



STANDARD PRODUCT



EC fan, horizontal and vertical configuration

### Feel the efficiency. Feel STULZ.

### / Strength through unity

With the aim of join knowledge and offering a complete solution to market needs, in 2016 Tecnivel merges with the German multinational STULZ, a leader in precision air conditioning equipment for critical applications such as data centers and laboratories among others, thus becoming one of the most important companies in the sector, with an extensive product range worldwide from a single supplier.

### / Quality at your service

Since its foundation in 1971, our name has been synonymous of high quality, innovation and continuous improvement, placing special emphasis on comfort, air quality, well-being and energy efficiency with a serious commitment to limiting environmental impact.

We are a manufacturer and in order to ensure maximum reliability and quality, we select the best components on the market from the most qualified suppliers, with the most modern production methods and very strict controls in accordance with ISO 9001 and 14001 standards issued by TÜV and Eurovent certification.



# / 50 years in the market guarantee our experience

Customer-focused personal attention, entrepreneurial spirit, comprehensive support and extensive experience in air conditioning systems have laid the foundation for STULZ Tecnivel's growth for more than 50 years.

To fulfill the most demanding needs of the market, 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 after-sales service with the utmost competence.





I /CAS - CAMS

Axial condensers, H/V Configuration





Axial condensers, V-shaped configuration





Radial condensers, in different configurations



Standard EC technology and optional AC

**Axial** ..... PAG. 5-9

- CAS/CAMS

- CASV/CAMSV

Radial ..... PAG. 10-12

- CCS

### **STULZ Condensers**

Energy efficiency with low sound level





**Axial condensers** 



### / Lower charges, higher benefits

Aware of the challenge of reducing the environmental impact of our units, as well as the upward trend in the cost of refrigerants (HCFC), the CAS and CAMS series have finned tube and microchannel heat exchangers with reduced internal volume. This feature reduces the economic impact on the installation, due to the need of lower loads and as a consequence, reducing the carbon footprint of the installation.

In the case of the CAMS series, which install microchannel coils, optimum performance is obtained, considering the dissipated power.

The CAS series installs finned tube coil, which has made STULZ one of the most reliable condensers manufacturers in the world. The ratio of dissipated power, internal volume of the unit, as well as the power consumption and sound levels that offer this serie, makes CAS units one of the most energy efficient and environmentally friendly solutions available in the HVAC market.

# Reliability, sturdiness and durability State-of-the-art components

### Fans

Axial EC, dynamically and statically balanced. High energy efficiency, achieving low power consumption. Its design allows it to reduce turbulence, obtaining low sound levels.

Tested to withstand a large number of cycles, as well as the severity of environments with corrosive agents.

### Casing

Manufactured in aluminum magnesium alloy (AW 5754), which, together with its compact design, gives the unit robustness and good mechanical resistance.

High resistance to external agents, allowing its outdoor installation in corrosive environments, such as marine, industrial or rural.

### **Control and regulation**

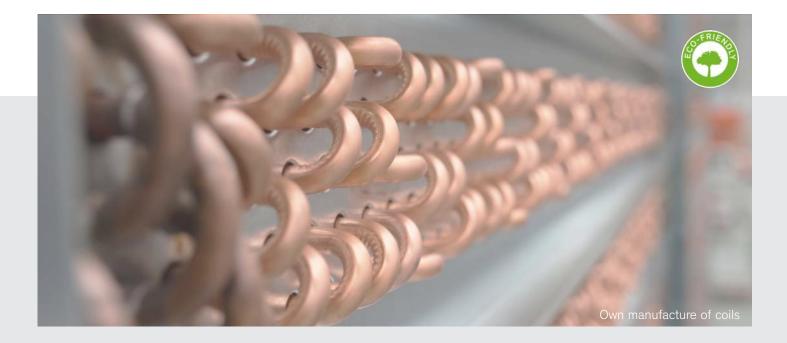
Standard delivery with junction box and main switch these elements are located on the same side as the connections to the cooling circuit. With IP 66 dprotection class, it protects the power supply inputs to the fans.



The units are delivered as standard with condensing control by

fan speed regulation, as well as the connection hoses, through which the regulation element will be connected to one of the schrader valves located on the inlet manifold of the heat exchanger.





### **Development of energy efficient solutions**

Several factors make the CAS and the CAMS series into a solution that combines high efficiency, with consequent energy and cost savings, and a considerable reduction of noise levels compared to other solutions on the market.

Thanks to the design of its heat exchangers, the environmental impact is also reduced, as they maximize the capacity with respect to the volume of refrigerant used, thus minimizing the impact on the environment. STULZ's commitment to environmental protection has become a priority objective as an specialed manufacturer in the development of air conditioning solutions that seeks and focus on reducing pollutant gas emissions and the ecological footprint, incorporating new technologies, components and refrigerants that allow maximum performance of air conditioning systems with the lowest environmental impact.

### **CAS** exchanger

#### / Copper, tube and fin

Made in inner grooved copper tube for optimal heat transfer and aluminum fin, in its standard version.

With self-distancing collars, fixed to the tube by mechanical expansion, which allows a perfect fit between elements and optimum heat transmission



### **CAMS** exchanger

#### / Aluminum, microchannel

Made of aluminum, consisting of aluminum fins and main collector and microports whose function is to conduct and distribute the refrigerant, in aluminum protected by zinc coating.

It allows to achieve optimal ratios between capacity and volume of refrigerant used, reducing electrical consumption due to its reduced weight and dimensions.



## High versatility Installation and transport

CAS and CAMS units have a compact and light construction, due to its aluminum alloy structure and the reduced weight of its main components, which facilitates its transport and relocation.



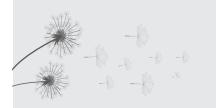
#### **TRANSPORT CONFIGURATION**

Thanks to the design of its legs, the configurations regarding the direction of the air can be reconfigured.

This advantage gives CAS and CAMS units a great versatility with transportation, relocation and installation of the units, as well as its re-installation in another location.

#### HORIZONTAL CONFIGURATION

The CAS and CAMS condensers have two configurations, depending on the direction of air flow through the unit, in this case horizontal.



#### **VERTICAL CONFIGURATION**

CAS and CAMS condensers have two configurations, depending on the direction of air flow through the unit, in this case vertical airflow.



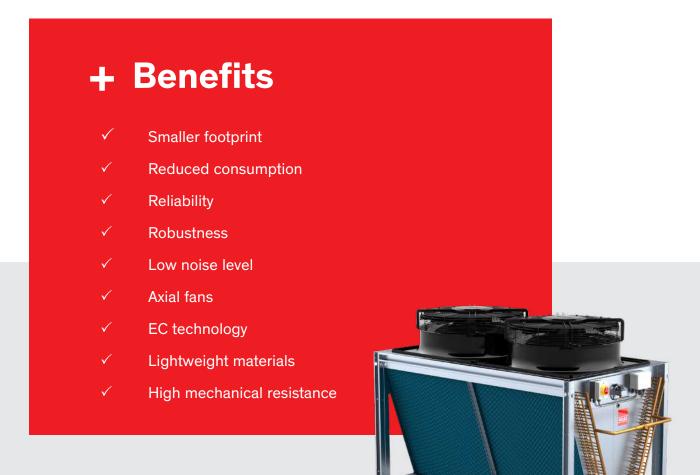
### / Adaptability to your project specifications.

Different conveying configurations, sizes and positions, according to the needs of impulsion and air flow required in the installation.



# **CASV & CAMSV Series**

**Axial Condensers** 



### / New V-shaped configurations

The new optimized design of the CASV & CAMSV Series V-configuration condensers offers many advantages over standard condensers.

Not only it has a smaller footprint, taking up less floor space, but the coupled fans also offer lower power consumption during operation, as well as reduced noise levels.

Its V layout offers an innovative and more efficient design compared to traditional condensers.





### **Radial Condensers**

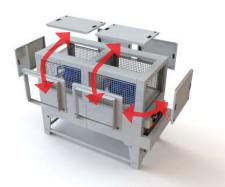
# + Benefits

- Air flow conduction in different configurations
- Easy control of the unit
- ✓ Reliability
- ✓ Robustness
- Indoor installation
- ✓ Radial fans
- ✓ Adaptable design
- Versatile solutions



### / Compact and versatile design

The CCS series of remote condensers are designed for indoor installation (e.g. compressor rooms, basements or engine rooms). Thanks to its radial fans, the CCS units are capable of driving air through duct networks, overcoming static pressures up to 200 Pa or more.



### / Adaptability

Its compact design and variety of configurations, makes the CCS Series the ideal remote condenser, adaptable to a wide variety of installations in any of its available configurations, coping with all kinds of dimensional constraints, ventilation ductwork design and energy demands. CCS units are available in different sizes, depending on the number and diameter of fans to be installed and in two main configurations depending on the inlet airflow direction, vertical or horizontal.

# **Reliability, robustness and durability** State-of-the-art components

STULZ Tecnivel has extensive experience in the production and selling of condenser units. As a result of this experience and great knowledge of the market needs, the design and development of the CCS units, as well as the selection of its components, has followed criteria oriented to find the perfect balance to optimize the solution and the market expectations, supplying a quality, reliable and energy efficient product.

This experience in manufacturing condensers has enabled STULZ to meet the company's current quality standards, as well as the efficiency standards set by current regulations, and reinforced STULZ's commitment to producing reliable, long-life equipment.

#### Fans

Radial EC technology, which allows these units to overcome pressures above 200 Pa. They feature high energy efficiencies, as well as high precision control and modulation of its operation, which allows the units to achieve considerable energy savings compared to traditional solutions such as asynchronous motors.

### Casing

Manufactured in painted galvanized sheet metal, its compact construction and reinforced structure make the CCS Series units highly robust and durable. Its painted surface gives it a clean appearance and a quality finish. It has drilled holes in the support bench or legs, depending on the configuration, for fixing in the installation.



# High versatility Easy installation and transport

CCS units, due to its compact construction and anchoring elements for hoisting by lifting elements, allow a wide variety of possibilities for transporting and moving the units.

For safe and reliable fastening, the CCS Series units, both in its vertical and horizontal configurations, provide drilled holes in both the base and legs for fixing the unit or the inclusion of vibration absorption elements.

These features make CCS units easy to transport and install, which, together with its robust structure and the quality of its main components, make CCS units a reliable solution.





### Adaptability by directing the air

The fan section panels are designed to be interchangeable because both, the blind panels and the mouth panels, share the same constructive characteristics, thus allowing for a wide variety of condenser outlet airflow directions. Also, at the last moment, if necessary, the air discharge direction initially considered for the installation could be modified.

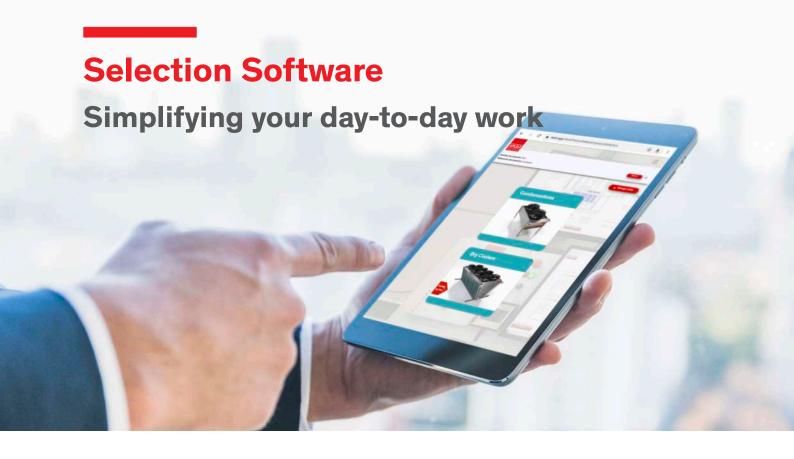
#### **Protection grilles**

CCS units, being remote condensers, are conceived to be connected through duct networks, hence the fan is protected perimetrically by grids to ensure the safety of personnel exposed to the unit, being the safety of the installation and personnel in contact with the equipment objectives during the design and projection of the unit.



### / Removable panels

The design of the unit, with removable panels in the fan section and the easy access to the heat exchanger, allows easy and quick management of inspection and maintenance tasks, while a system of guides inside the unit simplifies and speeds up fan inspection and replacement.



### / Design your condenser quickly and easily with STULZ Product Selector

With some simple data with the operating conditions of the installation, such as air and condensing temperatures, refrigerant, voltage and location among others, the software will perform an exhaustive thermodynamic calculation and will offer you different equipment selectable according to efficiency, dimensions, sound levels or price.

- ✓ User-friendly web interface
- ✓ Reliable and fast selection
- $\checkmark$  Data sheets with dimensioning and prices
- ✓ Multilingual software
- ✓ Multi-platform, on any device and at any time.





#### / Customization: Design adapted to each project

Modular constructions from 1 to 10 fans, with frame in galvanized sheet metal or other materials adaptable to the requirements of the installation.

To custom design the condenser that fits your air conditioning system, we will need some simple data with the operating conditions of the installation such as air and condensing temperatures, refrigerant, voltage and location among others, and we will offer you the selection of the most suitable equipment according to efficiency, dimensions, sound levels and price.

Check the different options, request a customized study and we will manufacture the required condenser on request according to the parameters of your installation.

# **Anywhere...** From one single source



Customized Support



Flexibility Adaptability



Energy Efficiency



Specialized Service



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