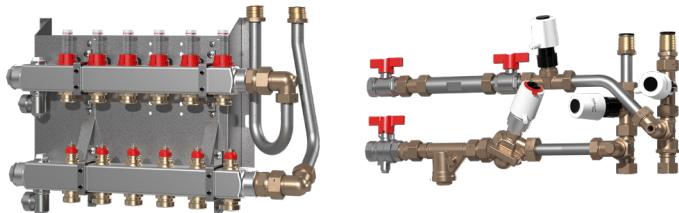


Data Sheet

Distribution units

SG / SGCI - CDM

Description



Product

The Danfoss stainless steel distribution units with CDM module are prefabricated solutions for floor heating and cooling, which can be implemented with the Danfoss flat station range.

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 systems are available as standard solutions with 2 to 12 connections 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
- Minimum time required for installation
- Prepared for implementation with the Danfoss flat station range
- Prepared for mounting in recess box together with flat station
- Pre-mounted ensures minimal risk of installation faults
- Correct heat/cool distribution, even under partial load
- App solutions for installer and end-user (SGCI)

Applications

- Distribution unit SG - CDM
- Distribution unit SGCI - CDM

Ordering**Product code numbers Distribution units - CDM**

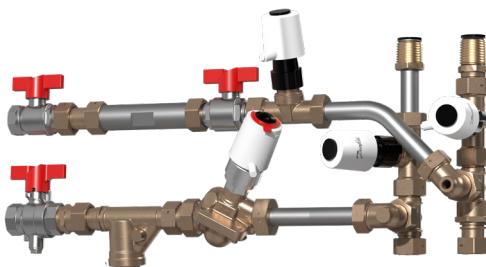
Distribution unit	SG - CDM	SGCI - CDM
2 circuits	145H0862	145H1882
3 circuits	145H0863	145H1883
4 circuits	145H0864	145H1884
5 circuits	145H0865	145H1885
6 circuits	145H0866	145H1886
7 circuits	145H0867	145H1887
8 circuits	145H0868	145H1888
9 circuits	145H0869	145H1889
10 circuits	145H0870	145H1890
11 circuits	145H0871	145H1891
12 circuits	145H0872	145H1892

Product code numbers CDM Module

Distribution unit	SGCI - CDM
CDM Module - DN20 HP AB-PM + DN15 RA-C, 230V	145B9506
CDM Module - DN25 AB-PM + DN20 RA-C, 230V	145B9507

Spare parts code numbers

Code number	
013G7376	Service built-in valve for manifold
088U0819	Replacement flowmeter for FHF & SSM manifold
088H3112	TWA-A, RA , NC, 230V
088U2110	ICON2 Master controller advanced



Pre-fabricated cooling modules for direct connection of the cooling line to all Danfoss flat stations (EvoFlat and EvoFlat 4.0).

Mounted on a mounting plate fitted for installation in standard Danfoss recess boxes.

CDM cooling module

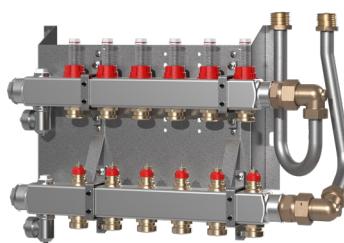
For direct connection to external cooling system. With ball valves in the supply and return. A differential pressure controller with flow limitation and integrated control valve with actuator is mounted in the flow.

Control valves (TWA 230V) in the cooling flow for switching between heating and cooling operation, as well as hydraulic separation.

Fitting piece for cold meter (G 3/4" x 110mm) in the cooling return and sensor pocket in the supply ball valve.

Strainer in the cooling flow on the supply side.

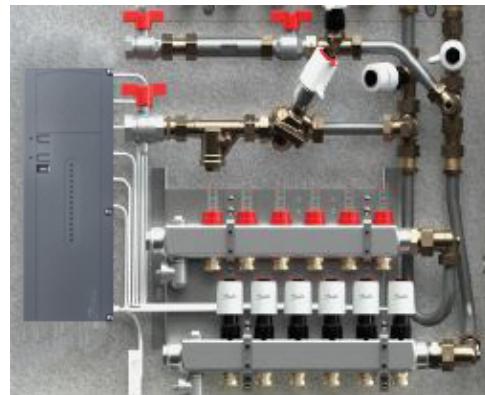
a	Flow at 4 K [l/h]	Flow at 5 K [l/h]	Flow at 6 K [l/h]	Flow at 7 K [l/h]	Flow at 8 K [l/h]
Standard flow (CDM DN20 HP AB-PM)					
0.5	107				
1.0	215	172	143	123	107
1.5	322	258	215	184	161
2.0	430	344	287	246	215
2.5	537	430	358	307	269
3.0		516	430	369	322
3.5		602	502	430	376
4.0			573	491	430
4.5				553	484
5.0				614	537
5.5					591
High flow (CDM DN25 AB-PM)					
1.5	322	258			
2.0	430	344	287		
2.5	537	430	358	307	
3.0	645	516	430	369	322
3.5	752	602	502	430	376
4.0	860	688	573	491	430
4.5	967	774	645	553	484
5.0	1075	860	717	614	537
5.5	1182	946	788	676	591
6.0		1032	860	737	645
6.5		1118	931	798	699
7.0		1204	1003	860	752
7.5			1075	921	806
8.0			1146	983	860
8.5				1044	914
9.0				1106	967
9.5				1167	1021
10.0					1075
10.5					1129
11.0					1182



The Distribution units SG - CDM are all for right top connections for heat/cooling source.

Distribution unit SG - CDM

Is delivered with flow meter, without controller and thermo actuators, but prepared for mounting a controller and actuators of your choice.



Distributions unit SGCI - CDM, installed in Danfoss Recess box with CDM module connected.

Distribution unit SGCI - CDM

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.

Automatic balancing.

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 – Distribution unit SGCI - CDM with ICON2™ Advanced Controller		
Code number	Product description	Image
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)	

Connections

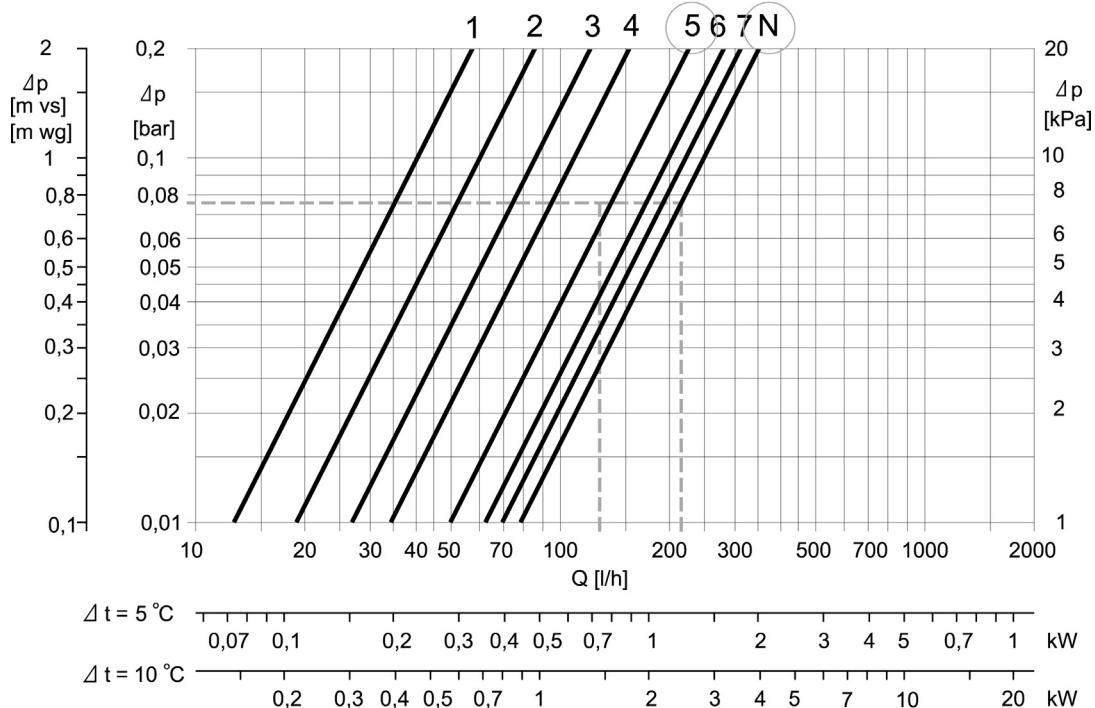


SSM Floor heating manifold

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	230V
Output voltage	230V
Connection sizes	G 3/4" (IT)

Pre-setting diagram

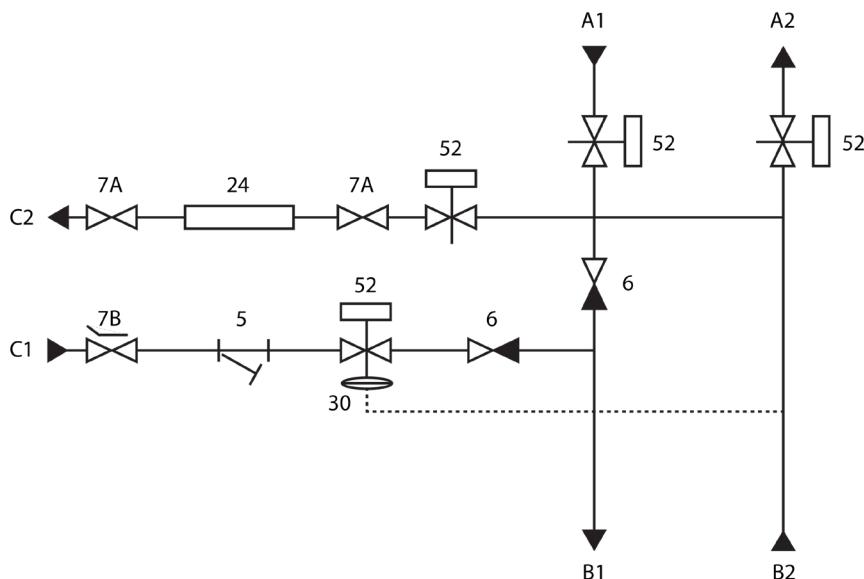
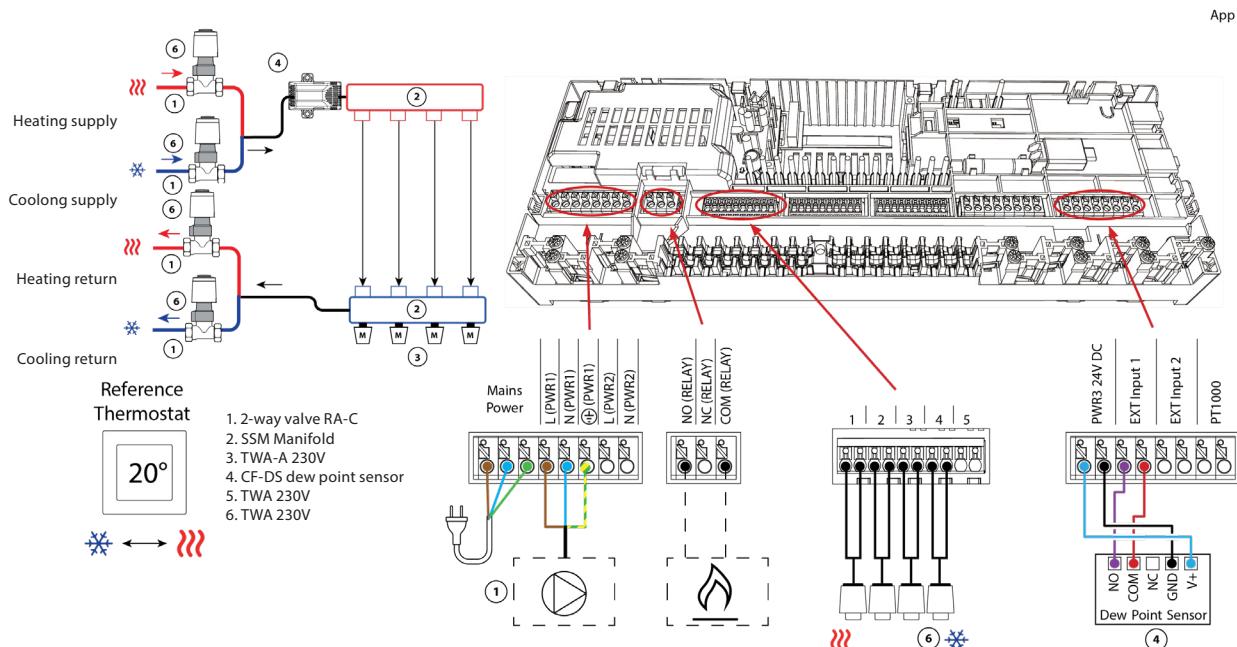




ICON2™ Advanced Master Controller (UnoFloor Light CI)

Danfoss ICON2™ Advanced Master Controller is a control box for use in hydronic floor heating using wireless or wired thermo-stats and 230V 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



Flow diagram

5	Strainer
6	Check valve
7A	Ball valve
7B	Ball valve with sensor pocket
24	Fitting piece for cold meter (G 3/4" x 110 mm)
30	Differential pressure controller (AB-PM)
52	Zone valve RA-C/TWA 230V
A1	Flat station supply
A2	Flat station return
B1	Distribution unit supply
B2	Distribution unit return
C1	Cooling supply
C2	Cooling return

**Certificates,
declarations
and approvals**

CE	
EU RoHS	

Tender text

Danfoss underfloor heating manifold and CDM cooling module for EvoFlat stations.

The manifold is used for heating/cooling regulation in floor heating systems. Each circuit in the floor heating system is connected to the manifold, which makes it possible to regulate the heat/cool supply to each room in the building independently.

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. Balancing of the floor heating system shall be done on a swivel scale ranging from 1-7 and N 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 of up to 12 outlets with air vent and drain / fill function valve. Ball valves must be available as an option for positive shut-off between manifold and system.

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 with flow meter: 6 bar
- Maximum operating pressure, without flow meter: 10 bar
- Max Kv setting of the valve (N): 0,97 m

Distribution unit SGCI - CDM:

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 15 channels and 15 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, max. power per output: 2 W. It must be possible to set up to 15 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 accurate hydronic control, automatic heat load control feature must be available.

The actuator must be premounted 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.

CDM Module "Standard flow"

Danfoss cooling module for direct connection of the cooling line to apartment stations, mounted on a mounting plate for installation in standard Danfoss flush-mounted cabinets. With shut-off ball valves in the flow and return. A differential pressure regulator with flow limiter and integrated control valve including actuator is mounted in the flow.

Switching valves in the cold flow and return, as well as in the heating flow and return, for switching between heating and cooling operation, as well as mutual hydraulic locking.

Fitting piece for cold quantity meter (G3/4 x 110mm) in the cold return and sensor pocket in the flow ball valve. Shut-off devices before and after the meter. Dirt trap in the cold flow on the supply side.

Technical data:

max. cooling capacity (dT 6K) [kW]: 4

Pressure level: PN10

Connection nominal diameter: DN20

Dimensions H/W/D [mm]: 255x500x149

CDM Module "High flow"

Danfoss CDM cooling module with AB-PM HF for direct connection of the cooling line to apartment stations (e.g. of the Danfoss EvoFlat MSS type), mounted on a mounting plate for installation in standard Danfoss flush-mounted cabinets. With shut-off ball valves in the flow and return.

A differential pressure regulator with flow limitation and integrated control valve DN 25 including actuator is mounted in the flow. Switching valves DN 20 in the cold flow and return, as well as in the heating flow and return, for switching between heating and cooling operation, as well as mutual hydraulic locking.

Fitting piece for cooling meter (G3/4 x 110 mm) in the cold return and sensor pocket in the flow ball valve. Shut-off devices before and after the meter. Dirt trap in the cold flow on the supply side.

Technical data

max. cooling capacity (dT 6K) [kW]: 8

Pressure level: PN10

Connection nominal diameter: DN20

Dimensions H/W/D [mm]: 255x500x149

Danfoss A/S

Climate Solutions, Salg Denmark • danfoss.dk • +45 6991 8080 • kundeservice.dk@danfoss.com

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