REACT Pacific

Instructions for Use

2026-05-08
Art. 942428103

Contents

The document refers to version "d"

Symbol key

Symbols on the machine

This product complies with applicable EU directives

CE

Symbols in this user manual

Warning/Caution!

Swegon

Application area

The product is a chilled beam with VAV dampers. The product is used to ventilate, cool and heat premises.

The product may not be used for anything other than its intended use.

General

Read through the entire instructions for use before you install/use the product and save the instructions for future reference. It is not permissible to make changes or modify this product other than those specified in this document.

Contents

1 st REACT Pacific

1 st Instructions for use

Protective equipment

Always use appropriate personal protective equipment for the work in question, in the form of gloves, respirators, protective glasses and helmets during handling, installation, cleaning and service/maintenance.

Electrical safety

Permitted voltage, see Electrical data.

It is not permissible to insert foreign objects into the product's contactor connections or ventilation openings; risk for short circuiting.

24 V isolation transformer to be connected should comply with the provisions of IEC 61558-1.

Cable sizing must be carried out for cabling between the product and the power supply source.

Disconnect the power supply when working on products that are not required to run.

Always follow the local/national rules for who shall be permitted to carry out this type of electrical installation.

Handling

Always use appropriate transport and lifting devices when the product is to be handled to reduce ergonomic loads.

The product must be handled with care.

Installation

- Moist, cold and aggressive environments must be avoided.
- Assemble the product according to this instruction and applicable industry regulations.
- Install the product for easy access during service/maintenance.
- Avoid installing the product near a heat source.
- Check to make sure that the product does not have any visible defects.
- Check that the product is properly secured after it has been installed.
- Secure cables with cable ties.
- Check that all cables are properly secured in place after installation.

Cleaning

Ideally the product should be cleaned twice a year by vacuuming the coil to remove loose dust.

In fibre-dense environments such as hotels, an initial cleaning is recommended, about three months after use, as new textiles usually release more fibres. Thereafter, cleaning is recommended at an interval of one to two times per year.

A simple visual inspection of connections is recommended when cleaning.

For cleaning grilles and other painted surfaces: Avoid aggressive cleaning agents which may harm painted surfaces. Normally a mild soap or alcohol solution is fully adequate for cleaning. See also the maintenance section.

Cleaning of electrical components

- If needed, use a dry cloth to clean the components.
- Never use water, detergent and cleaning solvent or a vacuum cleaner.
- Service/maintenance
- In connection with a service, mandatory ventilation inspection or cleaning of the ventilation system, check that the general condition of the products looks ok.
- Pay particular attention to the suspension, cables and that they sit firmly in place.
- It is not permissible to open or repair electrical-components.
- If you suspect that the product or a component is defective, please contact Swegon.
- A defective product or component must be replaced by an original spare part from Swegon.

Environment and waste disposal

Help to protect the environment by ensuring correct disposal- of the packaging and use the products in accordance with applicable environmental regulations.

Product warranty

The product warranty or service agreement will not be in effect/ will not be extended if: (1) The product is repaired, modified or changed, unless such repair, modification or change has been approved by Swegon AB; or (2) the serial number on the product has been made illegible or is missing.

Installation

Dimensions

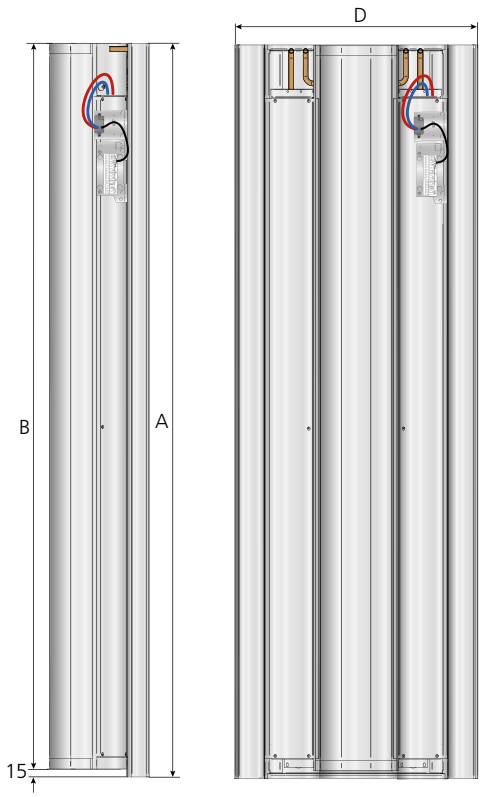


Figure 1. Dimension sketch - full size

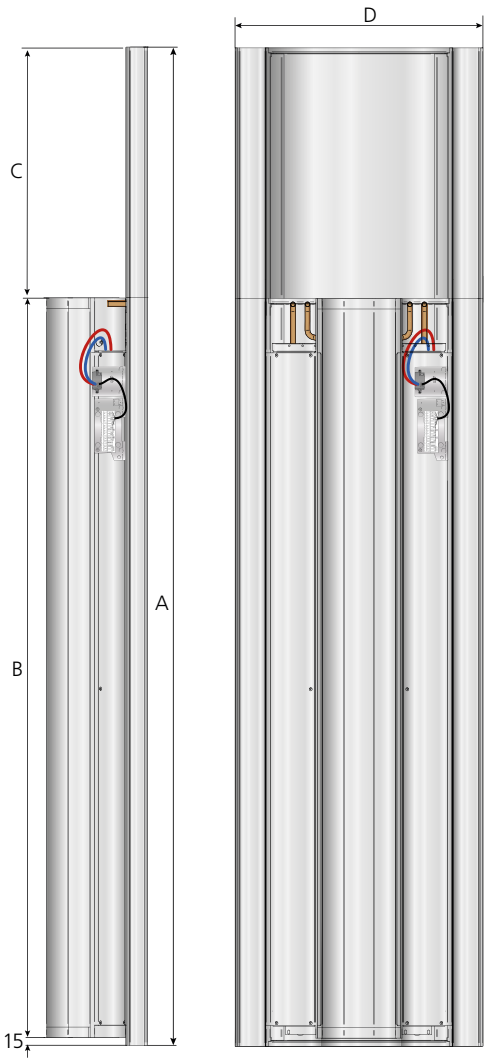


Figure 2. Dimension sketch - Modules in different sizes

For design module in T-bar with 600 mm centre-to-centre

A	B	C	D
1194; 1715; 1794	1170	(1194)=24; (1715)=545; (1794)=624	594
1794; 2394	1770	(1794)=24; (2394)=624	594
2394; 2994	2370	(2394)=24; (2994)=624	594
2994	2970	(2994)=24	594

For design module in T-bar with 625 mm centre-to-centre

A	B	C	D
1242; 1867	1170	(1242)=72; (1867)=697	617
1867; 2492	1770	(1867)=97; (2492)=722	617
2492	2370	(2492)=122	617

For design module in T-bar with 675 mm centre-to-centre

A	B	C	D
1342; 2017	1170	(1342)=172; (2017)=847	667
2017; 2692	1770	(2017)=247; (2692)=922	667
2692	2370	(2692)=322	667

For design module in Clip-in ceiling and sheet metal ceiling coffers

A	B	C	D
1198; 1498; 1698; 1715; 1798	1170	(1198)=28; (1498)=328; (1698)=528; (1715)=545; (1798)=628	598
1798; 2398	1770	(1798)=28; (2398)=628	598
2398; 2998	2370	(2398)=28; (2998)=628	598
2998	2970	(2998)=28	598

Weight

Air module

Length	Air connection	Weight
(mm)	ø	(kg)
1170	125	6,38
1170	160	6,94
1170	200	7,66
1770	125	9,63
1770	160	10,36
1770	200	11,46
2370	125	12,74
2370	160	13,75
2370	200	15,11
2970	125	15,8
2970	160	17,03
2970	200	18,71

Capacity module

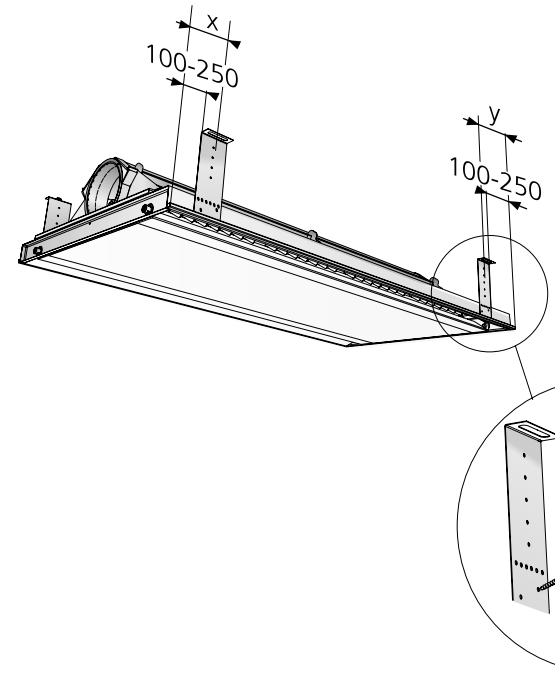
Length	Water volume (l)		Dry weight
(mm)	Cooling circuit	Heating circuit	(kg)
1000	0,97	0,26	3,41
1000 NPT	0,97	0,26	3,79
1600	1,52	0,40	5,02
1600 NPT	1,52	0,40	5,4
2200	2,09	0,53	7,06
2200 NPT	2,09	0,53	7,44
2800	2,63	0,67	8,63
2800 NPT	2,63	0,67	9,01

Design module

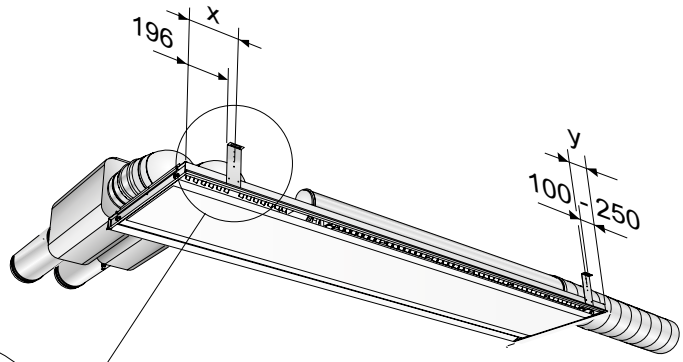
Length	Width	Weight
(mm)	(mm)	(kg)
1194	594	5,35
1794	594	7,65
2394	594	9,96
2994	594	12,27
1198	598	5,39
1798	598	7,72
2398	598	10,04
2998	598	12,36
1213	603	5,49
1823	603	7,87
2433	603	10,25
3043	603	12,63
1242	617	5,72
1867	617	8,21
2492	617	10,71
1342	667	6,55
2017	667	9,46
2692	667	12,38

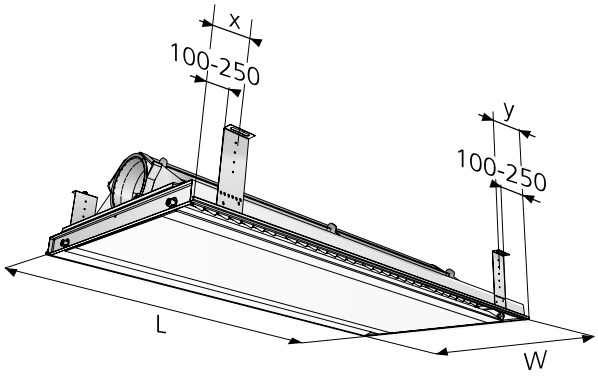
Installation

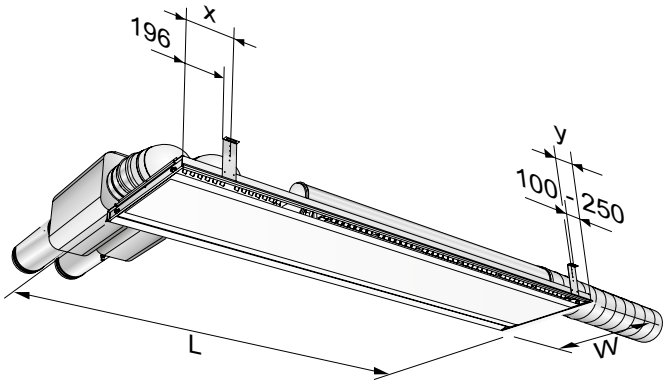
REACT Pacific

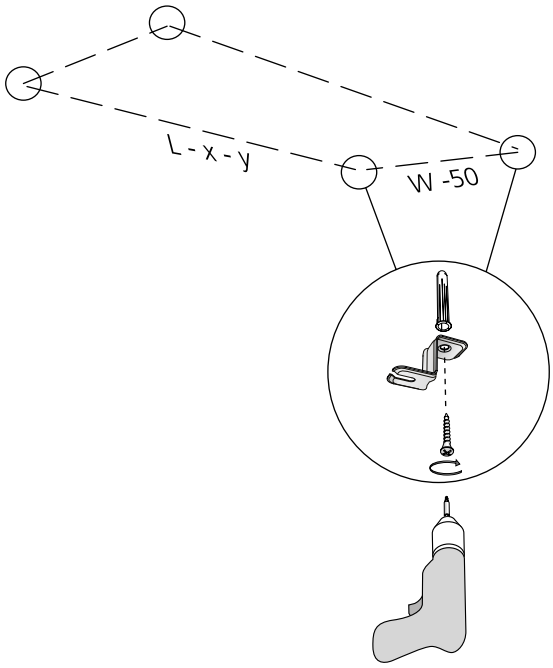


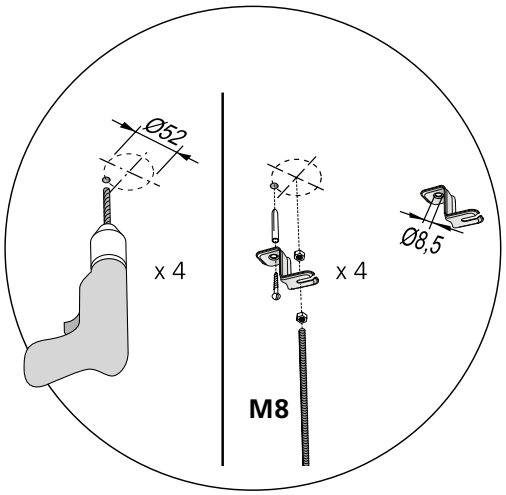
REACT Pacific SA/EA

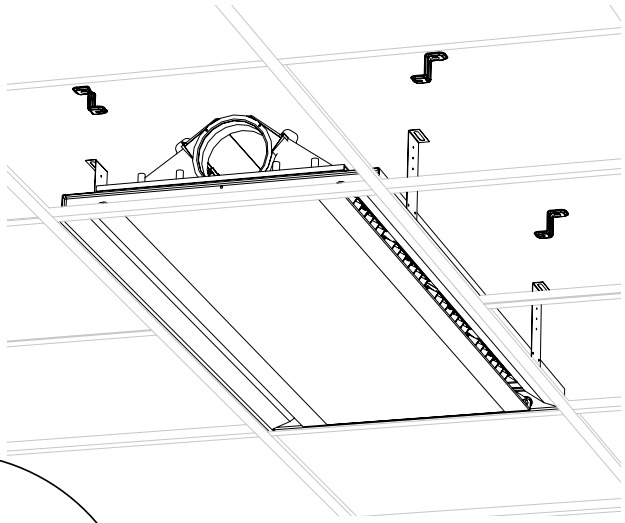


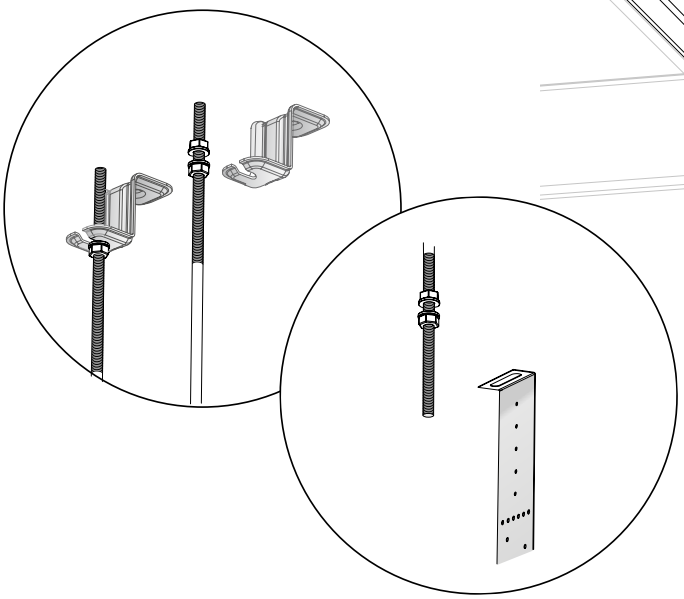


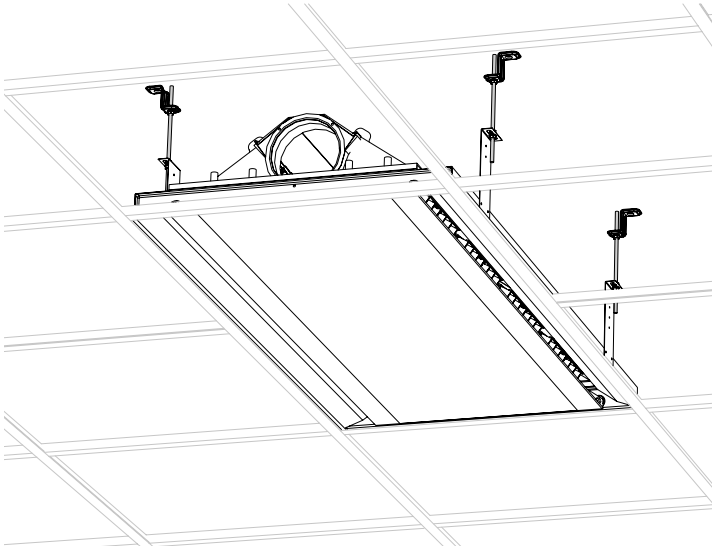





Ø52
x 4
x 4
Ø8,5
M8

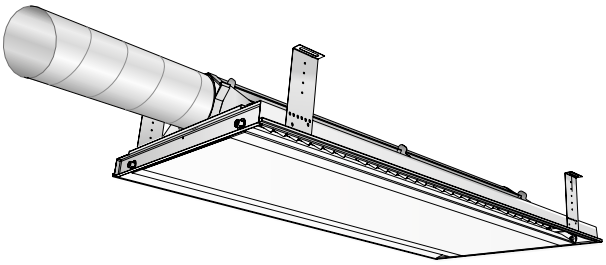




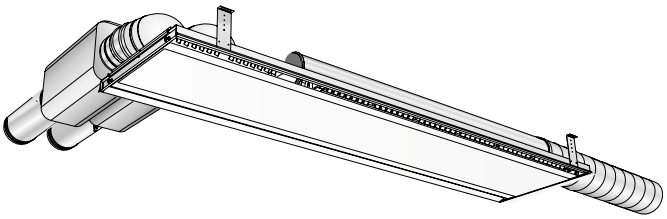


Air

REACT Pacific



REACT Pacific with SA/EA module



Air connection

Connection dimensions - REACT Pacific

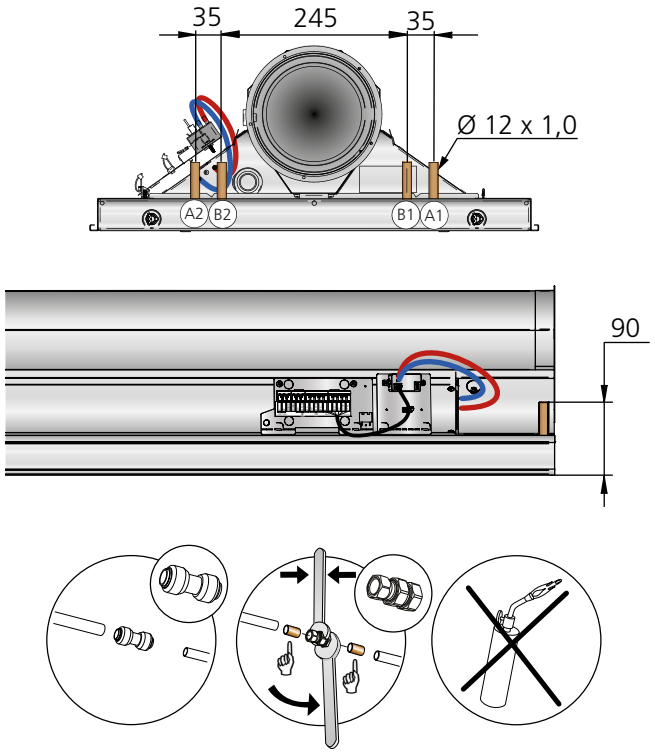
Unit *	Air connection
(mm)	Ø
1200, 1800, 2400, 3000	125, 160, 200

** Nominal length*

Connection dimensions - SA/EA modul

Air connection
Ø
160

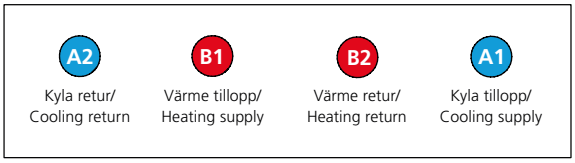
Water



Note!

Use support sleeves inside the pipes together with compression ring couplings.

Max. recommended operating pressure: 1600 kPa
Max. permissible inlet flow temperature: 60°C



Water quality

Swegon recommends water quality according to VDI 2035-2 for both the heating and cooling systems. In order to maintain the oxygen content in the water below the levels (<0.1 mg/l) prescribed in VDI 2035-2, it is recommended to install a vacuum degasser, particularly in the cooling system where it's more challenging to dissolve gas. It is also important that the prepressure in the expansion vessel is dimensioned according to EN-12828 for both the heating and cooling systems and that regular checks are made of the pre-pressure. The cooling and heating systems must be designed to prevent oxygen from entering the system, this is particularly important to consider when selecting flex hose, pipes and expansion vessels. When the system is filled with fresh water, it has an oxygen content of approximately 8 mg/l, however, this oxygen is consumed quickly through corrosion processes and within a few days the oxygen in the water should be consumed.

Nevertheless, it is important to avoid filling the system with fresh water unnecessarily.

Automatic deaerators are often installed to facilitate filling of the system. It is recommended that the automatic deaerators are turned off once the system has been fully vented to avoid these drawing in air in the system if the pre-pressure in the expansion vessel should drop.

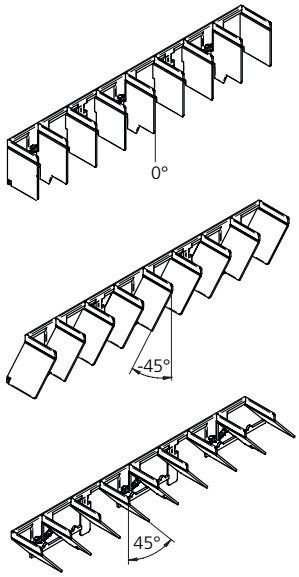
Connection sizes

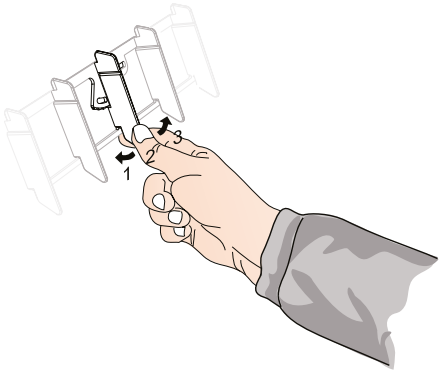
Model	Length *	Factory-fitted	Connection	Coupling type	Connection	Coupling type
Cooling only	1200, 1800	Actuator and valve	Return	DN15, male thread	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling/heating	1200, 1800	Actuator and valve	Return	DN15, male thread	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling only	2400, 3000	Actuator and valve	Return	DN20 external threads	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling/ heating	2400, 3000	Actuator and valve	Return	DN20 external threads DN15 external threads	Supply pipe	Plain pipe 12 x 1.0 mm Plain pipe 12 x 1.0 mm
Cooling only	1200, 1800	-	Return	Plain pipe 12 x 1.0 mm	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling/heating	1200, 1800	-	Return	Plain pipe 12 x 1.0 mm	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling only	2400, 3000	-	Return	Plain pipe 12 x 1.0 mm	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling/heating	2400, 3000	-	Return	Plain pipe 12 x 1.0 mm	Supply pipe	Plain pipe 12 x 1.0 mm

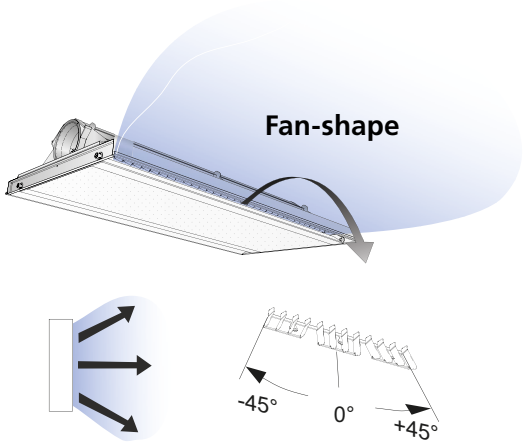
**Nominal length*

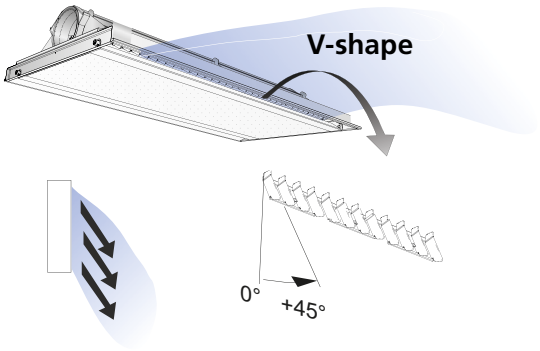
Commissioning

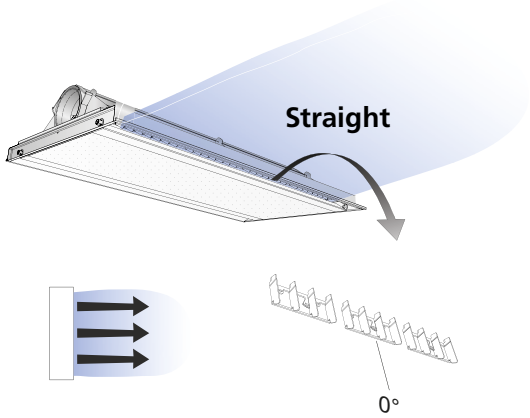
ADC











K-factor setting

PACIFIC AWC continuously regulates the k-factor to ensure the required airflow is maintained. The active k-factor setpoint can be found on the k-faktor label mounted at the actuator.

Control measurement of Air flow

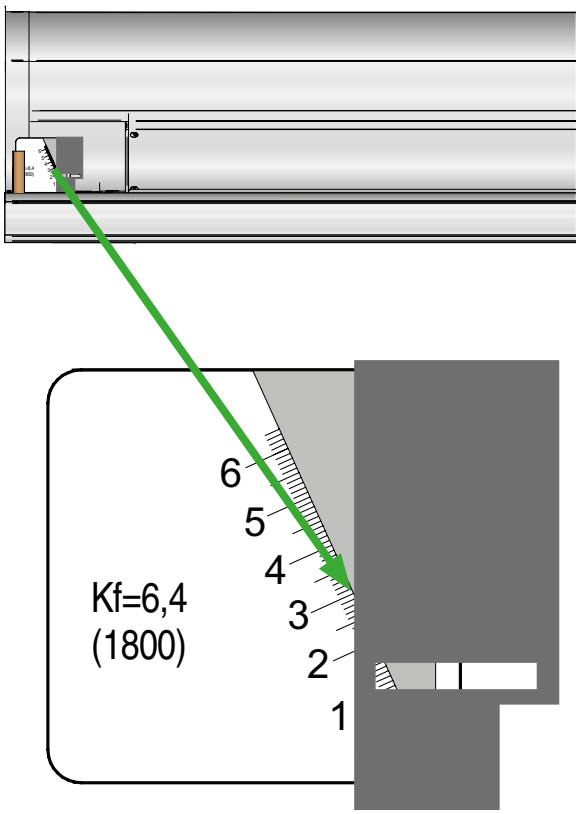
Step 1
Allow the system to stabilize.
It is recommended to set the system to balancing mode and wait until the products have stabilized and the expected airflow is reported.

Step 2
Disconnect the RJ45 cable from the motor control board to prevent the product from adjusting itself during the control measurement.

Step 3
Disconnect the pressure tubes from the air hose fittings and connect the measuring instrument to measure the duct pressure.

Step 4
Fold down the face plate and read the product's current K-factor by checking the K-factor scale against the control plate.

In the example image, the K-factor is 3.



Example showing the K-factor is 3.

Step 5
Use the measured pressure and the current K-factor to calculate the airflow (l/s) using the formula:

Flow tolerance

Air module ø	Minimum flow **			Tolerance Q* ±5 % but at least ±x		
	l/s	m³/h	cfm	l/s	m³/h	cfm
1200	7	25	14,8	2	7	4
1800	9	32	19	2	7	4
3400	11	39	23	2	7	4
3000	14	50	29	2	7	4

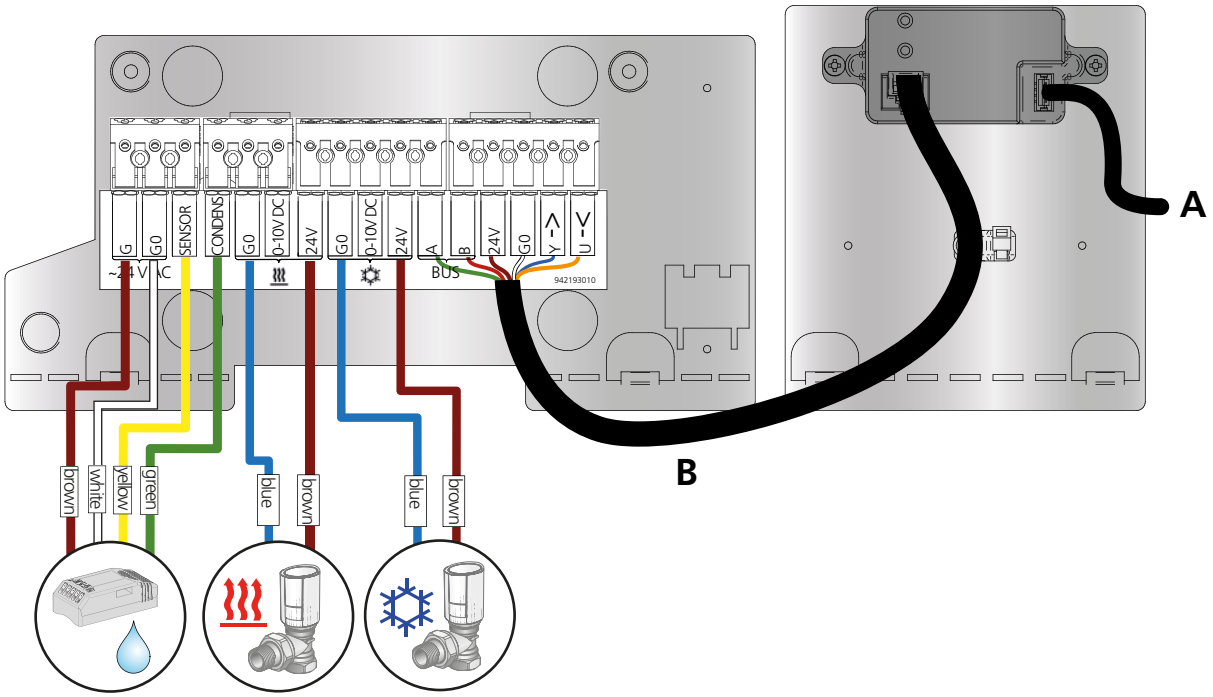
** Installed according to instructions*
*** For flows below the lowest specified level, we cannot guarantee the tolerances.*

$$q = k \cdot \sqrt{p}$$
$$q = 3 \cdot \sqrt{100}$$
$$q = 30\ l/s$$

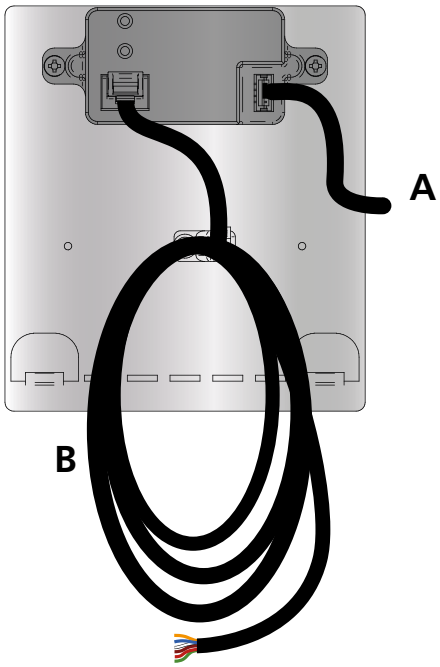
Wiring diagram

Wiring diagram for REACT Pacific ordered with and without accessories.

When REACT Pacific is ordered with accessories, the product is delivered with a terminal block. The cable from the motor controller to the motor (A) is already connected, as is the cable (B) from the motor controller to the terminal block. Other accessories are connected to the terminal block according to the instructions below.



When REACT Pacific is ordered without accessories, the product is delivered without a terminal block but with cable (A) pre-mounted from the motor controller to the motor, as well as the cable mounted on the motor controller for further on-site connection.



Connection – motor controller

Blue – Control signal (Y)	0..10 / (2..10) V
Orange – Feedback signal (U)	0..10 / (2..10) V*
Red – Modbus (B)	
Green – Modbus (A)	
Brown – 24V AC/DC	
White – 0V/GND**	

** Load on U (feedback): max 5 mA*
*** 0V/GND for the power supply serves as the reference level for both the analog interface and the Modbus interface.*

Electrical data

Power supply:	24V AC ±15% 50–60 Hz	
	24V DC ±25%	
Power consumption:	VA unit	W unit
Inrush current 10 ms/20 ms:	72	36
Operation:	4,5	3

Commissioning

Step-by-step description	
1	Download the application **Swegon Configuration Tool** from Google Play and install it on your Android device.
2	Start the app "Swegon Configuration Tool".
3	Disconnect the RJ45 connector from the control board.
4	Connect the commissioning cable to the Android device via USB-C and to the motor controller via RJ45 connector.
5	Select the device and press "Connect" to connect to the motor controller.

Home screen

Page 1 – Without connected commissioning cable

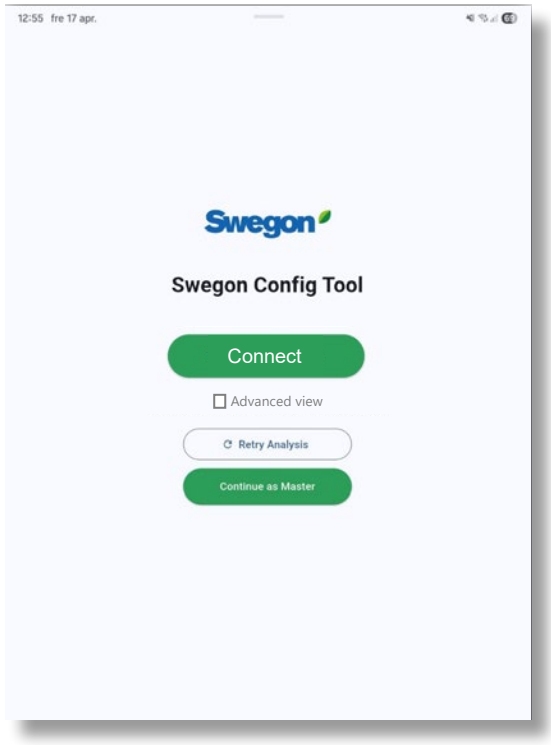
This is the first page you arrive at. If the cable is not connected, you remain here until it is connected.

If the cable is connected, you are automatically moved to the next page.

Page 2 – With connected commissioning cable

When the cable is connected, you are automatically taken to the view below. Press "Connect".

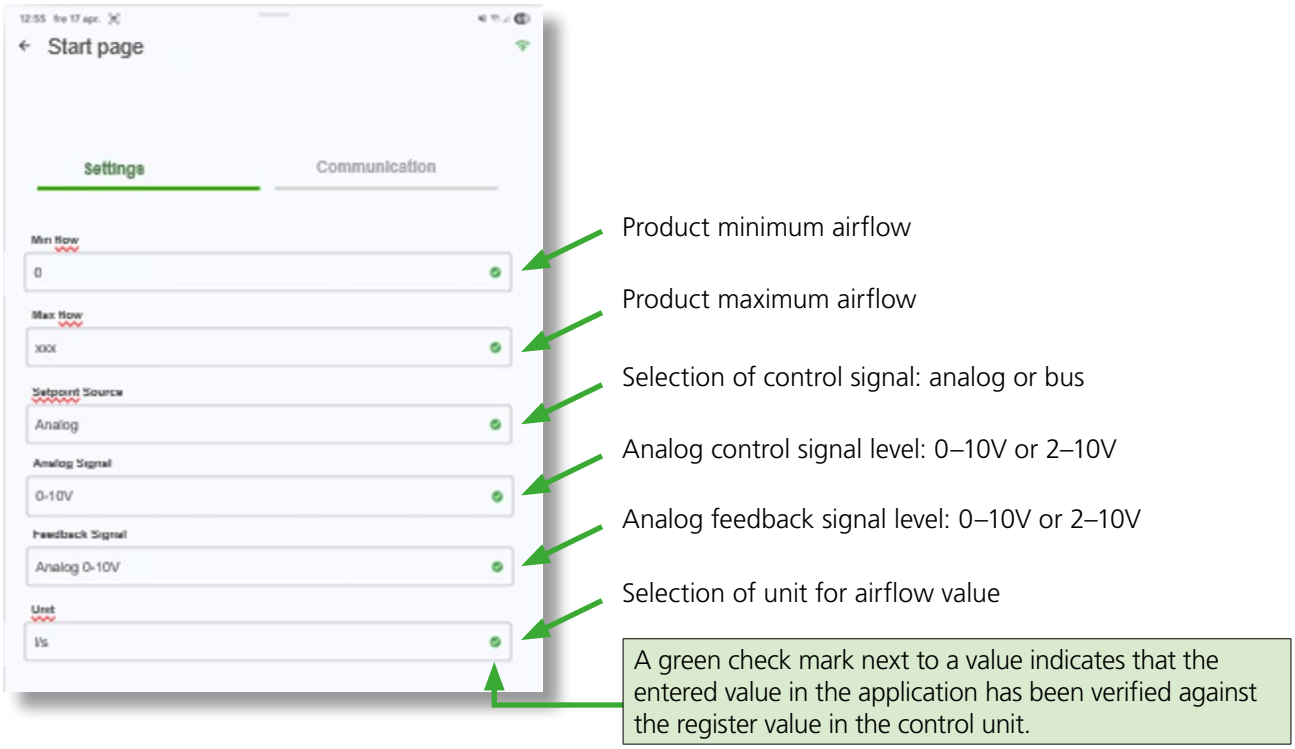
By enabling "Advanced view", additional settings and technical information are displayed.



Continued step-by-step description	
6	Select the "Settings" tab to configure airflow and other necessary product settings.
7	Select the "Communication" tab to change bus communication settings.
8	When product adjustments are complete, remove the commissioning cable and reconnect the operating cable to the motor controller. The motor will then recalibrate and the product is ready for use.

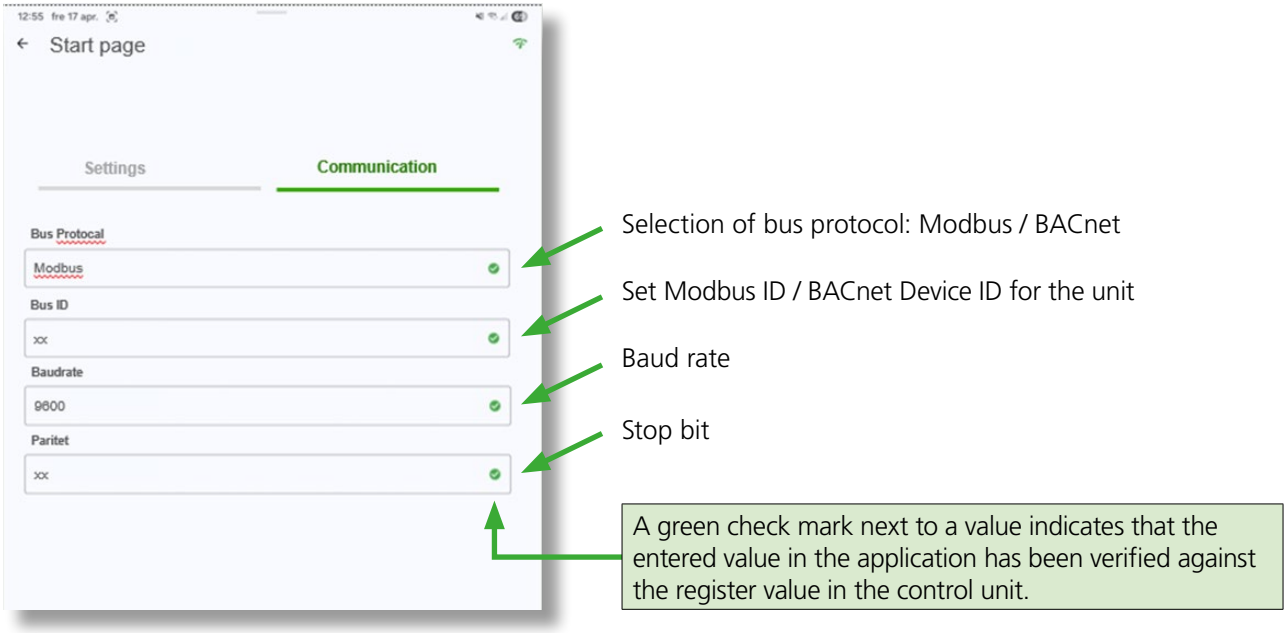
Page 3 – Settings

Here you configure the most common settings (available under the "Settings" tab). You receive direct feedback on what is stored in the motor controller, indicated by a green check mark. When a value is changed, it is written directly to the motor controller. When the green check mark reappears, the value has been verified.



Page 4 – Communication / Connection settings

In this tab, connection settings are adjusted (Communication is available under the "Communication" tab).
You receive direct feedback on what is stored in the control board, indicated by a green check mark.
When a value is changed, it is written directly to the motor controller. When the green check mark reappears, the value has been verified.



Trouble shooting

The product does not communicate over Modbus

- Make sure that the product is energized.
- Check the product's Modbus connection.
- Check the product's communication settings.
- Check that the product has the right and unique Modbus address.

The product shows the incorrect/no air flow

- Make sure that the product is energized.
- Check that the motor’s set size (Vnom) corresponds with the physical size of the product, see “Use”.
- Make sure that the product is installed according to the recommended distance to disruptions, see “Installation”.
- Check that there is an air flow in the system.
- Make sure that the product is correctly oriented in terms of air direction. The air flow must follow the instructions on the product.
- Check that the measuring tube is mounted correctly, plus to plus (red), minus to minus (blue).
- Check that the measuring tubes are undamaged and not creased.

The product does not regulate the air flow

- Make sure that the product is energized.
- Check that the product is connected correctly.
- Check that the product is not force controlled.

The product does not regulate on the desired air flow

- Check that the settings for Vmin and Vmax correspond with the required regulation range.
- Check the electrical connection for the required function, see the wiring diagram in the document “Description of functions & wiring diagram”.

Product does not exit test mode

- Check that the product is connected correctly, check the "Y" signal and polarity on "G" and "G0". See "Connection".
- Check setpoint settings for Vmin and Vmax. The value of Vmax must be higher than Vmin for the product to be in automatic mode.

Recommendation for electrical installations

- Swegon recommends that all electrical installations are carried out by a qualified electrician.
- Swegon recommends that a 24 V power supply is connected with a 1.5 mm² copper cable to minimise the risk of voltage drops in the case of long cable runs.
- Swegon recommends the use of Swegon-marked transformers for supplying power to Swegon's products

Voltage drop table at different loads (amperes) with a 1.5 mm² cable

Metres	Current/Amperes					
(m)	1	2	3	4	5	6
10	0.24	0.48	0.72	0.96	1.20	1.44
20	0.48	0.96	1.44	1.91	2.39	2.87
30	0.72	1.44	2.15	2.87	3.59	4.31
40	0.96	1.91	2.87	3.83	4.78	5.74
50	1.20	2.39	3.59	4.78	5.98	7.18
60	1.44	2.87	4.31	5.74	7.18	8.61
70	1.67	3.35	5.02	6.70	8.37	10.05
80	1.91	3.83	5.74	7.65	9.57	11.48
150	3.59	7.18	10.76	14.35	17.94	21.53
160	3.83	7.65	11.48	15.31	19.13	22.96

The largest permitted voltage drop is 3.6 V

Description of problem:

Swegon's electrical units and machines are designed to work within specific voltage intervals. If the voltage drops below the nominal value, this can lead to impaired performance or even damage to the equipment.

Voltage drops also entail increased resistance in cables and
components, which generates heat. This heat represents a loss of electrical energy. Depending on the voltage drop, the energy losses can be significant.

A general guideline for a 24 V system is that a 15% voltage drop is acceptable (3.6 volts).

How is the voltage drop in the cable calculated:

Resistance (R) = (Resistivity (p) x Length (L)) / Area (a).

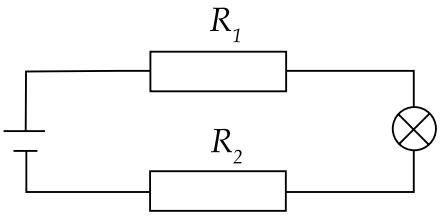
Voltage drop in wire (UL) = Resistance (R) x current (I)

$$R_1 = \frac{p \cdot L}{a}$$

$$R_2 = \frac{p \cdot L}{a}$$

$$R = R_1 + R_2$$

$$UL = R \cdot I$$



For example, the resistivity for copper is 0.0175 ohm mm²/m at 15°C. Bear in mind that the resistance increases by 0.4% per degree Celsius.

Examples of voltage drops in cables:

Input data	value	Unit
Supply voltage	24	Volts
Current (load)	1.25	Amperes
Cable area	1.5	mm
Cable length (phase + neutral wire)	50	M

Voltage drop	1.5	Volts

Example 1 at 22°C

Input data	value	Unit
Supply voltage	24	Volts
Current (load)	1.25	Amperes
Cable area	1.5	mm
Cable length (phase + neutral wire)	200	M

Voltage drop	6	Volts

Example 2 at 22°C

Maintenance