SR2 SUPER CITY

Handles any curve.

TRAILER INNOVATION 2013
WINNER
CATEGORY
CONCEPT

LAMBERET

SEMI-TRAILER

SR2 SUPER CITY

TAKE CONTROL OF THE CITY.

In the city, transport and delivery of products under controlled temperatures has become increasingly complex to satisfy the growing number of consumers deserting the out of town hypermarkets in favour of the local supermarkets. Access, operational costs, new environmental taxes all present new challenges for urban distribution!

SR2 SuperCity provides a dedicated response to distribution in the hyper-urban zone.

SuperCity enables the protection of consumers' food health as well as the qualify of the living environment for city-dwellers, whether in terms of bulk, sound pollution and air quality. It drastically reduces investment and urban distribution operating costs.

ACCESSIBILITY: the manoeuvrability of the SR2 SuperCity is exceptional. Its turning circle is less than that of a 21 pallet carrier.

QUIETNESS: the quiet equipment, including the refrigeration unit, respects the tranquillity of the inhabitants in the neighbourhoods of delivery locations.

PRODUCTIVITY: 2 temperatures on a single vehicle and 33 pallet capacity. The tail lift guarantees rapid loading and unloading.

ECOLOGY: The gain in capacity of a minimum of 33% in relation to a vehicle of equivalent handling qualities enables a reduction in the number of vehicles in circulation. On average, 1 SuperCity replaces 2 small vehicles, cutting operational costs and CO2 emissions in half!

ECONOMY: SuperCity means that the fleet size can be reduced. It can be used for both long distance AND urban deliveries. Without Super City, the fleet size is doubled between tractor units + trailers used for long distance work, and vans dedicated to urban deliveries. The SR2 SuperCity enables delivery directly to distribution points without the need to go via a centre dedicated to unloading and loading into vans.

LAMBERET

THE LAMBERET BONUSES

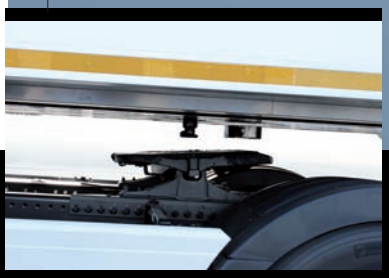
Electro-hydraulic unit

This transmits steering commands via a number of valves mounted on the hydraulic manifold. The flow of oil is thus controlled to and from the steering cylinders on the axles.
A control LCD screen enables the system to be adjusted.
A light display on the front face of the semi-trailer informs the drive instantly of any malfunction.
This is the most reliable hydraulic technology in the field of transmission to date.

Angle sensor on the trailer king pin

The electromagnetic angle sensor incorporated in the king pin measures the angle between the tractor and the semi-trailer. The processor incorporates other data originating from the EBS (speed, forward or reverse, etc...) in order to optimise the commands transmitted to the steering axles. The system also locks the axles in aligned configuration for speeds over 50 km/h.

The SR2 is there with you as a co-driver permanently at your side!



Modular chassis with steering axles

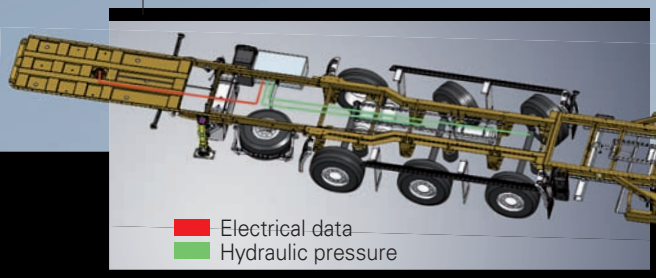
SR2 SuperCity has a dedicated modular chassis with steering axles. The height of the chassis is not increased to the detriment of the net height or centre of gravity. The height of the fifth wheel remains standard, and the rear sill is adapted for loading bays (1300 mm). The track width provides stability in any challenging situation: 2090 mm compared to 2040 mm for a standard refrigerated semi-trailer for the European market. The steering system that was developed by Lamberet is based on the latest generation of axles (SAF B9 with 120 offset) with large diameter disk brakes and size 65 tyres.
The 7350 mm wheelbase, and locking of the steering axles in aligned position at 50km/h ensure a high level of stability. This completely eliminates the phenomenon of drifting on bends and jack-knifing in a straight line which is a feature of self-tracking axles with mechanical operation.
All the hydraulic equipment has a centralised multi-points greasing system covering the steering axles and tail lift for simplified maintenance.

Steering cylinders

The steering cylinders react in 1/10th of a second to provide the required angle to each axle in order to optimise manures. They are fitted with a centrally controlled greasing system for ease of maintenance. An independent battery pack smooths out peaks in demand in situations of high levels of demand so that an immediate response is always guaranteed.

Steering axles

The 1st axle is fixed and the second and third are steering axles. The spacing between each axle of 1850 mm means that the first one can act as a fixed pivot on the cornering initiated by the other 2. The wheel angles are differentiated in order to provide an exceptional level of efficiency: 14° for the central axle, and 32° for the rear axle.
The system is active in both forward and reverse.



Bolted stainless steel frame curtain with electric rising door (PIEK - 54 dB)

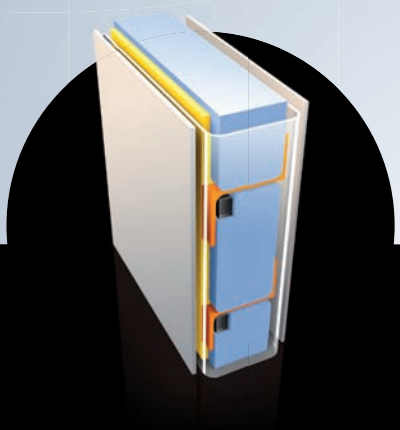
The electric rising door with its silent operation speeds up handling. For maximum ergonomic efficiency there are 3 controls: under chassis with key locking, at normal height on the right door jamb frame, and on the inside.
The stainless steel frame is fully bolted, without welds and therefore with no inherent weaknesses. The sill and lower and upper vertical jambs are integrally protected by robust section buffers.

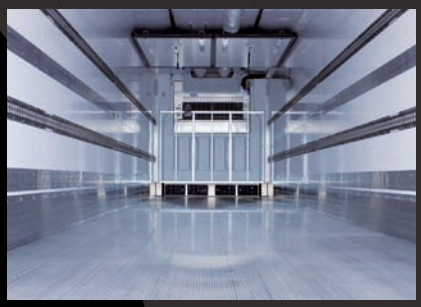
Raisable 1/2 partitions secured on sliders

The SuperCity can be provided with 2 modular, readily accessible compartments using a system of 2 independently raisable, sliding semi-partitions mounted non-dissociably on rails fixed onto the roof. With spring locks and a decompression hatch, they can be operated quickly and without difficulty, regardless of temperature.
The PIEK silent deliveries certification relates both to their being moved (59 dB) and their deployment (54 dB)

Composite technology: more insulating, more robust

Having been developed for the road cold chain, also used in the maritime industry for their proven water-tightness, the composite panels are made up of a succession of insulating compartments lined with blocks of foam of a constant density of 35 kg/m^3! Their polyester lining has a thermal conductivity 150 times less than steel. All of the 305 mm of the aluminium inserts serve as a delaminating barrier. The insulating floor is reinforced by coated inserts and cross-pieces. Finally, as a resistance feature against rubbing, the internal facing has been thickened to 2.8 mm.



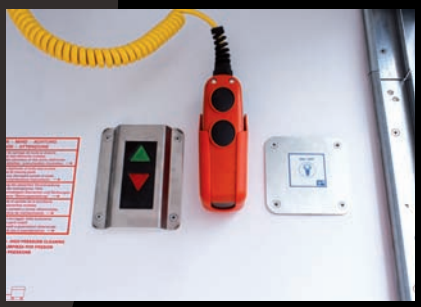


Anti-slip «floating» PIEK aluminium floor (55 dB). A Lamberet patent, combining resistance with wear and sound insulation. Its profiles incorporate longitudinal anti-slip grooving. A peripheral joint delinks the sound bridge.
The HD(1) plinths, the highest on the market (300 x 7 mm), are glued, screwed and riveted.

Partition decompression hatch
With a view to ergonomics, the partitions are equipped with decompression hatches. This means that a maximum seal for each compartment and easy handling are compatible.

Silent multi-temperature refrigeration unit (PIEK). The SuperCity chassis has a sufficiently wide wheelbase to accommodate silent multi-temperature refrigeration systems such as the CARRIER Vector City 1850 MT City unit. The unit's motor and exhaust are located under the chassis which minimises sound emissions.

Silent tail lift (PIEK- 56 dB).
The SuperCity dedicated chassis accommodates a retractable tail lift, an essential accessory for urban distribution. The tail lift is protected by lateral protective sheaths. It can be certified for silent delivery.
Photo: retractable tail lift DHOLLANDIA DHSM2000 PIEK.

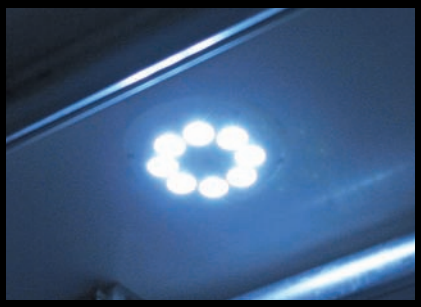


Internal control panel.
Maximum ergonomics and safety: the extra-flat control panel for the timed ceiling lights, the remote control for the tail lift and internal controls for the electric curtain are grouped together at the top right of the frame, outside the impact zone for handling equipment.

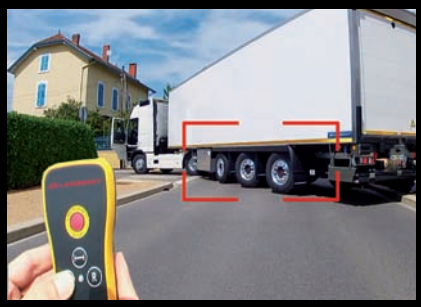
100% pneumatic autonomous raising and lowering with internal controls. An exclusive LAMBERET - HALDEX feature, controls the raising and lowering valve from an additional air reserve (60 litres). It has non-coupled functioning without electrical power. The internal controls enable levelling of the SR2 SuperCity.

TOTALLY integrated Soft-Docking. When approaching the loading bay, 2 radars integrated and protected inside the end of chassis frame crossmember detect its presence and apply the brakes on the trailer automatically and progressively before impact. Your capital investment is protected from violent impacts. Drivers are relieved of the stress of potential damage even in poor visibility or complicated manoeuvres, as can be frequent in towns.

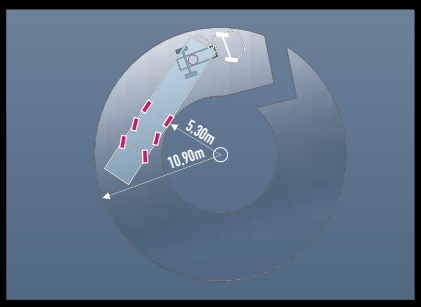
Anti-shock protection and steel twin tube roller buffers (Lamberet patent). Impacts are absorbed by the roller buffers fitted with an external steel tube and cellular rubber inside, mounted on a steel axis. Residual efforts are dissipated by the high inertia reinforcement arms on the chassis.



4 recessed flat ceiling lights with 8 LEDs with interior time switch.
These combine exceptional lighting, low consumption and durability. Surface mounted, like their switches, they cannot catch on the load or handling equipment.



Remote control for the steering axles.
The remote control enables the pre-positioning from the diver's cabin of the steering axles at the required angle, which can be done independently of the lock on the tractor unit's steering. An unbeatable protection for surviving the most delicate situations and manoeuvres intact.



A turning circle reduced by 30%.
The SR2 SuperCity has the benefit of the maximum capacity of a refrigerated fixed tri-axle semi-trailer with a 7450 wheelbase, but its turning circle has been reduced from 6873 mm to just 5016 mm. This is less than a 21 pallet carrier (5600 mm)!

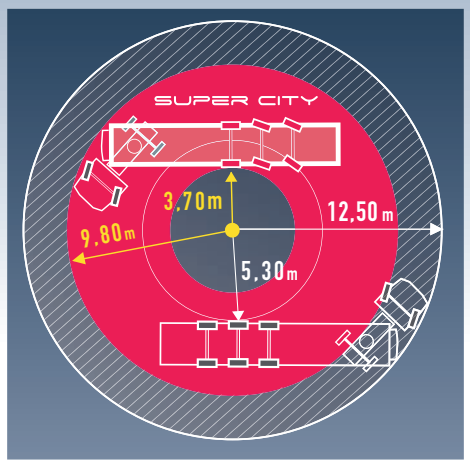
Flared chassis module with steering axles.
The modular design of the SR2 chassis means that the steering axle system can be accommodated without increasing the height of the chassis.
Each axle is independent.

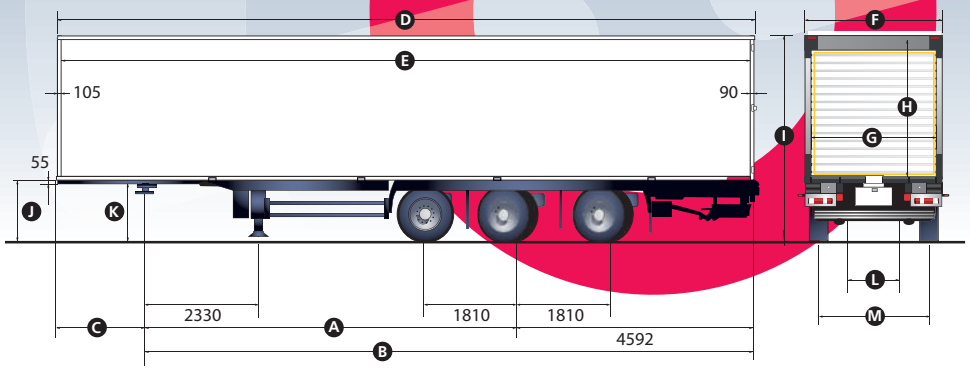
SEMITRAILER SR2 SUPER CITY

SOLUTRANS — PRIX DE L'INNOVATION TECHNIQUE DE LA CARROSSERIE INDUSTRIELLE — Lauréat 2011 — Remorques et semi- remorques

TECHNICAL SPECIFICATIONS

Turning circles : Combined tractor unit + SR2 SuperCity : ext. L. 16,500 mm - 33 pallets





Chassis / upper body dimensions

A	Wheelbase	7 m 35
L	Spar sill axle base for rear module	1 300 mm
L	Spar sill axle base SuperCity* flared joint central module	900 mm
M	SuperCity* central module track width	2 090 mm
	Max. steering axle central angle	14°
	Max. rear steering axle angle	32°
	Axle offset	120 mm
	Lifting axle	-
	Ø pneumatic suspension cushions	300 mm
B	Rear length	11 m 942
C	Front overhang (excluding unit)	1 m 60

* requires SAF 120 offset axles

Body dimensions and configuration

D	Overall length	13 m 60
E	Maxi internal length (except internal fittings)	13 m 385
F	Overall width	2 m 60
G	Useful internal width between panels (except internal fittings)	2 m 46
H	Internal height (except internal fittings)	2 m 60 / 2 m 65 / 2 m 70

Weights

	SR2 SC without cold unit, without tail lift, or accessories	SR2 SC with multi-temperature cold unit*, partition, without tail lift or accessories	SR2 SC *multi-temperature cold unit, **tail lift and partition
Empty kerb weight	8 275 kg	9 750 kg	10 400 kg
Maximum authorised loaded weight	38 t / 34 t	38 t / 34 t	38 t / 34 t
Total kerb weight (with towing vehicle)	44 t / 40 t	44 t / 40 t	44 t / 40 t
Estimated useful load	29 725 kg / 25 725 kg	28 250 kg / 24 250 kg	27 600 kg / 23 600 kg

* Cold unit: CARRIER Vector 1850 MT City - ** Tail lift: DHOLLANDIA DHSM 2000 PIEK

Coupling and unloading height (values in mm)

		EMPTY / LOADED			EMPTY / LOADED		
K	Coupling height	1 100 / 1 070			1 150 / 1 120		
H	Useful int. height	2 600	2 650	2700	2 600	2 650	2700
I	Overall height	3 980 / 3 950	4 030 / 4 000	4 080 / 4 050	4 030 / 4 000	4 080 / 4 050	4 130 / 4 100
J	Rear floor height: Mini	1 200 / 1 070			1 250 / 1 220		
	Road	1 290 / 1 260			1 340 / 1 310		
	Maxi	1 380 / 1 350			1 430 / 1 400		

* To be marketed

Comparative turning circle of the SR2:

SR2 vehicle Configuration	SR2 SuperCity 2 steering axles	SR2 HeavyDuty wheelbase 7450 fixed tri-axle	21 pallet type vehicle max 11m ext. L. - 1 fixed rear axle
Minimum internal turning circle (capacity to perform a U-turn or negotiate a roundabout)	5 m 016	6 m 873	5 m 60
External turning circle for an inside radius of 5,300 mm (capacity to avoid a corner obstacle in a curve)	10 m 900	12 m 093	10 m 900

(1) HD Heavy Duty

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