# ADRIATIC

## Active chilled beam/climate beam for cooling, heating and ventilation

## QUICK FACTS

- ADRIATIC is a climate beam with integrated recirculated air opening in the bottom.
- Climate beam with cooling, heating and ventilation
- Designed for suspended installation from hangers or mounted directly against the ceiling.
- Stylish design section in two versions
- Variants with high output that can cope with varying needs
- Factory-fitted directional airflow control
- Available with water and air connections on opposite short sides
- Adjustable k-factor for wide range of air flows
- Service-friendly with hinged design section for easy accessibility
- A connection casing is available as an option to hide ventilation ducts and water pipes
- Simple adjustment on site
- Adjustable slot control with a knob for simple adjustment on site.
- Standard color White RAL 9003
  - 5 alternative standard colors
  - Other colors upon request

| Variant | | | Supply air | | Performance | |
|---|---|---|---|---|---|---|
| Size | | Air connection in. | IN WG | CFM | Total cooling capacity [BTUH]** | "Sound level [dB(A)] ***" |
| ft. | m. | | | | | |
| 4 | 1.2 | 5 | 0.2 | 30 | 1768 | <20 |
| 4 | 1.2 | 5 | 0.2 | 44 | 2034 | 24 |
| 6 | 1.8 | 5 | 0.2 | 21 | 1840 | <20 |
| 6 | 1.8 | 5 | 0.2 | 42 | 2717 | <20 |
| 6 | 1.8 | 5 | 0.2 | 66 | 3188 | 25 |
| 8 | 2.4 | 5 | 0.2 | 30 | 2689 | <20 |
| 8 | 2.4 | 5 | 0.2 | 64 | 3758 | 21 |
| 8 | 2.4 | 5 | 0.2 | 93 | 4218 | 28 |
| 10 | 3.0 | 5 | 0.2 | 36 | 3229 | <20 |
| 10 | 3.0 | 5 | 0.2 | 72 | 4430 | 20 |
| 10 | 3.0 | 5 | 0.2 | 110 | 5007 | 30 |

**Total pressure duct (IN WG)*
***Air: $\Delta T_{air}$=12.6F, Water: $\Delta T_{mk}$=15.3F, water flow=0.8 GPM for 4 ft and 6 ft, water flow=1.6 GPM for 8 ft and 10ft*
****Including -4dB room attenuation*

Swegon

# Content

# Technical description

## Version

The new generation of Adriatic is a closed, active climate beam with two-way air discharge. It has variable air flow control, which makes sizing easier. The new Adriatic also delivers greater flexibility and simplicity during future refurbishments and customisations.

The increased cooling capacity enables a lower duct pressure or that a higher cooling water temperature can be used, which saves energy and also improves room comfort further.

The products are equipped with ADC air defectors and Swegon's unique slot adjustment.

*Figure 1. ADRIATIC with design section Prisma.*

## Variants

**Sizes:**

- 4, 6, 8 and 10 feet (1.2, 1.8, 2.4 and 3.0 m)

With its high capacity, the new Adriatic can often replace another, larger product.

**Versions:**

- Prisma, design section with a angular shape
- Ellips, design section with a softer, rounder shape

**Functions:**

- Cooling and ventilation
- Cooling, heating and ventilation

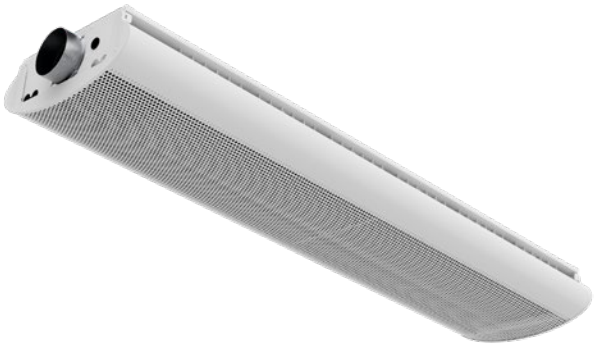


*Figure 2. ADRIATIC with design section Ellips.*

## Installation

The ADRIATIC is designed for suspended installation from hangers or mounting directly against the ceiling. A connection casing is also available as an accessory in cases where you want to hide ventilation ducts and water pipes.

If you want the product with water and air connections on different short sides, Variant TH is available as an option.

## Material

The casing is made of pre-painted sheet metal.

The design plate on the Prisma is pre-painted sheet metal, and for the Ellips it is aluminium and sheet metal.

The coil is made of copper and aluminium.

The connection casing is made of pre-painted sheet metal.

## Applications

The ADRIATIC is well-suited for use in all types of rooms with waterborne climate cooling, such as:

- Offices and conference rooms
- Hotels
- Classrooms
- Data processing rooms
- Bank premises
- Restaurants
- Shops

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

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

## Advantages of the ADRIATIC

- The ADRIATIC has an attractive design and extremely low installation height that fits in well in all types of room decor.
- Since the ADRIATIC is a closed climate beam with integrated recirculated air opening in the face plate, it can be mounted directly against the ceiling without regard to circulation air slots.
- The ADRIATIC combines the superior air discharge properties of ceiling units with the stringent design requirements of suspended climate beams. The discharge of air provides the optimal Coanda effect that is always the objective when it is desirable to maintain low air velocities in the occupied zone.
- The connection components are concealed in a simple manner by an attractive connection casing. The casing is installed after the climate beam has been suspended and connected.
- The product provides a unique opportunity to check and adjust the air discharge thanks to ADC and Swegon's slot adjustment as standard.

## Design

ADRIATIC is available in two designs, Prisma and Ellips. The different designs provide a choice to fit in with the interior design in the room. The covers for concealing water and air pipes, if required, are available as optional accessories.

### Range of products held in stock

As Adriatic is always supplied with a cooling/heating coil, the stocked product covers both cooling and cooling/heating.

ADRIATIC d 1.8-A/B-P-STOCK (6 ft)

ADRIATIC d 2.4-A/B-P-STOCK (8 ft)

ADRIATIC d 3.0-A/B-P-STOCK (10 ft)

### Color

The product, the connection casing and the surface mounted assembly piece are painted as standard in RAL 9003 standard color, white, gloss ratio 30 ± 6%, but can also be ordered in the following colors.

RAL 7037 Grey, gloss ratio 30-40%

RAL 9010 White, gloss ratio 30-40%

RAL 9005 Black, gloss ratio 30-40%

RAL 9006 White, gloss ratio 70-80%

RAL 9007 Grey, gloss ratio 70-80%

### Special types

On request, the product, the connection casing and the surface mounted assembly piece can also be supplied painted in an optional color or relief finish paint.

For further details about special types, get in touch with your nearest Swegon representative.

## Function

The climate beam uses the supply air to operate the cooling and heating function of a central air handling unit and therefore does not include an integrated fan. This gives very quiet operation and minimal maintenance requirements.

The distribution air is distributed from two sides of the unit and uses a large part of the ceiling to spread the air and ensure comfort in the occupied zone.

Adriatic has variable k-factor setting and a large air flow range. The product is available as a Constant Air Volume (CAV) product with fixed k-factor. It can also be ordered as a Variable Air Volume (VAV) and Demand Control Ventilation (DCV) variant from the factory, fitted with control or actuator for air flow control (0-10 V) (see ADRIATIC VAV).

The Adriatic has variable control with a knob for rapid setting of the CAV product. It is also possible to set an asymmetrical air flow in order to adapt to different room types and refurbishments.

The integrated slot control of the air flow means that the product can retain a pressure internally and at the same time supply air with the correct throw lengths, even at low flows.

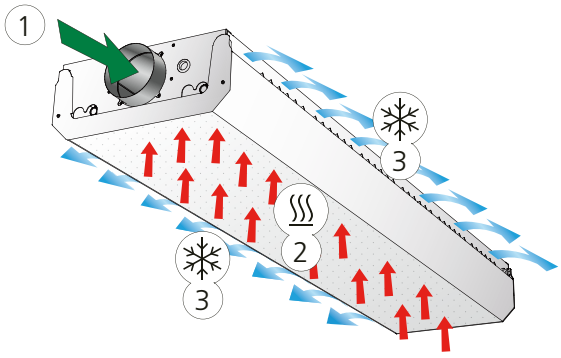



*Figure 3. Cooling and supply air function.*

*1 = Primary air*

*2 = Induced room air*

*3 = Primary air mixed with cooled room air*

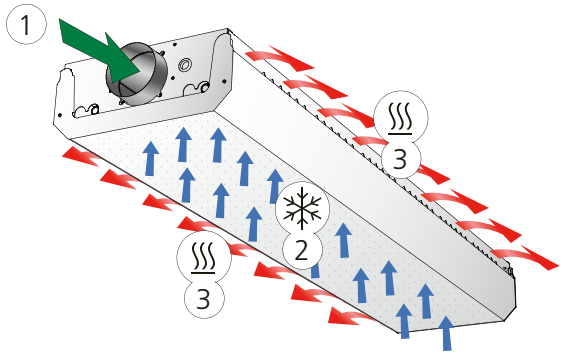



*Figure 4. Heating and supply air function.*

*1 = Primary air*

*2 = Induced room air*

*3 = Primary air mixed with heated room air*

## Flow distribution

Swegon's built-in airflow distributor can be set to different positions and makes it possible to adjust the airflow direction and throw length.

- ADRIATIC provides many opportunities with air settings.
- shorter delivery time because the stocked products have a substantial working range.
- it is simple to change the air flow if changes are made in the installation.
- asymmetrical air flow (e.g. 70/30%) is simple to set on the product during installation.
- with ADC air deflectors, manual airflow adjustment is simple.

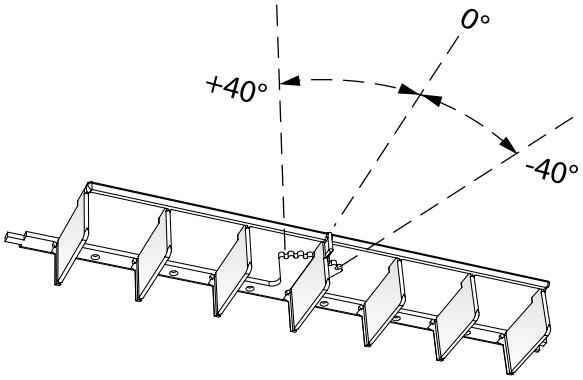



*Figure 5. Swegon ADC air deflectors.*

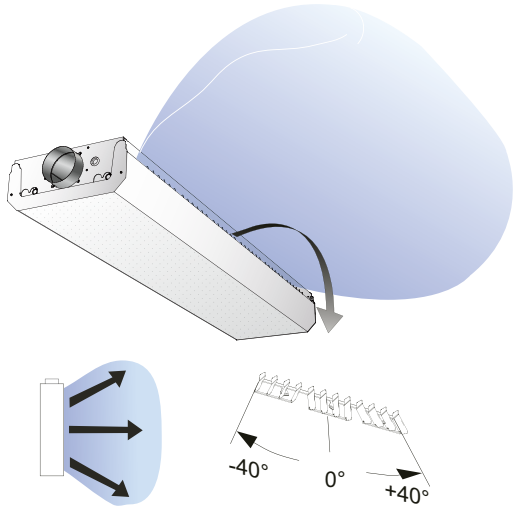



*Figure 6. Possible settings for the ADC, Fan-shape.*

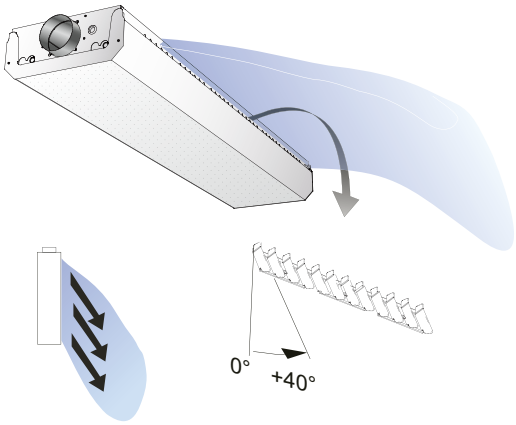



*Figure 7. Possible settings for the ADC, X-shape.*

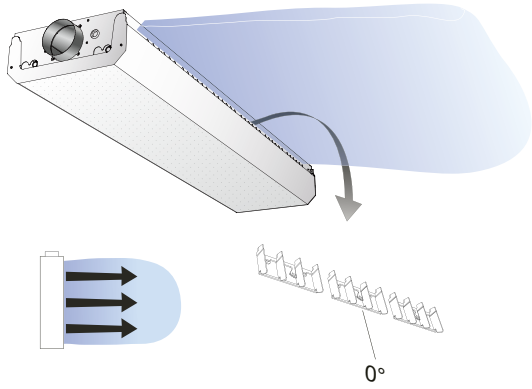



*Figure 8. Possible settings for the ADC, straight shape.*

# Installation

## Suspension:

The new Adriatic is fitted with a threaded blind rivet in each corner for simple installation with threaded rods in the ceiling.

The units are shipped as standard without installation accessories. If installation accessories are required, they can be ordered separately.

Installation accessories:

SYST MS-M8 threaded rod kit

ADRIATIC d-T-MD-4S flush mount kit.

## Opening the design section

The unit is supplied with a lever at each end of one long side for simple folding of the design section and to access e.g. control equipment. When opening, one long side is opened and the design section is then suspended from the opposite long side.

## Connection casing

The connection casings are available in several lengths and several selectable colors, and are ordered separately (ceiling brackets included).

### Connection to wall

Connection casing that is mounted in the extended section of the climate beam and beyond to a wall designed for concealing pipe and duct connections.

### Connection to ceiling

Connection casing with end connection panel is mounted in the extended section of the climate beam and beyond to a ceiling designed for concealing pipe and duct connections.

Note: Min. 3xØ before elbow.

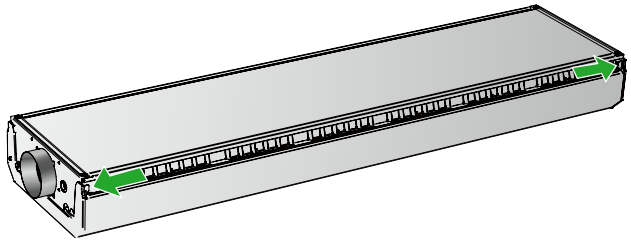


*Figure 9. ADRIATIC Prisma with levers for simple opening of the design section.*

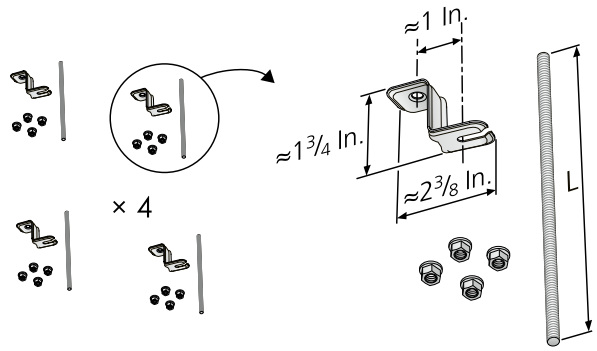



*Figure 10. Installation accessory SYST MS M8-1, ceiling mount and threaded rod.*

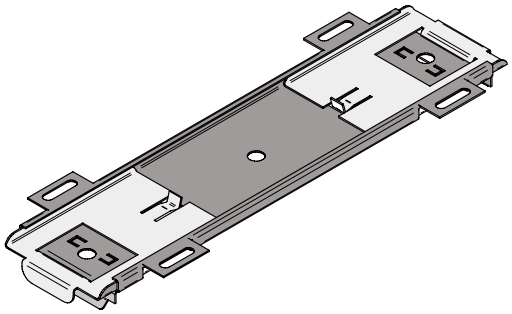


*Figure 11. Installation accessory ADRIATIC d-T-MD-4S, for mounting directly against the ceiling.*

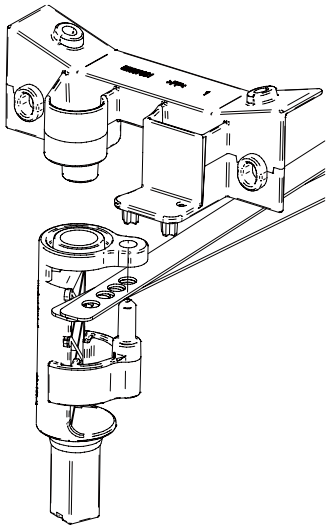


*Figure 12. It is also possible to e.g. lock one side using the mechanism above.*

# K-factor setting

The k-factor can easily be set or adjusted with the help of the knob, which is located on the underside of the product and which is accessible when the design section is opened.

**Example: 60 in CFM at 0.4 IN WG, requires k-factor 2.8**

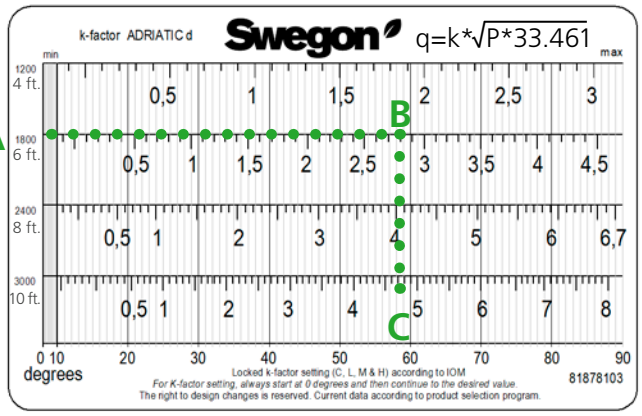
**A**: Find the product's length from the left-hand side of the k-factor table.

**B**: Read the required k-factor on the row in question.

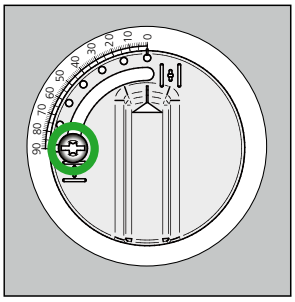
**C**: Follow the vertical row and read the number of degrees at the bottom.

*In the example from the table for an ADRIATIC d with length 1.8 (6 ft), k-factor 2.8, turn the knob to 58°.*

**K-factor table**

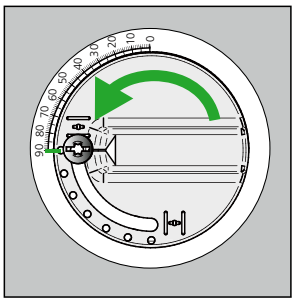



**To enter settings for k-factor**



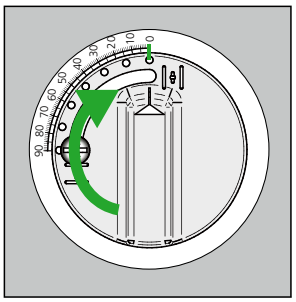
**1.**

Loosen the screw located in the knob's groove.



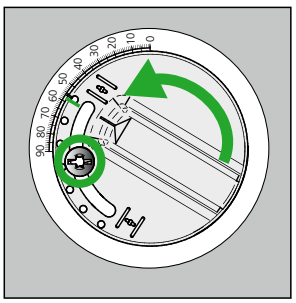
**2.**

The knob then moves automatically to the fully open position, 90°.



**3.**

Then turn the knob to the fully closed position, 0°.



**4.**

Then turn the knob back to the angle for the desired k-factor (58° in our example) and tighten the screw.

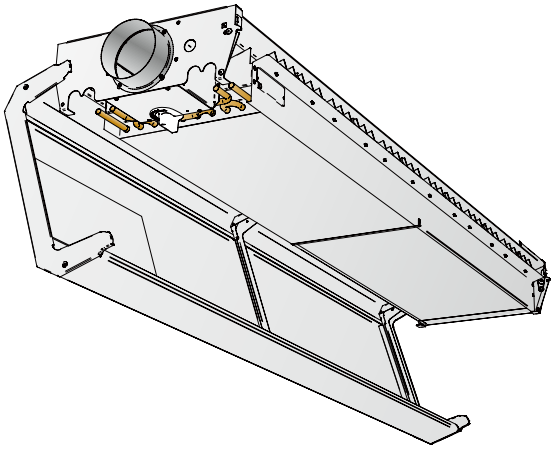


*Figure 13. The knob is located on the base module.*

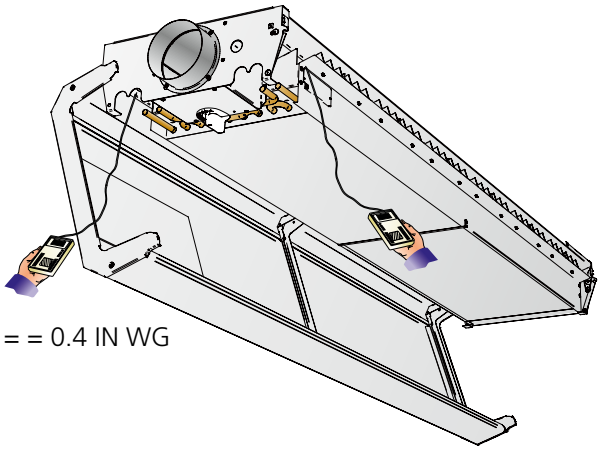



*Figure 14. Measuring tubes can be found on the product's two long sides.*

$$p_i = \left(\frac{\left(\frac{q}{k}\right)}{33.461}\right)^2$$

$$q = k * \sqrt{p_i} * 33.461$$

$$k = \frac{\frac{q}{\sqrt{p_i}}}{33.461}$$

$p_i$ *[IN WG]*

$q$ *[CFM]*

$k$ *= k-factor*

*33.461 = Metric to Imperial conversion factor*

# Connection

## Water

### Connection dimensions

| Unit | Cooling and heating |
|---|---|
| (ft) | Supply and return |
| 4, 6, 8, 10 | plain pipe end |
| | (Cu) Ø 12 x 1.0 mm |

### Adapters and connectors (accessories)

| Unit | Adapter/connector | Cooling | Heating |
|---|---|---|---|
| (ft.) | (type) | Supply/return | Supply/return |
| 4, 6, 8, 10 | Flexible hose | Ø 12mm to "1/2" NPT | Ø 12mm to "1/2" NPT |
| | Nominal pipe thread connection | Ø 12mm to "1/2" NPT | Ø 12mm to "1/2" NPT |
| *Adapters/connectors are sold as accessories.* | | | |

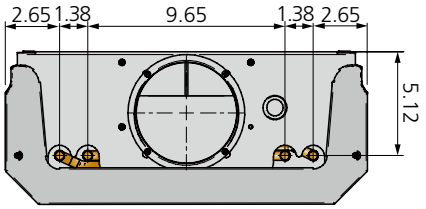



*Figure 15. Dimensions ADRIATIC Prisma, end view water connection.*

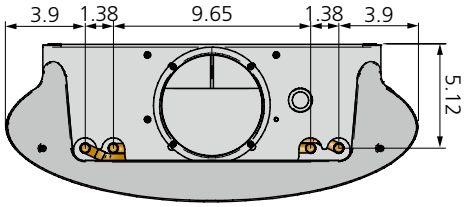



*Figure 16. Dimensions ADRIATIC Ellips, end view water connection.*

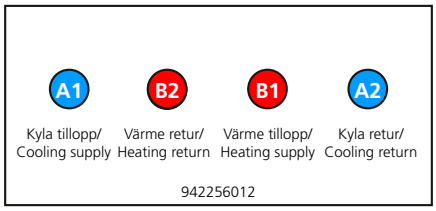



*Figure 17. Water connection.*
*A1 = Supply cooling water ø12x1.0 mm (Cu)*
*A2 = Return cooling water ø12x1.0 mm (Cu)*
*B1 = Supply heating water ø12x1.0 mm (Cu)*
*B2 = Return heating water ø12x1.0 mm (Cu)*

## Variant TH

If you want water and air connections on different short sides, Variant TH is available. The dimensions for connecting water and air are the same as for the standard variant.

Note: When ordering valves and actuators for Variant TH, these are enclosed and placed adjacent to the water pipes. They are connected, but installation on the relevant water pipes is required (see label and color marking on the actuators).

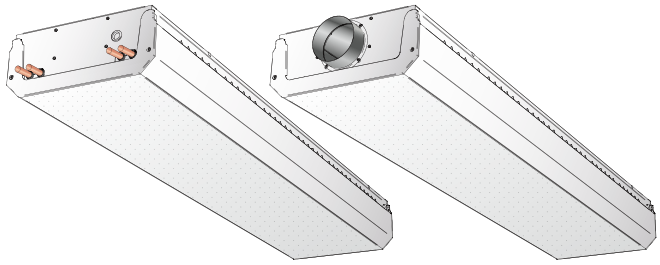


*Figure 18. Variant TH with air and water connections on different short sides. The example shows both short sides with the TH connection on ADRIATIC Prisma.*

### Connecting water

The water pipes are placed as standard on the same side as the air connection on one of the product's short sides. If you want water and air connections on different short sides, Variant TH is available (see Variant TH).

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.

## Water quality

Swegon recommends water quality according to VDI 2035-2 for both the heating and cooling systems. In order to maintain the oxygen content in the water below the levels (<0.1 ppm) prescribed in VDI 2035-2, it is recommended to install a vacuum degasser, particularly in the cooling system where it's more challenging to dissolved gas. It is also important for the pre-pressure in the expansion vessel to be dimensioned according to EN-12828 for both the heating and cooling systems and for regular checks to be made of the prepressure.

The cooling and heating systems must be designed to prevent oxygen from entering the system, this is particularly important to consider when selecting flex hose, pipes and expansion vessels. When the system is filled with fresh water, it has an oxygen content of approximately 8 ppm, however, this oxygen is consumed quickly through corrosion processes and within a few days the oxygen in the water should be consumed.

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

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

## Air

| Unit | Air connection, diameter |
|---|---|
| (ft) | Ø in. |
| 4, 6, 8, 10 | 5 |

### To connect the air

ADRIATIC is supplied with an open air connection on one short side. The spigot is connected to the primary air duct.

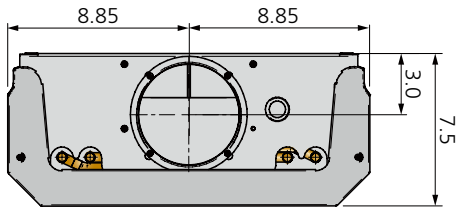



*Figure 19. Dimensions ADRIATIC Prisma, end view air connection.*

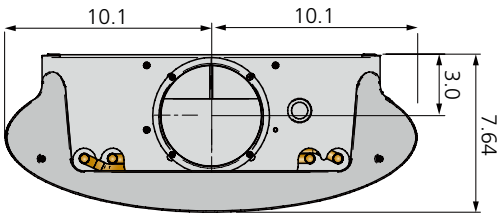



*Figure 20. Dimensions ADRIATIC Ellips, end view air connection.*

## Control equipment

See under the section “Accessories” to supplement the product with various control equipment.

ADRIATIC can also be ordered as a VAV product. See ADRIATIC VAV.

# Technical data

**The following tables are only examples. For an exact calculation of the product, use RUD or SPC, which can be accessed from our website. www.swegon.com**

## Key figures

| | | | |
|---|---|---|---|
| Air flow range | min. | max. | |
| | 0 | 190 | CFM |
| Pressure range | min. | max. | |
| | 0.08 | 0.6 | IN WG |
| Cooling capacity total: * | Up to 12350 BTUH | | |
| *$\Delta t$ air = 18 F, $\Delta t_{mk}$ = 21.6 F* | | | |
| Heating capacity, water: * | Up to 23320 W | | |

*At $\Delta t_{mk}$ = 54 F, water flow = 0.17 CFM, changeover system*

## Designations

| | |
|---|---|
| $\Delta T_m$: | Temperature difference [$t_r$ - $t_m$] K |
| $t_r$: | Room temperature |
| $t_m$: | Average temperature of the water in the beam |
| $\Delta T$: | Temperature difference between inlet - return K |
| $\Delta T_{mk}$: | Temperature difference, cooling |
| $\Delta T_{mv}$: | Temperature difference, heating |

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

## Recommended limit values

### Pressure levels

| | |
|---|---|
| Coil working pressure, max. | 232 psi* |
| Coil test pressure, max. | 348 psi* |

*Applies without valves or other extra equipment mounted on the coil*

### Commissioning pressure

| Recommended lowest commissioning pressure, cooling | Air flow CFM | Commissioning pressure IN WG |
|---|---|---|
| | <22.2 | 0.2 |
| | 22.2-53.0 | 0.12 |
| | >53.0 | 0.08 |

### Water flow

Min. water flow ensures evacuation of any air pockets in the coil.

| Size (ft) | Cooling water, min. GPM | Heating water, min. GPM |
|---|---|---|
| 4, 6 | 0.4 | 0.24 |
| 8, 10 | 0.8 | 0.24 |

Recommended max. water flow ensures that the pressure drop in the coil is not larger than max. 2.9 psi

| Size (ft) | Cooling water, max. GPM | Heating water, max. GPM |
|---|---|---|
| 4, 6 | 0.21 | 3.65 |
| 8 | 0.3 | 3.65 |
| 10 | 0.425 | 3.65 |

### Supply flow temperature

| | |
|---|---|
| Cooling water, min. | ** |
| Heating water, max. | 140 F |

** Cooling water must always be kept at a level that ensures that no condensation is formed.*

## Cooling

Cooling capacities are measured in conformity with EN 15116.

Note: The total cooling capacity is the sum of the airborne and waterborne cooling capacities.

ADRIATIC d is always supplied with cooling/heating, even if only cooling is required.

## Heating

Chilled beams are convenient for heating because they can heat with lower temperature hot water, resulting in energy savings and less thermal stratification.

The heat is conducted along the ceiling which, in order to work properly, requires a low supply flow temperature and a certain impulse. A temperature gradient of 5.4 F is normally obtained between floor and ceiling.

### Recommendations for excess heat operation

| | |
|---|---|
| Max. permissible supply flow temperature: | 140 F |
| Min. permissible heating water flow: | 0.225 gpm |
| Nozzle pressure, $p_i$: | >0.12 IN WG |

## Table 1 – data – cooling. Sizing Guide for Adriatic d at total pressure 30 Pa

| Unit | Air flow | Sound level | Cooling capacity, primary air at $\Delta T_1$ BTUH | | | | Cooling capacity, water at $\Delta T_{mk}$ BTUH | | | | | Pressure drop constant, air |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft | CFM | dB(A) | 6 | 8 | 10 | 12 | 6 | 7 | 8 | 9 | 10 | kpl |
| 4,0 | 23 | <20 | 270 | 362 | 451 | 539 | 761 | 894 | 1027 | 1160 | 1294 | 67 |
| 4,0 | 34 | <20 | 392 | 526 | 655 | 785 | 829 | 966 | 1102 | 1239 | 1379 | 99 |
| 4,0 | 34 | <20 | 392 | 526 | 655 | 785 | 1205 | 1420 | 1618 | 1833 | 2031 | 99 |
| 6,0 | 51 | <20 | 590 | 785 | 983 | 1181 | 1324 | 1553 | 1761 | 1986 | 2195 | 150 |
| 6,0 | 23 | <20 | 270 | 362 | 451 | 539 | 1239 | 1447 | 1655 | 1863 | 2055 | 67 |
| 8,0 | 49 | <20 | 567 | 754 | 942 | 1130 | 1662 | 1935 | 2208 | 2481 | 2751 | 144 |
| 8,0 | 72 | 21 | 836 | 1113 | 1393 | 1672 | 1717 | 2000 | 2283 | 2567 | 2846 | 220 |
| 8,0 | 28 | <20 | 321 | 427 | 532 | 638 | 1454 | 1696 | 1939 | 2177 | 2396 | 80 |
| 10,0 | 57 | <20 | 662 | 884 | 1106 | 1328 | 1980 | 2297 | 2618 | 2935 | 3256 | 170 |
| 10,0 | 85 | 23 | 983 | 1311 | 1638 | 1966 | 2027 | 2358 | 2686 | 3044 | 3369 | 264 |

## Table 2 – data – cooling. Sizing Guide for Adriatic d at total pressure 50 Pa

| Unit | Air flow | Sound level | Cooling capacity, primary air at $\Delta T_1$ BTUH | | | | Cooling capacity, water at $\Delta T_{mk}$ BTUH | | | | | Pressure drop constant, air |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft | CFM | dB(A) | 6 | 8 | 10 | 12 | 6 | 7 | 8 | 9 | 10 | kpl |
| 4,0 | 30 | <20 | 345 | 457 | 573 | 689 | 956 | 1116 | 1276 | 1440 | 1601 | 66 |
| 4,0 | 44 | 24 | 515 | 689 | 860 | 1031 | 1007 | 1174 | 1341 | 1526 | 1693 | 101 |
| 6,0 | 21 | <20 | 246 | 328 | 410 | 491 | 1092 | 1273 | 1454 | 1635 | 1833 | 47 |
| 6,0 | 42 | <20 | 491 | 655 | 819 | 983 | 1495 | 1754 | 2014 | 2273 | 2536 | 96 |
| 6,0 | 66 | 25 | 761 | 1017 | 1270 | 1522 | 1611 | 1887 | 2164 | 2437 | 2713 | 150 |
| 8,0 | 30 | <20 | 345 | 457 | 573 | 689 | 1628 | 1898 | 2140 | 2410 | 2676 | 66 |
| 8,0 | 64 | 21 | 737 | 983 | 1229 | 1474 | 2051 | 2382 | 2747 | 3079 | 3410 | 145 |
| 8,0 | 93 | 28 | 1082 | 1440 | 1802 | 2164 | 2072 | 2420 | 2799 | 3150 | 3498 | 220 |
| 10,0 | 36 | <20 | 416 | 556 | 696 | 836 | 1942 | 2256 | 2570 | 2887 | 3201 | 81 |
| 10,0 | 72 | 20 | 836 | 1113 | 1393 | 1672 | 2464 | 2853 | 3242 | 3669 | 4058 | 166 |
| 10,0 | 110 | 30 | 1276 | 1703 | 2130 | 2556 | 2488 | 2891 | 3331 | 3737 | 4143 | 267 |

## Table 3 – data – cooling. Sizing Guide for Adriatic d at total pressure 70 Pa

| Unit | Air flow | Sound level | Cooling capacity, primary air at $\Delta T_1$ (K) | | | | Cooling capacity, water at $\Delta T_{mk}$ (K) | | | | | Pressure drop constant, air |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft | CFM | dB(A) | 6 | 8 | 10 | 12 | 6 | 7 | 8 | 9 | 10 | kpl |
| 4,0 | 34 | <20 | 392 | 526 | 655 | 785 | 1051 | 1246 | 1423 | 1601 | 1778 | 64 |
| 4,0 | 51 | 28 | 590 | 785 | 983 | 1181 | 1123 | 1311 | 1498 | 1703 | 1891 | 97 |
| 6,0 | 25 | <20 | 294 | 392 | 491 | 590 | 1276 | 1505 | 1713 | 1942 | 2154 | 48 |
| 6,0 | 51 | 21 | 590 | 785 | 983 | 1181 | 1710 | 2000 | 2294 | 2584 | 2877 | 97 |
| 6,0 | 76 | 30 | 884 | 1181 | 1474 | 1768 | 1816 | 2119 | 2423 | 2730 | 3038 | 148 |
| 8,0 | 36 | <20 | 416 | 556 | 696 | 836 | 1911 | 2222 | 2532 | 2846 | 3157 | 68 |
| 8,0 | 74 | 25 | 860 | 1147 | 1433 | 1720 | 2311 | 2679 | 3085 | 3454 | 3826 | 143 |
| 8,0 | 110 | 33 | 1276 | 1703 | 2130 | 2556 | 2317 | 2707 | 3130 | 3522 | 3949 | 220 |
| 10,0 | 42 | <20 | 491 | 655 | 819 | 983 | 2242 | 2601 | 2962 | 3355 | 3713 | 80 |
| 10,0 | 85 | 25 | 983 | 1311 | 1638 | 1966 | 2775 | 3208 | 3683 | 4119 | 4594 | 165 |
| 10,0 | 129 | 35 | 1498 | 2000 | 2498 | 2997 | 2782 | 3232 | 3724 | 4218 | 4672 | 264 |

*Water flow = 0.8 GPM for 4 ft and 6 ft, water flow = 1.6 GPM for 8 ft and 10 ft, temperature supply pipe +57.2°F.*

*The specified sound level applies to straight connection without damper or with fully open damper. Room attenuation = 4 dB.*

## Table 4 – data – heating. Sizing Guide for Adriatic d at 30 Pa

| Unit | Air flow | Sound level | Heating capacity, water at $\Delta T_{mv}$ (K) | | | | | Pressure drop constant, air |
|---|---|---|---|---|---|---|---|---|
| ft | CFM | dB(A) | 15 | 20 | 25 | 30 | 35 | kpl |
| 4,0 | 23 | <20 | 898 | 1253 | 1614 | 1993 | 2379 | 67 |
| 4,0 | 34 | <20 | 969 | 1345 | 1737 | 2143 | 2556 | 99 |
| 6,0 | 34 | <20 | 1440 | 2003 | 2590 | 3191 | 3816 | 99 |
| 6,0 | 51 | <20 | 1556 | 2164 | 2802 | 3444 | 4113 | 150 |
| 8,0 | 23 | <20 | 1625 | 2246 | 2874 | 3526 | 4171 | 67 |
| 8,0 | 49 | <20 | 1925 | 2672 | 3427 | 4195 | 4990 | 144 |
| 8,0 | 72 | 21 | 2113 | 2901 | 3724 | 4563 | 5413 | 220 |
| 10,0 | 28 | <20 | 1952 | 2686 | 3444 | 4212 | 5007 | 80 |
| 10,0 | 57 | <20 | 2294 | 3167 | 4068 | 5003 | 5952 | 170 |
| 10,0 | 85 | 23 | 2522 | 3461 | 4444 | 5440 | 6447 | 264 |

## Table 5 – data – heating. Sizing Guide for Adriatic d at 50 Pa

| Unit | Air flow | Sound level | Heating capacity, water at $\Delta T_{mv}$ (K) | | | | | Pressure drop constant, air |
|---|---|---|---|---|---|---|---|---|
| ft | CFM | dB(A) | 15 | 20 | 25 | 30 | 35 | kpl |
| 4,0 | 30 | <20 | 969 | 1345 | 1737 | 2143 | 2556 | 66 |
| 4,0 | 44 | 24 | 1113 | 1546 | 1993 | 2454 | 2922 | 101 |
| 6,0 | 21 | <20 | 1362 | 1877 | 2420 | 2973 | 3536 | 47 |
| 6,0 | 42 | <20 | 1648 | 2283 | 2956 | 3631 | 4328 | 96 |
| 6,0 | 66 | 25 | 1782 | 2481 | 3205 | 3959 | 4713 | 150 |
| 8,0 | 30 | <20 | 1881 | 2590 | 3321 | 4065 | 4833 | 66 |
| 8,0 | 64 | 21 | 2253 | 3102 | 3980 | 4867 | 5768 | 145 |
| 8,0 | 93 | 28 | 2447 | 3379 | 4317 | 5294 | 6277 | 220 |
| 10,0 | 36 | <20 | 2270 | 3130 | 4010 | 4908 | 5833 | 81 |
| 10,0 | 72 | 20 | 2659 | 3672 | 4710 | 5768 | 6860 | 166 |
| 10,0 | 110 | 30 | 2918 | 4031 | 5167 | 6324 | 7492 | 267 |

## Table 6 – data – heating. Sizing Guide for Adriatic d at 80 Pa

| Unit | Air flow | Sound level | Heating capacity, water at $\Delta T_{mv}$ (K) | | | | | Pressure drop constant, air |
|---|---|---|---|---|---|---|---|---|
| ft | CFM | dB(A) | 15 | 20 | 25 | 30 | 35 | kpl |
| 4,0 | 34 | <20 | 1099 | 1526 | 1966 | 2420 | 2884 | 64 |
| 4,0 | 51 | 28 | 1201 | 1676 | 2157 | 2659 | 3164 | 97 |
| 6,0 | 25 | <20 | 1485 | 2055 | 2642 | 3256 | 3864 | 48 |
| 6,0 | 51 | 21 | 1795 | 2485 | 3208 | 3966 | 4720 | 97 |
| 6,0 | 76 | 30 | 1945 | 2696 | 3474 | 4287 | 5109 | 148 |
| 8,0 | 36 | <20 | 2079 | 2853 | 3662 | 4471 | 5304 | 68 |
| 8,0 | 74 | 25 | 2444 | 3375 | 4314 | 5290 | 6273 | 143 |
| 8,0 | 110 | 33 | 2676 | 3683 | 4717 | 5765 | 6843 | 220 |
| 10,0 | 42 | <20 | 2468 | 3413 | 4382 | 5369 | 6348 | 80 |
| 10,0 | 85 | 25 | 2891 | 4000 | 5137 | 6297 | 7464 | 165 |
| 10,0 | 129 | 35 | 3188 | 4403 | 5631 | 6898 | 8174 | 264 |

*Water flow = 0.8 GPM, room temperature 68°F*

*The specified sound level applies to straight connection without damper or with fully open damper. Room attenuation = 4 dB*

# Optional extras and accessories

## Factory-fitted accessories

**The accessories below can be ordered fitted on the product, and will then be connected to the terminal block.**

### Controller, URC1

ADRIATIC can be ordered with factory-fitted controller URC1

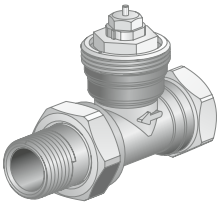
### Valve (Straight)

ADRIATIC can be ordered with factory fitted valves for cooling and heating.

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

| Length | Function | Type | Dim. | $K_v$(GPM) |
|---|---|---|---|---|
| 4, 6, 8, 10 ft | Cooling/heating | VDN215 | DN15 (½") | 0.3-3.9 |

For more information about the valve, see the separate product data sheet on www.swegon.com.



### Valve actuator, ACTUATORc

ADRIATIC can be ordered with factory fitted valve actuators for cooling and heating.

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

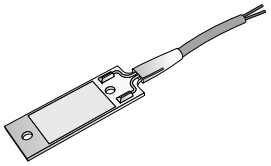
For more information about the valve actuator, see the separate product data sheet on www.swegon.com.

### Condensation sensor CG-IV

CG-IV is a condensation sensor with sensor element, consisting of a circuit board with gold plated conductive paths that react when condensation occurs between the paths.

When condensation arises, the cooling valve closes the incoming water flow to the product. The cooling valve is permitted to open again when the condensation on the conductive paths has been wiped off.

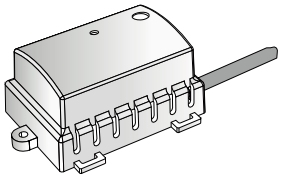
Compatible with LUNA



### Condensation sensor WCD2

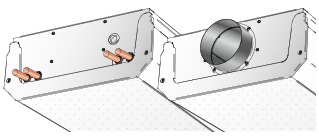
The detector operates at the dew point temperature rather than a fixed relative humidity value.

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



### Variant TH

Water and air on opposite sides



# Loose accessories

### Controller LUNA RE

To control the room temperature. Set point value is set on the controller, which is mounted on the wall.

- Four outputs to control heating and cooling actuators.
- Built-in temperature sensor and possibility to connect an external temperature sensor.
- Four inputs for condensation sensor or presence sensor.

Controller LUNA RE for installation on a wall is ordered separately.

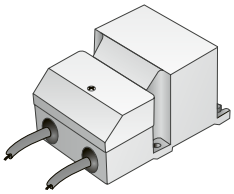
### Controller LUNA RC

Versatile room controller for temperature control of air, heating and cooling. Available in standard version with built-in $CO_2$ sensor.

- Built-in temperature sensor and possibility to connect an external temperature sensor.
- Built-in communication port for connection to a communication bus for reading values from a computer.
- Four outputs to control heating and cooling actuators.
- Inputs for condensation sensor or presence sensor.

Controller LUNA RC for installation on a wall is ordered separately.

### Transformer SYST TS-1 72 VA



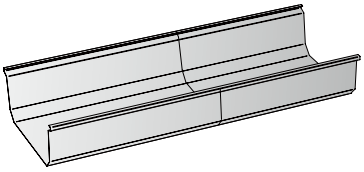
Double-insulated protective transformer 230 V AC/24 V AC
See separate product datasheet on www.swegon.com.

### Transformer, Power Adapt 20 VA

Double insulated protective transformer with plug type F.

Input voltage: 230 V. Output voltage 24 V AC
See the separate product data sheet on www.swegon.com.

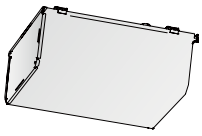
### Connection casing, connection to wall, ADRIATIC d KA



Connection casing in two parts to be mounted in the extended section of the climate beam and beyond to a wall designed for concealing pipe and duct connections.

The casing is available in eleven different length ranges.

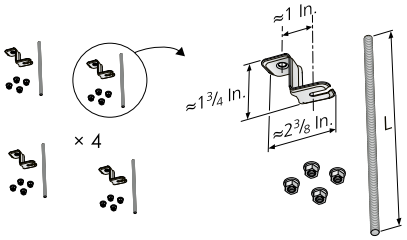
### Connection casing, connection to ceiling, ADRIATIC d KA-G



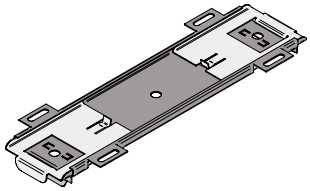
Connection casing with end connection panel designed for concealing pipe and duct connections when connecting to a ceiling.

The casing is available in six different lengths.

**Installation accessory, SYST MS M8**
For installation, use the installation accessory containing threaded rods, ceiling brackets and nuts for all four mounting brackets. Also available with double threaded rods and thread locks.

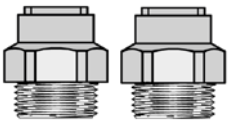



**Assembly piece, ADRIATIC d-T-MD-4S**
Special assembly piece for installation directly against the ceiling.
Available in 2-packs and 3-packs.

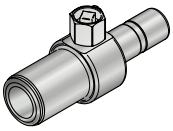


**Flexible connection hoses, SYST FH F50**
Flexible hoses, Length: 6, 12, 18, 24 and 36 inch.
Quick fit coupling (push-on ø12 mm against pipe on one end and 1/2" NPT male coupling on the other end.
SYST FH-F50-6in.-12-1/2in. NPT, SYST FH-F50-12in.-12-1/2in. NPT
SYST FH-F50-18in.-12-1/2in. NPT, SYST FH-F50-24in.-12-1/2in. NPT
SYST FH-F50-36in.-12-1/2in. NPT

**NPT-connection, SYST CS**
Nominal pipe thread connection.
Ø 12mm to "1/2" NPT



**Bleed nipple SYST AR-12**
Nipple for venting the water circuit. Equipped with push-on connector adapted for installation with flexible connection hose F50.



**Connection piece, air – double nipple, SYST AD1**
SYST AD1 is used as an insertion joint between the ADRIATIC and the duct system.
Available in size: Ø5 in

**Connection piece, air – 90° duct bend, SYST CA**
90° duct bend for air connection. Nipple connection with seals at both ends.
Dimensions: Ø5 in

# Dimensions and weight

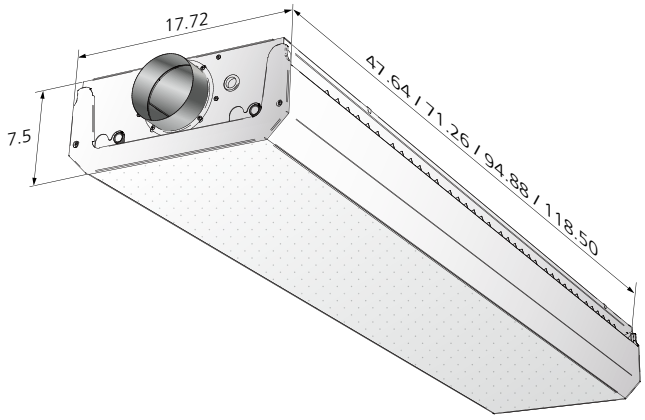



*Figure 21. Dimensional drawing (in.) - ADRIATIC Prisma.*

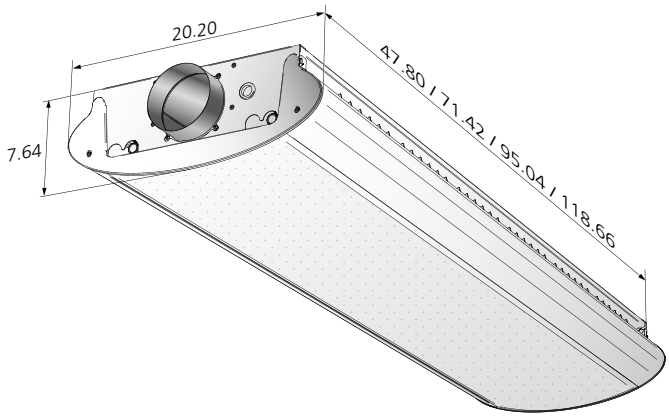



*Figure 22. Dimensional drawing (in.) - ADRIATIC Ellips.*

## Installation

The c-c dimensions are the same for ADRIATIC with design modules Prisma and Ellips. Prisma is shown in the example to the right.

| Unit | Suspended installation | |
|---|---|---|
| | c-c (in) | c-c (in) |
| ft | Short side | Long side |
| 4 | 15.43 | 46.10 |
| 6 | 15.43 | 69.72 |
| 8 | 15.43 | 93.35 |
| 10 | 15.43 | 116.97 |

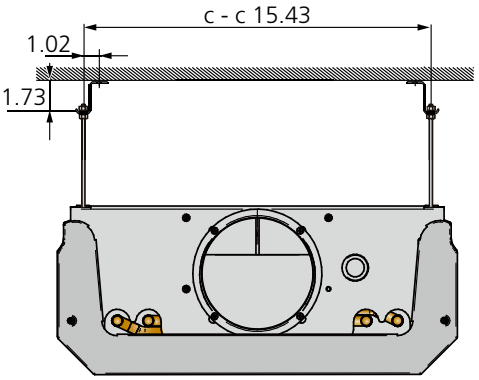



*Figure 23. Installation - suspended installation with installation accessory SYST MS-M8.*

## Weight

Weight excluding controller, valves, actuators and sensors.

| **ADRIATIC Prisma** | | | |
|---|---|---|---|
| Unit | (pound, lbs) | Weight with water (lbs) | |
| ft | | A: ❄ | A/B: ❄/♨ |
| 4 | 39.9 | 42.1 | 42.5 |
| 6 | 58.4 | 61.7 | 62.6 |
| 8 | 76.7 | 81.4 | 82.5 |
| 10 | 93.7 | 99.4 | 101.0 |
| **ADRIATIC Ellips** | | | |
| Unit | (pound, lbs) | Weight with water (lbs) | |
| ft | | A: ❄ | A/B: ❄/♨ |
| 4 | 41.4 | 43.7 | 44.1 |
| 6 | 60.4 | 63.7 | 64.6 |
| 8 | 79.4 | 84.0 | 85.1 |
| 10 | 97.0 | 102.7 | 104.3 |

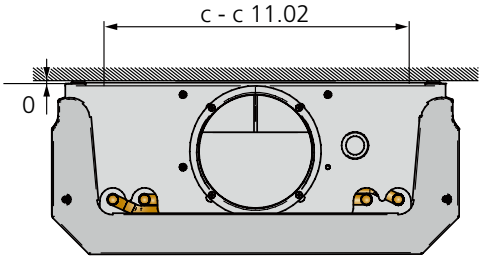



*Figure 24. Installation - directly against the ceiling with installation accessory ADRIATIC d-T-MD-4S.*

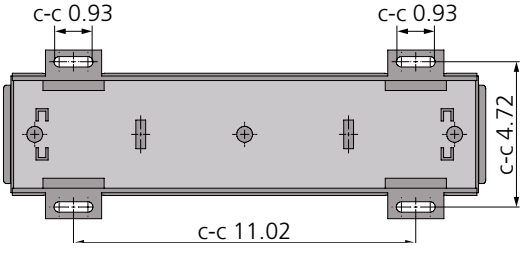



*Figure 25. Dimensions - ADRIATIC d T-MD-4S*

# Specification

Type ADRIATIC active climate beam incl. ADC air deflector for cooling and ventilation or cooling, heating and ventilation.

The units are supplied painted in Swegon's standard shade of white, RAL 9003, gloss ratio 30 ±6%.

## Product

**Climate beam ADRIATIC**

| ADRIATIC | d | a- | bbb- | c |
|---|---|---|---|---|
| Version | | | | |
| Function: | | | | |
| A = Cooling and supply air | | | | |
| B = Cooling, heating and supply air | | | | |
| Length ft: | | | | |
| 4, 6, 8, 10 (1.2, 1.8, 2.4, 3.0 m) | | | | |
| Variant: | | | | |
| P = Prisma | | | | |
| E = Ellips | | | | |

**Also read about our range of products held in stock on page 4.**

**Climate beam ADRIATIC TH**

| ADRIATIC | d | a- | bbb- | c | TH |
|---|---|---|---|---|---|
| Version | | | | | |
| Function: | | | | | |
| A = Cooling and supply air | | | | | |
| B = Cooling, heating and supply air | | | | | |
| Length ft: | | | | | |
| 4, 6, 8, 10 (1.2, 1.8, 2.4, 3.0 m) | | | | | |
| Variant: | | | | | |
| P = Prisma | | | | | |
| E = Ellips | | | | | |
| TH = Water and air on opposite sides | | | | | |

## Color

The product, the connection casing and the surface mounted assembly piece are painted as standard in RAL 9003 standard color, white, gloss ratio 30 ± 6%, but can also be ordered in the following colors.

RAL 7037 Grey, gloss ratio 30-40%

RAL 9010 White, gloss ratio 30-40%

RAL 9005 Black, gloss ratio 30-40%

RAL 9006 White, gloss ratio 70-80%

RAL 9007 Grey, gloss ratio 70-80%

## Special types

On request, the product, the connection casing and the surface mounted assembly piece can also be supplied painted in an optional color or relief finish paint.

For further details about special types, get in touch with your nearest Swegon representative.

## Accessories

| | | |
|---|---|---|
| Connection casing | ADRIATIC d KA- | aaaa bbbb |
| Length: (in.)<br>7.87-13.78, 11.81-17.72, 15.75-21.65<br>19.69-25.59, 19.69-39.37, 35.43-41.34<br>35.43-53.15, 35.43-68.90, 62.99-68.90<br>62.99-96.46, 62.99-124.02 | | |

| | | |
|---|---|---|
| Connection casing with end connection panel | ADRIATIC d- KA-G | aaaa |
| Length: (in.)<br>7.87, 11.81, 15.75, 19.69, 35.43, 62.99 | | |

| | | | | |
|---|---|---|---|---|
| Assembly fitting<br>(For suspended installation) | SYST MS M8 | aaaa- | b- | RAL9003 |
| Length of threaded rod:<br>7.9, 19.7, 39.4 (in.)<br>1 = threaded rod only<br>2 = Double threaded rods with thread locking device | | | | |

| | | |
|---|---|---|
| Assembly fitting<br>(For installation directly against the ceiling) | ADRIATIC d-T-MD-4S | a |
| Quantity per pack<br>2 = 2 pcs<br>3 = 3 pcs | | |

| | | | |
|---|---|---|---|
| Flexible connection hose (1)<br>Quick fit coupling (push-on ø12 mm against pipe on one end and 1/2" NPT male coupling on the other end. | SYST FH F50 | aa | 12 |
| Length:<br>6, 12, 18, 24 and 36 inch. | | | |
| Dimension (Ø) 12 mm | | | |

| | |
|---|---|
| Connection piece<br>(90° duct bend) | SYST CA-4.92-90 |

## Specification text

Contact Swegon or your Swegon representative for 3-part guide specifications.