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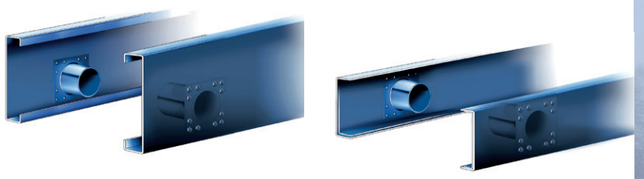
SISU frame

When you need power and torque, and plenty is available, it is critical to transmit it to the ground efficiently through the axles. An orthodox frame structure optimised for the task in hand is key in this respect.

With SISU Works, you can choose between two different types of frame:

a 460 mm-high C-profile frame, which needs no separte sub-frame. All necessary superstructure components are integrated into it, including the tipper axle, support lattice, the tipper with its cradles, platform controllers, etc. This structure forms a sturdy, light and straightforward unit, which has very good tipping stability.

a 300 mm-high U-profile frame, with a factory-fitted 160 mm-high SISU sub-frame on top. This structure has the same dimensions and features as the higher frame, but offers more versatile configurability of the vehicle's later stages.



The structures are designed and dimensioned for road maintenance and earth-moving work. SISU Works is exceptionally stable when gritting and tipping. The robust frame, which is equipped with round cross-beams, balances out the stresses exerted on it in tough earth-moving work, and the flexibility of the axles ensure good tyre grip. The truck is able to start off even in difficult weather and terrain conditions.

The SISU Works frame is designed and manufactured specifically for use in road maintenance work. Extra brackets for additional specialised equipment are designed and installed on the frame so they are optimally located and reinforce the entire frame structure. That means that even though it is lightweight, the frame will stand up to loads that average frames cannot withstand for very long.

Technical information

Frame	Cabin	
SISU high C-profile C-460 frame	Day cab	
SISU low U-profile U-300 frame	Sleeper cab	
	Sleeper cab, high roof	
Engine		
Mercedes-Benz OM501LA, V6	power 350 kW – 480 hp	torque 2300 Nm
Mercedes-Benz OM502LA, V8	power 405 kW – 550 hp	torque 2600 Nm
Mercedes-Benz OM502LA, V8	power 440 kW – 600 hp	torque 2800 Nm
Transmission		
Mercedes PowerShift G280-16	unsynchronised fully-automated transmission	
Mercedes Telligent G240-16	synchronised transmission clutch pedal-operated Telligent gear change	
Eaton RTLO 20918	unsynchronised manual transmission	
Vehicle steering system	**Vehicle suspension system**	
Mechanical-hydraulic, number of axles adapted in relation to size of chassis and location of steering axles.	Steel, trapezoid or parabolic-type leaf springs, and compressed air suspension on some of the axles, several different alternatives.	
Superstructures		
Factory-fitted superstructures specially developed for SISU Works based on customer needs and wishes, providing the opportunity to select all the latest accessories for road maintenance trucks. Furthermore, many accessories have a number of alternatives regarding structure, material, etc. In the structures and their tailoring, efforts have been made to create an end-product that is as fit-for-purpose as possible.		
Axles		
Heavy-duty axles developed for the most demanding conditions. Our wide axle range provides the opportunity to select the axle combinations and transmissions that best suit each type of vehicle. Load capacity on front axles 9–10 tons, and 19–22 tons in the bogies. Brakes electronically controlled pneumatic brakes, disc brakes on the front axles, drum brakes on the rear axles.		

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SISU reserve the right to make changes without further notice. 10/2011

SISU WORKS ROAD MAINTENANCE TRUCKS

https://truckmanualshub.com/

A ready-made solution for productive operations

SISU Works is a robust, top-quality vehicle that is designed for the most demanding conditions. SISU Works is the only road maintenance truck on the market that is fully ready to work straight from the factory.

Because nobody knows their own vehicle better than the customer, SISU Works is always designed and manufactured in co-operation with the customer. Rather than treating the chassis and superstructure as separate entities, the vehicle is built with the final purpose in mind throughout the whole process. This approach enables us to meet the needs and wishes of the customer much more accurately and efficiently than by building the vehicle in the traditional way. This results in stronger, simpler and lighter solutions.

Manufacturing a vehicle that is fully designed in advance makes sense and can be carried out quickly. Subassemblies are manufactured and assembled wherever it is most efficient to do so. Thus even the surface treatment is entirely factory-quality. The end-result is a complete transport solution that is tailor-made for the customer with no compromises. SISU grants a full warranty for the whole vehicle as delivered from factory, superstructures included. A vehicle that is ready for use ex-factory is a safe and profitable choice for a transport business.

Innovative SISU technology

SISU Works is equipped with the customer's choice of equipment that is best suited to performing operational tasks. In determining the road maintenance vehicle's platform, we consider optimal capacity as well as numerous special requirements. Its dimensions and structure take specialised antiskid treatment equipment compatibility and connections into account.

The rear of the frame is equipped with sifter sleeves, a side-mounted plough support and hydraulic and electric connections as required. The front plough bumper also strengthens the front frame structure, which means that the structure can withstand the stresses caused by using heavy, wide modern plough blades.

Equipment such as an advanced system of work and warning lights and an automated lubrication system for additional equipment contribute to SISU Works' excellent safety and ease of use, as well as ample equipment storage and other available options.

Power for the road

SISU Works is powered by a V6 or V8 engine, capable of producing 480–600 hp of power and 2300–2800 Nm of torque respectively.

The Telligent® gearshift offers the best usability of any manual gearshift. With a very short gear selection path, the gearshift can be operated with a slight movement of the hand.

PowerShift automated transmission makes for a pleasant driving experience. The fast gearshift of the PowerShift Offroad automated transmission continues to deliver high power during long ascents and when traction is poor.

With unsynchronised manual transmission, a skilled driver can outperform any automated transmission. The legendary Eaton Fuller is making a comeback in gravel pits as part of the SISU power train. The Fuller transmission range is by far the widest selection of transmissions available on the market. The lowest gear guarantees reliable decoupling in gravel pits, while the highest guarantees optimally cost-efficient driving on the road, with or without a load.

Unique bogie solutions

Increased engine power and heavy-duty trailers require the most powerful traction possible, especially on steep slopes. At the same time, the vehicle should be highly agile in narrow places and cost-efficient to run on main roads.

Equipped with a hydraulic lift and drive disconnect, **the bogie drive** developed by SISU meets these rigorous requirements in one vehicle. The hydraulic lift is integrated into the chassis structures, so it is stable and provides very powerful lifting. If necessary, the bogie can be lifted when loaded. An unloaded vehicle can be driven with the rearmost drive axle lifted and drive disconnected. This gives it the agility of a traditional bogie lift truck, but with a smoother ride, fewer moving parts and naturally, better cost efficiency.

SISU's legendary **bogie lift solution** is available on vehicles of up to 550 hp. The springs (trapezoid or parabolic) located above the axle and the separate hydraulic cylinders located outside the frame and connected to ingenious lifting linkage guarantee powerful lift even with a full load. In addition, the sturdy structure makes driving an unloaded vehicle stable. If necessary, the vehicle can be equipped with a friction drive unit for extra traction power.

Advanced hydraulics

Efficient, safe operation of additional equipment requires a sufficiently wide range of advanced hydraulics. SISU has several decades of experience in hydraulic systems for trucks.

The SISU road maintenance vehicle's additional equipment is controlled by means of information transfer based on the latest channel transfer technology, which enables simple operation with a display screen to guide the driver. This technology ensures that the driver can focus better on controlling the vehicle while operating the additional equipment.

When the hydraulics are constructed as high-quality components intended for practical work, the end-result guarantees a robust road maintenance vehicle that is built to last.