IT Cooling Solutions

Telecom Line

Air conditioning for base stations of cell phone networks

Reliable air conditioning with the STULZ Telecom Line.

For more than 40 years, sensitive information and communication technology has been cooled by air-conditioning systems made by STULZ – everywhere in the world. Our formula for success is both simple and sophisticated: we are engineers with a vision and business people who know a lot about technology.

Containers, shelters and base stations for telecommunications pose special challenges for air conditioning technology. With the Telecom Line, STULZ offers a range of professional air conditioning solutions for the telecommunications infrastructure, which reliably cool the receiving and transmitting stations of cell phone networks in any weather conditions.

Air conditioning for base stations of cell phone networks

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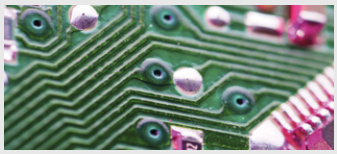

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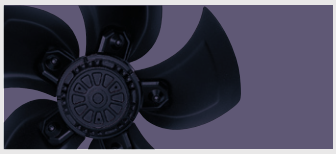

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STULZ Telecom Line products and systems Overview

STULZ supplies four different systems capable of utilizing Free Cooling, tailor-made to your individual requirements. With WallAir, Tel-Air, Split-Air and FreeAir systems, you can cut the energy costs of your air conditioning by up to 96 %. Compact, sturdy and economical to run, these systems work around the clock for many years to ensure the availability of cell phone technology.

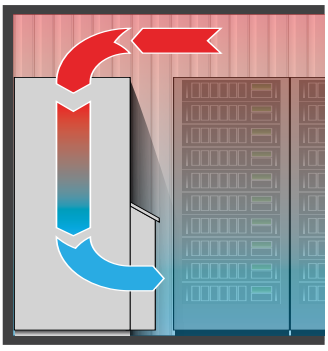
The Telecom Line units are plug and play and therefore immediately ready to connect and use. Thanks to the variety of options available, they can be individually configured to customers' specific requirements and needs.

	STULZ Telecom Line		Free Cooling	Mixed mode	DX mode	Upflow	Displace-ment	Downflow	Plug and play
Indoor installation	Tel-Air		●	●	●	●	●	●	●
	FreeAir FCL-IN		●						●
Outdoor installation	WallAir		●	●	●		●		●
	Split-Air		●	●	●				●
	FreeAir FCL		●						●

Variable air conduction and Free Cooling solutions for more energy efficiency

Displacement

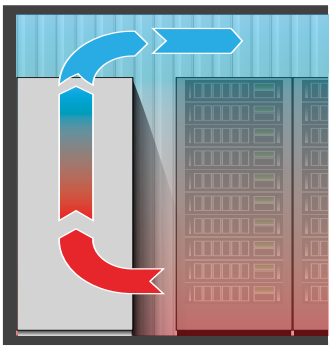
Cold supply air flows in close to the ground at low speed. Due to the low speed at which the air is flowing, a "pool" of cold air forms on the floor. This cold air is drawn in by fans integrated in the server rack to a varying extent depending on the heat load, and then expelled upwards as heated air. Because the cold and hot air are prevented from mixing, the displacement unit can draw the circulating air in at 30 °C, instead of 25 °C as was previously the case. This higher temperature level increases the number of operating hours with Free Cooling.



STULZ Telecom Line products and systems Overview

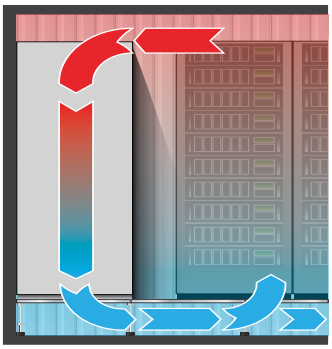
Upflow

Upflow units draw the return air out of the room from the front of the air conditioning unit, and expel the cooled supply air upwards. In server rooms, upflow units can be connected to a duct, so that the cold supply air is conveyed right up to the consumer without any warm room air mixing with it.



Downflow

Downflow units draw the return air out of the room from above and expel cooled supply air down into the raised floor. Through the raised floor, the supply air reaches exactly the right spot in the room that requires cooling.



Telecom Line Free Cooling solutions

In many base stations, comfort air conditioning units without Free Cooling mode are still used today for air conditioning, with high energy consumption as the consequence. STULZ Telecom Line units exploit the potential of Free Cooling and slash operating costs.

Free Cooling

At low outside temperatures, cooling is direct with outside air. The outside air is conveyed into the container when the air damper is open. Energy-intensive compressor cooling is not needed when outside temperatures are low. Free Cooling achieves potential savings of up to 96 %.

Mixed mode

If the outside temperature exceeds a given threshold, Free Cooling alone is no longer sufficient. Then, in Mixed mode, the runtimes of the compressor are kept to a minimum by the simultaneous use of Free Cooling and compressor cooling. In this way, depending on the local temperature profile, annual energy costs can be cut by a further 10 %. The partial load mode of the air conditioning unit delivers further potential savings.

STULZ control technology

For Telecom Line products

To be able to cool IT systems efficiently and reliably, air conditioning units and their control systems must work in perfect harmony. That is why here at STULZ, we design both – air conditioning units and controllers – under one roof. And on this basis, we can ensure maximum reliability and efficiency for STULZ hardware and software.

C2020 microprocessor for WallAir, TelAir 2 and SplitAir 3

The C2020 consists of a controller and an optional operator terminal. The controller controls all functions of Telecom Line products. The operator terminal, consisting of a keypad and LCD, displays the most important operating states and alarms.

Sequencing

- The C2020 enables up to ten units to be configured in one air conditioning system. If an individual unit drops out or the heat load rises, the standby unit is switched in for additional support
- The operating times of all connected air conditioning units are compared to make sure each one is used to an equal extent

Night mode

- Condenser and evaporator fan speed is limited in a time-controlled manner, to ensure quiet operation

Energy-saving mode

- The (adjustable) fan speed is automatically reduced at times when neither heating nor cooling is required

Controlling the various operating modes

- Free Cooling function dependent on temperature and enthalpy
- Mixed mode management
- Compressor operation
- Backup ventilation upon failure of the main power supply
- Heating
- Humidification and dehumidification

C2020 microprocessor

For WallAir, TelAir 2 and SplitAir 3

C2020 and C102 operator terminal

Multi-step configuration menu via operator terminal

- Operator
- Service (password protected)

Multilingual display

- The operator terminal offers a choice of seven languages for displaying general menus, alarms and setpoints

Monitoring and alarm relaying

- Via BMS systems (Modbus on board, further protocols via WIB 1000)
- Nine voltage free contacts are available: Alarms can be assigned a high or low priority
- Via GSM modem (CompTrol SMS)

Simple configuration and software updates

- Central configuration of units via laptop
- Hardware key for uploading and downloading software without a laptop and/or for copying the configuration onto other units

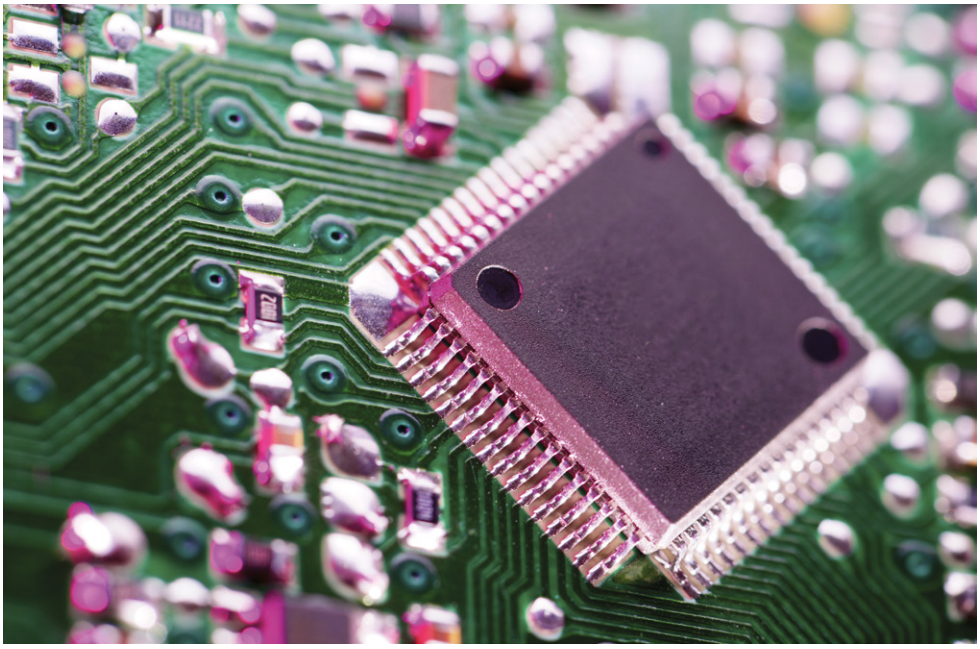
High pressure alarm management

- In order to avoid unnecessary service callouts, high pressure alarms are initially reset three times automatically. Then, after the fourth error message, the alarm must be manually deleted after four hours

C102 microprocessor

For FreeAir

The FreeAir units are monitored and controlled by the C102 microprocessor. Comfort air conditioning units can be integrated in the existing air conditioning system and also actuated by the C102 controller.
Whenever the outside temperature allows, Free Cooling mode is activated and the comfort air conditioning units are switched off.



The C102 microprocessor guarantees maximum versatility

- The integrated relays enable the C102 to control and monitor up to two connected comfort air conditioning units
- Alternatively, one air conditioning unit and one external heater can be controlled
- Directly measures the energy consumption of the FreeAir units and records the operating hours of the comfort air conditioning units
- Backup ventilation upon failure of the main power supply or a fault in the comfort air conditioning units
- Monitors DC voltage and disables units if the battery voltage is below the permitted threshold
- 48 VDC power supply enables it to be used as emergency backup ventilation
- Configurable filter alarm triggered by differential pressure, or via an adjustable fan operating time
- Service mode: Forced switch-off of a unit is possible, to enable service work to be performed at a base station. The air conditioning unit starts automatically after an adjustable time interval
- Semi-automated commissioning test for checking all components
- Monitoring: ModBus on board, further protocols via WIB 1000

WIB 1000 interface

For Telecom Line products

WIB 1000: The all-in-one interface to your air conditioning technology

WIB 1000 is user-friendly and offers easy data exchange, monitoring and diverse options for use around the world.

Functions and monitoring

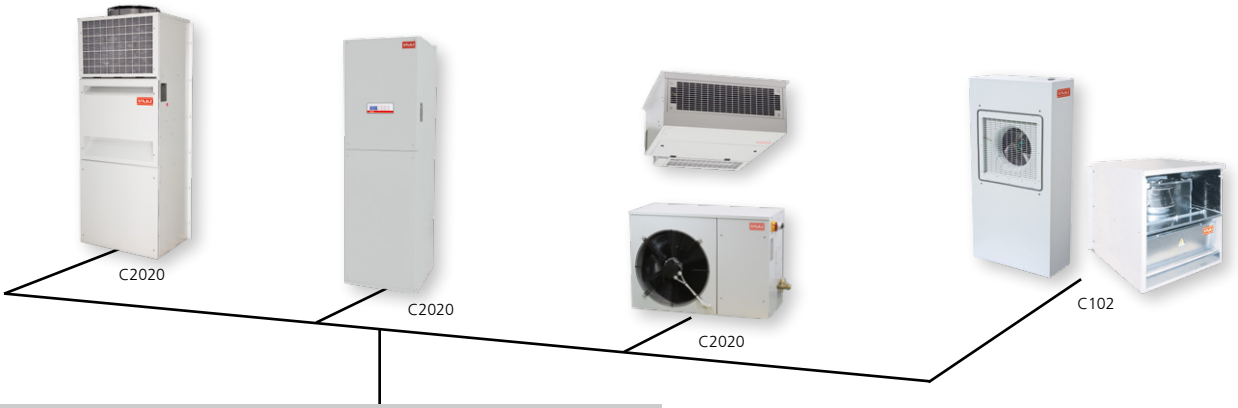
- Ongoing retrieval of data from the controller
- Ethernet interface
- Easy connection to existing building management systems

Network solutions for limitless communication

- Compatible with all common BMS systems
- Communication via SNMP and HTTP IP protocols

User friendly

- Simultaneous HTTP and SNMP
- Easy, fast configuration via laptop



Gateways for STULZ controller systems

ALARM

Alarm/central control technology

HTTP/ SNMP

Remote monitoring and control

Display/ visualization

Operation

Remote maintenance

Customer

Data protocol
Modbus [1]
Saia bus [1]
SNMP [1] [2]
HTTP [1] [2]
GSM CompTrol® SMS [1] [3]

[1] Serial RS485 interface card required.
[2] Compatible gateways available as an option.
[3] Via central control technology contacts.

AIR CONDITIONING FOR BASE STATIONS OF CELL PHONE NETWORKS

STULZ Telecom Line products

WallAir
TelAir 2
SplitAir 3
FreeAir

Air conditioning units from STULZ ensure the availability and stability of cell phone networks all over the world.

STULZ WallAir Evolution

Precision air conditioning unit for outdoor installation

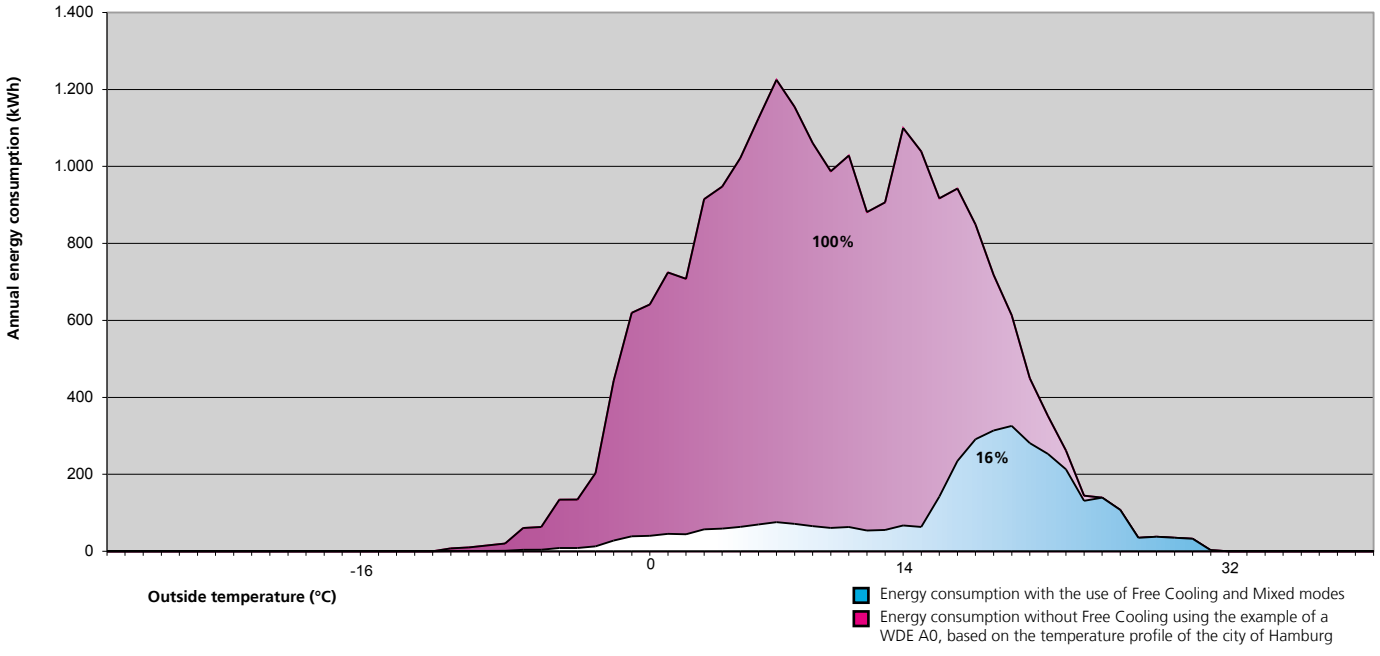
In telecommunication containers, space is at a premium. **WallAir Evolution** units are installed outside the container, making the best possible use of the container space. These compact, weather-resistant air conditioning units work using the displacement method, and are immediately ready for connection and operation. The units boast Free Cooling and Mixed modes, and therefore achieve savings of up to 84 % on operating costs.

In the **WDE version**, WallAir Evolution units are available with a constant-speed compressor, while the **WDI version** offers a variable-speed EC compressor.

Free Cooling	●
Mixed mode	●
Displacement	●
Upflow	
Downflow	
Outdoor installation	●
Plug and play	●

New version: WallAir Evolution with EC compressor (WDI)

Up to 84 % savings on operating costs thanks to Mixed and Free Cooling mode



STULZ WallAir Evolution

Precision air conditioning unit for outdoor installation

Features of the WallAir Evolution

- Reduced operating costs thanks to:
  - Free Cooling and Mixed modes
  - Displacement principle
  - Condensation pressure control
- Factory tested, filled with refrigerant and ready for operation from the very first day
- Outside air conditions –20/+50 °C winter/summer
- Automatic restart after power failure
- Refrigerant R407C
- Filter monitor and airflow alarm
- Inside and outside temperature sensors
- G4 zig-zag air filter
- Heat exchanger with microchannel technology
- C2020 microprocessor

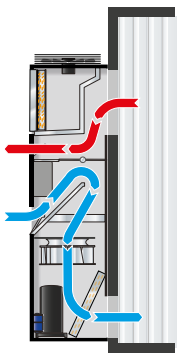
Options

- High temperature operation up to 55 °C with R134a
- Winter kit down to –40 °C
- Compressor soft start for low starting currents
- Electrical wiring, with connector for plug and play
- External operator terminal for C2020
- Electric heater
- Humidity sensor
- WIB 1000 interface

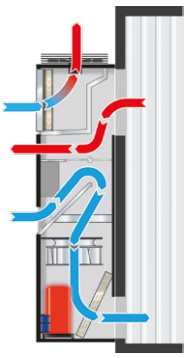
Advantages thanks to variable-speed EC compressor (WDI version)

- Maximum energy efficiency in partial load mode
- Constant supply air temperature
- Refrigerant R410A
- Integrated compressor soft start
- Long service life thanks to continuous operation without compressor on/off cycles

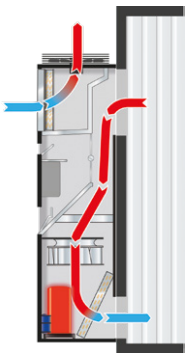
WallAir Displacement air distribution



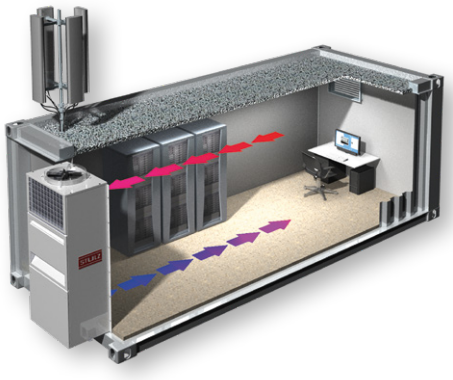
Free Cooling



Mixed mode



Compressor operation



Installation of the WallAir Displacement

STULZ TelAir 2

Precision air conditioning unit for indoor installation

TelAir 2 units are designed for installation in telecommunication containers and equipment rooms. As they are installed indoors, noise is kept to a minimum and the units are protected against environmental influences and vandalism. The air conditioning units are plug and play and immediately ready for connection and use. Thanks to their quiet running, they can be used without problem in residential areas.

All TelAir 2 units also feature a Mixed mode, which effectively combines Free Cooling with compressor operation, dramatically reducing operating costs.

The individual models of the TelAir 2 series are available in upflow and downflow versions, and in the especially energy efficient displacement version.

TelAir 2 Upflow (TLU)

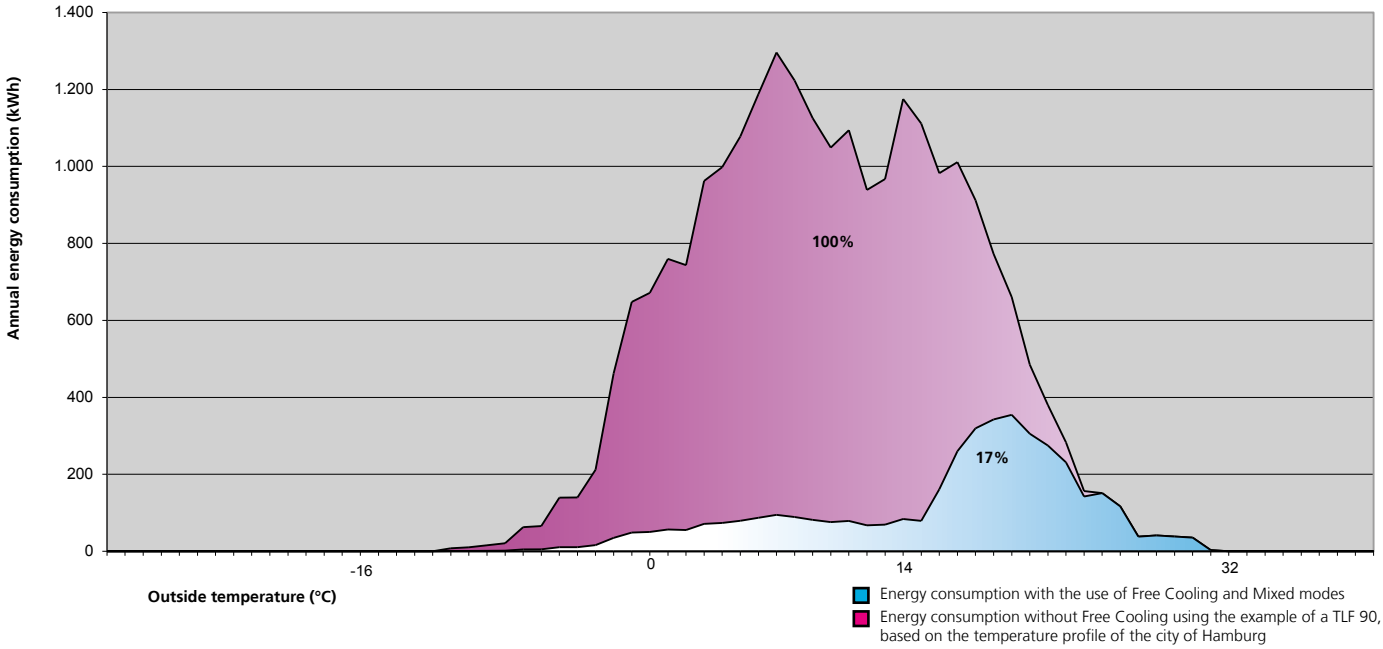
TelAir 2 Downflow (TLD)

TelAir 2 Displacement (TLF):
The unit pictured here is equipped with the optional blow-out diffuser.

Free Cooling	●
Mixed mode	●
Displacement	●
Upflow	●
Downflow	●
Indoor installation	●
Plug and play	●

Installation of the TelAir 2 Displacement

Up to 83 % savings on operating costs thanks to Mixed and Free Cooling modes



STULZ TelAir 2

Precision air conditioning unit for indoor installation

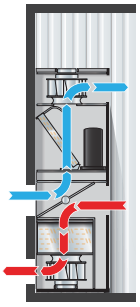
Features of the TelAir 2

- Reduced operating costs thanks to:
  – Free Cooling and Mixed modes
  – Condensation pressure control
- Factory tested, filled with refrigerant and ready for operation from the very first day
- Automatic restart after power failure
- Refrigerant R407C
- Filter monitor and airflow alarm
- Inside and outside temperature sensors
- G4 zig-zag air filter
- Outside air conditions –20/+50 °C winter/summer
- C2020 microprocessor

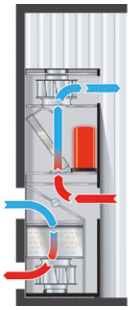
Options

- High temperature operation up to 55 °C with R134a
- Winter kit down to –40 °C
- Compressor soft start for low starting currents
- Electrical wiring, with connector for plug and play
- Humidity sensor
- Operator terminal for C2020
- Electric heater
- Heat exchanger with anti-corrosive finish
- WIB 1000 interface

Air distribution of the TelAir 2
Upflow (TLU)

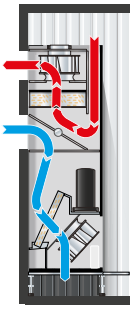


Free Cooling

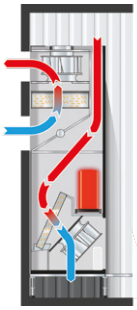


Compressor operation

Air distribution of the TelAir 2
Downflow (TLD)

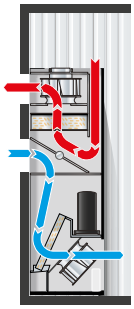


Free Cooling

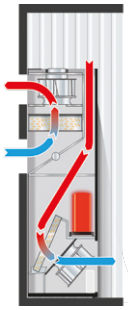


Compressor operation

Air distribution of the TelAir 2
Displacement (TLF)



Free Cooling



Compressor operation

STULZ SplitAir 3

Precision air conditioning unit for flexible installation

SplitAir 3 is the space and energy-saving version for the reliable cooling of telecommunication containers. The unit consists of an evaporator and a condenser unit, and is a plug and play design allowing immediate connection and use. The SplitAir 3 features Free Cooling and Mixed modes, and therefore achieves savings of up to 83 % on operating costs.

Because the indoor unit can be installed either on the ceiling or the wall, the SplitAir 3 is also suitable for use when space is at a premium. Thanks to the low noise level of the outdoor unit, the SplitAir 3 can also be used without problem in residential areas.

SplitAir 3 units are available as an **SAL version** with constant-speed compressor. To further increase energy efficiency, these units are now also available in the **SIL version**, with variable-speed EC compressor.

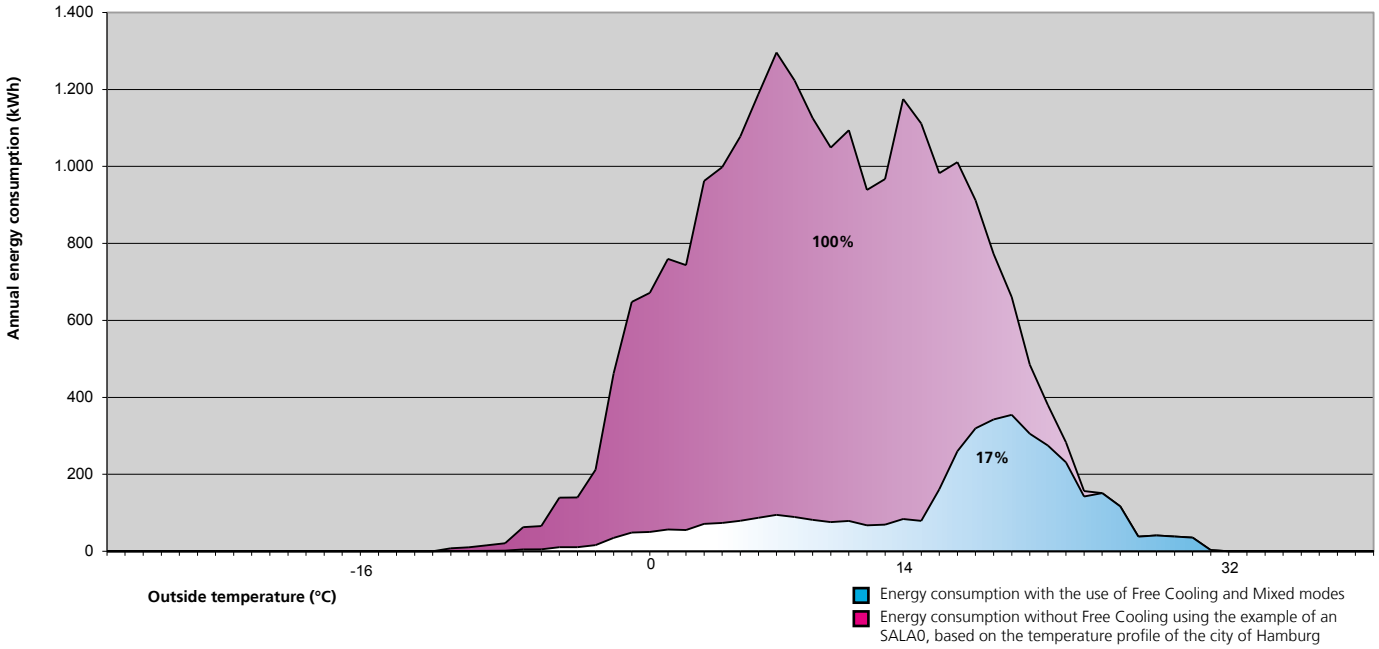
Indoor unit
Evaporator unit with
Free Cooling module

Free Cooling	●
Mixed mode	●
Displacement	○
Upflow	○
Downflow	○
Plug and play	●

New version: SplitAir 3 with EC compressor (SIL)

Outdoor unit
Compressor-condenser unit

Up to 83 % savings on operating costs thanks to Mixed and Free Cooling modes



STULZ SplitAir 3

Precision air conditioning unit for flexible installation

Features of the SplitAir 3

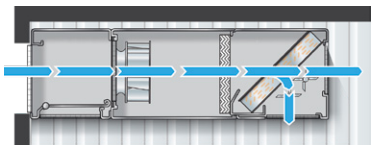
- Reduced operating costs thanks to:
  – Free Cooling and Mixed modes
  – Condensation pressure control
- Factory tested, filled with refrigerant and ready for operation from the very first day
- Highly flexible
  – Ceiling or wall installation
  – Variable air supply via the front or underside
  – Optionally available with Free Cooling module
- Quiet operation
- Refrigerant R407C
- EU3 air filter
- Filter monitor
- C2020 microprocessor
- Easy installation and maintenance
- Automatic restart after power failure
- Outside air conditions –25/+50 °C winter/summer

Options

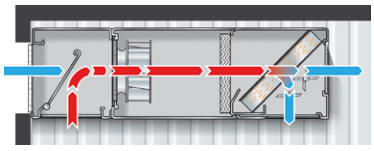
- High temperature operation up to 55 °C with R134a
- Compressor soft start
- Electric heater
- Heat exchanger with anti-corrosive finish
- Installation kit for outdoor unit
- Air intake and blow-out grills
- Air duct for indoor unit
- WIB 1000 interface

Advantages thanks to variable-speed EC compressor (SIL version)

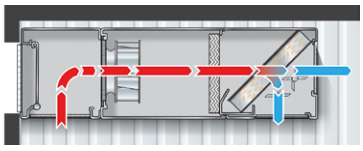
- Maximum energy efficiency in partial load mode
- Constant supply air temperature
- Integrated compressor soft start
- Fast and precise reaction to the actual thermal load
- Long service life thanks to continuous operation without compressor on/off cycles



Free Cooling



Mixed mode



Compressor operation

Wall mounted SplitAir 3

Ceiling mounted SplitAir 3

STULZ FreeAir

Retrofit Free Cooling units for indoor or outdoor installation

Free Cooling retrofit solution for telecommunication infrastructures for indoor or outdoor installation

Even today, comfort air conditioning units are still used for cooling in many base stations. This means that the possibilities of Free Cooling are not exploited, and unnecessarily large amounts of energy are used for air conditioning. To considerably cut the operating costs of base stations, these can be retrofitted with the Free Cooling unit STULZ FreeAir.

The FreeAir and comfort units are monitored and controlled by the C102 microprocessor. Whenever the outside temperature allows, Free Cooling mode is activated and the comfort air conditioning units are switched off. FreeAir enables you to transform your existing system into an energy efficient solution at low cost.

The return on investment for the retrofit is achieved especially quickly in containers where comfort air conditioning units are running 24 hours a day.

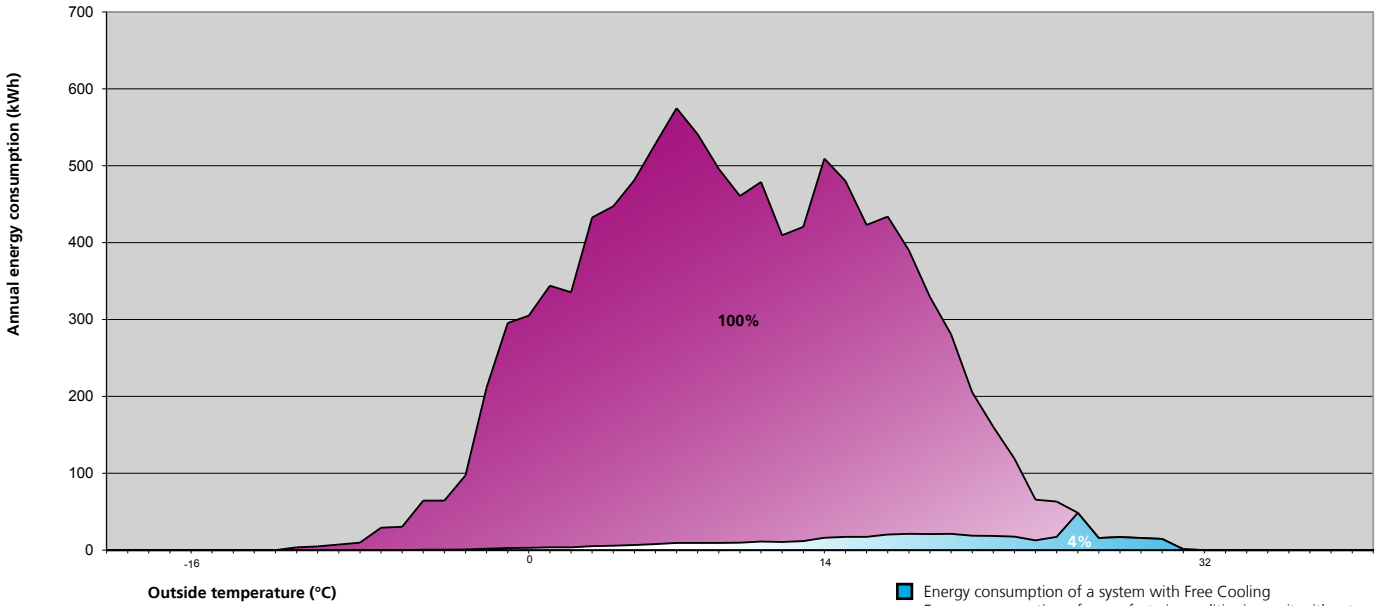
The FreeAir units are plug and play and therefore immediately ready for connection and use. The units are available in two versions for maximum versatility – FCL-IN for indoor installation and FCL for outdoor installation.

FCL-IN
Version for indoor installation

Free Cooling	●
Mixed mode	○
Displacement	○
Upflow	○
Downflow	○
Plug and play	●

FCL
Version for outdoor installation

Up to 96 % savings on operating costs thanks to Free Cooling mode



Energy consumption of a system with Free Cooling
Energy consumption of a comfort air conditioning unit without Free Cooling using the example of a 3.5 kW unit, based on the temperature profile of the city of Frankfurt am Main.

STULZ FreeAir

Retrofit Free Cooling units for indoor or outdoor installation

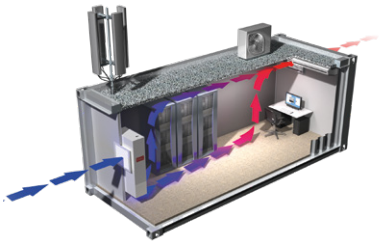
Features of the FreeAir

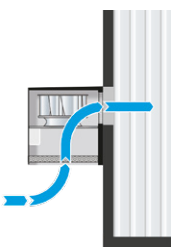
- Ready for operation on the very first day – easy to install both mechanical and electrically
- Easy integration of existing comfort air conditioning units
- Outside temperature value for Free Cooling can be defined as you wish
- C102 microprocessor controls the entire system including comfort air conditioning units
- Speed-controlled EC fan
- Full service accessibility from the front
- Measures DC power consumption
- G4 air filter:
  The FCL-IN is equipped with a pocket filter, providing a large filtering surface (2 m^2). This reduces pressure losses and extends maintenance intervals
- Insulated, powder-coated housing of galvanized sheet steel
- The filter alarm can be triggered either by differential pressure or based on a manually adjustable fan operating time

Options

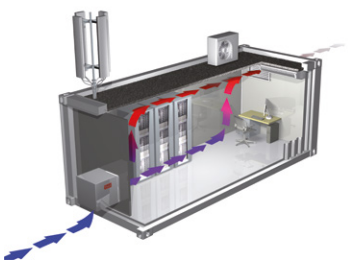
- Aluminum or stainless steel housing
- Humidity sensor
- Weather-proofed excess pressure damper
- User-friendly LCD operator terminal for operation, installation and service
- External operator terminal with 3 x 7 segment display
- Paper and leaf guard for fitting to the air intake
- Support frame for secure mounting on thin walls (FCL only)
- Supply air grill with adjustable louvers (FCL only)
- Plenum/grill for fresh air supply aperture with metal pre-filter (FCL-IN only)
- WIB 1000 interface

FCL-IN
For indoor installation





FCL
For outdoor installation



Installation of the FCL-IN

The FCL-IN is installed indoors, for when maximum protection against vandalism and adverse weather conditions is your priority.

Installation of the FCL

The FCL is installed outside the container, so that the entire indoor space can be used for IT equipment. Full access from the outside for maintenance purposes.

Telecom Line

Performance data of all models

WallAir

WallAir										
Model		WDE40	WDE60	WDE80	WDEA0	WDEA2	WDEA4	WDEA6	WDI80	WDIA4
Airflow	m³/h	1,100	1,700	2,700	2,400	2,800	3,600	3,600	2,700	3,600
Cooling capacity[1]	kW	4.5	6.1	8.0	10.0	12.0	13.9	15.7	7.7	13.2
Noise level (external)[2]	dBA	50	51	52	53	54	58	60	52	58
Height/width/depth	mm	2,085/879/565	2,085/879/565	2,085/879/565	2,226/992/730	2,226/992/730	2,226/992/730	2,226/992/730	2,085/879/565	2,226/992/730
Weight	kg	170	200	210	240	240	250	250	230	250
Supply voltage[3]	V/ph/Hz	400V/3 ph/50 Hz + 48V DC								

[1] Operating conditions: Indoor temperature 30 °C, relative humidity 30 %, outside temperature 35 °C.
[2] Measured at a distance of 2 m, free field conditions.
[3] Other voltages on request.
Technical data subject to change without notice.

TelAir 2

TelAir 2 Downflow, Displacement							
Model		TLF/TLD40	TLF/TLD60	TLF/TLD80	TLF/TLD90	TLF/TLDA2	TLF/TLDA4
Airflow	m³/h	1,000	1,500	2,000	2,200	3,000	3,200
Cooling capacity[1]	kW	4.5	6.0	8.3	9.2	11.0	12.5
Noise level (internal/external)[2]	dBA	64/53	64/55	64/61	67/62	67/63	67/63
Height/width/depth	mm	1,990/600/650	1,990/600/650	1,990/900/700	1,990/900/700	1,990/900/700	1,990/900/700
Weight	kg	170	190	250	260	270	280
Supply voltage[3]	V/ph/Hz	400V/3 ph/50 Hz + 48V DC					

[1] Operating conditions: Indoor temperature 30 °C, relative humidity 30 %, outside temperature 35 °C.
[2] Measured at a distance of 2 m, free field conditions.
[3] Other voltages on request.
Technical data subject to change without notice.

TelAir 2 Upflow							
Model		TLU40	TLU60	TLU80	TLU90	TLUA2	TLUA4
Airflow	m³/h	1,000	1,500	2,000	2,200	3,000	3,200
Cooling capacity[1]	kW	4.7	6.1	8.4	9.5	11.2	12.6
Noise level (internal/external)[2]	dBA	64/53	64/55	64/61	67/62	67/63	67/63
Height/width/depth	mm	1,990/600/650	1,990/600/650	1,990/900/700	1,990/900/700	1,990/900/700	1,990/900/700
Weight	kg	170	190	250	260	270	280
Supply voltage[3]	V/ph/Hz	400V/3 ph/50 Hz + 48V DC					

[1] Operating conditions: Indoor temperature 25 °C, relative humidity 40 %, outside temperature 35 °C.
[2] Measured at a distance of 2 m, free field conditions.
[3] Other voltages on request.
Technical data subject to change without notice.

Telecom Line

Performance data of all models

SplitAir 3

SplitAir 3									
Model		SAL40	SAL60	SAL80	SALA0	SALA2	SALA5	SIL80	SILA5
Airflow	m³/h	1,100	2,000	2,000	2,300	3,300	3,300	2,000	3,300
Cooling capacity[1]	kW	5.2	6.7	8.4	11.5	13.6	15.7	8.1	13.0
Noise level (internal/external)[2]	dBA	60/48	62/49	62/50	62/51	63/53	63/53	62/50	63/53
Height/width/depth (indoor unit)[3]	mm	350/850/1,160	350/850/1,160	350/850/1,160	410/1,040/1,370	410/1,040/1,370	410/1,040/1,370	350/850/1,160	410/1,040/1,370
Height/width/depth (outdoor unit)	mm	695/1,050/492	695/1,050/492	695/1,050/492	1,334/1,050/491	1,334/1,050/491	1,334/1,050/491	695/1,050/492	1,334/1,050/491
Weight (indoor unit)	kg	53	54	54	75	76	76	54	76
Weight (outdoor unit)	kg	82	87	91	138	140	146	91	146
Supply voltage[4]	V/ph/Hz	400V/3 ph/50 Hz + 48V DC							

[1] Operating conditions: Indoor temperature 30 °C, relative humidity 30 %, outside temperature 35 °C.
[2] Measured at a distance of 2 m, free field conditions.
[3] With Free Cooling module.
[4] Other voltages on request.
Technical data subject to change without notice.

FreeAir

FreeAir			
Model		FCL/FCL-IN 35	FCL/FCL-IN 60
Airflow	m³/h	1,050	1,750
Cooling capacity[1]	kW	3.5	6.0
Noise level (external)[2]	dBA	44	46
Height/width/depth (indoor unit)	mm	1,271/640/290	1,271/640/290
Height/width/depth (outdoor unit)	mm	612/720/604	612/720/604
Weight (indoor unit)	kg	35	35
Weight (outdoor unit)	kg	35	35
Supply voltage	V DC	48	48

[1] Operating conditions: Indoor temperature 30 °C, outside temperature 20 °C.
[2] Measured at a distance of 1 m, free field conditions.
Technical data subject to change without notice.

PRODUCTION SITES

Plants

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The humidity of the tropics and arid heat of the desert require completely different air conditioning solutions from the moderate climes of the Northern Hemisphere. And the demands of Europeans and Americans differ completely from those of Indians and Chinese. Only by producing in the relevant area can you know precisely what customers want. This is why STULZ has production sites in the world's major growth regions. All over the world, customers put their trust in product lines that answer perfectly to their requirements.

Cooperating globally, producing locally: For every region, STULZ supplies tailor-made products for individual requirements.

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Germany, Hamburg

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China, Shanghai

China, Hangzhou

Asia

India, Mumbai

USA, Frederick, Maryland

America

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Belgium
China
Germany
France
Great Britain
India
Italy
Mexico
New Zealand
Netherlands
Austria
Poland
Singapore
Spain
South Africa
USA

Production sites
Germany
China
India
Italy
USA

Partners
www.stulz.com/worldwide

STULZ financial figures
Year STULZ was founded: 1947
Workforce of STULZ Klimatechnik, worldwide approx. 2,100
Sales volume of STULZ Klimatechnik, worldwide approx. 360 million euros

Close to you around the world, with 17 subsidiaries, 6 production sites and sales and service partners in more than 120 countries

In 1971 we began specializing in the development and production of precision air conditioning units and chillers for data centers.
That's a wealth of experience gathered over 40 years and from many thousands of projects that we've implemented worldwide.
We have systems and solutions for data centers of all sizes and with the most diverse requirements – take advantage of our expertise!

German engineering ingenuity

We put a great deal of experience and innovative spirit into developing our air conditioning systems. Engineers, specialist departments and sales employees work closely together, and our teams are involved through all stages of the development process, right up to completion of the finished product. We brook no compromise where the efficiency of our products is concerned, and cost effective operation is at the heart of our endeavors.

STULZ air conditioning systems

All STULZ Telecom Line units are designed for operation 24/7, 365 days a year, and offer maximum reliability and availability. Fast, smooth service is guaranteed by a worldwide network of specialist partners and subsidiaries.

Quality standards

STULZ ensures the best possible reliability by manufacturing its precision air conditioning units from high-quality components that meet our extremely rigorous quality standards. Every Telecom Line unit undergoes exhaustive live mechanical and electrical testing on our running test bench. This is how we guarantee 100 % reliability.

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- Global framework agreements
- Individual solutions
- Reliable delivery
- Fast reaction times thanks to our dense service and sales network

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