

# PARAGON AWC

Demand-controlled comfort module for hotels and hospital wards



## QUICK FACTS

- Comfort module for demand-controlled indoor climate
- Equipped with control equipment for stand-alone or connectable to BMS via ModBUS
- Complete product with integrated damper for variable air flow control 0-100%
- Energy-efficient operation since the room is ventilated, heated and cooled exactly as called for by the load, neither more or less.
- Ventilation, cooling and heating
- Straightforward installation with optional water connection side and centred air connection
- Adjustable air direction ADC and adjustable grille louvres
- Low installation height
- High capacity

### KEY FIGURES

| Air flow range: |         | Pressure range: | Cooling capacity total: | Heating capacity: |
|-----------------|---------|-----------------|-------------------------|-------------------|
| l/s             | m³/h    | Pa              | W                       | W                 |
| 0 - 85          | 0 - 306 | 20 - 200        | Up to 3180              | Up to 5060        |

### SIZE

| Length (mm)     | Width (mm)  | Height (mm) |
|-----------------|-------------|-------------|
| 800, 1100, 1400 | 722 (+0-20) | 205         |

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# Technical description

## PARAGON AWC

The product is a demand-controlled comfort module with integrated regulation which, with its mounted control equipment, brings air flow and cooling and heating under demand-control for the best energy efficiency and comfort.

PARAGON AWC has a unique slot opening that means we can always guarantee the air volume into the room and this with our functional controller with many I/O possibilities.

This is a plug & play product for quick and easy installation.

The compact comfort module is primarily designed for hotels and hospitals but can also be installed in offices.

PARAGON AWC provides high cooling/heating capacity through optimal utilisation of its cooling/heating coil even when the air pressure and airflows are low. At the same time, the installation height of the product is kept at an absolute minimum which enables maximum room height in e.g. the entrance to a hotel room.

## PARAGON AWC in a nutshell

- Complete plug & play product with factory-fitted control equipment
- Connectable via Modbus
- Low noise level
- Draught-free indoor climate
- Straightforward planning and installation with two optional water connection sides and centred air connection
- No fan in the room
- Dry system without condensation
- No need for any drainage system
- No filter
- Requires minimal maintenance
- Low energy consumption
- Guaranteed comfort through flexible adjustment of the direction of air discharge (ADC)
- Can be ordered with or without grille

## Variants

PARAGON AWC is available in the following variants:

Variant A: Ventilation, waterborne cooling.

Variant B: Ventilation, waterborne cooling and heating.



Figure 1. PARAGON AWC



Figure 2. PARAGON AWC, rear view

## Sizes and variants

The product is available in three different lengths 800, 1100 and 1400 mm.

All sizes can be ordered with the water connection on the left or right short side, and there is also a variant with a centred water connection at the rear.

In addition to the standard version, Swegon now also has a Suite version for larger rooms. It has double air connections and is only available in length 1400 mm.



www.eurovent-certification.com  
www.certiflash.com

## Basic function diagram

The primary air is supplied via duct connection in the rear edge of the unit and this builds up positive pressure inside the unit. The positive pressure distributes the primary air with relatively high velocity via two rows of slots, one row in the upper edge and one row in the lower edge of the outlet. The high velocity of the primary air creates negative pressure which generates induction of the room air. The recirculation air is sucked up through the recirculation grille of the unit and flows on through the coil where it is cooled, heated, if required, or just passes untreated, before it mixes with the primary air and is discharged into the room.

The supply air discharged into hotel rooms and hospital wards is advantageously distributed as straight as possible by allowing it to follow the ceiling, i.e. utilising the Coanda effect. This enables the air to reach all the way to the perimeter wall. If horizontal air distribution is desirable, this is simply achieved by means of the ADC (Anti Draught Control) feature, which is included as standard in all PARAGON AWC comfort modules. If vertical air distribution is desirable, this is achieved by setting the outlet grille vanes to slant upward or downward. If you like, you can lock the angle setting of the outlet grille using an accessory that secures the vanes in fixed position.

Our new generation PARAGON AWC has variable k-factor setting and large air flow range.

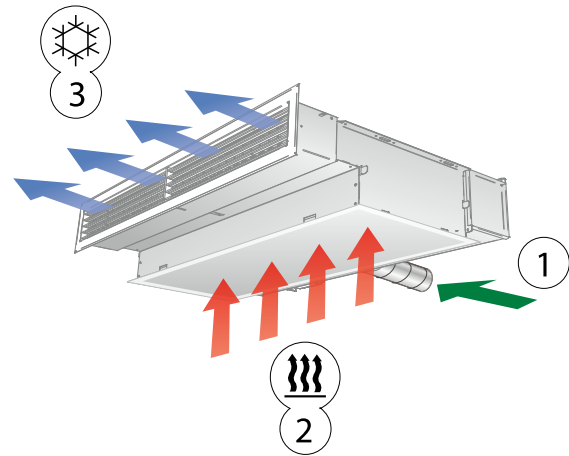


Figure 5 – PARAGON AWC cooling function

1 = Primary air

2 = Induced room air

3 = Primary air mixed with chilled room air

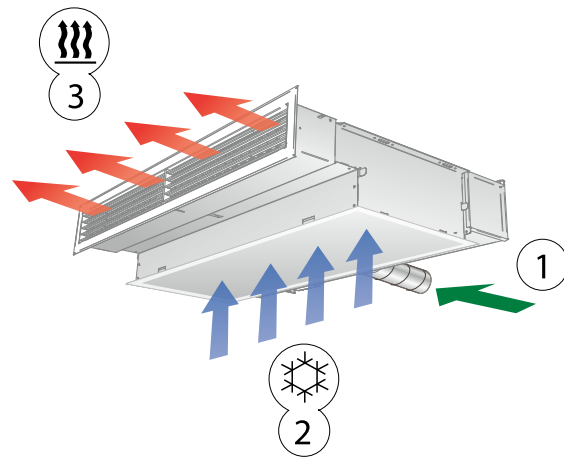


Figure 6 – PARAGON AWC heating function (waterborne)

1 = Primary air

2 = Induced room air

3 = Primary air mixed with heated room air

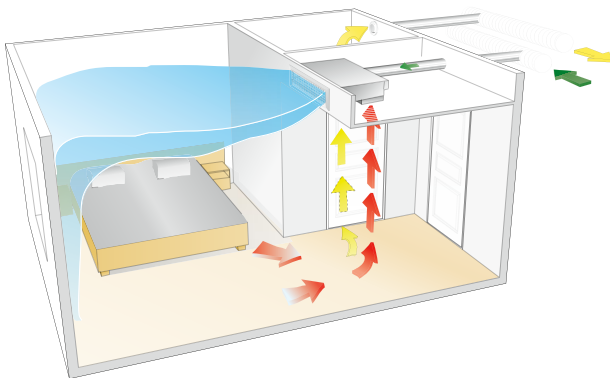


Figure 3 – Air distribution with the PARAGON AWC in a hotel room

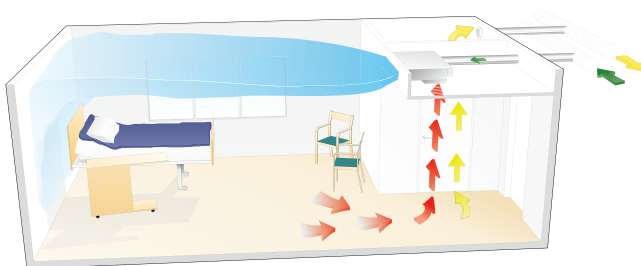


Figure 4 – Air distribution with the PARAGON AWC in a hospital ward

Air distribution

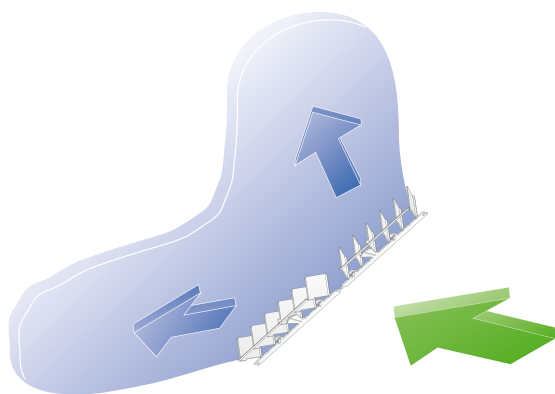


Figure 7 – Horizontal air distribution with ADC

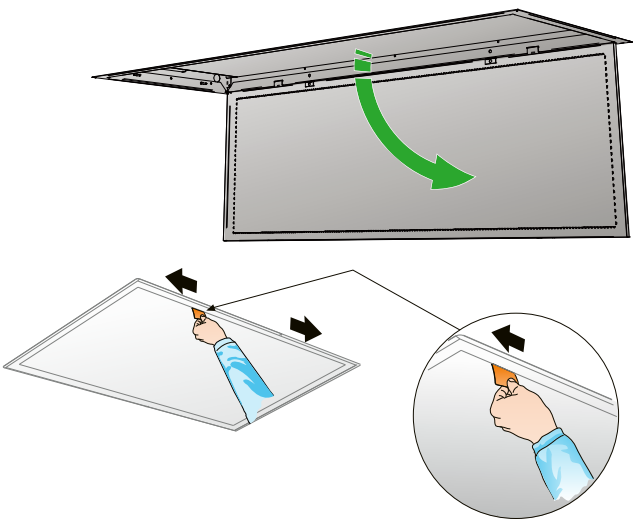


Figure 10. The return grille has a Quick access function, which facilitates cleaning.

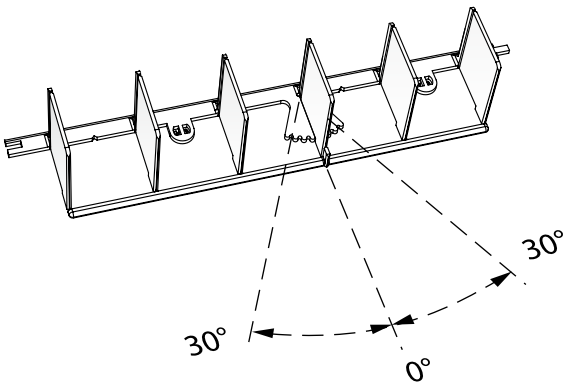


Figure 8. PARAGON AWC ADC

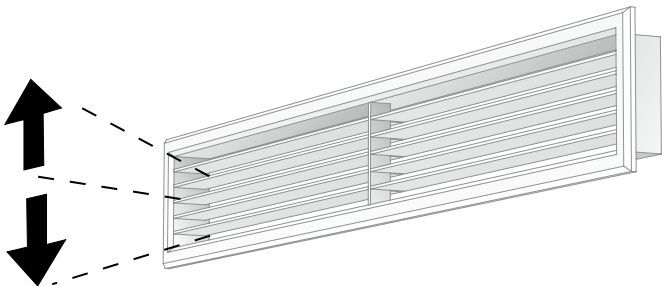


Figure 9. Vertical air distribution with adjustable louvers in the supply air grille.

## Control equipment

### VAV - Control equipment for demand-controlled ventilation, heating and cooling

Occupancy in hotel rooms varies daily and throughout the day.

The room has different needs depending on both occupancy/non-occupancy, but also individual needs depending on the individual in the room. The best solution to ensure the right air flow into the hotel room is by means of our functional VAV controller with numerous I/Os that can easily be integrated into a BMS system via Modbus.

The needs of the room are managed by different sensors in the room where the controller sets different operating modes. When for example the key card (or equivalent) is activated in the room, the air flow increases from the economical low flow to the normal flow, while the temperature adjusts to the comfort level. When the room is empty, the ventilation and temperature return to economic low flow. In addition to the automatic room control, the guest can manually adjust the temperature and air flow.

PARAGON AWC is fully equipped with actuator, controller, pressure sensor, valves and valve actuators for optimum demand control according to the actual need and the occupancy level in the hotel.

As standard the product has two selectable water connection sides.



Figure 11. PARAGON AWC, complete with factory-fitted controller, actuator, pressure sensor and valves and valve actuators for cooling and heating water.



Figure 12. VAV controller for demand-controlled ventilation



Figure 13. Room controller/Setpoint selector switch LOCUS

## Operating case

Depending on the status of connected sensors, the controller adjusts the outputs from any of several possible operating modes.

Operating modes are described below, these are based on occupancy in the room, status of the current sensor or the signal from the main control system.

### Operating modes

There are a variety of operating modes for PARAGON AWC:

- Occupancy mode.
- No occupancy mode.
- Emergency mode.
- Commissioning mode
- Summer night cooling.

### Occupancy mode

When the product receives a signal via the occupancy sensor that someone is present in the room, the valve actuator is regulated for cooling or heating water according to the chosen switching temperatures for cooling or heating linked to this operating mode. The air flow is controlled to the selected occupancy flow, but is naturally influenced by sensors such as condensation sensor, temperature sensor, window contact, possible air quality sensor, etc.

### No occupancy mode

When No occupancy mode is enabled, the system automatically switches to energy save mode. In Energy-save mode/No occupancy mode, the valve actuator is controlled for cooling or heating water according to the status on other sensors in the room, but normally with a greater permissible difference between switching temperature cooling and heating than in Occupancy mode at the same time as the air is regulated to Min. flow. The system returns to the Occupancy mode when occupancy is registered again.

### Emergency mode

In the event of a fire alarm, the air damper in the extract air duct is open or closed, depending on how the control system has been set. In Emergency mode cooling and heating are switched off. Supply air is normally switched off.

Operating mode EMERG can only be handled in control systems that are connected to the main control system via Modbus RTU.

### Commissioning mode

The "first open" function means that the water valves are open during installation, which simplifies filling, pressure testing and venting the water system.

The function is disabled automatically after being energised for about 6 minutes.

A clicking noise can be heard when the valves and dampers change over to NC mode (normally closed) and the normal control function is enabled.

### Summer night cooling

The function means that cold outdoor air is used to cool the room during the night to the predefined level.

The function can only be handled in control systems that are connected to the main control system via Modbus RTU.

## Functions, system

### Change-over

During change-over at system level, the building can have a two-pipe system and is then often divided into several different rooms, depending on whether the facade faces north-east or south-west. Heating or cooling is supplied, depending on the season. The function involves the use of only one valve actuator which should be wired to the cooling output terminal. This actuator then controls both the heating water and the cooling water, which is transported in the same pipe. An external temperature sensor should be used and this should measure on the main pipe where the water always circulates.

In winter, when heating is required, the valve opens if the water in the pipe is warmer than the temperature set point. If the water is colder, the valve does not open.

In summer, when cooling is required, the valve opens if the water in the pipe is colder than the temperature set point.

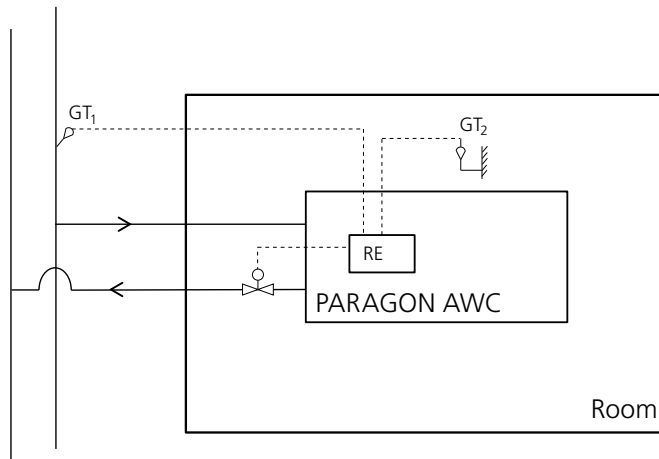


Figure 14.

- 2-pipe system with cooling water in the summer and heating water in the winter
- GT1 is placed where heating or cooling water always circulates
- Summer: If the room temperature T2 is higher than the water temperature T1, the valve opens when cooling is required.
- Winter: If the room temperature T2 is lower than the water temperature T1, the valve opens when heating is required.
- GT1 is connected to the regulator as an external temperature sensor
- Via the room setpoint selector switch or hand-held unit, set up for the unit to be used in a change-over system
- GT2 is the temperature sensor which is located in the Sensor module
- The valve actuator must be connected to the regulator's cooling output.

### Activating valves

The function requires regular automatic activation of the water valves to avoid them beginning to stiffen or stick. During activation, all valves connected to the regulator are open for a maximum of 6 minutes, and then closed. The valves for the cooling system are activated first, followed by those for the heating system.

### Frost protection

The function means that heating operations start at 10°C to counteract the risk of damage that can otherwise occur due to freezing.

## Technical data

|                                                           |                         |
|-----------------------------------------------------------|-------------------------|
| Cooling capacity total, max.                              | 3180 W                  |
| Heating capacity, water, max.                             | 5060 W                  |
| Air flow                                                  | 0-85 l/s                |
|                                                           | 0-306 m <sup>3</sup> /h |
| Pressure range                                            | 20-200 Pa               |
| Dimensions:                                               |                         |
| Length:                                                   | 800, 1100, 1400         |
| Width:                                                    | 722 (+0-20) mm,         |
| Height:                                                   | 205 mm                  |
| <i>See the dimensional drawing for exact measurements</i> |                         |

## Power consumption

| Power consumption for transformer sizing: | VA / unit |
|-------------------------------------------|-----------|
| Actuator                                  | 6         |
| Damper motor (UM24) *                     | 2,5       |
| Controller *                              | 2         |
| Sensor module *                           | 1         |

\* Always included in the product

### Example A:

PARAGON AWC 1100-B-HF;  $6+2,5+2+1 = 11,5$  VA  
6 VA for cooling - OR heating actuator when they are normally regulated in sequence.

### Example B:

PARAGON AWC 1100-B-HF;  $6+6+2,5+2+1 = 17,5$  VA  
For operating modes such as Radiator Heat and Cold draught protection, power consumption will then be 6+6 VA for actuators when they are not regulated in sequence.

## Recommended limit values, water

Max. recommended operating pressure (above coil only): 1600 kPa \*

Max. recommended test pressure (across coil only): 2400 kPa \*

\* Applicable without control equipment mounted

Max. recommended pressure drop across the CCO valve: 20 kPa

Max. recommended pressure drop across a standard valve: 20 kPa

Min. permissible heating water flow: 0.013 l/s

Max. permissible supply flow temperature: 60 °C

Min. permissible cooling water flow: 0.04 l/s

Lowest permissible supply flow temperature: Must always be sized so that the system works without condensation

## Designations

P: Capacity (W, kW)

v: Velocity (m/s)

q: Flow (l/s)

p: Pressure, (Pa, kPa)

$t_r$ : Room temperature (°C)

$t_m$ : Mean water temperature (°C)

$\Delta T_m$ : Temperature difference [ $t_r - t_m$ ] (K)

$\Delta T$ : Temperature difference, between inlet and return (K)

$\Delta T_i$ : Temperature difference, between room and supply air (K)

$\Delta p$ : Pressure drop (Pa, kPa)

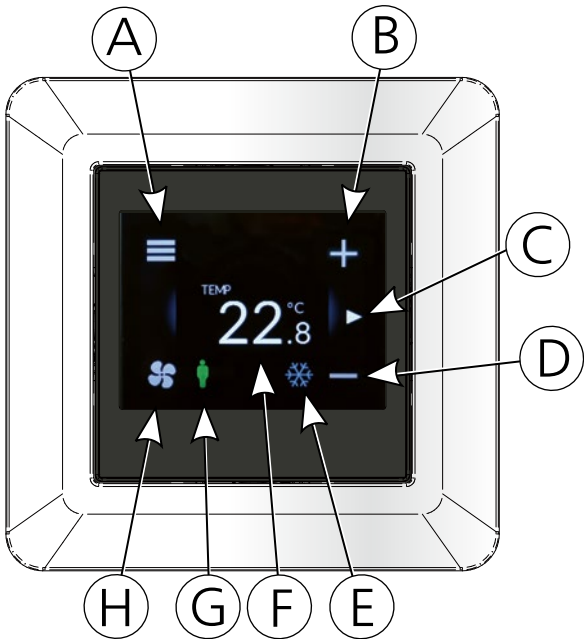
$k_p$ : Pressure drop constant

*Supplementary index:*

$k$  = cooling,  $l$  = air,  $v$  = heating,  $i$  = commissioning

**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 by clicking.

| Display | Description                             | Explanation                                                             |
|---------|-----------------------------------------|-------------------------------------------------------------------------|
|         | Display in standby mode                 | Activated with a click                                                  |
|         | Active main menu                        | Click on the + or – signs to increase/decrease the setpoint temperature |
|         | Activated boost mode                    |                                                                         |
|         | Swipe left for next display page        | Shows input 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](http://www.swegon.com)

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

## Sensor module

The sensor module consists of an occupancy sensor and a temperature sensor in the same unit.

The sensor module is ordered separately and is mounted on a wall, flush mounted in a standard electrical box or surface-mounted.

The push buttons on the sensor module allow you to adjust the temperature in the room, put the PARAGON Wall VAV in commissioning mode and read the alarm list.

In normal mode, 6 LEDs indicate the selected temperature level. In the event of a fault, the relevant alarm is indicated in the form of flashing LEDs that is translated with the help of an alarm list.

The sensor module is connected to the controller with the help of an RJ12 cable.

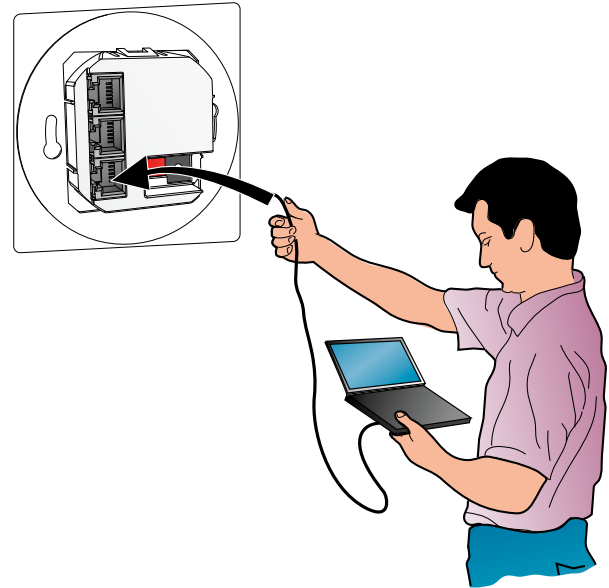


Figure 17. With the help of CABLE CONVERTER USB-RJ12 (RS485), you can easily connect a PC to make e.g. software settings. The connection can either be made on the rear of the Sensor module as illustrated, or directly on the controller. How to do this is described in the SWICCT manual.

## Temperature adjustment

Reduce the temperature by pressing the left-hand button



Increase the temperature by pressing the right-hand button

Each LED corresponds to an increase or decrease of the set point by one degree. Base setting of temperatures is made in SWICCT or SuperWISE

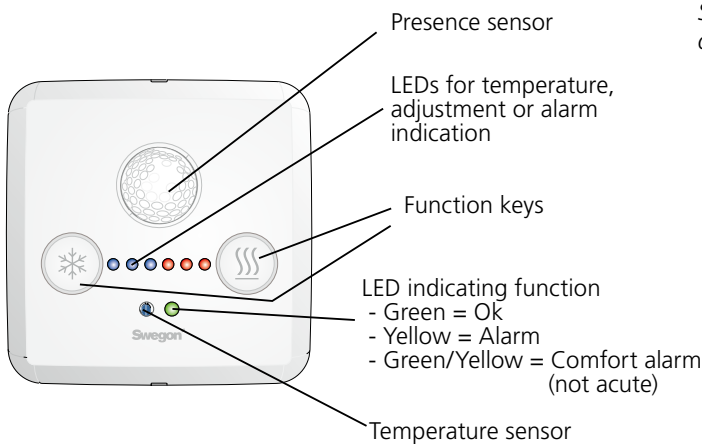


Figure 15. Sensor module seen from the front

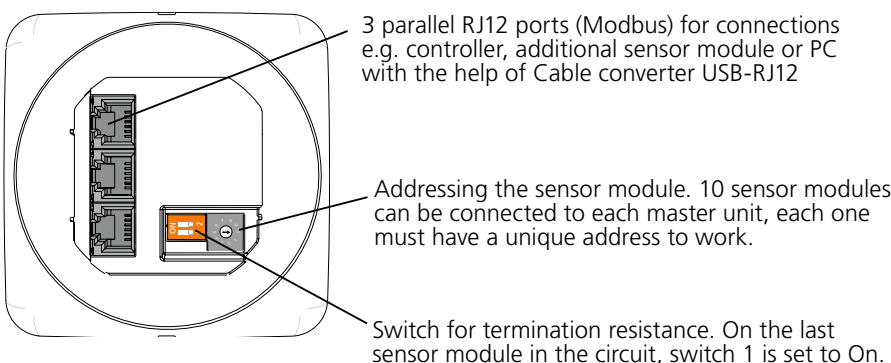


Figure 16. Sensor module seen from the back

## SWICCT

SWICCT (SWegon Indoor Climate Configuration Tool) is the software that makes it easy to make settings in the controller. (To make settings requires the cable "CABLE CONV. USB RJ-12", and the installation of this, see the SWICCT manual)

Here it is possible to make all essential settings for the Product, for example;

- Base settings for temperature
- Use of external sensors, e.g. for air quality
- Air flows
- Commissioning

The screenshot displays the SWICCT v1.22 software interface. The top menu bar includes: Connection settings, Status and Information, Customer configuration, Service mode, Update, Parameter access, and About and license. The right side features a 'Device tree' showing '1 URC1'. The main area is divided into several configuration panels:

- Temperature setpoint settings:** Includes fields for Cooling setpoint OCC (2350 °C \* 100), Heating setpoint OCC (2250 °C \* 100), Cooling setpoint NoOCC (2400 °C \* 100), Heating setpoint NoOCC (2100 °C \* 100), Cooling setpoint Holiday (2300 °C \* 100), Heating setpoint Holiday (2400 °C \* 100), Cooling setpoint SNC (2400 °C \* 100), and Heating setpoint SNC (2100 °C \* 100).
- Regulator settings:** Includes P-band Heating (200 °C \* 100), P-Band Cooling (200 °C \* 100), I-time Heating (10 min), I-Time Cooling (10 min), P-Band airflow (1000 l/s \* 10), and I-time airflow (120 s).
- CO2/VOC:** Includes VOC use (Auto), CO2/VOC min set value (850 ppm), CO2/VOC max set value (1050 ppm), Input 3 usage (CO2 2-10V), and CO2/Volt (sensor) (200 ppm).
- Controller settings:** Includes Ventilation boost delay (72 h), Ventilation boost time (1 min), Temperature offset timer (8 h), Occupancy on delay (10 s), Occupancy off delay (1024 s), Occupancy type (Auto), Two step cooling delay (10 min), Air cooling sequence (Air - Water), Slave air function (Variable), Heat type (Radiator), Cold draft protection level (0 % \* 100), Cold draft protection stop (0 % \* 100), Cold draft protection UnOcc (checkbox), Actuator period time (600 s), and Continuous airflow type (Linear).
- Temperature settings:** Includes Room temperature sensor use (Mean value of sensor module(s)), Input 1 usage (External temp), Window contact NO, ChOV-4 Dead Zone low limit (550 V \* 100), and ChOV-4 Dead Zone high limit (650 V \* 100).
- Airflow settings:** Includes Kfactor short side (1+3) (0 k \* 100), Kfactor long side (2+4) (580 k \* 100), Zero cal. pressure sensor (checkbox), Airflow setpoint HOLIDAY (100 l/s \* 10), Airflow setpoint UNOCC (90 l/s \* 10), Airflow setpoint OCC (200 l/s \* 10), Airflow setpoint MAX (450 l/s \* 10), Min cooling Pressure (50 dPa), ADAPT EA analog min (90 l/s \* 10), ADAPT EA analog max (460 l/s \* 10), and ADAPT EA offset (0 % \* 100).
- Commissioning:** Includes Air (Off, Min unoccupied, Min occupied, Max, Min holiday) and Water (Off, Open cooling valve, Open heating valve, Valve first open function, STOP water actuators) sections.

At the bottom, there are buttons for 'Check slave bus', 'Write settings to file', 'Read current values', and 'Exit'. The status bar at the very bottom indicates 'Selected controller: URC1 with Modbus ID 1'.

SWICCT is available for download from [www.swegon.se](http://www.swegon.se), both the software and a separate manual.

# Sizing

## SPC for calculating room products

Single Product Calculator "SPC" is a simple quick calculation for room products. Capacities, sounds, flows, isovels, etc. can be calculated and printouts can be made.

SPC is accessible from our product pages at [www.swegon.se](http://www.swegon.se) where there is a "Calculate" button. No login or software download needed, incredibly quick and easy!

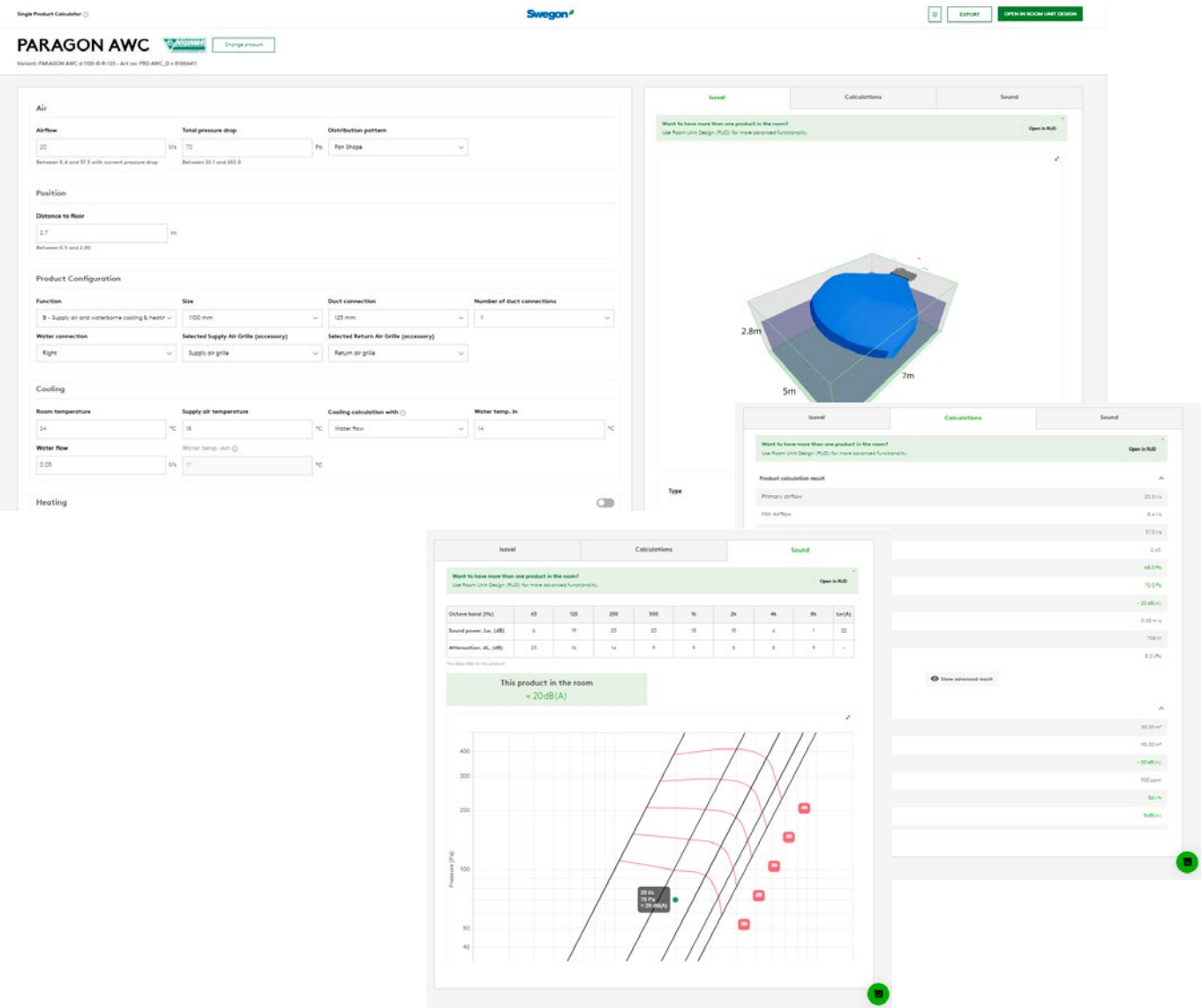


Figure 18. PARAGON AWC length 1100 for cooling and heating, water connection on the right side, factory-fitted controller, valves and valve actuators for cooling and heating.

## Typical room

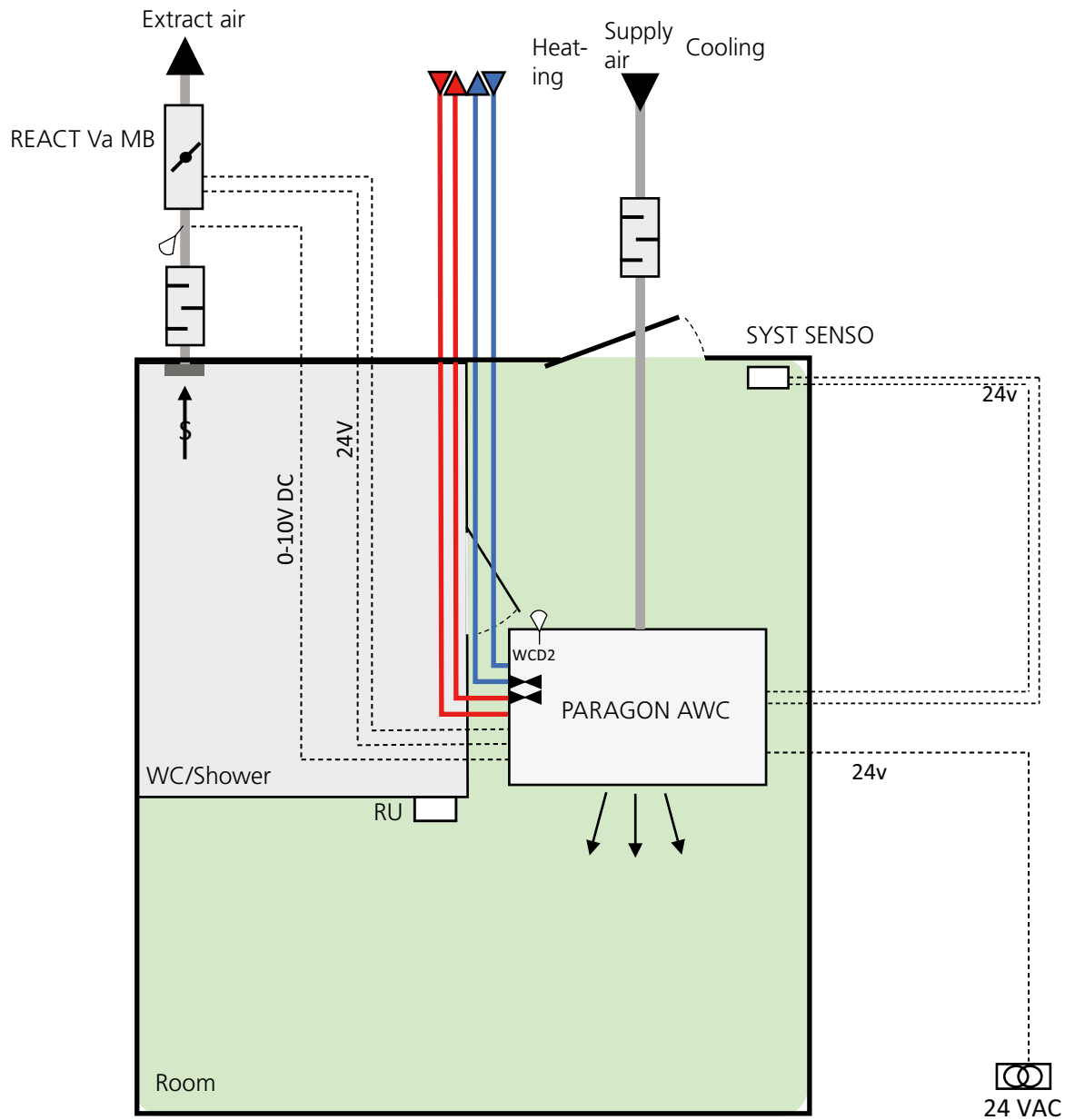
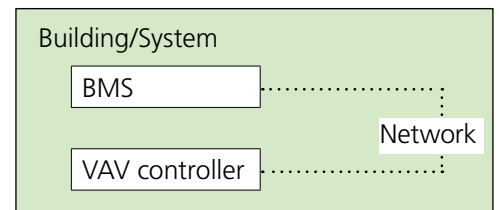


Figure 19. Hotel room with VAV solution.

- PARAGON AWC is supplied with factory-fitted accessories as listed below and with water valves, actuators and motor for the integrated damper
- VAV controller regulates valve actuator and damper motor. Communicates via RJ12 cable with Modbus.
- SYST PS measures pressure of supply air.
- SYST PCS Condensation prevention sensor
- Extract Air Kit VAV-REACT-125. REACT Va MB damper on the extract air is controlled via a 0-10V DC control signal
- The room controller RU is a setpoint selector switch and temperature sensor that communicates via RJ12 cable



## Cooling

### Cooling capacity

Table 1-2 shows the cooling capacities achieved from both the primary air and chilled water for various lengths of unit and air flows.

The total cooling capacity for one unit is the sum of the cooling capacity of the primary air and the chilled water.

**Table 1 – Cooling capacity, 70 Pa**

| Length of the Unit | Air flow |       | Sound level 1)    | Cooling capacity air (W) at $\Delta T$ |     |     |     | Cooling capacity water (W) at $\Delta T_{mk}$ 2) |     |     |     |      |      |      | Pressure drop constant, air |
|--------------------|----------|-------|-------------------|----------------------------------------|-----|-----|-----|--------------------------------------------------|-----|-----|-----|------|------|------|-----------------------------|
|                    | mm       | l/s   | m <sup>3</sup> /h | dB(A)                                  | 6   | 8   | 10  | 12                                               | 6   | 7   | 8   | 9    | 10   | 11   | 12                          |
| 800                | 8.4      | 30.1  | <20               | 60                                     | 80  | 100 | 120 | 214                                              | 250 | 285 | 320 | 356  | 391  | 427  | 1                           |
| 800                | 16.7     | 60.2  | <20               | 120                                    | 161 | 201 | 241 | 319                                              | 370 | 422 | 473 | 524  | 575  | 626  | 2                           |
| 800                | 27.6     | 99.4  | 22                | 199                                    | 265 | 331 | 398 | 360                                              | 420 | 480 | 540 | 600  | 659  | 719  | 3.3                         |
| 1100               | 8.4      | 30.1  | <20               | 60                                     | 80  | 100 | 120 | 236                                              | 274 | 311 | 349 | 386  | 423  | 460  | 1                           |
| 1100               | 25.1     | 90.4  | <20               | 181                                    | 241 | 301 | 361 | 445                                              | 519 | 594 | 668 | 743  | 818  | 893  | 3                           |
| 1100               | 39.3     | 141.6 | 27                | 283                                    | 378 | 472 | 566 | 512                                              | 599 | 687 | 774 | 862  | 949  | 1037 | 4.7                         |
| 1400               | 8.4      | 30.1  | <20               | 60                                     | 80  | 100 | 120 | 263                                              | 306 | 348 | 391 | 433  | 475  | 517  | 1                           |
| 1400               | 25.1     | 90.4  | <20               | 181                                    | 241 | 301 | 361 | 497                                              | 581 | 665 | 749 | 833  | 917  | 1002 | 3                           |
| 1400               | 50.2     | 180.7 | 29                | 361                                    | 482 | 602 | 723 | 612                                              | 717 | 822 | 927 | 1033 | 1139 | 1245 | 6                           |

**Table 2 – Cooling capacity, 100 Pa**

| Length of the Unit | Air flow |       | Sound level 1)    | Cooling capacity air (W) at $\Delta T$ |     |     |     | Cooling capacity water (W) at $\Delta T_{mk}$ 2) |     |     |      |      |      |      | Pressure drop constant, air |
|--------------------|----------|-------|-------------------|----------------------------------------|-----|-----|-----|--------------------------------------------------|-----|-----|------|------|------|------|-----------------------------|
|                    | mm       | l/s   | m <sup>3</sup> /h | dB(A)                                  | 6   | 8   | 10  | 12                                               | 6   | 7   | 8    | 9    | 10   | 11   | 12                          |
| 800                | 10       | 36    | 21                | 72                                     | 96  | 120 | 144 | 258                                              | 302 | 345 | 389  | 432  | 476  | 520  | 1                           |
| 800                | 20       | 72    | 21                | 144                                    | 192 | 240 | 288 | 373                                              | 435 | 496 | 556  | 617  | 678  | 738  | 2                           |
| 800                | 33       | 118.8 | 27                | 238                                    | 317 | 396 | 475 | 423                                              | 493 | 562 | 630  | 699  | 768  | 836  | 3.3                         |
| 1100               | 10       | 36    | 21                | 72                                     | 96  | 120 | 144 | 297                                              | 344 | 390 | 437  | 483  | 529  | 574  | 1                           |
| 1100               | 30       | 108   | 25                | 216                                    | 288 | 360 | 432 | 524                                              | 613 | 703 | 793  | 883  | 974  | 1064 | 3                           |
| 1100               | 47       | 169.2 | 32                | 338                                    | 451 | 564 | 677 | 596                                              | 697 | 799 | 901  | 1003 | 1105 | 1207 | 4.7                         |
| 1400               | 10       | 36    | 22                | 72                                     | 96  | 120 | 144 | 324                                              | 378 | 433 | 487  | 542  | 597  | 651  | 1                           |
| 1400               | 30       | 108   | 24                | 216                                    | 288 | 360 | 432 | 585                                              | 684 | 784 | 883  | 983  | 1082 | 1182 | 3                           |
| 1400               | 60       | 216   | 35                | 432                                    | 576 | 720 | 864 | 715                                              | 833 | 950 | 1068 | 1185 | 1302 | 1419 | 6                           |

1) Room attenuation = 4 dB

2) The specified capacities are based on a complete unit including standard distribution and recirculation grille. Without grille the water capacity increases by approx. 5%. With ADC adjusted to Fan shape you lose approx. 5% in water capacity. The primary air capacity is not affected.

NOTE! The total cooling capacity is the sum of the airborne and waterborne cooling capacities.

## Heating

### Heating capacity

**Table 3 – Heating capacity, 70 Pa**

| Length of the Unit | Air flow |       | Sound level 1) | Heating capacity water (W) at $\Delta T_{mk}$ |     |     |      |      |      |      | Pressure drop constant, air |
|--------------------|----------|-------|----------------|-----------------------------------------------|-----|-----|------|------|------|------|-----------------------------|
| mm                 | l/s      | m³/h  | dB(A)          | 5                                             | 10  | 15  | 20   | 25   | 30   | 35   | k                           |
| 800                | 8,4      | 30,1  | <20            | 100                                           | 196 | 302 | 412  | 524  | 636  | 751  | 1                           |
| 800                | 16,7     | 60,2  | <20            | 134                                           | 281 | 436 | 598  | 764  | 933  | 1104 | 2                           |
| 800                | 27,6     | 99,4  | 22             | 145                                           | 299 | 461 | 626  | 794  | 964  | 1135 | 3,3                         |
| 1100               | 8,4      | 30,1  | <20            | 105                                           | 219 | 344 | 474  | 609  | 745  | 883  | 1                           |
| 1100               | 25,1     | 90,4  | <20            | 190                                           | 385 | 598 | 821  | 1044 | 1271 | 1504 | 3                           |
| 1100               | 39,3     | 141,6 | 27             | 200                                           | 415 | 649 | 886  | 1132 | 1383 | 1637 | 4,7                         |
| 1400               | 8,4      | 30,1  | <20            | 140                                           | 297 | 458 | 624  | 792  | 963  | 1135 | 1                           |
| 1400               | 25,1     | 90,4  | <20            | 230                                           | 474 | 735 | 997  | 1262 | 1535 | 1787 | 3                           |
| 1400               | 50,2     | 180,7 | 29             | 268                                           | 541 | 832 | 1128 | 1429 | 1738 | 2045 | 6                           |

**Table 4 – Heating capacity, 100 Pa**

| Length of the Unit | Air flow |       | Sound level 1) | Heating capacity water (W) at $\Delta T_{mv}$ |     |     |      |      |      |      | Pressure drop constant, air |
|--------------------|----------|-------|----------------|-----------------------------------------------|-----|-----|------|------|------|------|-----------------------------|
| mm                 | l/s      | m³/h  | dB(A)          | 5                                             | 10  | 15  | 20   | 25   | 30   | 35   | k                           |
| 800                | 10,0     | 36,0  | 21             | 105                                           | 221 | 343 | 467  | 593  | 721  | 851  | 1                           |
| 800                | 20,0     | 72,0  | 21             | 153                                           | 316 | 489 | 667  | 848  | 1036 | 1223 | 2                           |
| 800                | 33,0     | 118,8 | 27             | 160                                           | 331 | 510 | 695  | 880  | 1071 | 1260 | 3,3                         |
| 1100               | 10,0     | 36,0  | 21             | 120                                           | 255 | 400 | 547  | 700  | 854  | 1012 | 1                           |
| 1100               | 30,0     | 108,0 | 25             | 204                                           | 431 | 672 | 919  | 1171 | 1427 | 1686 | 3                           |
| 1100               | 47,0     | 169,2 | 32             | 220                                           | 464 | 723 | 996  | 1269 | 1553 | 1840 | 4,7                         |
| 1400               | 10,0     | 36,0  | 22             | 165                                           | 341 | 530 | 719  | 916  | 1115 | 1313 | 1                           |
| 1400               | 30,0     | 108,0 | 24             | 260                                           | 540 | 829 | 1123 | 1421 | 1722 | 2030 | 3                           |
| 1400               | 60,0     | 216,0 | 35             | 290                                           | 597 | 922 | 1253 | 1589 | 1929 | 2272 | 6                           |

1) Room attenuation = 4 dB

Water flow = 0,051 l/s, Room temperature = 20°C

# Installation

## Suspension

PARAGON AWC has two holes on each short side for hanging and is mounted with a threaded rod in each hole.

For installation use the assembly fitting containing threaded rods, ceiling brackets and nuts to all four mounting brackets. Threaded rod length from 200 mm. In the event of large distances between ceiling and unit, double threaded rods with thread locks are used. Assembly fitting SYST MS M8 (Figure 21) is ordered separately.

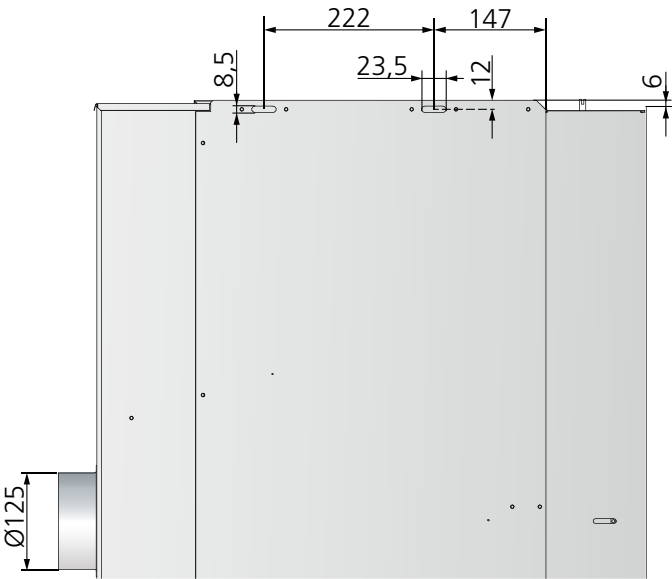


Figure 20. Dimensions, suspension, view from above

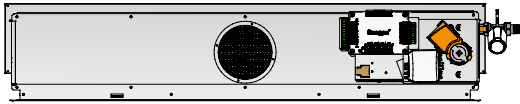
## Air connection

All variants have the air connection Ø125.

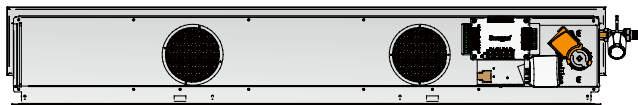
The standard variant has the air connection centred at the rear of the product for easy access from both ends and the rear.

The suite version, which is only available in 1400 mm length, has two parallel air connections at the rear, i.e. 2 x Ø125.

Standard variant



Suite variant



### Connection sizes, air

| Variant     | Length<br>(mm)  | Air connection |           |
|-------------|-----------------|----------------|-----------|
|             |                 | 1 x Ø 125      | 2 x Ø 125 |
| 1: Standard | 800, 1100, 1400 | Yes            | No        |
| 2: Suite    | 1400            | No             | Yes       |

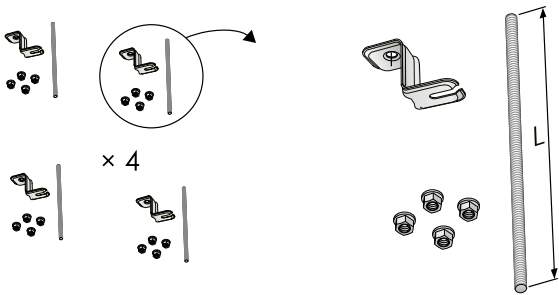


Figure 21. Assembly fitting SYST MS M8-1, ceiling mount and threaded rod

## Installation

The work involving the casing can begin once PARAGON AWC has been fully installed. PARAGON AWC is designed for use in most common types of load-carrying T-grid ceiling systems with panels, plaster board, etc. To make your work simpler, detailed dimensions for cutting the opening are specified below in the “Dimensions” section on page 27 in this brochure. More detailed information is also available in separate installation instructions at [www.swegon.com](http://www.swegon.com).

Connection - Water

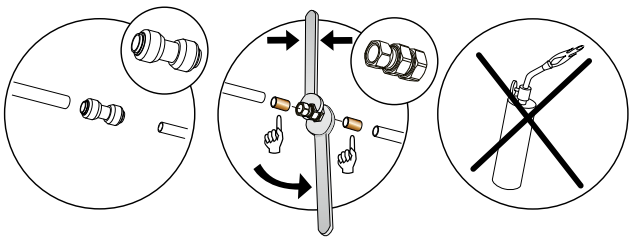
Connection sizes

Standard variant with factory-fitted valves:

| Length          | Cooling          | Heating          |
|-----------------|------------------|------------------|
| (mm)            | Return           | Return           |
| 800, 1100, 1400 | DN15 male thread | DN15 male thread |

Standard variant without factory fitted valves:

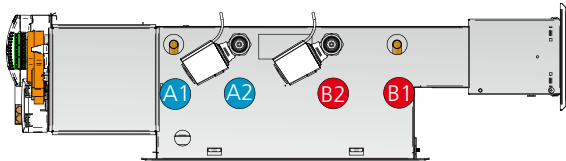
| Length          | Cooling            | Heating            |
|-----------------|--------------------|--------------------|
| (mm)            | Supply and return  | Supply and return  |
| 800, 1100, 1400 | plain pipe ends    | plain pipe ends    |
|                 | (Cu) Ø 12 x 1.0 mm | (Cu) Ø 12 x 1.0 mm |



Note that compression ring couplings require support sleeves inside the pipes.

Water connection on the right-hand side "R"

Cooling and heating R. all sizes



Cooling R, all sizes

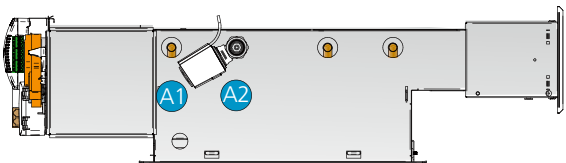


Figure 22. Water connection on right-hand side (R).  
A1 = Cooling water, supply    B1 = Heating water, supply  
A2 = Cooling water, return    B2 = Heating water, return

Connecting water

The water pipes are placed on the left or right short side of the product depending on the choice made, there is also a variant with a centred water connection at the rear (WB).

Connect the water pipes using push-on couplings or compression ring couplings. Note that compression ring couplings require support sleeves inside the pipes.

Do not use solder couplings to connect the water pipes. High temperatures can damage the unit's existing soldered joints.

Flexible connecting hoses for water are available for flat-end pipes and valves, and can be ordered separately.

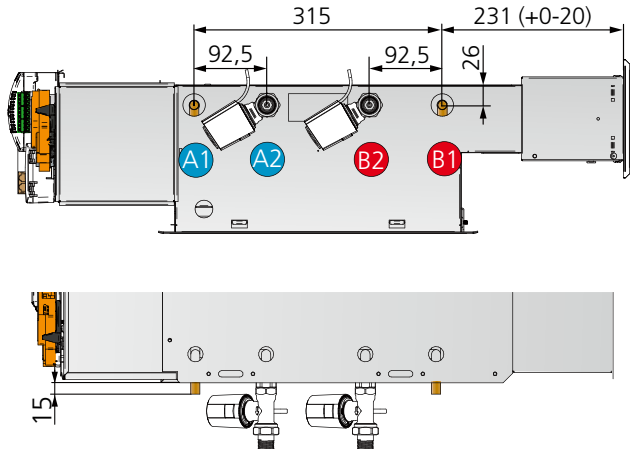
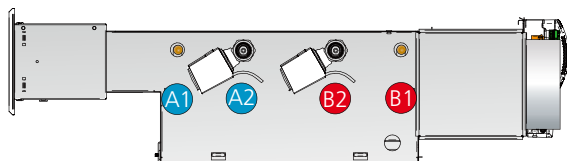


Figure 23. Dimensions water connection

Water connection on the left-hand side "L"

Cooling and heating L. all sizes



Cooling L, all sizes

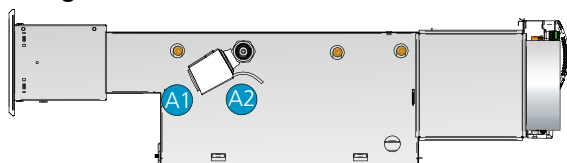


Figure 24. Water connection on left-hand side (L).  
A1 = Cooling water, supply    B1 = Heating water, supply  
A2 = Cooling water, return    B2 = Heating water, return

Water connection at the rear edge "WB"

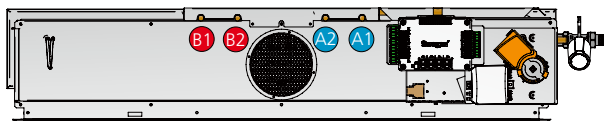


Figure 25. Water connection at the rear edge (WB).  
A1 = Cooling water, supply    B1 = Heating water, supply  
A2 = Cooling water, return    B2 = Heating water, return

# Accessories

## Optional factory-fitted accessories

Factory-fitted control equipment makes the installation work simple. All components are accessible from the back of the product.

### A selection of our optional factory-fitted extras:

|                                    |                             |
|------------------------------------|-----------------------------|
| Controller                         | PARAGON AWC RE              |
| Actuator                           | PARAGON AWC SA              |
| Valve cooling                      | SYST VDN 215 Straight valve |
| Valve heating                      | SYST VDN 215 Straight valve |
| Actuator cooling                   | ACTUATOR 24 V NC            |
| Actuator heating                   | ACTUATOR 24 V NC            |
| Pressure sensor                    | SYST PS                     |
| Condensation sensor                | CG IV                       |
| "                                  | SYST PCS                    |
| Temperature sensor                 | T-TG-1                      |
| Air quality sensor CO <sub>2</sub> | DETECT Qa                   |
| Air quality sensor VOC             | Detect VOC-2                |

### Upgrade kits

There are also a number of upgrade kits for upgrading from PARAGON AWC and to WISE Paragon

Upgrade kit WISE Paragon CU

Upgrade kit WISE Paragon SA

Control kit WISE Paragon Dew point

**In addition to the factory-installed options, loose accessories and kits (not factory-fitted) are also available:**

Kits and accessories are easily mounted during installation

|                                                 |                                 |
|-------------------------------------------------|---------------------------------|
| Controller                                      | WISE Paragon CU - Kit           |
| Actuator motor                                  | WISE Paragon SA - Kit           |
| Pressure sensor                                 | SYST PS                         |
| Valve cooling                                   | SYST VDN 215 Straight valve     |
| Valve heating                                   | SYST VDN 215 Straight valve     |
| Actuator cooling                                | ACTUATOR 24 V NC                |
| Actuator heating                                | ACTUATOR 24 V NC                |
| Condensation sensor                             | Condensation sensor, CG IV-KIT  |
|                                                 | SYST PCS-KIT                    |
|                                                 | WISE SMA Multi                  |
| Temperature sensor                              | T-TG-1                          |
|                                                 | WISE Temperature sensor PT1000  |
| Air quality sensor                              | CO <sub>2</sub> -Kit, Detect Qa |
|                                                 | VOC-Kit, Detect VOC-2           |
| Room controller/<br>Setpoint selector<br>switch | LOCUS (wall)                    |
| Temp/Occupancy<br>detector                      | VAV sensor (wall) - KIT         |

# Accessories, factory-fitted

## Valve, cooling & heating

Factory fitted valves for cooling and heating.

The valve is mounted on the product and preset fully open.

| Function        | Type   | Dim.      | K <sub>v</sub> (m³/h) |
|-----------------|--------|-----------|-----------------------|
| Cooling/heating | VDN215 | DN15 (½") | 0.07-0.89             |

For more information about the valve, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



## Actuator cooling & heating, ACTUATORc 24 V NC

Factory fitted valve actuators for cooling and heating.

24V AC/DC, NC (Normally Closed).

For more information about the actuator, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



## Transformer, Power Adapt 20 VA

Transformer for the voltage supply of products.

Protective transformer with plug type F.

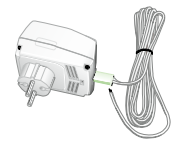
Input voltage 230 V 50-60 Hz

Output voltage 24 V AC

Power 20 VA

Double insulation

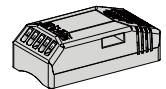
Enclosure IP33



## Condensation sensor SYST PCS

The detector operates at the dew point temperature rather than a fixed relative humidity value.

The dew-point is calculated from a temperature compensated RH element and an extremely accurate sensor element that is bound to the metal plate on the detector.

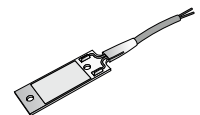


## Condensation sensor, CG IV

The condensation sensor is supplied fitted and connected from the factory. The actual sensor element consists of a circuit board with gold plated conductive paths that react when condensation occurs between these. When condensation arises, the cooling valve closes the incoming water flow to the product. When the condensation on the conductive paths has been wiped off, the cooling valve is permitted to open again.

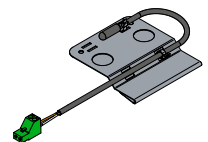
The sensor is positioned on the coil fins by the cooling supply.

For more information about the condensation sensor, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



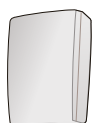
## Temperature sensor, T-TG-1

External temperature sensor. Used for example if the room temperature must be measured elsewhere than at the sensor module, or to measure the temperature of the main pipe in change-over systems.



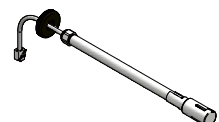
## Co<sub>2</sub> sensor. Detect Qa

Analogue carbon dioxide sensor that is mounted concealed, above the extract air grille. See separate product sheet at [www.swegon.com](http://www.swegon.com).



## VOC sensor Detect VOC

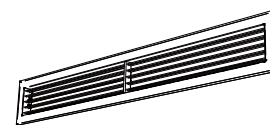
Modbus connected air quality sensor that is mounted concealed above the extract air grille



# Loose accessories

## Supply air grille, PARAGON T-SG

Front grille for PARAGON, available for products with the length, 800, 1100, 1400 mm



## Return grille, PARAGON T-RG

Return grille for PARAGON, available for products with the length, 800, 1100, 1400 mm



## Transformer, Power ADAPT 20 VA (ARV)

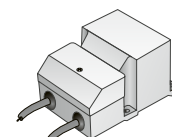
Input voltage 230 V, 50-60 Hz, Output voltage 24 V AC  
Power 20 VA, Enclosure IP33



## Transformer, SYST TS-1

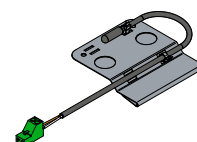
Double-insulated protective transformer 230 V, AC/24 V AC  
Input voltage 230 V, 50-60 Hz, Output voltage 24 V AC,  
Power 20 VA, Enclosure IP33

For more information, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



## Temperature sensor, T-TG-1

External temperature sensor. Used for example if the room temperature must be measured elsewhere than at the sensor module, or to measure the temperature of the main pipe in change-over systems.



## Valve, SYST VDN 215

Straight valves for cooling and heating.

VDN215 is preset fully open on  $K_v$  0.89.

For more information about the valve, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).

| Function        | Type   | Dim.      | $K_v$ (m³/h) |
|-----------------|--------|-----------|--------------|
| Cooling/heating | VDN215 | DN15 (½") | 0.07-0.89    |



## Valve actuator, cooling & heating, ACTUATORc 24 V NC

Valve actuators for cooling and heating.

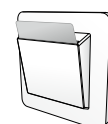
24V AC/DC, NC (Normally Closed).

For more information about the actuator, see the separate product data sheet on [www.swegon.com](http://www.swegon.com).



## Card switch, SYST SENSO II

Key card holder for hotel rooms.



## Sensor module, external

Rectangular sensor module with temperature and occupancy sensors for wall mounting

Always supplied with both a mounting frame for the most common junction boxes and a spacer frame for surface mounting.



## Room controller, LOCUS

The room controller is a setpoint selector switch with integrated temperature sensor and digital colour display.

LOCUS is available with a white or black frame.

For more information about the room controller, see the separate product data sheet at [www.swegon.com](http://www.swegon.com).



## **Cable, SYST CABLE RJ12 6-LED.**

Cable for the connection of an external sensor module to the controller or between sensor modules. Available in different standard lengths.

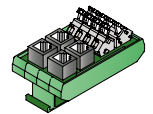


## **Cable, CABLE CONVERTER USB-RJ12 (RS485)**

Cable with integrated modem to connect a PC to the controller. Needed to run e.g. SWICCT or ModbusPoll.



## **Cable adapter, ADAPTER RJ12-WIRE**



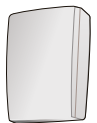
## **LINK Wise**

Network cable for Modbus communication in the WISE system. The cable conforms to EIA 485 standard. Shielded four conductor AWG 24, external diameter Ø 9.6 mm, Grey PVC. The cable is only supplied in reels of 500 m.



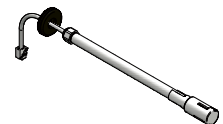
## **Co<sub>2</sub> sensor. Detect Qa**

Analogue carbon dioxide sensor that is mounted concealed in the product. See separate product sheet at [www.swegon.com](http://www.swegon.com).



## **VOC sensor Detect VOC**

Modbus connected air quality sensor that is mounted concealed in the product.



## **Assembly fitting, SYST MS M8**

For installation use the assembly fitting containing threaded rods, ceiling brackets and nuts to all four mounting brackets.



## **Grille lock, PARAGON AWC T- GL**

Grille lock for fixing the position of the supply air grille.



### Flexible connection hoses, SYST FH

Flexible hoses are available with quick-fit, push-on couplings as well as clamping ring couplings for quick and simply connection. The hoses are also available in various lengths. Note that compression ring couplings require support sleeves inside the pipes.

Flexible hoses also reduce the risk of movement in the piping system due to thermal expansion.

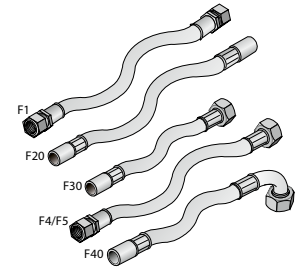
F1 = Clamping ring couplings at both ends.

F20 = Push-on couplings at both ends.

F30 = Push-on coupling at one end and union nut G20ID at the other end.

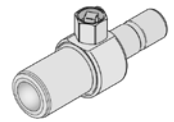
F4/F5 = Clamping ring coupling at one end and union nut with flat seal at the other end.

F40 = Push-on coupling at one end, union nut 90° at the other end.



### Venting nipple, SYST AR-12

A venting nipple is available as a complement to the flexible hoses with push-on couplings. The venting nipple fits directly in the push-on hose coupling and can be fitted in an instant.



### Connection piece, air – insertion joint, SYST AD1

SYST AD1 is used as a joint between PARAGON AWC and the duct system.

Available in two sizes: Ø125 and Ø160 mm.



### Connection piece, air, SYST CA

90° duct bend.

Available in two sizes: Ø125 and Ø160 mm.



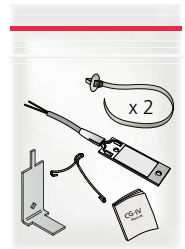
# Accessory kits

## CG-IV-KIT

Condensation sensor CG-IV and assembly parts for retrofitting.

Condensation sensor's sensor element consists of a circuit board with gold plated conductive paths that react when condensation occurs between these. When condensation arises, the cooling valve closes the incoming water flow to the product. When the condensation on the conductive paths has been wiped off, the cooling valve opens again. The sensor is positioned on the coil fins by the cooling supply.

*For more information about the condensation sensor, see the separate product data sheet and installation instructions on [www.swegon.com](http://www.swegon.com).*



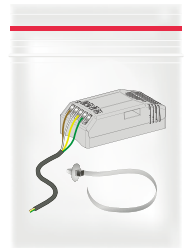
## SYST PCS-KIT

Condensation sensor SYST PCS and assembly parts for retrofitting.

The detector operates at the dew point temperature rather than a fixed relative humidity value.

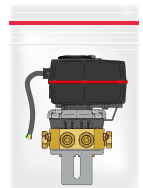
The dew-point is calculated from a temperature compensated RH element and an extremely accurate sensor element that is bound to the metal plate on the detector.

*For more information about the condensation sensor, see the separate product data sheet and installation instructions on [www.swegon.com](http://www.swegon.com).*



## CCO-Kit

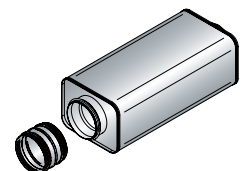
Compact Change Over valve, for maximum utilisation of the coil.



## Supply Air Kit-125

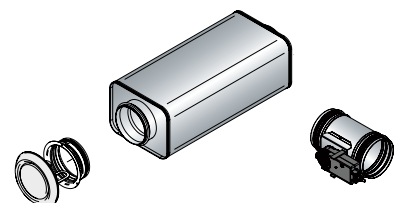
The supply air kit contains a sleeve and sound attenuator.

Accessories must be completed through user configuration of one or more selectable properties on the product.



## Extract Air Kit VAV-REACT-125

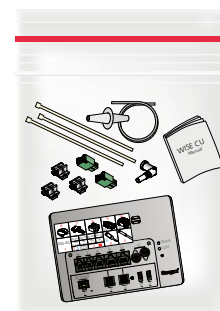
Extract air kit for VAV containing a REACT Va MB damper, control valve EXC and sound attenuator. Accessories must be completed through user configuration of one or more selectable properties on the product.



# Upgrade kit WISE

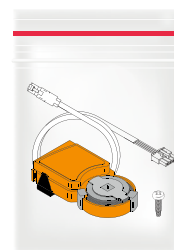
## Upgrade kit WISE PARAGON-CU

The upgrade kit WISE PZ CU includes control plate with mounted CU, Phönix connector, assembly clamps, pressure hose, hose coupling and Luer-female.



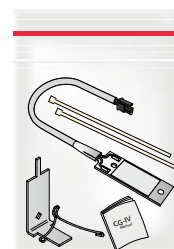
## Upgrade kit WISE PARAGON-SA

The upgrade kit includes motor actuator, actuator cable, RJ45 cable and screw



## Upgrade kit WISE Condensation sensor CG IV-KIT

The upgrade kit includes condensation sensor and assembly parts



## Upgrade kit Dew-point KIT WISE PARAGON

The upgrade kit contains the temperature sensor, WISE TEMP SENSOR PT1000  
For dew point regulation, RH measurement is also required in the room.



## Upgrade kit WISE SMA Multi

The upgrade kit includes WISE SMA Multi incl. RJ12 cable and assembly plate.



# Dimensions and weight

## Weight

### PARAGON AWC 800

| Length<br>mm | Type | Dim.<br>Ø | Dry weight* (kg) |              | Water volume (l) |         |
|--------------|------|-----------|------------------|--------------|------------------|---------|
|              |      |           | Without grille   | incl. grille | cooling          | heating |
| 800 R        | A    | 125       | 14.0             | 16.9         | 1.39             |         |
| 800 L        | A    | 125       | 14.0             | 16.9         | 1.38             |         |
| 800 R        | B    | 125       | 14.0             | 16.9         | 1.39             | 0.38    |
| 800 L        | B    | 125       | 14.0             | 16.9         | 1.38             | 0.37    |
| 800 R        | X    | 125       | 14.0             | 16.9         | 1.39             |         |
| 800 L        | X    | 125       | 14.0             | 16.9         | 1.38             |         |

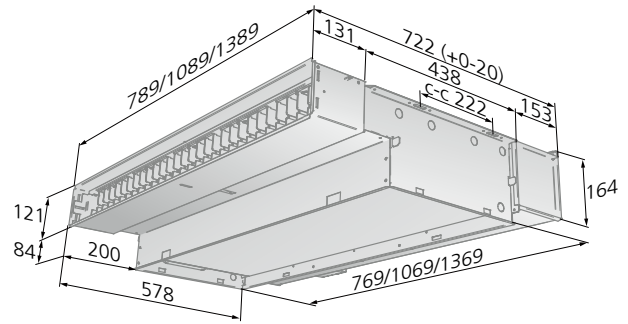


Figure 26. Dimensional drawing without grille

### PARAGON AWC 1100

| Length<br>mm | Type | Dim.<br>Ø | Dry weight* (kg) |              | Water volume (l) |         |
|--------------|------|-----------|------------------|--------------|------------------|---------|
|              |      |           | Without grille   | incl. grille | cooling          | heating |
| 1100 R       | A    | 125       | 18.8             | 22.6         | 1.93             |         |
| 1100 L       | A    | 125       | 18.8             | 22.6         | 1.92             |         |
| 1100 R       | B    | 125       | 18.8             | 22.6         | 1.93             | 0.52    |
| 1100 L       | B    | 125       | 18.8             | 22.6         | 1.92             | 0.51    |
| 1100 R       | X    | 125       | 18.8             | 22.6         | 1.93             |         |
| 1100 L       | X    | 125       | 18.8             | 22.6         | 1.92             |         |

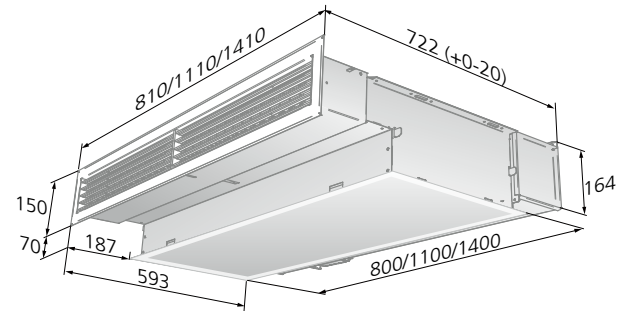


Figure 27. Dimensional drawing with grille

### PARAGON AWC 1400

| Length<br>mm | Type | Dim.<br>Ø | Dry weight* (kg) |              | Water volume (l) |         |
|--------------|------|-----------|------------------|--------------|------------------|---------|
|              |      |           | Without grille   | Incl. grille | cooling          | heating |
| 1400 R       | A    | 125       | 23.0             | 27.6         | 2.47             |         |
| 1400 L       | A    | 125       | 23.0             | 27.6         | 2.46             |         |
| 1400 R       | B    | 125       | 23.0             | 27.6         | 2.47             | 0.65    |
| 1400 L       | B    | 125       | 23.0             | 27.6         | 2.46             | 0.64    |
| 1400 R       | X    | 125       | 23.0             | 27.6         | 2.47             |         |
| 1400 L       | X    | 125       | 23.0             | 27.6         | 2.46             |         |

\*Added weight for:  
Control equipment: 0.80 kg  
Actuator: 0.28 kg

# Specification

## PARAGON AWC specification

Type PARAGON AWC comfort module for cooling, heating, ventilation and control. As standard, factory fitted components are included for plug & play installation.

## PARAGON AWC delivery demarcation

Swegon's limits of supply are at the connection points for water.

At these connection points, the RE pipework contractor connects to plain pipe end and/or male threads towards valves, fills the system, bleeds it and tests the pressure in the circuits.

The ventilation contractor connects to the duct connections with dimensions as specified on the basic size drawing in the section "Dimensions".

EE electrical equipment contractor provides a 24 V AC network power supply or earthed 230 V outlets for a transformer, as well as a junction box, if required, installed in a wall for a room thermostat.

The building contractor cuts the openings in corridor wall for the supply air duct, in the interior wall and suspended ceiling for the supply air and extract air grilles and in the bathroom ceiling for the extract air duct.

The electrical contractor connects the power (24V) and signal cables to the connection terminals with spring-loaded snap-in connections.

Maximum cable cross section 2.5 mm<sup>2</sup>. For safe operation, we recommend cable ends with ferrules.

## Maintenance

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 previous maintenance section in the Instructions for Use.

## PARAGON AWC Ordering key

| PARAGON AWC                                                    | d | aaaa- | b- | c- | dddd |
|----------------------------------------------------------------|---|-------|----|----|------|
| Version:                                                       |   |       |    |    |      |
| Length (mm)                                                    |   |       |    |    |      |
| 800, 1100 and 1400                                             |   |       |    |    |      |
| Function:                                                      |   |       |    |    |      |
| A = Cooling                                                    |   |       |    |    |      |
| B = Cooling and heating (water)                                |   |       |    |    |      |
| Connection side - water<br>(seen from the back of the product) |   |       |    |    |      |
| R = Right                                                      |   |       |    |    |      |
| L = Left                                                       |   |       |    |    |      |
| WB = Centred at the rear (optional extra)                      |   |       |    |    |      |
| Air connections                                                |   |       |    |    |      |
| 125 = Ø125 (standard)                                          |   |       |    |    |      |
| 2x125 = 2Ø125 (suite, only selectable for length 1400)         |   |       |    |    |      |

## Factory-fitted optional extra

|                                    |                             |
|------------------------------------|-----------------------------|
| Control unit/controller            | PARAGON AWC RE              |
| Motor                              | PARAGON AWC SA              |
| Valve cooling                      | SYST VDN 215 Straight valve |
| Valve heating                      | SYST VDN 215 Straight valve |
| Actuator cooling                   | ACTUATOR d 24V NC           |
| Actuator heating                   | ACTUATOR d 24V NC           |
| Condensation sensor                | CG IV<br>SYST PCS           |
| Temperature sensor                 | T-TG-1                      |
| Air quality sensor CO <sub>2</sub> | DETECT Qa                   |
| Air quality sensor VOC             | Detect VOC-2                |

## Available to order, loose kits and accessories

**In addition to the factory-installed options, loose accessories and kits (not factory-fitted) are also available:**

Kits and accessories are easily mounted during installation

|                                          |                                |
|------------------------------------------|--------------------------------|
| Controller KIT                           | PARAGON AWC RE - Kit           |
| Actuator motor KIT                       | WISE Paragon SA - Kit          |
| Valve cooling                            | VDN 215 Straight valve         |
| Valve heating                            | VDN 215 Straight valve         |
| Actuator cooling                         | ACTUATOR 24 V NC               |
| Actuator heating                         | ACTUATOR 24 V NC               |
| Condensation sensor                      | Condensation sensor, CG IV-KIT |
| "                                        | SYST PCS-KIT                   |
| Temperature sensor                       | T-TG-1-KIT                     |
| "                                        | Dew-point KIT WISE Paragon     |
| Air quality,                             | WISE SMA Multi                 |
| Air quality, CO2-KIT                     | CO2 Detect Qa - kit            |
| Air quality, VOC-KIT                     | DETECT VOC-2 - kit             |
| Condensation sensor KIT                  | CG IV - kit                    |
| "                                        | SYST PCS - kit                 |
| Pressure sensor                          | SYST PS                        |
| Transformer                              | Power ADAPT 20 VA (ARV)        |
| Transformer                              | SYST TS-1                      |
| Card switch                              | SYST SENSO                     |
| Supply air grille                        | PARAGON T-SG                   |
| Return grille                            | PARAGON T-RG                   |
| Grille lock                              | PARAGON T-GL                   |
| ADC                                      | ADC-2-105                      |
| Sensor module                            | VAV sensor module              |
| "                                        | WISE SMB                       |
| Room controller/Setpoint selector switch | LOCUS                          |
| Cable adapter                            | ADAPTER RJ12-WIRE              |
| Flexible connection hose                 | SYST FH                        |
| Assembly piece                           | SYST MS-M8                     |
| Venting nipple                           | SYST AR-12                     |
| Connection fitting, air – nipple         | SYST AD1                       |
| Connection fitting, air – elbow          | SYST CA                        |
| Supply air kit                           | Supply Air Kit-125             |
| Extract air kit                          | Extract Air Kit VAV-REACT-125  |

## Ordering key, accessories

|                        |              |     |      |
|------------------------|--------------|-----|------|
| Grille                 | PARAGON d T- | aa- | bbbb |
| Type:                  |              |     |      |
| SG = Supply air grille |              |     |      |
| RG = Return grille     |              |     |      |
| Product length (mm):   |              |     |      |
| 800, 1100, 1400        |              |     |      |

|                                         |            |       |   |
|-----------------------------------------|------------|-------|---|
| Assembly piece                          | SYST MS M8 | aaaa- | b |
| Length threaded rod (mm):               |            |       |   |
| 200; 500; 1000                          |            |       |   |
| Type:                                   |            |       |   |
| 1=One threaded rod                      |            |       |   |
| 2=Two threaded rods and one thread lock |            |       |   |

|                                                                             |             |      |    |
|-----------------------------------------------------------------------------|-------------|------|----|
| Flexible connection hose, (x1)                                              | SYST FH F1- | aaa- | 12 |
| Compression ring (Ø12 mm) against pipe at both ends (excl. support sleeves) |             |      |    |
| Length (mm):                                                                |             |      |    |
| 300, 500, 700                                                               |             |      |    |

|                                                            |              |      |    |
|------------------------------------------------------------|--------------|------|----|
| Flexible connection hose, (x1)                             | SYST FH F20- | aaa- | 12 |
| Quick-connector push-on (Ø12 mm) against pipe at both ends |              |      |    |
| Length (mm):                                               |              |      |    |
| 275, 475, 675                                              |              |      |    |

|                                                                                                |              |      |    |
|------------------------------------------------------------------------------------------------|--------------|------|----|
| Flexible connection hose, (x1)                                                                 | SYST FH F30- | aaa- | 12 |
| Quick-fit coupling push-on (Ø12 mm) against pipe at one end, union nut G20ID at the other end. |              |      |    |
| Length (mm):                                                                                   |              |      |    |
| 200, 400, 600                                                                                  |              |      |    |

|                                         |      |
|-----------------------------------------|------|
| Condensation sensor                     | aaaa |
| SYST PCS proactive condensation control |      |
| CG-IV reactive condensation control     |      |

|                 |       |    |   |
|-----------------|-------|----|---|
| Room controller | LOCUS | a- | b |
| Version:        |       |    |   |
| Frame colour:   |       |    |   |
| W = white       |       |    |   |
| B = black       |       |    |   |

### Accessory kits:

- Controller KIT WISE PARAGON CU xx items
- Controller KIT LUNA RE xx items
- Actuator motor KIT WISE PARAGON SA xx items
- Condensation sensor KIT for retrofitting  
Condensation sensor CG IV-KIT, xx items
- Condensation sensor for retrofitting, SYST PCS-KIT, xx items
- Temp. sensor, T-TG1-KIT, xx items
- Temp. sensor, Dew-point KIT WISE Paragon, xx items
- 6-way valve, CCO-Kit, xx items
- Air quality sensor, CO2-Kit, Detect Qa, xx items
- Air quality sensor, VOC-Kit, DETECT VOC-2
- Air quality, WISE SMA Multi, xx items
- Supply Air Kit-125, xx items
- Extract Air Kit VAV-REACT-125, xx items

### Accessories:

- Supply air grille, PARAGON d-T-SG-aaaa xx items
- Return grille, PARAGON d-T-RG-aaaa xx items
- Grille lock, PARAGON T-GL xx items
- Valve cooling SYST VDN 215 xx items
- Valve heating SYST VDN 215, xx items
- Actuator cooling ACTUATORc 24 V NC, xx items
- Actuator heating ACTUATOR c 24 V NC, xx items
- Transformer, POWER Adapt 20 VA, xx items
- Transformer, SYST TS-1, xx items
- Pressure sensor, SYST PS, xx items
- Room controller/Setpoint selector switch, LOCUS, xx items
- Card switch, SYST SENSO II, xx items
- Assembly piece, SYST MS M8 aaaa-b
- ADC for subsequent installation, SYST ADC-2-105, xx items
- Cable adapter, ADAPTER RJ12-WIRE, xx items
- Flexible connection hose, SYST FH F1 aaa- 12 xx pcs.
- Flexible connection hose, SYST FH F20 aaa- 12 xx pcs.
- Flexible connection hose, SYST FH F30 aaa- 12 xx pcs.
- Venting nipple, push-on, SYST AR-12, xx items
- Connection piece, air – nipple, SYST AD1-aaa, xx items
- Connection piece, air (90°elbow), SYST CA-aaa-90, xx items

etc.

Specify the quantities individually or with reference to the drawing.

## Specification text

Example of a specification text according to VVS AMA.

PCT.312 Duct connected chilled beams.

PTD.4 Duct connected room devices for heating and cooling.

Swegon's comfort module PARAGON AWC with integrated supply air damper in the product for demand-controlled ventilation.

For rear edge installation in a wall/ceiling, with the following functions:

- Ventilation, waterborne cooling and heating
- Integrated damper for variable air flow control 0-100%
- Ø125 mm duct connection
- Integrated circulating air opening in face plate
- Comfort guarantee ADC with adjustable function +-30 degrees
- Cleanable
- Fixed measurement tapping with hose
- Eurovent certified
- Grilles in standard colour RAL 9003

### Contractor demarcation at connection point for water and air as in outline drawing.

- At the points of connection the pipe contractor connects to 12 mm plain pipe end after which the ventilation contractor connects the Ø125 mm insertion piece (sleeve).
- The pipe contractor fills, bleeds, tests the pressure and assumes responsibility for the design water flows reaching each branch of the system and the unit.
- The ventilation contractor conducts initial commissioning of the air flows