EN

RASCO

More than products. Partnership.

SOLID

Wide selection of options for all working conditions

Spreader for dry and wet spreading equipped with a solid agent tank with a volume of 0.85 to 12.0 m³, and a liquid agent tank with a volume of 480 to 3680 L. Ideal choice for all types of conditions in winter maintenance.

The choice of one of the five offered conveyor systems, possibility of mounting on all types of vehicles used in winter maintenance, robust design and advanced control systems guarantee the efficiency and cost-effectiveness of your investment.

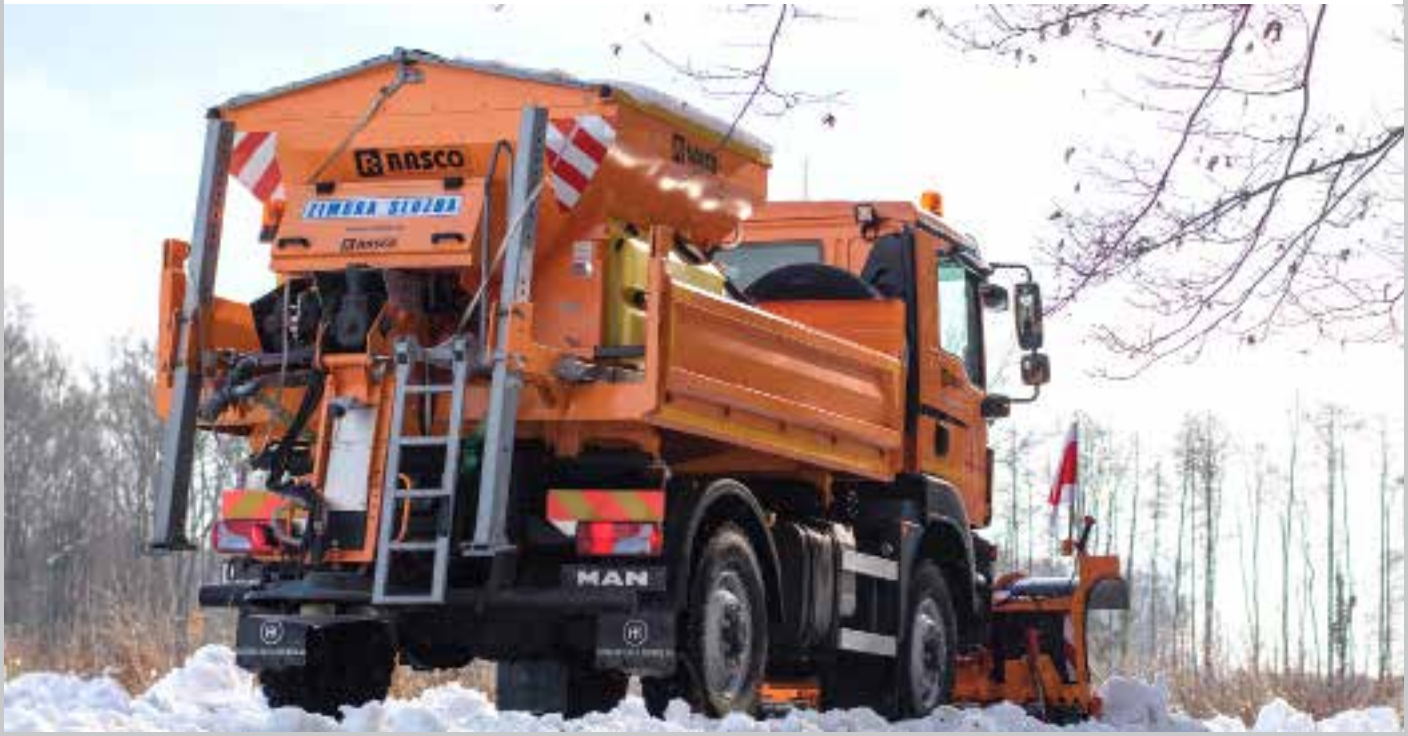
Ready for all winter conditions

Regardless of whether you are working in conditions of strong snow blizzards or mild winters, if you are clearing wide highways or narrow pedestrian crossings, using wet sand or fine salt as a spreading agent, and mounting the spreader on a truck or a small multifunctional vehicle: the SOLID family of spreaders is our answer to all your requirements with regard to a professional spreader. Strong and durable spreaders that have proven their reliability in the harshest winter conditions around the world will readily face any challenge of your winter service.

The SOLID family of spreaders is intended for spreading using dry and liquid agents. The five available types of conveyor systems guarantee optimal spreading results regardless of the type and quality of spreading agents. Beside solid spreading agents, a pre-wetting system can also be installed on SOLID spreaders, which gives them the option to mix the dry agent and the chloride solution. Wet spreading enables faster defrosting of traffic areas and reduces the consumption of dry spreading material. A reduced consumption of salt further reduces the overall winter service operational costs, and has a positive effect on the environment. Dosage of the spreading agent and all other functions and work parameters of the spreader are controlled electronically from the vehicle cabin by means of advanced control units that enable simple use.

The spreader can be mounted on any vehicle intended for winter maintenance, from multifunctional and light-duty vehicles to tractors and trucks. The mounting and de-mounting from a vehicle is very simple due to a wide selection of mounting mechanisms adapted to any vehicle. The spreader can be powered via the hydraulic system installed on the vehicle, a diesel-hydraulic power unit or the fifth wheel.

SOLID spreaders are designed as machines with low maintenance requirements. A simple procedure of preventive maintenance recommended prior to the beginning of the winter season enables the spreader to work continuously for months without the need for any service interventions. Key components of the spreader which have the most contact with salt, such as the spreader's bottom, chute exit and distribution spinner are created from stainless steel, which in combination with quality anti-abrasion and anti-corrosion surface protection guarantees a long lifespan of the device even in extreme working conditions.



WHY CHOOSE A SOLID SPREADER?

Adapted to any requirement of the winter service

The SOLID family of spreaders is the perfect choice for winter maintenance regardless of road type, weather conditions and type of spreading material.

The spreader is configured depending on vehicle size and type of drive, in accordance with the characteristics of the spreading material used.

Greatest choice of conveyor systems

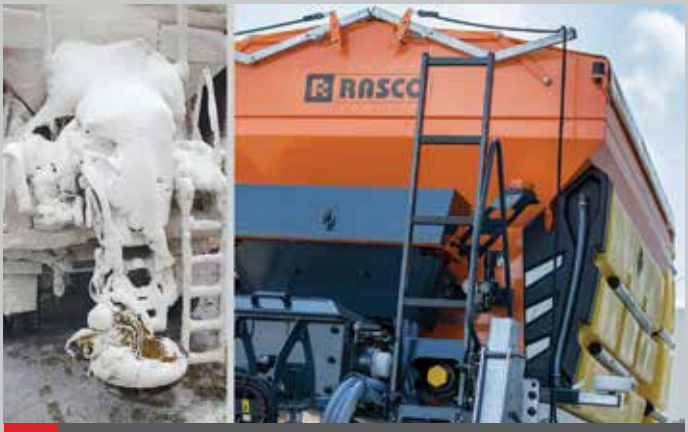
SOLID spreaders are available with conveyor system for dry agents in the form of a steel chain, steel chain with closed bottom, auger conveyor, double auger conveyor, or belt conveyor.

They can also be equipped with a pre-wetting system, which enables faster defrosting of traffic areas and reduces consumption of dry spreading material.

Total lowest cost of ownership

The unique surface protection system, easiness of use and maintenance, robust design, high-quality materials, and hydraulic components produced by renowned manufacturers guarantee that the SOLID spreaders are a safe investment.

Proven durability, safety, efficiency, simplicity, and availability of service parts and post-sales support guarantee the lowest overall cost of ownership of a spreader currently available on the market.



Proven quality and reliability

We have incorporated the experience gathered from over 40 markets and three continents where RASCO operates in RASCO spreaders.

The quality, robustness and reliability of RASCO spreaders has been proven on virtually all European roads, from the Arctic Circle over sunny Spain to the toughest winter conditions in Russia and Ukraine.

Equip the SOLID spreader with a conveyor system that suits you best

The SOLID spreader can be equipped with one of the five conveyor systems for materials for dry spreading. The choice of a conveyor system depends on the material used for dry spreading and your preferences.

Steel conveyor chain

SOLID L is especially designed for work with the most demanding materials for dry spreading, such as wet and adhesive sand with a high percentage of clay, coarse sea salt or a mixture of different materials.

High reliability and efficiency of the spreader is guaranteed by a strong chain conveyor which prevents the formation of a tunnel effect, regardless of the quality of spreading agents.

Steel chain with lowered bottom

SOLID LLB is a patented chain conveyor system and represents a unique solution which combines the best characteristics of every known conveyor system.

The main advantage of this system is the prevention of falling out of the spreading material into the box or on the vehicle chassis, providing simultaneous robustness and reliability of the steel chain conveyor system.

This conveyor system ensures uniform discharging of the spreader and continuous fragmentation of the material for dry spreading before it is delivered to the distribution system.

Auger conveyor

SOLID X is the best choice for spreading with materials such as fine salt with a low moisture content or stone granules. Precision and efficiency of work with SOLID X is enabled by an auger conveyor system. The auger conveyor has a built-in fragmentation mechanism which prevents the passage of larger lumps of material for dry spreading onto the spinner.

Rubber belt conveyor

The SOLID T spreader is intended for spreading with dry materials with low or moderate humidity. Reliability of spreading with more demanding materials using the SOLID T spreader is guaranteed by a rubber belt conveyor used for supplying the material. The shape of the belt conveyor prevents adhesion of the material, and a part of the conveyor system is also equipped with a fragmentation system for the spreading material.

Double auger conveyor

SOLID XX uses two auger conveyors as the transportation element. Therefore, SOLID XX can be used as a spreader for one or two materials for dry spreading. If the spreader carries two materials for dry spreading, the hopper is divided into two sections.

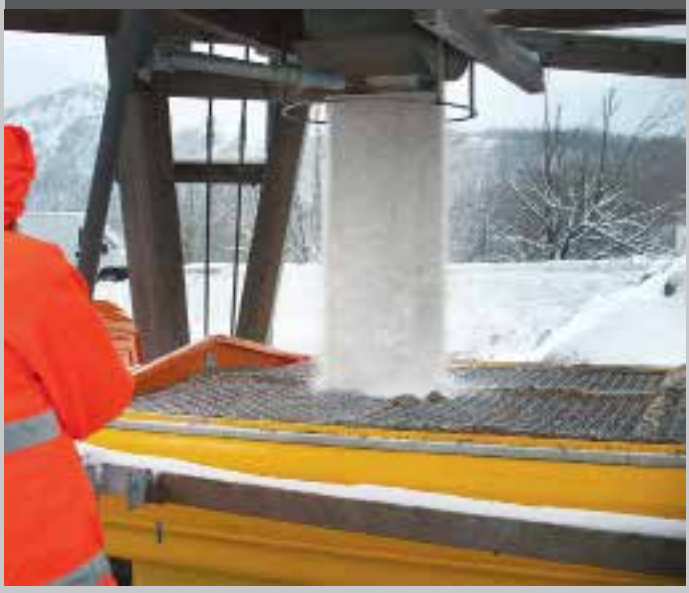
MATERIALS FOR DRY AND WET SPREADING

From wet sand to fine salt: SOLID can work with anything

The choice of material for dry spreading depends on weather conditions, user preferences and legal regulations for road maintenance. The most commonly used materials for dry spreading are salt of different grain size and moisture content, rock salt, sand and stone granulate or a mixture of these materials. Although salt is the most commonly used material for dry spreading, at low temperatures when spreading salt no longer gives the desired results, the final resort are sand and stone granulate. Sand is often wet, sometimes with a high percentage of clay. Ensuring efficient spreading using such materials and respecting the required parameters can be a challenge for any spreader.

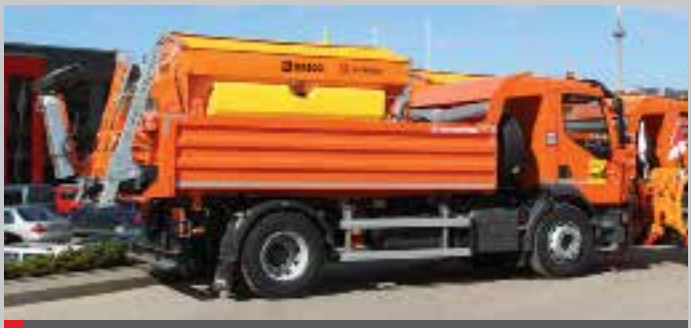
When salt is used as the spreading material, wet spreading achieved by mixing salt and a water solution of salt enhances and accelerates de-icing of roads. Wet salt adheres to road surface more easily, and its action is accelerated and prolonged.

SOLID spreaders have been developed by taking into consideration the properties of all materials for dry and wet spreading. The five available conveyor systems for SOLID spreaders guarantee that a properly configured spreader will work in accordance with the expectations and preferences characteristic of a certain market.



Every spreader needs a vehicle

SOLID spreaders can be mounted on almost any vehicle intended for winter maintenance. With easy mounting onto vehicles, there are also a variety of mounting options for the SOLID spreader:



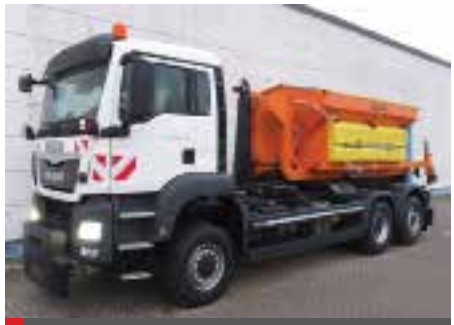
Mounting on dump box

Mounting directly on vehicle chassis

Mounting on dump box balls

Mounting on trailers

Mounting on vehicles equipped with a container lifter



Mounting on vehicles equipped with a hooklift system

RASCO spreader safety

Mounting the spreader on vehicles is performed according to strict safety standards and recommendations of the vehicle manufacturer.

The spreaders can be quickly and easily mounted or de-mounted from vehicles.

Multiple safety elements protect the user during spreader operation and maintenance.

Spreaders are marked with light and reflective markings that ensure visibility of the winter service vehicle regardless of weather conditions.

Solution for vehicles with and without built-in hydraulic system

Vehicles with built-in hydraulic system

SOLID spreaders can be powered using a built-in hydraulic system of the vehicle if it is designed according to the EN ISO 15431 standard.

If the hydraulic system of the vehicle is equipped with LS, the spreader must be equipped with a compatible hydraulic installation that is available as an option.

Power via the fifth wheel

Solution intended for vehicles without a built-in hydraulic system. The system consists of a wheel mounted directly onto the spreader and a hydraulic pump.

While driving, the fifth wheel powers the hydraulics which enables the spreader to work.

Vehicles without built-in hydraulic system

If the vehicle is not equipped with a hydraulic system, the SOLID spreader can be powered using the highly reliable diesel-hydraulic power unit which is available as an option with the spreader.

With this solution, the spreader becomes independent of the vehicle and can be easily and quickly moved to any carrier vehicle of sufficient capacity. In a particular edition, the diesel-hydraulic power unit mounted on the spreader can be used to power the front or side plough.

Intuitive and advanced control units for maximum efficiency

The work of all RASCO spreaders is controlled by EPOS control units. Their dedicated development by RASCO experts in cooperation with the users makes EPOS control units a leading solution for spreading control and monitoring. The EPOS family of control units is the result of the knowledge and experience gathered in the quarter of century in over 40 markets where RASCO operates. The result is intuitive control units, easy to use, designed for controlling the spreader without taking your eyes off the road.

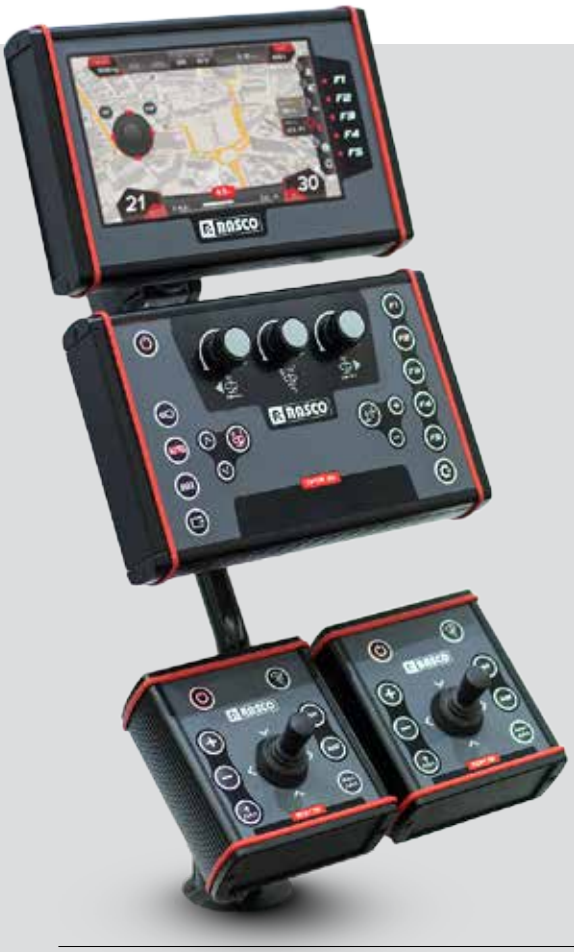
SOLID spreaders can be controlled with EPOS 10 and EPOS 30 control units. EPOS 10 enables control of all spreader functions, and EPOS 30 adds the option of wireless connectivity, GPS automatic sprinkling, navigation, and front and side snow plough control.

The high reliability of compliance with the set parameters is achieved by using the system of feedback connections with the spreader's actuators, and the simple and rapid calibration system of the spreader ensures precision of spreading using different spreading materials.

Geolocation and navigation in the service of w[illegible] maintenance

Geolocation of vehicles and navigation are standard functionalities that are used primarily for easier and faster navigation on the roads.

They can be used in the winter road maintenance service for faster, easier and more reliable maintenance of smooth traffic flow. Record the routes used by winter road maintenance vehicles once. Add spreading parameters to segments of recorded routes. After that, the winter road maintenance drivers must only follow the instructions of the navigation system, and adjusting of the spreading parameters is fully left to the EPOS 30 control unit according to the pre-set parameters.



EPOS	5	10	30
Control of spreading quantity and width	•	•	•
Dry spreading	•	•	•
Wet spreading	•	•	•
Liquid spreading	•	•	•
Travel-dependant spreading	•	•	•
Adjustment of the spreading pattern asymmetry	•	•	•
Spreading control using feedback connections	•	•	•
Separate adjustment of left and right spreading width		•	•
Thermal camera		•	•
Automatic spreading using GPS location and predefined routes			•
Online & offline maps			•
Connectivity via Bluetooth and Wi-Fi			•
Compatibility with additional control units (e.g. for front/side snow plough)			•

Keep track of your winter service fleet of vehicles in real time

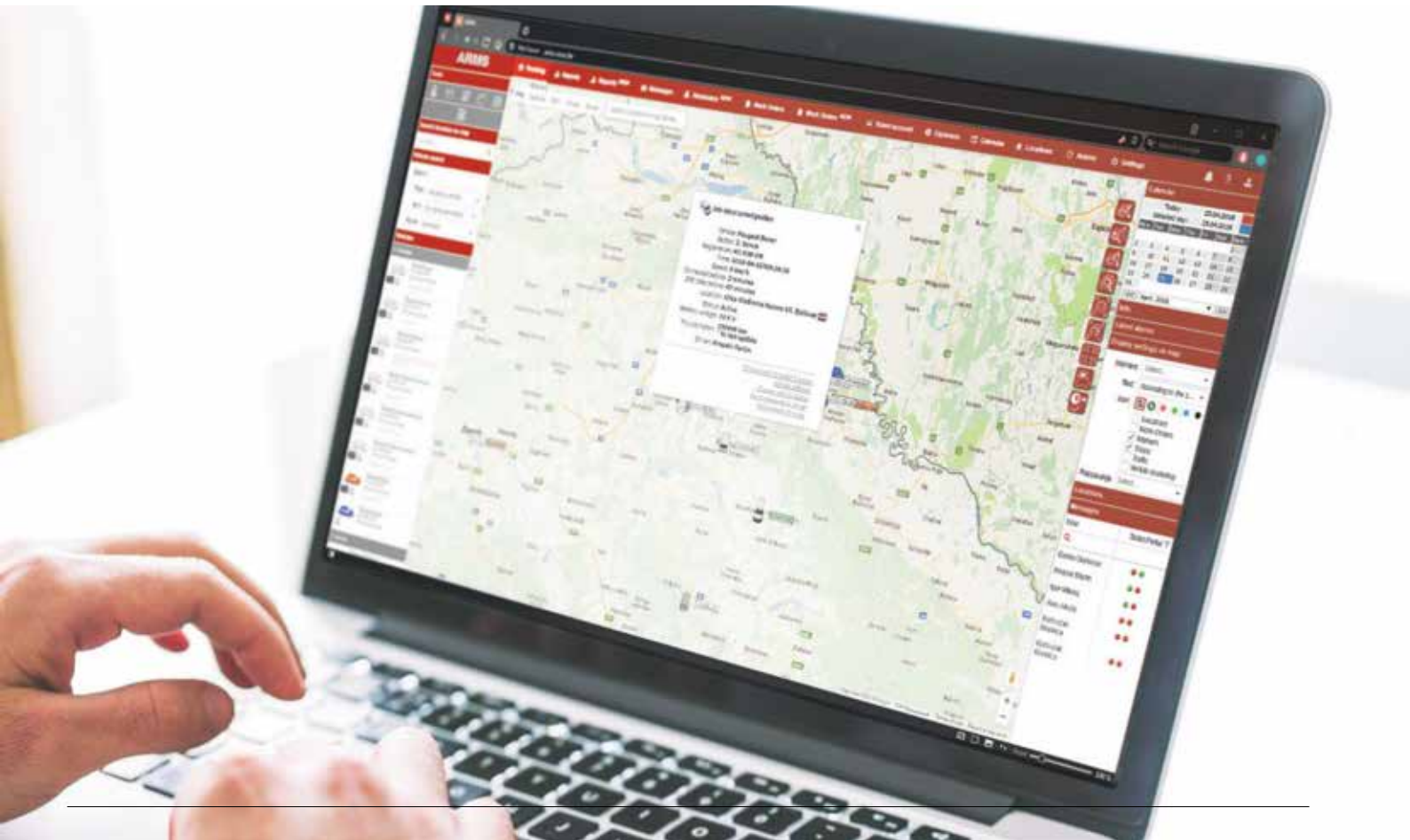
The current position of the spreader, spreading parameters settings, working hours, and historical movement and usage data are information that you need available at any time. RASCO spreaders are adapted for connecting with monitoring and tracking systems.

ARMS is an information and communication system for control, central monitoring, reporting and optimization of activities related to the maintenance of traffic infrastructure. Monitoring of working hours of people and machines as well as of the used resources (such as the used spreading salt, vehicle fuel etc.) in real time creates a unique possibility to quickly decide on potential saving methods. Unchangeable logs protect the user from responsibility by providing clear information on any taken action, while the reduced consumption of spreading material at the same time protects traffic infrastructure and its surroundings.

The system gathers information on device and vehicle usage in real time using a data mobile approach, standard in almost all countries of the world.

The application which collects information is placed in the "cloud" and is maintained by RASCO experts, which reduces operative costs and the need for system maintenance by users. The user can approach the system through a simple web interface from any computer.

ARMS can be integrated in a larger intelligent transportation system (ITS) or it can be connected to smaller systems such as RWIS (Road Weather Information System).



TECHNICAL CHARACTERISTICS

Model	Dry agent hopper	Liquid agent tanks capacity	Conveyor system
	m^3	L	
For small vehicles			
0.85	0,85	480	Auger Belt
1.0	1,0		
1.2	1,2		
1.5	1,5		
For medium-sized vehicles			
1.7	1,7	840	Auger
2.0	2,0	800	
2.5	2,5	1000	
3.0	3,0	1200	
3.0	3,0	1240	Belt / Chain
For Unimog			
1.8	1,8	-	Double auger
2.2	2,2		
2.5	2,5	1120	
2.8	2,8		
For large vehicles			
3500	3,5 - 7,0	1840	Auger Double auger Belt Chain Chain with lowered bottom (LLB)
4000	4,0 - 7,0	2400	
4500	6,0 - 9,0	2700	
5000	6,0 - 9,0	3000	
5800	8,0 - 12,0	3650	

CHOICE OF SPREADER EQUIPMENT

- Cover grids and tarpaulins
- Edge protection from filling up
- Safety fences
- Access platforms
- Spinner up to 6, 9 or 12 m
- Variety of mounting options
- Storage legs
- Control units, sensors, cameras and motors for automation of the spreader
- ARMS system
- Multiple spreader power system options
- Work lights and rotating lights
- Graphic markings
- Colour by customer's choice

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