Solutions for Asphalt Transport

S.KI Tipper Trailer with Thermal Insulation.
Compliance from the Start. 
Ready for the Quality Initiative in Road Construction.

Get fit for temperature-monitored transport in road construction. The installation guidelines are clear – our solutions are sharply focused, and enable you to get a quick start with a selection that perfectly meets your needs.

The Federal Ministry of Transport has issued new guidelines for road construction and renovation. The aim is to improve road surfaces over the long-term, making sure roads become more durable. As a result, transport companies working in highway construction for transporting asphalt since 1 January 2015.

Thermal insulation of the body is now necessary to minimise payload heat loss. A heat resistant body cover prevents heat loss from the top. The quality will be checked at the time of transfer and before tipping with a valid temperature measurement. These regulations for federal highways – which have been in effect for construction sites larger than 18,000 square metres since 2015 – will be successively expanded to include all German roadworks by 2019.

Since 1 January 2016 new vehicles must be equipped with all-round thermal insulation. Vehicles constructed after 2017 must be equipped with a permanently installed temperature-measuring device enabling the temperature of the asphalt mixture to be read off directly before the mixture is unloaded into the feeder / road paver. Our S.KI tipper trailers with thermal insulation have been perfectly prepared for future requirements. So you can look to the future with confidence.
Perfect Combination.
Fully Insulated Rounded Steel Body with Light Chassis.

S.KI tipper trailers with a rounded steel body are the all-rounders among construction site vehicles. In particular for high-frequency tipping – this applies, for example, to the transport of mixed asphalt for road construction – robust steel bodies have proven their value. An optimised body geometry ensures a low centre of gravity. The complete, all-round insulation of the body represents the perfect transport solution for the new requirements in highway construction.

Schmitz Cargobull has drawn on its extensive experience in the area of temperature-controlled transport to offer insulation elements providing smooth, precision-fit thermal insulation for rounded steel bodies, which meet the statutory specifications stipulated by the German Federal Ministry for Transport (BMVI) with ease. All bodies have been prepared for the upgrading of measuring sensors, which is mandatory from 1 January 2017.

Insulation of the Rounded Steel Body

With the fully insulated rounded steel body with a Light chassis we offer a robust and payload-optimised transport solution for road construction. A newly developed elastomeric rubber foam is used for the insulation. In the case of the standard body variant (SR 7.2) with a dropside height of 1,460 millimetres, the innovative material saves a total of 200 kilograms in weight compared to its predecessor’s insulation. The insulation is installed using the segmental construction method. With this technique, the foam insulation lies directly on the outer wall of the body like a mat. Overlying this, aluminium sheets cover the individual insulating elements.

Seven Good Reasons for the S.KI SR with Thermal Insulation

- New, lightweight, rubber-based insulation material with outstanding insulating properties.
- Low water absorption (less than 3%) due to closed cellular structure of the insulating material.
- Robust and payload-optimised transport solution for road construction with an unladen weight starting at 5,790 kilograms.
- Semitrailer with low centre of gravity (better driving behaviour) due to optimised floor insulation and adaptation in the floor area.
- Floating insulating sheets for compensation of the linear expansion due to temperature – in the event of external damage, individual segments can be quickly replaced.
- High-quality, temperature-resistant tarpaulin with a convenient quick-tensioning device or electric sliding tarpaulin.
- All of the bodies are also prepared for retrofitting with digital measurement sensors (future-proof for the asphalt transport business).
Insulation with Ease.
Fully Insulated Aluminium Box Body.

A fully insulated aluminium box body with a Light chassis is the weight-optimised transport solution for road construction. An unladen weight of less than 5.2 tonnes – for a high payload – is achieved through the combination of robust aluminium box body and lightweight insulation components. The insulation is set flush with the floor, and the insulation on the side walls only marginally decreases the body volume. Since the outer dimensions of the body are not altered, the tipper trailer retains its low centre of gravity and can, for example, be combined with all trough covering options from the standard range. The body is available with an external pendulum tailgate or with an internal pendulum tailgate and a chute. All bodies have been prepared for upgrading of the measuring sensors. This is mandatory from 1 January 2017.

**Five Good Reasons for the S.KI AK with Full Thermal Insulation**

- Payload-optimised, full thermal insulation for construction site vehicles as of 5,170 kilograms.
- Low unladen weight of insulating elements from 380 kilograms.
- Outstanding insulation values in compliance with the legal requirements.
- Low centre of gravity – the body has the same dimensions as conventional versions.
- All roof options possible.

Manual roller tarpaulin cover with time-saving quick-tensioning device.

Long service life: Side wall with optional wear plate.
Safe Tipping.
Underride Guard Optimised for Work with the Road Paver.

The folding underride guard makes working with the road paver easier. Here, the newly designed folding mechanism creates more free space when manoeuvring and backing up to the road paver. The position of the tail lights has been raised to increase the distance to the hot asphalt temperatures.

**Four-point Temperature Measurement***

The illustration shows the positions of the four sensors on the side walls for temperature measurement in the body. The calibrated temperature-measuring device enables the temperature of the asphalt mixture to be read off before unloading begins. This device is also used to track the temperature between loading at the asphalt mixing plant and unloading into the feeder / road paver.

Source: BMVI (German Federal Ministry of Transport) circular letter “Measures for Improving Asphalt Paving Quality” of 12/2015.

**In detail:** Floor of the aluminium box body thermally isolated by insulating layer.

Insulation of the floor and side walls of the aluminium box body using high-temperature rigid foam.

Comprehensive modular body range: insulated, pendulum flap with chute.
Easy Handling.
Remote Control of the S.KI Tipper Trailer using the S.KI control App.

The S.KI control app controls important functions on the appropriately equipped S.KI tipper trailer via a smartphone or tablet.

These functions also include typical tasks for working with the road paver: A power-operated convertible roof is remote-controlled, as is the folding of the underrideguard. Depending on the road’s gradient the action of the paver brake can be changed. Cameras monitor the freight in the body, as well as the area behind the trailer. The camera image is displayed on the smartphone or tablet.

The S.KI control app is available for smartphones and tablets with Android or iOS operating systems, and is “personalised” for a vehicle so as to avoid operating errors.

The tilt angle assistant checks that the vehicle is in a horizontal position before tipping to minimise the risk of the vehicle tipping over.

The articulation angle assistant checks that the tractor unit is exactly aligned with the trailer. Both should be exactly in line for optimum safety when tipping.

With the help of two cameras the outflow of the bulk material in the cargo space, as well as the rear area during tipping and manoeuvring at the road paver, can be monitored live using the app.
Seamless Transparency.
The Use of TrailerConnect in Bulk Transport.

TrailerConnect facilitates the scheduling of construction site vehicles and optimises the delivery of asphalt at the paving site. Through exact indication of the vehicle’s position, journey times can be optimised and prompt delivery can be ensured. Dispatchers have a clear view of the vehicle fleet in the telematics portal without having to communicate with the drivers. At the same time, the trip history records the actual transport kilometres of every vehicle for your evaluation.

The pro-active monitoring of the trailer equipment including tyre pressure control helps to avoid breakdowns. Measuring the axle load protects against overloading. In this way you improve value retention, save money through needs-based maintenance and optimise the costs for your vehicle fleet.

With the introduction of the digital measuring sensors from 2017 onwards, you will benefit from the advantages of seamless temperature monitoring by TrailerConnect.

The electric sliding tarpaulin, controlled via the S.KI control app, allows unloading to be performed while only partially open. This saves time and helps to maintain the correct asphalt temperature. The quick opening and closing of the trough covering also provides considerable time savings and greater work safety.

The tyre pressure monitoring and re-pressurisation system actively monitors the tyre pressure in each individual tyre and, in the event of a slow loss of pressure, also makes it possible to continue driving a limited distance to reach a workshop.

The hydraulic pendulum tailgate can be controlled via the S.KI control app. This is ideal for controlling the bulk material outflow by limiting the extent of the tailgate opening during tipping. In the case of voluminous bulk material, the maximum opening angle ensures damage-free unloading.

TrailerConnect optimises the use of construction site vehicles.