

POTATO TECHNOLOGY
SUGAR BEET TECHNOLOGY
VEGETABLE TECHNOLOGY

GRIMME
HARVESTING SUCCESS!

MAXTRON 620

6-row sugar-beet harvester with 22-ton bunker



NEXT
GENERATION

MAXTRON 620: No one will get more out of it for you!

What comes out of taking more than 70 years of experience of Grimme potato harvesting technology and applying this knowledge to the development of a 6-row sugar-beet harvester? To put it simply: more! – More gentle harvest handling. More

protection for the soil. More impact force. More harvest. This is because the innovative combination of the unique defoliating, digging and cleaning concept together with the soil-protecting chassis is convincing even under the most difficult harvesting

conditions. The Maxtron 620 is the yardstick for a sugar-beet harvest offering maximised yield and gentle harvest treatment. – When may the MAXTRON 620 start harvesting success for you?



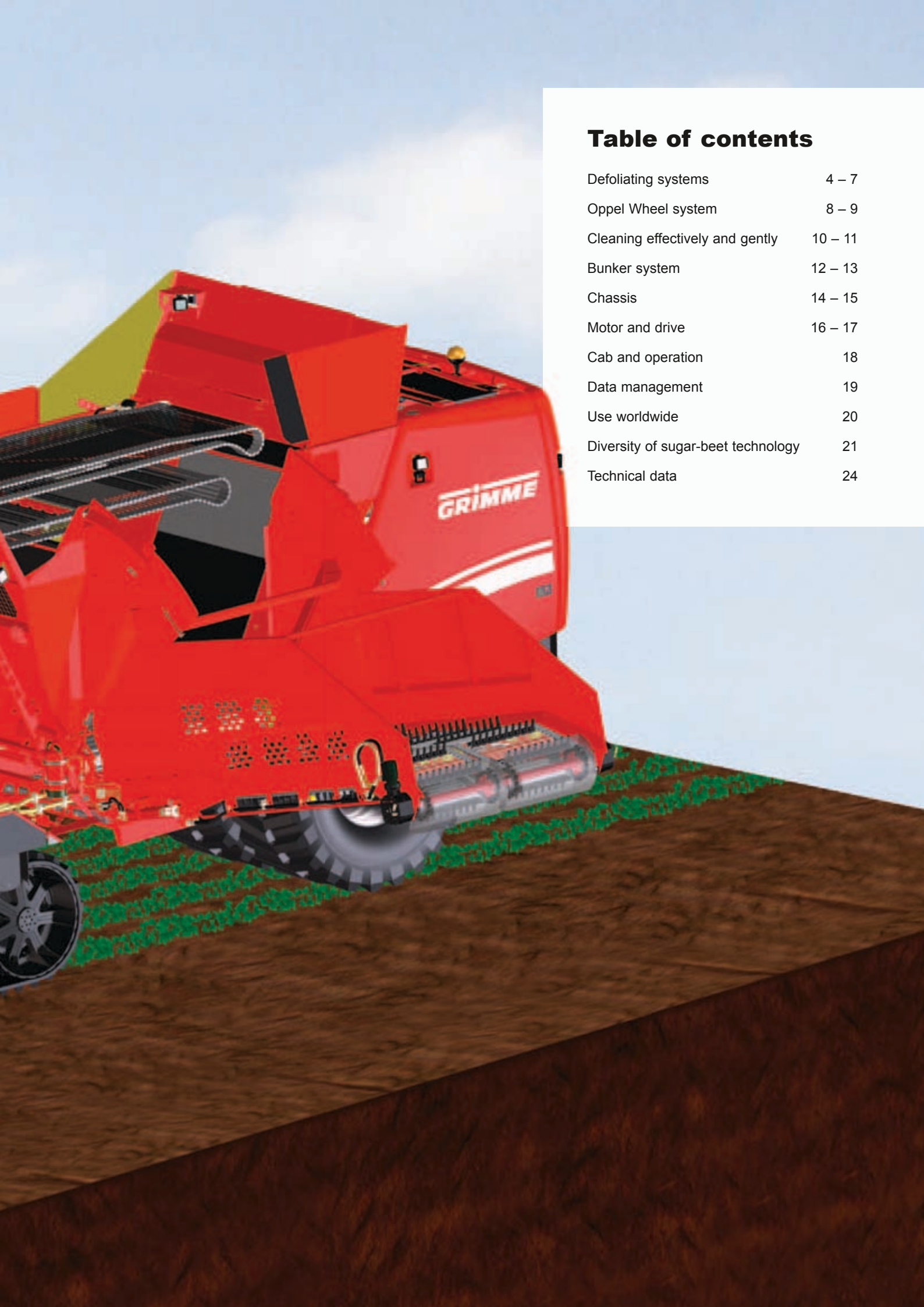


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TOPPING OR DEFOLIATING

We work out a new calculation for you

Grimme offers two alternatives for the reliable separation of the sugar-beet leaf mass. You can either use the topping

system or the innovative defoliating system. The results of scientific studies demonstrate what's in it for you!



A Topping



The new topper generation from Grimme unites the familiar long service life of the components with an improved sensor unit for loss-minimised topping of the sugar-beet.

More information can be found on page 6.

B Defoliating

Repeatedly tested and found to be good – defoliating is worth a lot of money!

More information can be found on page 7.

	Topped  A	Defoliated  B	Relative [%]
Sugar-beet yield (t/ha)	75.4	78.5	+ 4.1
Sugar content (%)	17.84	17.71	- 0.7
Amino-N (mmol/kg)	11.8	12.3	+ 4.2
Standard treacle loss (%)	1.18	1.20	+ 1.7
Sugar yield (t/ha)	13.45	13.90	+ 3.3

Source: Zuckerrübe 3/2011; Defoliated and topped sugar-beet in practical comparison; Prof. Dr. Christa Hoffmann, Dr. Antje Wulkow; Institute for sugar-beet research, Göttingen



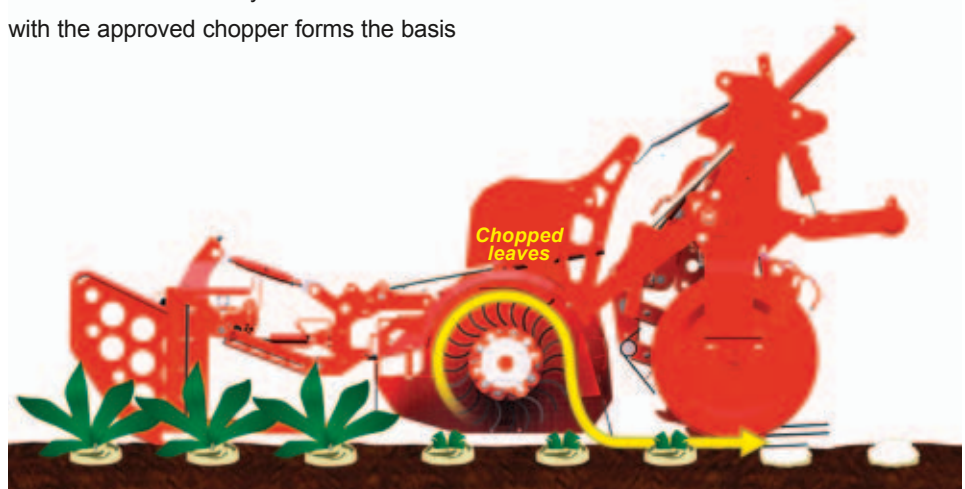
TOPPING WITH INLINE SYSTEM

For all who want to achieve a better cut: the new generation of toppers

Powerful chopping and precise topping – these are the requirements for your success. The INLINE system from Grimme with the approved chopper forms the basis

for trouble-free sugar-beet topping even under the most adverse conditions.

Advantages of the INLINE SYSTEM: ideal for bed-independent digging. The chopped sugar-beet leaf is put down between the rows. In this manner, the nutrients in the leaf are returned whereby they are absorbed by the plant. The leaf topper height is accurately guided via seven steel feeler rollers.



Powerful: The high-performance flails are effective with their long service life and high suction effect. Thanks to the sturdy individual suspension, shaft and flail are insensitive towards stones. The speed can be adjusted in an infinitely variable manner between 900 and 1,300 rpm.



The INLINE system deposits the leaves between the rows (1). There, the feeler rollers push down on them and the topper which is arranged between the feeler wheels can work in a trouble-free manner. Also for weed-infested crops.

The optimum rotor topper creates an accurate topping cut even in extremely weed-infested sugar-beet crops (2).



Exclusive Grimme know-how: Harvesting with savvy!

You would like to retrieve as far as possible the entire sugar-beet mass from the field? Then there is no alternative to the defoliating technology. The Grimme defoliating system FM by far offers the

smallest losses in the sugar-beet head section. The proven flail technology is gentle on the head and yet very durable.



The smart operating method of the INLINE front mulcher FM 270/300: Height-adjustable feeler rollers in front of and behind the machine (1) provide for an accurate depth guidance. In the front area, the sugar-beet is defoliated by means of a multi-shaft (2) and in the rear area by means of a cleaner shaft (3). The shafts are counter revolving and clean the sugar-beet heads from both sides.



The multi-shaft (2) is equipped with a combination of steel and rubber flails. The short steel flails provide for an accurate flailing off of sugar-beet leaf and weeds even in the case of weed-infested crops, while the longer rubber flails gently defoliate the sugar-beet from the rear.

Rubber flails are installed on the cleaner shaft (3), which gently defoliate the sugar-beet from the front.



A perfect result for highest yields: The leaf mass is chopped up and placed centrally between the sugar-beet rows; the sugar-beet is completely defoliated.



GENTLE CROP HANDLING FROM THE BEGINNING

A round affair: the Oppel Wheels

Hydraulically driven Oppel Wheels

with sideways movement: The use of hydraulically driven Oppel Wheels during the sugar-beet harvest facilitates the most gentle harvest handling possible, minimises the unnecessary intake of earth during the digging process and prevents obstructions of the harvesting unit even under extreme conditions. The sideways movement of ± 40 mm allows the loss-free intake even of irregularly planted rows of sugar-beet. The travelling speed-dependent lead of the Oppel Wheels actively and very gently lifts

the sugar-beet out of the soil, without pressing additional earth onto the sugar-beet. The ratio between lead and travelling speed can be set in an infinitely variable manner depending on soil conditions. The Oppel Wheels are made from HARDOX steel convince by their enormous stability and compared to cast-iron shares are absolutely break-proof even in case of contact with foreign matter. In addition, they are individually pressure-protected and reversible, so that any failure occurring due to foreign matter is easy to eliminate from inside the cab.



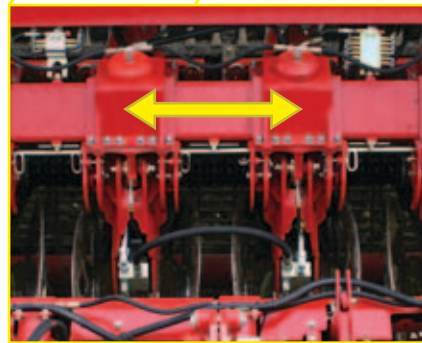
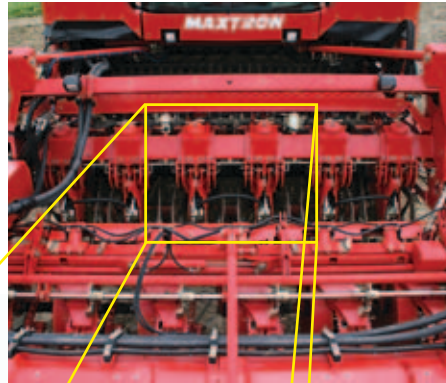
Laterally mobile (± 40 mm) and hydraulically driven Oppel Wheels for an optimum sugar-beet intake even in case of offset rows

A clean affair: Thanks to their lead, the hydraulically driven Oppel Wheels gently raise the sugar-beet from the soil.



The optional row width adjustment:

The harvesting unit with hydraulically adjustable row width offers in particular agricultural contractors who are working in regions with changing row widths the possibility of adapting their MAXTRON 620 to different row widths at the push of a button. This reduces set-up times, thus facilitating an increased campaign performance.



Flexible and convenient: the hydraulic row width adjustment for the following row widths (option):
45 – 50 cm
48 – 50 cm
18 – 20 Inch





GENTLE CROP HANDLING

Effectively and gently for more sugar-beet inside the bunker

The DLG-award winning cleaning concept from Grimme – for effective full-width cleaning without any tapering of the harvested produce



The cleaning system of the MAXTRON 620 is designed for the most gentle harvest handling possible with simultaneously high cleaning performance. The versatile setting possibilities can be saved and retrieved via the set-up

assistant
CLEAN
CONTROL.

In addition, four pre-settings are available, which

make it easier for the driver

to set up the machine. Compared to conventional share systems, clearly less compressed earth is getting into the cleaning system thanks to the loosening

effect of the leading Oppel Wheels. The ejector shaft transfers the dug sugar-beet to the main web cleaning system. Three 90 cm wide main webs arranged next to each other gently clean off the largest portion of the trash. To increase the cleaning performance in this area, the distance between main web and first cleaning roller can be set. The subsequent roller cleaning system consists of a total of 13 cleaning rollers, which provide for a gentle subsequent cleaning of the sugar-beet. The entire cleaning off of earth and other trash takes place across a width of 2.80 m. Depending on the weather and soil conditions, the cleaning intensity can be varied.

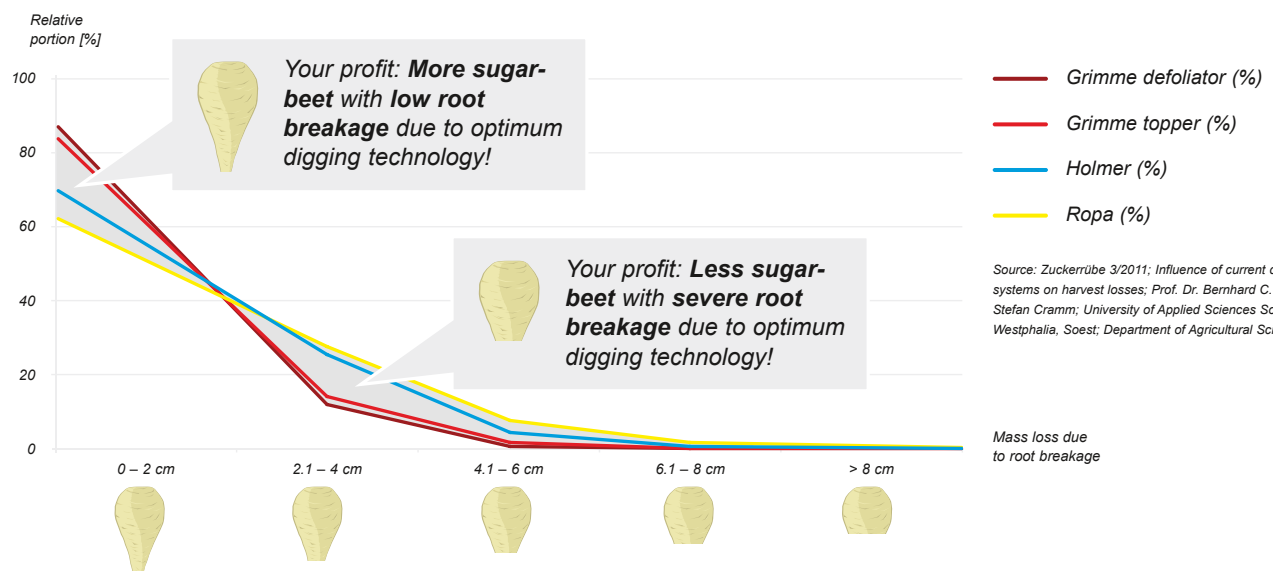
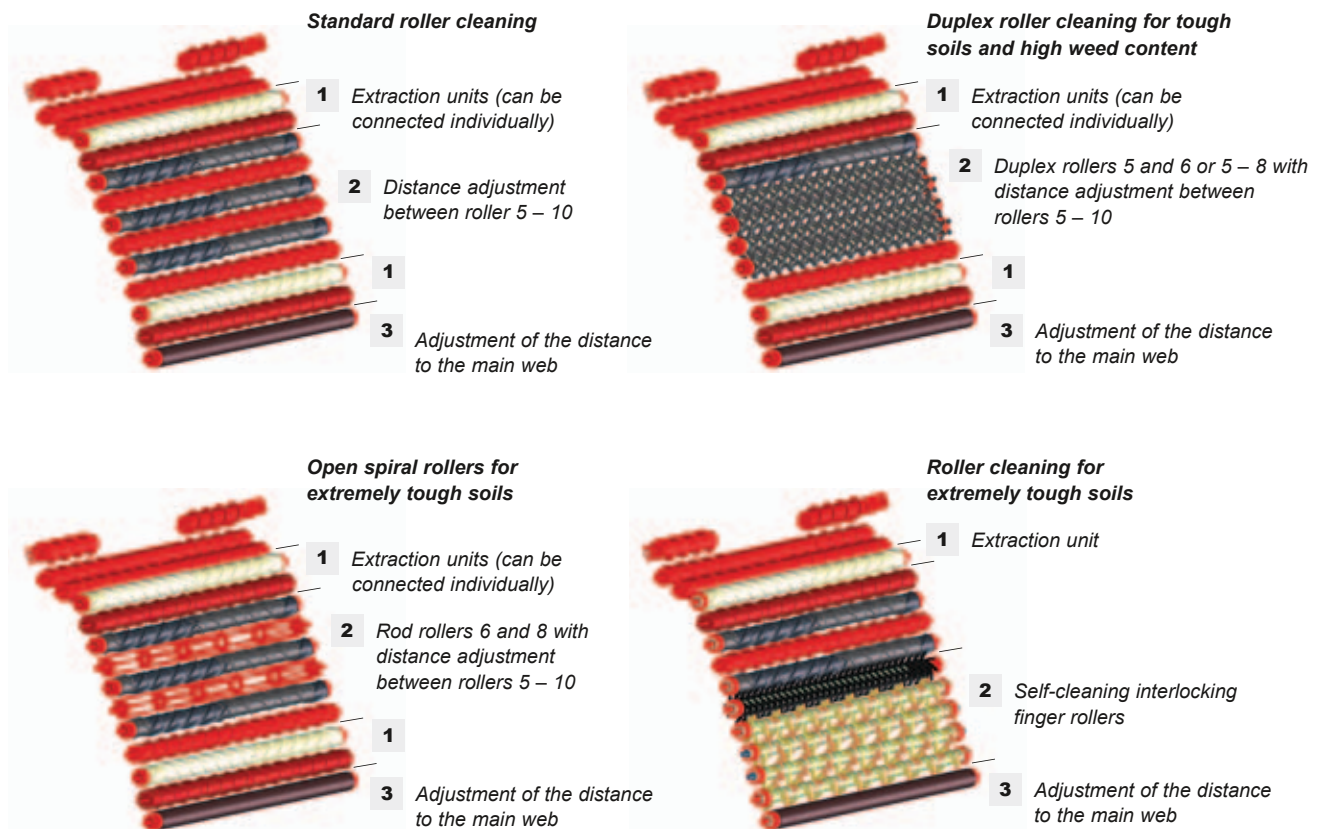
Full-width cleaning



Full separating performance: the extraction unit of the spiral roller cleaning system under the most difficult conditions



Different equipment versions of the roller cleaning system for extreme soil conditions are available as option to the standard roller equipment:





BUNKER FILLING AND UNLOADING

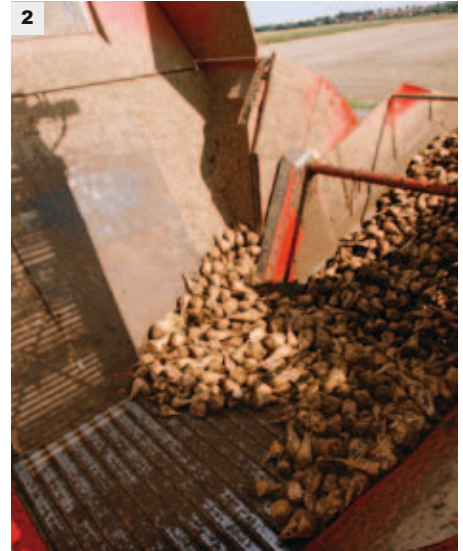
Harvesting your clamp with less than half the effort: the bunker system

The MAXTRON 620 is equipped with a special gentle transport system. The bunker filling elevator is perfect down to the last detail. The filling automatic transfers the crop directly into the innovative 22 ton bunker with a minimized drop height at the delivery point. Thanks to the fold-out side wall, the natural material cone effect is put to effective use.

When starting to dig or along rows of trees, it is also possible to dig with the side wall folded in. Straight transport paths while filling and unloading – this is gentle on the product and provides for a high performance. No matter whether you are unloading the bunker at the clamp at the edge of the field or whether you are transfer loading during digging.

The bunker filling conveyor's automatic height system provides for minimum fall heights (1) and treats your sugar-beet gently down to their tips.

The large bunker accommodates 22 tons and is equipped with a strong moving floor for a quick and gentle unloading of the sugar-beet (2).



Don't pound all over your precious sugar-beet: a lot of space between sugar-beet and tyres: The unloading belt smoothly puts down the sugar-beet in 4 m high and 10 m wide clamps (3).



WEIGHING BUNKER

For all those who like to go into detail – the new Grimme weighing bunker

The new concept for the MAXTRON main frame makes it possible to freely suspend the bunker. The ideal condition for a perfect weighing of the bunker contents. As an option, we offer a weighing system

by means of which you can directly determine the yield. This way you always know which quantities are stacked at the edge of the field and can plan all transport work in an optimum manner.





SOIL PROTECTION

A lot of advantages ex factory: the innovative chassis

The driver of the MAXTRON 620 benefits from its perfect handling. – and the soil from maximised soil protection! An extreme steering angle of the steering head of $\pm 70^\circ$ facilitates an inner turning radius of just one metre. Thus, the frequent and soil-damaging driving manoeuvres that occur mostly when starting to dig the field are clearly reduced. Spoil your soil with the track. Thanks to the large footprint and optimum weight distribution between crawler and wheel, the Maxtron fully merits the title “lowest soil pressure” in

the sector of self-propelled sugar-beet harvesters with a 20-ton bunker. The belt travelling gear steering and the optionally available active slope compensation additionally contribute to a maximum slope stability.

The DLG-award winning chassis concept guarantees that the soil is only rolled over once on 73 % of the working width. Only 20 % of the area are rolled over twice, while 7 % are not rolled over at all. Contrary to wheel chassis with articulated joint, the concept prevents the soil from being rolled over three times.

The Grimme chassis concept makes it possible that in all driving modes, the soil is rolled over in an extremely gentle manner across the entire surface and makes for efficient digging even under extremely humid soil conditions. In daily application this means digging longer when it starts to get wet and starting again earlier when the soil starts to dry. Thus a higher degree of utilisation of the machine, reducing the costs per hectare and the campaign.

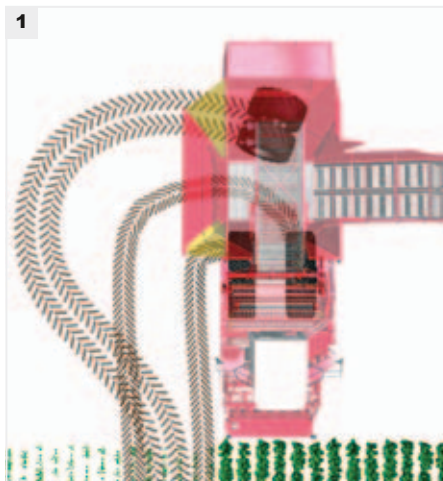


Good news for the soil – the innovative Grimme chassis concept; DLG-award winning

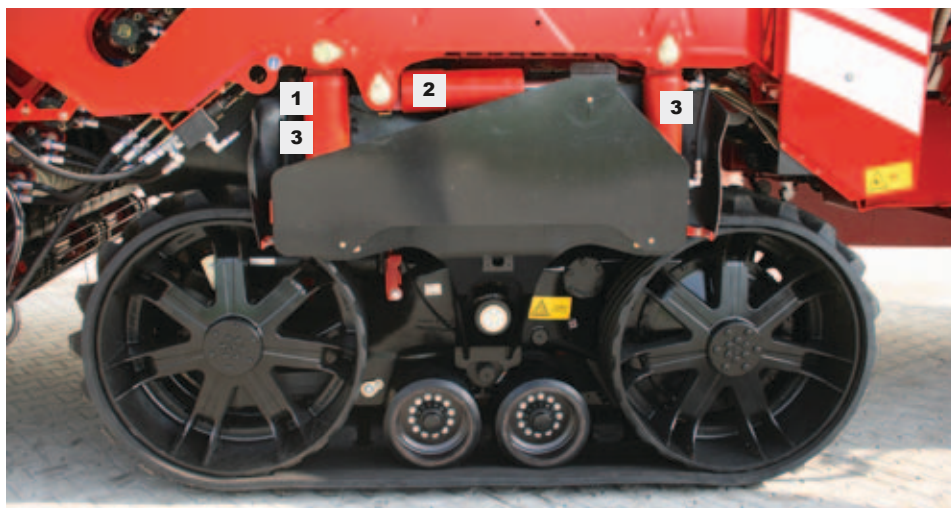


Nothing to moan about: The extreme turning circle prevents frequent and soil-damaging turning and driving manoeuvres (1). Crosswise driving on the headland is reduced. The inner turning radius only amounts to 1 m.

Minimum soil pressure due to the soil being rolled over in an extremely gentle manner across the entire surface (2)



Ride comfort and stability on slopes



High ride comfort during road travel: The suspension of the tracks are ensured by a system consisting of hydraulic cylinder and gas pressure accumulator (1).

Staying safely on track: For corrections on a slope, the entire track axle can be deflected by $\pm 4^\circ$ (2).

Perfect, controlled drive in any position and during any turn: The axles are equipped with single wheel or track drive. An anti-slip-control (ASC) prevents unnecessary slipping of the track gears and the cluster gear.



Consistent degree of utilisation of the cleaning system in any position with the optionally available slope compensation (3): The machine frame can be inclined by up to 5° against the slope via a total of four hydraulic cylinders above the crawler axle. Thus, bunker filling is optimised and the entire machine stabilised on a slope.





Economic and clean driving for the future: with state-of-the-art engine technology

The sophisticated hydraulic system combined with the innovative control technology and a new engine generation with SCR-exhaust gas treatment technology render the second generation MAXTRON clearly more economic. The engine, the heart of the machine, is an electronically controlled 6-cylinder Mercedes-Benz engine OM 460 with 490 PS owing to a rich 12.8 l displacement. Due to the SCR-exhaust gas treatment (exhaust gas standard Euro 3B), it was possible to optimise the specific consumption of the engine in the part-load operational range. In addition, the hydraulic drives were geared to an optimisation of efficiency compared to the first MAXTRON generation. In practical application this means that the automotive speed control as a function of the engine's degree of utilisation needs to come into action a lot later so that the low speed which is favourable for consumption can be maintained for longer. Combined with the 1,400 l fuel tank, this minimises the need for pit stops for longest refuelling intervals. Depending on the machine's

power requirement, automotive driving controls the engine speed in field and road travel mode between 1,250 and 1,650 rpm. In addition, the MAXTRON 620 is officially approved for the use of RME-fuel. Basically, it is attempted to keep the engine speed as low as possible to drive the engine at a favourable ratio of torque, output and consumption. The load sensing system with adjustment piston pumps in interaction with the engine's automotive speed control guarantees highest input power at constant speeds for chassis and harvesting units. Hydraulic drives – designed to economise! The second MAXTRON generation was developed with the highest degree of efficiency of the hydraulic drives in mind. The combination of drives and cutting down on entire pump systems has rendered this machine markedly more economic. In this way, every litre of fuel is converted into performance in a particularly efficient manner.

Permanently high performance at low engine speed. – That saves fuel and is gentle on the environment.



Fuel-saving speed reduction down to 1,250 rpm during automotive driving. The MAXTRON 620 with Mercedes-Benz engine has been officially approved for the use of RME-fuel (1).

Approved drive components by Bosch/Rexroth and Parker provide for optimum efficiencies and a high degree of reliability (2).



THE PERFECT WORKPLACE

The tailor-made suit for the driver: cab and operation

Climb in and feel good. The new spacious cab of the MAXTRON 620 offers you all the convenience to master even long harvesting days at full productivity without tiring. A CD-/MP3-radio with Bluetooth hands-free equipment for your mobile phone is just as much included in the standard scope of supply as an automatic air conditioning system. Versatile storage possibilities as well as a passenger seat round off the workplace. So as to be able

to keep an eye on all areas at any time, the MAXTRON 620 is equipped with six cameras and two colour monitors. In conjunction with the DLG-award-winning VISUAL PROTECT system, the driver's attention is thus drawn early and automatically to special load states in the machine. The CCI 200, awarded the DLG gold medal, makes it possible to intuitively attend even to complicated setting and control tasks.

The large glass surfaces of the comfort cab (1) with their narrow corner rails provide an ample view of the harvesting unit, towards the sides and into the bunker.

Full control at any time: 2 high-resolution colour monitors (2) in conjunction with 6 cameras provide you with a consistent view.



World-wide unique: the operating concept CCI 200 for ISOBUS-compatible agricultural machines (3) co-developed by Grimme and spanning various manufacturers.



Optimised logistics: ISOLOG – with the Grimme weighing bunker

ISOLOG is an interdisciplinary data management system spanning the entire sugar-beet logistics, from harvester to factory. The master data of the growers which has been prepared by the sugar industry is made available to the logistics coordinator of the harvesting association on the Internet portal FarmPilot (Arvato-Systems). With this data, he schedules jobs for the sugar-beet harvester, which are transmitted to the machine on-line via GSM module. The jobs received by the machine are processed. As soon as a job is activated, field navigation starts automatically and guides the machine directly to the correct field entrance. In addition, the driver is shown the field borders and the position of the clamp. During harvesting, all necessary data such as times, routes and diesel consumption are recorded. As an option, the sugar-beet harvester can be equipped with a weighing system, the Grimme weighing bunker, which is accurate to 2 – 3 %. With this system, the yield or clamp

tonnage of the current job is captured. The completed job is automatically sent back to the Internet portal FarmPilot. Data is on the one hand available to the harvesting association and on the other hand to the transportation associations and clamp coverers. These in turn are able to accurately plan their logistics on the basis of the weighing data and the progress of harvesting work. Data sovereignty is in the hands of the harvesting association which decides which data can be viewed by the other users. In addition, ISOLOG offers the possibility of machine tracking, i.e. important data such as the progress of the current job and the fuel tank contents can be viewed on-line. Like the harvesting data, recorded working times are captured in the portal and are assigned to the individual job. Depending on the situation, it is also possible to assign several drivers to one job, i.e. it is possible to separately record harvesting work, maintenance or repair work.

ISOLOG



ISOLOG – Optimum use of resources on the basis of the new Grimme weighing bunker



Year-round field documentation in the sugar-beet production via smart phone or tablet PC (1)

Real-time weight recording of harvested quantities thanks to the weighing bunker and ISOLOG (2)

WORLDWIDE IN USE

Powerfully in action on all soils, under any condition

Ten years after its market launch, the MAXTRON 620 has firmly established itself on the world-wide market of self-propelled 6-row sugar-beet harvesters. In many sugar-beet cultivation areas in the world, the MAXTRON 620 is proving its worth in daily field application under the most different of harvesting conditions. Guarantor of success continues to be the

powerful combination of a unique digging and cleaning concept with the soil-protecting chassis that proves reliable in operation even under the most adverse conditions. Numerous awards for different innovations will only urge us on to continue bringing the MAXTRON 620 to perfection.



The most beautiful moments in Spain are spent driving to the next field.



Versatile applications: Even outside the campaign, the MAXTRON 620 proves useful as "best man" in Holland.



Dense weed content in Russia: No problem for the combination of leaf chopper with cross conveyor and rotor toppler



Even on the motorways of Chile, the MAXTRON 620 cuts a fine figure.



Who's there hiding in the bushes: the MAXTRON 620 in Italy.



Adverse conditions in Romania: a welcome change for the MAXTRON 620



Approved and marvelled at during field presentations



MAXTRON 620 goes East: At the harbour where the sugar-beet harvester is being shipped to Croatia.



On the slopes of Switzerland, the MAXTRON 620 remains safely on track thanks to the slope compensation.

Harvesting success in every respect



MAXTRON 620:

Simply getting the most of it – even under the most adverse conditions: This job the MAXTRON 620 is taking care of in high-end-quality. At the same time, the efficient 6-row sugar-beet harvester with 22-ton bunker always proceeds in a particularly gentle manner. The result: the yardstick for gentle harvest and soil treatment.



REXOR 620:

Highly productive, fast and economic. The new 6-row REXOR 620 with 22-ton bunker convinces in the field with lowest fuel consumption at high performance and thanks to SPEEDMATIC delivers a satisfying 40 km/h on the road. The result: the highest degree of efficiency under any condition.



Rootster 604/804/904:

Less is more! The new pulled transfer harvester is the powerful and economic alternative to the self-propelled harvester technology for the 6-, 8- or 9-row sugar-beet harvest. The all-rounder competently and effectively takes care of all work arising with the 1- and 2-phase harvesting method. The result: Digging, cleaning and transfer loading – all in one.



BM 300/330:

No weed is able to resist the 6-row BM 300/330. The high-performance leaf mulcher guarantees a clean harvest preparation for 2-phase digging. The result: a sugar-beet crop that has been optimally prepared for digging.



FT 300:

The ingenious 6-row INLINE front chopper FT 300 simplifies the 1-phase harvesting system. With its patented leaf depositing system, it avoids any unnecessary material congestions and facilitates an optimum distribution of the chopped mass of leaves. The result: each sugar-beet is accurately topped.



FM 300:

Improved cleaning for an improved harvest using the 1-phase system. Thanks to its compact design and patented operating method, the 6-row INLINE front mulcher FM 300 achieves best "cleaning results". The result: Increased sugar-beet harvest per hectare!

**Turn the night
into day!**







Technical data

	MAXTRON 620
Length	12,000 mm
Width	3,300 mm
Height	4,000 mm
Row width	45 cm, 48 cm, 50 cm, 18 inch and 20 inch fixed Optionally hydraulically moveable: 45 – 50 cm or 48 – 50 cm or 18 – 20 inch
Flail toppler	Series: INLINE SYSTEM Options: High-performance defoliator FM 270/300
Depth guidance	EHR electro-hydraulic linkage control by means of 7 feeler wheels, depth adjustment can be carried out from inside the cabin
Scalper unit	Series: Parallelogram guided scalper unit with cutting height automatic Option: Hydraulically driven rotating scalper
Digging shares	Hydraulically driven Oppel Wheels with ± 40 mm side movement
Intake units	Paddle rotor plus main web unit with plain roller at the front
Cleaning	13 spiral rollers with support web Continuous width 2,800 mm Option: Partially equipped with rod rollers or duplex rollers
Bunker capacity	33 m ³ / approx. 22,000 kg
Filling	Bunker filling conveyor with automatic filling system
Unloading web	1,800 mm wide; maximum unloading height up to 4,300 mm with 2 position-memory-function
Front axle	Belt travelling gear, 770 mm wide with approx. 2,000 mm footprint Option: active slope compensation $\pm 5^\circ$
Rear axle	Terra tyres 900/60 R 32
Steering mode	Centre pivot plate steering $\pm 70^\circ$; belt travelling gears $\pm 4^\circ$; inner turning radius 1 m
Operation	2 colour touch screens CCI 200 Multifunction ride lever plus GBX joystick box
Motor	Mercedes-Benz OM 460 with SCR exhaust gas technology (AdBlue) to ensure compliance with exhaust gas standard Euro 3B 360; kW / 490 PS Automotive driving as a standard due to fuel-saving speed reduction down to 1,250 rpm
Tank capacity	1.400 l
Grimme comfort package	Series: Large comfort cab with large storage spaces and large refrigerated compartment as well as excellent noise insulation, automatic air conditioning, video monitoring with six cameras (Oppel Wheels, main web, roller cleaning, bunker, transfer loading, reverse drive camera) and two colour monitors, air-suspended de-luxe seat, audio system with CD-/MP3 payer, pneumatically folding, heated exterior mirrors Option: <ul style="list-style-type: none"> · Comfort package cab (seat heating; lateral windscreen wipers, refrigerated compartment) · OPTIPLAN BASIC – data entry on the machine with data printer · OPTIPLAN PROFI – data management system with USB data transfer and printer · OPTIPLAN ISOLOG – on-line job management with/without bunker weighing and machine tracking

Your Grimme Partner for advice and service:

No claims can be raised in respect of texts, illustrations, technical specifications, dimensions and weights, equipment as well as performance specifications. They are approximate and non-binding. Changes in the course of technical enhancement are possible at any time.