

**STULZ**  
**TECNIVEL**



# ClimaPac

**Modular and flexible AHU**





**Experience  
Flexibility  
Efficiency  
Reliability  
Service  
Quality**

## **United We Stand**

In order to unify knowledge and offer a complete solution to the market needs, in 2016 Tecnivel merged with the German multinational STULZ, world's leading solution provider of energy-efficient temperature and humidity management technology, specifically for mission-critical applications such as data centers and laboratories, among others, becoming one of the most important companies in our field, with a wide range of products worldwide from a single source.





DRY COOLERS



FANCOILS



UHAs



AIR CURTAINS

## 50 years in the market guarantee our experience

Personalized attention, focused on the customer, entrepreneurial spirit, comprehensive support and extensive experience in HVAC systems have laid the basis for the growth of STULZ Tecnivel for almost 50 years.

To satisfy the most demanding market needs, our main competitive advantage is the ability to supply customized solutions with multiple configurations. Our adaptability is such, both in terms of delivery times and with the specific characteristics of your projects, that we offer you the best technical advice and service.

## Quality at your disposal

Since its foundation in 1971, our products stand for high quality, innovation and continuous improvement, with special emphasis on comfort, wellbeing and energy efficiency with a serious commitment to reduce the environmental impact.

We are manufacturers and in order to ensure maximum reliability and quality, the selection of the best components in the market from the most qualified suppliers is guaranteed, with the most modern production methods and very strict controls in accordance with the ISO 9001 standard granted by TÜV and the certification of Eurovent.



# Smart Solutions for your Applications

## Developping your Projects

STULZ Tecnivel is fully involved in the personalization of each offer by conducting previous studies, advising you to achieve a space tailored to your needs. We offer global and customized solutions for each type of installation.

The most reputable brands around the world choose us, being able to find our products in the properties of the most recognized Hospitals, Hotels, Offices, Schools, Public Buildings, Wineries, Banks, Industries and a long list of other applications, since we adapt to your needs by customizing your installations.

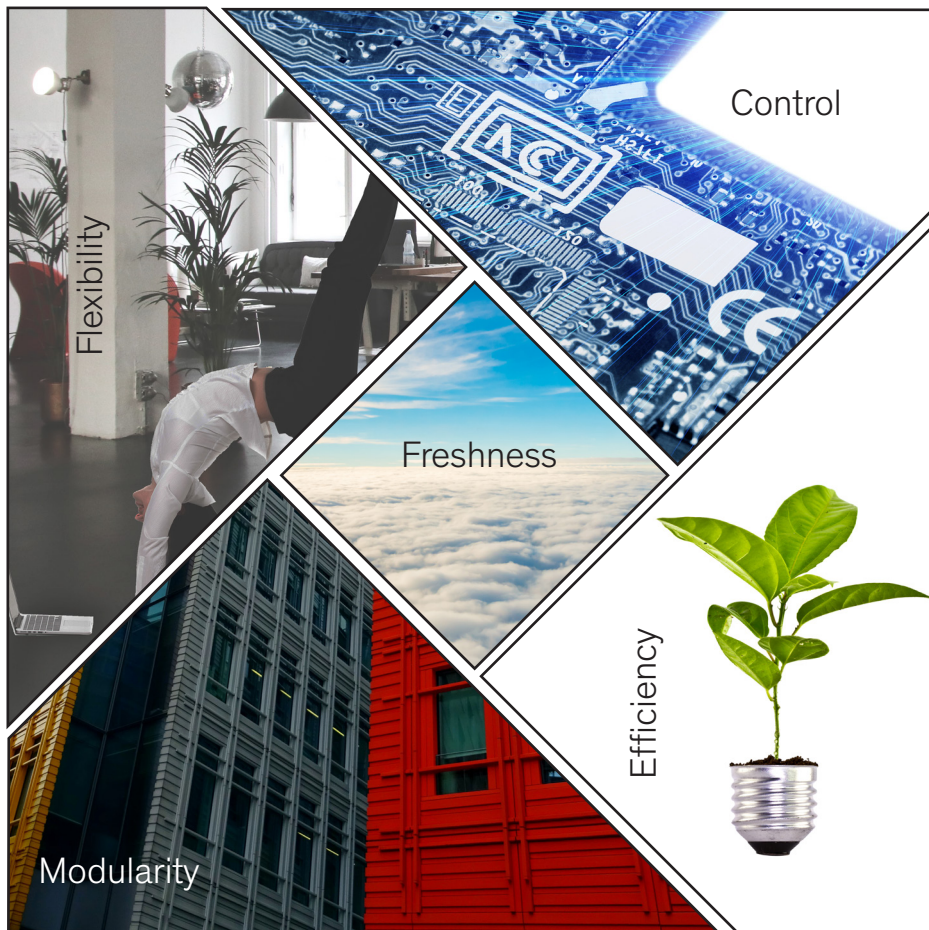


- ✓ **Flexible**
- ✓ **Modular configurations**
- ✓ **Energy Efficient**
- ✓ **Clean air**
- ✓ **Integrated control**

- 50 standard sizes
- Adapted to all requirements
- State-of-the-art components
- Different filtration solutions
- Optimizing operations

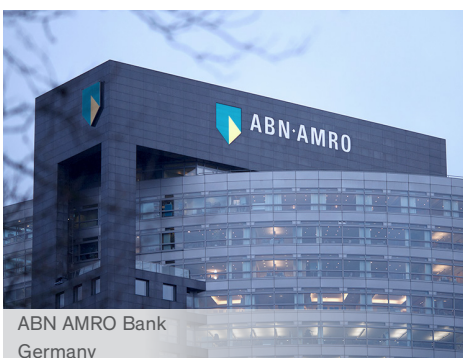
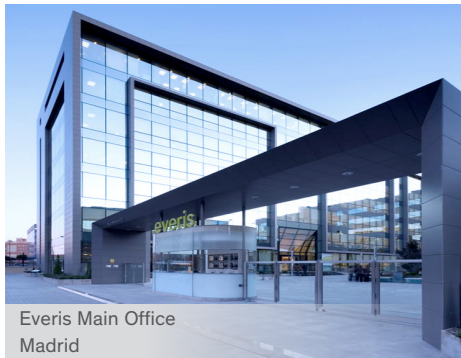
Adaptability, energy performance, air quality and comfort

Countless applications





# Big brands already trust in our AHUs





**Maximum Flexibility**  
**Your Need our Aim**





# Quick Selection Guide

## Standard sizes

ClimaPac	External dimensions	Filters			Airflow (m <sup>3</sup> /h)			
Size	W x H (mm)	Matrix	Qty		Face Air Velocity (m/s)			
			1	1/2	1,5	2	2,5	3
<b>10.10</b>	820×780		1	0	2.554	3.405	4.256	5.108
<b>10.15</b>	820×1130		1	1	3892	5.189	6.487	7.784
<b>15.10</b>	1130×780		1	1	3.672	4.896	6.120	7.344
<b>15.15</b>	1130×1130		1	2	5.596	7.462	9.327	11.192
<b>15.20</b>	1130×1440		2	2	7.300	9.734	12.167	14.601
<b>20.10</b>	1460×780		2	0	4863	6.483	8.104	9.725
<b>20.15</b>	1460×1130		2	2	7.410	9.880	12.350	14.820
<b>20.20</b>	1460×1440		4	0	9.667	12.889	16.111	19.334
<b>20.25</b>	1460×1720		4	2	11.705	15.607	19.508	23.410
<b>20.30</b>	1460×2020		6	0	13.889	18.518	23.148	27.777
<b>25.15</b>	1790×1080		2	3	8.771	11.695	14.619	17.542
<b>25.20</b>	1790×1390		4	2	11.580	15.440	19.300	23.160
<b>25.25</b>	1790×1720		4	4	14.570	19.427	24.284	29.141
<b>25.30</b>	1790×2020		6	3	17.289	23.052	28.815	34.578



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ClimaPac	External dimensions	Filters		Airflow (m <sup>3</sup> /h)				
Size	W x H (mm)	Matrix	Qty		Face Air Velocity (m/s)			
			1	1/2	1,5	2	2,5	3
<b>30.15</b>	2090×1080		3	3	10.339	13.786	17.232	20.679
<b>30.20</b>	2090×1720		6	0	13.651	18.201	22.751	27.301
<b>30.25</b>	2090×1720		6	3	17.175	22.900	28.626	34.351
<b>30.30</b>	2090×2350		9	0	20.380	27.173	33.966	40.759
<b>30.40</b>	2090×2660		12	0	27.216	36.288	45.359	54.431
<b>35.20</b>	2420×1390		6	2	15.928	21.237	26.547	31.856
<b>35.25</b>	2420×1720		6	5	20.041	26.721	33.401	40.082
<b>35.30</b>	2420×2020		9	3	23.780	31.706	39.633	47.560
<b>35.40</b>	2420×2660		12	4	31.756	42.342	52.927	63.512
<b>35.50</b>	2420×3290		15	5	39.608	52.811	66.013	79.216

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## Standard sizes

ClimaPac	External dimensions	Filters			Airflow (m <sup>3</sup> /h)			
Size	W x H (mm)	Matrix	Qty		Face Air Velocity (m/s)			
			1	1/2	1,5	2	2,5	3
<b>40.20</b>	2730×1720		8	0	18.067	24.090	30.112	36.135
<b>40.25</b>	2730×1720		8	4	22.733	30.310	37.888	45.465
<b>40.30</b>	2730×2020		12	0	26.974	35.965	44.956	53.948
<b>40.35</b>	2730×2350		12	4	31.639	42.185	52.732	63.278
<b>40.40</b>	2730×2660		16	0	36.022	48.029	60.036	72.043
<b>40.45</b>	2730×2990		16	4	40.687	54.249	67.811	81.374
<b>40.50</b>	2730×3290		20	0	44.928	59.904	74.880	89.856
<b>45.25</b>	3060×1720		8	6	25.598	34.131	42.663	51.196
<b>45.30</b>	3060×2020		12	3	30.374	40.498	50.623	60.748



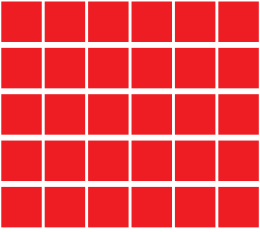
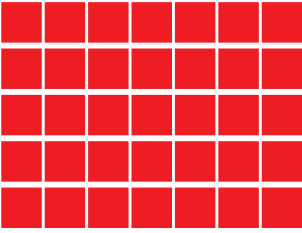
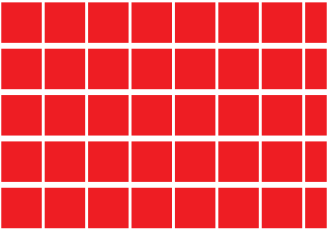
# Quick Selection Guide

## Standard sizes

ClimaPac	External dimensions	Filters		Airflow (m <sup>3</sup> /h)				
Size	W x H (mm)	Matrix	Qty		Face Air Velocity (m/s)			
			1	1/2	1,5	2	2,5	3
<b>50.35</b>	3360×2350		15	5	39.253	52.337	65.421	78.505
<b>50.40</b>	3360×2660		20	0	44.690	59.587	74.483	89.380
<b>50.45</b>	3360×2990		20	5	50.478	67.304	84.130	100.956
<b>50.50</b>	3360×3290		25	0	55.740	74.319	92.899	111.479
<b>55.30</b>	3690×2020		15	3	36.865	49.153	61.441	73.730
<b>55.50</b>	3690×3290		25	5	61.403	81.870	102.338	122.806
<b>60.30</b>	4000×2020		18	0	40.059	53.412	66.765	80.118

# Quick Selection Guide

## Standard sizes

ClimaPac	External dimensions	Filters		Airflow (m <sup>3</sup> /h)				
Size	W x H (mm)	Matrix	Qty		Face Air Velocity (m/s)			
			1	1/2	1,5	2	2,5	3
<b>60.40</b>	4000×3290		24	0	53.469	71.328	89.160	106.992
<b>60.50</b>	4000×3290		30	0	66.723	88.964	111.205	133.445
<b>65.50</b>	4330×3290		30	5	72.386	96.515	120.643	144.772
<b>70.50</b>	4630×3290		35	0	77.534	103.379	129.224	155.069
<b>75.50</b>	4960×3290		35	5	83.197	110.930	138.662	166.395

 -half filter

 -full filter

**NOTE 1:** Absolute filters are available for all sizes.

**NOTE 2:** Filters installation by rail available up to size 20.20.

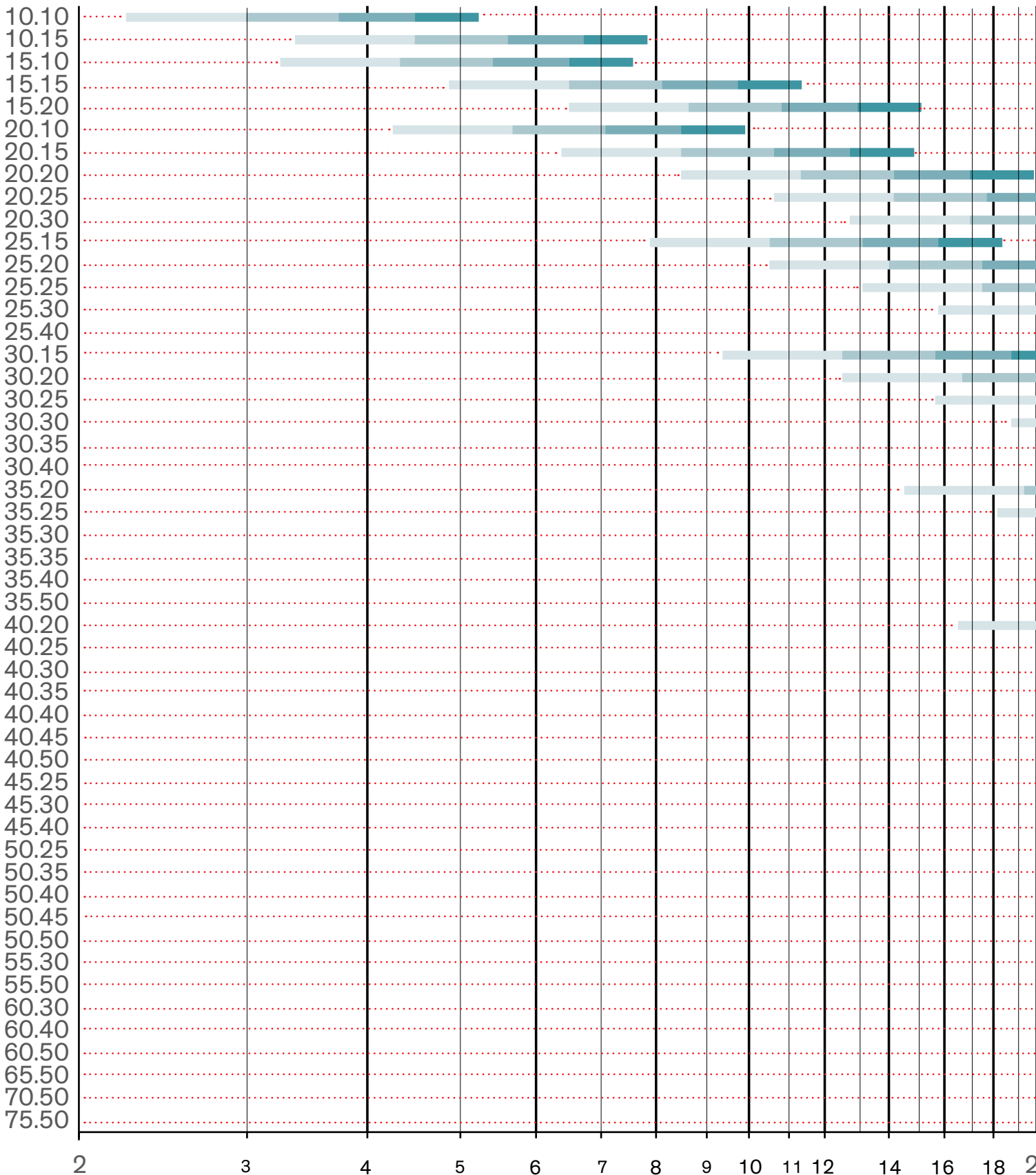
**NOTE 3:** Is not included in the external height the base frame nor the roof.



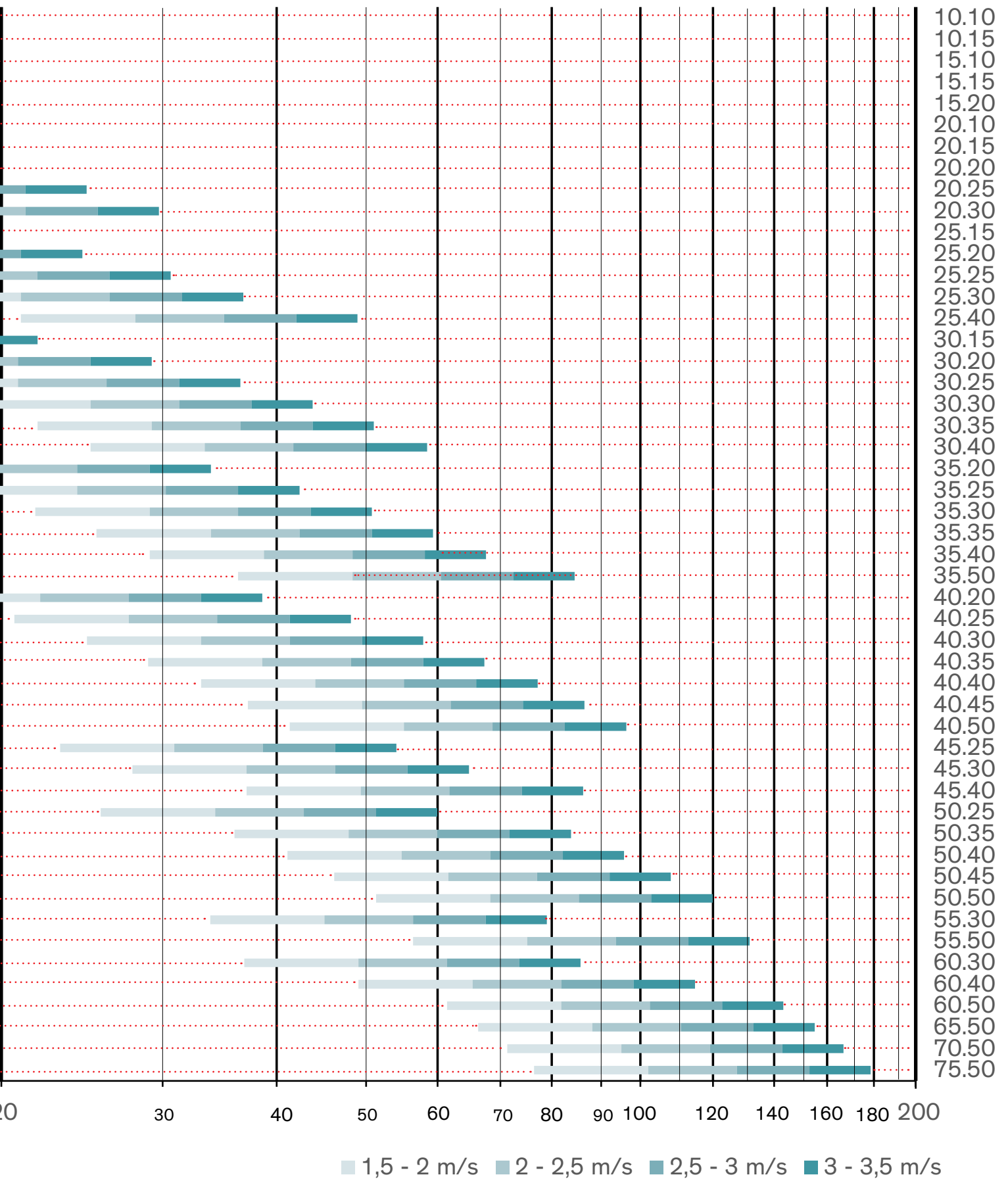
# Quick Selection Guide

## Chart: airflow vs air velocity

Size



Airflow x 1000 m³/h





# Overview

## Product Information

### Casing

The thermal break system casing assures, composed by an aluminum frame and double-skin panels, high classifications according to the EN1886.

### Roof

Made from coated galvanized steel and design to ensure full-drainage.

### Insulation

Rockwool with a density of  $100 \text{ kg/m}^3$  45mm thickness.

### Frame

Extruded aluminum with thermal break system allow to hold the panels without the use of screws. Coated in RAL7044.

### Corners

Made from nylon (polyamide) they serve to join the main aluminum profiles and assure thermal break. Color RAL7044.

### Handles

Made from nylon they are a key piece in order to guarantee maximum leakage class according the EN1886.



## Mechanical performance

According to EN1886

Characteristics	Class
Mechanical strength	D1
Casing air leakage	L1 / L1
Filter bypass leakage	F9
Thermal transmittance	T2
Thermal bridging	TB2

### Acoustic Insulation

Hz	125	250	500	1k	2k	4k	8k
dB	16	12	13	23	28	38	43

## Operating temperatures

The usual range of operating temperatures for a so-called standard configuration is:

Standard configuration: -40/+40 °C \*

*\*The operating temperatures will depend of the final configuration, more specifically the components that will be included in the unit. For additional information's please check the IOM Manual*

## Directives

The unit ClimaPac range is in conformity with the following directives:

EC Machinery directive 2006/42/EC

EC Directive for low voltage 2014/35/EU

EC EMC directive 2014/30/EU

EC Ecodesign Directive 2009/125/EC (Commission Regulation No 1253/2014)

## ISO 9001 Certification

STULZ Tecnivel complies the Quality Management System certification ISO 9001.

## Eurovent Certification

ClimaPac range participates in the Eurovent Certified Performance programme for Air Handling Units (AHU).

Check on-going validity of certificate:

[www.eurovent-certification.com](http://www.eurovent-certification.com)

## Panels

Double-skin, 45 mm thickness, rockwool insulated  
Both skins are pre-coated galvanized steel sheets RAL7032.

Euro class to fire reaction A2 (s1, d0).



## Inspection Windows

Square inspection window in transparent, impact-resistant polycarbonate. No fastening hardware on the inside ensure perfect thermal breakage.





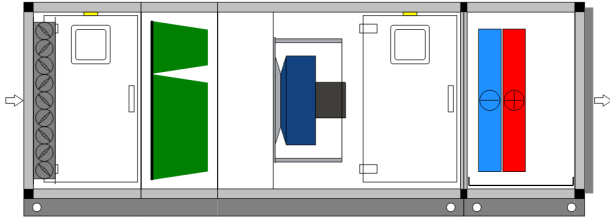


**Preconfigured Designs  
Making Your Life Easier**



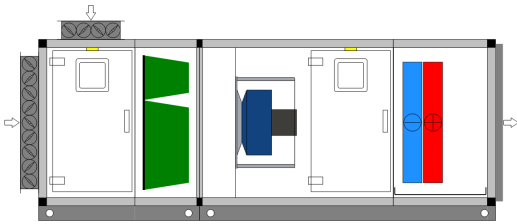
# Modular Configurations

## Built up sections



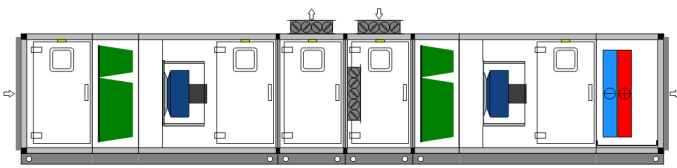
### In Line

Unidirectional unit. The pre-defined configuration is composed by an inlet damper, one filter stage, a fan and cooling/heating coils. Additional components can be added, and existing ones can be removed.



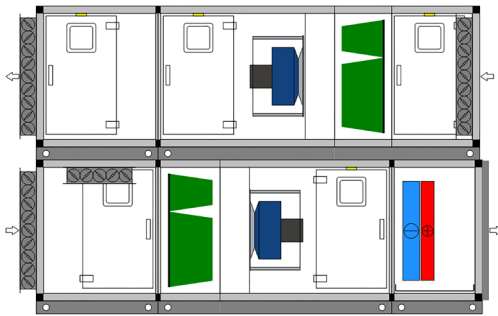
### In Line with 2-way mixing box

Unidirectional unit. The pre-defined configuration is composed by a 2-way mixing box (2 inlet dampers), one filter stage, a fan and cooling/heating coils. Additional components can be added, and existing ones can be removed.



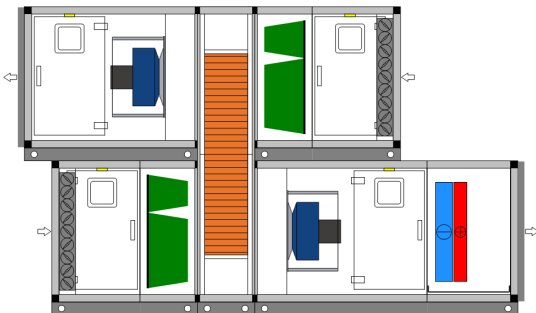
### In Line with 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by a 3-way mixing box (3 dampers), one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



### Double-Deck with 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by an extract air damper, a 3-way mixing box (3 dampers), one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



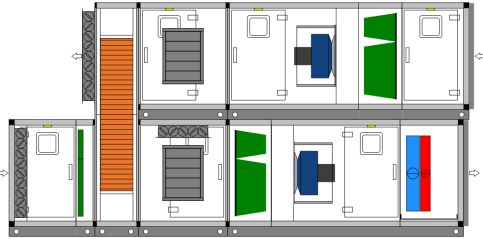
### Double-Deck Rotary Heat Exchanger

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an extract air damper, a rotary heat exchanger, one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



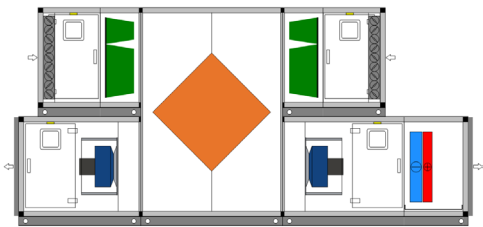
# Modular Configurations

## Built up sections



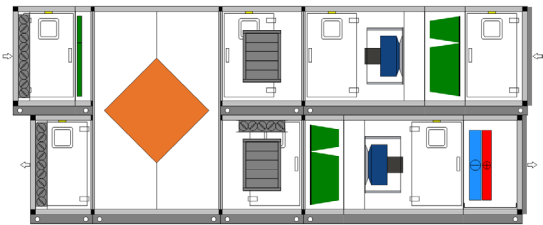
### Double-Deck Rotary Heat Exchanger and 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an exhaust air damper, a rotary heat exchanger, a 3-way mixing box (3 dampers), one filter stage on the extract side, two filter stages on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



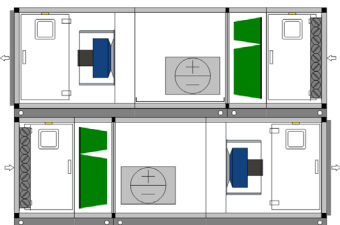
### Double-Deck with Plate Heat Exchanger

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an exhaust air damper, a plate heat exchanger without by-pass, a 3-way mixing box (3 dampers), one filter stage on the extract side, two filter stages on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



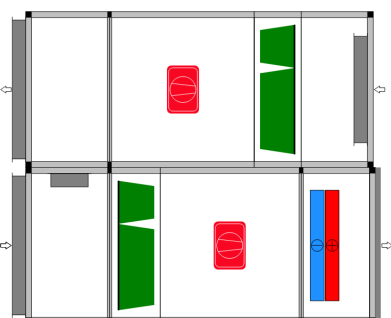
### Double-Deck with Plate Heat Exchanger and 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an extract air damper, a plate heat exchanger with by-pass, one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



### Double-Deck with Run Around Coils

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an extract air damper, a run-a-round coils, one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan on the supply side. Additional components can be added, and existing ones can be removed.

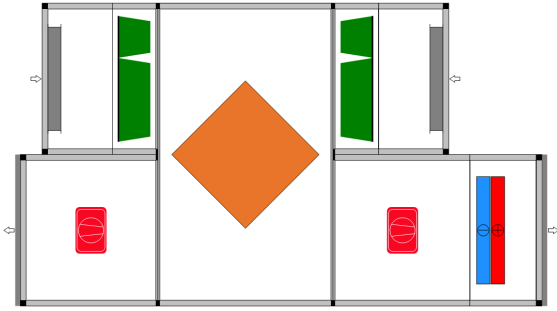


### Side-by-side 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by an extract air damper, a 3-way mixing box (3 dampers), one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.

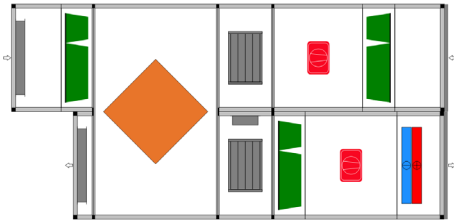
# Modular Configurations

## Built up sections



### Side-by-side with Plate Heat Exchanger

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an extract air damper, a plate heat exchanger with by-pass, one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



### Side-by-Side with Plate Heat exchanger and 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an exhaust air damper, a plate heat exchanger without by-pass, a 3-way mixing box (3 dampers), one filter stage on the extract side, two filter stages on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



### Side-by-side with Rotary Heat Exchanger

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an extract air damper, a rotary heat exchanger, one filter stage on the extract side, one filter stage on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.



### Side-by-side with Rotary Heat Exchanger and 3-way mixing box

Bidirectional unit. The pre-defined configuration is composed by an outdoor air damper, an exhaust air damper, a rotary heat exchanger, a 3-way mixing box (3 dampers), one filter stage on the extract side, two filter stages on the supply side, a fan on the extract side, a fan and cooling/heating coils on the supply side. Additional components can be added, and existing ones can be removed.

**NOTE:** For all the configurations is possible to change the order of the modules/components and to add/remove them to meet the requirements of individual project.



# State-of-the art components

## Optimized energy efficiency

### Steam humidifiers



Available two types of steam generators:

- Resistances
- Electrodes

The generators can be supplied with different types of steam dispersion systems that allow very compact AHU section due to low absorption distances.

### Dampers



100 % aluminium and plastics (no corrosion issues)

Different leakage classes available

Standard leakage class 2

### Heat Recovery



Different types of heat recovery solutions are available, providing high heat recovery efficiencies for different applications:

- Cross flow plate heat exchangers (different geometries and also in epoxy)
- Rotary heat exchanger
  - Enthalpy
  - Sorption
  - Condensation
  - Epoxy
- Run-around coils

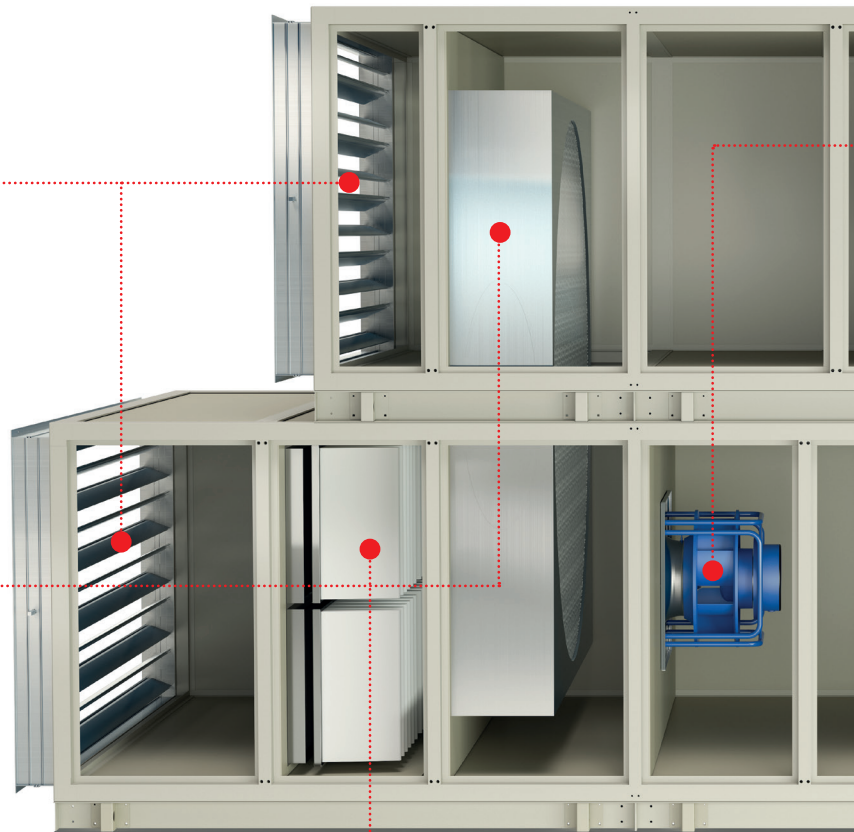
### Evaporative humidifier/media



Built entirely from stainless steel AISI304.

Media pad non-combustible and made from inorganic material (fiberglass), glue-free providing this way high saturation efficiency and low pressure drop.

Hygienic certified according the VDI6022 standard.



### Filters



Highly efficient filters with low pressure losses. Different types available according the new ISO 16890:

Panel filters (Coarse, ePM10 and ePM2,5)

Compact filters (ePM10 and ePM1)

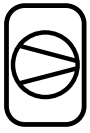
Bag Filters (Coarse, ePM10, ePM2,5 and ePM1)

Absolute filters HEPA (E10 up to H14)

# Environmental Awareness



## Fans



Plug fans:

- EC motor IE4
- AC motor IE3

Wide choice of fan-walls:

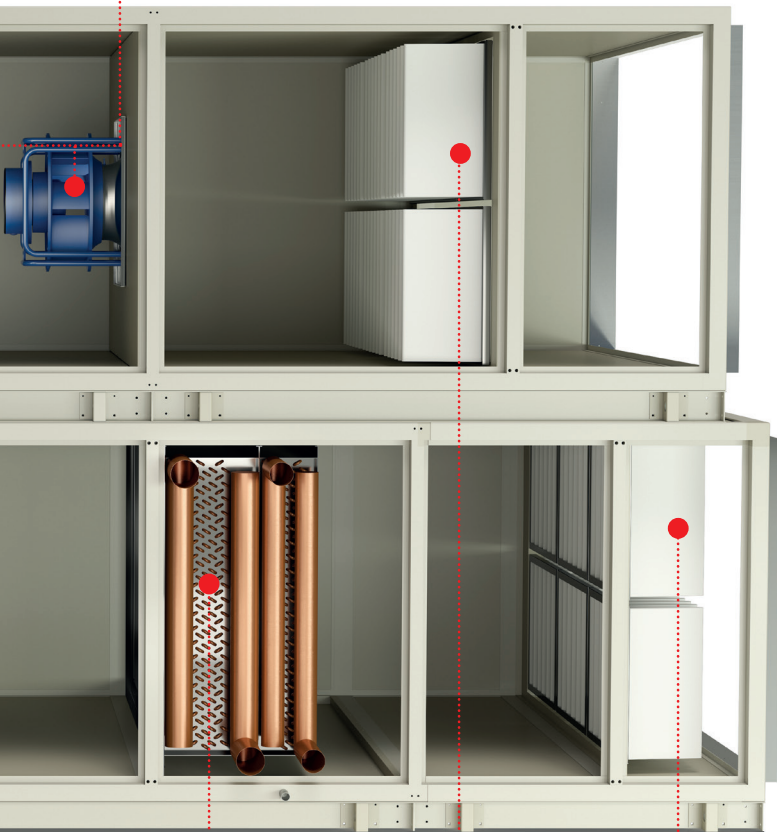
Fan-wall configuration to reach high airflow volumes

Aluminum and composite impellers available

Operation temperatures:

EC up to 50°C

AC up to 60°C



## Coils



Standard construction copper tubes, aluminum fins and steel frame. Available for selection:

- Chilled water-cooling coils
- Heating water coils
- Evaporator coils (DX systems)
- Condenser coils (DX systems)



Fins and frame available in different materials.

## Sustainable Solutions

In order to achieve the best energy efficiency the ClimaPac range uses state-of-the-art components where the main features are low internal pressure drops, low power consumption with high efficiency.

The use of the latest technology available in the market is something always present at the ClimaPac range.

# Tecnivel Instant Project (TIP)

## Intuitive AHU Selection Software



The Tecnivel Instant Project (TIP) is a selection software in-house developed.

With a user-friendly interface, this powerful selection tool is easy and fast to design AHU's being able to quote several projects within a short period of time.

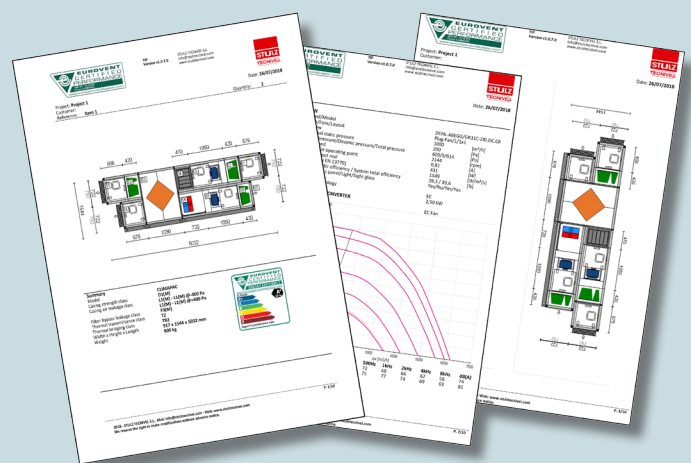


- Intuitive Tool
- Fast selections and quotations
- User-friendly interface
- Multi-language
- Technical specification sheets
- Drawings with real dimensions

## Reports and Drawings

The TIP is able to generate as output the following documentation:

- ✓ Detailed technical specification sheets
- ✓ 2D drawing with detailed dimensions
- ✓ Technical specification texts
- ✓ Quotation





# Integrated Control

## Installation costs savings and enhanced energy efficiency

The ClimaPac range have available a regulation and control system. The controller is capable to effectively control the different configurations available.

The integrated controls solutions directly from the factory enhance the energy efficiency and at the same time save installation costs.

### Control

- Plug & Play modular AHU with lower installations cost.
- Configured from factory enhancing the operation of the unit.

### Controller Siemens Climatix C600

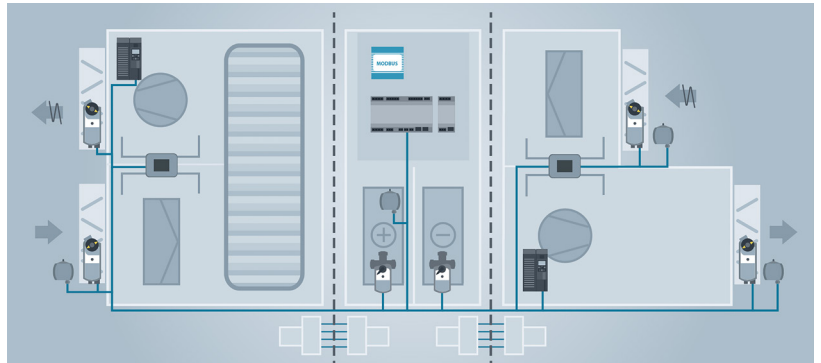


### Field equipment

Multilanguage complete solution including the field equipment:

- Pressure sensors
- Temperature sensors
- Valves & actuators
- Pressure switch

### Complete regulation Solution



### Communication

Different types of protocols available:

- BACnet (IP; MS/TP)
- LON
- Modbus (RTU; TCP)
- Web

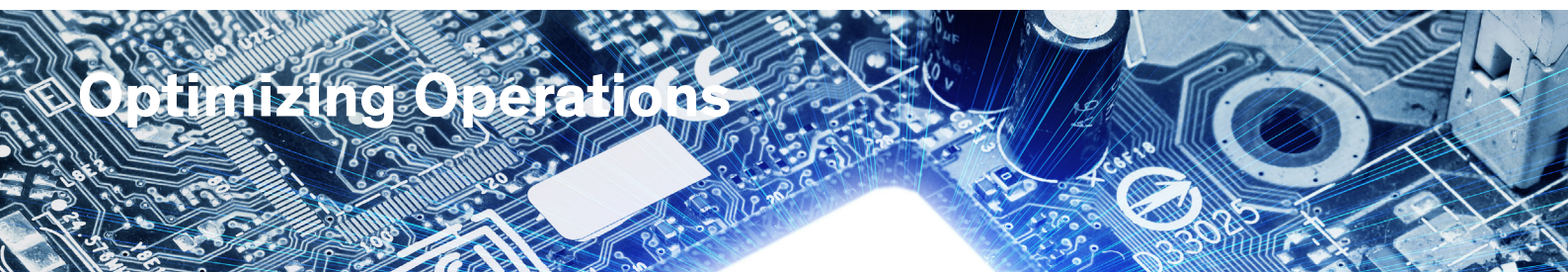
### Network Protocols



LONMARK  
INTERNATIONAL



Optimizing Operations



# Everywhere...

## From a single Source.



Smart Cooling Solutions for your Installations



Tested  
Quality



Expertise  
Service



Energy  
Efficiency



Flexibility  
Adaptability



Comprehensive  
Support

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