

STULZ the natural choice

# Free-Air Series

## Telecom-Line

**STULZ**

# Free-Air – The proven energy-saving solution for telecommunications infrastructure

With its Telecom Line, STULZ offers a range of professional air-conditioning solutions for the telecommunications infrastructure and for switch cabinets. All units are designed for operation 24/7, 365 days a year, and promise maximum reliability and availability. Service is assured through a worldwide network of specialist partners and branches.

Even today, comfort air-conditioning units are still used for cooling in many shelters. This means that the possibilities of free cooling are not exploited, and unnecessarily large amounts of energy are used for air conditioning. Now, with our **Free-Air** free cooling unit, these telecommunication networks can be equipped with an energy-efficient system. The existing comfort air-conditioning units are monitored and controlled by the STULZ C2020 microprocessor. Whenever the ambient temperature allows, free cooling mode is activated and the comfort air-conditioning units are switched off.

The use of free cooling offers potential energy savings of up to 84%. In this way, the investment cost for this solution – which is universally suitable for retrofitting – is frequently paid off within just a year.

## Free-Air FCS/FCB

Free-Air FCS and FCB provide you with a choice of two versions with the same capacity and different mounting options. Both versions are situated outside the container, so that the interior space can be used to the full.

During assembly, the FCS version is pushed through an aperture in the container, from the inside to the outside, and fastened to the inside of the container wall. All parts relevant to maintenance are accessible from the inside. The side of the unit that lies on the inside fits exactly in the container aperture, forming a flush surface. This reduces the assembly time.

If there is not enough space in the container for assembly or later maintenance from the inside, the FCB version, which is mounted on the outside of the container, is an excellent alternative.

## Information on backup operation

During normal operation, Free-Air provides energy-saving cooling with a reduced airflow. If a comfort unit shuts down because of a fault, Free-Air takes over and continues to provide cooling in backup mode with the maximum airflow.

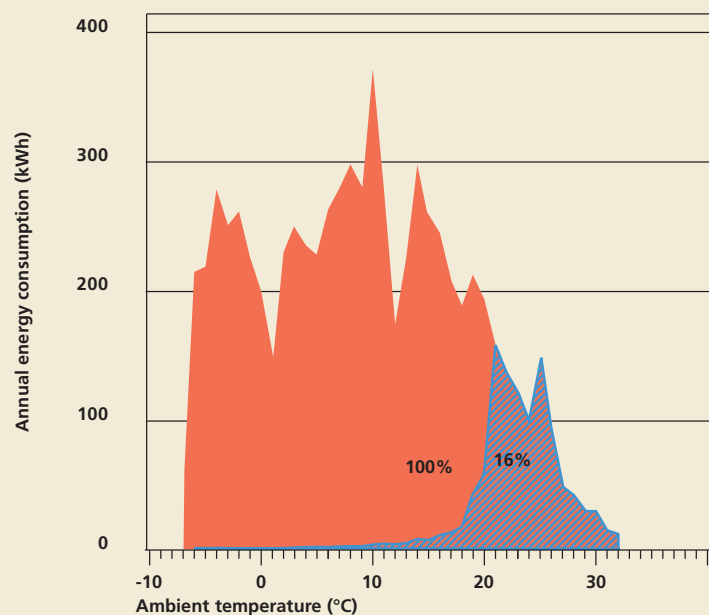


FCS version



FCB version

■ Energy consumption of a system with free cooling  
■ Energy consumption of a comfort A/C unit without free cooling  
The example shows a 3.5 kW unit, with the temperature profile of the city of Frankfurt.

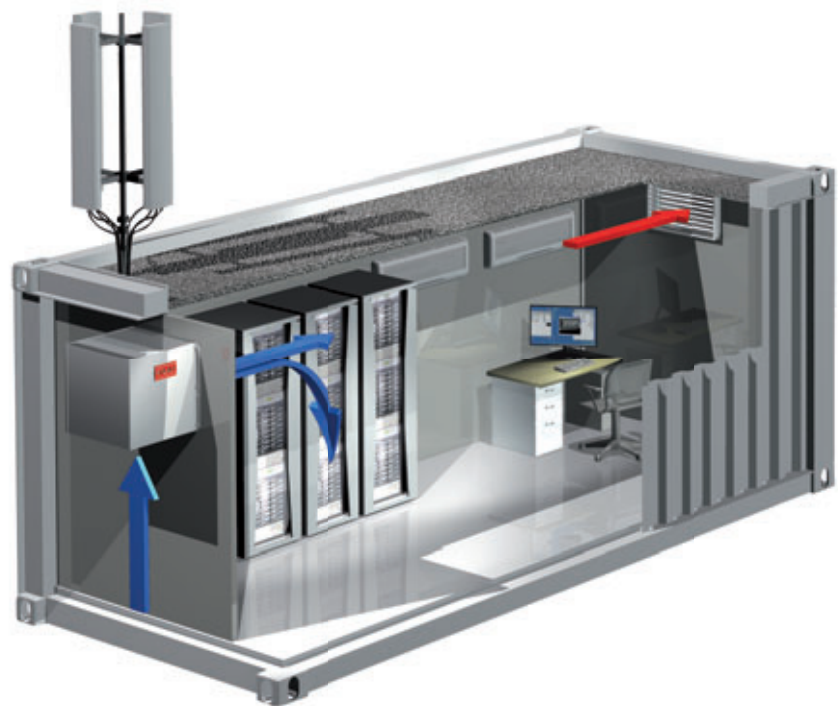


## Technical features

- Cooling capacity scalable up to 12 kW by combining several Free-Air units
- Ready for operation on the very first day – easy mechanical and electrical installation
- Existing comfort A/C units can be integrated with ease, with remote On/Off thanks to the Free-Air control system
- Management of up to two comfort A/C units
- Ambient temperature value can be varied for free cooling mode
- EC fan with stepless control from 10 to 100 %
- G4 air filters
- Insulated, powder-coated housing of galvanised sheet steel
- Full service accessibility from the front and from beneath
- 48 VDC power supply allows use as an emergency backup system

## Options

- Aluminium or stainless steel housing
- Moisture sensor
- Connection to building services management systems (BMS)
- Weather-proofed excess pressure grille
- External operator terminal for C2020
- Simple comfort units are controlled by the power supply by means of an external contactor
- Paper and leaf guard for fitting to the air intake



Free-Air		FCS/FCB 350	FCS/FCB 600
Cooling capacity <sup>1)</sup>	kW	3.5	6.0
Airflow	m <sup>3</sup> /h	1,050	1,724
Power input	kW	0.036	0.12
EER cooling <sup>1)</sup>		97.2	50.0
Noise level, outside <sup>2)</sup>	dB(A)	44	46
Backup operation <sup>1)</sup> Airflow	m <sup>3</sup> /h	2,300	3,400
Power consumption	kW	0.236	0.420
No. of fans/Type		1/EC fan	1/EC fan
Height of FCS/FCB	mm	682/604	682/604
Width of FCS/FCB	mm	730/720	730/720
Depth of FCS/FCB	mm	609/602	609/602
Weight	kg	50	70
Electrical power supply	V DC	48	48

<sup>1)</sup> Inside temperature 30°C/rel. humidity 40%/ambient temperature 20°C  
<sup>2)</sup> Noise level at 1 m distance, free-field conditions  
**Technical data subject to change without notice.**

## STULZ Company Headquarters

**D** **STULZ GmbH**  
Holsteiner Chaussee 283 · 22457 Hamburg  
Tel.: +49(40)55 85-0 · Fax: +49(40)55 85-352 · products@stulz.de

## STULZ Subsidiaries

- AUS** **STULZ AUSTRALIA PTY. LTD.**  
34 Bearing Road · Seven Hills NSW 21 47  
Tel.: +61(2)96 74 47 00 · Fax: +61(2)96 74 67 22 · sales@stulz.com.au
- CN** **STULZ AIR TECHNOLOGY SYSTEMS (SHANGHAI) CO., LTD.**  
No. 999 Shen Fu Road, Min Hang District · Shanghai 201108 · P.R. China  
Tel.: +86(21) 54 83 02 70 · Fax: +86(21)54 83 02 71 · info@stulz.cn
- E** **STULZ ESPAÑA S.A.**  
Calle Lluvia Nº 1 · 28918 Leganés (Madrid)  
Tel.: +34(91)517 83 20 · Fax: +34(91)517 83 21 · info@stulz.es
- F** **STULZ FRANCE S. A. R. L.**  
107, Chemin de Ronde · 78290 Croissy-sur-Seine  
Tel.: +33(1)34 80 47 70 · Fax: +33(1)34 80 47 79 · info@stulz.fr
- GB** **STULZ U. K. LTD.**  
First Quarter · Blenheim Rd. · Epsom · Surrey KT 19 9 QN  
Tel.: +44(1372)74 96 66 · Fax: +44(1372)73 94 44 · sales@stulz.co.uk
- I** **STULZ S.P.A.**  
Via Torricelli, 3 · 37067 Valeggio sul Mincio (VR)  
Tel.: +39(045)633 16 00 · Fax: +39(045)633 16 35 · info@stulz.it
- IN** **STULZ-CHSPL (INDIA) PVT. LTD.**  
006, Jagruti Industrial Estate · Mogul Lane, Mahim · Mumbai - 400 016  
Tel.: +91(22) 56 66 94 46 · Fax: +91(22) 56 66 94 48 · info@stulz.in
- NL** **STULZ GROEP B. V.**  
Postbus 75 · 1180 AB Amstelveen  
Tel.: +31(20)54 51 111 · Fax: +31(20)64 58 764 · stulz@stulz.nl
- NZ** **STULZ NEW ZEALAND LTD.**  
Office 71, 300 Richmond Rd. · Grey Lynn · Auckland  
Tel.: +64(9)360 32 32 · Fax: +64(9)360 21 80 · sales@stulz.co.nz
- PL** **STULZ POLSKA SP. Z O.O.**  
Budynek Mistral · Al. Jerozolimskie 162 · 02 – 342 Warszawa  
Tel.: +48(22)883 30 80 · Fax: +48(22)824 26 78 · info@stulz.pl
- USA** **STULZ AIR TECHNOLOGY SYSTEMS (SATS), INC.**  
1572 Tilco Drive · Frederick, MD 21704  
Tel.: +1(301)620 20 33 · Fax: +1(301)662 54 87 · info@stulz-ats.com
- ZA** **STULZ SOUTH AFRICA PTY. LTD.**  
P.O.Box 15687 · Lambton 1414 · Gauteng  
Tel.: +27(11)873 68 06 · Fax: +27(11)873 31 3 · dudley@stulz.co.za

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... With specialist, competent partners in our subsidiaries and exclusive sales and service partners around the world. Our five production sites are in Europe, North America and Asia.