

# WISE Pacific

Chilled beam for Swegon's WISE System for demand-controlled ventilation



## QUICK FACTS

- **Smart climate control** — Automatically adjusts air and water flow for optimal comfort and efficiency.
- **Wireless integration** — Fully compatible with the Swegon WISE system for easy setup and monitoring.
- **Stable performance** — Pressure-independent control ensures consistent airflow and comfort.
- **Modular design** — Three-module system for adaptable, optimized indoor climate solutions.
- **Integrated SA/EA air modules** — Optional supply and extract modules for a seamless look.
- **Coanda wing option** — Optimized air distribution for open ceilings, eliminating drafts.

| Primary airflow<br>l/s | Pressure range<br>Pa | Cooling capacity<br>W | Heating capacity<br>Water W |
|------------------------|----------------------|-----------------------|-----------------------------|
| Up to 97               | 30 to 150            | Up to 2158            | Up to 2494                  |

| Additional SA/EA module   |                           |                            |
|---------------------------|---------------------------|----------------------------|
| SA: Supply airflow<br>l/s | SA: Cooling capacity<br>W | EA: Extract airflow<br>l/s |
| Up to 65                  | Up to 470                 | max. 100                   |

| Size                    |            |  |             |      |      |
|-------------------------|------------|--|-------------|------|------|
| Length (mm)             | Width (mm) |  | Height (mm) |      |      |
|                         | min./max.  |  | Ø125        | Ø160 | Ø200 |
| 1200, 1800, 2400, 3000* | 594 / 667* |  | 189         | 244  | 299  |

\* The WISE Pacific is obtainable in lengths and widths that fit the majority of false ceilings available on the market.

Cooling, air:  $\Delta T_i = 6K$  / water:  $\Delta T_{mk} = 8,5K$ ,  $t_{water} = 14/17,3^\circ C$ , waterflow 0,1l/s  
 Heating, air:  $\Delta T_i = -1K$  / water:  $\Delta T_{mk} = 16K$ ,  $t_{water} = 45/31^\circ C$ , waterflow 0,045l/s  
 Commissioning pressure: 70 Pa  
 30dB with 5db room attenuation

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# Technical description

## WISE system

Demand-controlled ventilation with the WISE system has never been easier. For a description of the WISE system, see the WISE System Guide at [www.swegon.com](http://www.swegon.com)

## Communicates wirelessly

The WISE system's intelligent room products/nodes communicate wirelessly with the built-in radio transmitter. Products that have a power supply work both as a transmitter and receiver and in some instances, can be used to boost/repeat the system's radio communications. Products powered by a battery act only as transmitters.

## WISE supports different combinations of indoor climate systems

The option is now given to combine waterborne and airborne within the building, right down to floor level to zone and room level. WISE makes it possible to combine a number of system solutions at the same time.

## Chilled beam WISE Pacific

WISE Pacific is fully prepared for integration with Swegon's WISE control system, enabling demand-controlled operation, precise room regulation, and smooth communication with the overall building system. The result is a future-ready solution that combines comfort, energy efficiency, and intelligent control in one coherent system.



Figure 1. WISE Pacific



Figure 2. WISE Pacific from the opposite side with WISE CU

## Design

### DCV – 2-way blowing chilled beam

WISE Pacific is a new generation of 2-way blowing chilled beams designed for buildings that require stable airflow, excellent comfort and a clean, architectural appearance. The beam delivers cooling, heating and ventilation with high induction and low sound levels — perfect for offices, schools and hotels.

WISE Pacific is designed for seamless ceiling integration, offering flexible linear installation in both continuous series and individual units to accommodate a wide range of architectural designs. This design allows for creative and functional solutions that can adapt to various interior layouts and design preferences.

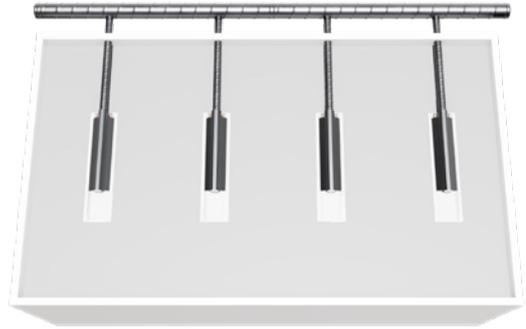


Figure 3. Example with four WISE Pacific installed in a room.

### Modular by design

The WISE Pacific platform is built from interchangeable modules:

- **Air Duct Module** - Available in three duct sizes and several lengths with integrated damper for easy balancing.
- **Capacity Module** - High-performance cooling and heating coil, available in several lengths to match different room sizes and loads.
- **Design Module** - Modern, clean surfaces with hidden water and air connections — allowing the beam to blend seamlessly into any interior.

This modularity simplifies design, installation, and future adaptations.



Figure 4. Example with WISE Pacific installed in serie.

### Lightweight & service-friendly

Construction reduces weight and improves access to all internal components, ideal for buildings with tight installation spaces and renovation projects.

### Quiet and efficient

- High induction ensures excellent air quality and thermal comfort
- Low pressure drop reduces fan energy
- Quiet operation suitable for noise-sensitive environments.

### Sustainable by default

- Optimised material use
- Constructed from reused and renewably produced steel
- Long service life and easy refurbishment

## Functionality

### Demand control ventilation (DCV)

WISE Pacific features integrated sensors and controls that continuously adjust airflow, cooling, and heating based on the actual needs of each room or zone. Optimizing indoor comfort and energy efficiency at all times, regardless of changes in occupancy or load.

This ensure:

- Optimal comfort in every room or zone
- Lower energy use
- Future-ready and flexible operation

### Flow Control

An integrated damper and actuator continuously adjust the airflow, ensuring accurate air volumes, stable performance, and consistent comfort.

### Anti Draught Control (ADC)

Anti Draught Control (ADC) ensures that airflows can be redirected to reduce the risk of draughts in the occupied zone.

### Modularity

As buildings become more energy-efficient, cooling and heating demands decrease while fresh air needs remain occupant-driven. WISE Pacific meets these requirements with a fully modular design:

- The capacity module is tailored to the required thermal load.
- The Airduct module is sized for the number of occupants.
- The design module can include a service hatch or supply/extract air modules.

This flexibility improves comfort, simplifies project design and supports long-term sustainability.

## Material and surface treatment

### Material

The air module is manufactured in RRP recycled and renewably produced galvanized sheet steel (zinc plated)

The capacity module (coil) is in copper and aluminium.

The design module (face plate) is in RRP recycled and renewably produced galvanized sheet steel (zinc plated) and painted in desired colour.

### Standard colour:

- RAL 9003 White (Signal white), gloss ratio 30 ± 6%

### Alternative standard colours:

- RAL 7037 Grey (Dusty gray), gloss ratio 30-40%
- RAL 9010 White (Pure white), gloss ratio 30-40%
- RAL 9005 Black (Jet black), gloss ratio 30-40%
- RAL 9006 Silver (White aluminium), gloss ratio 70-80%
- RAL 9007 Grey (Grey aluminium), gloss ratio 70-80%

Other colours available on request



Figure 5.



Figure 6. WISE Pacific full size.



Figure 7. WISE Pacific with Air duct module, Capacity module and Design module in three different sizes.

## Certifications/Standards

- EPD Declaration
- CE Declaration
- Eurovent

## Adaptation

### Installation in open plenum ceilings

Renovated buildings where open plenum ceilings are desired, WISE Pacific allows architects and designers to realize their vision without compromise.

With WISE Pacific's Coanda frame, air distribution is optimized, ensuring comfort and preventing drafts in the occupied zone, (see figure 8).

### Plasterboard frame

The plasterboard frame is designed to create a seamless and integrated transition between the WISE Pacific unit and the surrounding plasterboard ceiling, (see figure 9).

It allows for fine adjustments within the ceiling cut-out, ensuring precise alignment during installation and a clean final appearance. This compensates for tolerances in ceiling construction and simplifies on-site mounting.

### SA/EA module

An additional supply air (SA) and integrated extract air (EA) module can be added using an extended design frame, creating a seamless and unified appearance in the ceiling.

The SA/EA module is engineered to ensure optimal airflow separation, preventing short-circuiting between supply and extract air. This maintains efficient ventilation performance, supports good room air quality and preserves the intended air distribution pattern, (see figure 10).

### Longer design module

In certain cases it could be advantageous to select a design module that is extra long in relation to the capacity module. One typical case is when the beam is installed in a plasterboard ceiling and there is a need for inspecting the valves and/or the commissioning damper.

By employing a design module that is longer than the air module and the capacity module, you get a built-in inspection cover per automatic control system, (see figure 11).

The inactive section of the design module is covered to avoid acoustic disturbance and so that the space above the false ceiling will not be visible from the room.

### The face plate

The face plate of the design module is hinged and can be swung out from either side to a 90-degree open position. This completely exposes the coil for cleaning. Safety cords secure the face plate and ensure that it cannot fall down, (see figure 10).



Figure 8. WISE Pacific with coanda frame for installation in open plenum. PACIFIC T-CF



Figure 9. WISE Pacific with Plasterboard frame, PACIFIC T-FPB



Figure 10. PACIFIC SA/EA module (Supply/Extract air module)



Figure 11. Built-in inspection cover through shorter capacity module or longer design module.

# Technical data

## Dimensions

The product is available in different sizes

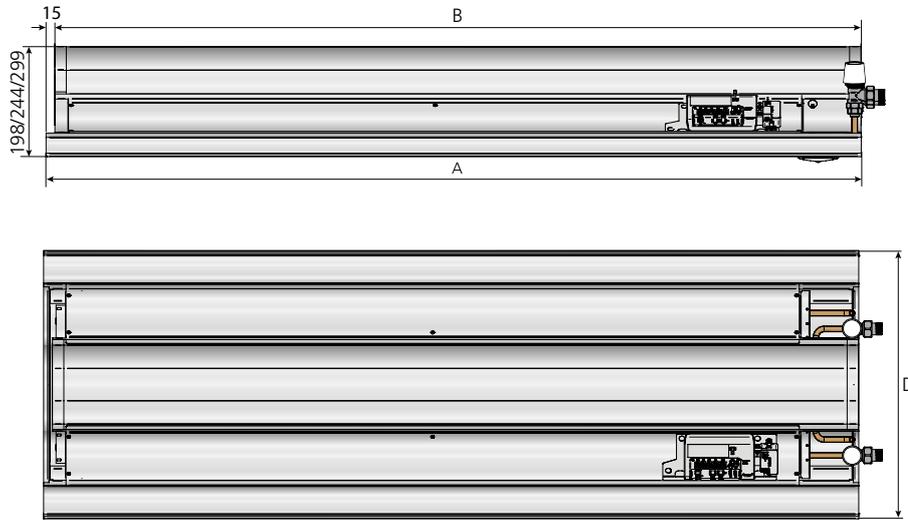


Figure 12. Dimension sketch - full size



Figure 13. Dimension sketch - Modules in different sizes

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

| A          | B    | C                     | D   |
|------------|------|-----------------------|-----|
| 1194; 1794 | 1170 | (1194)=24; (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

Since the product can be combined in numerous combinations, we show the weight for the three different modules, where you pick your size and add them together to have the total weight of your product.

### Air module

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

### Design module

| Length<br>(mm) | Width<br>(mm) | Weight<br>(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          |

## Cooling

The capacities are measured in conformity with EN 15116.

### Sizing guide, Table 2.

The values in table 2 refer to the combination of the product's largest possible Air module with its largest possible capacity module, for the listed product length.

Example: Product length: 1800 mm

Air module: 1770 mm

Capacity module: 1600 mm

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

## Designations

P: Capacity (W, kW)

$t_r$ : Room temperature (°C)

$t_m$ : Mean water temperature (°C)

v: Velocity (m/s)

q: Airflow (l/s)

p: Pressure, (Pa, kPa)

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

$\Delta T$ : Temperature differential, between inlet – return (K)

Supplementary index: k = cooling, v = heating, l = air, i = commissioning

### Diagrams 1a-1b.

The correction factor in Diagram 1 shows how the cooling capacity is affected by the water flow, assuming that the temperature difference between the room and the mean cooling water temperature is kept constant. A correction factor of 0.7 corresponds to a 30% reduction in cooling capacity, compared to correction factor 1.0.

The diagram is valid for the 1000-capacity module; however, the curve is very similar for the 1600-capacity module as well. The diagram is intended to provide a general indication of how the water flow affects the cooling capacity. If specific cooling capacity values are required for a water flow other than the one specified in the cooling capacity table, the calculation software Single Product Calculator must be used.

### The cooling capacity of the primary air for chilled beam and additional SA module

The following formula can be used for calculating the cooling capacity of the primary air for the chilled beam and the additional SA module:

$$P_1 = q_1 \times 1.2 \times \Delta T_1$$

$P_1$  = cooling capacity of the primary air (W)

$q_1$  = the primary airflow (l/s)

$\Delta T_1$  = Temperature differential between the temperature of the primary air and the room temperature (K)

### Pressure drop for the cooling circuit

The following formula for calculating the pressure drop in the cooling circuit:

$$\Delta p_k = A \cdot q_k^B$$

A = constant, read from table 1 (Kpa)

B = constant, read from table 1

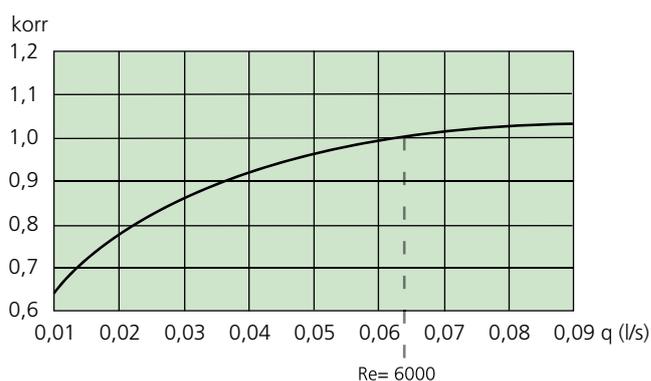
$q_k$  = cooling water flow (l/s)

**Table 1. Pressure drop, water in capacity module**

| Capacity module, Length (mm) | A     | B    |
|------------------------------|-------|------|
| 1000                         | 708,1 | 1,69 |
| 1600                         | 983,5 | 1,72 |
| 2200                         | 580,7 | 1,80 |
| 2800                         | 597,6 | 1,76 |

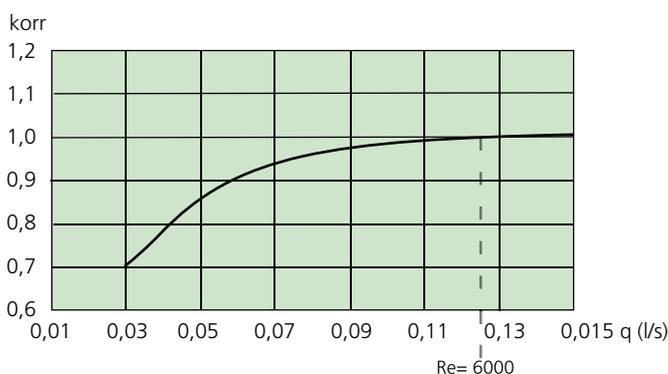
### Diagram 1a. Water flow – capacity correction, cooling

Length of Capacity module: 1000 and 1600 mm



### Diagram 1b. Water flow – capacity correction, cooling

Length of Capacity module: 2,200 and 2800 mm



**Table 2. Data – Cooling. Sizing guide for the WISE Pacific , 70 Pa nozzle pressure**

| Product length<br>(mm) | Airflow |                     | Sound level, dB(A) *<br>Connection (mm) |      |      | Cooling capacity,<br>primary air (W), $\Delta T_1$ |     |      | Cooling capacity of the water (W),<br>$\Delta T_{mk}$ |      |      |      |      | k-factor |
|------------------------|---------|---------------------|---|------|------|--|-----|------|---|------|------|------|------|----------|
|                        | (l/s)   | (m <sup>3</sup> /h) | Ø125                                    | Ø160 | Ø200 | 6  | 8   | 10   | 6   | 7    | 8    | 9    | 10   |          |
| 1200 **                | 12,5    | 45                  | <20                                     | <20  | <20  | 91   | 121 | 152  | 290   | 338  | 387  | 435  | 488  | 1,5      |
| 1200 **                | 23,4    | 84                  | <20                                     | <20  | <20  | 170  | 226 | 283  | 346   | 409  | 466  | 523  | 585  | 2,8      |
| 1200 **                | 36,0    | 130                 | 24                                      | 21   | 22   | 261  | 348 | 435  | 381   | 448  | 509  | 576  | 638  | 4,3      |
| 1800 **                | 25,9    | 93                  | <20                                     | <20  | <20  | 188  | 251 | 313  | 480   | 563  | 645  | 735  | 811  | 3,1      |
| 1800 **                | 38,5    | 139                 | 21                                      | <20  | 21   | 279  | 372 | 465  | 528   | 617  | 706  | 795  | 884  | 4,6      |
| 1800 **                | 51,0    | 184                 | 26                                      | 23   | 24   | 370  | 493 | 617  | 552   | 643  | 743  | 835  | 927  | 6,1      |
| 2400 ***               | 34,3    | 123                 | 21                                      | <20  | <20  | 249  | 332 | 415  | 686   | 809  | 922  | 1035 | 1159 | 4,1      |
| 2400 ***               | 51,9    | 187                 | 23                                      | 20   | 20   | 376  | 501 | 627  | 763   | 897  | 1021 | 1156 | 1280 | 6,2      |
| 2400 ***               | 71,1    | 256                 | 28                                      | 25   | 24   | 516  | 687 | 859  | 810   | 939  | 1080 | 1210 | 1351 | 8,5      |
| 3000 ***               | 46,0    | 166                 | 26                                      | 20   | <20  | 334  | 445 | 556  | 866   | 1024 | 1182 | 1342 | 1502 | 5,5      |
| 3000 ***               | 71,1    | 256                 | 35                                      | 27   | 24   | 516  | 687 | 859  | 982   | 1150 | 1318 | 1488 | 1657 | 8,5      |
| 3000 ***               | 87,8    | 316                 | 39                                      | 33   | 27   | 637  | 849 | 1062 | 994   | 1164 | 1335 | 1505 | 1677 | 10,5     |

\* The specified sound level is applicable to straight connection without duct bend and commissioning damper.

Room attenuation = 5 dB.

\*\*\*) = The water capacity is specified for a water flow of 0.05 l/s and can vary depending on the installation and how the ADC air deflectors are set.

\*\*\*) = The water capacity is specified for a water flow of 0.1 l/s and can vary depending on the installation and how the ADC air deflectors are set.

Detailed acoustic data can be obtained by sizing with Swegon's Single Product Calculator or Room Unit Design available at Swegon's home page: [www.swegon.com](http://www.swegon.com).

## Heating

### Waterborne heating

The WISE Pacific is as standard equipped with a coil containing two separate tube circuits. The first functions as a cooling circuit and the second as a heating circuit. When hot water circulates in the tube circuit, the recirculated air from the room is heated up in the coil, is then mixed with the primary air and is distributed to the room. The inlet flow temperature of the heating water should be kept as low as possible to minimise the temperature differential between the air at ceiling level and at floor level. The temperature stratification in the room will be negligible if the inlet flow temperature is kept at 40°C or lower. If the inlet flow temperature is up to the recommended max temperature (60°C), the stratification will be perceptible even if it normally is within the prescribed range.

In the majority of cases, the system will heat the room air to a satisfactory temperature. In order to achieve good operating temperature, other factors must be taken into account. The following factors are typical in this respect: Window dimensions, the U factor of the windows, the orientation of the room, the location of the occupants, etc. The quality and dimensions of the windows are also important with regard to possible cold down draughts. The windows used now-a-days are usually so well insulated that cold down draughts do not arise. Cold down draughts are especially likely to occur in the renovation of old buildings if the planner decides to keep the existing windows.

| Recommendations for waterborne heating   |           |
|--|-----------|
| Max. permissible inlet flow temperature: | 60° C     |
| Min. permissible heating water flow:     | 0.013 l/s |
| Min. permissible nozzle pressure:        | 50 Pa     |

### Sizing guide, Table 4.

The values in table 4 refer to the combination of the product's largest possible Air module with its largest possible capacity module, for the listed product length.

Example: Product length: 1800 mm

Air module: 1770 mm

Capacity module: 1600 mm

N.B.! The total heating capacity is the sum of the airborne and waterborne heating capacities. If the primary air temperature is lower than the room temperature, it causes negative impact on the total heating capacity.

### The heating capacity of the primary air for chilled beam and supply air module

The following formula can be used for calculating the heating capacity of the primary air for the chilled beam and the supply air module:

$$P_1 = q_1 \times 1.2 \times \Delta T_1$$

$P_1$  = heating capacity of the primary air (W)

$q_1$  = the primary airflow (l/s)

$\Delta T_1$  = Temperature differential between the temperature of the primary air and the room temperature (K)

### Diagram 2.

The correction factor in Diagram 2 shows how the heating capacity is affected by the water flow, assuming that the temperature difference between the room and the mean heating water temperature is kept constant. A correction factor of 0.7 corresponds to a 30% reduction in heating capacity, compared to correction factor 1.0.

The diagram is valid for the 2200-capacity module; however, the curve is very similar for the other capacity module sizes as well. The diagram is intended to provide a general indication of how the water flow affects the heating capacity. If specific heating capacity values are required for a water flow other than the one specified in the cooling capacity table (0.05 l/s), the calculation software Single Product Calculator must be used.

### Pressure drop for the heating water circuit

Use the following formula for calculating the pressure drop in the heating circuit:

$$\Delta p_k = A \cdot q_k^B$$

A=constant, read from table 3, (Kpa)

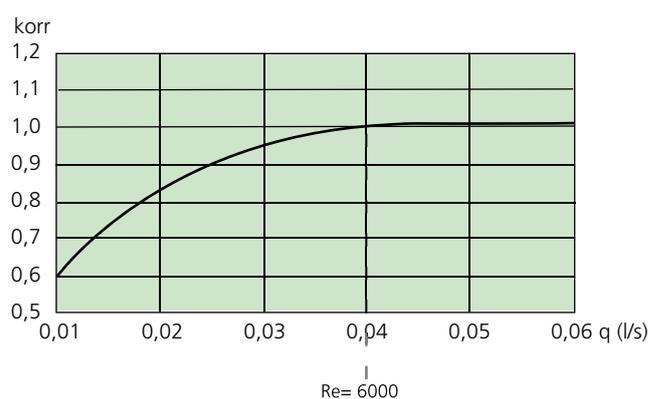
B=constant, read from table 3

$q_k$ =heating water flow (l/s)

**Table 3. Pressure drop water in capacity module**

| Capacity module, Length (mm) | A     | B    |
|------------------------------|-------|------|
| 1000                         | 115,8 | 1,39 |
| 1600                         | 192,0 | 1,39 |
| 2200                         | 106,9 | 0,99 |
| 2800                         | 139,6 | 0,99 |

**Diagram 2. Water flow – capacity correction, heating**



**Table 4. Data – Heating. Sizing guide for the WISE Pacific, 70 Pa**

| Product Length<br>(mm) | Airflow |                     | Sound level, dB(A) * |      |      | Heating capacity, water (W) ** |      |      |      |      | k-factor |
|------------------------|---------|---------------------|----------------------|------|------|--------------------------------|------|------|------|------|----------|
|                        | (l/s)   | (m <sup>3</sup> /h) | Connection (mm)      |      |      | $\Delta T_{mv}$                |      |      |      |      |          |
|                        |         |                     | Ø100                 | Ø125 | Ø160 | 5                              | 10   | 15   | 20   | 25   |          |
| 1200                   | 12,5    | 45                  | <20                  | <20  | <20  | 246                            | 334  | 424  | 521  | 630  | 1,5      |
| 1200                   | 23,4    | 84                  | <20                  | <20  | <20  | 279                            | 376  | 478  | 589  | 714  | 2,8      |
| 1200                   | 36,0    | 130                 | 24                   | 21   | 22   | 301                            | 409  | 521  | 642  | 783  | 4,3      |
| 1800                   | 25,9    | 93                  | <20                  | <20  | <20  | 443                            | 599  | 767  | 957  | 1179 | 3,1      |
| 1800                   | 38,5    | 139                 | 21                   | <20  | 21   | 469                            | 637  | 815  | 1015 | 1254 | 4,6      |
| 1800                   | 51,0    | 184                 | 26                   | 23   | 24   | 519                            | 708  | 907  | 1129 | 1394 | 6,1      |
| 2400                   | 34,3    | 123                 | 21                   | <20  | <20  | 594                            | 804  | 1024 | 1271 | 1572 | 4,1      |
| 2400                   | 51,9    | 187                 | 23                   | 20   | 20   | 643                            | 873  | 1115 | 1382 | 1708 | 6,2      |
| 2400                   | 71,1    | 256                 | 28                   | 25   | 24   | 673                            | 915  | 1169 | 1454 | 1798 | 8,5      |
| 3000                   | 46,0    | 166                 | 26                   | 20   | <20  | 810                            | 1103 | 1401 | 1711 | 2025 | 5,5      |
| 3000                   | 71,1    | 256                 | 35                   | 27   | 24   | 868                            | 1179 | 1501 | 1832 | 2173 | 8,5      |
| 3000                   | 87,8    | 316                 | 39                   | 33   | 27   | 894                            | 1219 | 1550 | 1890 | 2246 | 10,5     |

\* The specified sound level is applicable to straight connection without duct bend and commissioning damper.

Room attenuation = 5 dB.

\*\*\*) = The water capacity is specified for a water flow of 0.05 l/s and can vary depending on the installation and how the ADC air deflectors are set.

Detailed acoustic data can be obtained by sizing with Swegon's Single Product Calculator or Room Unit Design available at Swegon's home page: [www.swegon.com](http://www.swegon.com).

## Compact plug & play unit

WISE Pacific is supplied with control equipment including a radio unit for pairing with the WISE system. Only a 24 V supply needs to be routed to units, which are then easily paired to the main wireless system SuperWISE and allocated functions.

The control equipment is installed concealed on the base module, and can easily be accessed if required. WISE Pacific can also be equipped with numerous different accessories that are fitted to the product at the factory.

WISE Pacific sends its values continuously to SuperWISE and you can see the current flow and pressure in real time. The integrated radio node in the product's control unit communicates with the room's setpoint selector switch or any temperature sensor and sensors in the room.

WISE Pacific works individually and can easily be allocated new functions and set point values to realise the demanded room functions or, if new functions are required, then these can easily be introduced via our new software Room Unit Design and our new, well-designed web interface SuperWISE. This gives major advantages, for example, in the event of modifications and changes in floor layout such as switching from an open-plan office to individual offices.

Also see the WISE System Guide on [www.swegon.com](http://www.swegon.com).

### WISE Pacific is equipped as standard with the following components

- WISE CU with built-in pressure sensor and 2 inputs for WISE sensors that communicate over Modbus. You can also connect sensors for the function, WISE dewpoint monitoring.
- Actuator for regulation of the internal damper.
- Sensor for measuring the supply air temperature.

### Factory fitted components as an option

- WISE SMA air quality sensor measures room temperature, Room humidity (RH) and Volatile organic compounds (VOC).
- WISE SMB room temperature sensor and occupancy sensor.
- CG-IV condensation sensor with WISE dew point regulation.
- Valves and actuators to control cooling and heating water circuits.

### Loose accessory kit

There are also several accessory kits for retrofitting if you should wish to expand your WISE Adriatic with additional functions. (See loose accessory kit)

- WISE SMA kit
- WISE CG-IV-kit
- WISE dew point regulation
- WISE face plate with SMB

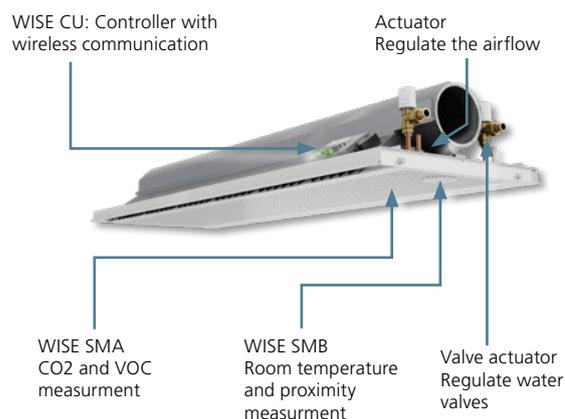


Figure 14. Factory fitted components

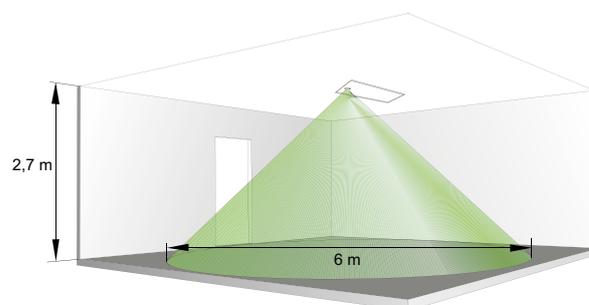


Figure 15. Detection range

## Comfort and commissioning functions

### Anti Draught control (ADC)

ADC consists of a number of sections with adjustable fins arranged in the outlet of the unit. With a simple grip of the hand, the fins can be set to an appropriate angle to direct the discharge of air and in this way create the desired air distribution pattern.

The standard setting for ADC is straight but the unit can be supplied factory-preset to a V-shape distribution pattern, if desired.

The ADC is also included as standard feature.

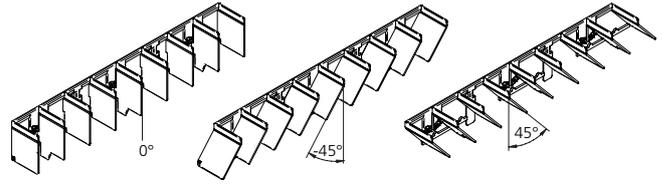


Figure 16. Detailed illustration of ADC

### K-factor settings

WISE Pacific continuously regulates the airflow to each room or zone to match the actual demand. The current k-factor position can be viewed digitally in WISEdesign and verified directly on the product via the positioning lever on the k-factor label.

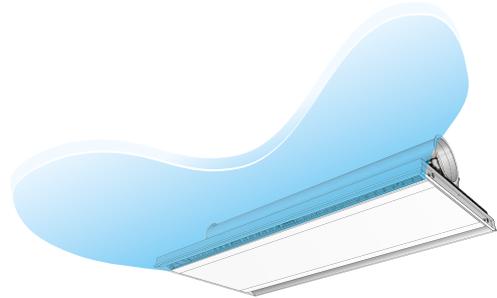


Figure 17. ADC set to the V-shape setting

### Check measure

For detailed instructions, see WISE Pacific IOM manual on [www.swegon.com](http://www.swegon.com).

### Flow tolerance

| Air module<br>∅ | Minimum flow ** |                   |      | Tolerance Q* ±5 %<br>but at least ±x |                   |     |
|-----------------|-----------------|-------------------|------|--------------------------------------|-------------------|-----|
|                 | l/s             | m <sup>3</sup> /h | cfm  | l/s                                  | m <sup>3</sup> /h | cfm |
| 1200            | 7               | 25                | 14,8 | 2                                    | 7                 | 4   |
| 1800            | 9               | 32                | 19   | 2                                    | 7                 | 4   |
| 3400            | 11              | 39                | 23   | 2                                    | 7                 | 4   |
| 3000            | 14              | 50                | 29   | 2                                    | 7                 | 4   |

\* Installed according to instructions

\*\* For flows below the lowest specified level, we cannot guarantee the tolerances.

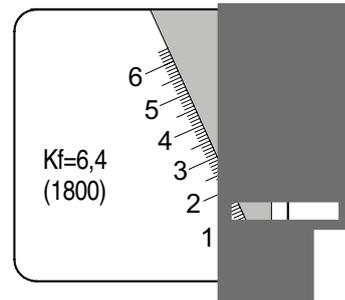


Figure 18. Positioning lever and k-factor label

## Installation, commissioning and maintenance

### Mounting

The WISE Pacific is supplied with four mounting brackets and self-tapping screws packaged separately and supplied with each unit. The pre-punched holes in each mounting bracket simplify the fastening work.

The mounting brackets are designed enabling them to be turned in any optional direction depending to suit type of suspension system selected. Turned inward, the mounting brackets offer simple installation by means of mounting strips. Turned outward, the mounting brackets work at their best for suspending the beams by means of size M8 threaded rods.

Mounting strips and threaded rods are not supplied with the unit. If assembly fittings are required, these can be ordered separately.

### Connecting water

The water pipes are always placed on the product's short side. Connect the water pipes using push-on couplings or compression ring couplings when the product is ordered without valves. 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.

### Recommended limit values

|   |   |
|---|---|
| Max. recommended operating pressure:                              | 1600 kPa                                  |
| Max. recommended test pressure:                                   | 2,400 kPa                                 |
| Min. permissible nozzle pressure:                                 | 50 Pa                                     |
| Min. cooling water flow*<br>Capacity module: L = 1,100; 1,600 mm: | 0.03 l/s                                  |
| Min. cooling water flow*<br>Capacity module: L = 2200; 2,700 mm:  | 0.045 l/s                                 |
| Min. permissible heating water flow*:                             | 0.013 l/s                                 |
| Increase in temperature, cooling water:                           | 2-5 K                                     |
| Decrease in temperature, heating water:                           | 5-10 K                                    |
| Min. permissible inlet flow temperature:                          | Should always be sized avoid condensation |
| Max. permissible inlet flow temperature:                          | 60° C                                     |

\* The min. recommended water flows ensure evacuation of any air pockets in the circuit.

### Connection dimensions

|                  |                                     |
|------------------|-------------------------------------|
| Cooling (water): | Cu Ø 12 x 1.0 mm plain pipe end     |
| Heating (water): | Cu Ø 12 x 1.0 mm plain pipe end     |
| Air:             | Ø125, 160 or 200 mm insertion joint |
| SA/EA module:    | Spigot Ø160 mm                      |

For detailed information about Installation, commissioning and maintenance, see WISE Pacific IOM-manual and Operations & maintenance

## Flush-mounted installation

The WISE Pacific is designed for installation flush-mounted in the majority of false ceilings available on the market.

- T-bar with 600 mm c-c and plasterboard ceilings:  
Width: 594 mm  
Lengths: 1,194; 1,794; 2,394 and 2,994 mm
- T-bar with 600 mm c-c in combination with 100 mm wide strip grid systems, 1800 mm c-c  
Width: 594 mm  
Length: 1,715 mm
- T-bar with 625 mm c-c  
Width: 617 mm  
Lengths: 1242; 1867; 2,492 mm
- T-bar with 675 mm c-c  
Width: 667 mm  
Lengths: 1,342; 2,017; 2,692 mm
- T-bar with IP units (USA)  
Width: 23.7 inches (603 mm)  
Length: 47.8, 71.8, 95.8, 119.8 inches (1213; 1823; 2433; 3043 mm)
- Clip-in ceiling / sheet metal ceiling coffers 598 mm  
Lengths: 1,198; 1,498; 1,698; 1,715; 1,798; 2,398; 2,998 mm

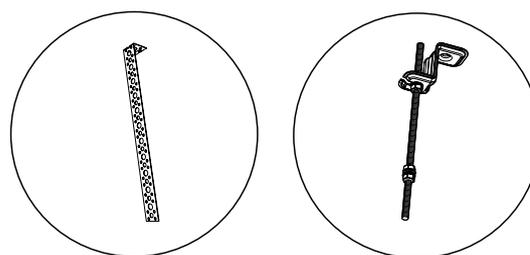


Figure 19. Suspension variant with mounting brackets and threaded rods respectively.

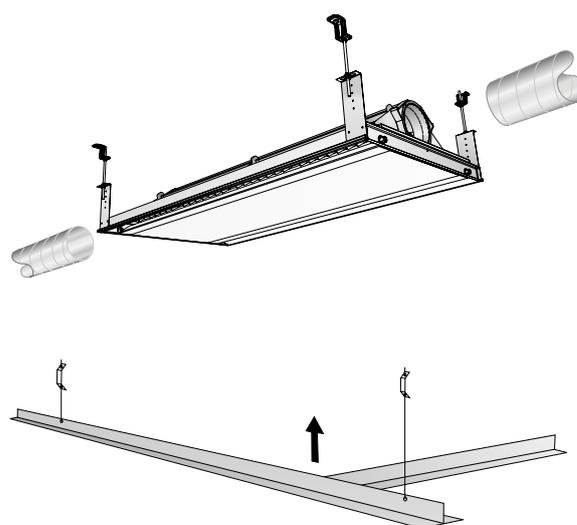


Figure 20. Installation of WISE Pacific, here suspended by means of threaded rods.

# Accessories and optional extras

## Factory-fitted accessories/optional extras

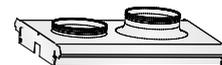
### Controller, WISE CU

WISE CU with built-in pressure sensor and 2 inputs for WISE sensors which communicate over Modbus, it also features a general Modbus input/output for e.g. to accept pressure data from extra external pressure sensors. You can also connect sensors for the function, WISE dewpoint monitoring.



### Additional SA/EA module

Supply and extract air module SA/EA



### Extract air register

EXC Extract air register



### The air quality sensor, WISE SMA (Sensor Module Advanced)

WISE SMA is a sensor that measures temperature, RH and VOC.

WISE SMA can be factory fitted in climate products, dampers or air diffusers in the WISE system and which are equipped with a WISE CU. The unit is powered by a 5V DC from WISE CU and communicates via Modbus with this.



### Presence sensor, WISE SMB (Sensor Module Basic)

WISE SMB measures temperature and detects occupancy and indicates status via its LED.

WISE SMB can be factory fitted in air diffusers or climate products in the WISE system and which are equipped with a WISE CU.

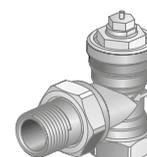
The unit is powered by a 5 V DC from WISE CU and communicates via Modbus with this.



### Valve, cooling & heating

Factory fitted valves for cooling and heating. The valve is mounted on the product and preset fully open.

| Unit       | Function        | Type   | Dim.      | $K_v$ (m <sup>3</sup> /h) |
|------------|-----------------|--------|-----------|---------------------------|
| 1200, 1800 | Cooling/heating | VEN115 | DN15 (½") | 0.10-0.89                 |
| 2400, 3000 | Cooling         | VEN120 | DN20 (¾") | 0.31-1.41                 |
| 2400, 3000 | Heating         | VEN115 | DN15 (½") | 0.10-0.89                 |



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).



### WISE dewpoint monitoring

The PT1000 sensor measures the supply temperature on water pipes in order to give the function WISE dewpoint monitoring.

Note that other accessories that measure RH and temperature are needed in combination with the PT1000-sensor to realise this function.



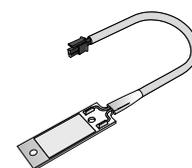
### Condensation sensor, CG IV

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).

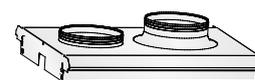
The aforementioned factory-fitted accessories, in addition to WISE SMA and WISE SMB, are available to order as loose items.



## Loose accessories

### Additional SA/EA module

Supply and extract air module SA/EA



### Extract air register

EXC Extract air register



### Plasterboard frame, WISE Pacific T-FPB

Available in four sizes: 1194, 1794, 2394, 2994 mm



### Coanda frame, WISE Pacific T-CF

Available in four sizes: 1194, 1794, 2394, 2994 mm



### Transformer, Power ADAPT 20 VA (ARV)

Input voltage 230 V, 50-60 Hz

Output voltage 24 V AC

Power 20 VA

Enclosure IP33



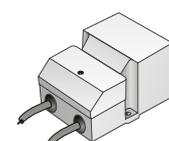
### Transformer, SYST TS-1

Double-insulated protective transformer 230 V, AC/24 V AC

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

Input voltage 230 V, 50-60 Hz

Output voltage 24 V AC,  
Power 72 VA, Enclosure IP33



### Temperature sensor, TEMP. SENSOR PT-1000

The temperature sensor is used to measure the supply temperature on water pipes in order to give the function WISE dewpoint monitoring. NOTE! Other accessories that measure RH and temperature are needed in combination with the TEMP SENSOR PT-1000-sensor to realise the dewpoint monitoring function.

Can also be used to measure the temperature of the main pipe in change-over systems.

Length: 1000 mm



### Valve, SYST VEN115 / SYST VEN120

Straight valves for cooling and heating.

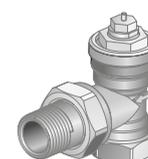
VEN115 is preset fully open on Kv 0.89.

VEN120 is preset fully open on Kv 1.41

| Unit       | Function        | Type   | Dim.      | K <sub>v</sub> (m <sup>3</sup> /h) |
|------------|-----------------|--------|-----------|------------------------------------|
| 1200, 1800 | Cooling/heating | VEN115 | DN15 (½") | 0.10-0.89                          |
| 2400, 3000 | Cooling         | VEN120 | DN20 (¾") | 0.31-1.41                          |
| 2400, 3000 | Heating         | VEN115 | DN15 (½") | 0.10-0.89                          |

Note: VDN220 has to be installed outside the product.

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



### 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, for example.



## Assembly fitting, SYST MS M8

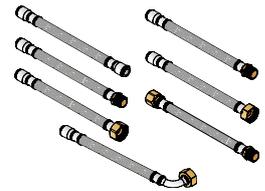
For installation use the assembly fitting containing threaded rods, ceiling brackets and nuts to all four mounting brackets.



## Flexible hoses, FH

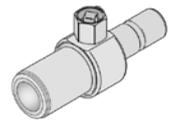
Available in different lengths and with different couplings.

See separate product sheet "FH" on [www.swegon.com](http://www.swegon.com).



## 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.



# Ordering key

## Product

Swegon's WISE Pacific chilled beam for integrated installation in false ceilings or open plenums, for cooling, heating and ventilation

The product is possible to order in multiple combinations between capacity modules, air modules and design modules. The rule is that the capacity module cannot be bigger than the air module, and the air module cannot be bigger than the design module. It is also possible to order a combination with SA/EA module, if the design module is at least 600 mm bigger than the air module.

See possible combinations for different false ceilings at the bottom of this page.

### T-bar with 600 mm centre-to-centre

|   |   |       |       |       |      |     |
|---|---|-------|-------|-------|------|-----|
| WISE Pacific                                | d | aaaa- | bbbb- | cccc- | 594- | ddd |
| Version                                     |   |       |       |       |      |     |
| Design module                               |   |       |       |       |      |     |
| Length (mm):<br>1194, 1794, 2394, 2994      |   |       |       |       |      |     |
| Capacity module                             |   |       |       |       |      |     |
| Length (mm):<br>1000, 1600, 2200, 2800*     |   |       |       |       |      |     |
| Air module:                                 |   |       |       |       |      |     |
| Length (mm)<br>1170, 1770, 2370, 2970*      |   |       |       |       |      |     |
| Width (mm): 594                             |   |       |       |       |      |     |
| Connection, air:<br>Ø125, 160 and 200 (mm). |   |       |       |       |      |     |

### T-bar with 675 mm centre-to-centre

|   |   |       |       |       |      |     |
|---|---|-------|-------|-------|------|-----|
| WISE Pacific                                | d | aaaa- | bbbb- | cccc- | 667- | ddd |
| Version                                     |   |       |       |       |      |     |
| Design module                               |   |       |       |       |      |     |
| Length (mm):<br>1342, 2017, 2692            |   |       |       |       |      |     |
| Capacity module                             |   |       |       |       |      |     |
| Length (mm):<br>1000, 1600, 2200            |   |       |       |       |      |     |
| Air module:                                 |   |       |       |       |      |     |
| Length (mm)<br>1170, 1770, 2370*            |   |       |       |       |      |     |
| Width (mm): 667                             |   |       |       |       |      |     |
| Connection, air:<br>Ø125, 160 and 200 (mm). |   |       |       |       |      |     |

### T-bar with 625 mm centre-to-centre

|   |   |       |       |       |      |     |
|---|---|-------|-------|-------|------|-----|
| WISE Pacific                                | d | aaaa- | bbbb- | cccc- | 617- | ddd |
| Version                                     |   |       |       |       |      |     |
| Design module                               |   |       |       |       |      |     |
| Length (mm):<br>1242, 1867, 2492            |   |       |       |       |      |     |
| Capacity module                             |   |       |       |       |      |     |
| Length (mm):<br>1000, 1600, 2200*           |   |       |       |       |      |     |
| Air module:                                 |   |       |       |       |      |     |
| Length (mm)<br>1170, 1770, 2370*            |   |       |       |       |      |     |
| Width (mm): 617                             |   |       |       |       |      |     |
| Connection, air:<br>Ø125, 160 and 200 (mm). |   |       |       |       |      |     |

### Clip-in ceiling / sheet metal ceiling coffers

|  |   |       |       |       |      |     |
|--|---|-------|-------|-------|------|-----|
| WISE Pacific   | b | aaaa- | bbbb- | cccc- | 598- | ddd |
| Version  |   |       |       |       |      |     |
| Design module  |   |       |       |       |      |     |
| Length (mm): 1198, 1498, 1698,<br>1715, 1798, 2398, 2998 |   |       |       |       |      |     |
| Capacity module  |   |       |       |       |      |     |
| Length (mm):<br>1000, 1600, 2200, 2800*                  |   |       |       |       |      |     |
| Air module:  |   |       |       |       |      |     |
| Length (mm)<br>1170, 1770, 2370, 2970*                   |   |       |       |       |      |     |
| Width (mm): 598  |   |       |       |       |      |     |
| Connection, air:<br>Ø125, 160 and 200 (mm).              |   |       |       |       |      |     |

\* Not selectable for the SA/EA module

\* Not selectable for the SA/EA module

## Possible combinations for false ceilings below

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

| Design module | Air module | Capacity module        |
|---------------|------------|------------------------|
| 1194; 1794    | 1170       | 1000                   |
| 1794; 2394    | 1770       | 1000, 1600             |
| 2394; 2994    | 2370       | 1000, 1600, 2200       |
| 2994          | 2970       | 1000, 1600, 2200, 2800 |

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

| Design module | Air module | Capacity module  |
|---------------|------------|------------------|
| 1242; 1867    | 1170       | 1000             |
| 1867; 2492    | 1770       | 1000, 1600       |
| 2492          | 2370       | 1000, 1600, 2200 |

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

| Design module | Air module | Capacity module  |
|---------------|------------|------------------|
| 1342; 2017    | 1170       | 1000             |
| 2017; 2692    | 1770       | 1000, 1600       |
| 2692          | 2370       | 1000, 1600, 2200 |

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

| Design module                | Air module | Capacity module        |
|------------------------------|------------|------------------------|
| 1198; 1498; 1698; 1715; 1798 | 1170       | 1000                   |
| 1798; 2398                   | 1770       | 1000, 1600             |
| 2398; 2998                   | 2370       | 1000, 1600, 2200       |
| 2998                         | 2970       | 1000, 1600, 2200, 2800 |

## WISE Pacific

Choose from several factory mounded accessories in Single Product Calculator or Room Unit Design

**Additional module** PACIFIC T-SA/EA

Supply and extract air module SA/EA

**Extract air register** PACIFIC T-EA-EXC

EXC Extract air register

### Accessories

Assembly piece SYST MS aaaa- b M8

Length, threaded rod (mm)  
200; 500; 1000

1 = One threaded rod  
2 = Two threaded rods and a thread lock

Plasterboard ceiling frame PACIFIC T - FPB aaaa

Length (mm)  
1194, 1794, 2394, 2994

Coanda frame PACIFIC T - CF aaaa

Length (mm)  
1194, 1794, 2394, 2994

Flexible hoses FH aaaaaa bbb cccccc

See separate product sheet "FH"

Coupling A

Length (mm)

Coupling B

# Specification text

## Example of specification text according to VVS AMA QLC.11 Active Chilled Beam

**Manufacturer:** Swegon

**Type:** WISE Pacific d "DCV"

### Chilled beam for Swegon's WISE System for demand-controlled ventilation:

- Air- and water-based chilled beam for comfort cooling and heating.
- Demand-controlled ventilation (DCV).
- Induction-based operation for efficient heat and cooling transfer.
- Integrated water heat exchanger.
- Integrated air deflector for even air distribution and draught-free comfort.
- Modular design to suit room-specific requirements.
- Continuously regulates airflow depending on requirements in the room or zone.
- Integrated control equipment factory-mounted for demand controlled ventilation.
- Euroventcertified (verified cooling capacity in accordance with EN 15116).
- Available in a wide range of colours and gloss levels.
- Suitable for most suspended ceiling systems.
- To be installed in suspended ceiling or as exposed installation according to drawings.
- Installation shall be carried out to allow access for service and cleaning.
- Lengths: 1200–3000 mm
- Colour: RAL 9003 Signal White, gloss level 30 ±6%
- Nominal lengths: 600, 1200, 1800, 2400, 3000 mm
- Nominal width: 600 mm
- Height: 198 (ø125), 244 (ø160), 299 (ø200) mm
- Air connection: ø125, ø160, ø200 mm
- Water connection: Plain pipe end Cu Ø12 × 1.0 mm  
Alternative: External thread DN 15 (applies to factory-mounted valves)

### Accessories:

- Extra air supply and extract air module, PACIFIC SA/EA module, xx pc.
- Extract air register, EXC, PACIFIC T-EA-EXC, xx pc.
- Plasterboard frame, PACIFIC T-FPB aaaa xx pc.
- Coanda frame, PACIFIC T-CF aaaa xx pc
- Flexible connection hose, FH-aaaaa-bbb-cccc xx pc.
- Assembly piece SYST MS aaaa - b - M8 xx pc.
- Valve actuator, ACTUATORc 24V aa-bb, xx pc.
- Valve actuator, ACTUATORc 0-10V AC/DC aa, xx pc.
- Valve, SYST VEN-bbb, xx pc
- Venting nipple SYST AR-12 xx pc.
- Condensation sensor SYST CG-IV, xx pc.
- Transformer, SYST TS, xx pc