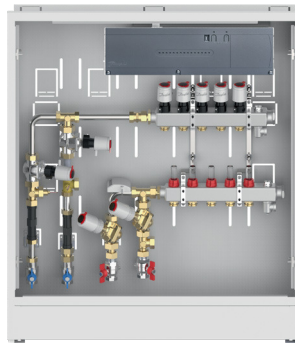


Data Sheet

# UnoFloor Heating/Cooling

## Description



### Product

Danfoss UnoFloor Heating/Cooling is a prefabricated pressure independent stainless steel distribution units for 4-pipe systems with floor heating and cooling.

UnoFloor Heating/Cooling comes wired and premounted installed in a cabinet for in-wall or on-wall installation.

These solutions make it easier for the installer to order a ready-made plug & play construction for mounting of distribution pipes for the building section.

The units are available as standard solutions with 4 to 11 connections left/right version and include manual air vent and drain valve. In addition the solutions include a flow meter to maintain the designated flow rate.

### Features & benefits

- Plug & Play construction
- Durable stainless steel distribution unit
- Minimum space required for installation
- In-wall cabinet ensures minimum time required for installation
- Pre-mounted ensures minimal risk of installation faults
- Correct heat distribution, even under partial load
- Reliable hydronic balancing for lower heating costs
- Control of heating and cooling
- App solutions for installer and end-user

### Applications

- UnoFloor Heating/Cooling

**Ordering**

**Product code numbers UnoFloor**

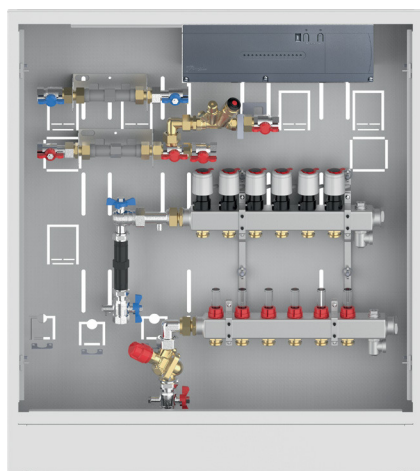
UnoFloor	Heating/Cooling
4 circuits left version	088X3764
5 circuits left version	088X3765
6 circuits left version	088X3766
7 circuits left version	088X3767
8 circuits left version	088X3768
10 circuits left version	088X3770
11 circuits left version	088X3771
4 circuits right version	088X3774
5 circuits right version	088X3775
6 circuits right version	088X3776
7 circuits right version	088X3777
8 circuits right version	088X3778
10 circuits right version	088X3780
11 circuits right version	088X3781

**On-wall panels**

Code number	Description
088X3026	On-wall panels UnoFloor 790 wide (4 - 6 circuits)
088X3028	On-wall panels UnoFloor 940 wide (7 - 8 circuits)
088X3030	On-wall panels UnoFloor 1140 wide (10 - 12 circuits)

**Spare parts code numbers**

Code number	Description
013G7376	Service built-in valve for manifold
088U0819	Replacement flowmeter for FHF & SSM manifold
088H3112	TWA-A, RA , NC, 230V
088U2110	ICON2 Advanced Master controller
088X3020	Frame and door for UniFloor cabinet 790
088X3022	Frame and door for UnoFloor cabinet 940
088X3024	Frame and door for UnoFloor cabinet 1140



**Heating/Cooling**

Is delivered with flow meter and fitted with an Icon2™ advanced master controller 230V and thermo-actuators TWA NC for control of the floor heating system. Wireless or wired room thermostats.

App based installation guide for the installer with the option of an installation report as documentation.

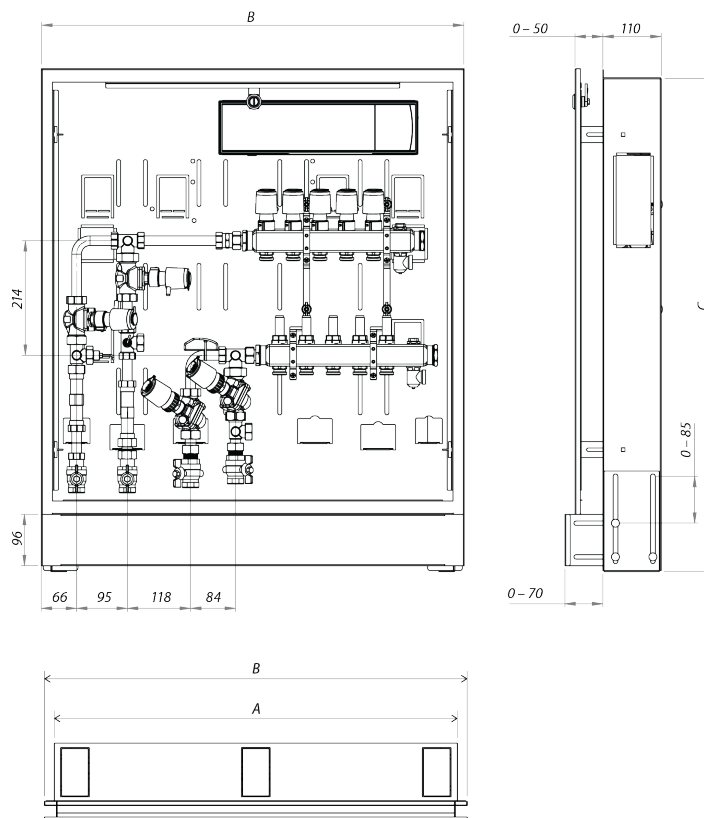
By purchasing an Ally gateway, the end-user can control the room heating in his home via the Danfoss Ally app.

wireless /wired solution – UnoFloor Light CI with ICON2™ Main Controller Installed		
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	
088U1110	Floor sensor	
014G2400	Danfoss Ally™ Gateway (for user-app)	

**Media** Use heating water according to VDI2035 or Ö-NORM H5195-1, fluid category ≤ 3 according to EN1717

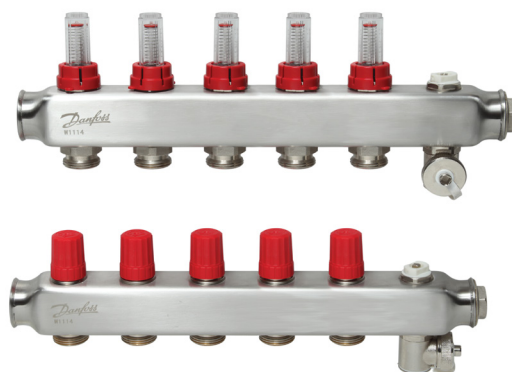
**Product details**

**Dimensions**



Dimensions [mm]	A	B	C
4 circuits	762	790	922
5 circuits	762	790	922
6 circuits	762	790	922
7 circuits	912	940	922
8 circuits	912	940	922
10 circuits	1112	1140	922
12 circuits	1112	1140	922

Connections

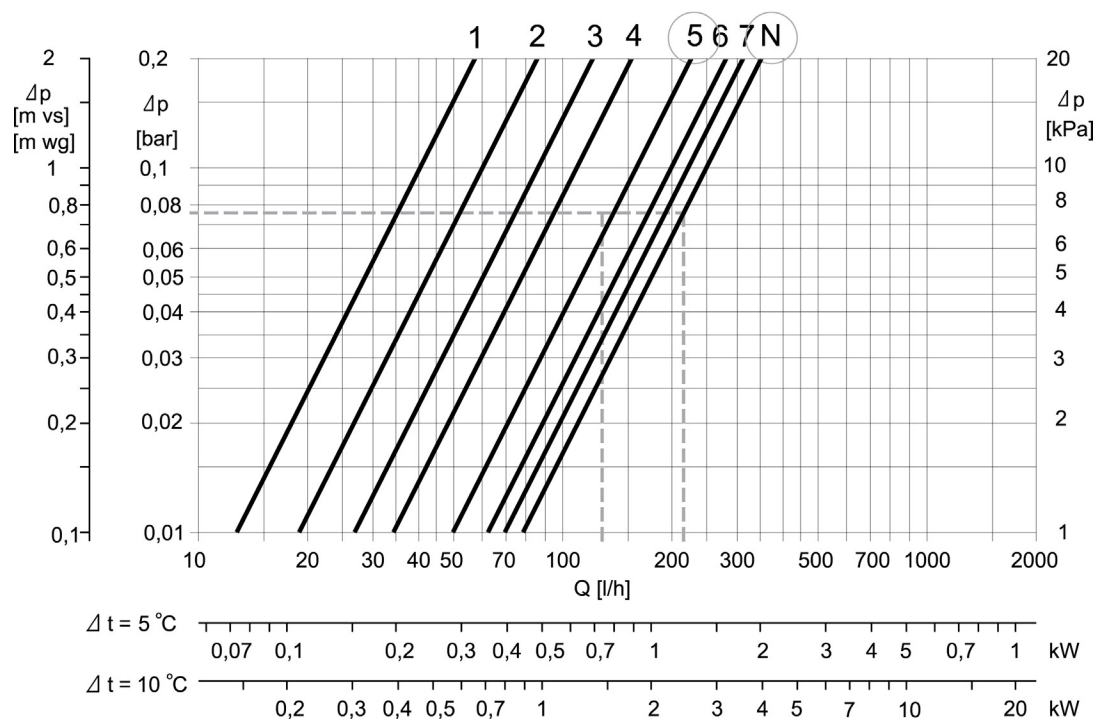


**SSM Floor heating manifold**

The SSM manifold is used for controlling water flow in underfloor heating system. Each tube of the floor heating system is connected to the manifold, thus making it possible to control water flow or heat supply to each room in the building individually.

Nominal pressure	PN 6
DH supply temperature Tmax	60 °C
Supply voltage	230 V
Output voltage	230 V
Connection sizes	G 3/4" (IT)

Pre-setting diagram



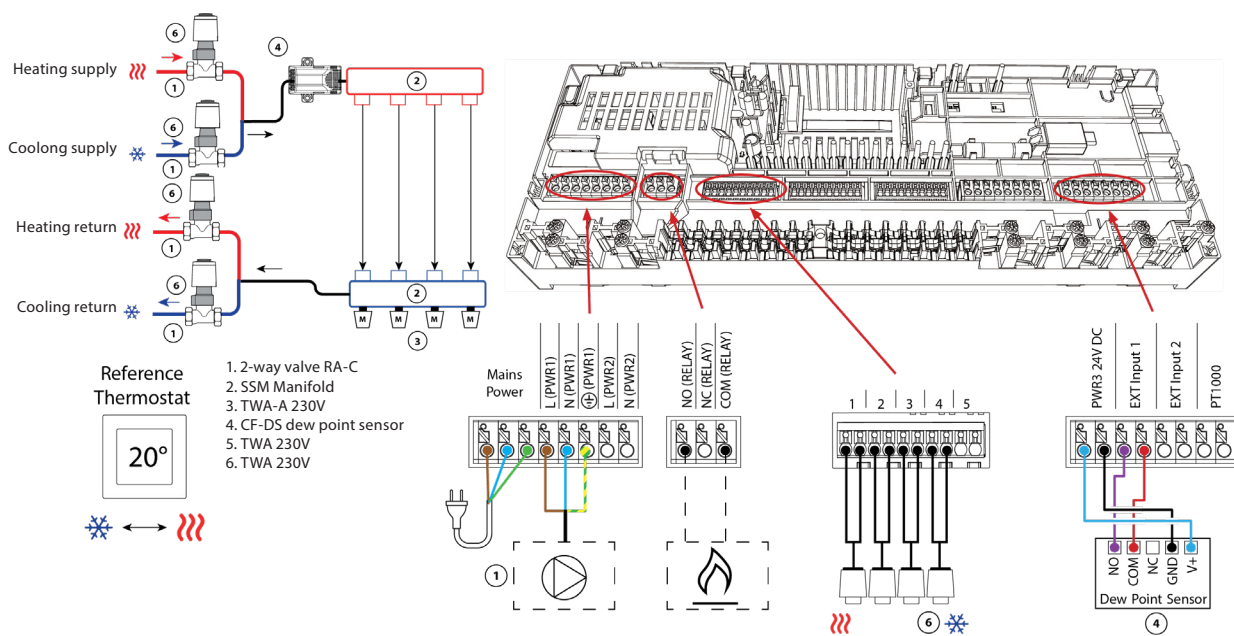


### ICON2™ Advanced Master Controller (UnoFloor Light CI)

Danfoss ICON2™ Advanced Master

Controller is a control box for use in hydronic floor heating using wireless or wired thermostats and 230 V actuators.

- Automatic balancing (PWM+), which ensure that hydraulic balancing of the system is done by the master controller based on the actual room demand.
- Requires no pre-setting on the manifold
- On/Off control possibility
- Possibility to combine wired and wireless thermostats in same installation



**Certificates,  
declarations  
and approvals**

CE	
EU RoHS	

**Tender text**

Pre-assembled pressure independent underfloor heating balancing and control distribution unit must come wired and pre-mounted, suitable for left- and right-hand side connection to the manifold, fitted in in-wall cabinet.

Cabinet must be painted in white (RAL 9016), 922 mm in height, up to 1140 mm in width and 110mm in depth.

It must be possible to connect the room thermostats to the NC/NO actuators via a connection box. The connection box must have not less 10 channels and 10 actuator outputs, have potential free relay, one micro disconnection output and permanent 230 V (max 50W) output. Supply voltage: 230 V AC. Output voltage for actuators: 230 V DC, max. power per output: 2 W. It must be possible to set up to 10 actuators for 1 room thermostat. It must be possible to control system by smartphone app and have pre-set work profiles with applications. Connection box must have possibility to be upgraded to wireless solution by Wireless module. For accuracy hydronic control, automatic heat load control feature must be available.

The manifold shall consist of a flow and return manifold where the flow manifold must be able to close each circuit independently. The return manifold must be equipped with presetting valves, ensuring optimal balancing of the system. Flow control of the floor heating system shall be done on a visible presetting scale, so that the value can be read and checked after commissioning. Valves shall be controlled electronically by thermal actuators installed without adapters.

The manifold must be provided in modules with air vent and drain / fill function valve.

The manifold must be made of stainless steel and have the following specifications:

- Maximum flow temperature: 60 °C
- Maximum differential pressure: 0,6 bar
- Maximum operating pressure: 6 bar
- Max Kv setting of the valve (N): 0,97 m

The actuator must be pre-mounted on a valve. The actuator receives a signal from the room thermostat. Based on the signal, it opens and closes the valve which makes it possible to regulate the energy supply to each room in the building independently. For easy and secure installation, the actuator must be delivered as one part (no adapter) and mounted on the manifold by use of an Allen screw.

The pressure independent balancing and control set must consist of a linear control valve, impulse tube with adapters to it, connector to manifold.

The valve could be used as an automatic flow limiter. The valve should have a mechanism to adjust the flow from 100 % to 0 % of the maximum flow. Maximum recommended flow setting should not be more than 600 l/h at maximum system pressure drop 10 kPa, and no more than 915 l/h at maximum system pressure drop 5 kPa. Shut off service function should be possible with setting mechanism. The authority of the pressure independent control valve should be 1 at all settings (control valve characteristic is not changed). Upper limit of pressure controller at zero flow must be 35 kPa. (Supplier of the valve should provide lab test results<sup>1</sup>). Nominal pressure rating 16 bar. Valve should have possibility to mount actuator.

Heating and cooling circuits shall include a control valve, where it must be possible to connect normally closed (TWA-A NC 230V) actuator.





ENGINEERING  
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