

SHUTTLE 450 S _ SHUTTLE 470 K
SHUTTLE 490 S _ SHUTTLE 510 K

BERGMANN

...the specialists

Loader Wagon SHUTTLE

For powerful green fodder harvest





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 120 years.

Our actions are determined by an awareness of tradition and our innovative strength. Our state-of-the-art machines 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/
Germany“*





BERGMANN Loader Wagon SHUTTLE

Tandem & Tridem | 24.000 - 34.000 kg

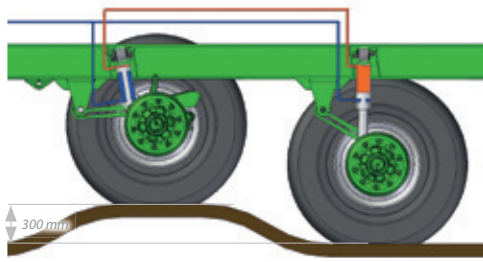


The **SHUTTLE** models are equipped with low drawbar and a K 80 ball hitch. Hydraulically lockable, follow-up steering axle is standard equipment.

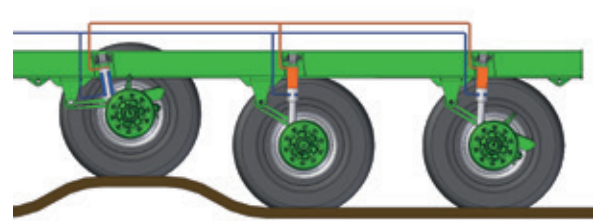
The **narrow drawbar** design ensures high manoeuvrability and low wear. The jack stand can be swivelled up and fastened to the frame.



The **trailer height** can be easily adjusted via the ISOBUS terminal in conjunction with the **weight sensing system** on the articulated drawbar cylinder. Different heights can be stored for loading, unloading and road mode.



Tandem: SHUTTLE 450 S / SHUTTLE 470 K



Tridem: SHUTTLE 490 S / SHUTTLE 510 K

Hydraulic Chassis
 The 300 mm hydraulic axle compensation provides for the best driving performance, the highest standing and driving safety, stability and off-road handling. Bumps are reliably absorbed, ground pressure is significantly reduced and wheel sinking in is minimized.



Forced steering
 – upon request also available with computer control – is optionally.



Control panel for the electro-hydraulic forced steering

All **SHUTTLE** models are very manoeuvrable and safe to drive, both on fields and roads.

The **controlled pick-up** with a pick-up width of 2,270 mm, six rows of tines and a tine spacing of 55 mm can easily pick up even large swaths and ensures rake-clean and gentle forage pick-up.
The swath roller, with its guide comb and large, steered guide wheels, is standard equipment.



The optional pick-up **guide roller** provides for optimum ground adaptation.
Also optional, the **pick-up relief** ensures that the pick-up always rolls gently over the ground with constant contact pressure and picks up the forage cleanly.



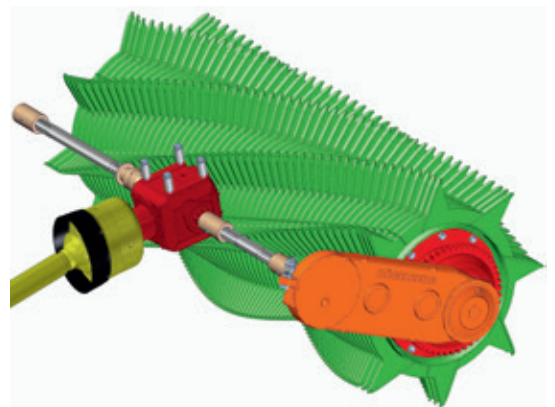
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The **rotor is driven** by a powerful planetary gearbox. Its compact design provides for considerable power reserves and is thus designed for high performance.

▲ The powerful **cutting rotor** (Ø 850 mm, 1,840 mm wide), with its eight helically arranged rows of tines, conveys the forage gently and evenly into the cargo area. Hardox tine mounts and the welded shaft end ensure a long service life.



Planetary Gearbox

This drive concept provides the torque only where it is needed.



Cutting Unit

The 34 mm short cut unit, with 53 knives at one level, ensures an exact, optimum long cut and ensures the best silage quality. The knives remain sharp for a long time and are easy to replace.



Knife beam

Each of the 53 knives is individually protected against foreign objects and returns to the cutting channel automatically after contact with foreign objects. This ensures the permanent short cut.

The knives can be removed and installed without tools in just a few seconds and the knife beam can be swivelled out hydraulically. The knives are automatically unlocked and can be removed without tools. Lifting the high-lift drawbar at the same time increases the space under the **SHUTTLE**, so that the knife beam no longer needs to be swung out to the side.



The drawbar and knife beam can be easily adjusted on the left side of the vehicle.



Hydraulically Moveable Front Wall

During loading, the front wall is first moved back to achieve ideal loading of the cargo space. The cargo space is easily visible – despite the maximum tightness of the front wall.

When the cargo space is filled up to the tailgate or the dosing rollers, the front wall is automatically moved forward, thus providing approx. 5 m³ of additional cargo space. In unloading mode, the front wall moves back again independently when the scraper floor has moved back one meter, thus providing an active unloading aid.



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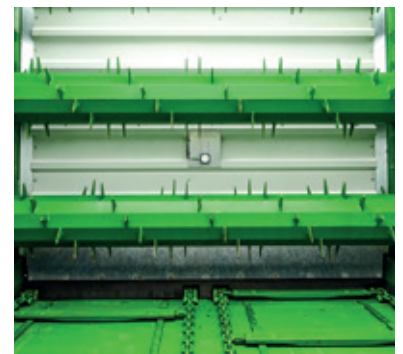


Headwall Top Flap

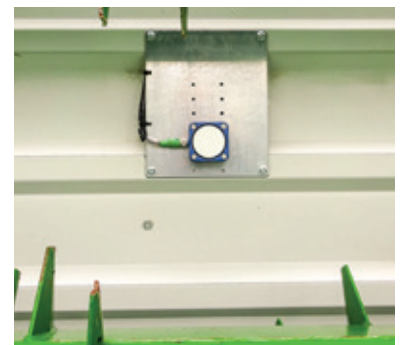
The upper part of the front wall can be hydraulically swivelled forward 90 degrees for forage loading.



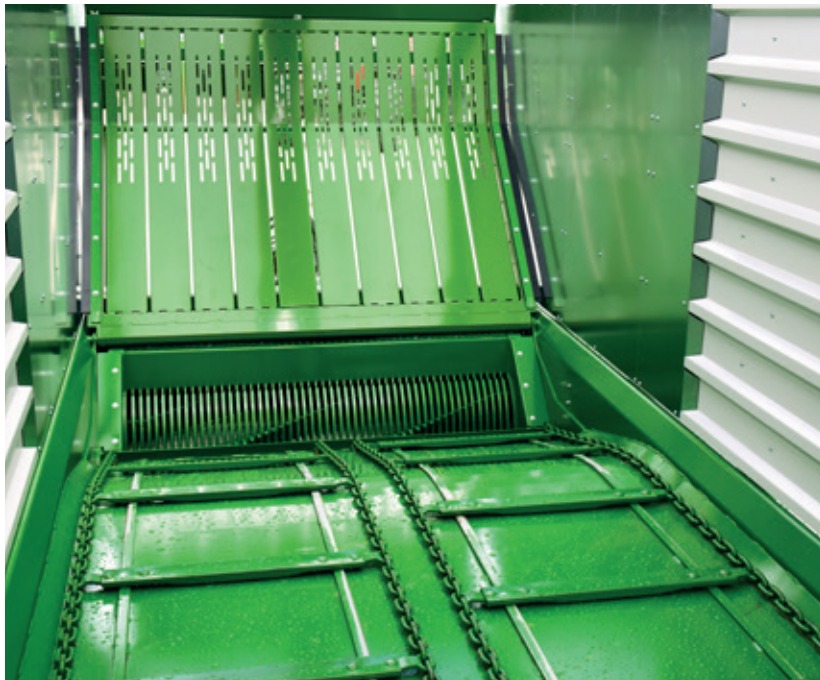
Automatic Loading System – optional – via sensors in the loading channel and in the filling hood.



Fill Level Detection – optional – via ultrasonic sensor in the tailgate. The fill level in the cargo space is displayed as a percentage value on the terminal.



The cargo space is optimally filled through the wide **conveyor channel**. The steel scraper floor, which slopes 275 mm to the front, reduces the conveyor channel height and requires considerably less power for the rotor drive, protects the forage and increases the loading capacity. The smooth inner sides and side walls in the front section reduce friction during the loading process.



The four **round steel chains** (ea. 14 x 50 mm, 25 t per chain) are deeply embedded in large chain wheels (little wear and tear). The chains are stretched in pairs. Deflection pulleys with scrapers in the front and rear ensure safe scraper floor chain guidance. The scraper floor bars run on extra wear rails.



The sturdy **body** with its solid frame elements (350 mm height) and robust, wide side walls ensure high stability. The large, lockable **access door** is mounted on the side and allows easy access via the low-reaching, fold-out ladder.



The lubricated **chain tensioner** guides are easily accessible and allow easy chain re-tensioning.



Scraper Floor Drive

The drive is via spur gearboxes on both sides with stepless speed regulation, overdrive and reverse function.



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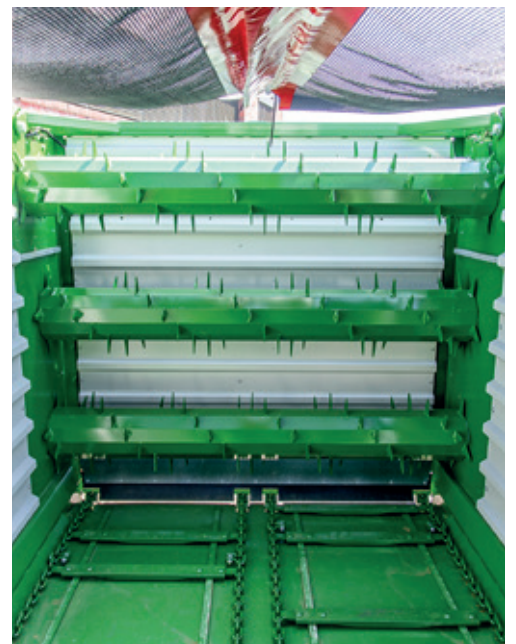
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K-model without dosing rollers
(SHUTTLE 470 K / SHUTTLE 510 K)

Fast and powerful **unloading** of the SHUTTLE can be carried out with the optional dosing rollers (S-models) or without (K-models).

The special arrangement and speed adjustment of the dosing rollers, which are equipped with aggressive rip tines, ensures an even layer of forage. The helical arrangement of the tines ensures smooth running.



The *S-model* dosing unit with three standard dosing rollers (SHUTTLE 450 S / SHUTTLE 490 S).

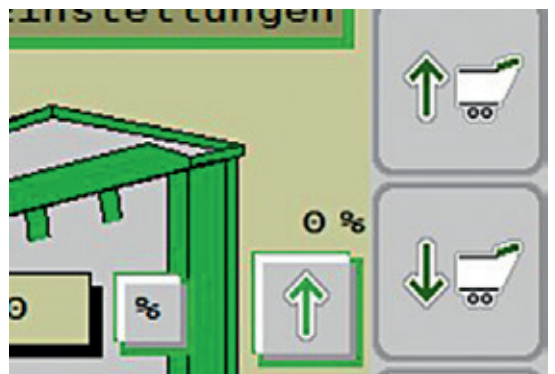
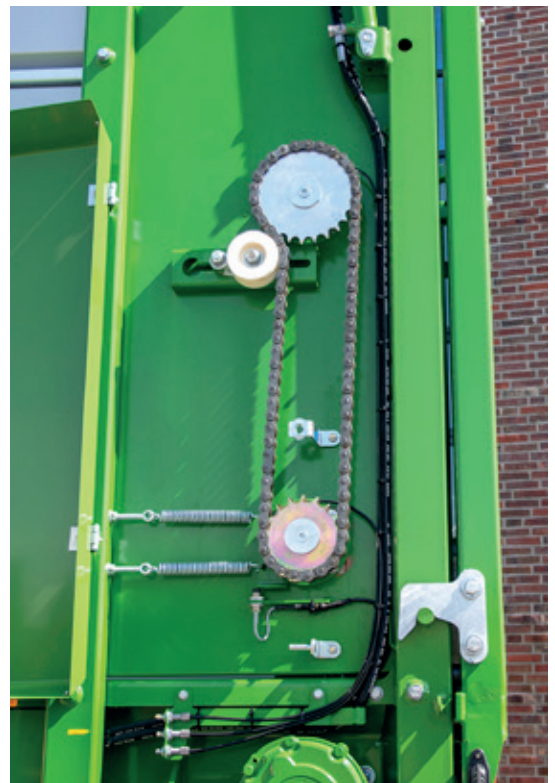


Direct drive of the lower dosing roller via bevel gearbox, and drive shaft bearing on the vehicle side wall.



Wide opening, sturdy **tailgate** with mechanical locking – for fast unloading.

The desired opening angle can be saved in the operating terminal and easily changed.



The position display in the terminal is standard.

The optionally available two-piece, hydraulic **cargo space cover** ensures safe transport of the cargo. It adapts to the contour of the load, and the highly tear-resistant nets lie securely on top and cannot lift off even at high speeds. Opening and closing takes less than seven seconds. It can be conveniently operated from the tractor seat.



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Optional equipment

Cargo space cover



Central lubrication



The optional **central lubricating system** provides for a continuous flow of lubricant which is adapted for each individual bearing. This significantly reduces maintenance efforts.

Lighting concept



Optional interior and exterior lighting. Desired areas, e.g. cargo space, axle assembly, etc., can be specifically illuminated using powerful LED spotlights.

All **SHUTTLE** models can be optionally equipped with a **hydraulic weighing system**.

Systems



Drawbar eye with measuring device

Pressure sensors

If the measurement is carried out hydraulically on the chassis, the payload is also detected hydraulically via pressure sensors or mechanically by the drawbar eye. The weight is displayed in conjunction with an ISOBUS terminal.

Indicators



ISOBUS

- Payload display
- Possible via many ISOBUS terminals
- Transfer of the payload to BERGMANN ISOBUS for display, control and documentation
- BERGMANN:
 - Detection of the unloaded mass

Optional: separate display



All **SHUTTLE** models are ISOBUS compatible.
 The selection of the different operating modes makes easy operation possible in any situation.
 The hardware and software are AEF / ISOBUS certified.



BERGMANN Loader Wagon SHUTTLE Operation



BERGMANN Comfort Terminal BCT 20 with an illuminated keypad, different modes, trip counter, programmable sequence controls, clear and precise symbols, automatic loading and unloading (optional).



Optional **CCI 50 / CCI 200 ISOBUS Operating Terminals** – simple operation and adjustment of all functions, automatic loading and unloading, programmable control sequence, colour touch screen display, multiple interface options, possible camera image display.

- Optional CCI 1200 ISOBUS Operating Terminal**
- Flexible Layout – displays multiple apps simultaneously
 - Multi Touch – smartphone level operation
 - 2x Universal Terminal – operate two ISOBUS machines simultaneously
 - Help System – help when it's needed
 - Camera – display of up to eight camera images
 - Task Control – documentation with ISO-XML 14

Technical data

Dimensions and weights		SHUTTLE 450 S	SHUTTLE 470 K	SHUTTLE 490 S	SHUTTLE 510 K
		Tandem / Tridem	Tandem / Tridem	Tridem	Tridem
Vehicle dimensions					
Length*	mm	11.150	11.150	11.900	11.900
Width*	mm	2.550	2.550	2.550	2.550
Height*/**	mm	4.000	4.000	4.000	4.000
Ground clearance pick-up*	mm	~ 400	~ 400	~ 400	~ 400
Ground clearance with extended high-lift drawbar*	mm	~ 700	~ 700	~ 700	~ 700
Dead weight*	kg	10.820	10.470	13.100	12.750
Gross vehicle weight*	kg	24.000 - 34.000	24.000 - 34.000	34.000	34.000
Payload*	kg	13.180	13.530	20.900	21.250
Capacity at medium compression*	m ³	81,9	84,6	89,1	91,8
Capacity according to DIN 11741*	m ³	45,5	47,0	49,5	51,0
Cut length	mm	34	34	34	34
Number of knives	pcs.	53	53	53	53
Pick-up intake width		2.270	2.270	2.270	2.270
Power requirements	KW	132 - 257	132 - 257	132 - 257	132 - 257
	HP	180 - 350	180 - 350	180 - 350	180 - 350

* depending on equipment ** with tire 710/50 R 26.5 BKT

Optional:

- Forced steering (hydraulic or computer controlled)
- Cargo cover
- Rotor cover
- Extensions
- 60 km/h-version
- Hydraulic weighing system
- Various lighting possibilities
- BERGMANN Comfort Terminal BCT 20
- ISOBUS terminals CCI 50, CCI 200 and CCI 1200
- Central lubrication
- Various tire options, etc.

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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