#Innovations1st

ERGOWALL

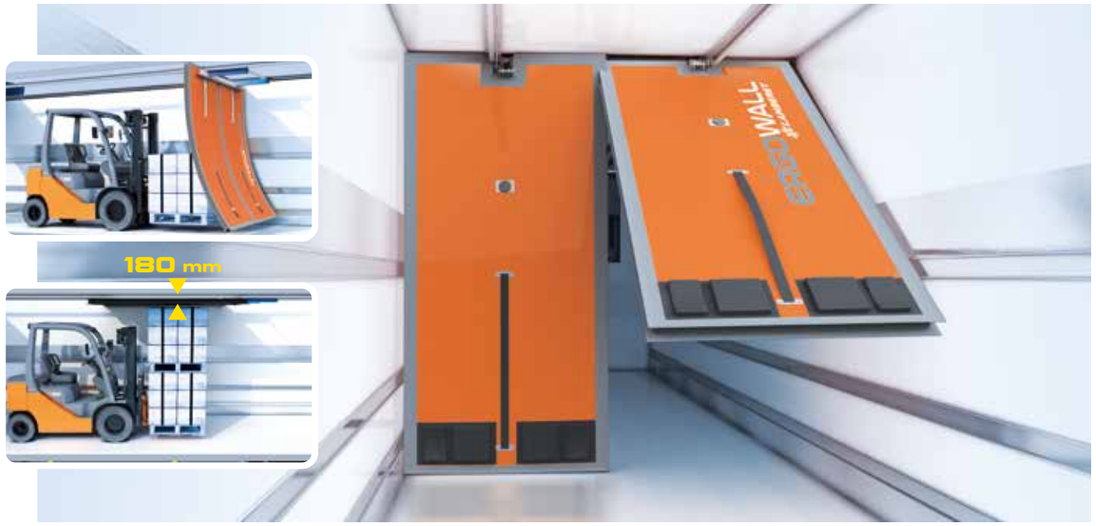
The **Ergonomic** link in the cold chain

TRAILER INNOVATION 2019 WINNER CATEGORY COMPONENTS

2019

The development of temperature-controlled product distribution (food or pharmaceuticals) requires vehicles that are truly capable of managing several temperatures simultaneously, with a range of between -28°Celsius to +22°Celsius.

The partitioning of the compartments must be perfectly insulating, sealed, modular, easy for the driver to move, and compatible with intensive operating restrictions.



The new ERGOWALL partition wall system meets all these constraints and is a true **technological breakthrough** in comparison with existing systems. The ERGOWALL system fitted to the vehicle is ATP-compatible.

The use of innovative materials has enabled us to reach unmatched performance levels. Impact resistance and flexibility under stress drastically reduce the risk of breakage. The compactness of the raised system gives good passage height, thus optimising the usable volume and securing the load. Finally, the 50% reduction in the weight (gain of 100 kg) of the system is of benefit to the payload and offers savings in consumption.

VIDEO

- Very high-level insulation based on hard foam
- Military quality impregnable polycarbonate coating
- Flexible, shape-retaining memory foam core
- Auto-locking of the slide in the top and bottom position

DISTRI+

Pneumatic roller shutter door with reinforced insulation

The new Distri+ pneumatic roller shutter door, 100% made by Lamberet, opens up new horizons in distribution. It combines the best useful height/overall height ratio, the widest passageway on the market with 2.42m thanks to its recessed sliders, and the first insulated bed developed for sub-zero applications.

The unique design of its chevron-shaped bed prevents water from seeping in from outside.

Its exclusive handle-free closing system includes an anchor point on the floor and a mechanism that acts on the upper blade: no more poorly closed roller shutter door!

Its autonomous pneumatic assistance is naturally more reliable and durable than electric systems.

Another innovation is its ultra-compact mechanics, which allow for a fully integrated air curtain.

VIDEO

- Larger passage width, 2.42 m
- 100% pneumatic, autonomous, Electricity-free automation
- Opens and closes without a handle
- Tir latch compatible
- Double independent balancing shaft
- Ultra-compact, silent pneumatic cylinder
- Protected rear evaporator atop roller shutter

TRAILER INNOVATION CCC 2023 WINNER CATEGORY SMART_TRAILER

LCV

LCV LAMBERET VOICE COMMAND

1st refrigerated bodywork controlled by UX voice interface.

The distribution of fresh products requires successive manipulations in difficult conditions, at night, on slopes... Using the bodywork involves grasping a manual control, twisting oneself and having a busy hand. Deliveries' efficiency and safety are at stake.
The Lamberet Command by Voice controls the functions of the refrigerated body. This intelligent UX relies on multiplexing and is integrated locally in the Lamberet Multiplex Smartphone application. Autonomous, it does not need a mobile network, and neither does the Bluetooth-secured connection between the vehicle and the Smartphone.
Voice control is revolutionizing the delivery process, now operated hands-free. The driver no longer has to let go its Rolls or stop its move to raise the taillift, open the rear curtain or turn on the lights, even more as these functions can be synchronized on demand through multiplexing. Deliveries are smooth, risks are reduced and both the cold chain and energy losses are optimized.

Integrated in the multiplexed platform of Lamberet and its Smartphone app, LCV reinforces the safety and comfort of the body use during deliveries (taillift, isothermal roller shutter door and peripheral lighting...) by the exclusive voice control.

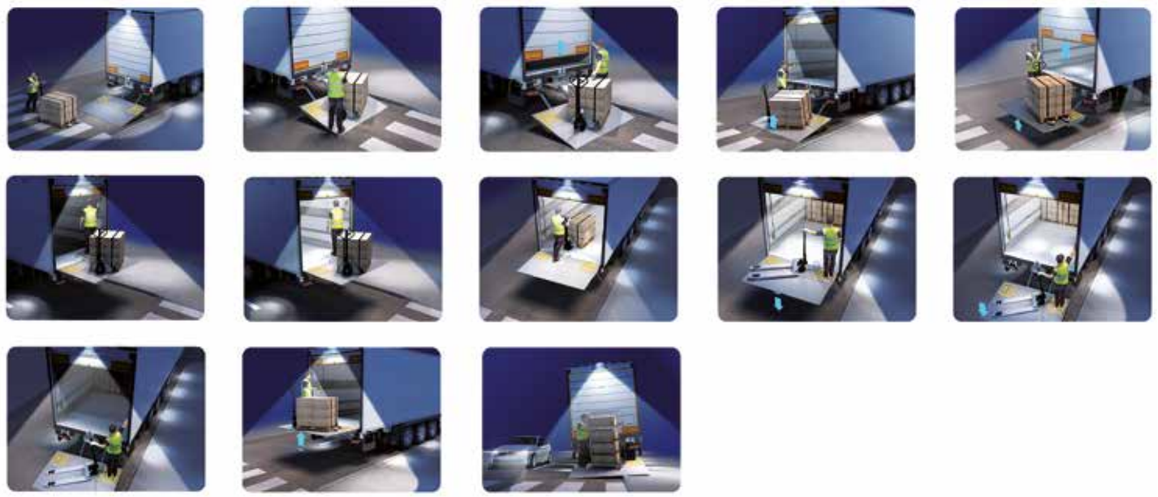
LCV allows the driver to command without access constraint any body controls, safely position himself (improved peripheral vision) and always keep his two hands to hold the pallet carrier or the Rolls during risky handling phases.

Voice control has many benefits both for the driver and the efficiency of logistics :

- Limit accidents resulting from falls during handling (entry/exit of the loading area).
- Offer a grouped control always accessible and functional remotely from the loading platform or the ground.
- Synchronize functions to boost efficiency and safety.
- Optimize the cold chain, by synchronizing movements (eg: taillift/rear roller shutter door).
- Limit the operating time of the cooling unit by favorizing closing the door.
- Secure (theft, pollution) the goods left alone in the body during delivery.

VIDEO

CLASSICAL OPERATING PROCESS



" Voice control activated "

OPERATIONS WITH LAMBERET VOICE COMMAND

FRIGO LIGHT

LIGHTER BODYWORK -25%

1st "all-in-one" refrigerated body & cooling unit with new panel technology, lightweight and aerodynamic

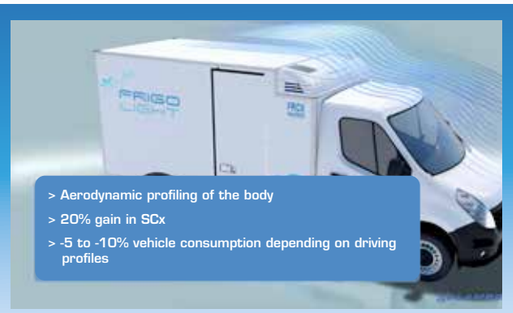
The increase in payload of 3.5t LCVs is a strong customer expectation for refrigerated conversions, further reinforced by the arrival of heavier electrical vehicles running on batteries. FRIGOLIGHT is a new all-in-one body & refrigeration unit offer, unveiling a new lighter insulated panel technology.

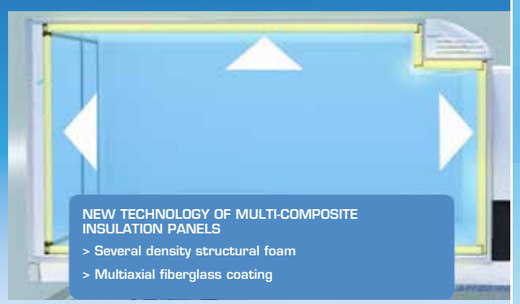
The converted vehicle has been fully modelized in order to simulate mass, insulation level and mechanical resistance for multiple playable configurations. By successive iterations, hundreds of concepts and new materials have been tested and selected to minimize weight, while keeping original insulation and mechanical resistance.

The innovative multi-composite insulated panels from FRIGOLIGHT, without metal or wood inserts, as well as **the innovative integration of the cooling unit** into the roof, offer a saving in mass of 25% and in SCX of 20% compared to a conventional body!

FRIGOLIGHT is the ideal solution for 3.5t or electric LCVs, with a significant gain in payload and energy savings, preserving their driving range.

NOMINATED
SOLUTRANS innovation i-AWARDS 2021





+ **FRIGOLIGHT innovates by its research and development methodology, its concept and its panel technology:**
  - Vehicle + bodywork modeling followed by successive iterations
  - All-in-one, body and cooling unit
  - Multi-composite panels without metal or wood
+ **FRIGOLIGHT offers, with constant insulation and mechanical resistance:**
  - **25% weight saving** on assembled body + cooling unit
  - **An aerodynamic gain** with a SCx reduced of 20%
  - **Optimized internal aeraulics** implied by the position of the evaporator
+ **Users benefit from more efficient, environmental friendly and less costly operations:**
  - Transport is optimized thanks to the increased payload
  - Lower energy consumption and enhanced autonomy for electrical vehicles, at iso-loading
  - The increased payload improves GVW compliance and safety.
  - The "all-in-one" electrical cooling unit + bodywork design facilitates body transfers and fights obsolescence.
  - Their 100% composite technology favors recycling of panels.

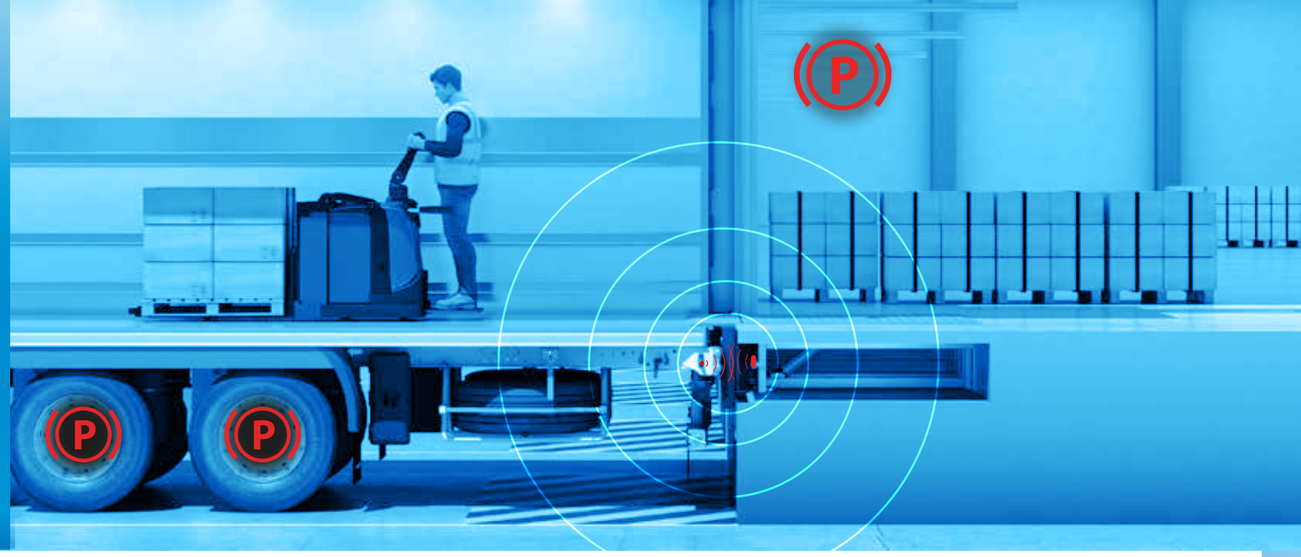
VIDEO

Research & Development partners of **FRIGOLIGHT**

Kerstner · SAERTEX · SEGULA TECHNOLOGIES · CETHIL UMR 5008 INSA · LAMBERET

ADI AUTOMATIC DROP IMMOBILIZER

Securing docked vehicles by RFID technology



The major risk when loading vehicles at the dock is a departure while a handling machine is still operating inside.
The Automatic Drop Immobilizer developed by Lamberet innovates with its **automation based on an unprecedented implementation of RFID technology.**
When docking, the chassis chip is activated by the dock tag signal, released by the deployment of the leveling ramp. The brakes are then activated. When the dock operators remove the ramp, the signal is masked. Without a ramp, it is impossible to drive through with a handling machine: the ADI releases the brakes and authorizes a safe departure.

Lamberet's automatic ADI is reliable, affordable, and retrofitable on any semi-trailers and rigids, with or without taillift, whatever the brand. **The docks can be equipped without civil engineering or power supply.** Automated and maintenance-free, without risk of human error, ADI is a universal and accessible innovation that helps prevent accidents and saves lives.

- The Automatic Drop Immobilizer offers a real safety for the dock workers during the loading / unloading phases. Zero risk of accident by fall between dock and vehicle (loading) or vehicle and dock (exit) following an unexpected truck departure.
- Automatic solution without human intervention guaranteeing the safety of all staff in the dock/vehicle risk area.
- 100% autonomous, priority system: no required driver or dock worker intervention.
- Installation on the dock without civil engineering. TAG (mirror, signal return) without battery or power supply.
- Retrofitable system on all types of vehicles. Simple, economical installation, with control of the original braking functions. Adaptable to vehicles already in service.

Without Automatic Drop Immobilizer

1. Free docking manoeuvers

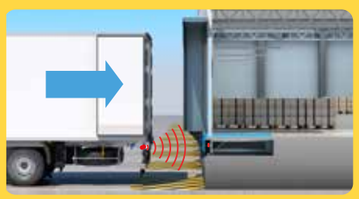
2. Docked vehicle, no safety

3. Ongoing loading operations, no safety.

4. Dock operator going reverse, blind

5. **ACCIDENT** Unexpected vehicle departure taking the dock operator by surprise.

With Automatic Drop Immobilizer



1. Free docking manoeuvers

2. Dock ramp unarmed, no signal picked up by RFID radar, unlocked vehicle brakes

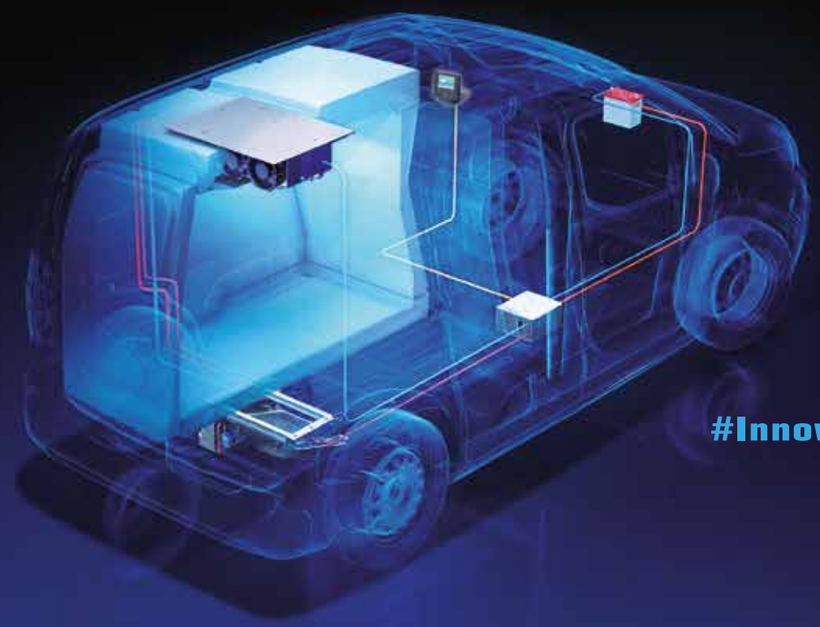
3. Dock ramp armed, TAG RFIG visible and detectable, locked vehicle brakes

4. Brakes locked, loading operations are fully safe

5. Safety active as long as the docking ramp is armed

6. Dock ramp folded, TAG hidden, brake vehicle released. Authorized departure.

Safety of departure controlled automatically by the ADI system



Kerstner

e-COOLJET 106

100% THE LEADING COOLING UNIT
BUILT-IN
ULTRA-LOW CONSUMPTION

Or - *Gold*

SOLUTRANS innovation -AWARDS 2019

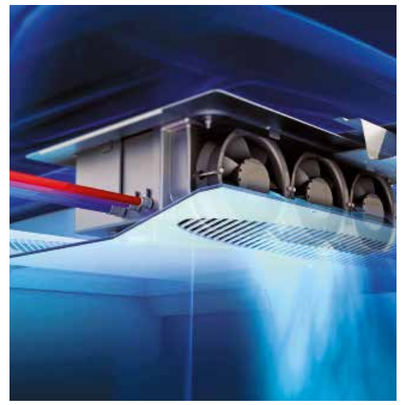
doubleimpact

Kerstner e-COOLJET 106

The 1st 100%-integrated ultra-low-consumption refrigeration unit

Condenser and compressor built in under chassis

Unit control with 2.8" colour screen



Evaporator built into insulation

Up to 5m³ | 944W 0°c / +30°c | COP 1.55 | Mass 53 kg | Warm gas

Never-before-seen vehicle refrigeration technologies:

- VARIABLE-SPEED ELECTRIC HERMETIC COMPRESSOR
- "MICROCHANNEL" EXCHANGER CONDENSER WITH LAMELLAR SURFACE
- VARIABLE-SPEED FAN AND "LONGLIFE" BEARINGS
- 100% BRUSHLESS MOTORS, WITH NO CARBON OR BELT
- TWO-WAY COMMUNICATION WITH THE VEHICLE AND TELEMATICS VIA THE BUS-CAN
- BUILT-IN MONITORING AND BATTERY PROTECTION
- EASY MAINTENANCE; EXTENDED INTERVALS (3000 HOURS)

VIDEO

The new e-CoolJet 106 cooling unit is revolutionizing the refrigerated van landscape, both figuratively and literally.

This electric unit was produced through internal development initiated to account for the new WLTP standard. **A 100% integrated, innovative concept,** the compressor and condenser are installed under the chassis of the vehicle and are not housed on the ceiling. The van's original aesthetics, aerodynamics, and WLTP qualification characteristics are thereby preserved in full.
The evaporator built into the insulation
- a Kerstner exclusivity - maximizes the useful height.

Another innovative feature: the power management capitalizes on the expertise developed for the Frigovan H2, the first fuel-cell-powered refrigerated vehicle presented in 2017 by Lamberet, which won gold in the Solutrans Prix de l'innovation. It offers the best energy efficiency on the market, with a COP (EER) of 1.55, for lower consumption of just 45 amperes. Voltage peaks during power draw phases, such as starting, are also smoothed. This consumption is low enough to do away with or reduce the volume of heavy, expensive battery packs that are traditionally needed for electric units.

The KERSTNER e-Cooljet 106 is therefore particularly well-suited to alternative-energy utility vehicles like the Ford Custom hybrid, Mercedes E-Vito, Renault ZE, or the upcoming electric Citroën Berlingo, Opel Combo, and Peugeot Partner!

LAMBERET

SR2-e

Multi-temperature electric rechargeable reefer, the distribution semitrailer of tomorrow.

SR2-e includes the latest generation of SAF TRAK'r axles equipped with a 33 Kw generator (one of the 3 electric axles on the semi-trailer). This generator recharges an on-board battery pack with a capacity of 19.2 Kw.h, allowing it to power a multi-temperature cooling unit equipped with 100% electric Carrier e-Cool or Vector hybrid technology.

The cooling unit can therefore be set to 100% electric mode when accessing urban areas or low-emission zones (LEZs), for example.

The cooling unit can be switched between recharge mode (permanent) and energy recovery mode. Recharge mode allows 100% electric operation of the cooling unit, but part of the energy is then taken from the tractor, which can lead to additional energy consumption by the tractor.

The most interesting feature is energy recovery mode. For this purpose, the battery pack is pre-charged from standby supply, just like a rechargeable hybrid car. Thus, although the cooling unit can still be run on internal combustion when approaching city centres by major roads (motorways, express lanes), 100% electric mode can also be set as a priority. During the distribution phase, with a lot of slowing down and braking, the vehicle's kinetic energy is recovered and turned into electrical energy, recharging the battery pack on the road in order to power the cooling unit and the body's electrical peripherals.

SR2-e brings a new economic and ecological answer to the problems of mass urban distribution, as it is emission-free, while reducing the noise impact.

Carrier TRANSICOLD VECTOR eCool™ SAF e-Axle TRAKr FRANCE RELANCE LIVE 2 PURE

VIDEO

Kerstner e-CoolJet 106

The new e-CoolJet 106 cooling unit is revolutionizing the refrigerated van landscape, both figuratively and literally.

This electric unit was produced through internal development initiated to account for the new WLTP standard. A 100% integrated, innovative concept, the compressor and condenser are installed under the chassis of the vehicle and are not housed on the ceiling. The van's original aesthetics, aerodynamics, and WLTP qualification characteristics are thereby preserved in full.

The evaporator built into the insulation **- a Kerstner exclusivity -** maximizes the useful height.

Another innovative feature: the power management capitalizes on the expertise developed for the Frigovan H2, the first fuel-cell-powered refrigerated vehicle presented in 2017 by Lamberet, which won the Solutrans Innovation Award. It offers the best energy efficiency on the market, with a COP (EER) of 1.55, for lower consumption of just 45 amperes. Voltage peaks during power draw phases, such as starting, are also smoothed.

This consumption is low enough to do away with or reduce the volume of heavy, expensive battery packs that are traditionally needed for electric units.

The KERSTNER e-Cooljet 106 is therefore particularly well-suited to alternative-energy utility vehicles like the Ford Custom hybrid, Mercedes E-Vito, Renault ZE, or the upcoming electric Citroën Berlingo, Opel Combo, and Peugeot Partner!

Thus, for the first time, Lamberet can offer a refrigerated conversion to an eLCV for the same cost as on an internal-combustion vehicle, with similar or superior performances.

Firs 100% integrated electrical cooling unitwith ultra-low consumption, adapted to electrical vans.

Up to **5m³**

944W **0°c / +30°c**

COP **1.55**

Mass **53 kg**

Hot gas

+ Never-before-seen vehicle refrigeration technologies:

- Variable-speed electric hermetic compressor
- "Microchannel" exchanger condenser with lamellar surface
- Variable-speed fan and "longlife" bearings
- 100% brushless motors, with no carbon or belt
- Two-way communication with the vehicle
- And telematics via the bus-can
- Built-in monitoring and battery protection
- Easy maintenance; extended intervals (3000 hours)

Customisation? This is Lamberet's expertise!

Lamberet assists its customers in finding the best vehicle suited to their business needs.

In this configuration, on a Renault D19 Wide GNC chassis, the multi-temperature bodywork proposed is completely customised:

Rear openings composed by a Distri+ curtain associated with a swing door give access to 2 distinct parts. The blueseal air curtains limit the heat exchange between the interior and exterior aera during deliveries. In addition, the various interior bulkeads transforms the vehicle into 3 or 4 compartments. It can therefore transport fresh goods at up to 3 different temperatures.

Finally, thanks to its natural gas engine combined with the Carrier TRS - Iceland 100% electric cooling unit, the whole guarantees a zero emission delivery tour!

KLEUSTER
FREEGONES
FRIGOLINE

Zero-Emissions refrigerated electrically power assisted tricycle

The final yard for the final mile delivery? It's easy with the new Freegone Frigoline and its refrigerated 1.5 m³! It is designed as an electrically power-assisted cycle.

Zero emissions, Zero noise and Zero congestion as it can use bike lanes. Its cooling unit and body are ATP-approved. Its new Frigoline cell offers an exceptional K coefficient of 0.31 and an innovative large rear opening, 'OT1'. Its electric drive propels it up to 18 km/h effortlessly and includes a hill-start assist and cruise control. The battery recharges in 5 hours from a single 230V 16 amp socket.

VIDEO

- REFRIGERATED BODY WITH REAR INNOVATIVE FULL OPENING OT1
- TRACTION AND REFRIGERATION CHARGING COUPLED
- REVERSING BUZZER
- COMPLETE LIGHTING KIT WITH RECALL AT THE TOP OF THE BODY

FRIGOLINE CITY

New refrigerated body for 7 to 12-ton trucks

FRIGOLINE City is a refrigerated body fully designed for the medium-duty straight truck segment. It has been designed by Lamberet to offer a competitive advantage in terms of design, robustness, insulation, lightness and ergonomics.
Its range of sizes and rear opening solutions take into account new containers and final mile delivery use.
Lamberet anticipates the accelerated development of the niche market for trucks with GVWR of 7 to 12 tons linked to the imposition of stricter clean-up standards and the need to expand city centre distribution massively.

VIDEO

- GAIN IN PAYLOAD OF UP TO 10%
- ENHANCING DESIGN WITH INTEGRAL ALUMINIUM MOULDING
- AVAILABLE WITH SWING OR SLIDING SIDE DOOR
- 4 INTERIOR USABLE WIDTHS, 2100, 2210, 2310 AND 2460 MM
- COMPATIBLE WITH THE DISTRI+ PNEUMATIC CURTAIN

VOLKSWAGEN CADDY VAN

Kerstner e-cooljet 106

- REINFORCED-CLASS INSULATION ACCORDING TO ATP
- WITH ORIGINAL CABIN BULKHEAD: MORE SAFETY AND COMFORT
- ORIGINAL SLIDING SIDE DOOR WITH INSULATION
- CUSTOMIZABLE FOR EACH BUSINESS

VIDEO

Integrated insulation with very high energy efficiency cooling unit

The new VOLKSWAGEN Caddy Van is available in a refrigerated version in two lengths, short and maxi. In Maxi version, it carries nearly 3 M3! Its integrated cell offers a reinforced-class quality of insulation according to the ATP, a sliding side door with double sealing to ensure tightness according to the DIN 1815 and resistance to intense use with its wheelarches featuring protection as standard. Equipped with the KERSTNER cooling unit eCooljet 106 with very high energy efficiency - its peak consumption does not exceed 45 Ah - it can ensure the most severe positive cold distribution missions, helped during distribution tour by its efficient defrosting by hot gas. Housed in the location of the spare wheel, this reliable, compact and light cooling unit allows the overall height to be limited to the original values of the van, making access to underground car parks possible and promoting a lower WLTP cycle consumption.

Refrigeration for Professionals!

+100 MODELES

Lamberet, Refrigeration for Professionals

FOR MORE INFORMATION | Follow us online !

WEBSITE
www.lamberet.com

LAMBERET

LIGHT TRAILER | VAN | PLATFORM-CAB | CHASSIS-CAB | RIGID | SEMI-TRAILER | SWAP BODY | CUSTOMISED

LAMBERET SAS - Head Office - 129 route de Vonnas - BP 43 - 01380 Saint Cyr/Menthon - FRANCE
Tel. : +33 (0)3 85 30 85 30 - communication@lamberet.fr - www.lamberet.com