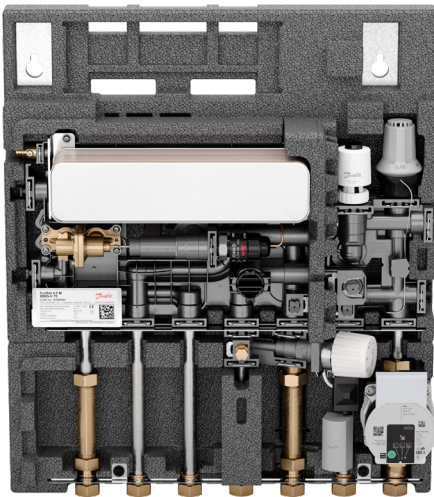


Data Sheet

# EvoFlat 4.0 M



EvoFlat 4.0 M is a Flat station with self-acting controls for direct heating with a mixing circuit for floor heating and instantaneous domestic hot water. The Flat station is for mounting in to a recess box, or direct on the wall.

## Application

The EvoFlat 4.0 M Flat station is easy to install, maintain and use. It is particularly suitable for multi family buildings, with central or district heating.

## Construction

The innovative EvoFlat 4.0 M sets a new standard. Its 'body' is made from special reinforced PPS composite. This makes the station extremely lightweight and limits internal heat emission. The smooth surface significantly reduces the risks of scaling and clogging.

All components are mounted with newly designed click-fit connections. Compared to conventional stations with lots of pipes and screw connections, this new connection technology does not require retightening during installation. The size, connection order and distances between the stainless-steel connection pipes is compatible with the existing EvoFlat program.

## Primary side (DH)

The Flat station is equipped with two differential pressure controller and a central strainer. The station is connected to the heat supply with two connections. A summer bypass keeps the supply line warm during standstill. This

ensures a fast response time for domestic hot water. Even when the heating is not needed. The bypass can be operated thermostatically or manually and is standard positioned after the pass pipe for heat meter.

## Heating (HE)

The Flat station supplies the floor heating of the residential unit with a regulated flow temperature, adjustable from 30 °C to 50 °C. The integrated temperature controller and the differential pressure controller create optimal operating conditions for the heating. A safety thermostat closes the flow at 55 °C via a thermal actuator. The highly efficient heating pump (Wilo Para R) ensures the heat distribution in the connected heating circuits. The bathroom radiator can be connected using an optional high-temperature connection set.

## Domestic hot water (DHW)

The DHW capacity is determined by the amount of plates on the built-in Heat Exchanger. 4 types are available to cover every requirement, from 37 up to 80 kW. A special built-in flow actuator allows primary and secondary side flow through the heat exchanger, only when hot water is tapped. It blocks the flow immediately after completion of the tapping process.

The Evoflat 4.0 M is characterized by an intelligent controller taking both flow volume and flow temperature into account. This self-acting thermostatic flow controller with integrated differential pressure controller ensures accurate and stable water temperatures and optimized hydronic balance among all stations connected to the same heating source.

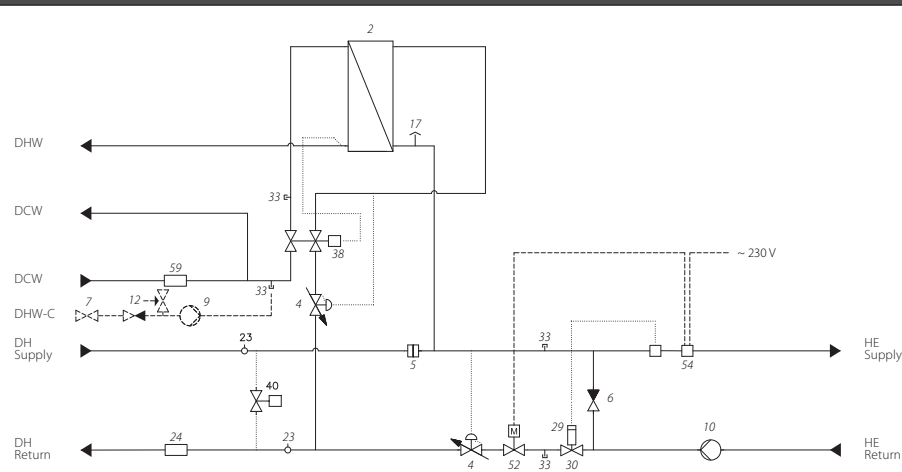
For registration of the water consumption the EvoFlat 4.0 M is equipped with a fitting piece for mounting of a cold-water meter in the PWC inlet.

If necessary, it is possible to expand the station with a hot water circulation set.

## Insulation

The EvoFlat 4.0 M has a high insulation EPP cover. It is built up on an EPP insulated back plate and a few front insulation covers for the DHW, DH, HE and mounting rail. This ensures the EvoFlat 4.0 M is fully insulated for minimum heat losses and excellent operating economy.

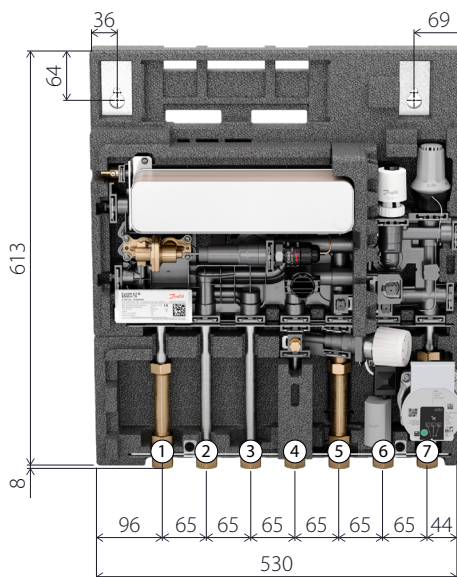
### CIRCUIT DIAGRAM (EXAMPLE)



- 2 Plate heat exchanger DHW
- 4 Differential pressure controller
- 5 Stainer
- 6 Check valve
- 7 Ball valve
- 9 DHW circulation set with safety valve (Wiloyonos Para Z)
- 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
- 29 Sensor
- 30 Valve HE
- 33 Plug for heating circuit
- 38 Hot Water Controller
- 40 Summer by-pass
- 52 Zone valve
- 54 Safety thermostat with TWA
- 59 Fitting piece for water meter 3/4" x 110 mm

#### Technical specifications:

- Nominal pressure: PN 10
- Max. supply temperature: 95 °C
- DCW static Cold water pressure:  $P_{min} = 1,5 \text{ bar}$
- Brazing (HEX): Copper or Stainless steel
- Weight excl. cover: 9,2 – 10,8 kg
- Insulation: EPP  $\lambda 0,039$
- Electrical supply: 230 V AC
- Dimensions (mm): H613 x W530 x D150
- Connections sizes: G 3/4" internal thread



#### Connections:

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

#### Options:

- HTC (183H0501)
- PWH- Circulation set (183H0500)
- Actuator TWA-Q NO 230V (082F1601)

### DHW: CAPACITY EXAMPLES

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.]
XB05H 36 Cu/E (Type 1)	37	65/15	637	20	13,3
	43	65/16	750	27	15,4
XB05H 46 Cu/E (Type 2)	45	65/15	770	23	16,2
	49	65/15	844	29	17,6
XB05H 54 Cu/E (Type 3)	55	65/15	943	34	19,8
	37	55/18	869	27	13,3
XB05H 70 Cu/E (Type 4)	60	65/14	1014	37	21,6
	70	65/14	1197	52	25,2
	49	55/19	1158	50	17,6

### HEATING: CAPACITY EXAMPLES

Heating capacity [kW]	Heating circuit $\Delta T$ [°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

\* Energy meter not included

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Climate Solutions • danfoss.com • +45 7488 2222

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