

PARASOL Z VAV C

Installation – Commissioning – Maintenance

11/04/2021
Art. 942428062

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Symbol explanation

Symbols on the machine

This product complies with applicable EU directives

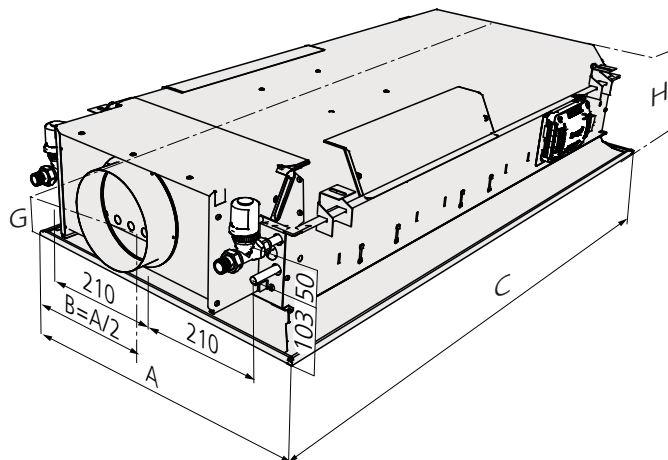
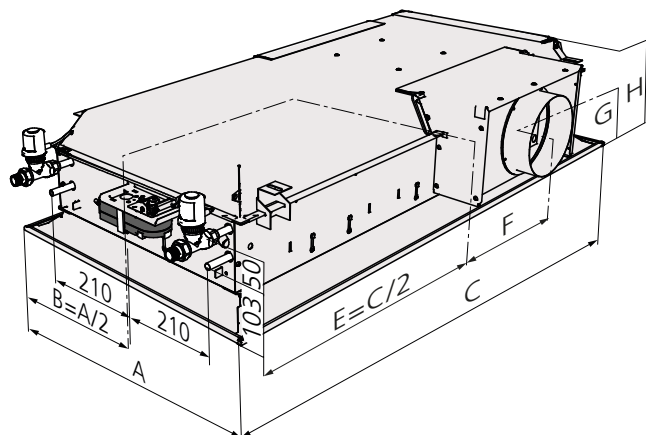


Symbols in this user manual

Warning/Caution!



Dimensions and weights



Dimensions

Parasol Zenith VAV 600

Dimensions (mm)							
A	B	C	ØD*	E	F	G*/**	H*/**
584	292	584	125/160	292	178	137/153	220/250
592	296	592	125/160	296	178	137/153	220/250
598	299	598	125/160	299	178	137/153	220/250
617	308.5	617	125/160	308.5	178	137/153	220/250
623	311.5	623	125/160	311.5	178	137/153	220/250
642	321	642	125/160	321	178	137/153	220/250
667	333.5	667	125/160	333.5	178	137/153	220/250

Parasol Zenith VAV 1200

Dimensions (mm)							
A	B	C	ØD*	E	F	G*/**	H*/**
584	292	1184	125/160	592	178	137/153	220/250
592	296	1192	125/160	596	178	137/153	220/250
598	299	1198	125/160	599	178	137/153	220/250
617	308.5	1242	125/160	621	178	137/153	220/250
623	311.5	1248	125/160	624	178	137/153	220/250
642	321	1292	125/160	646	178	137/153	220/250
667	333.5	1342	125/160	671	178	137/153	220/250

Parasol Zenith VAV 1800

Dimensions (mm)							
A	B	C	ØD	E	F	G**	H**
584	292	1784	200	892	478	173	290
592	296	1792	200	896	478	173	290
598	299	1798	200	899	478	173	290
617	308.5	1823	200	911.5	478	173	290
623	311.5	1867	200	933.5	478	173	290
642	321	1873	200	936.5	478	173	290
667	333.5	1942	200	971	478	173	290

* Dimensions refer to products with air connection Ø125/Ø160.

** With a sensor module in the face plate the height measurement G and H increases by 12 mm.

Weight

Parasol Zenith VAV 600

Length mm	Type	Dim. Ø	Dry weight (kg)	Water volume (l)	
				cooling	heating
600	A	125	13.1	1.08	
600	B	125	13.3	0.84	0.34
600	A	160	13.7	1.08	
600	B	160	13.8	0.84	0.34

Parasol Zenith VAV 1200

Length mm	Type	Dim. Ø	Dry weight (kg)	Water volume (l)	
				cooling	heating
1200	A	125	23.8	2.4	
1200	B	125	23.8	1.8	0.7
1200	A	160	24.6	2.4	
1200	B	160	24.6	1.8	0.7

Parasol Zenith VAV 1800

Length mm	Type	Dim. Ø	Dry weight (kg)	Water volume (l)	
				cooling	heating
1800	A	200	35.9	3.8	-
1800	B	200	35.9	2.7	1.1

Weights above are excl.:

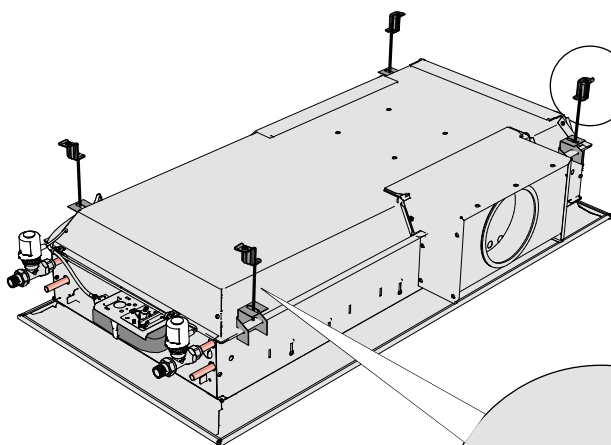
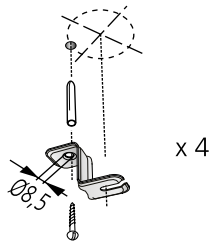
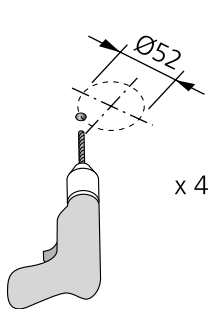
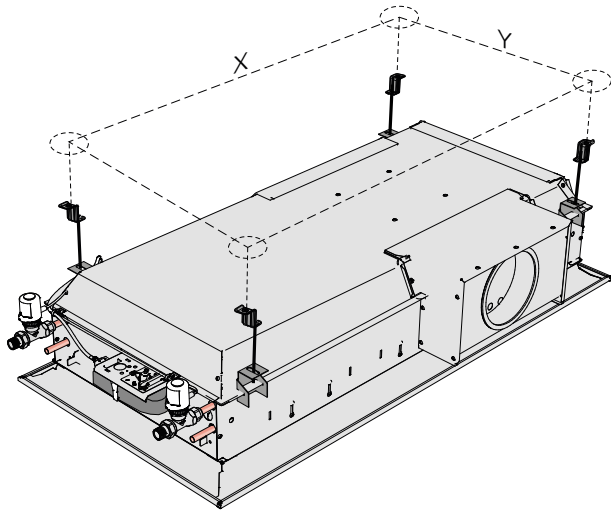
Sensor module (0.1 kg).

Control plate with regulator (0.28 kg).

Installation

Suspension bracket

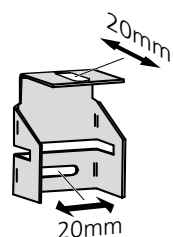
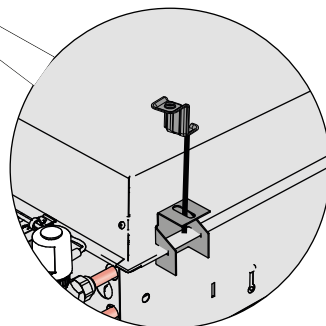
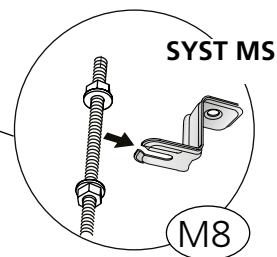
To mount the product on the ceiling using standard suspension bracket SYST MS



c - c measurement

Placement of the bracket on delivery		
Length of the unit	c - c (mm) X	c - c (mm) Y
600	330 ±10	508 ±10
1200	930 ±10	508 ±10
1800	1530 ±10	508 ±10

Alternative placement of the suspension bracket		
Length of the unit	Out towards the corner	In towards the centre
	c - c (mm) X (A1)	c - c (mm) X (A2)
600	398 ±10	262 ±10
1200	998 ±10	862 ±10
1800	1598 ±10	1462 ±10

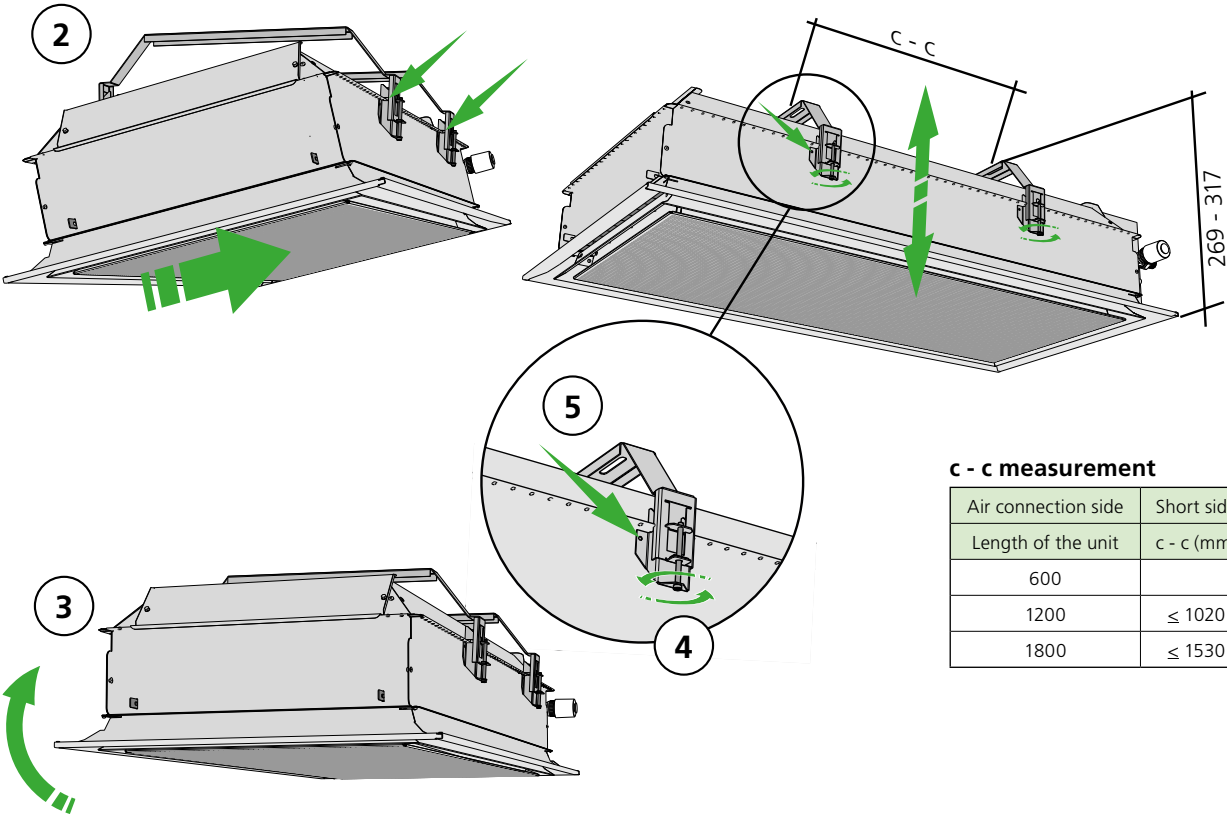
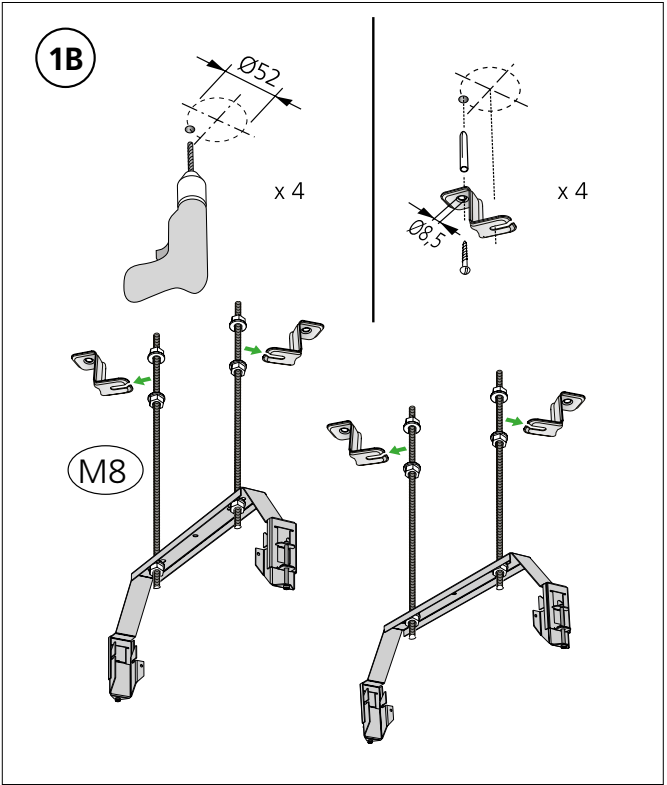
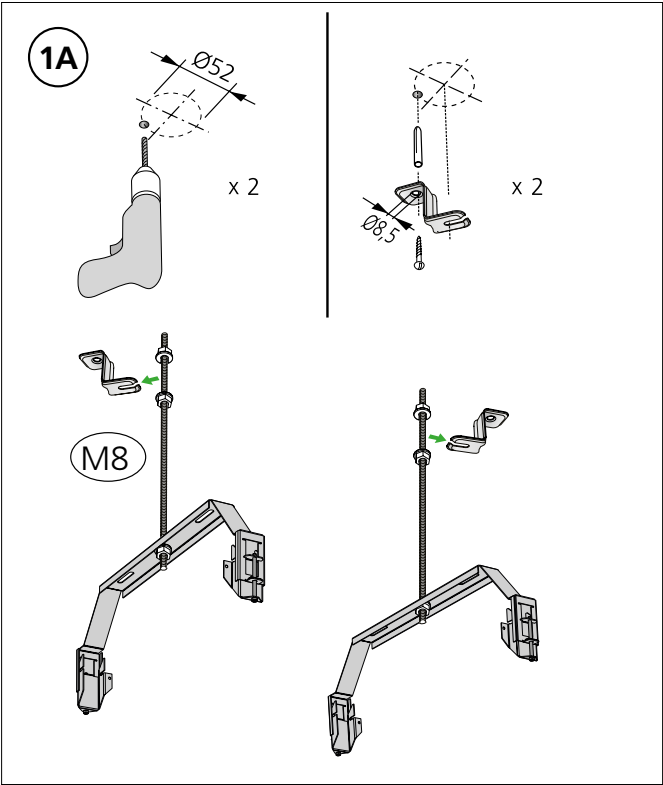


Accessory - Quick bracket

To mount the product on the ceiling with the accessory, quick bracket

1A: Installation with one centred threaded rod per quick bracket.

1B: Installation with two threaded rods per quick bracket

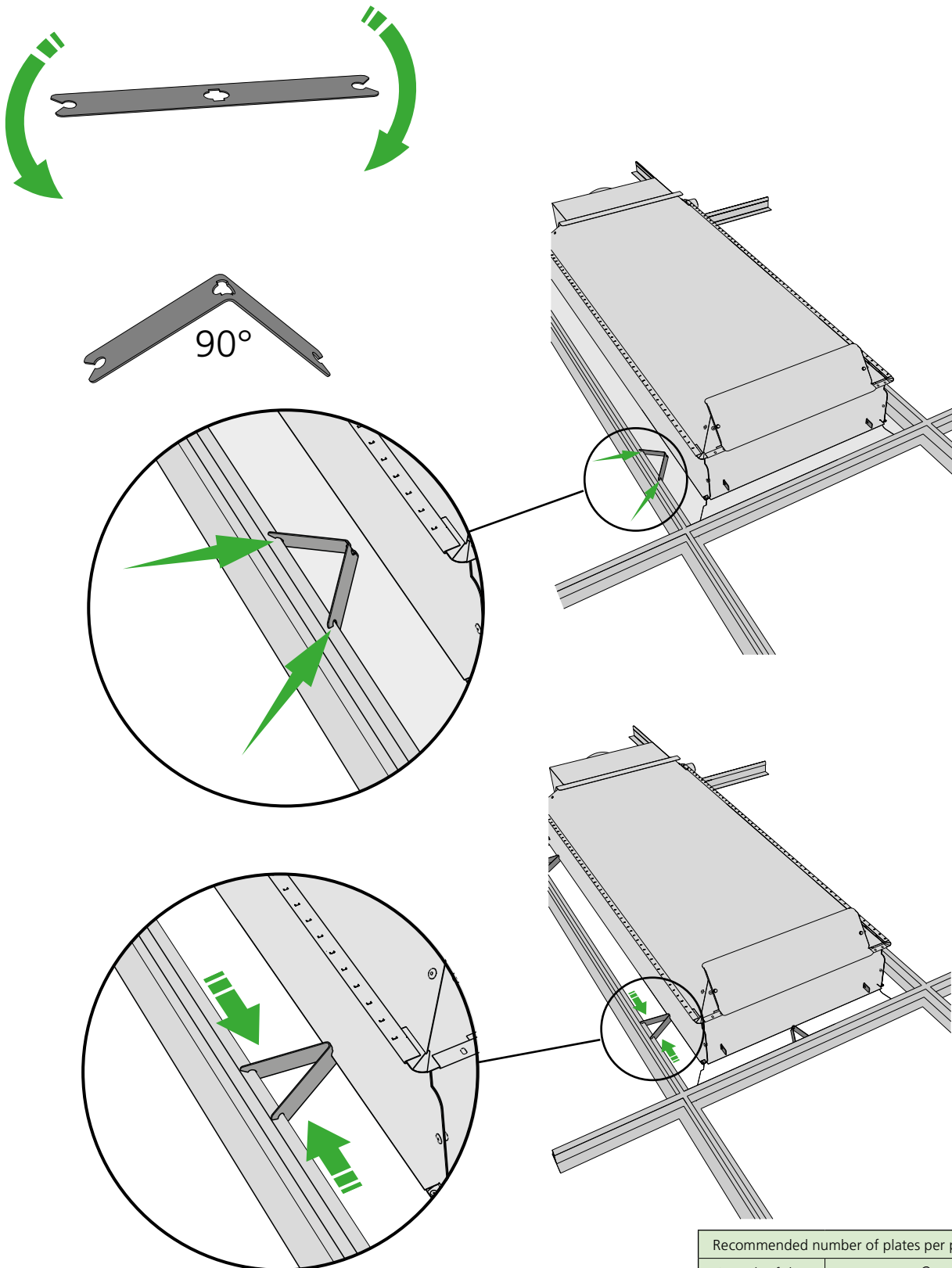


c - c measurement

Air connection side	Short side	Long side
Length of the unit	c - c (mm)	c - c (mm)
600	≤ 320	
1200	≤ 1020	900-1020
1800	≤ 1530	900-1530

Accessory - Mounting in concealed T-bars

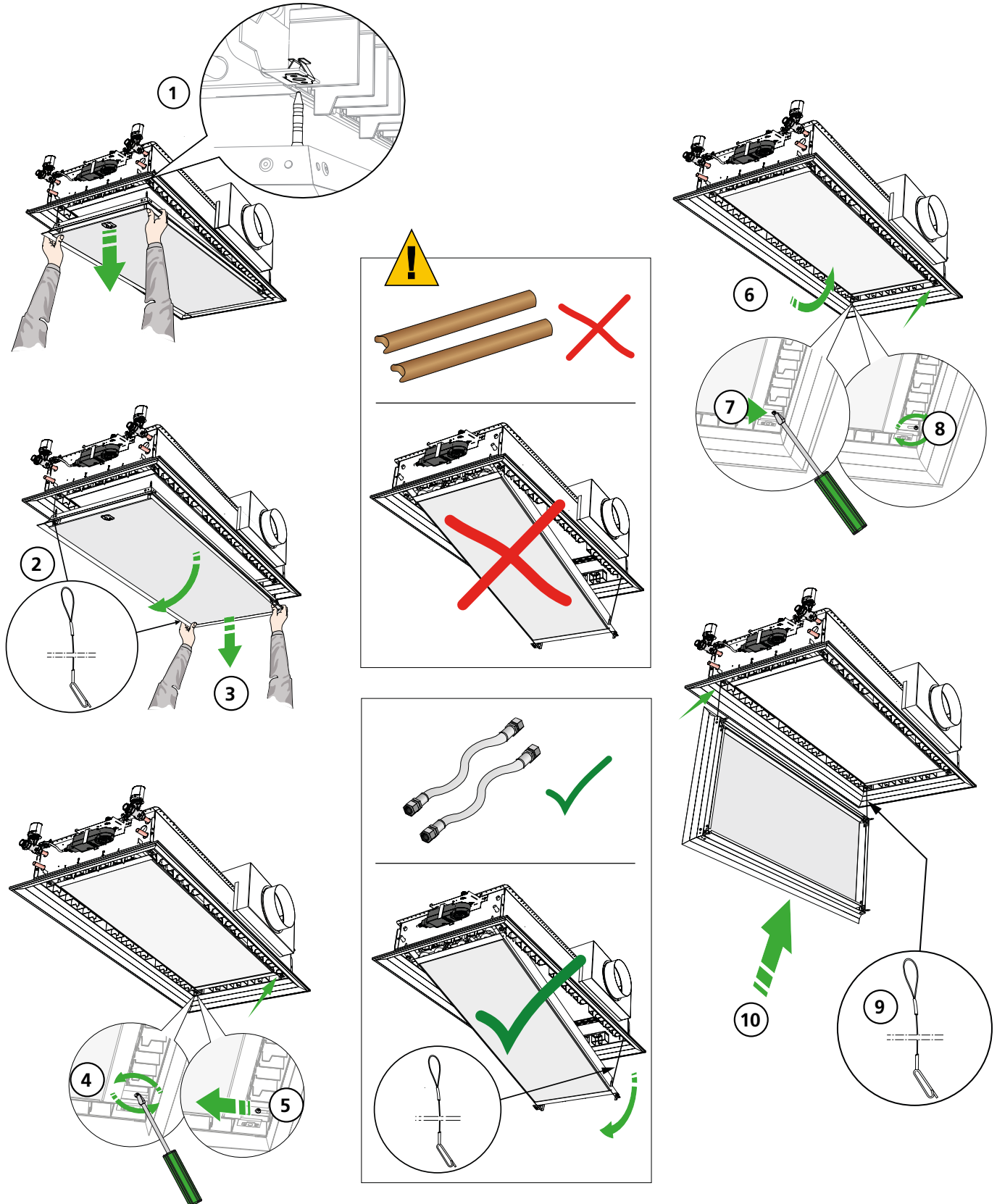
To centre the product when mounting in concealed T-bars.



Recommended number of plates per product.	
Length of the unit	
600	4
1200	6
1800	6-8

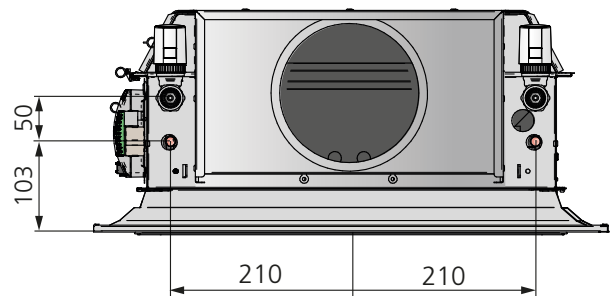
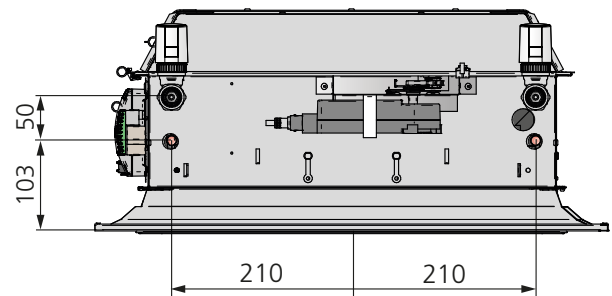
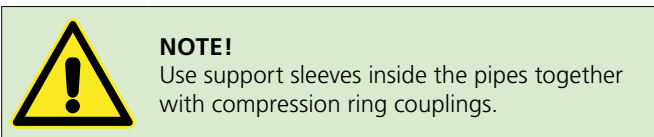
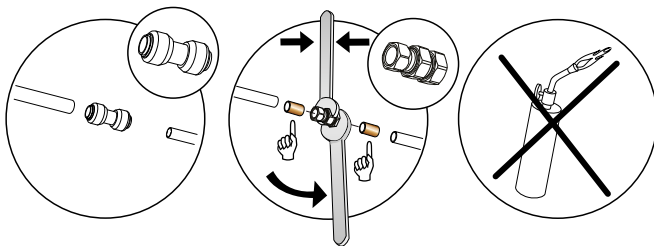
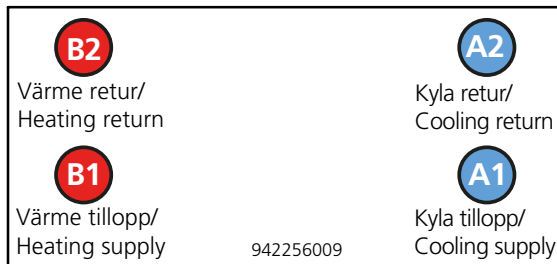
Accessory - Fold-out coil

PARASOL Zenith VAV with fold-out coil (accessory) for easy access and cleaning when stringent demands are made on hygiene. The accessory, fold-out coil, requires flexible connecting hoses on the water side.



Water connection

PARASOL Zenith VAV 600 / 1200 / 1800

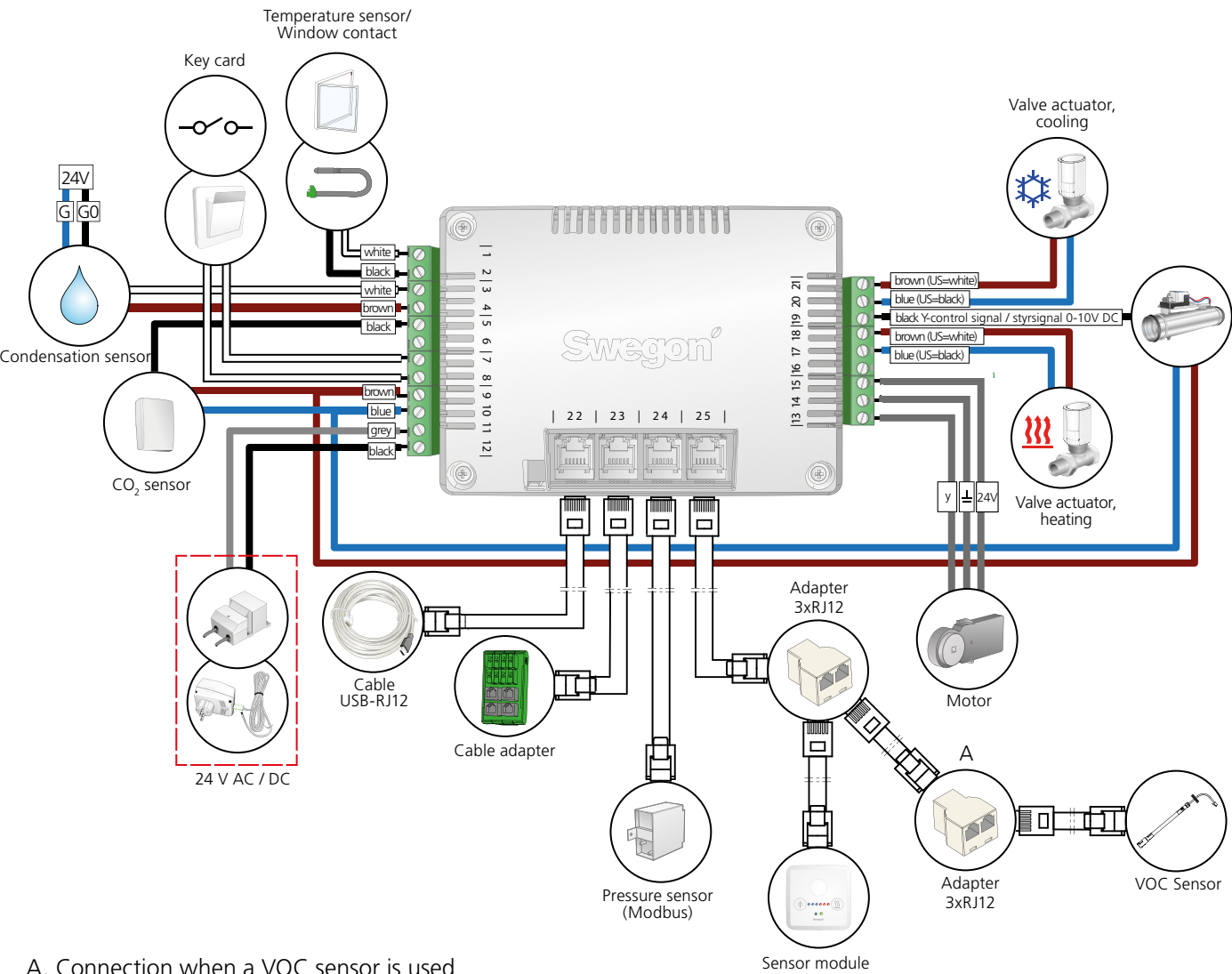


Connection sizes

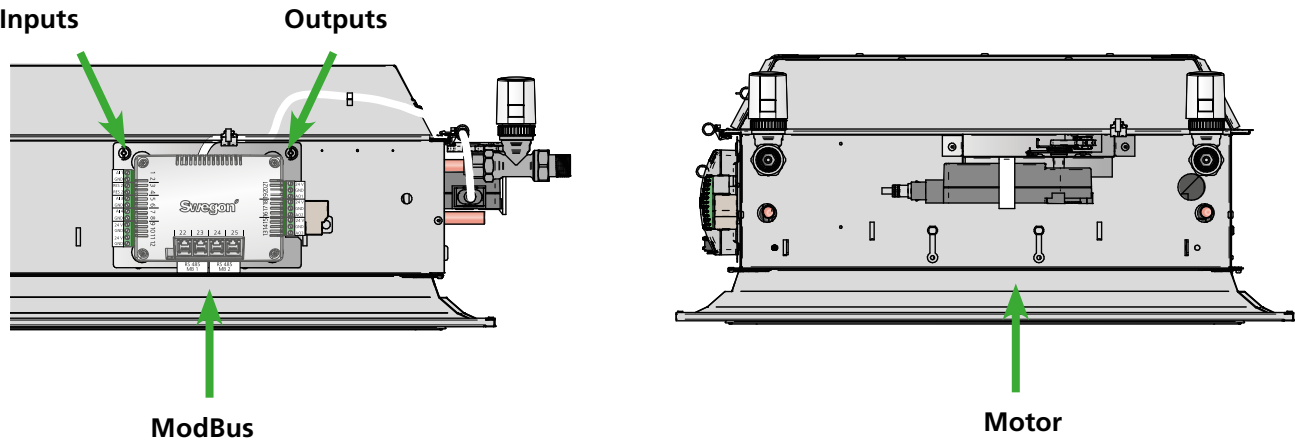
Model	Length	Factory-fitted	Connection	Coupling type	Connection	Coupling type
A Cooling only	600, 1200	Actuator and valve	Return	DN15, male thread	Supply pipe	Plain pipe end 12 x 1.0 mm
B Cooling/Heating	600, 1200	Actuator and valve	Return	DN15, male thread	Supply pipe	Plain pipe end 12 x 1.0 mm
A Cooling only	1800	Actuator and valve	Return	DN20 external threads	Supply pipe	Plain pipe end 15 x 1.0 mm
B Cooling Heating	1800	Actuator and valve	Return	DN20 male thread/ DN15, male thread	Supply pipe	Plain pipe end 15 x 1.0 mm/ Plain pipe end 12 x 1.0 mm
A Cooling only	600, 1200	-	Return	Plain pipe end 12 x 1.0 mm	Supply pipe	Plain pipe end 12 x 1.0 mm
B Cooling/Heating	600, 1200	-	Return	Plain pipe end 12 x 1.0 mm	Supply pipe	Plain pipe end 12 x 1.0 mm
A Cooling only	1800	-	Return	Plain pipe end 15 x 1.0 mm	Supply pipe	Plain pipe end 15 x 1.0 mm
B Cooling Heating	1800	-	Return	Plain pipe end 15 x 1.0 mm/ Plain pipe end 12 x 1.0 mm	Supply pipe	Plain pipe 15 x 1.0 mm/ Plain pipe 12 x 1.0 mm

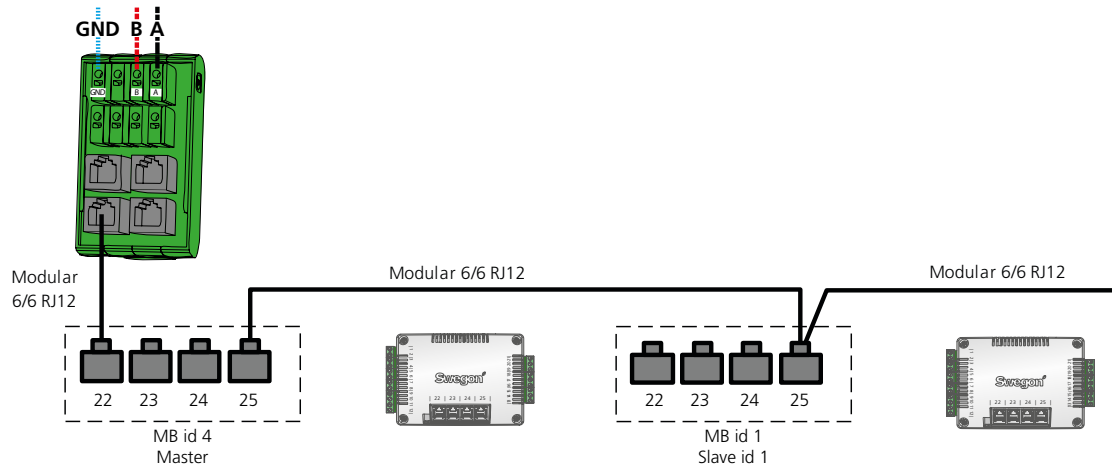
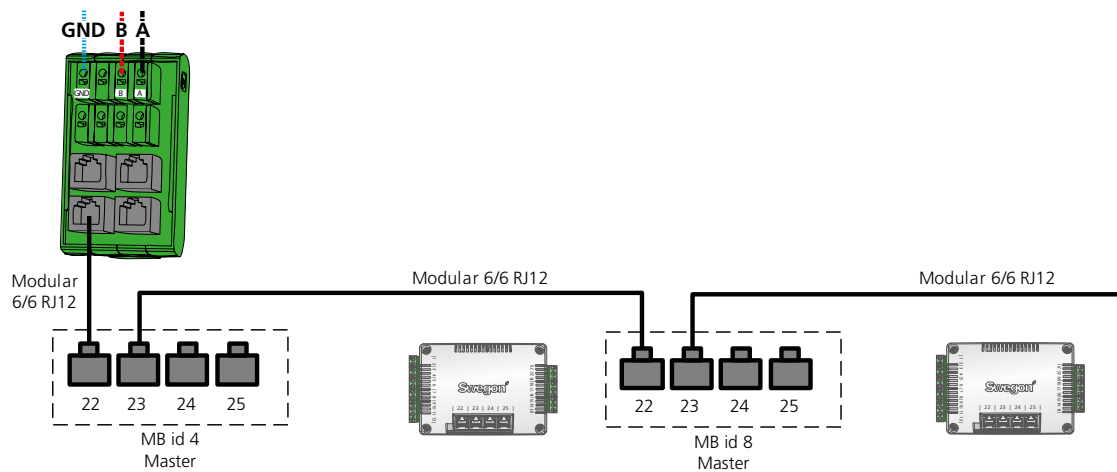
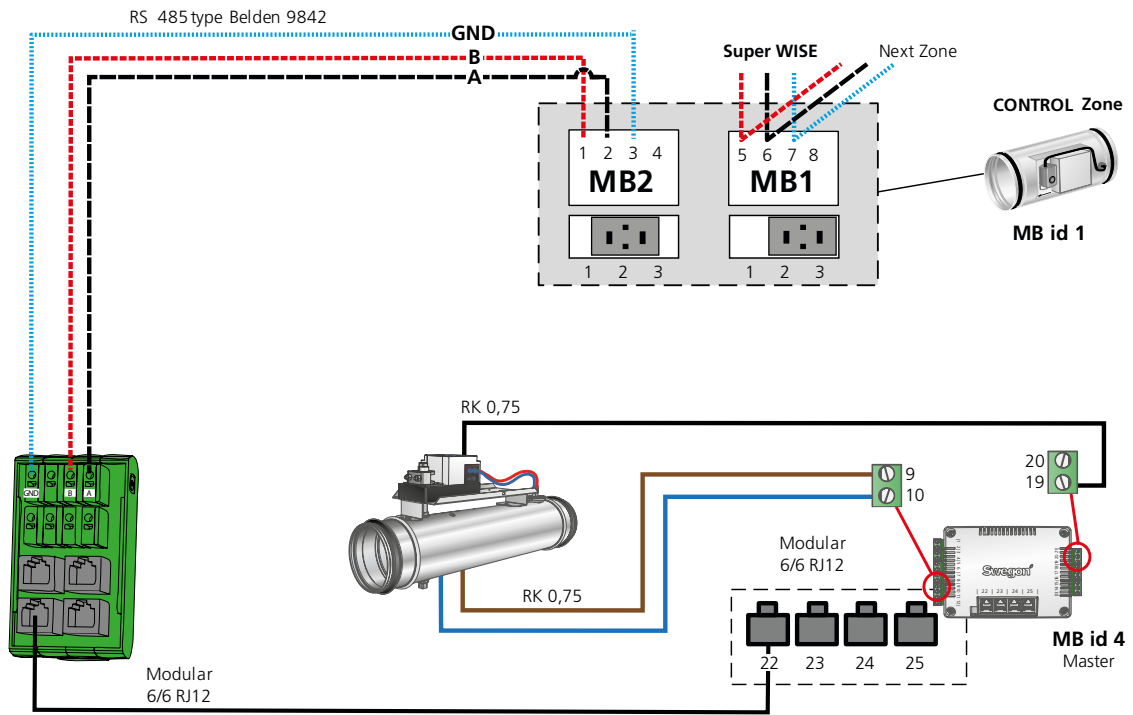
Wiring diagram

Wiring diagram for accessories



A. Connection when a VOC sensor is used





Menu sensor module:

Press and hold the left and right-hand buttons for five seconds to access the menu.

Use the left-hand button () to steps through the menus. Use the right-hand button () to confirm your selection.

Press the left-hand button and select:

1. Alarm list
2. Air commissioning
3. Water commissioning
6. Return to menu

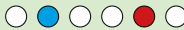


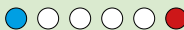
Confirm selections by pressing the right-hand button

1. Alarm list: See the complete alarm list to the right. In the commissioning menus:

- Navigate between the menus by pressing the left-hand button
- Confirm selections by pressing the right-hand button
- When a selection has been confirmed, the blue LED will flash for about 60 seconds.
- In order to return to normal operation, select "no adjustment"

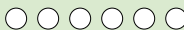
2. Commissioning, air:

2.1. Min. airflow, no occupants 

2.2. Min. airflow, occupancy 

2.3. Max. air flow, occupancy 

2.4. Min. airflow, holiday/longer period of no occupancy 

2.5. No adjustment 

3. Commissioning, water:

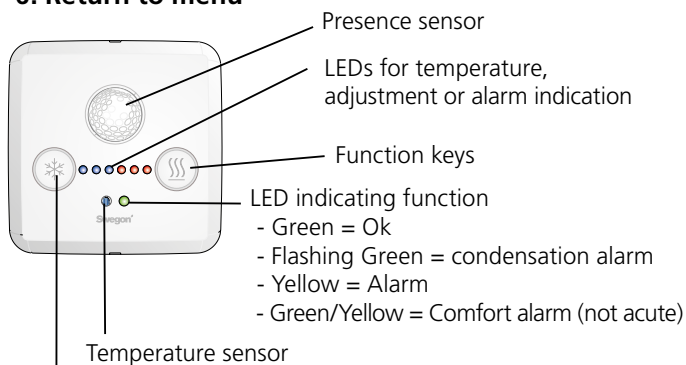
3.1. Open the chilled water valve 

3.2. Open heated water valve 

3.3. No adjustment 

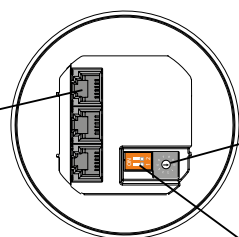
4, 5 are not used

6. Return to menu



Function keys

3 parallel RJ12 ports (Modbus) for connections e.g. controller, additional sensor module or PC with the help of Cable converter USB-RJ12



Addressing the sensor module. 10 sensor modules can be connected to each master unit, each one must have a unique address to work.

Switch for termination resistance. On the last sensor module in the circuit switch 1 is set to On.

Alarm list for the sensor module

Alarm no. Type of alarm

Alarm 1 Supply voltage low

Alarm 2 Supply voltage critical low

Alarm 3 Ext temp missing

Alarm 4 Ext temp error

Alarm 5 Condensation sensor error

Alarm 6 SM temp sensor error

Alarm 7 SM button error

Alarm 8 CO₂ sensor missing

Alarm 9 VOC Error

Alarm 10 Low pressure

Alarm 17 SM comm error

Alarm 18 Slave comm error

Alarm 19 Pressure sensor comm error

Alarm 20 VOC sensor comm error

Alarm 21 No master request (slave)

Alarm 22 Slave incompatible version

Alarm 25 Heating comfort alarm

Alarm 26 Cooling comfort alarm

Alarm 27 Temp. Set point overlap alarm

Alarm 28 Air quality comfort alarm

Alarm 29 Condensation

Alarm 33 24 V Out 1 overload error

Alarm 34 24 V Out 2 overload error

Alarm 35 24 V Out 3 overload error

Alarm 41 Slave input sum alarm

Alarm 42 Slave output sum alarm

	32	16	8	4	2	1
Alarm 1						●
Alarm 2					●	
Alarm 3					●	●
Alarm 4				●		
Alarm 5				●		●
Alarm 6				●	●	
Alarm 7				●	●	●
Alarm 8			●			
Alarm 9			●			●
Alarm 10			●		●	
Alarm 17		●				●
Alarm 18		●			●	
Alarm 19		●			●	●
Alarm 20		●		●		
Alarm 21		●		●		●
Alarm 22		●		●	●	
Alarm 25		●	●			●
Alarm 26		●	●		●	
Alarm 27		●	●		●	●
Alarm 28		●	●	●		
Alarm 29		●	●	●		●
Alarm 33	●					●
Alarm 34	●				●	
Alarm 35	●				●	●
Alarm 41	●		●			●
Alarm 42	●		●		●	

The alarm is shown with a number of LEDs when you select Alarm list (1) in the menu.

Each LED represents a number as per the table above and the numbers are added to form an alarm number.

E.g. Middle blue and the two last red are lit (xoxoo)

Middle blue corresponds to 16, next last red 2 and last red 1.

The sum of these is 19, which is the alarm number.

Return to normal operation by pressing the right-hand button.

Air connection

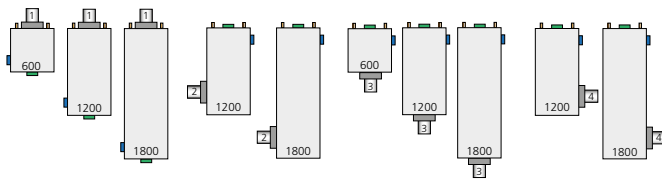
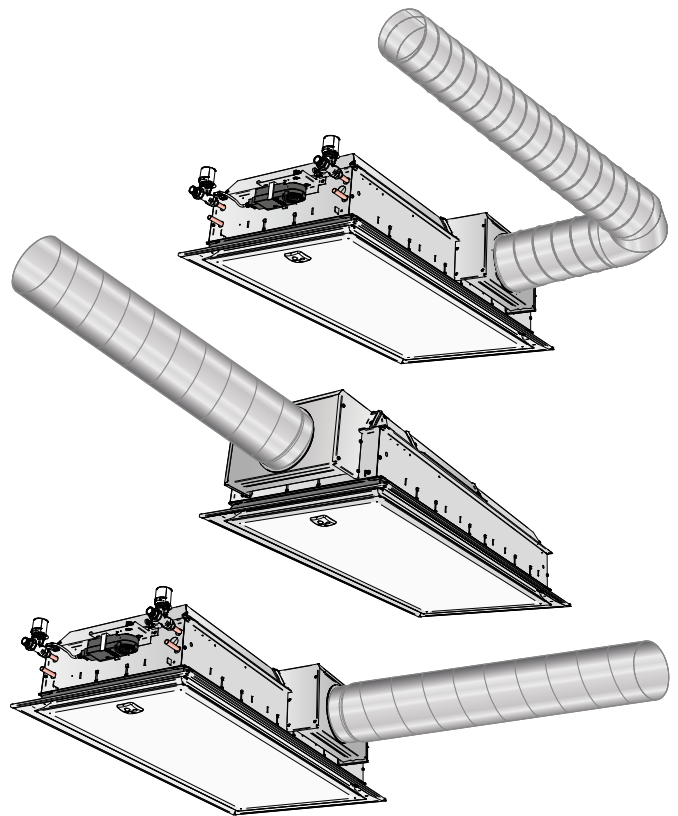
Connection sizes

Length of the unit	Dim. Ø		
	125	160	200
600, 1200	Yes	Yes	No
1800	No	No	Yes

Selectable air connection sides.

When ordering, depending on the length, it is possible to choose connection side 1 2, 3 or 4, see the table and figure below (view from above).

Length of the unit	Side			
	1*	2	3	4
600	Yes	No	Yes	No
1200	Yes	Yes	Yes	Yes
1800	Yes	Yes	Yes	Yes

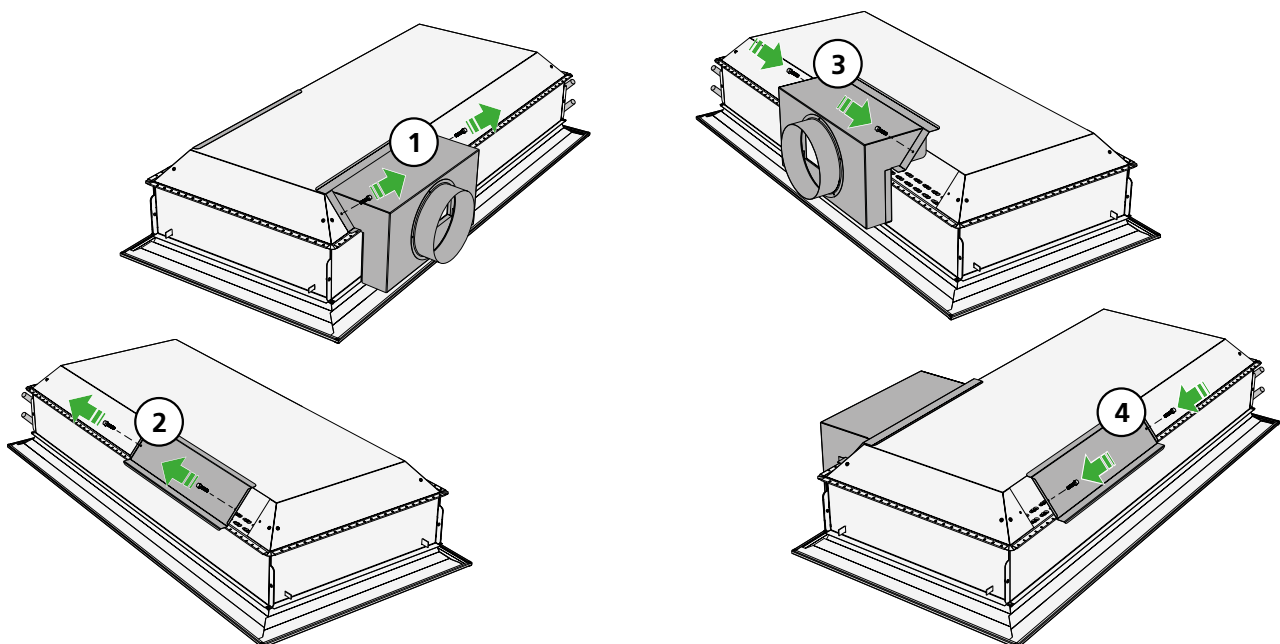


Symbol explanation

	Water pipe
	Motor
	Control equipment URC1
	Air connection

Alternative air connection side

1. Unscrew the screws from the sleeve and cover
2. Change the location of the sleeve and cover
- 3 - 4. Screw the sleeve and cover in position with screws on the new side



Commissioning

K-factor setting

K-factor setting for products ordered without motor

$$p_i = \left(\frac{q}{k}\right)^2 [\text{Pa}]$$

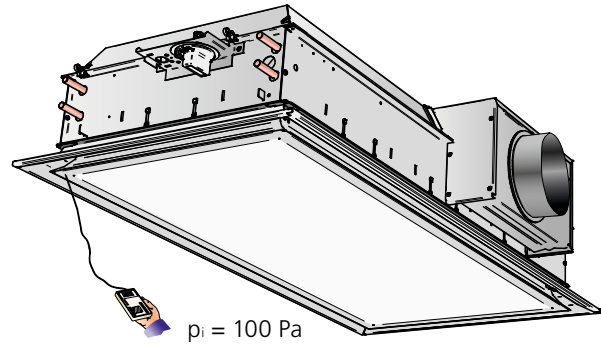
$$q = k \cdot \sqrt{p_i} [\text{l/s}]$$

$$\frac{q}{\sqrt{p_i}} = k$$

$$p_i [\text{Pa}]$$

$$q [\text{l/s}]$$

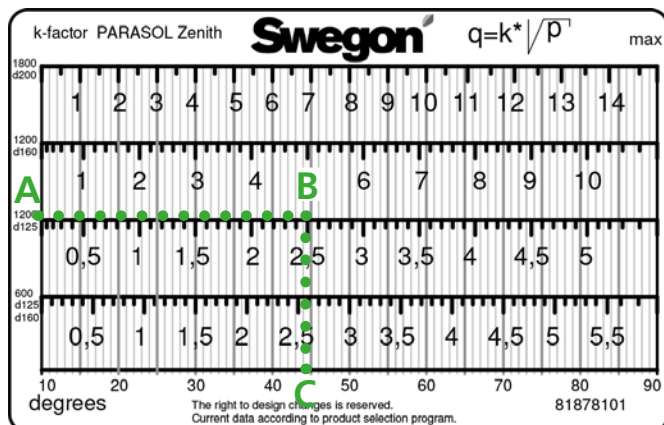
$$k = \text{k-factor}$$



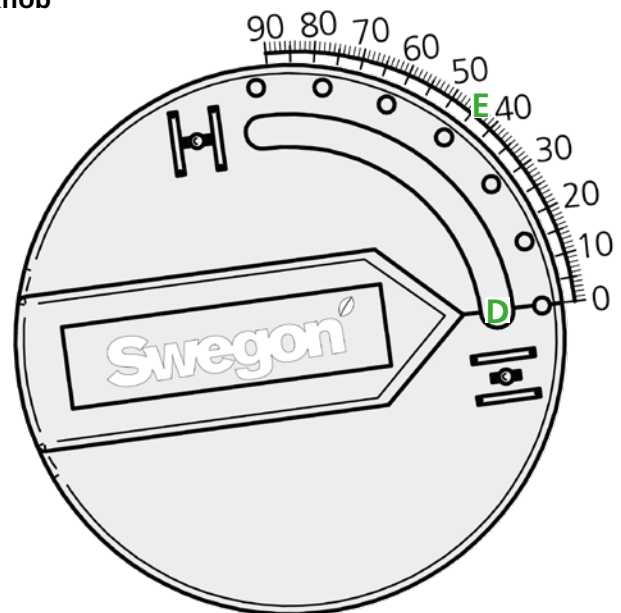
Example: To achieve the required flow of 25 l/s at 100 Pa, requires k-factor 2.5

- A** Find the product's length and air connection diameter from left-hand side of the k-factor table.
- B** Read the required k-factor on the row in question.
- C** Follow the vertical row and read the number of degrees at the bottom.
- D** Loosen the screw located in the knob's groove (the knob then moves to the fully open position, 90°)
- E** Turn the knob until the marking reaches the required number of degrees.
In the example from the table for a PARASOL Zenith VAV with length 1200, ø125, k-factor 2.5, turn the knob to 44°.
- F** Tighten the screw again when the marking is set on the required number of degrees.

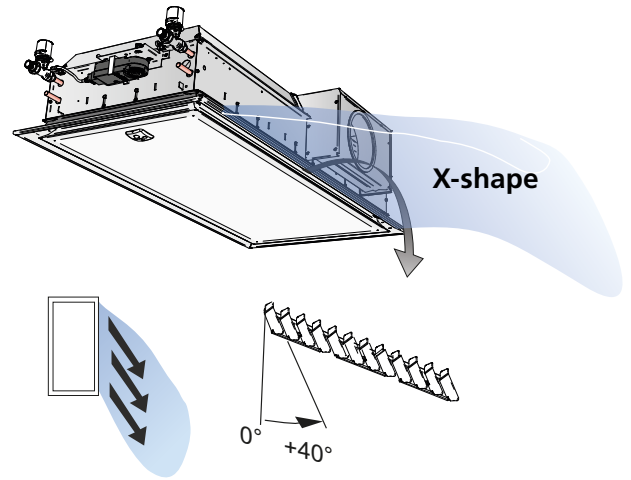
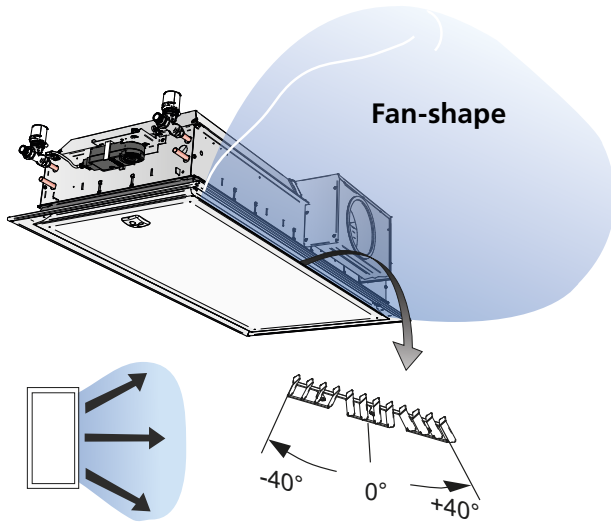
K-factor table



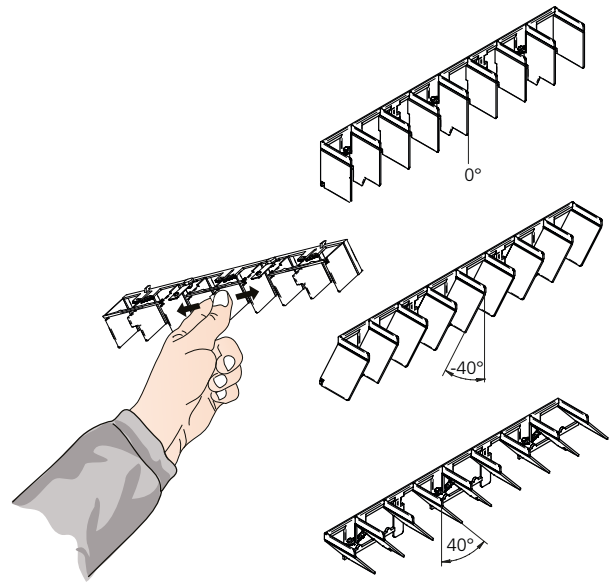
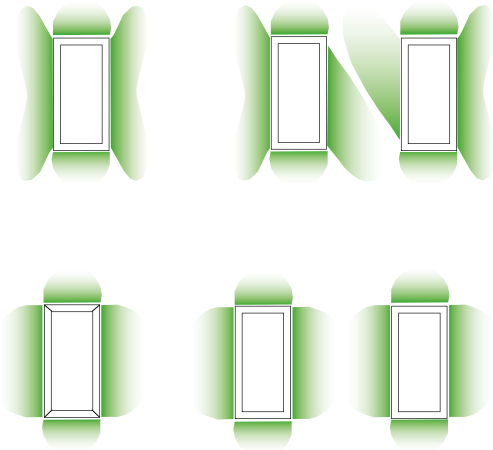
Knob



ADC



Examples of ADC settings



Maintenance

