PACIFIC AWC

Installation – Commissioning – Maintenance

2025-12-02
Art. 942428103

Content

The document refers to version “d”

Swegon

Application area

The product is a climate beam with stepless airflow control, equipped with functions for demand-control of the indoor climate. 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 x PACIFIC AWC

1 x 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 are 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

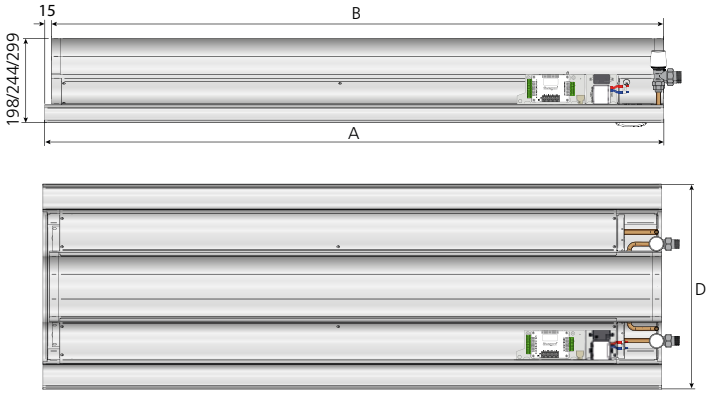


Figure 1. PACIFIC AWC Dimension sketch - full size

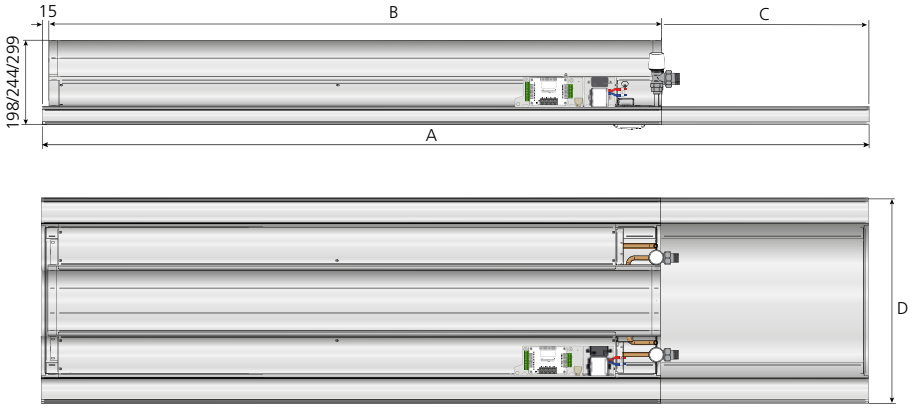


Figure 2. PACIFIC AWC Dimension sketch - Different sizes

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

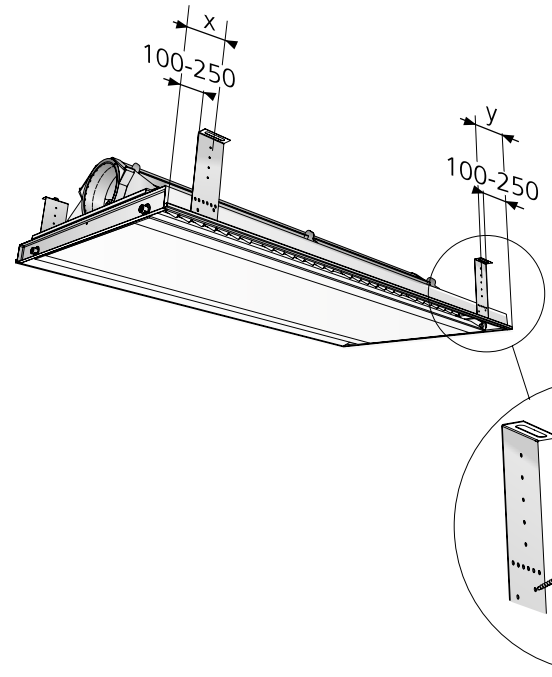
Length	Dry weight
(mm)	(kg)
1000	3,41
1000 NPT	3,79
1600	5,02
1600 NPT	5,4
2200	7,06
2200 NPT	7,44
2800	8,63
2800 NPT	9,01

Design module

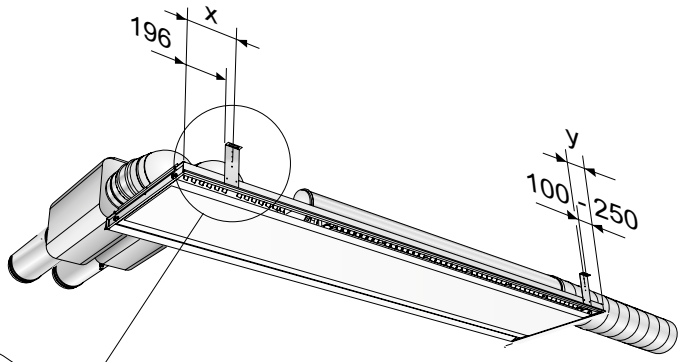
Length	Width	Weight
(mm)	(mm)	(kg)
1194	594	5,35
1794	594	7,65
2394	594	9,96
2994	594	12,27
1198	598	5,39
1798	598	7,72
2398	598	10,04
2998	598	12,36
1213	603	5,49
1823	603	7,87
2433	603	10,25
3043	603	12,63
1242	617	5,72
1867	617	8,21
2492	617	10,71
1342	667	6,55
2017	667	9,46
2692	667	12,38

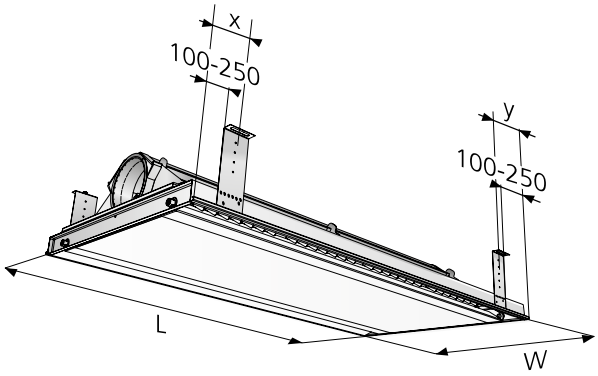
Suspension

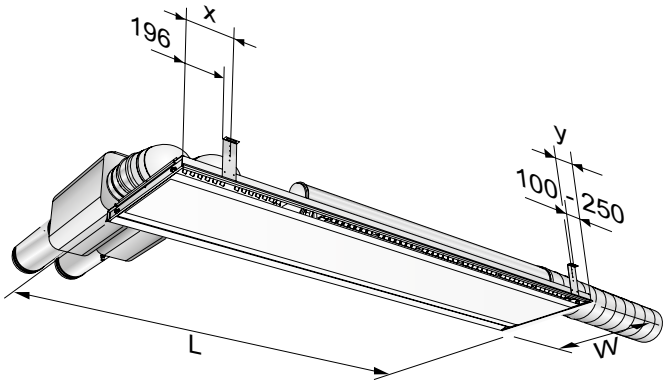
PACIFIC AWC

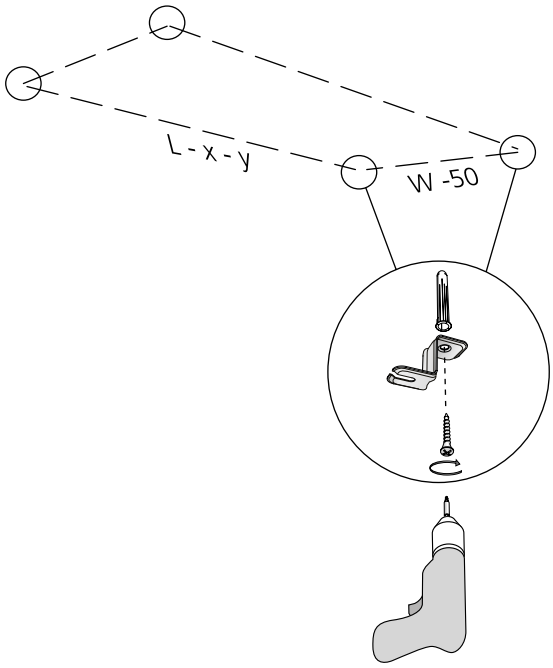


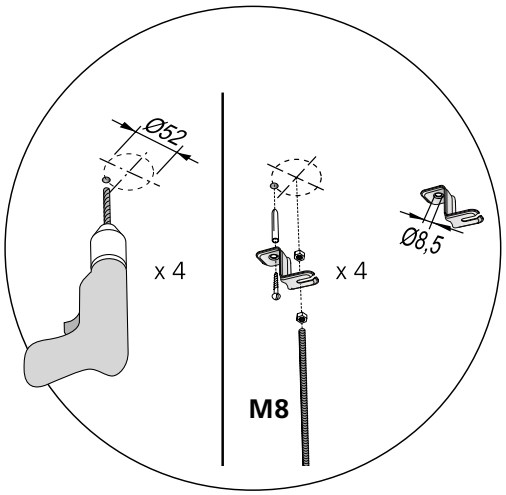
PACIFIC AWC SA/EA

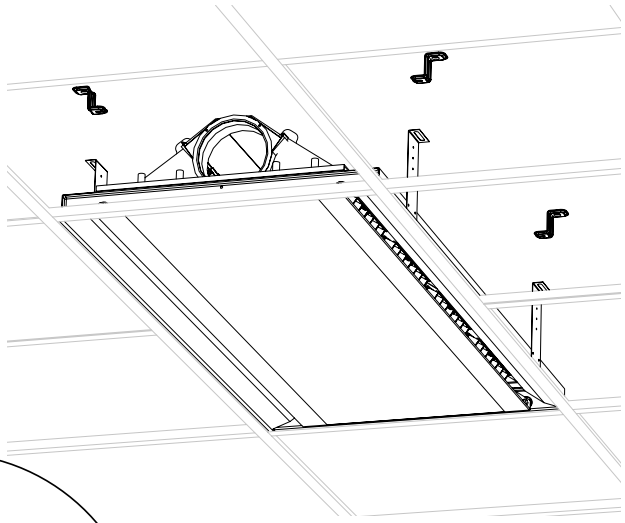


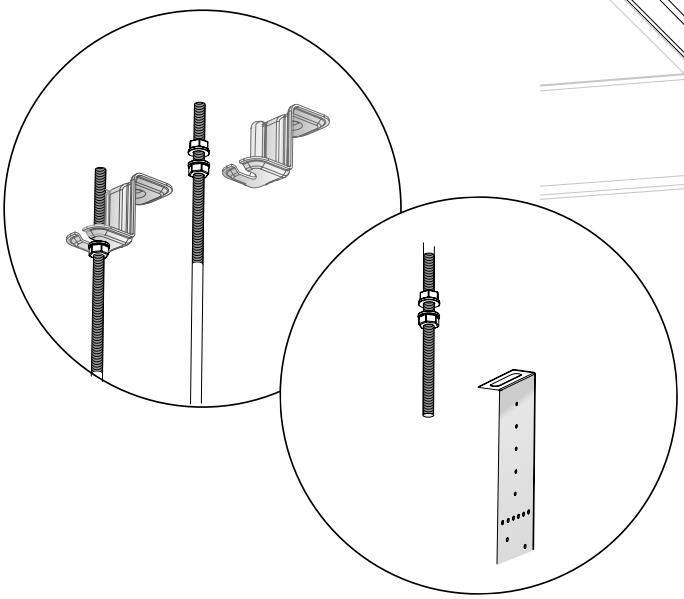


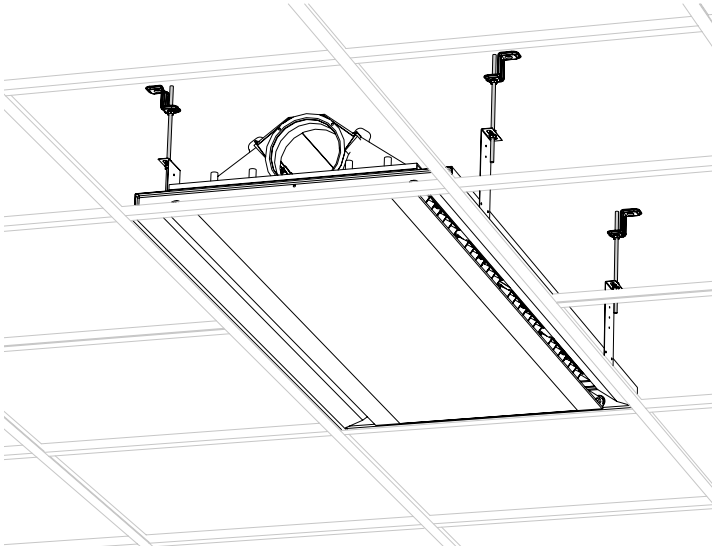






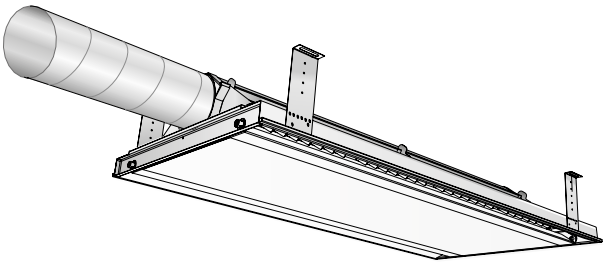




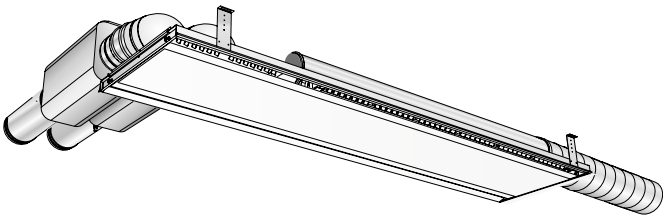


Air

PACIFIC AWC



PACIFIC AWC with SA/EA module



Air connection

Connection dimensions - PACIFIC AWC

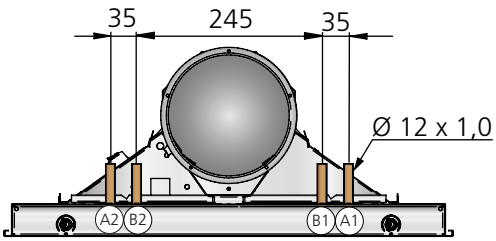
Unit *	Air connection, diameter
(mm)	Ø
1200, 1800, 2400, 3000	125, 160, 200

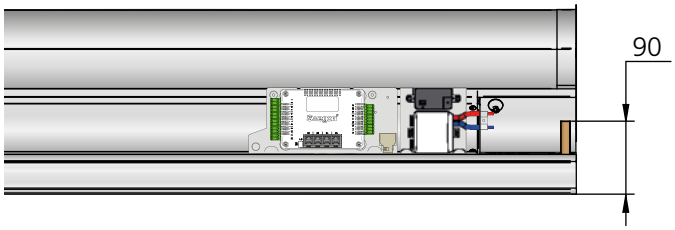
** Nominal length*

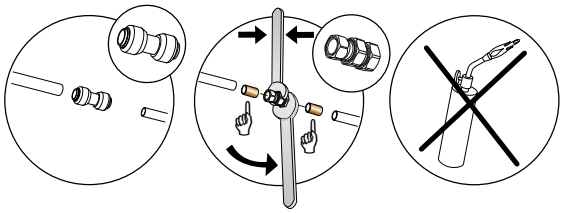
Connection dimensions - SA/EA module

Air connection, diameter
Ø
160

Water







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

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

A2	B1	B2	A1
Kyla retur/ Cooling return	Värme tillopp/ Heating supply	Värme retur/ Heating return	Kyla tillopp/ Cooling supply

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.

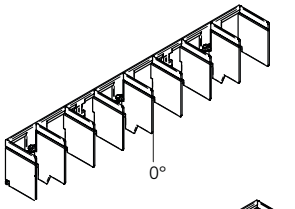
Connection sizes

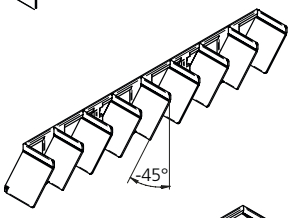
Model	Length *	Factory-fitted	Connection	Coupling type	Connection	Coupling type
Cooling only	1200, 1800	Actuator and valve	Return	DN15, male thread	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling/heating	1200, 1800	Actuator and valve	Return	DN15, male thread	Supply pipe	Plain pipe 12 x 1.0 mm
Cooling only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

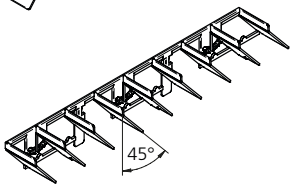
**Nominal length*

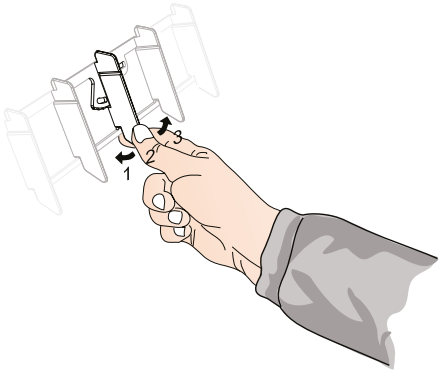
Commissioning

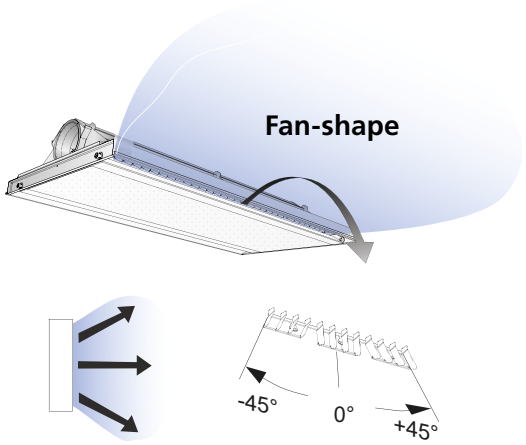
ADC

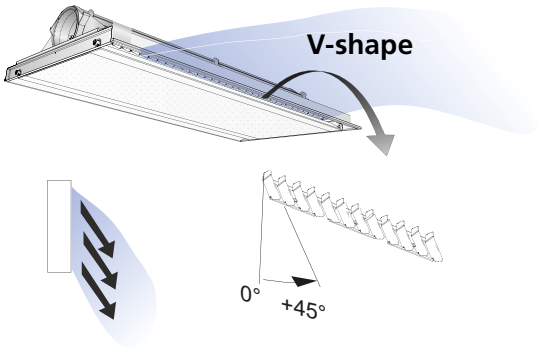


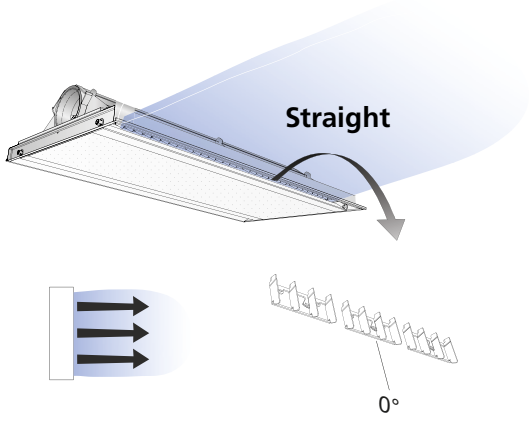






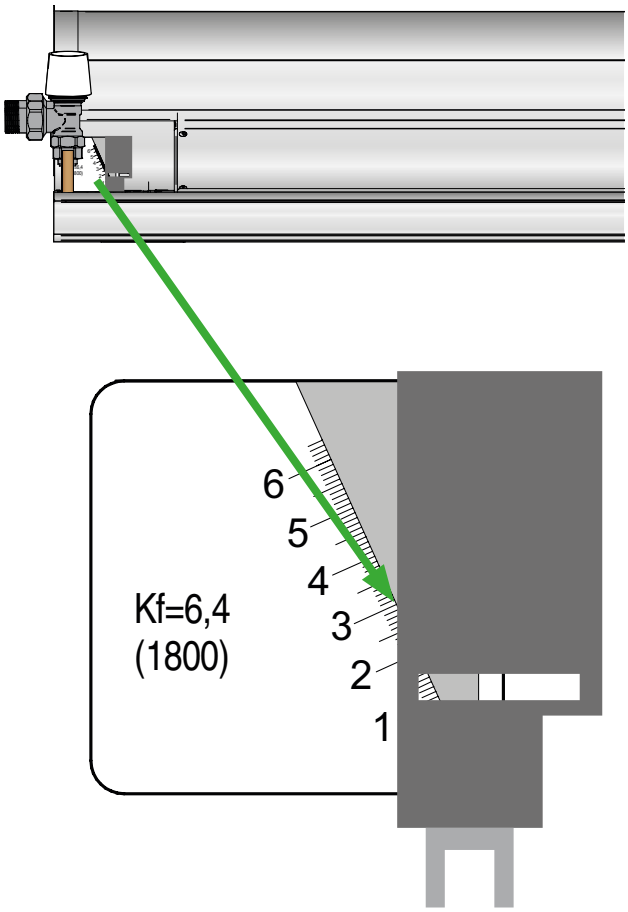






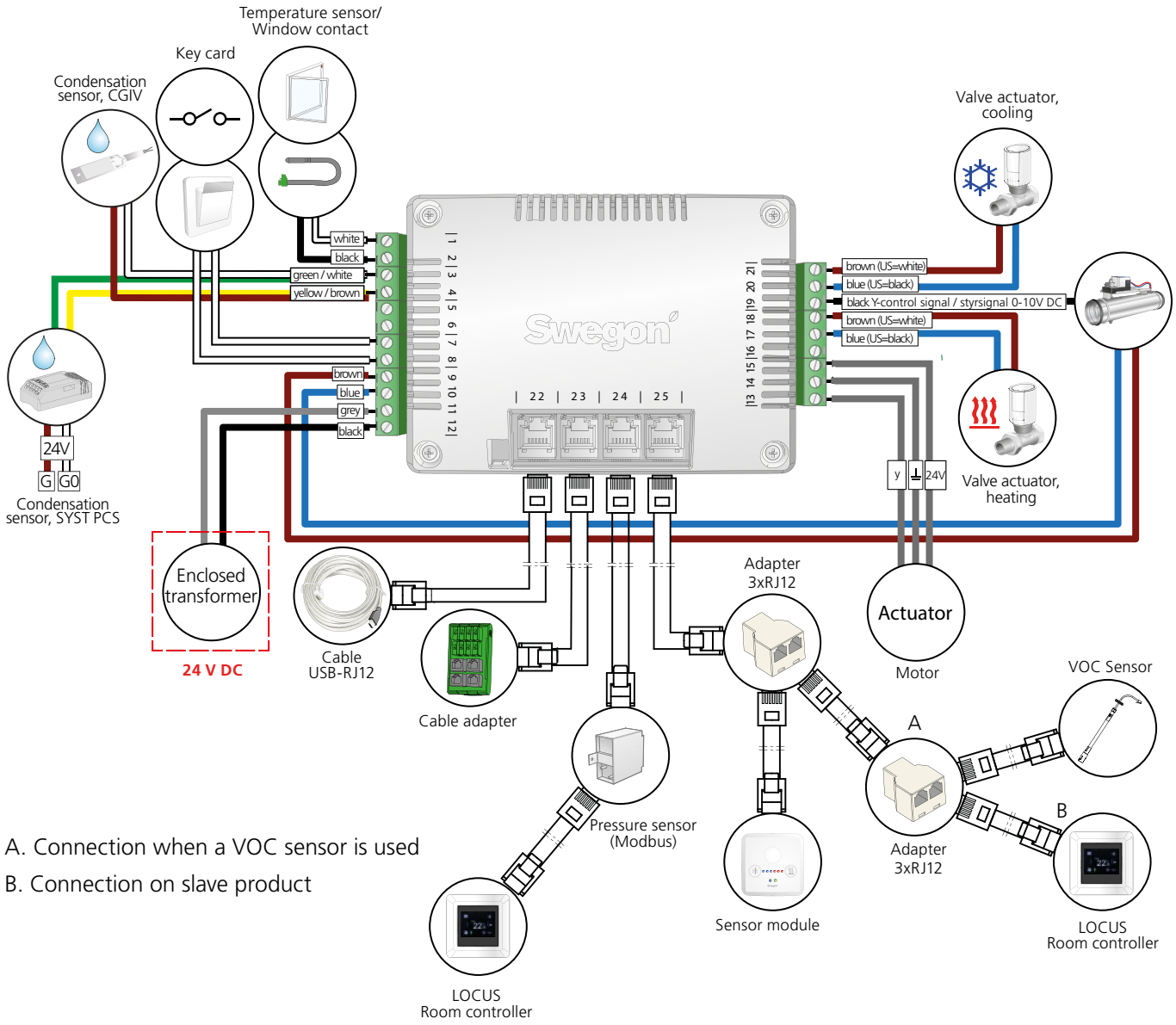
K-factor setting

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.



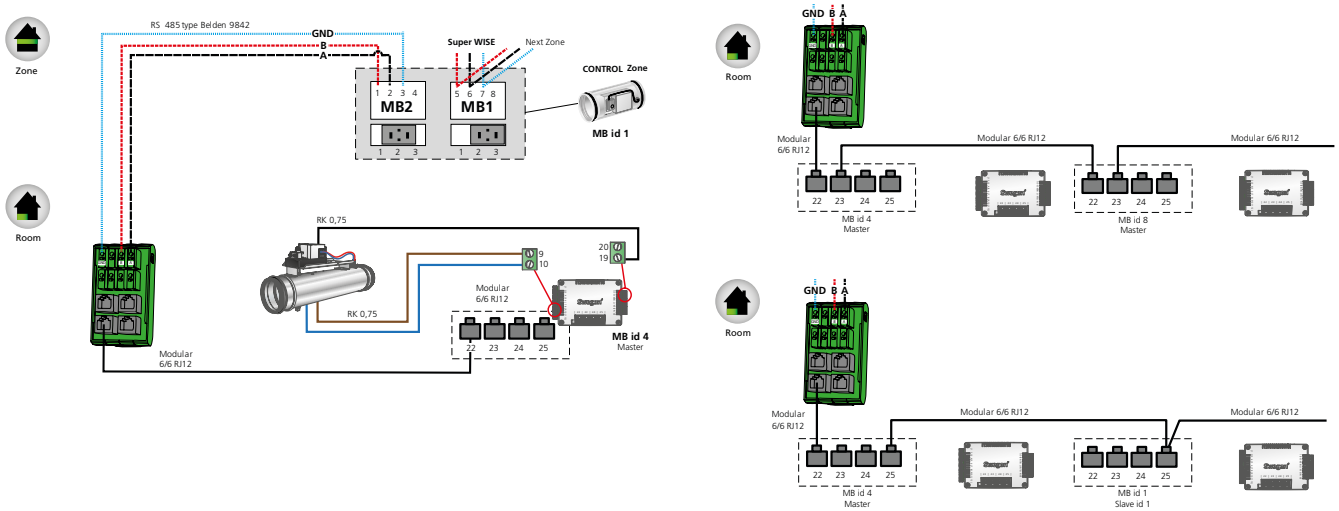
Wiring diagram

Connection for controller (URC1) with accessories.



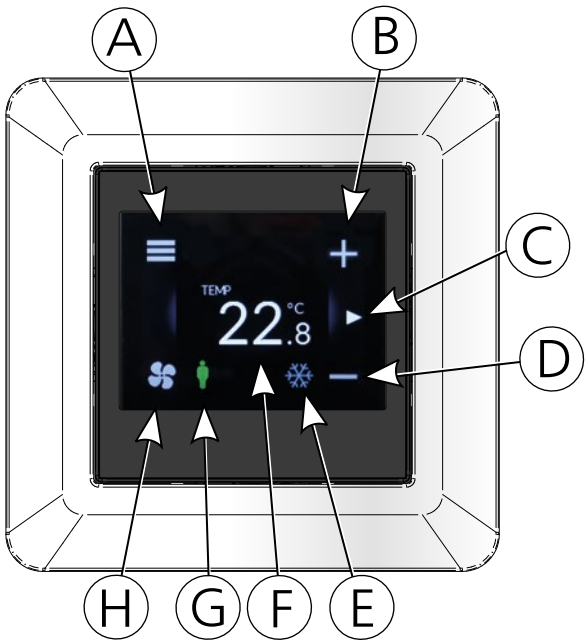
A. Connection when a VOC sensor is used

B. Connection on slave product



Room controller, LOCUS

Main menu and explanation of symbols



A. menu
B. increase
C. swipe left to go to the next page
D. decrease
E. symbol showing ongoing cooling or heating
F. shows programmed setpoint or measured temperature
G. shows occupancy in the room
H. press to activate boost flow

Technical data

Display	Capacitive touch TFT Display QVGA 2.3"
Screen resolution	320x240
Communication	Modbus RTU via RS-485
Temperature sensor	Internal 10K NTC sensor
Operating temperature	+5 ... +40°C
Degree of protection	IP20
Dimensions	88 x 88 x 35 mm
Operating voltage	12-40 VDC
Current requirement	0.5 W

Connection

LOCUS	Connection	Description
VDD	RJ12	12-40 VDC power supply
A+	RJ12	RS-485 bus connection
B-	RJ12	RS-485 bus connection
GND	RJ12	Earth for 12-40 VDC power supply
Memory card slot		The user panel's software can be updated via a Micro SD card

Standards and directives

The following standards have been observed:

EC Directive:	93/68/EEC
Low Voltage Directive:	2014/35/EU
Machinery Directive:	2006/42/EEC
EMC Directive:	2014/30/EU
RoHS Directive:	2002/95/EC
Vibrations:	EN-60721-3-3

Description of display

If the screen is in standby mode, it is activated again by clicking.

Display	Description	Explanation
	Display in standby mode	Activated with a click
	Active main menu	Increase/decrease the setpoint temperature by clicking on the + or – signs
	Activated boost mode	
	Swipe left for next page	Shows values from connected sensors
	Swipe right to go back to the main menu	

For more detailed information about LOCUS room controller. See documentation at www.swegon.com

- LOCUS Product datasheet
- LOCUS Instructions for Use (IOM)

Sensor module

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. Commissioning air
3. Commissioning water
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

Alarm list for the sensor module

Alarm no.	Type of alarm	32	16	8	4	2	1
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	CO_2 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	●		●		●	

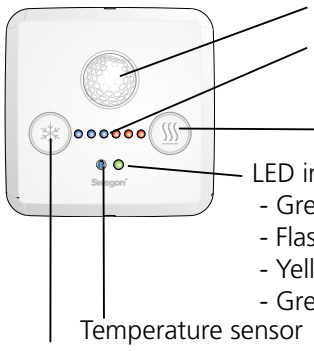
The alarm is shown with a number of LEDs when you select Alarm list (1) in the menu.

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 (xoxxoo)

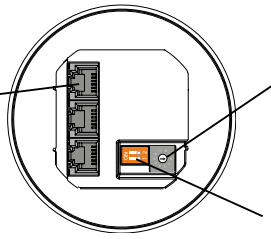
Middle blue corresponds to 16, next last red 2 and last red 1. The sum of these is 19, which is the alarm number.

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



Presence sensor
LEDs for temperature, adjustment or alarm indication
Function keys
LED indicating function
- Green = OK
- Flashing Green = condensation alarm
- Yellow = Alarm
- Green/Yellow = Comfort alarm (not acute)

Temperature sensor
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.

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).

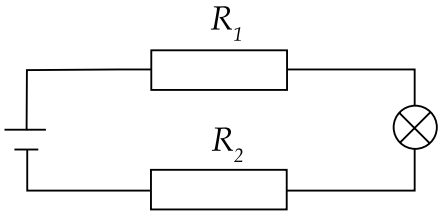
Voltage drop in wire (UL) = Resistance (R) x current (I)

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

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

$$R = R_1 + R_2$$

$$UL = R \cdot I$$



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

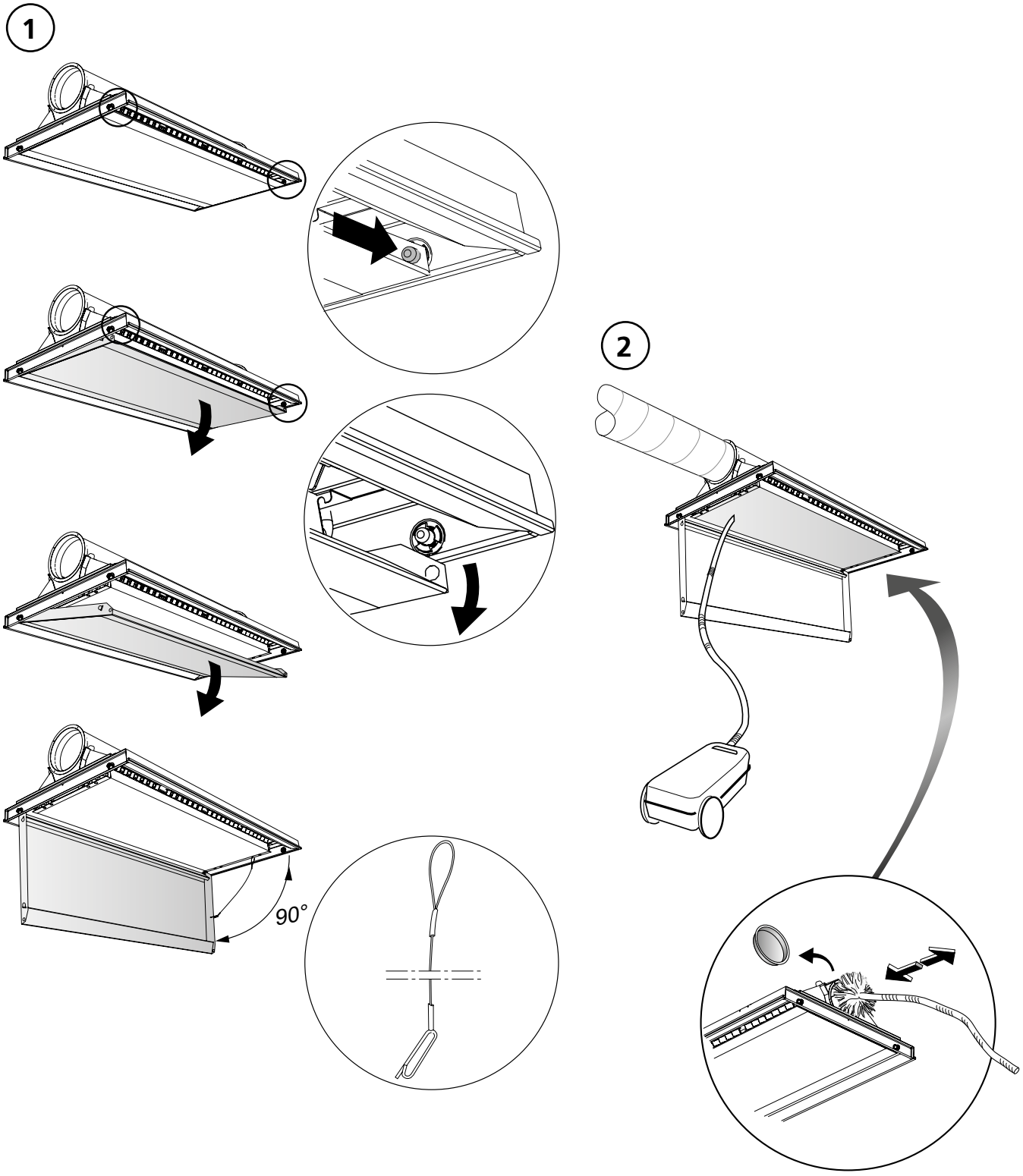
Example 1 at 22°C

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



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