, min. static pressure [bar]:	1.5
DH network, max. flow temperature [°C]:	95
Nominal connection size:	G $\frac{3}{4}$ " (union, 7x)
Electrical connection:	230 V AC
Dimensions H/W/D [mm]:	613/530/150
Weight [kg]:	9.2 (Type 1 HEX) 9.7 (Type 2 HEX) 10.3 (Type 3 HEX) 10.8 (Type 4 HEX)

Stainless steel HEX

Design

Danfoss EvoFlat™ flat station for direct heating and hygienic safe hot water provision with a control valve without auxiliary energy in the continuous flow system. Mounted on a heat-insulated base plate including EPP heat insulation hood, for flush or surface mounting.

Domestic hot water (DHW)

Tap water is heated by means of heat exchangers based on the continuous flow principle. The tap water temperature is regulated by the self-acting controller. These controllers ensure outstanding ease of use. The flow-controlled part allows primary and secondary flow through the heat exchanger only during hot water tapping. The flow is blocked immediately after completion of hot water tapping. The thermostat part in turn regulates the hot water temperature.

Thanks to the fast-acting control valve, limescale deposits and bacteria growth are largely avoided.

The controller in combination with the differential pressure controller ensures a constant DHW temperature even with varying flow temperatures and differential pressures.

The primary line is kept warm by a thermostatically controlled bypass valve (summer bypass).

The flat station is equipped with a connection for domestic hot water circulation. The circulation kit is available as an option.

Heating (HE)

The mixing circuit for surface heating temperature is controlled by the connected ICON2 floor heating controller. An optimum supply temperature is determined based on the rooms' need for heat.

The system uses a PT1000 sensor to detect the supply temperature. This sensor also ensures that the temperature does not exceed the maximum allowable temperature set as the safety temperature. The system will control the circulation pump.

The Danfoss ICON2™ makes use of automatic balancing. During periods with a greater need for heat, this decreases the time spent "on" for shorter pipes in small rooms and prioritizes longer pipes in large rooms within the system. The process is automatic and continuous. It ensures more efficient energy consumption and greater comfort.

The flat station is equipped with a connection for a second heating circuit on the high temperature circuit. The high temperature connection set is available as an option.

Supply-side equipment

Temperature and pressure regulators, two differential pressure regulators, strainer and air vent.

Fitting piece for heat meter G¾"x110mm in return flow, sensor holder as direct immersion sensor M10x1mm

Heat exchanger

Sealless stainless steel plate heat exchanger, brazed with stainless steel braze under vacuum to form a compact unit. New Micro Plate™ heat exchanger technology with unique plate structure for more effective heat transfer, lower pressure losses and longer service life. Corrosion resistant design.

Calculation and materials according to AD data sheets. Manufactured in accordance with DIN ISO 9001, CE tested in accordance with Pressure Equipment Directive 97/23/EC (PED).

Mark: Danfoss Type: XB05H

Consumer-side equipment

Connection for static heating circuit (high temperature circuit) speed-controlled high-efficiency circulation pump:

Mark: Wilo

Type: Para 15-130/6 Non-return valve in bypass.

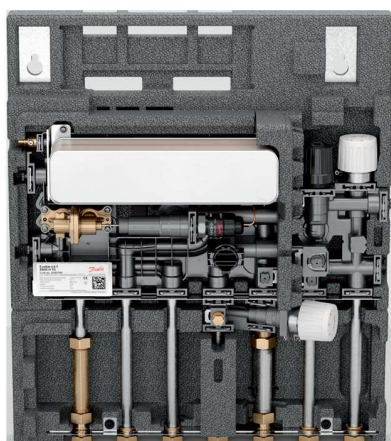
Fixed value controller without auxiliary energy

Mark: Danfoss TWA-A NC 24 V

Tap-water-side equipmentFitting piece for cold water meter G $\frac{3}{4}$ "x110 mm (CW inlet)**Technical data**

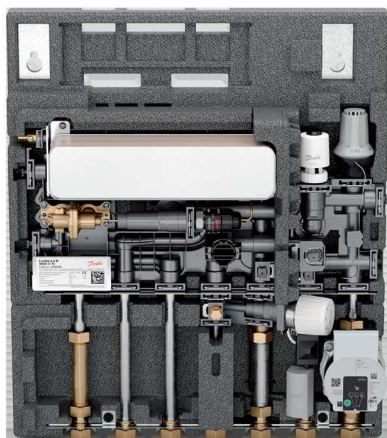
Heating	
max. capacity [kW]:	17.5
at max. volume flow [m ³ /h]:	0.5 (supply side) / 1.29 (consumer side)
Tap water heating	
max. capacity [kW]:	45 @ VL65 °C (Type 1 HEX)
at max. tapping capacity [l/min]:	13.2
max. capacity [kW]:	53 @ VL65 °C (Type 2 HEX)
at max. tapping capacity [l/min]:	15.4
max. capacity [kW]:	60 @ VL65 °C (Type 3 HEX)
at max. tapping capacity [l/min]:	17.4
max. capacity [kW]:	80 @ VL65 °C (Type 4 HEX)
at max. tapping capacity [l/min]:	28.3
Pressure level (tap water side):	PN10
Pressure level (supply side):	PN10
DH network, max. differential pressure [bar]:	4
CW network, min. static pressure [bar]:	1.5
DH network, max. flow temperature [°C]:	95
Nominal connection size:	G $\frac{3}{4}$ " (union, 7x)
Electrical connection:	230 V AC
Dimensions H/W/D [mm]:	613/530/150
Weight [kg]:	9.2 (Type 1 HEX) 9.7 (Type 2 HEX) 10.3 (Type 3 HEX) 10.8 (Type 4 HEX)

Other stations in this portfolio



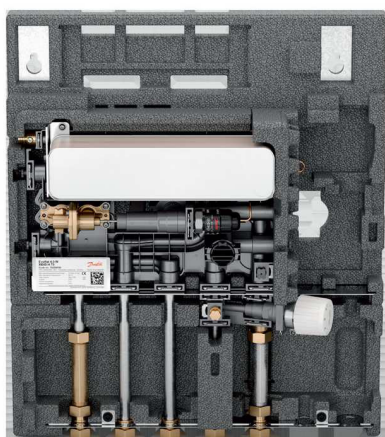
EvoFlat 4.0 F

Flat station for domestic hot water and radiator heating.



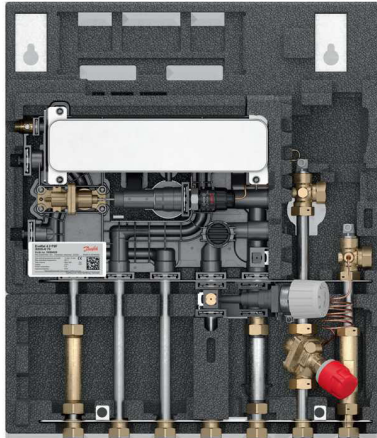
EvoFlat 4.0 M

Flat station for domestic hot water and floor heating



EvoFlat 4.0 W

Flat station for domestic hot water.



EvoFlat 4.0 Four pipe

Flat station for domestic hot water and floor heating. Especially made for heat pumps.

Contact details

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