

# ...die Spezialisten

# Manure/universal spreaders

A strong line for effective operations





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

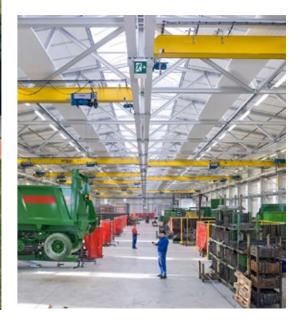
Our actions are determined by an awareness of tradition and our innovative strength. Our stateof-the-art products for spreading and grassland technology, harvesting and transport logistics meet the highest quality standards and are in use worldwide every day. As a strong and reliable partner in the agricultural 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"



### Proven quality: *"Made in Goldenstedt"*







# The manure and universal spreaders with a vehicle gross weight up to 12,000 kg

BERGMANN has always pursued innovative ideas and significantly promoted important developments. Our modern manure and universal 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 manure and universal spreaders operate reliably even under difficult conditions. BERGMANN spreaders have received highest recognition for functionality and quality with outstanding spreading accuracy.

Wherever particularly demanding conditions prevail, BERGMANN manure and universal 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. A wide range of optional extras allow the machines to be adapted to specific customer requirements.



### Manure spreader M 1080 SW

Features at a glance

**Operation** of the hydraulic functions: – tractor's control units (standard) – e-control light (optional)

Automatic chain tensioners, that are clearly visible from the driver's seat and easy to adjust, ensure reliable operation at all times. Large maintenance hatch for convenient cleaning and maintenance of the scraper floor.

Screwed drawbar for **high drawbar** with sturdy jockey wheel.

VIDEO



Hydraulically driven scraper floor with two chains with 15 t breaking load each for outstanding reliability and reversing function. **Bolted scaper** floor bars for easy replacement.

**One-piece drive train** for superior reliability. PTO shaft with cam clutch to protect the tractor and spreader from overload.

Single-axle chassis with 1,800 mm track. Various tyre options up to 710/35 R22.5 for **low ground disturbance**.

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1080

Sturdy, self-supporting all-steel bin with a width of **1,800 mm** for **maximum payload** and **minimum** cleaning and maintenance times.

> Spreader unit (1,300 mm passage height) with **four vertical beaters** and screwed flat-steel tines for finest shredding of the spreading material. Hydraulically foldable spreader hood to protect the spreader unit and to prevent material loss when driving on roads.

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**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.

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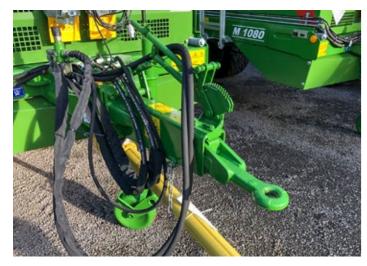
**Overrun brake** with **reversing mechanism** (25 km/h) as standard. Optional air brake and 40 km/h package with air brake.







## **BERGMANN manure spreader M 1080 SW** Single axle | 8,000 kg



#### Easy coupling

The M 1080 SW is equipped with a screwed high drawbar and an overrun brake with reversing mechanism as standard. The drawbar's slim design creates a highly manoeuvrable tractortrailer combination. An air brake with manual regulator is optionally available.



The drawbar eye is always a standard type eye with 40 mm diameter. The hydraulic hoses are stored neatly in the hose cabinet, where they are protected from soiling.





#### **Convenient parking**

The M 1080 SW is equipped with a sturdy jockey wheel with hand crank for secure parking.

#### **Robust chassis**

The M 1080 SW is equipped with a sturdy, screwed, unsprung chassis with overrun brake with reversing mechanism. It has an 80 mm square axle and a track width of 1,800 mm as standard. An air brake in combination with a reinforced axle is optionally available. The axle has a cross-section of 100 x 100 mm and a 1,900 mm track. Approval for 40 km/h is possible in combination with the air brake system.

#### **Great variety**

A large selection of tyres from 550/45-22.5 to 710/35 R22.5 is available. In combination with the tyres, the chassis ensures comfortable, smooth driving characteristics on both field and road. Galvanized mudguards are optional; for approval of 40 km/h in combination with the German TÜV approval, they are mandatory.

#### **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 scraper floor at all times. The standard rockfall screen affords the driver a clear view of the cargo space and protects the driver from any material that is thrown forwards.





The scraper floor can be easily reached for cleaning and maintenance through a large maintenance hood.

### Easy maintenance





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, 400 mm high side wall extensions are available. These can be fitted on the left, on the right or on both sides.













#### **Robust and low-wear**

The scraper floor is made of steel with two robust round-link steel chains (11 x 31 mm each, 15 t breaking load per chain) with scraper floor bars. The bars running on separate wear rails are screwed in, making them easy to replace.

#### **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 two 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 or e-control light is optionally available. The largesized spur gearbox ensures optimum power transmission.

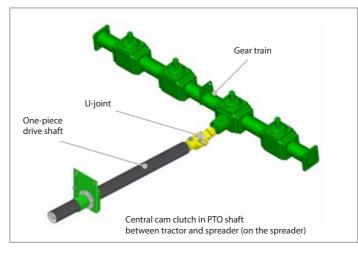
#### Low-maintenance drive train

The standard PTO shaft features a cam clutch. The optional wideangle joint PTO shaft allows reliable power transmission even in curves and ensures smooth running. 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.



Long service life

The drive of the spreader unit features large-sized gearboxes for a long service life.



#### Superior spreading quality

The spreader unit of the M 1080 SW features four vertical beaters and has a passage height of 1,300 mm. For optimum material shredding, the milling beaters are fitted with screwed flat-steel tines.







The standard hydraulically foldable spreader hood protects the spreader unit and prevents loss of material when driving on roads.











#### Good visibility

In addition to the required lighting, further lighting options are available for increased safety and convenience.

## Manure/universal spreaders M/TSW 2120 E/T

### Features at a glance

**Operation** of the hydraulic functions:

- tractor's control units (standard)

- e-control light (optional)

- PILOTBOX (optional)

- ISOBUS (optional)

Sturdy, self-supporting all-steel bin for maximum payload and minimum cleaning and maintenance times.

M/TSW 2120 E optionally with mechanical weighing system.

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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.

High drawbar (standard) or low drawbar (optional) for even higher driving comfort. Mechanical drawbar suspension as standard.

with overrun brake and reversing mechanism.

Optionally with high drawbar

### **VIDEO**



One-piece drive train for superior reliability. Transfer case protection through centrally mounted cam clutch.

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Robust single-axle chassis (M/TSW 2120 E) or ADR tandem pendulum suspension (M/TSW 2120 T) with 1,900 mm track for adverse conditions.

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Automatic chain tensioners, that are

clearly visible from the driver's seat

and easy to adjust, ensure reliable

Easy lubrication of the scraper floor

chains through lubrication rails on the

operation at all times.

sides of the body.

Wide tyres up to 750/45 R22.5 (M/TSW 2120 E) or 710/35 R22.5 (M/TSW 2120 T) for low ground disturbance. Axle cover for easy cleaning as standard on tandem chassis.

Hydraulically driven scraper floor with four chains with 25 t breaking load each for outstanding reliability and reversing function. Bolted scraper floor bars for easy replacement.

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Air brake as standard, M/TSW 2120 T in addition with ALB regulator for maximum road safety. EU type approval (COC) as standard; no country-specific national approvals necessary.

#### TSW 2120 E/T:

- 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, four spreader blades each) for exact spreading of all materials.

#### M 2120 E/T:

- Spreader unit (1,400 mm passage height) with four vertical beaters and screwed double tines for finest shredding of the spreading material.
- Hydraulically foldable spreader hood to protect the spreader unit and to prevent material loss when driving on roads.









## BERGMANN Manure/universal spreaders M/TSW 2120 E/T Single axle/tandem | 8,000 – 12,000 kg



#### Easy coupling

The M/TSW 2120 E/T models feature a mechanically suspended high drawbar as standard. For even higher driving comfort, a mechanically suspended low drawbar is optionally available. The low hitching point makes starting off at high loads easier. The drawbar's slim design creates a highly manoeuvrable tractortrailer combination.



Various drawbar eyes are available for coupling. The optional 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 jack stand with hand crank ensures easy coupling and uncoupling of the vehicle. For quicker low-effort coupling and uncoupling, the Jost jack stand with a tongue load of 10 t and 2-speed gearbox is optionally available. For increased convenience, a hydraulic jack stand is also available.

#### Robust single axle chassis

The single axle vehicle is equipped with a sturdy, screwed, unsprung chassis and air brake. It has a 100 mm square axle and a track width of 1,900 mm as standard. A reinforced axle with a cross-section of 130 mm is optionally available. In combination with the tyres, the chassis ensures comfortable, smooth driving characteristics on both field and road. A large selection of tyres from 550/45-22.5 to 750/45 R22.5 is available.

#### **Robust tandem chassis**

The robust, screwed 4-spring tandem chassis has an axle cross-section of 100 x 100 mm and a track width of 1,900 mm. An air brake system with ALB regulator is also standard. In combination with the tyres, the chassis ensures comfortable, smooth driving characteristics on both field and road. A large selection of tyres from 550/45-22.5 to 710/35 R22.5 is available.

#### **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 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.





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

field.



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, 250 mm high side wall extensions are available. These can be fitted on the left, on the right or on both sides.















#### **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.

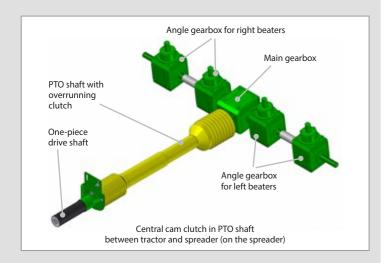
The large-sized spur gearbox ensures optimum power transmission. For spreading lime or sticky material, we recommend the optional reinforced spur gearbox.



#### Low-maintenance drive train

The standard PTO shaft features a cam clutch. The optional wideangle joint PTO shaft allows reliable power transmission even in curves and ensures smooth running. 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.

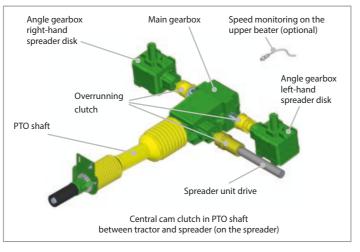




#### Long service life

M 2120 SX E/T

The spreader unit drive features a central protection and largesized gearboxes for a long service life.



#### Long service life

The spreader unit drive features a central protection and largesized gearboxes for a long service life. The drive train of the TSW models features overrunning clutches before the main gearbox and the disk gearboxes. These ensure a high level of reliability. For added safety, speed monitoring of the upper beater is optionally available.

#### M 2120 SX E/T



#### **High throughput**

The M 2120 models feature a 4-beater spreader unit with vertical, reinforced beaters. The spreader unit has a passage height of 1,400 mm. The beaters are fitted with screwed double tines for fine shredding of the spread material. This spreader unit is suitable for spreading solid manure and for high throughput rates.



#### **Superior protection**

The hydraulically foldable spreader hood, which is standard on the M models, protects the spreader unit and prevents loss of material when driving on roads.

#### TSW 2120 E/T



#### Superior spreading quality

The two TSW 2120 models feature a reinforced 2-beater spreader unit with horizontal beaters fitted with screwed-on double tines made of sheet steel and a disk spreader unit with two spreader disks (900 mm diameter and four adjustable spreader blades each). The spreader unit has a passage height of 1,400 mm. A reinforced disk spreader unit with Hardox-grade spreader blades and guide plates is optionally available. The spreader unit can be used universally for numerous materials, such as solid manure, compost, lime or sewage slurry.



#### 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 over the disks for precise spreading of different materials under varying conditions. A spring-loaded auto-reset system provides protection against foreign objects.

#### Ideal power transmission

As standard, the milling beaters of the TSW 2120 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

Unique for spreaders of this size is the optionally available milling beaters cardan drive. 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.



#### Accuracy at the field edge

Three versions of the hydraulically operated spread pattern limiter are optionally available for the TSW models: left side only, right side only, and on 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.



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.













#### **Optimised dosing**

The M/TSW 2120 does not have a dosing wall as standard. A splash guard is fitted in the upper section of the spreader unit of the TSW 2120, which prevents the material from being thrown forwards by the milling beaters. A dosing wall with a passage height of 1,400 mm and height indicator in the front wall is optionally available for all models. It serves to optimise material dosing. The exact position of the dosing wall can be conveniently checked on the mechanical height indicator with its large scale on the spreader's front wall.



#### **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.

#### **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.

#### **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 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 selfexplanatory 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 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 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 optional weighing system of the M/TSW 2120 E, 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. It excels with superior measuring accuracy. The load weight is indicated on a separate weighing terminal or, optionally, via ISOBUS.



In addition to the required lighting, further lighting options, such as LED working lights at the front wall or on the spreader hood are available for increased safety and convenience.

#### Europe-wide approval

As standard, the M/TSW 2120 E/T 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.











Dimensions and weights		M 1080 SW			
Chassis		Single axle			
Gross vehicle weight	kg	8,000			
Dead weight*	kg	2,235			
Load*	kg	5,765			
Bridge dimensions					
Length	mm	4,200			
Width	mm	1,800			
Height	mm	570			
Vehicle dimensions					
Length	mm	6,200			
Width without tyres	mm	2,070			
Height*	mm	2,830			
Transfer height**	mm	1,900			
Load volume*	m³	6.80			
Power demand	kW / HP	51 - 88 / 70 - 120			

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**Manure spreaders** 

Universal spreaders						
Dimensions and weights		TSW 2120 E	TSW 2120 T			
Chassis		Single axle	Tandem			
Gross vehicle weight	kg	8,000 —	12,000			
Dead weight*	kg	4,420	5,080			
Load*	kg	3,580 - 7,580	2,920 - 6,920			
Bridge dimensions						
Length	mm	4,900				
Width	mm	1,800				
Height	mm	1,070				
Vehicle dimensions						
Length	mm	7,640				
Width without tyres	mm	2,320				
Height	mm	3,335				
Transfer height**	mm	2,400	2,430			
Load volume*	m <sup>3</sup>	9.10				
Power demand	kW / HP	74 – 118 / 100 – 160				
* depending on equipment ** Reference wheel Vredestein 620/40 R22.5		22.5 Optional: - ALB – automatic load sensing brake (M/TSW 2120T) - Jost jack stand (M/TSW 2120) - Mudguards - Side wall extensions - Spreader unit with cardan drive (TSW) - Speed monitor - Spread pattern limiter (TSW)	<ul> <li>ISOBUS operation (M/TSW 2120)</li> <li>Central lubrication system (M/TSW 2120)</li> <li>LED working lights</li> <li>Various lighting options</li> <li>Range of tyre options</li> <li>Weighing system (M/TSW 2120 E)</li> <li>Camera system</li> </ul>			

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.

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Technical data

M 2120 SX E	M 2120 SX T			
Single axle	Tandem			
8,000 - 12,000				
4,020	4,680			
3,980 - 7,980	3,320 - 7,320			
4,900				
1,800				
1,070				
7,350				
2,150				
3	,335			
2,400	2,430			
9.10				
66 - 103 / 90 - 140				

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

- Manure Spreaders
- Universal Spreaders
- Loader Wagons
- Forage Transport Trailers
- Body Swap System
- Grain Transfer Trailers
- Beet Transfer Trailers
- Self-propelled Systems



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