Precise Temperature Control for a Secure Refrigeration Chain.

Transport Refrigeration Units.

Precise Temperature Control for a Secure Refrigeration Chain.
At a Glance.
The Following Pages Describe All of the Important Information Regarding Schmitz Cargobull Refrigeration Units:

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Temperature-controlled freight has the most demanding logistics standards. Fresh foodstuffs, deep-frozen goods and sensitive products from the pharmaceutical industry place exacting demands on the transport quality. Carriers and customers demand reliable, exact and uncompromising compliance with their specifications and standards. Like any other freight, this cargo has to arrive undamaged and on time. Yet the industry also requires impeccable hygiene, an uninterrupted refrigeration chain and, above all else, precise compliance with the specified transport temperatures.

Our pharmaceutical certification issued by Pharmaserv in conjunction with the EXECUTIVE package reflects Schmitz Cargobull’s holistic and integrated approach to these services. As a result, you and your customers have the security of knowing that you work together with the right partner.

Equipped for every temperature-controlled transport task – the Schmitz Cargobull premium transport refrigeration units for SingleTemp and MultiTemp in combination with the S.KO COOL semi-trailer.

Trust is Your Greatest Asset.
High Standards for Transporting Temperature-Controlled Freight.
Meets Every Need.
Trailers, Telematics and Refrigeration Units for Every Job.

With the S.KO COOL semi-trailer and FERROPLAST® ThermoTechnology – the leading transport solution for temperature-controlled freight – Schmitz Cargobull has constantly proven that it completely fulfils the industry’s demanding standards over decades.

The innovative TrailerConnect telematics solution and the TrailerConnect Interface digital data recorder give you optimum control over the transport refrigeration chain.

The company’s own premium transport refrigeration unit adds the final link to the refrigeration chain. The refrigeration unit maintains the temperature within very narrow tolerances through state-of-the-art, specifically combined components together with software developed by Schmitz Cargobull. This enables intelligent and economical control of the refrigeration unit.

The MultiTemp transport refrigeration unit is the latest innovation and completes the product range. This enables you to create multiple temperature zones within the body.

Schmitz Cargobull offers you a complete system from one supplier – the first full-service provider for temperature-controlled transport.

Two workhorses with impressive economy.
Family Programme.
The Ideal Modular Mix.

The exclusive series of transport refrigeration units developed completely in-house forms the basis of the Schmitz Cargobull refrigeration technology. These feature all of the innovations which have set new standards in the industry. The basic characteristics are distinguished by low-energy consumption, highest precision temperature control and the long-lasting design of all components.

The Schmitz Cargobull transport refrigeration unit for Single-Temp usage forms the technological foundation of the current refrigeration unit line. Powerful and economical in use, it is distinguished by impressive cooling and heating performance along with a low number of defrosting cycles. Every single centimetre of the S.KO COOL semi-trailer is perfectly temperature controlled.

The new MultiTemp transport refrigeration unit enables up to three temperature zones to be controlled with the same precision and efficiency in one vehicle. The refrigeration unit for MultiTemp usage shares the same impressive technical data and performance as the SingleTemp design.

The Schmitz Cargobull additional roof evaporator is a key element of the MultiTemp concept for precisely controlling multiple temperature zones in a single vehicle. The heat exchanger with a large evaporator service is distinguished by high-performance and low defrosting cycles thanks to minimal ice formation.
Transporting temperature-controlled freight using the Schmitz Cargobull system. The Schmitz Cargobull transport refrigeration unit provides the final link for Europe’s leading transport unit, certified by TÜV-Süd, Certicold and Pharmaserv. Trailer telematics monitor the compliance with the refrigeration chain and also enable the driver and the dispatcher to diagnose and remotely control the refrigeration unit.
No Changes Allowed.
The New Level of Temperature Control.

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 stepless speed control of the Schmitz Cargobull transport refrigeration unit for both the SingleTemp and MultiTemp designs ensures even air supply throughout the entire interior. The temperature remains precisely controlled even in the area near the rear door. In MultiTemp operation every temperature zone is controlled separately and independently.

The reduced fuel consumption represents another economic benefit of the intelligent partial-load control, as does the low noise level when running constantly.

The intelligent partial-load control of the Schmitz Cargobull refrigeration unit minimises temperature fluctuations. Avoiding peaks, safeguards even, exact cooling for all of the temperature zones independently of each other.
Three Trailers in One.
No Compromises for Various Refrigerated Products.

To be able to transport different refrigerated products in a single trailer, you need vehicles with different temperatures. MultiTemp equipment increases the profitability of refrigerated vehicles as it optimises the vehicle usage while reducing additional runs otherwise needed to transport sensitive goods with different requirements. There is absolutely no room for compromises with the reliability of the temperature management when transporting foodstuffs and pharmaceuticals. Every refrigeration zone must be as reliable as a separate refrigerated vehicle.

The reliable partition system conveniently divides up the interior of an S.KO COOL semi-trailer. The coolant and electrical lines for up to two roof evaporators are integrated into the roof and encased in foam, leaving the full volume of the interior available for freight. The Multi-Temp design is operated in exactly the same way as the Schmitz Cargobull transport refrigeration unit. The telematics and the "pro-active" service also transmit alarms to prevent the goods from perishing.

Secure and efficient transport with multiple temperature zones. Exact temperatures from the deep-freeze range of -18°C up to +10°C.

The control panel easily allows the central configuration of up to 3 cooling zones (illustration shows the two-chamber version). Movable partitions create multiple separate temperature zones. They can be moved longitudinally within the trailer to create a flexible interior layout. An electronic tank sensor allows the refrigeration unit tank to be monitored online at all times via the trailer telematics.
Every Intelligent Partitioning Option.
The Technology Adapts to the Jobs.

The modules in the Schmitz Cargobull refrigerated vehicles enable extensive freedom when configuring temperature zones.

A proven partitioning system creates the spaces which you need. Intelligent air distribution, coolant lines foamed into the roof and the compact dimensions of the units create a customised and highly versatile cargo area which is also easy to clean.

The equipment on the S.KO COOL body along with the transport refrigeration unit and the roof of evaporator components can be combined in versatile ways to optimally adapt the trailer to the specific transport task. The additional evaporator has various configurations.

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

The extremely flat and compact design of the Schmitz Cargobull additional roof evaporator allows for greater loading height underneath the device. The robust housing with an integrated guard rail prevents damage to the evaporator.

Powerhouse beneath the roof. The powerful technology of the Schmitz Cargobull additional roof evaporator ensures even temperature distribution as well as fewer defrosting cycles.

Half width – full performance: The Schmitz Cargobull additional roof evaporator sets benchmarks in terms of dimensions and ensures maximum usage of the interior height. Its power defies its compact design, requiring only one evaporator per temperature zone. Half of the vehicle interior remains free along the entire length. 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.
You Are the Boss. Versatile Options for Easy Operation.

The control panel for the Schmitz Cargobull transport refrigeration unit is located behind a transparent protective cover on the lower right. You can control the functions and numerous options with the large, clear buttons. The digital display shows the selected configuration and the current status. With MultiTemp devices it also indicates the exact temperature for each zone.

It can be set to display almost every European language. Historical data such as the sequence of alarms can be viewed as can the mileage or the next maintenance interval.

The control panel allows the display and configuration of every aspect of the temperature management.

Precise temperature specification and setpoints. (Illustrations show the two-chamber version)

Operating status can be displayed at any time.

Function overview with easy navigation and input.

Alarm history with useful, detailed information.
Belts Are So Yesterday.
Temperature Control in the Interior.

Many refrigeration units utilise a mechanical belt drive to power the fans. The air distribution is permanently coupled with the coolant circulation. The fans on the transport refrigeration unit are driven directly and decoupled from the compressor. This enables consistent air distribution even during periods of low cooling/heating performance. At the same time, no complex flap systems are required for the defrosting cycles.

Together with the circulation wall and the flexible air ducts underneath the roof, this creates ideal air circulation in the interior.

The intake duct for the evaporator is protected behind the circulation wall.
Service Begins with the Design.

The Design of the Schmitz Cargobull Transport Refrigeration Unit.

The modular design of the refrigeration unit combined with the bolted frame enables easy service access and repairs.

A user-friendly housing creates space for service: The two wide-opening flaps at the front make the unit very easy to maintain. They enable unimpeded access to all of the key housing components. All of the wearing parts are freely accessible without having to dismantle other components.

The electrical heating rods in the evaporator can be replaced from outside. As a result, the trailer no longer has to be unloaded in most cases.
Reduce the Defrosting Cycles.
The Evaporator Design Prevents Premature Icing.

An evaporator’s air-flow surface tends to ice up rapidly at temperatures below freezing. This requires frequent defrosting, which involves high energy consumption.

The special evaporator design of the Schmitz Cargobull transport refrigeration unit and the Schmitz Cargobull roof evaporator reduces the number of necessary defrosting cycles.

The number of cooling ribs at the front of the evaporator for the Schmitz Cargobull transport refrigeration unit has been reduced to prevent them from icing up.

Two powerful, vertical radial fans on the condenser ensure high airflow.
The Powerhouse.
Drive Components for Powerful Performance.

The Schmitz Cargobull transport refrigeration units feature an impressive combination of a powerful diesel motor and a generator which provides the electrical power for the cooling and ventilation.

The system is electrically driven and ensures minimum deviation from the set refrigeration temperature while making the most efficient use of the resources.

Quality you can see from the outside:
The attractive housing design is distinguished by cool elegance.
Fewer Pitstops.
Longer Maintenance Intervals Included.

State-of-the-art motor management for the diesel motor and the demand-driven deactivation of one row of cylinders in the coolant compressor provides efficient partial-load control at low engine speeds. The saves you fuel and reduces the operating costs.

The generously dimensioned wearing parts such as air, oil and fuel filters extend the maintenance cycles. This also reduces the operating costs and increases the trailer’s availability.

The 5-pin A/C plug socket on the underside of the refrigeration unit for stationary operation via central power supply is a standard feature and ensures lower noise and decreased fuel consumption combined with maximum reliability.

The large oil sump ensures that the engine runs smoothly and extends the oil change intervals.

Large fuel and air filters increase the maintenance intervals.

The transport refrigeration unit successfully passed 500,000 km of endurance and load tests on the hydropulsers at the Schmitz Cargobull Validation Center without any restrictions.
Perfect Monitoring Included.

Our TrailerConnect Telematics Are Already On Board.

Schmitz Cargobull’s series of premium transport refrigeration units is equipped with the TrailerConnect telematics system as a standard feature, enabling optimum control, monitoring and documentation of the temperature and refrigeration unit data.

The TrailerConnect control unit has been tested to automotive standards and fulfils the IP69K standard, the highest protection category. As a result, TrailerConnect perfectly meets the demanding quality standards required for trailer telematics and offers you maximum system availability.

The TrailerConnect Interface serves as an electronic temperature recorder in the refrigerated vehicle, further enhancing the Schmitz Cargobull trailer telematics. The entire system is perfectly harmonised and certified by TÜV SÜD to DIN EN 12830 for documenting the complete refrigeration chain. The TrailerConnect Interface can completely replace conventional temperature recorders.

SingleTemp versions feature two temperature sensors linked with the Trailer Connect Interface – MultiTemp vehicles can utilise up to 4 sensors. This provides you with a constant overview of the refrigeration temperature throughout the entire cargo area.

An optional electronic tank sensor also allows the refrigeration unit’s fuel tank to be monitored online. This prevents damage to the load caused when the refrigeration unit runs out of fuel and also helps to prevent theft and misuse of the diesel.

The LED display mounted on the bulkhead also indicates the tank level and allows the driver to quickly see when the tank has inadequate fuel.
Hand in Hand.
The Benefits of Integrated Trailer Telematics.

The TrailerConnect Interface and TrailerConnect include:
- A certified, digital temperature recorder
- Certified sensors for up to four temperature measurement points for the transport refrigeration unit and MultiTemp transport refrigeration unit plus optional humidity and tank level sensors
- Temperature recording certified to DIN EN 12830
- Information about the premium transport refrigeration unit from Schmitz Cargobull: This includes the status, operating hours, operating mode, refrigeration unit control temperatures, alarms, setpoints and defrosting cycles
- Two-way communication with the refrigeration unit. The functions can be controlled externally either manually or via smartphone app, e.g. temperature control for part units
- Equipment monitoring, e.g. for preventive maintenance
- All telematics services can be booked individually. This applies for additional vehicle information such as position, door and coupling status, EBS technical data such as driving speed and mileage or security monitoring for pharmaceutical transport. Tailored telematics services and portal access with clearly displayed information are also available.
No Waiting for Service.
Refrigeration Unit Monitoring for Pro-Active Maintenance.

Your refrigerated semi-trailer only makes you a profit when it is on the road. That is why every standstill, every longer maintenance appointment or downtime is a loss. The necessary stops for service and maintenance also need to be kept to a minimum.

Maintenance or repairs planned in advance help by reducing the time spent in the workshop. The Schmitz Cargobull Service Head Office allows precisely this by centrally monitoring the functions of all transport refrigeration units and additional roof evaporators. The workshop receives all of the necessary information about operating hours, the status and fault messages in advance and can order spare parts and plan the work ahead of time. Participation in the system is voluntary for all customers, of course.

Naturally, the entire family of Schmitz Cargobull transport refrigeration units also provides you with the familiar service benefits: A Full Service contract for refrigeration unit maintenance includes all of the wearing parts and necessary ATP inspections.

The 24-hour Cargobull Euroservice helps you in your native language with our free hotline in 40 countries throughout Europe, anytime. We are your reliable partner and support you 365 days a year. We inform the Schmitz Cargobull service partner near you.

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

All refrigeration units at a glance:
The Schmitz Cargobull Service Head Office monitors the correct function of the Schmitz Cargobull transport refrigeration units.

Shorter maintenance times:
When the trailer arrives the workshop already knows the diagnosis and has the spare parts for the refrigeration unit ready.
And Now?
We Will Inform You.

We will keep you informed.

Find out more at:
www.cargobull.com