Pöttinger TORRO

High performance silage wagon with loading rotor

"Easy Move"
"autocut"

PÖTTINGER

97+128.02.0811

TORRO

An ongoing success story

”Performance combined with high cost-effectiveness“ – a key objective for modern management. The powerful silage wagon meets all requirements for the efficient and cost-effective production of silage, making it the way of the future. The advantages of the silage wagon include less manpower, less diesel consumption and simple logistics.

The process of acquiring an optimum forage structure begins with the crop. The forage should not be too finely chopped. If there is a long term structure deficiency in the feed, the health and

productivity of the animals can be adversely affected. Using the chop length stipulated by feed experts the chopping quality of the silage wagon falls into the desired range for ruminants.

The facts speak for themselves – and for your profits!

The professional user demands reliable quality for long-term use. Pöttinger responds to this requirement with sophisticated technology, top-quality materials and precise workmanship. This market leader has set new standards for self loading wagon technology with high-quality work and a modern design.

Construction – Body – Hitch fittings

- Frame construction of 220x70x50x6-QSTE fine-grain steel.
- The straight side columns are bolted to the frame, not welded.
- Fine-thread high tensile bolts for frame and side posts.
- Sturdy platform channel profiles and close spacing provide optimum strength.
- The internal width of the construction is 6.89' / 2,10 m.
- The roof ropes can be replaced with roof profiles for dry forage or straw.
- Easy access to the interior of the wagon is provided by means of an access ladder.
- Floodlights attached to the front panel provide adequate lighting of the loading chamber. (LED floodlights as an option).

Sturdy construction

Access ladder

Floodlights

High drawbar

High or low drawbar with 2.2 sh t / 2.0 t

- The drawbar is fitted with two double-acting cylinders and a drawbar damper.
- A folding parking leg avoids time-consuming cranking when hitching or unhitching the self loading wagon without fouling on the collection of swath.

Forced steered axles available

- K80 ball coupling, closed system hydraulic steering, fail-safe.
- Follows tractor tracks on inclines and in the clamp.
- Turning angle up to 60° depending on tractor and tyres thanks to narrow design of drawbar, with trailing or forced steering axles.
- Mudguards as standard.

Low drawbar

Automatic chain tensioner
Central lubrication

Scraper floor drive

Driveline and power transmission

Unique power train

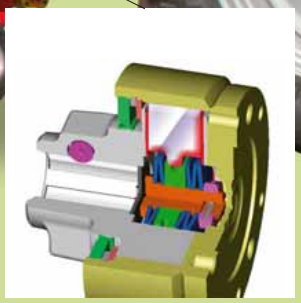
- Driven by a two-way wide-angle pto shaft, 60-hour lubrication interval.
- The cam clutch coupling protects the drive train.
- The torque protection is an impressive 2100 Nm, which corresponds to a peak performance of almost 230 HP (170 kW).

The performance of the drive elements is tested in the transmission test.

ISOBUS – loading torque sensor

Input gearbox

Beater driveline at front



Cam clutch coupling

Heavy duty transmission

- Power is transmitted from the input gearbox to the loading rotor and on to the pick-up.
- The rotor is driven by a large bevel gear submerged in oil that is completely maintenance-free. The drive system features a floating axle with precisely machined gears.
- Using an ISOBUS terminal a optional load cell on the rotor gearbox enables the drive torque to be matched precisely to the quantity of crop – the ultimate in crop protection without leaving the cab.

Scraper-floor drive

- A hydraulic motor drives the scraper floor. A hydraulic motor with single or two-speed ratios deliver a maximum unloading speed of up to 56' / 17 metres per minute.
- The scraper floor is equipped with four sturdy chains.

Beater-rotor drive transmission

- The fully enclosed driveline to the beaters is routed along the right-hand side of the wagon opposite the rotor drive system.
- Sturdy right-angle gear boxes and a heavy duty chain transmit the power to the beater rotors.
- The extra strong drive shaft train is protected with a cam clutch coupling set at 1200 Nm.

High loading speeds require a reliable and powerful pick-up. The Pöttinger suspended pick-up with six rows of tines delivers impressive performance – even at high travelling speeds and in all harvest conditions.

High capacity Pick-up

The 1.85-m wide, controlled 6-row pick-up guarantees maximum performance, even in difficult harvesting conditions such as in damp and short grass.

- The collection area from the pick-up tines to the rotor has also been optimised and adapted to the rotor capacity.
- Maintenance-friendly – cam track only needs to be lubricated once a year; the main bearing on the cam arm every 80 loads – lubrication points are externally mounted.
- Clean forage thanks to tempered transfer plates that help separate the soil from the forage. This protects the chopping unit.

Only a clean crop can guarantee trouble-free fermentation for high quality silage.

- The pick-up is controlled from both ends by a cam track made of steel with a solid centre. The sealed twin-groove roller bearings on the cam rollers are designed to withstand high stress.
- The pick-up tines are swept back to prevent damage to the sward, the throwing up of soil, and unnecessary wear on the tines.

Perfect ground hugging – height-adjustable 16 x 6.5-8 trailed jockey wheels.

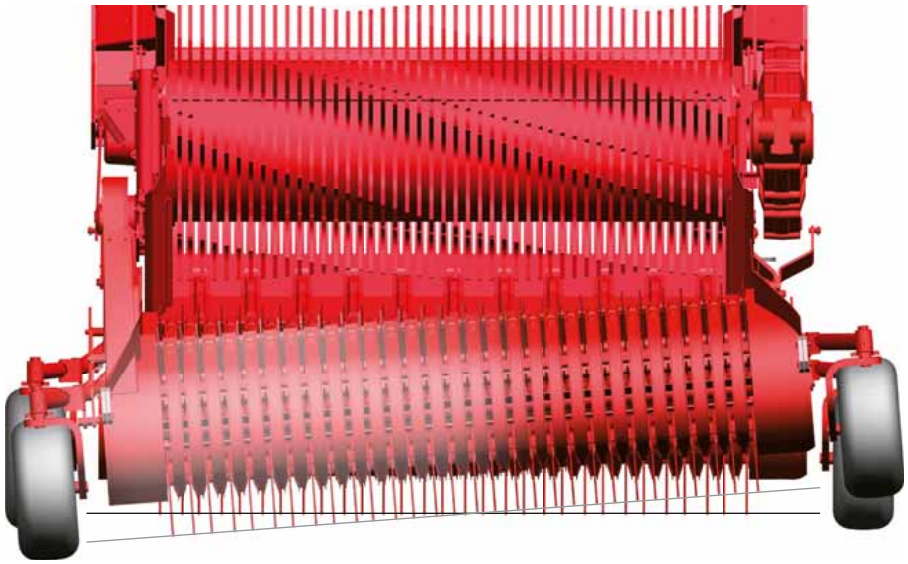
- The wheels sweep the ground on the same line as the tines, and guide the pick-up perfectly through each hollow. These wheels are free to castor allowing easy cornering.
- A height-adjustable windguard with a large diameter swath roller ensures perfect forage flow even when loading is fast and the crop is short and wet.

Clean base forage has a high value.

Farmers confirm that only Pöttinger's controlled pick-up system manages that.

Pendular hinged pick-up

- Two hinged support links give the pick-up full mobility.
- In addition to this, spring suspension ensures low, soil-protecting ground pressure – hydraulic suspension is available as an option.
- Automatic cut-off of pick-up drive when raised.



The structure of the forage greatly determines its digestibility. The rotor must be able to cut and compress the forage evenly with a high work rate. Powermatic is at the heart of Pöttinger self-loading wagons: Powerful, robust and capable.

The silage-loading rotor

Perfect transfer of the crop from the pick-up and maximum loading performance even in difficult harvesting conditions (wet and short forage). Rotor tines feature proven advanced geometry that has been field tested over many years.

- Smooth, energy-saving penetration into crop.
- Continuous transfer of the crop from the pick-up and highest loading performance thanks to the wide surfaces on the ends of the tines.
- The optimum gap between the knives and tines ensures smooth operation and protects the knives from foreign objects.
- The Powermatic loading rotor with eight rows of tines arranged in a spiral has a diameter of 800-mm. The theoretical chopped length of the forage is 35-mm; an ideal structure for ruminants.

Powermatic

The loading rotor

- The loading rotor is supported on both sides with self-aligning roller bearings. On the drive side the bearing is positioned between the rotor and the gear – reducing the load on the bearing.
- The conveyor tines are made of hardened fine-grain Hardox 500 and are 10-mm thick.

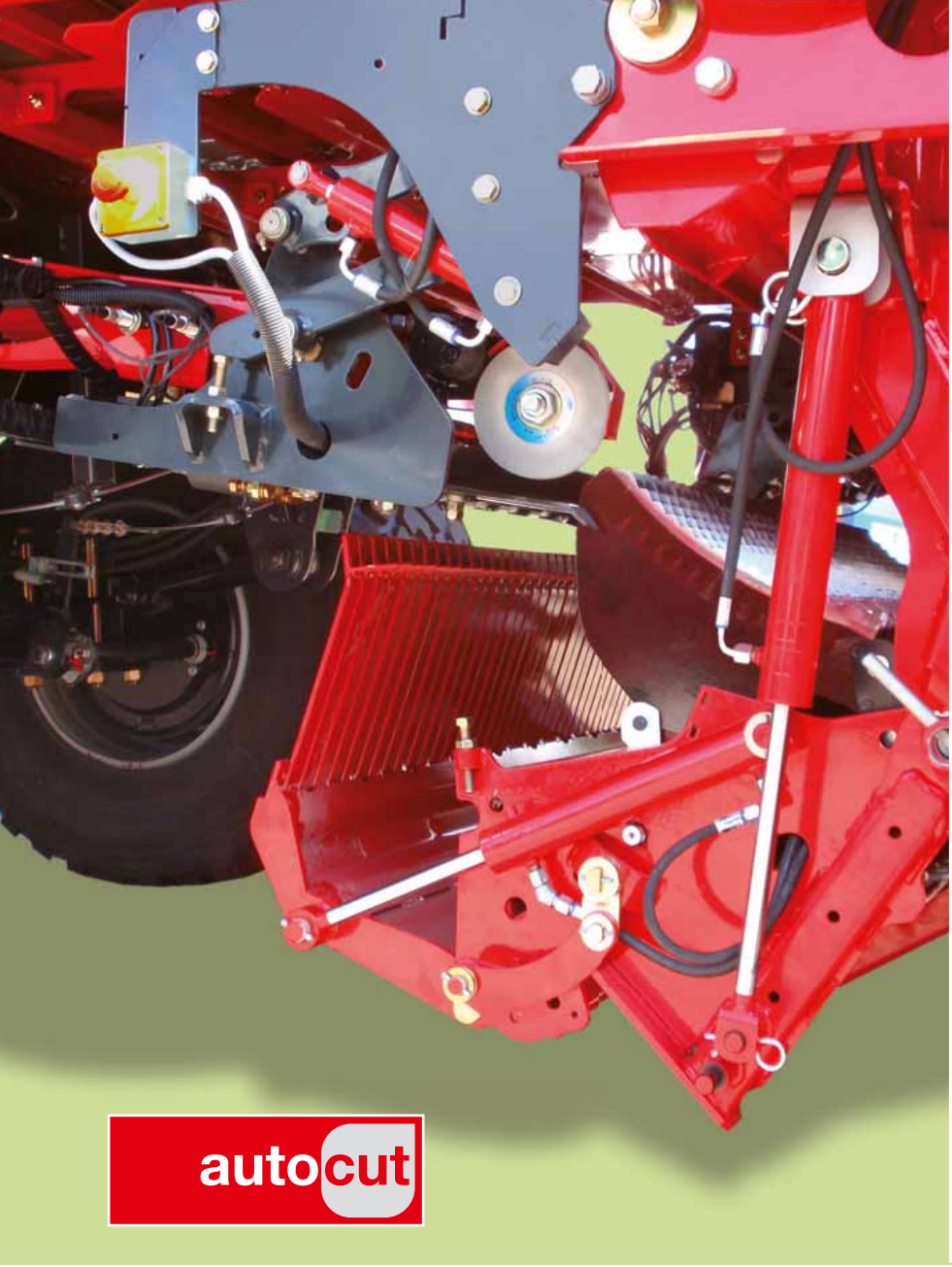
Maintenance made easy

- The tine rings are clipped into the inner drum.
- Each ring can be replaced individually.

Scrapers with 0.79" / 20-mm wide backbone

- The scrapers are positioned and bolted into place individually. The scrapers are an ideal shape which reduces energy wastage.

The best possible compression in the loading chamber is achieved thanks to the large scraper surface area and optimised rotor tine geometry. As a result the Pöttinger TORRO delivers the highest loading performance and load density per cu ft / m³, even with damp crops.



A precise and consistent cut is the basis for the best silage quality.

The new ”autocut“ knife sharpening system guarantees a consistent high quality cut for the duration of a long working day.

This system has already won multiple awards.

Unique chopping unit

New ”autocut“: sharpens knives directly on the self loading wagon

- The ”autocut“ knife sharpener allows for convenient blade sharpening directly on the self loading wagon. The sharpening cycle can easily be preselected in accordance with the wear on the knife using the control pad.
- This considerably reduces maintenance expenses and simultaneously guarantees long lasting optimal cutting quality with lower energy consumption and increased output.

Removing the knives for sharpening, which formerly took place only once a day, thereby impairing the cutting quality, has now come to an end.

- Intensive use of over 10 to 20 hours per day inevitably reduces the sharpness of the knives.
- This increases power demands and fuel consumption up to 15%, in stony areas up to 20%.
- With the new knife sharpening system the sharpness is maintained throughout the entire day – it is simple and fully automatic.
- This equals up to 15% more output and also up to 15% less diesel fuel consumption thanks to ”autocut“.

Chopping unit with cleaning scraper

Easy Move

”Easy Move“ and ”autocut“

awarded the DLG silver medal

Easy Move – The original

Unique cutting quality:	39 knives	1.38" / 35-mm theoretical chop length

Pöttinger lead the industry by introducing the Easy Move pivoting knife bank back in 1999. This unique pivoting knife bank makes knife changes effortless.

You can’t get simpler than this

- The chopping unit is lowered hydraulically either from the tractor seat or by pressing the button on the left-hand side of the wagon.
- The whole knife bank can be swung out sideways in the traditional Pöttinger fashion.
- The knives can be automatically released via the central knife release and removed without the need for any tools.
- The pressure springs and rocker arm for securing individual knives are located in the protected area. This considerably reduces the amount of soil which accumulates in the knife mountings.
- A cleaning scraper, which automatically cleans spaces between the knives every time the knife bank is lowered, is also available as an option.

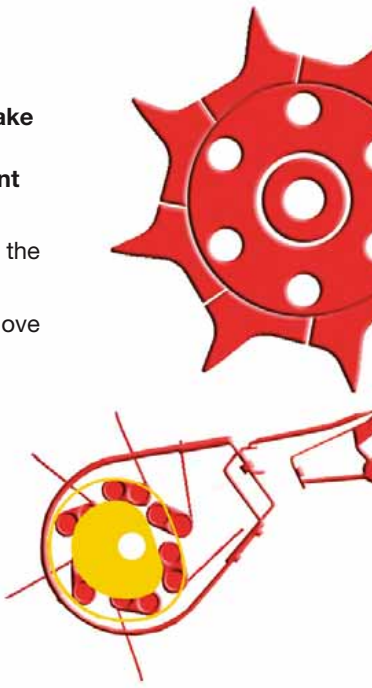
Time and cost pressures make machine idle time an expensive business. Foreign bodies are a danger to the most important elements of the machine – the rotor and chopping unit. Pöttinger protects the heart of the silage wagon with an innovative device – patented foreign-body security. Each knife is individually protected.

Knife protection

High capacity performance requires equally high triggering pressure. The knives are held individually in the correct position to make sure that a consistent chop length is produced.
What's special at Pöttinger: The triggering pressure is independent of the size and point of contact of the foreign body.

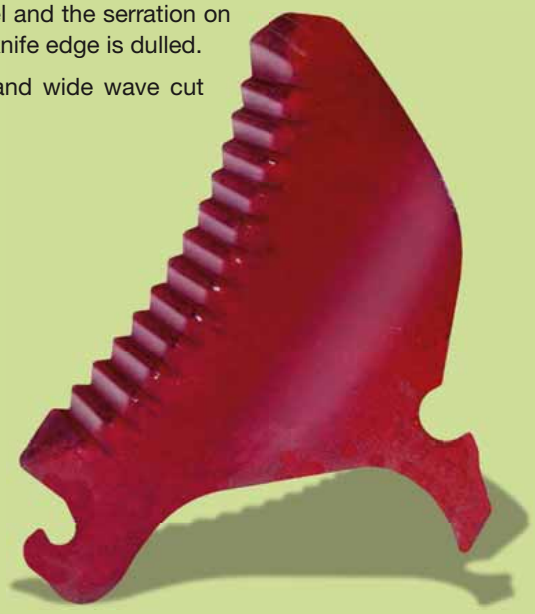
- Smaller pieces fall through baffle plates between the pick-up and the rotor.
- Larger foreign bodies are pushed by the rotor onto the knife and move it briefly in the direction of rotation.
- The trigger roller is lifted out of its holder at the back of the knife. The knife releases the foreign body. The resistance is minimal, which protects the knife!
- After the foreign body has passed the chopping unit, the knife springs back to its original position.

The most important benefit is that stones in the forage are not pulverised into splinters like they are by harvesters. The result is that there is no risk of injury to the digestive tract of livestock.



The original with high quality

- The knife shape provides a continuous sliding cut. The forage is always cut cleanly and not torn apart due to its pull-back chopping action.
- The knives are made of hardened tool-steel and the serration on one side ensures a precise cut even if the knife edge is dulled.
- The new knives with extra-strong backs and wide wave cut ensure a prolonged service life.



Original inside

① *Sensor on the front gate*

② *Sensor on roof section*

③ *ISOBUS torque sensor*

Every user wants high transport efficiency with a constant flow of loads.

The automatic loading system delivered with the range fitted by Pöttinger ensures this. The forage is gently compressed when still in the feed channel and therefore the loading chamber can be filled perfectly.

Automatic loading system

The constant force progression whilst loading, without torque peaks, is a feature of the TORRO self loading wagons. There are two integrated sensors for monitoring the status of loading. They check on the loading status and automatically control the scraper floor movement accordingly. This protects the self loading wagon and the forage.

Unique sensor on the front panel

- This measures the loading pressure of damp, heavy grass on the front panel and operates the scraper floor. This prevents the forage from being mashed due to excessive load on the loading rotor.

Sensor on roof panel

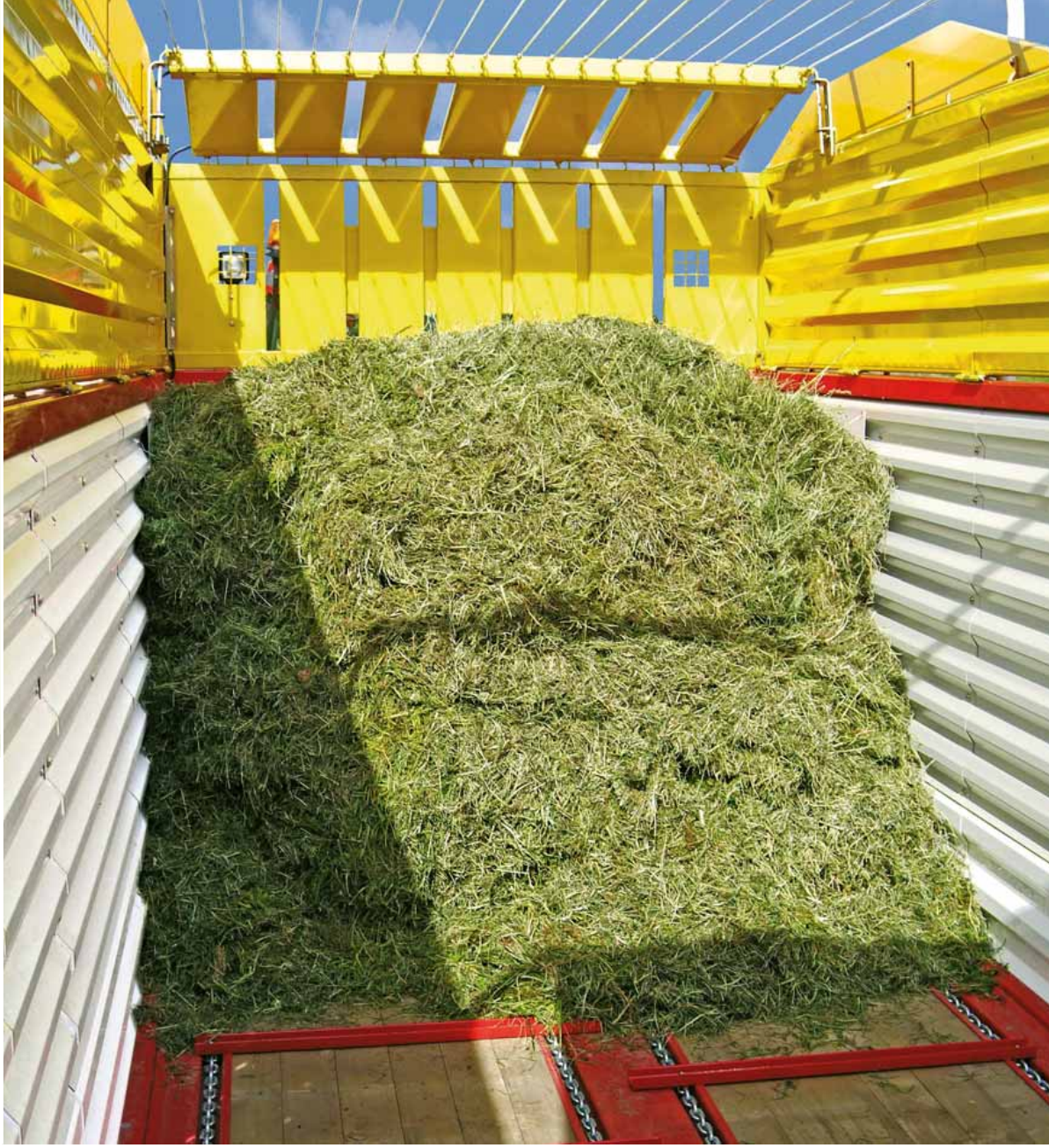
- This sensor measures the load status of the self loading wagon so that the driver does not have to do so. This significantly improves the filling efficiency of the loading chamber.

The scraper floor disengages when the self loading wagon is full

- The limit switch and ”wagon full“ signal are controlled by the tailgate or beaters.
- The scraper floor can also be manually controlled.

Load sensing as standard to save power

- Pöttinger silage self loading wagons are fitted with load-sensing equipment. The required amount of oil is measured constantly and adapted to requirements. No oil heating, and power saving of up to 20 hp / 15 kW – high efficiency.



Scraper floor

Reliability for long service

- The tempered slats are separated and offset.
- The scraper-floor shafts can be lubricated from the side of the wagon.
- Unloading speed of up to 56‘ / 17 metres per minute

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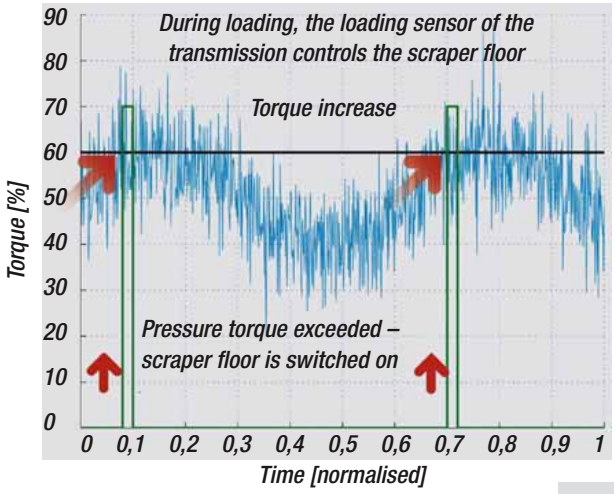
③ ISOBUS control

- The drive-train torque can be adapted to the crop using a load sensor on the rotor gearbox.
- Perfect forage protection operated directly from the tractor seat.



A uniform mat of forage is a prerequisite for perfect compaction. The automatic unloading system for trailers with beaters takes the stress away from the driver at the clamp and protects the wagon.

Unloading automated

A press of a key on the terminal is all that is needed on L and D models.

The wide opening enables quick unloading.

- The tailgate angle can be adjusted on all TORRO models – from the driver's seat. Prevents crosswind problems during unloading.
- The beater drive protection of 1200 Nm increases the unloading performance on D models.
- The beater rotors can be removed if required.

D-type wagon – new beater rotors

The new beater rotors guarantee rapid unloading and uniform distribution.

- The new rotor geometry with aggressive tines delivers higher performance with highly-compressed forage.
- Bars on the rotors ensure maize material can be unloaded effectively.
- A pressure sensor in the beater rotor bearings switches the scraper floor on and off automatically during unloading. The driver no longer has to do this.
- A third beater is available if required for even better distribution in the clamp.

Beater driveline at rear

Hydraulic cross conveyor belt

Automatic chain tensioner
Central lubrication

Intelligent operation

All TORRO self loading wagons are fitted with the controller terminal Power Control. All functions can be controlled directly from the controller. Error messages are also displayed. There is also integrated data-logging.

- Automatic functions for pure ease of use
- Ergonomic layout of control keys
- Back-lit keys are standard

The computer also contains ISOBUS software.
You can use the ISOBUS software to execute other functions such as speed-dependent control of the trailing steering axle, torque sensing controlled loading, and unloading functions. Integrated diagnostic functions and error reports allow problems to be solved quickly.

During long days of cropping, every driver appreciates the fact that all functions can be carried out with ease from the driver's seat. Pöttinger's future-safe control concept goes one step further:
The ISOBUS system is fully integrated into the range.

POWER CONTROL

Unloading

- Automatic unloading system (all functions)
- Scraper floor two-stage motor
- Fast/slow
- Beater rotors on
- Cross conveyor belt on
- Scraper floor forward
- Steering axle
- Tailgate open
- Tailgate closing
- Stop

Loading

- **Automatic loading system**
- Load scraper floor
- Knife bank in
- Knife bank out
- Pick-up up
- Pick-up down
- Drawbar up
- Drawbar down

On / Off

- Set: Hour/load counter
- Load-chamber lighting
- Feed-additive applicator
- Diagnostic system
- Knife-bank position alert
- Sharpen knives

Top class operating comfort, a terminal that does everything. In addition to the features offered by the Power Control terminal, this also enables the control of all ISOBUS machines, regardless of manufacturer.

CCI 100 – 100 % ISOBUS

- High quality 8.4SDSq TFT colour display
- Backlit touch keys
- Touch screen
- 12 softkeys
- USB interface
- Camera connection M 12x1
- Torque gauge for controlling the automatic loading systems. Quick and precise tuning for different forage properties operated from the tractor seat.
- Locking of the steering axle dependent on speed and when reversing.

Ride comfort up to 22 sh t / 20 t total weight

The pneumatic brake system with ALB controls ensures safe braking at high speed and with heavy loads.

ABS available as an option.

Hydraulic brakes can also be supplied for markets that require this option.

Forced steered axles available as an option.
K80 ball coupling, closed system hydraulic steering system.

Increasing load volumes and high transport speeds necessitate robust and soil-protecting chassis. Pöttinger has made great efforts in this area, responding with high quality steering tandem or tridem axles and tyres with large footprints.

Parabolic spring chassis for up to 22 sh t / 20 t permissible laden weight

Parabolic suspension with large spring-to-axle spacing and compensator for height regulation. Ideal suspension properties at the clamp, smooth running in fields and on the road. Robust control arms apply the brakes and control steering force and angle.
Trailed steering axles are standard, forced steered axle and ABS also available.

8-wheel chassis – perfect soil protection up to 22 sh t / 20 t total weight

On this unique chassis the wheels sit in pairs on the self-aligning axles. The rear axle pairs are equipped with trailed steering, thereby protecting both the wheels and the turf. A hydraulic levelling system with patented pendulum swing action ensures optimum ground pressure distribution. This improves stability on slopes. The hydraulic suspension optimises driving comfort, and pneumatic or hydraulic braking systems ensure a high braking performance even at speed.
Due to the lower platform height in comparison with 26.5" tyres, The discharge end of the rotor is only 3.54" / 90-mm below the scraper floor. This conserves power and increases the flow rate.
(Fitting can vary from country to country.)

Nokian Country King	**Michelin CARGO XBIB**	**Vredestein FLOTATION TRAC**	**Vredestein FLOTATION PRO**
			
600/50 R 22,5	710/45 R 22,5	710/45 R 22,5	
710/50 R 26,5	710/50 R 26,5		800/45 R 26,5

TORRO 4500 L

TORRO 5100 D

Technical data

TORRO	4500 L	4500 D	5100 L	5100 D	5700 L	5700 D
Capacity cu ft / m³	1589 / 45	1589 / 45	1801 / 51	1801 / 51	2010 / 57	2010 / 57
Volume DIN cu ft / m³	971 / 27,5	975 / 27	1095 / 31	1077 / 30.5	1218 / 34.5	1200 / 34
Volume DIN / with tyres 26,5"	918 / 26	900 / 25.5	1042 / 29.5	1024 / 29	1165 / 33	1148 / 32.5
Pick-up	Pickup width 6.07' 1.85 m / Pick-up width DIN 5.84' / 1.78 m					
Chopping unit	39 knives / 1.38" / 35 mm theoretical cutting length					
Platform height	57.5" / 1460 mm / 62.2" / 1580 mm with tyres 26.5"					
Loading chamber area in ft / m	18.6x6.9 / 5.68x2.1	17.8x6.9 / 5.43x2.1	20.3x6.9 / 6.18x2.1	15.5x6.9 / 5.93x2.1	22.2x6.9 / 6.78x2.1	21.4x6.9 / 6.53x2.1
Length in ft / m	28.5 / 8.7	29.1 / 8.87	29.8 / 9.08	31.3 / 9.55	32.1 / 9.77	33.6 / 10.24
Width in ft / m	8.4 / 2.55					
Height in ft / m	3.1 / 3.98					
Weight with standard axle lbs / kg	16090 / 7300	17090 / 7750	16310 / 7400	17310 / 7850	16650 / 7550	17530 / 7950
Total weight	22 sh to / 20 t					

Fittings

TORRO	4500 L	4500 D	5100 L	5100 D	5700 L	5700 D
High drawbar, supported load 2.0 t	●	●	●	●	●	●
Low drawbar, supported load 2.0 t	❍	❍	❍	❍	❍	❍
Chains for scraper floor	4					
One-stage gearing scraper floor	●	●	●	●	●	●
Two-stage gearing scraper floor	❍	❍	❍	❍	❍	❍
Metal roof profiles	❍	❍	❍	❍	❍	❍

● = Standard, ❍ = Option

3rd metering beater and
cross conveyor belt

TORRO 5700 L

Optional fittings

Cleaning scraper for chopping unit	autocut knife sharpener	ISOBUS Terminal	Loading torque sensor
			
Hydraulic pick-up suspension	**LED-floodlights**	**Metal roof profiles**	**Hydraulic cross conveyor belt**
			

Other optional fittings:
PTO shaft 1 3/4" 20 spline
PTO shaft 1 3/8" 21 spline
PTO shaft 8x32x38 8 spline
Emergency brake valve for hydraulic brakes
Extension plate for L-type tailgate
Rear switch for scraper floor (L model)
Marker boards and demarcation lights
Forced steered axles with K80 ball coupling
Pneumatic brake system with ABS
Load-sensing

All information is provided without obligation. Fittings can vary from country to country.




Supreme service

You can rely on us.

Wherever they are in the world, our customers can rely on a fully developed network of sales and service partners. This close proximity to the customer guarantees fast delivery of spare parts and also ensures professional machine set-up and handover by qualified specialists. We are on hand wherever you happen to be.

Our range of professional services:

- Original Inside parts. 24-hour ordering service online.
- Long-term stock of spare parts.
- Expertise through regular training – For professional personnel.
- and much more…

… find out more from your Pöttinger partner, or visit www.poettinger.at!

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