

Fact sheet

# EvoFlat FSS fully insulated

Flat station for single - family, semi - detached and terraced houses as well as flats



## FEATURES AND BENEFITS

- Flat station for decentralized heating systems
- Direct heating, DHW heating based on flow principle with thermostatic temperature controller
- Innovative, energy-saving controller TCP - M in combination with high performance heat exchanger for on-demand water heating without no-load losses
- Capacity: 15 kW HE, 55 kW DHW
- Minimum space required for installation
- Built-in or wall-mounted variant
- Pipes and plate heat exchanger made of stainless steel
- Minimized risk of lime scale and bacteria formation
- Plate heat exchanger in copper brazed or gasketed version

### Application

The EvoFlat is a compact and simple to operate flat station. The EvoFlat is especially suitable for two-pipe systems in residential buildings, which are supplied from a secondary connected district heating system, a block heating system or a centrally located boiler system. The EvoFlat is available as built-in variant with a recess box or as mount-on-wall variant.

### Primary side (HS)

The flat station is prefabricated with interconnecting components such as a differential pressure controller (integrated in main temperature controller TPC-M), strainer, sensor pockets and fitting piece for insertion of a heat meter. Thermostatic bypass is available as an option.

### Heating (HE)

The self-acting temperature controller TPC-M with integrated differential pressure controller sets the optimum operating conditions for heating and DHW. In order to enable a time dependent temperature control pro-

gram, a zone valve with actuator and a room thermostat can be included as an option.

### Domestic hot water (DHW)

The domestic hot water is prepared in the heat exchanger based on the flow principle and the temperature is regulated by the self-acting controller with integrated differential pressure controller - the TPC-M. Supreme ease of operation is obtained via the combined hydraulic and thermostatic regulation of the TPC-M controller. The flow - controlled part allows primary and secondary side flow through the heat exchanger, only when hot water is tapped and blocks the flow immediately after completion of the tapping process. The thermostatic part controls the domestic hot water temperature. Thanks to the quick-acting hydraulic control of the heat exchanger, it is largely protected from the formation of lime scale and growth of bacteria. The TPC-M controller with integrated differential pressure controller compensates

for variations in supply temperature and varying differential pressure and thereby ensures a constant domestic hot water temperature at all times. For registration of the cold water consumption the EvoFlat is equipped with a fitting piece for mounting of a cold water meter in the DCW inlet.

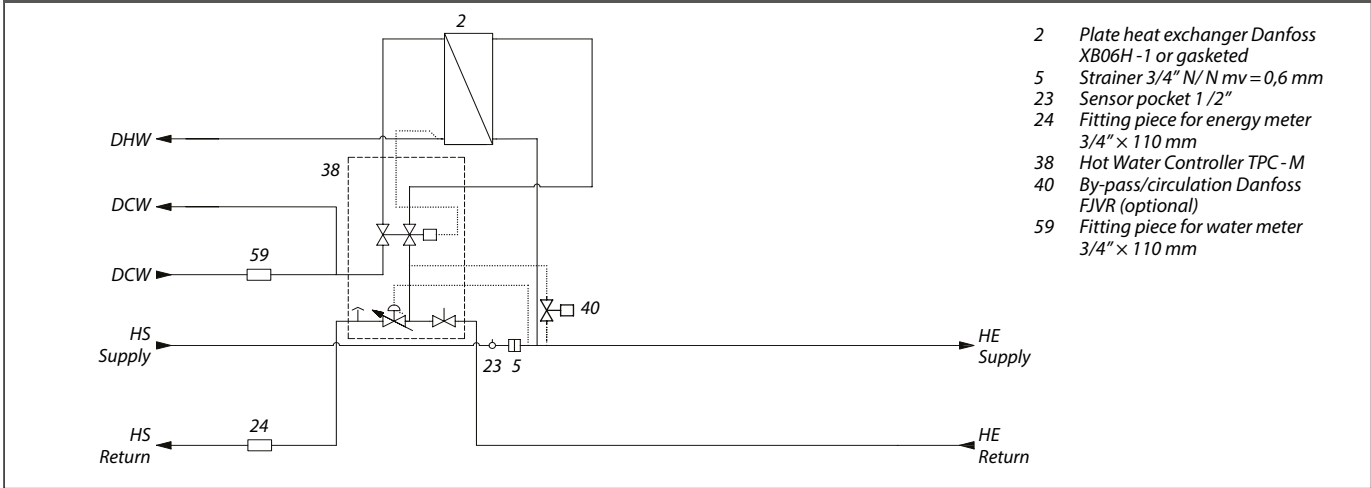
### Construction

All pipes are made of stainless steel. The connections are made by a newly designed click connection, which does not need retightening.

### Insulation

The EvoFlat is built up on an EPP insulation back plate and a front insulation cabinet is available as an option, enabling the customer to have a fully insulated substation, thus ensuring reduced heat losses and excellent operating economy.

**CIRCUIT DIAGRAM – EXAMPLE**



- 2 Plate heat exchanger Danfoss XB06H -1 or gasketed
- 5 Strainer 3/4" N/N mv = 0,6 mm
- 23 Sensor pocket 1/2"
- 24 Fitting piece for energy meter 3/4" x 110 mm
- 38 Hot Water Controller TPC -M
- 40 By-pass/circulation Danfoss FJVR (optional)
- 59 Fitting piece for water meter 3/4" x 110 mm

**Design specifications:**

Nominal pressure (prim/sec.): PN 10 / PN 10  
 Max. supply temperature: 95 °C  
 DCW static pressure: P<sub>min</sub> = 1,5 bar  
 Brazing material (HEX): Copper

**Weight excl. cover:** 10 kg  
 18 kg\*\*

**Insulation:** EPP λ 0,039

**Cover:** White-lacquered steel

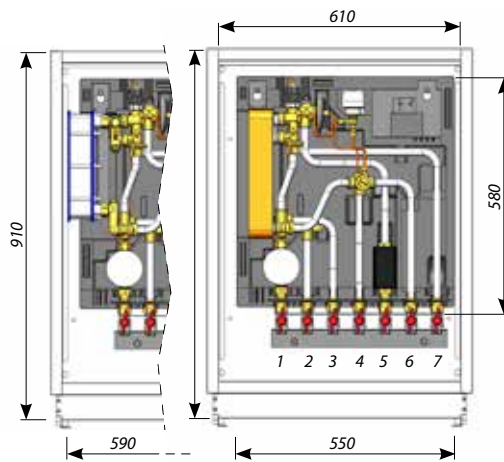
**Electrical supply:** 230 V AC

**Dimensions (mm):**

With connections: H 590 x W 550 x D 150\*  
 \* Depth incl. mounting plate  
 H 590 x W 590 x D 150\*\*  
 \*\* In gasketed versions

**Connections sizes:**

DH, HE, DHW, DCW: G 3/4" ET (int. thread)  
 space 65 mm



**Connections:**

1. Domestic cold water (DCW) inlet
2. Domestic hot water (DHW) outlet
3. Domestic cold water (DCW) inlet
4. Primary side (HS) supply
5. Primary side (HS) return
6. Heating (HE) supply
7. Heating (HE) return

**Options:**

- Room thermostat
- Actuator for zone valve
- Safety valve
- Ball valves (60 mm)
- Ball valves with connection for pressure gauge 3/4" (120 mm) incl. safety valve
- Mounting rail for wall mounted variant
- Recess box for built-in variant incl. mounting rail
- Bypass
- Isolated front cover
- DHW circulation
- Gasketed plate heat exchanger

**DHW: CAPACITY EXAMPLES**

DHW capacity [kW]	Type	Temperature primary [°C]	Temperature secondary [°C]	Flow rate primary [l/h]	Flow rate secondary [l/h]	Pressure loss primary [*kpa]
37	1	65/19,1	10/45	707	910	16
37	1	65/22,4	10/50	762	796	18
45	2	65/17,6	10/45	833	1106	18
45	2	65/20,6	10/50	890	968	21
55,5	3	65/14	10/45	950	1365	41
53	3	65/15,8	10/50	950	1140	41
42	3	55/16,3	10/45	950	1033	41
33,7	3	50/19,1	10/45	950	829	41
37	G1	65/25	10/45	850	910	25
37	G1	60/28	10/50	865	796	30

\* Energy meter not incl.

**HEATING: CAPACITY EXAMPLES**

Heating capacity	Heating circuit Δt [°C]	Total pressure loss primary [*kpa]	Flow rate primary [l/h]
10	20	3	430
10	30	1	287
10	40	1	215
15	20	8	645
15	30	3	430
15	40	1,5	323

\* Energy meter not incl.

Type 1 = XB 06H-1 26 (plate heat exchanger)  
 Type 2 = XB 06H-1 40 (plate heat exchanger)  
 Type 3 = XB 06H+ 60 (plate heat exchanger)

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