

M 2140 E | TSW 2140 E  
Gross weight of 12,000 to 14,000 kg

**BERGMANN**

*...die Spezialisten*

# Low-bed manure and universal spreaders

A strong line for effective operations





*Proven quality:  
"Made in Goldenstedt"*



BERGMANN, a successful, medium-sized, family-owned company in the third generation, has been firmly linked to its business location in Goldenstedt and its people for over 125 years.

Our actions are determined by an awareness of tradition and our innovative strength. Our state-of-the-art products for spreading and grassland technology, harvesting and transport logistics meet the highest quality standards and are in use worldwide every day.

As a strong and reliable partner in the agricultural sector, we develop and produce practical agricultural technology for our customers at our company's factory in Goldenstedt.

Our company philosophy, our ambition and our commitment are:

**Quality "Made in Goldenstedt"**



# The BERGMANN low-bed spreaders

BERGMANN has always pursued innovative ideas and significantly promoted important developments. Our innovative, state-of-the-art low-bed spreaders are the ideal choice for environment friendly large-surface spreading of quality materials, such as compost, organic sewage sludge, lime and all kinds of cattle and poultry manure. BERGMANN low-bed spreaders operate reliably even under difficult conditions. Due to their high quality standards, BERGMANN spreaders were awarded the highest recognition for functionality and quality with outstanding spreading accuracy by the German Agricultural Association DLG.

Wherever particularly demanding conditions prevail, BERGMANN low-bed spreaders come into their own. To cater for different materials and spreading requirements, all vehicles can be fitted with various spreader units for application rates from 1 to 50 t/ha.

With their unique concept with a wide, conical body and high tyres, BERGMANN low-bed spreaders are the benchmark regarding low ground disturbance and reliability. Thanks to their compact design and low centre of gravity, low-bed spreaders are exceptionally agile and ideally suited for use on inclines. Their low transfer height makes loading possible even with smaller loaders.

A wide range of optional extras allow the machines to be adapted to specific customer requirements. The low-bed spreaders can be operated via ISOBUS.



# Low-bed spreader M/TSW 2140 E

## Features at a glance

### TSW 2140 E:

- Milling unit (1,400 mm passage height) with two horizontal beaters and chain drive (standard); **optional cardan drive**
- **Screwed double tines** for finest shredding of the spreading material
- Disk spreader unit with two disks (ø 900 mm, 4 spreader blades each) for **exact spreading of all materials**.
- Optional **wide spreading unit V-Spread** for working widths up to 36 m (spreader disks ø 1,000 mm each)

### M 2140 E:

- **Hybrid spreader unit 2-Spread** (1,650 mm passage height) with two vertical beaters
- The ideal combination of manure and universal spreader unit, also suitable for lime, compost and other spreading materials

**Hydraulically driven scraper floor** with four chains with 25 t breaking load for outstanding reliability and reversing function.

**Bolted scraper floor bars** for easy replacement.

Optional **dosing wall** for optimised material dosing.

**Conical all-steel bin** prevents bulking of material in front of the spreader unit and ensures superior reliability, consistent application rates and reduced power demand.

Unique, sturdy, self-supporting all-steel bin with a width of **1,800 mm** for **maximum payload** and **minimum cleaning and maintenance times**.  
Optionally with a mechanical weighing system.

### Operation of the hydraulic functions:

- tractor control units (standard)
- e-control light (optional)
- PILOTBOX (optional)
- ISOBUS (optional)

### VIDEO



Robust single-axle chassis with 2,400 mm track for difficult operating conditions.

Unique, large VF tyres 480/95 R50 for **minimum ground disturbance** through low tyre pressure and large footprint.

Air brake as standard, for maximum road safety.

**EU type approval (CoC) as standard;** no country-specific national approvals necessary.

**One-piece drive train** for superior reliability.

Separate protection of the transfer case.

**Automatic chain tensioners** that are clearly visible from the driver's seat and easy to adjust, ensure reliable operation at all times.

**Low drawbar** (standard) for superior driving comfort or **high drawbar** (optional).

Mechanical drawbar suspension as standard; hydraulic drawbar suspension optional.



# BERGMANN

## Low-bed manure and universal spreader M/TSW 2140 E

Single axle | 12,000 - 14,000 kg



**Easy coupling**  
The M/TSW 2140 E features a height-adjustable, mechanically suspended low drawbar as standard. The low hitching point makes starting off at high loads easier. The drawbar's slim design also makes for a highly manoeuvrable tractor-trailer combination. A mechanically suspended high drawbar and a hydraulic drawbar suspension are optionally available in combination with both the low and the high drawbar.



Various drawbar eyes are available for coupling. The standard ball coupling offers superior driving comfort at minimum wear. The hydraulic hoses are stored neatly in the hose cabinet, where they are protected from soiling.



**Convenient parking**  
The Jost jack stand with a tongue load of 10 t and 2-speed gearbox ensures easy coupling and uncoupling of the vehicle with low effort. For increased convenience, a hydraulic jack stand is also available.

**Unique concept**  
With its unique concept, the M/TSW 2140 E stands out among low-bed spreaders. It has a 1,800 mm wide, conical body, which reliably prevents bridging in the body and bulking of material in front of the spreader unit. It also ensures consistent application rates and reduces the power demand of the scraper floor drive. The tyres are Alliance 354 AGRIFLEX+ VF 480/95 R50, which ensure minimum ground disturbance thanks to their large diameter of nearly 2,200 mm and low possible tyre pressure of approx. 1 bar.

At this equipment level, the M/TSW 2140 E is certified as standard with full EU type approval. The stable single-axle chassis with air brake, an axle cross-section of 130 mm and a track width of 2,400 mm ensures comfortable, even driving characteristics on both field and road. Plastic mudguards are standard.



**Optional tyres**  
In combination with 680/80 R42 or 800/70 R38 tyres, an axle with a cross-section of 130 x 130 mm and a 2,600 mm track width is optionally available. Due to the vehicle's overall width of 3,290 mm or 3,490 mm, it cannot be EU type approved.

### Conical all-steel bin

The fully welded, self-supporting conical all-steel bin reliably prevents the material from bulking in front of the spreader unit, ensures constant application rates and reduces the power demand of the scraper floor drive. It has a long service life and offers maximum payload. Its open design without subframe allows the spreader to be quickly and easily cleaned and serviced.



### Perfect visibility

The body's front wall features viewing windows, which provide the driver with an unimpeded view of the cargo space (top) and scraper floor (bottom) at all times. The scraper floor can be easily reached for cleaning and maintenance through a large maintenance hood. The standard equipment includes a rockfall screen, which protects the driver from any material that is thrown towards the front.



### Easy access

An access ladder is fitted on the right side in driving direction to allow checking of the body from above. The access ladder folds away to ensure maximum ground clearance in the field.



### More load volume

The side walls are protected from damage by the scraper guards, which are made of recycled plastic and are fitted as standard. To increase the load volume, 350 mm high, inclined side wall extensions are available.



### Robust and low-wear

The scraper floor is made of steel with four robust round-link steel chains (14 x 50 mm each, 25 t breaking load per chain) with scraper floor bars. The bars running on separate wear rails are screwed in, making them easy to replace. They are open towards the underside, so that they convey the material to the spreader unit with a double raking action. For optimum conveying of the material, the bar mounts are angled downwards to ensure that the scraper floor bars are reliably pulled to the floor.



### Reliable and powerful

The chains rest very low in the chain sprockets on the feed shaft at the rear. Integrated scrapers at the front and rear reliably prevent chains from skipping.



### Convenient chain tensioning

The automatic tensioning system ensures a constant tension of the scraper floor chains, making for reliable operation and smooth running. The driver has a clear view of the automatic tensioning system with its four tensioning stations, which can be easily adjusted from the outside.



### Powerful drive

The scraper floor is driven hydraulically via the tractor's control units. Infinite adjustment of the scraper floor speed via a flow control valve, e-control light, PILOTBOX or ISOBUS is optionally available. The large-sized, reinforced spur gearbox ensures optimum power transmission. It is also ideally suited for spreading lime or sticky materials.

### Splash guard

The M/TSW 2140 E does not have a dosing wall as standard. A splash guard is fitted in the upper section of the spreader unit of the TSW 2140 E, which prevents the material from being thrown forwards by the milling beaters.



### Optimised dosing

A hydraulically adjustable dosing wall with a passage height of 1,650 mm (M 2140 E) or 1,400 mm (TSW 2140 E) is optionally available. In combination with the scraper floor speed, the dosing wall opening height controls the material spreading rate.

The exact position of the dosing wall is conveniently indicated by the mechanical height indicator with its large scale on the spreader's front wall.

The dosing wall of the TSW 2140 E in combination with ISOBUS operation is optionally available with a position sensor. The dosing wall height is displayed on the operator terminal. The dosing wall can also be automatically opened to a preset opening height at the press of a button.



### Low-maintenance drive train

The one-piece drive train has a high load capacity, is fitted without spring pins or similar and is centrally protected. This makes it very low maintenance.



M 2140 E



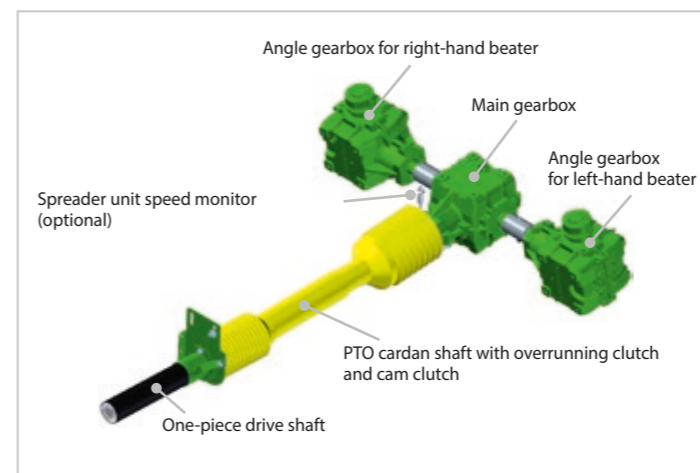
### Hybrid spreader unit 2-Spread

The 2-Spread spreader unit with two vertical beaters is the ideal combination of manure and universal spreader unit. In addition to solid manure, it can also be used for spreading lime, compost and other materials with working widths of up to 18 m.

It has a lower power demand than a universal spreader, and the throughput is up to 100 % higher. This makes 2-Spread more efficient than conventional manure spreaders with vertical beaters. The spreading quality is equal to that of a standard disk spreader unit.

### Robust drive

The drive of the 2-Spread spreader unit features robust gearboxes for a long service life. An overrunning clutch and a cam clutch before the main gearbox ensure reliable operation.



### Outstanding throughput rates

The 2-Spread hybrid spreader unit of the M 2140 E is fitted with two vertical beaters (ø 1,050 mm) and connected spreader disks (ø 1,050 mm, each with three adjustable spreader blades). It has a passage height of 1,650 mm for exceptionally high throughputs. For optimum shredding and spreading of the material, screwed in spreader blades and flat-steel tines are alternately arranged on the beaters.





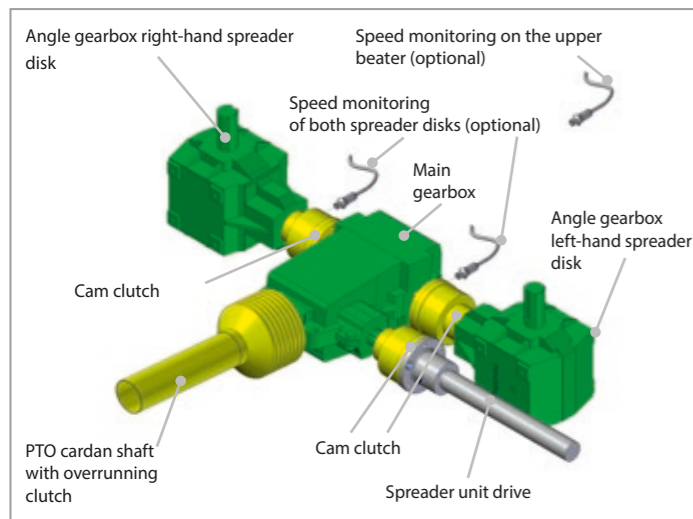
**Ideal power transmission**

As standard, the milling beaters are driven via roller chains. Spring-loaded chain tensioners ensure perfect power transmission and low wear. To simplify chain drive maintenance, an automatic drive chain lubrication system is optionally available.



**Quiet operation, minimum maintenance**

The cardan drive can optionally be selected for driving the milling beaters. The advantages of the cardan drive are its quiet operation, minimum maintenance requirements as well as substantial cost savings due to its longer service life. The cardan drive is required for the V-Spread wide spreading unit.



**Long service life**

The drive of the universal spreader unit (standard and V-Spread) features large-sized gearboxes for a long service life. An over-running clutch before the main gearbox and cam clutches before the disk gearboxes and the milling unit drive ensure reliable operation. For added safety, speed monitoring in front of the disk gearboxes and on the upper beater is optionally available.

**Perfect shredding**

The milling unit of the TSW 2140 E features two horizontal beaters and has a passage height of 1,400 mm. For optimum shredding, the milling beaters are fitted with double tines in a V-arrangement. These are screw-fitted for easy replacement. For improved stability and a better material flow, the tine beams are inclined between the tines. This also reduces power demand.



**Exact setting**

To prevent damage to the spreader hood, it is fully lined with strong PE panels as standard. The lower part of the spreader hood – the lower tailgate – can be adjusted in passage height and inclination. This allows the material feed point on the spreader disks to be ideally positioned for precise spreading of different materials



under varying conditions. A spring-loaded auto-reset system provides protection against foreign bodies.





### Standard universal spreader unit

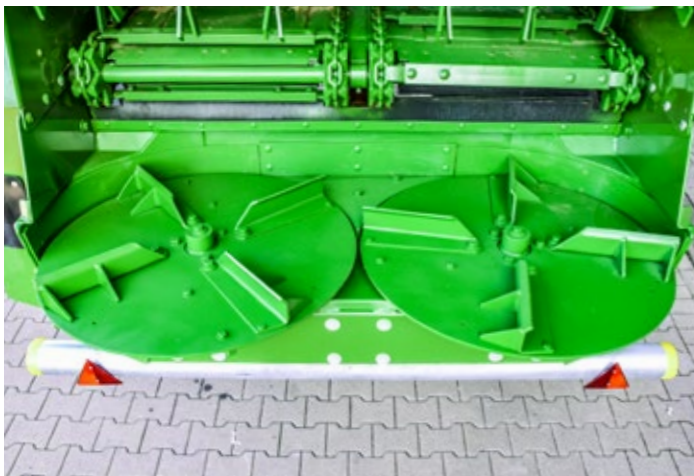
The standard universal spreader unit with two horizontal milling beaters and disk spreader unit is ideal for spreading different materials with working widths of up to 24 m. The material is finely shredded by the milling beaters and evenly fed to the spreader disks for a perfect spreading pattern.



### Wide spreading unit V-Spread

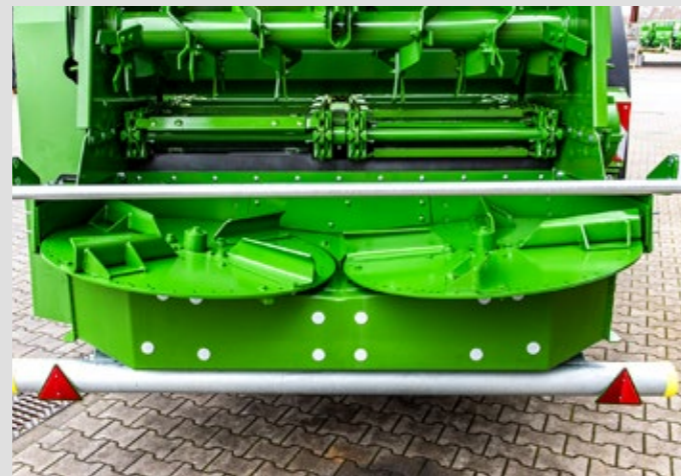
The innovative, patented V-Spread wide spreading unit is optionally available for the TSW 2140 E. With two horizontal milling beaters and disk spreader unit with spreader disks arranged in a V-pattern, it is ideal for spreading various materials at working widths of up to 36 m (depending on the material).

The material is finely shredded by the milling beaters and evenly fed to the spreader disks for a perfect spreading pattern. V-Spread achieved top marks in the DLG test and was awarded the "DLG Anerkannt" (DLG Approved) quality seal.



### Superior spreading quality

The standard disk spreader unit of the TSW 2140 E features two spreader disks (each with  $\varnothing$  900 mm and four adjustable spreader blades). For materials that cause rapid wear, a disk spreader unit with thicker disks as well as Hardox-grade spreader blades and guide plates is optionally available.



### Maximum working width

The V-Spread wide spreading unit is equipped with a disk spreader unit with two spreader disks arranged in a V-pattern (each  $\varnothing$  1,000 mm and with four adjustable spreader blades). For materials that cause rapid wear, a V-Spread spreader unit with Hardox-grade spreader blades and guide plates is available. The greater working width reduces the number of passages required for a given area, thereby reducing ground compaction. The use of tram lines is also possible at more than 24 m. Throughput is higher compared to standard spreader units.



### Accuracy at the field edge

Three versions of the hydraulically operated spread pattern limiter are optionally available for the TSW 2140 E: left side only, right side only, and both sides. The spread pattern limiter allows precise spreading at the field edges and even fertilisation all the way to the field edge. It also prevents soiling and contamination of roads, paths and waterways.

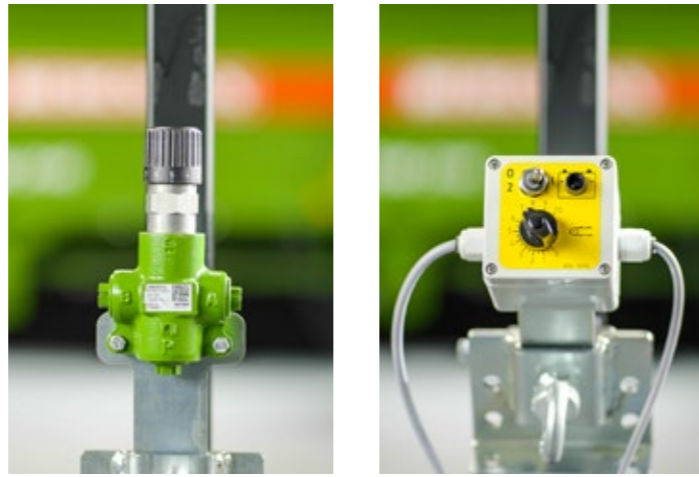


### Enhanced operator convenience

An optionally available sensor detects whether the spread pattern limiter has been activated or deactivated. When the spread pattern limiter is lowered, the scraper floor speed is automatically reduced to maintain a constant application rate at the reduced working width. This function is available only in combination with ISOBUS operation.

### Operation via control units

As standard, the hydraulic functions are operated via the control units of the tractor. An option for adjusting the scraper floor speed via the manually adjustable flow control valve or the electronic e-control light unit is available.



### Operation via PILOTBOX

The optional PILOTBOX allows easy operation of the hydraulic functions. The operator controls are arranged clearly and ergonomically and each control has a specific function. The number of functions that can be controlled depends on the equipment. On the tractor, only a single-acting control unit and an unpressurised return are required. Load sensing is optionally available.



### ISOBUS terminal CCI 50

The CCI 50 ISOBUS terminal with 5.6" touch screen, 12 function buttons and a scroll wheel can be used with all machine makes. This terminal can be expanded with a Task-Controller for order management and documentation as well as the automatic Section Control.



### ISOBUS terminal CCI 800

With its large 8" display, the CCI 800 allows the operator to fully focus on the task at hand. Multi touch in combination with the innovative menu navigation makes it as easy to operate as a smartphone. Functions such as Task-Controller and Section Control can be integrated. A connection to the agrirouter is also possible. For even more convenience, camera images can be displayed in addition to the user interface.

### ISOBUS comfort operation

Superior user friendliness and high ease of use with optional ISOBUS operation. Even inexperienced drivers will have no problem operating the intuitive user interface with the self-explanatory graphics and icons. A load counter and the speed monitor are included as standard in the ISOBUS software. Thanks to the AEF-certified software, the vehicle can be operated via any ISOBUS terminal. A tractor with its own ISOBUS-compatible terminal does not require an additional terminal in the cab. This means that the driver has a clear all-round view, which improves road safety and provides a better overview on the field.

Also optionally available are additional AUX-N control devices, such as the CCI A3 multi-function lever and a connection to the TC Task-Controller (operating status, documentation, selective spreading (VRC), Section Control (SC), etc.). On the tractor, only a single-acting control unit and an unpressurised return are required. Load sensing is optionally available.

### ISOBUS terminal CCI 1200

The CCI 1200 is an ISOBUS terminal with 12.1" display and intuitive multi-touch operation on smartphone level. The large terminal offers plenty of space for the simultaneous view of several apps. It also allows two ISOBUS-capable machines to be displayed and operated at the same time. Apps for automatic section control and variable spreading ensure a precise application. In addition, the CCI 1200 is "ready for agrirouter" and can be used for all machine makes.



### Exact documentation

The highly accurate optional weighing system, consisting of weigh bars between axle and body, and the K80 measuring drawbar eye allow exact control of the load, total spread mass and application rate. The load weight is indicated on a separate weighing terminal or, optionally, via ISOBUS.



### Exact application rates

The ExaRate weighing compensation system is integrated in the ISOBUS software and continually monitors the weight reduction during spreading and compares it to the specified application rate (t/ha). The actual application rate is automatically adjusted to the specified application rate. This makes the organic fertiliser go even further, supplying the soil with just the right amount of nutrients for a higher crop yield.



### Easy maintenance

Maintenance of the scraper floor is made easy by the central lubrication bank fitted as standard equipment with four easily accessible lubrication points in the front area of the vehicle. A further lubrication bank with three lubrication points is located in the rear area of the spreader for maintenance of the rear drive shaft.

### Selective cultivation

Selective cultivation (Variable Rate Control, or VRC) at non-homogeneous soil conditions is possible through the use of application maps in the ISO XML or Shape format in combination with the BERGMANN control system. This allows, for example, fertiliser to be applied as needed, thereby maximising yields and minimising costs.

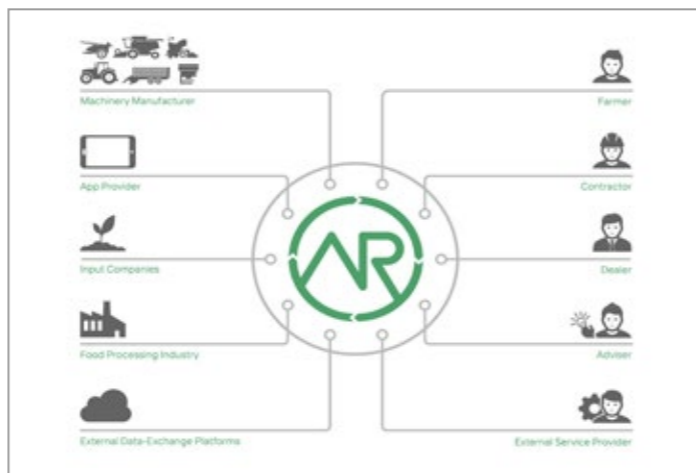


### Reliable lubrication

The optional central lubrication system automatically lubricates all connected lubrication points at the set intervals. This significantly reduces periodic maintenance times for the user.

### Easy data exchange

The agrirouter is a neutral, generic web-based platform for data exchange between machines and agricultural software. Machine, GPS and order data can, for example, be saved in ISO XML format and conveniently transferred from the terminal via the agrirouter to the farm's agricultural software. The agricultural software can also send data such as application maps to the vehicle.



### Counting made easy

For documentation on machines without ISOBUS equipment, the optional load counter counts the spread loads and displays them at the press of a button.

### Everything in sight

The optional cameras at the rear of the vehicle and at the front wall ensure a better overview for enhanced convenience. The video system provides the driver with a clear view on all relevant areas. The camera images can either be shown on a separate monitor or on the ISOBUS terminals CCI 800 and CCI 1200.



### Working lights

LED working lights at the top of the spreader unit and in the cargo space ensure excellent visibility in the working areas. The optional working lights are operated either from a control box, a PILOTBOX or conveniently from the ISOBUS.



### Good visibility

In addition to the required lighting, further lighting options, such as LED rear lights instead of the standard rear lights are optionally available.



### Europe-wide approval

As standard, the M/TSW 2140 E has full EU type approval according to the official regulation. The CoC (Certificate of Conformity) papers are also supplied.

Especially when reselling within the EU, type approval is an advantage, as it removes the need for individual national approvals.

The EU type approval is valid only in combination with the 480/95 R50 tyres.



### Technical data

		M 2140 E	TSW 2140 E
<b>Dimensions and weights</b>			
Gross vehicle weight	kg	12,000 – 14,000	
Dead weight*	kg	5,900	5,500
Load*	kg	6,100 – 8,100	6,500 – 8,500
<b>Bridge dimensions</b>			
Length	mm	5,900	
Width	mm	1,800	
Height	mm	1,070	
<b>Vehicle dimensions</b>			
Length	mm	8,850	8,740
Width without tyres	mm	2,530	
Width**	mm	2,885	
Height*	mm	3,375	3,340
Transfer height**	mm	2,400	
Load volume*	m <sup>3</sup>	14	
Power demand	kW / HP	74 – 184 / 100 – 250	88 – 184 / 120 – 250

\* depending on equipment

\*\* reference wheel Alliance 480/95 R50

### Optional:

- High drawbar
- Side wall extensions
- Spreader unit with cardan drive (TSW)
- Speed monitor
- Spread pattern limiter (TSW)
- ISOBUS operation
- Central lubrication system
- LED working lights
- Various lighting possibilities
- Various tyre options
- Weighing system
- Camera system

We reserve the right to make changes to dimensions, weights and technical data. Dimensions and weights do not necessarily correspond to series versions and are not binding. Illustrations may contain additional equipment.

## Our product range contains the right vehicle for every operation and every application.

- ▶ Manure spreaders
- ▶ Universal spreaders
- ▶ Loader wagons
- ▶ Forage transport trailers
- ▶ Body swap systems
- ▶ Transfer trailers
- ▶ Beet transfer trailers
- ▶ Bodies for self-propelled systems

# BERGMANN

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