

Ⓜ GB

Cooling Coil

VEX100 CCW

VEX100 CCW-HK

VEX200 CCW

VEX200 CCW-HK



VEX100
R A N G E
CROSS FLOW
HEAT EXCHANGER



VEX200
R A N G E
R O T A R Y
HEAT EXCHANGER

The following accessories are supplied separately

- MVM Motor Valve Kvs _____
- EON XCU Module
(Control box for the CCW)
- TE22
(Temperature Sensor - Supply Air)



Original instructions



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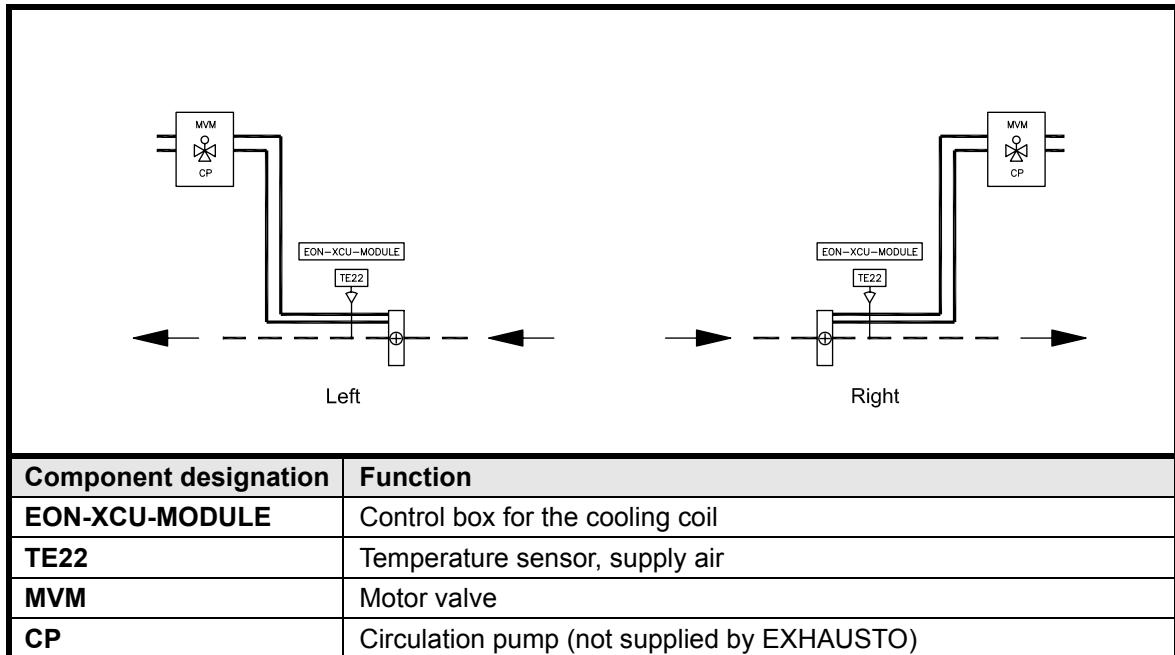


1. Product information

Drawings in the instructions

Cooling coil
VEX100 CCW
VEX200 CCW

All the spigots are shown as being round on the drawings. For actual sizes, see the main drawings.



1.1 Usage

The EXHAUSTO cooling coil is available as an accessory to the VEX100 and VEX200 series, and is used for cooling down the supply air.

The cooling coil is connected directly to the duct system after the VEX, and is available in models to fit both round and square duct systems.

CCW140 / 240 - 150 / 250 - 160 for round duct systems.

CCW260 - 170 / 270 for square duct systems.

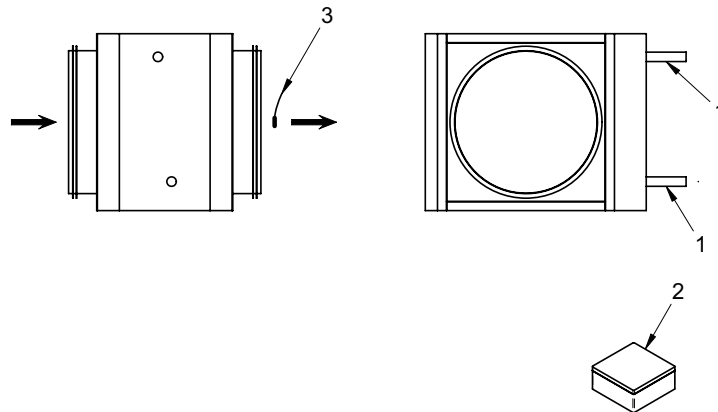
1.2 Description

1.2.1 Design of the cooling coil

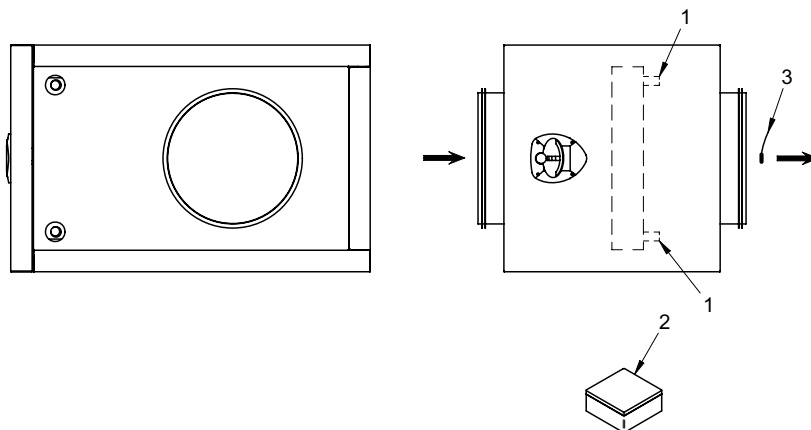
Layout drawing

The diagrams below show the design of the cooling coil:

Uninsulated cooling coil (CCW-HK)



Insulated cooling coil (CCW)



Pos. No.	Part	Function
1	Spigots for connecting water to the system	Water supply to the cooling coil: Return and supply directions are clearly marked on the pipes.
2	Connection box	Electrical connection box for connecting the MVM valve and the temperature sensor, if MVM and TE22 are chosen.
3	Temperature sensor	Measures the temperature in the supply air duct.

1.3 Dimensional sketches

NB!



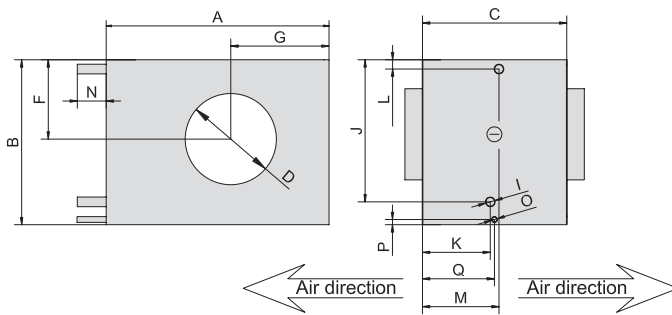
In order for the cooling coil to be mounted directly abreast of the supply air spigot of the VEX, the VEX needs to be provided with a base or otherwise elevated.

Dimensions

The following drawings and associated table contain the dimensions for the cooling coils

Uninsulated cooling coil (CCW-HK) for VEX140, VEX150, VEX240 and VEX250:

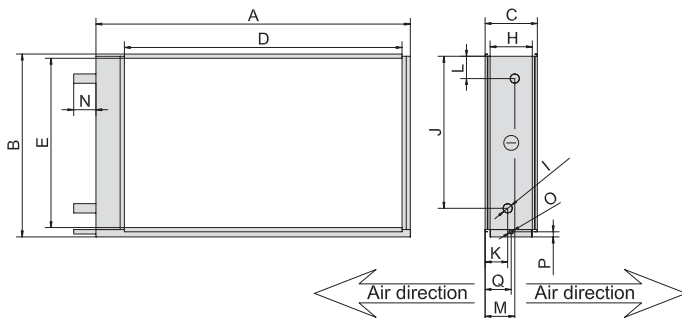
Uninsulated cooling coil



	A	B	C	D	F	G	I	J	K	L	M	N	O	P	Q
CCW140	754	575	520	ø315	257,5	475	DN25 (1")	507	231,5	33	288,5	116	½"	13	260
CCW150	904	600	520	ø400	282,5	518	DN32 (1¼")	528	231,5	37,5	288,5	86	½"	13	260
CCW240	754	575	520	ø315	279	330	DN25 (1")	507	231,5	33	288,5	116	½"	13	260
CCW250R V1* CCW250L V2*	904	600	520	ø400	289	370	DN32 (1¼")	528	231,5	37,5	288,5	86	½"	13	260
CCW250R V2* CCW250L V1*	904	600	520	ø400	311	370	DN32 (1¼")	528	231,5	37,5	288,5	86	½"	13	260

Uninsulated Cooling coil (CCW-HK) for VEX160, VEX170, VEX260 and VEX270:

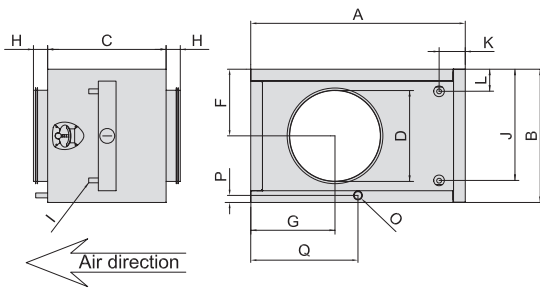
Uninsulated cooling coil



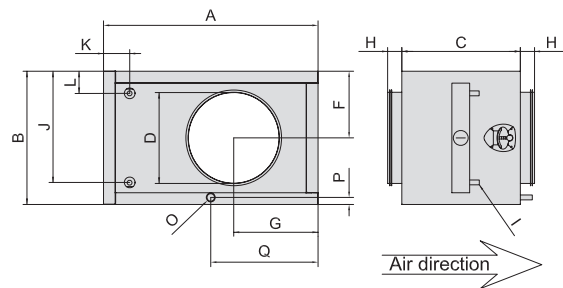
	A	B	C	D	E	H	I	J	K	L	M	N	O	P	Q
CCW60	1157	719	303	1000	650	190	DN32 (1¼")	50	109	619	174	100	½"	23	141,5
CCW70	1407	831	303	1250	762	190	DN32 (1¼")	50	100	731	182,5	100	½"	23	141,5

Cooling coil in a cabinet (CCW) for VEX140, VEX150, VEX160, VEX240 and VEX250:

Cooling coil in cabinet - Left



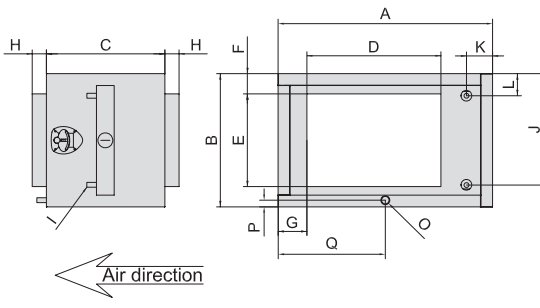
Cooling coil in cabinet - Right



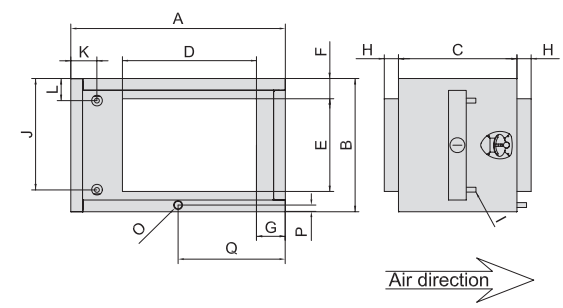
	A	B	C	D	F	G	H	I	J	K	L	O	P	Q
CCW140L CCW140R	860	676	750	∅315	262,5	475	62	DN25 (1")	547	100	97	½"	36,25	430
CCW150L CCW150R	1015	701	750	∅400	290	518	62	DN32 (1¼")	572	80	97	½"	36,25	507,5
CCW160L CCW160R	1265	826	750	∅500	340	553	62	DN32 (1¼")	697	80	97	½"	36,25	632,5
CCW240L V1* CCW240R V2*	860	676	750	∅315	381,5	330	62	DN25 (1")	547	100	97	½"	36,25	430
CCW240L V2* CCW240R V1*	860	676	750	∅315	288	330	62	DN25 (1")	547	100	97	½"	36,25	430
CCW250L V1* CCW250R V2*	1015	701	750	∅400	408	370	62	DN32 (1¼")	572	80	97	½"	36,25	507,5
CCW250L V2* CCW250R V1*	1015	701	750	∅400	289	370	62	DN32 (1¼")	572	80	97	½"	36,25	507,5

Cooling coil in a cabinet (CCW) for VEX170, VEX260 and VEX270:

Cooling coil in cabinet - Left



Cooling coil in cabinet - Right



	B	C	D	E	F	G	H	I	J	K	L	O	P	Q
CCW170L CCW170R	1525	946	750	600	500	190	319	62	DN32 (1¼")	778	90	97	½"	36,25
CCW260L V1* CCW260R V2*	1265	826	750	800	400	245	233	62	DN32 (1¼")	697	80	97	½"	36,25
CCW260L V2* CCW260R V1*	1265	826	750	800	400	174	233	62	DN32 (1¼")	697	80	97	½"	36,25
CCW270L V1* CCW270R V2*	1525	946	750	1000	500	251	263	62	DN32 (1¼")	778	90	97	½"	36,25
CCW270L V2* CCW270R V1*	1525	946	750	1000	500	187	263	62	DN32 (1¼")	778	90	97	½"	36,25

* V1 = Fan position 1
 V2 = Fan position 2
 For more info on fan positions, see section 2.2, Positioning in relation to the VEX.



2. Mechanical assembly

2.1 Unpacking

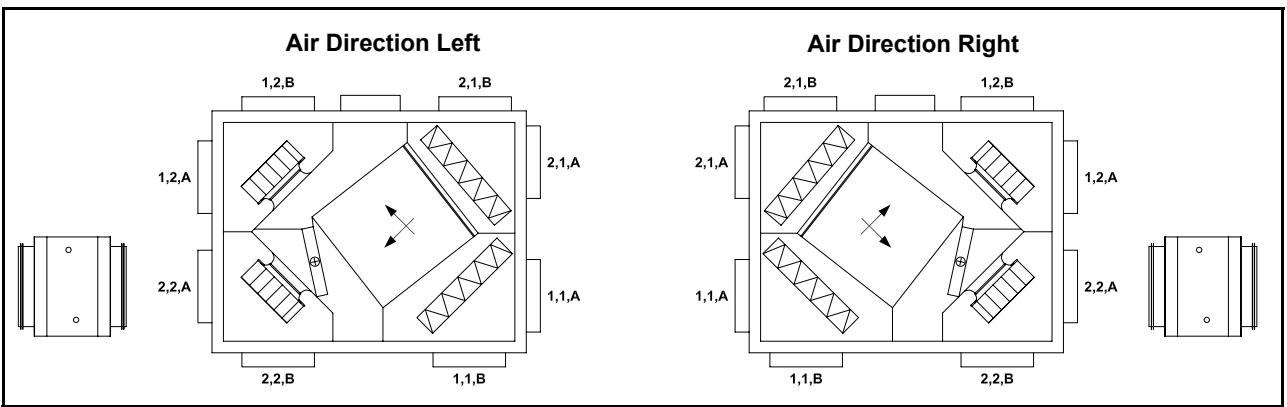
The delivered items are:

- CCW Cooling coil
- Specified accessories (indicated in the checklist on the front page of the instructions)

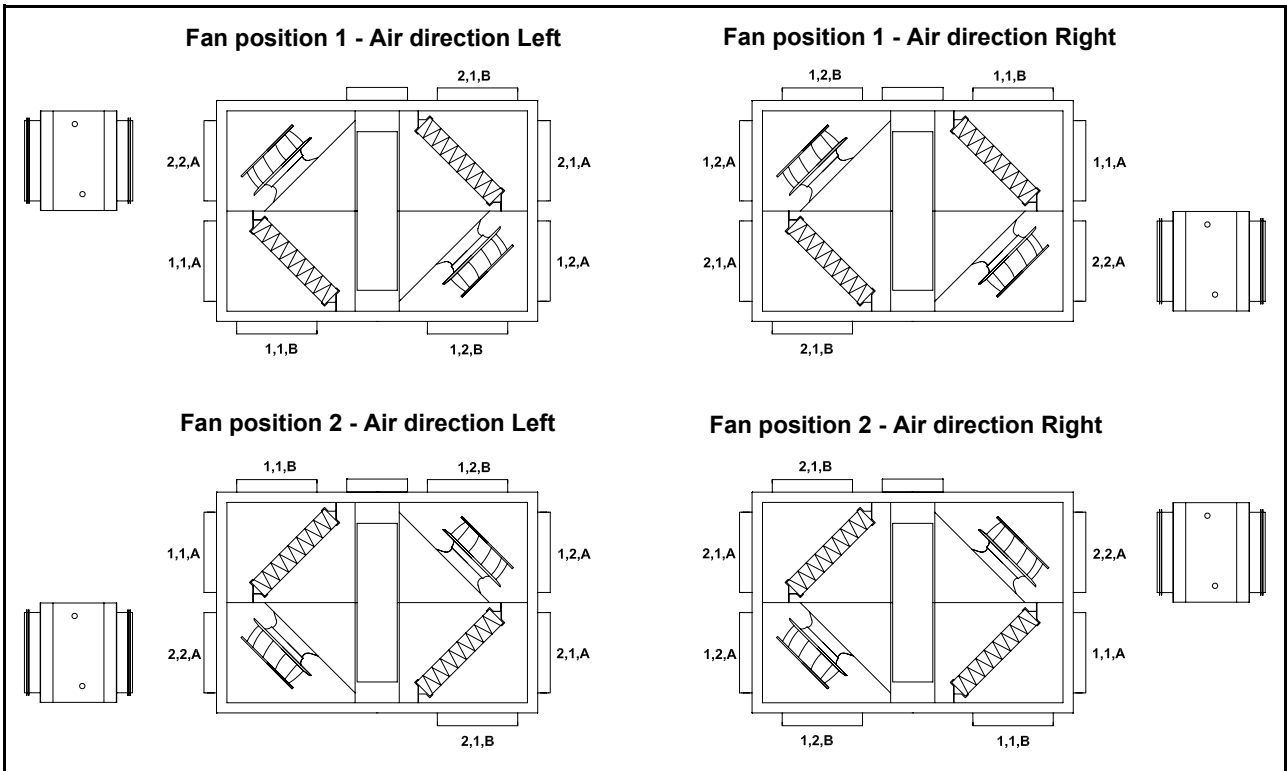
2.2 Positioning in relation to the VEX

2.2.1 Left/Right positioning

VEX100




VEX200

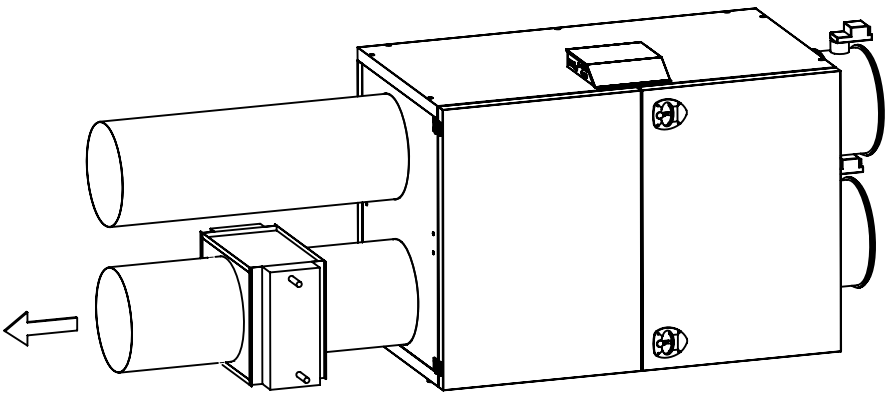


2.2.2 Weight

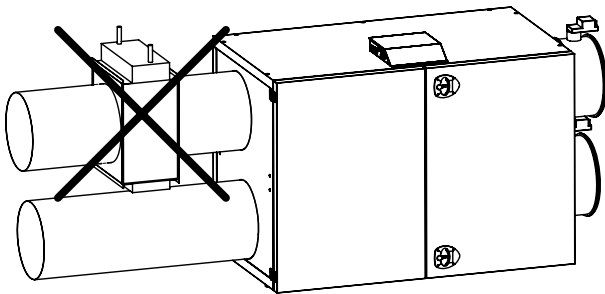
Cooling coil, weight in kg.	Uninsulated	With cabinet
CCW140 / 240	39	72
CCW150 / 250	49	87
CCW160 / 260	54	135
CCW170 / 270	72	165

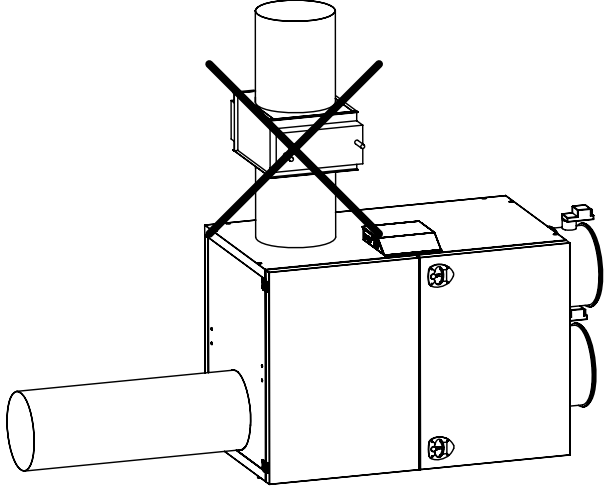
2.2.3 Correct installation in the duct system








Supply air





 The cooling coil should always be fitted so that the air runs through it horizontally.

 The cooling coil pipes must be horizontal so that the system can be bled and filled with or emptied of water.

 In order for the cooling coil to be mounted directly abreast of the supply air spigot of the VEX, the VEX needs to be provided with a base or otherwise elevated.

2.2.4 Condensation outlet

Connection



Connect the condensation outlet to a floor-mounted drain or similar. A water trap must be fitted between the condensation outlet and the drain.

Frost risk



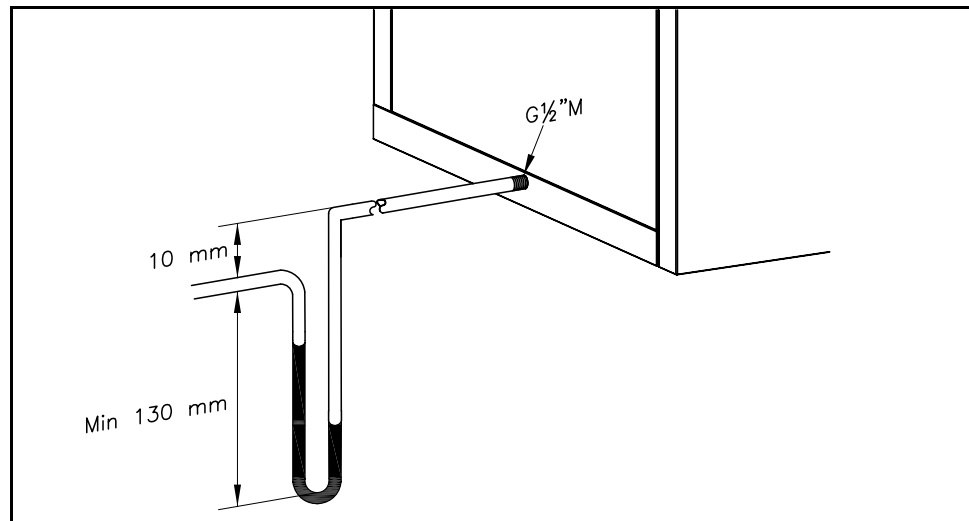
If there is a risk of frost:
Insulate the condensation outlet and protect it against frost – if necessary, using a heating cable.

Positioning




The drawing below illustrates the correct positioning of the water trap from the condensation outlet.

NB

If the unit is installed on an EXHAUSTO mounting base, there will be sufficient free height to fit a water trap.



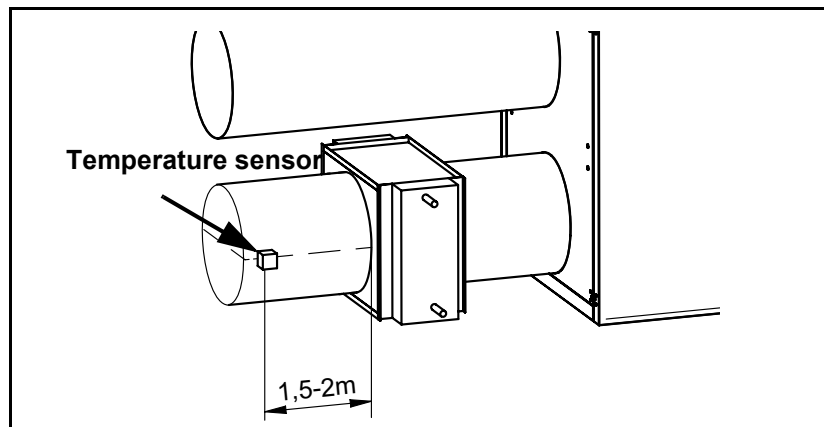
2.2.5 Installation requirements

Bleeding		After connecting cold water to the cooling coil, the system should be bled thoroughly.
Fitting the motor valve		The valve must not be fitted with the motor facing down.
Insulate the supply pipe and cooling coil		The pipes and cooling coil must be insulated according to the applicable regulations.
Frost protection		The cooling coil can be protected against frost by mixing 25% ethylene glycol in the water. This provides frost protection down to -13°C.

NB:

Shielding	Shield the valve motor from direct sunlight. For reasons of heat emission, the valve motor must not be encapsulated (max. ambient temperature: 50°C).
Insulating the valve	To avoid condensation forming on the body of the valve, insulate the valve in line with current standards.
Regulating properties	<p>The regulating properties of the valve are best when the differential pressure is in the range 10-50 kPa. See product information for the cooling coil for calculating the K_{VS} value.</p> <p>If the differential pressure in the cooling water supply exceeds the pressure range mentioned above, a pressure regulator should be fitted.</p>

2.2.6 Positioning the temperature sensor (TE22) in the duct





3. Electrical installation

3.1 Connection diagram for supply voltage and connection box

Diagram See the EON-XCU2 manual, Chapter 2.4, Connection for control of iced water cooling, on page 6 on connecting a cooling coil.



4. Commissioning and operation




During commissioning, ensure that there is no risk of frost-induced leaks in the cooling coil, and that the pressure conditions and flow of cold water is in line with the data ascertained using the capacity diagrams and the K_{VS} calculations.

See the EON-XCU2 manual, Chapter 3, Commissioning, on page 10 concerning the parameter settings needed to secure optimum operation.



5. Maintenance

5.1 Cleaning the CCW

Step	Action
1	Switch off the power supply to the unit at the repair switch.
2	Vacuum clean the cooling coil
3	Check that the fins on the cooling coil are not deformed.  The fins are sharp.

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