



# S.CU Semi-Trailer Refrigeration Unit

Transport refrigeration units with precise temperature management for perfectly temperature-controlled freight

## Your Unique One-Stop Complete Solution

Schmitz Cargobull is the only provider of transport solutions for temperature-controlled freight to offer you this smart all-inclusive solution, comprising perfectly coordinated components combined with services. The benefits of the complete solution include improved efficiency, increased uptime and lower Total Cost of Ownership (TCO).

Configure your dream trailer from the current S.KO COOL range. The trailer telematics hardware is fitted ex-factory and, among other things, permits two-way communication with the S.CU refrigeration unit. TrailerConnect® telematics gives you a complete overview of your freight and refrigeration unit, even from a distance.

The S.CU transport refrigeration unit is part of the EXECUTIVE package for your trailer. Full Service, maintenance and repair of the refrigeration unit are ensured Europe-wide – meaning you can make the most of the benefits of our proactive technical monitoring of the refrigeration unit.

### Your Service Benefits:



**Full Service refrigeration unit included in the EXECUTIVE package**



**Telematics hardware fitted ex-factory in the S.KO COOL SMART\*: get started straight away with TrailerConnect®**



The new generation of the Schmitz Cargobull S.CU Premium transport refrigeration unit stands in the foreground. The left trailer shows the existing refrigeration unit, which – emission technically state-of-the-art – continues to be available as an entry-level version.

Extremely efficient  
in intelligent partial-  
load operation

Easy to maintain,  
thanks to modular design

Greater  
payload:  
**50 kg**  
lighter\*

**Quiet  
operation!**  
Decoupled drive  
unit & Silent KIT

Up to  
**10%**  
lower fuel  
consumption

## New Generation: Schmitz Cargobull S.CU Unit

The new Schmitz Cargobull S.CU transport refrigeration unit is more economical, quieter and lighter. The benefits of precise temperature management, the best heat output and reduced defrosting cycles remain unchanged – long maintenance intervals and increased uptime at low cost, either for MonoTemp and MultiTemp versions. Both versions are approved for use in pharmaceutical transport.

### Your Benefits:

- New drive unit consisting of:
  - A highly efficient common-rail diesel engine with a maximum motor output of 19 kW
  - Generator optimised for efficiency
- Optimised temperature control, specifically designed for transporting sensitive goods
- Short defrosting cycles and high heat output for rapid defrosting.
- Extended maintenance cycles
- Low fuel consumption, particularly in partial-load operation

Complies with the new EU Stage V emission standards

- Available as a MonoTemp and MultiTemp system

- Innovative and reliable design

Includes telematics hardware

PIN code-secured operating lock

\* Figures apply to the previous generation of refrigeration units, 2017 model year.



## The Models

The S.CU semi-trailer refrigeration unit represents a complete in-house development by Schmitz Cargobull, combining only the best features: even the first generation of the refrigeration units stands out on account of its intelligent control, low energy consumption, precise temperature control, high output and the durable design of all components. This remains the standard – optimised to current requirements. The new S.CU Premium units offer greater efficiency and additional customer benefits.

All units are produced in the Schmitz Cargobull's own production plant at its Vreden factory and have previously undergone the toughest load tests over 500,000 km on the company's own test rigs. This is the only way to guarantee the safety you need for day-to-day work.



### New S.CU Premium version

- Lower operating costs, up to 10% less fuel consumption\* due to the diesel generator unit
- 50 kg weight reduction
- Greater comfort and lower noise thanks to a newly developed decoupling of the drive unit.
- Higher operational reliability through optimised heat management and hermetic sealing of the generator



### Optimised entry-level version

- Robust technology for use in markets with lower fuel qualities (e.g. higher sulphur content in the diesel)
- Performance-adapted version meets the requirements of the Stage V EU emission standards
- Only available as a MonoTemp unit

\* Figures apply to the previous generation of refrigeration units, 2017 model year.

## MultiTemp in the S.KO Box Semi-Trailer

Schmitz Cargobull's additional roof evaporator is a key element of the MultiTemp concept for precise control of multiple temperature zones in a single trailer. A proven partitioning system creates the spaces you need. The intelligent air flow, refrigerant lines embedded in foam in the roof and the compact design of the axle units complete the package.



Further information on MultiTemp is available in the S.KO box semi-trailer brochure.



Powerhouse beneath the roof: The powerful technology of the Schmitz Cargobull additional roof evaporator ensures even temperature distribution. The heat exchanger with a large evaporator surface is distinguished by high performance and low defrosting cycles thanks to minimal ice formation.



### Half width – full performance:

the Schmitz Cargobull roof evaporator sets the benchmark in terms of dimensions, ensuring maximum use of the interior height. Its power defies its compact design, requiring only one evaporator per temperature zone. Half of the trailer interior remains full-height and usable for loading. The additional evaporator is perfectly designed for the double-decker system. The beams are positioned underneath the roof when not in use and do not impair the cooling air flow and distribution.



The extremely flat and compact design of the Schmitz Cargobull additional roof evaporator provides greater loading height under the device. The robust housing with an integrated guard frame prevents damage to the evaporator.



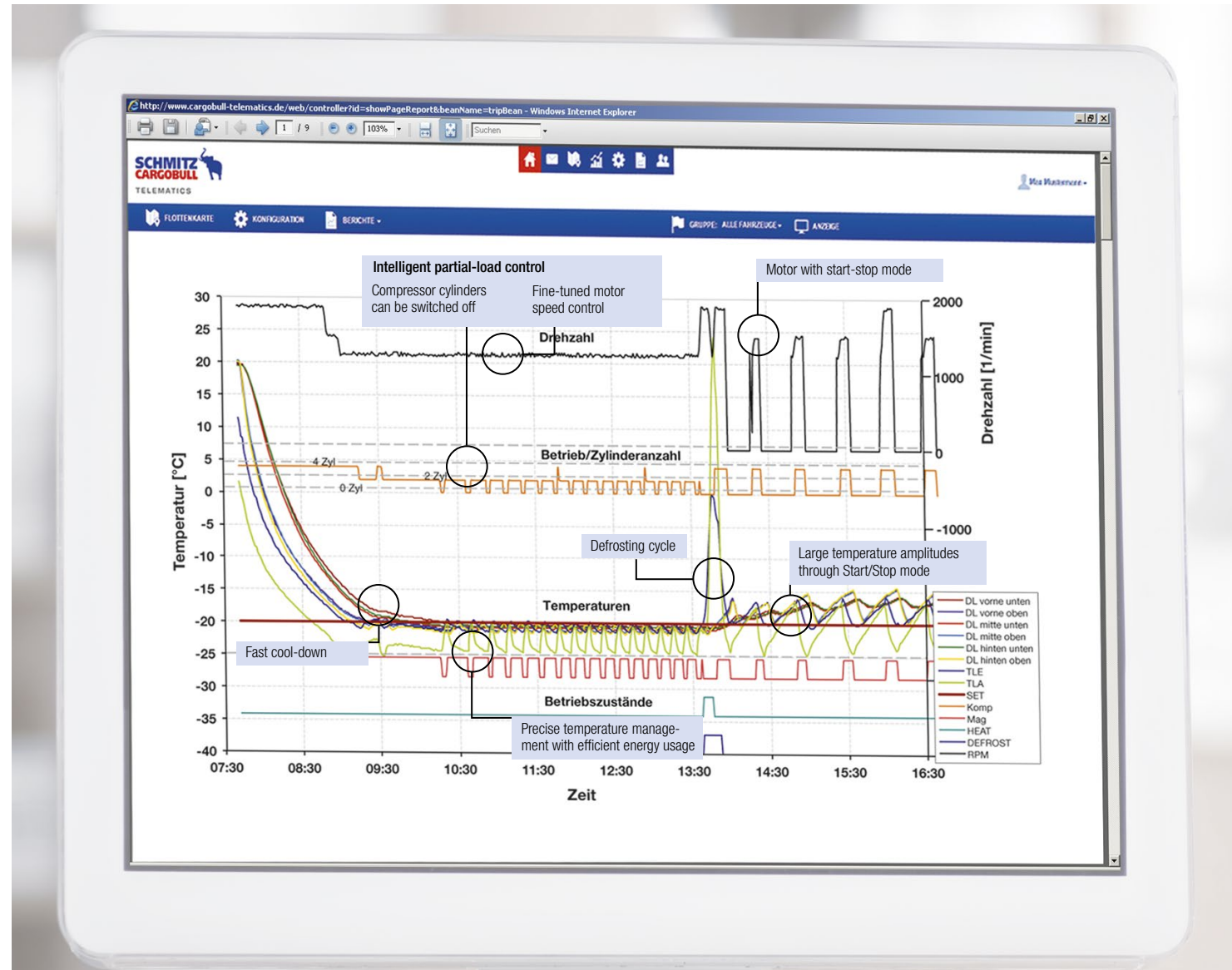
Two powerful radial fans in the additional evaporator provide the necessary air circulation.

## Precise Temperature Management

Even minor deviations from the specified temperatures can have a major influence on the storage life and quality of foodstuffs and pharmaceutical products. That is why consistent temperature control represents a central challenge for every transport refrigeration unit.

The freely adjustable speed control in MonoTemp or MultiTemp design enables air to be distributed evenly throughout the entire interior. The temperature remains precisely controlled, even around the door area. In MultiTemp mode, each temperature zone is controlled separately and independently.

Performance, precision and energy consumption – it is always essential to find the optimum in everyday operations. The premium version of the S.CU transport refrigeration units offers three operating modes for this: ECO, Normal or Booster, enabling you to simplify control.



The intelligent partial-load control of the Schmitz Cargobull refrigeration unit minimises temperature fluctuations. Avoiding peaks ensures the even, exact cooling of all the temperature zones independently of each other.





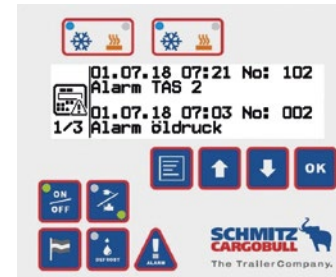
The control panel on the refrigeration unit can be used to configure all the important settings, such as the precise temperature specification and setpoints.

#### Your direct connection to TrailerConnect®:

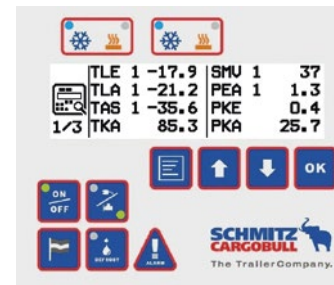
The identical display of the content on the control panel as in the beSmart app and in the telematics portal 2.0 enables you to work intuitively. The panel lets you display and manage all information relating to the SmartTrailer – trailer technology data from the running gear, tyre pressure, locking system and EBS. The control panel is part of the TrailerConnect® two-way communication. You can issue the necessary commands to the transport refrigeration unit also by using an app close to the trailer, or via remote control in the telematics portal, by changing. For instance, you can change the operating mode from continuous to start-stop mode or change the temperature setting.



Function overview with easy navigation and input.



Alarm history with useful detailed information.



Operating status can be displayed at any time.



The control panel is secured against unauthorised access by a four-digit PIN that you can individually configure per trailer.



Please refer to the TrailerConnect® telematics brochure for further information.

## Control Panel

The control panel for the refrigeration unit is located under a transparent protective flap on the left-hand side of the S.CU refrigeration unit semi-trailer, facing the direction of travel. You can control the functions and numerous options with large, clear buttons. The display shows the selected configuration, the current status and the current temperatures of the individual zones.

The panel can be set in 17 languages. Data on the current status and alarm history is easy to access, as are the operating hours or the time to the next maintenance appointment.

### Your Benefits:

- New start screen with enlarged display of the current temperatures
- Enlarged display font on all menu levels
- Prioritisation of the information relevant for customers
- Use of uniform symbols similar to the icons of the telematics portal, the SmartTrailer and the beSmart app

## Proactive Monitoring of the Refrigeration Unit by Schmitz Cargobull

Increase the uptimes of your investment with our service, which limits the necessary stops for service and keeps maintenance times to a minimum.

Maintenance or repairs planned in advance help by reducing the time spent in the workshop. All of this is made possible by centrally monitoring the unit functions of all transport refrigeration units by Schmitz Cargobull. Service Head Office. Service Partners receive all necessary information in advance so that they can order in spare parts and plan any trips to the workshop. Participation in the system is voluntary for all customers, of course.



Please refer to the **TrailerConnect® telematics brochure** for further information.

Proactive monitoring speeds up maintenance: The Service Head Office coordinates maintenance.





## Full Service – Included in the EXECUTIVE Package

Enjoy all of Schmitz Cargobull's well-known service benefits across the entire range of S.CU transport refrigeration units. The Full Service contract covers the wearing parts and required ATP inspections for maintenance of the refrigeration unit.

The 24-hour Cargobull Euroservice helps you in your native language with our free hotline in 40 countries throughout Europe. We are your reliable partner and support you 365 days a year – at any time of day. We will inform the Schmitz Cargobull Service Partner near you.

You will receive rapid and straightforward assistance from our comprehensive European network of trained partner workshops. This also includes spare parts which are generally supplied within 24 hours.

### Your Service Benefits:



**300 Service Partners for S.CU**



**Original spare parts in 24 hours\***

\* Applies in most European countries for spare parts available in stock (generally 95 %).

## S.CU Drive Unit

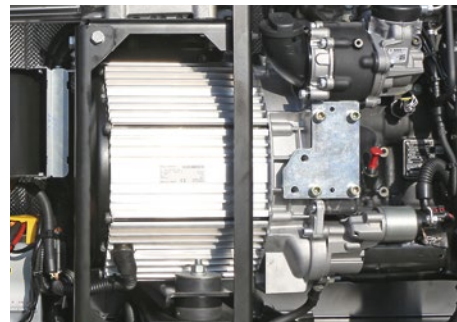
The new generation of S.CU transport refrigeration units lowers fuel consumption through the improved combination of a high-performance diesel engine and a generator that supplies electrical energy for heating and cooling.

Intelligent partial-load operation by the modern drive unit ensures minimum deviation from the set refrigeration chamber temperature while making the most efficient use of the resources.

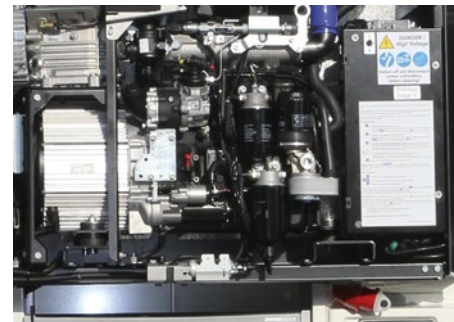


### Emission Standards Stage V

Since the first EU emission standards were introduced 20 years ago, the limits for diesel engines have been drastically reduced to approx. 5% of their originally permitted emission level. Stage V means that from January 2019, just 0.4 g/kWh nitrogen and 15 mg/kWh diesel particles can be emitted per hour from the engine.



Improved operational reliability due to optimised heat management and the additional hermetic sealing of the generator.



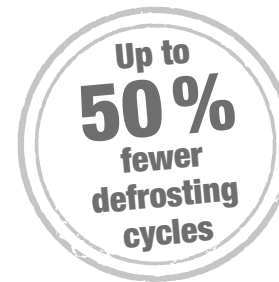
Common rail technology allows fuel injection and ignition time to be individually controlled to optimise performance and consumption.



## Evaporator

An evaporator's airflow surface generally tends to rapidly ice up at temperatures below freezing, which leads to frequent defrosting, coupled with higher energy consumption.

Schmitz Cargobull's special evaporator design for the transport refrigeration unit and the additional roof evaporator help to reduce defrosting cycles by up to 50%. On top of that, we have added outstanding heat output to reduce the time needed for defrosting.



Up to 50% fewer defrosting cycles thanks to improved evaporator design: the number of cooling ribs at the front of the evaporator for the Schmitz Cargobull S.CU transport refrigeration unit has been reduced to prevent them from icing up.



Two powerful, vertical radial fans on the condenser ensure a high airflow.



Three fans on the evaporator for optimum air distribution in the body.



The intake duct for the evaporator is protected behind the circulation wall.

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