

Swegon Home Solutions

CASA[®] duct coil in combination with ground source heat pumps



DUCT COIL FOR BRINE SOLUTION

The duct coil heats the incoming air during the winter and ensures that the ventilation unit works with a high degree of efficiency even in the severe cold. During the summer, the ground circuit's cold solution is used to cool the building. The control technology CASA Smart for ventilation units automatically enables the best utilisation of the duct coil all year round. Meets demands for leakage class C.



Ventilation unit Swegon CASA W3/W4/W5/R3/R5
SDCW 250 K3W

Duct coil

Separate preheater/prechiller for the fresh air duct. Cools the outdoor air to the ventilation unit during the summer and serves as a heater during the winter months. The unit is designed for residences in combination with a ground source heat pump and CASA ventilation unit. The cooling unit contains an efficient 4-row chiller suitable for cooling medium and a G3 filter.

Included in the delivery:

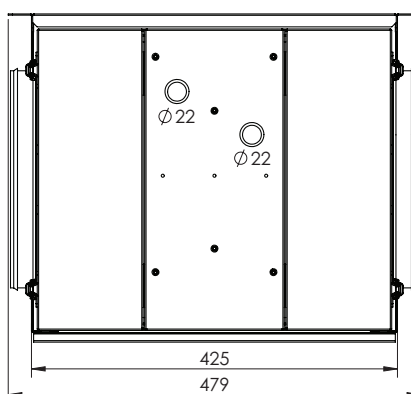
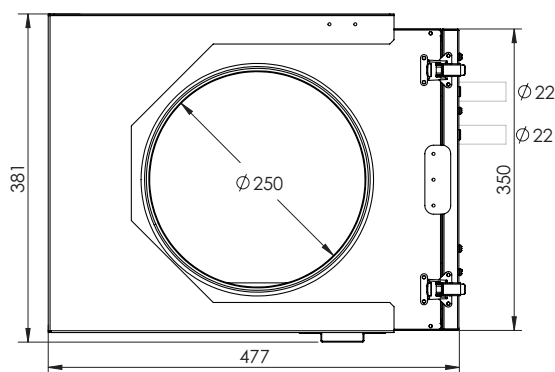
- CASA W250F duct coil
- Temperature sensor (T8) cable length 3 m
- Wall mounting bracket/ceiling mounting frame
- Wide-mesh filter
- Instructions

Accessories:

- Condensate hose W2504F for duct coil: 502130

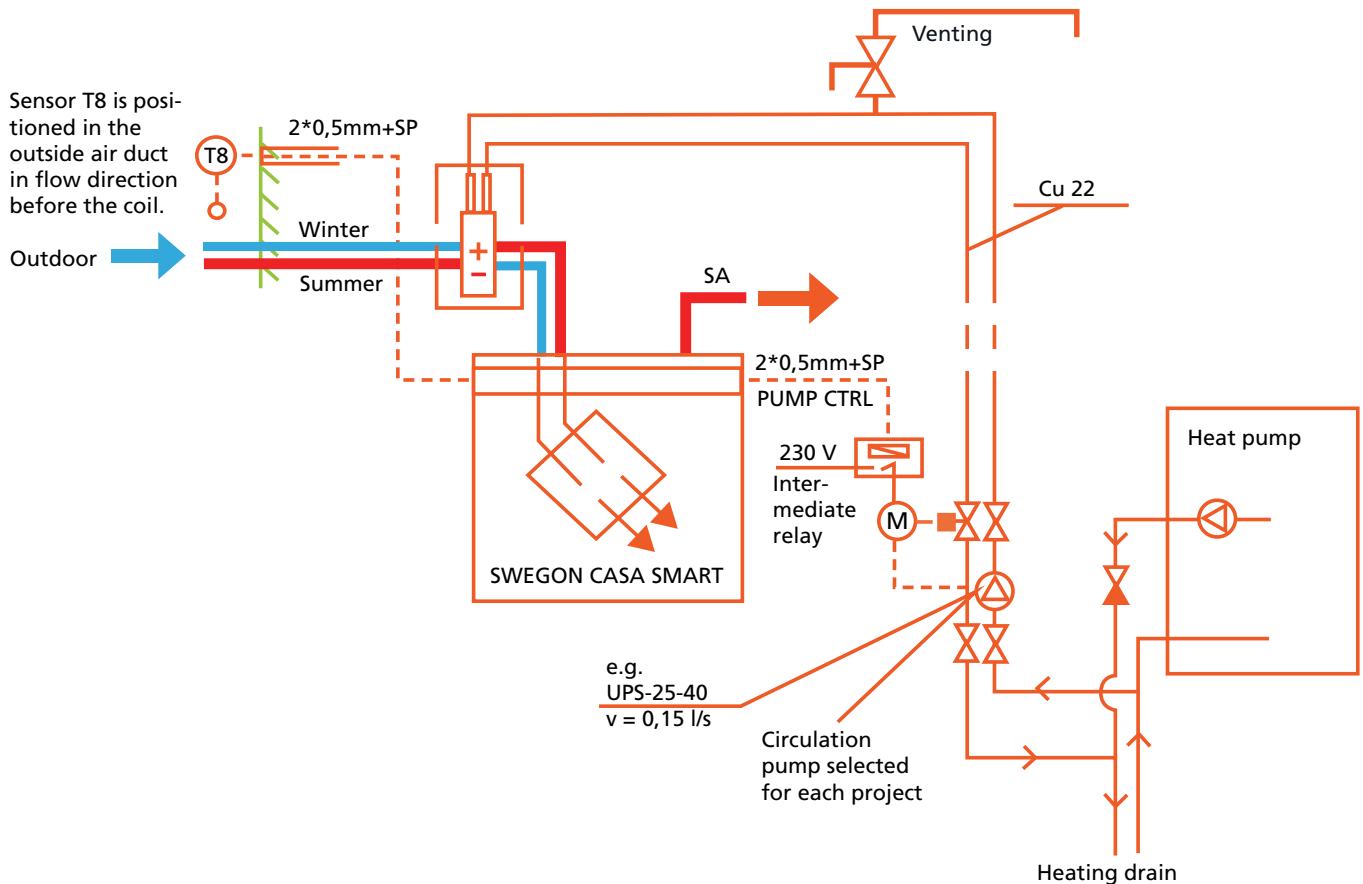
TECHNICAL DATA

- Duct outputs Ø250
- Duct connections with rubber seals for round ventilation ducts.
- Galvanized sheet steel casing.
- Drip tray for condensate Condensate outlet with male 3/8" thread. The pipe for condensate is routed freely sloping to the drain via a water trap.
- The unit's pipe connections are Cu 22 mm.
- Openable hatches for inspection and cleaning.
- Air tightness class corresponds to class C according to standard EN 15727.
- Maximum operating temperature 150 degrees.
- Maximum operating pressure 1.0 MPa (10 bar.)
- Fully insulated
- Wall mounting bracket/ceiling mounting frame supplied
- Also fitted with a coarse filter.



Leave at least 40 cm service space in front of the door.

Principle coupling for the brine solution coil



Take the coil's power requirement into account when sizing the well

FEATURES

The function of the ground heat compatible duct package is controlled by a separate outdoor air sensor:

- The heating function starts when the outside air temperature has fallen below the setting value, e.g. -2 °C.
- The cooling function starts when the outside air temperature has risen above setting value, e.g. 15 °C

NOTE! Take into account the freezing point according to the figure when sizing. Swegon recommends a freeze monitor on the return line for the heating/cooling medium, which turns off the circulation pump to prevent the energy well from freezing.

To note with regard to the ventilation unit and the system:

- The unit is equipped with a Smart control system
- Smart control panel
- Heating and/or condensation insulation of the supply air duct, duct coil and condensate pipe
- Venting of the pipe system
- Balancing of the pipe system/coil
- Sizing of the heating/cooling medium circuit with respect to the duct coil

Chiller/heater's performance data:

Chiller's performance data			
Cooling:			
Capacity, kW	1.3	2.2	2.5
Airflow, l/s	50	100	150
INCOMING AIR			
Temperature °C	25	25	25
Relative humidity %	55	55	55
OUTGOING AIR			
Temperature °C	11	13	15
Relative humidity %	95	89	86
INCOMING FLUID			
Temperature °C	6	4	4
OUTGOING FLUID			
Temperature °C	9	8.5	9.5
Fluid flow dm ³ /s	0.11	0.12	0.12



With easy-to-use CASA Smart automatic system, you get the most out of your unit.

Preheating:						
Capacity, kW		1.1	1.6	1.8	2.2	2.3
Airflow, l/s		40	60	70	90	100
Incoming air °C	0	-26	-26	-26	-26	-26
Outgoing air °C	0	-2.1	-4	-5	-6	-7
Air's velocity, m/s		0.44	0.67	0.78	1	1.11
Air's pressure loss Pa		4.8	8.8	11.2	16.4	19.3
Incoming fluid °C	0	2	2	2	2	2
Outgoing fluid °C	0	-1	-1.2	-1.5	-2	-2.3
Fluid flow l/s	0	0.09	0.12	0.12	0.13	0.13
Fluid velocity m/s		0.77	0.99	1.01	1.08	1.06
Fluid's pressure loss kPa		30.6	31.8	33.7	43.2	39.6
Pipe connection DN	10	10	10	10	10	10

The unit's function for preheating is designed with 28% ethanol

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