POTATO TECHNOLOGY
BEET TECHNOLOGY
VEGETABLE TECHNOLOGY

Belt planter GB 430

The GB 430

The GB 430 belt planter, is the perfect four-row choice for fast, efficient and gentle planting of potatoes. The design of the belt planting element makes it possible to plant non-calibrated tubers or oblong shaped varieties. With suitable, calibrated tuber sizes, higher working speeds of up to 10 km/h can be achieved, which can lead to a significant increase in output. The GB 430 belt planter is designed both for conventional planting in ridges and for planting in separated beds. Thanks to two different versions of the chassis, the machines can be perfectly adapted to different applications in terms of ridge construction. The efficiency and performance of the machine can be increased by the integration of under-root fertilization, ridge shaping, erosion control and the application of granules as well as the application of liquid seed dressing or furrow treatment agents. The machine can be equipped with Clever Planting and Section Control as an option.

Belt planter

Special features at a glance:

High degree of agility and manoeuvrability

- For high maneuverability on headlands, the hydraulic steering axles provide very large steering angles.
- The chassis with four wheels has a steering angle of 35°.
- In the case of the alternative chassis with two wheels, the steering angle is even better and increased to 42°.

Increased output

- Due to the large tipping hopper with a capacity of more than 3000 kg the amount of fillings can be kept to a minimum.

Saving resources

Section Control:

- Precise creation / documentation of field edges, spraying tracks, headlands, etc.
- Save time and money on production resources.
- Reduced harvesting losses
- Improved crop quality

Everything in a single pass

- Combination of several working steps with the GRIMME tank system and the granular applicator.
- Premium protection of the tuber through the application of pesticides and granulates in a single operation process.
- Save on work by applying treatments in a combined, single procedure.

Optimally shaped

- Shaping boards achieve a loose to firm ridge with a smooth surface.
- Cage rollers for a more fine and crumbled ridge structure.
- Flow-Board XL enables an even ridge shaping, when cultivation is done in beds.

High performance

- The belt planter elements enable travelling speeds of up to 10 km/h
- For optimum and gentle handling of the tubers, the belt planting element consists of six round belts which work in pairs at three different speeds.
- Hydraulic single row drive and Clever Planting are optionally available.

Accurately dosed

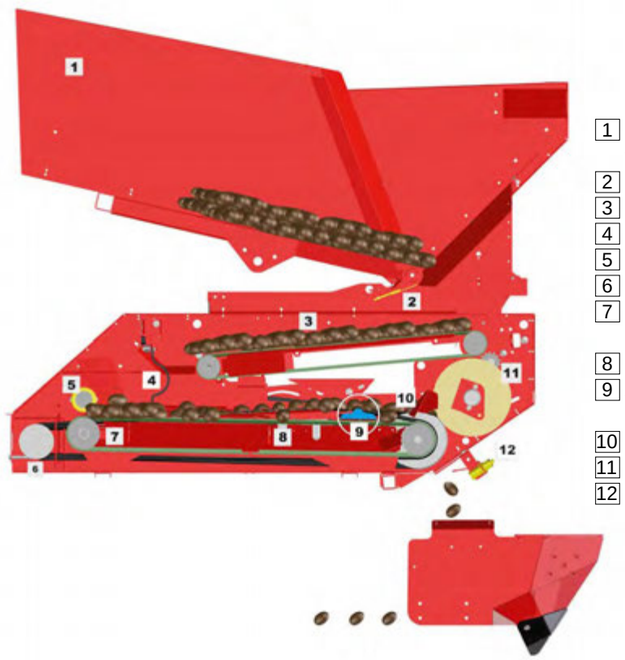
- Automatic, speed depending dosage of fertiliser
- The amount of fertilizer can be easily adjusted in kg/ha via operator terminal.
- The fertiliser box can be expanded from 900 l to 1500 l with attachments.
- The fertilizer is applied either centrally below the tuber or slightly deeper to the left and right of the tuber

Perfect guidance

- Automatic hydraulic steering of the drawbar for a reliable, central tuber placement in pre-formed ridges, even on slopes.
- Automatic self-centre steering
- High ground clearance at the headland via hydraulic machine lifting.

The belt planting element

During planting, the potatoes are first transferred from the hydraulic tipping hopper (1) onto two individual, hydraulically driven feeder belts (3). The filling level in the planting element can be adjusted in an infinitely variable manner from the operator terminal. The finger feelers (4) control the constant feed. For planting, the potatoes are placed onto the round belts (10). The regularity of the tuber spacing depends on the evenness of the tubers and the corresponding machine settings. Excess tubers roll off the side and are conveyed back in the direction of the coil roll (5) by closed return belts (7). From here the potatoes are returned onto the round belts (10).



1 Hydraulic tipping hopper
2 Supply flap
3 Feeding belt
4 Finger feeler
5 Coil roller
6 Round belt drive
7 Closed return belts (green)
8 Round belt agitator
9 Adjustment unit (potato size)
10 Round belts (black)
11 Foam roller
12 Ultrasonic sensor

Feeder belts

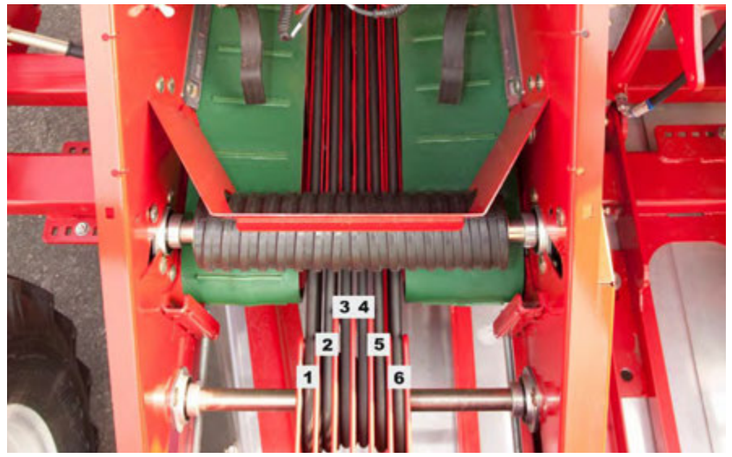
The feeding belts evenly fill the planting elements. This leads to an ideal singulation of the tubers on the round belt, which ensures an even planting result.

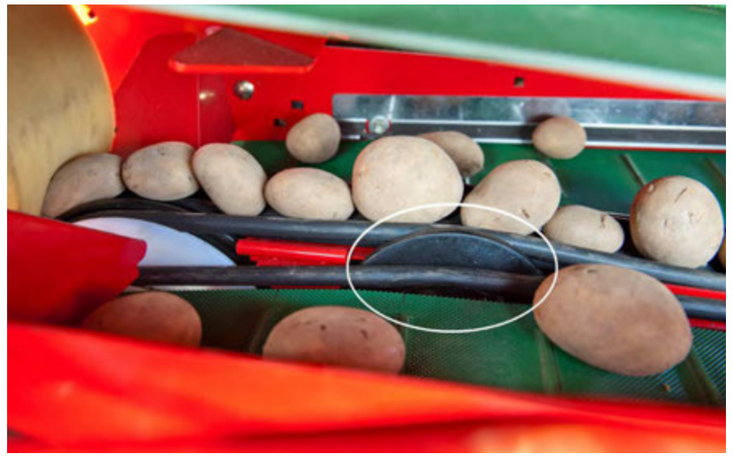
Finger feelers

Finger feelers detect and regulate the filling level in the planting element. This ensures an even supply of seed potatoes even on slopes.

Set of planting belts

Six round belts, which rotate at different speed, transport the seed tubers centrally and closely lined up on the set of planting belts from the backside of the machine towards the furrow opener in the front. The differential speed of the round belts in relation to the return belts supports a good alignment of long potatoes on the set of round belts.





Adaptation to the tuber size

The distance between the round belts can be adjusted to adapt to the tuber size. The adjustment can be done via an adjustment handle.

Round belt agitator

The round belt agitator helps remove doubles and creates a unified tuber spacing on the round belts. Due to the possibility of a fast and sensitive adjustment of the agitator to the tuber size, the device is perfectly suitable for frequent change of different tuber varieties.

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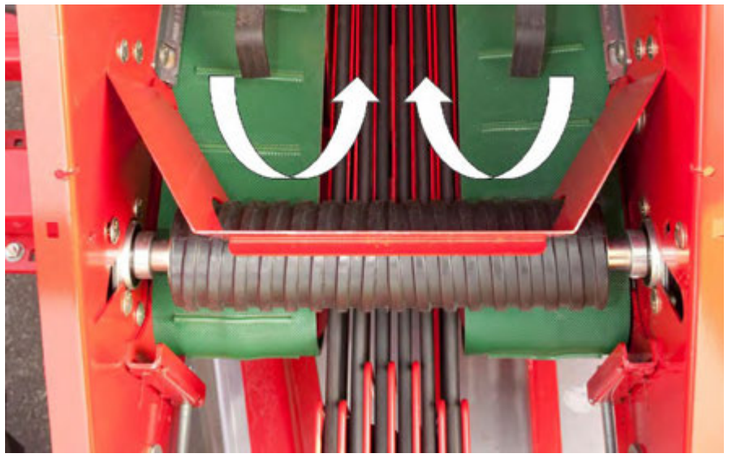
Return conveyors

The return conveyors move the excess potatoes back towards the coil roller at the rear of the planting element. Compared to similar systems, the closed surface of the return conveyors ensure a particularly gentle transport of chitted seed tubers. This design also reduces the cleaning requirements of the planting element.

Coil roller and scraper

The spiral roller gently guides the potatoes from the outer return conveyor towards the inner set of round belts.

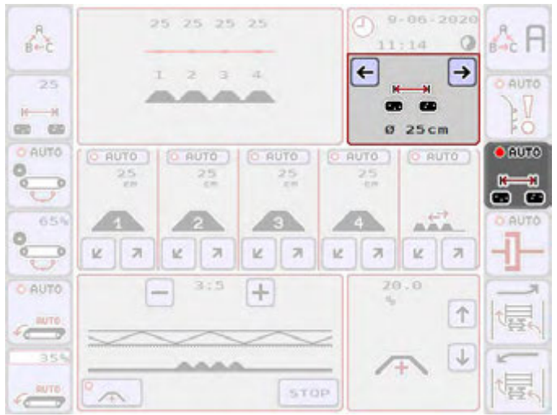


Foam roller

At the front of the set of round belts there is a foam roller which slows down the tuber flow and releases the potatoes individually for planting. The decelerating effect of the foam roller compensates for small irregularities and missing tubers in the alignment of the tubers on the belts.

Monitoring

Tuber spacing is monitored by an ultrasonic sensor that counts the tubers as they fall into the furrow opener and thus checks for deviations. If there are any deviations in the planting distance, the driver is informed acoustically and visually on the operator terminal.



Control of tuber spacing

The adjustment aid automatically corrects the tuber spacing during planting to a pre-defined number of tubers per hectare.

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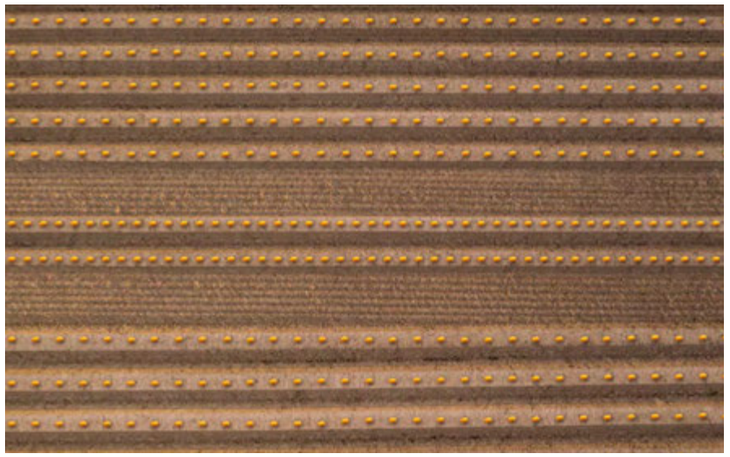
Automatic levelling

For a perfect distribution of the tubers, even on slopes (+/- 7°), the leveling of the planting elements is always kept horizontal in relation to the working direction. The discharge point into the furrow opener as well as the drop height of the potatoes always remains constant due to the automatic levelling on slopes.

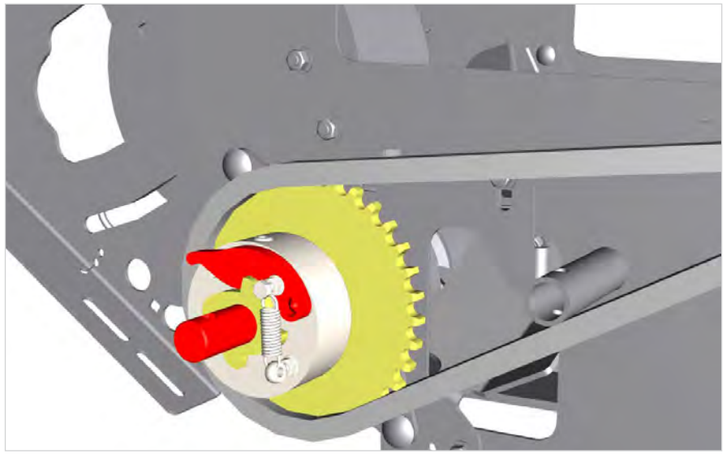
Hydraulic drive

All planting elements are jointly operated by a single hydraulic motor. The hydraulic drive allows an easy, infinitely and comfortable adjustment of the planting distance directly from the cab.



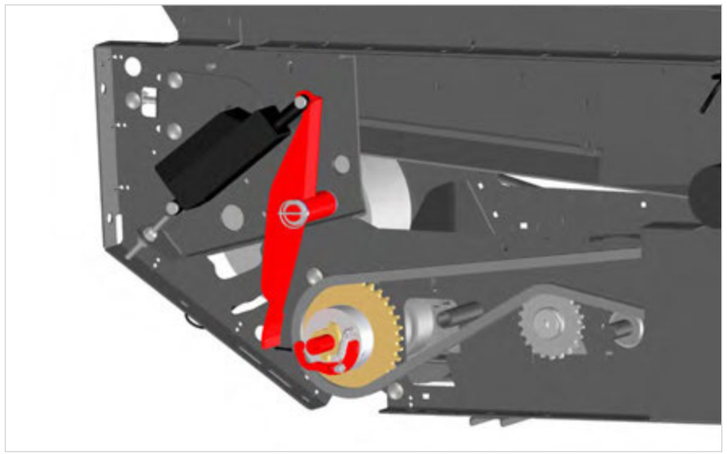
Mechanical clutch

For planting potatoes in spray tracks, two belt planting elements can be completely switched off manually via mechanical clutches.



Electrical switch-off

For the manual switching of single rows and/or the creation of separating rows (i.e. between different varieties), all four belt planting elements can be switched off individually.



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Hydraulic single row drive

Each belt planting element is driven by its own hydraulic motor. The hydraulic single row drive allows Section Control and Clever Planting.

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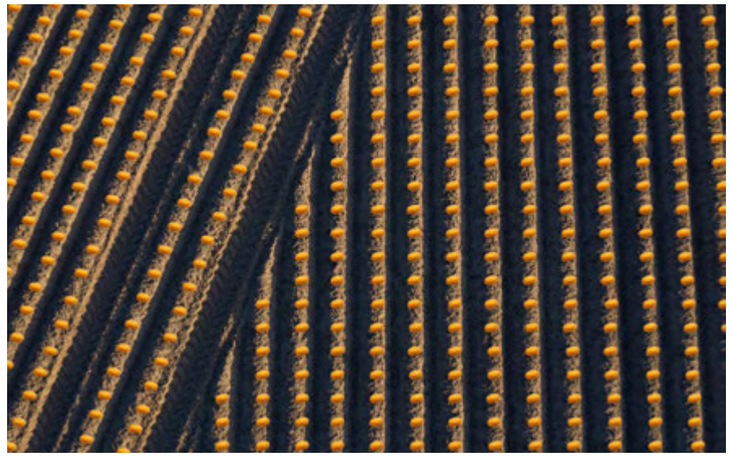
CLEVER Planting

Consistant growth and tuber size

Increased share of marketable crop due to an improved, even growth and tuber size in the rows next to the spray tracks. This is achieved by an infinitely adjustable, reduced tuber spacing and reduces the competition for light and nutrients along the spray tracks.



Section Control

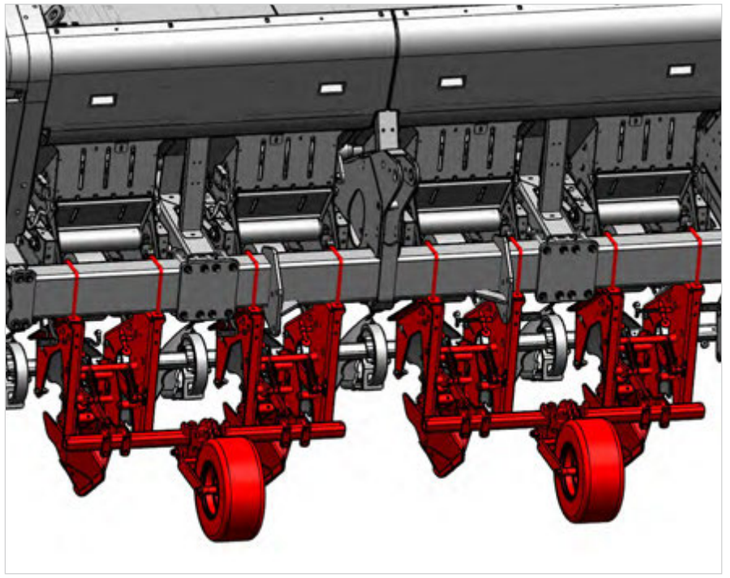
The optionally available Section Control enables automatic switching on/off of single rows on wedge-shaped field resp. on headlands. The results include consistent rows across the field, reduced production costs and increased seed savings.

Ideal for lighter soils

The pulled furrow openers are individually guided in height by a feeler wheel. This design reduces the load per feeler wheel. As the feeler wheels are installed centrally in front of the furrow opener, this version is particularly suitable for lighter soils.

For an intake of 4 rows

The four, trailed furrow openers are mechanically connected and guided in a parallelogram. This type of depth control is particularly suitable for the combination with 4-row harvesters. The uniform depth of tuber placement can be ensured over the entire working width.



Perfect for heavy soils

The pairwise mechanically connected, pulled furrow openers are guided in the depth by two large feeler wheels.
The feeler wheels are mounted in a way, that they run between the ridges on an even slightly compacted surface of the tractor track. This allows to use a maximum of uncompacted soil volume for the ridges. This design is particularly suitable for heavy soils.

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Comfort and precision

The four, trailed furrow openers are mechanically connected and guided in a parallelogram. The automatic, hydraulic depth control is adjusted conveniently from the cab via operator terminal.
A uniformed field emergence can be achieved due to the constant covering of the seed potatoes with soil, even under changing conditions.

Tipping hopper

The hydraulic hopper lifting ensures equal supply of the feeding belts of each planting element without bridging. With a hopper capacity of up to 3 000 kg and a row width of 75 cm, high area outputs are possible with only just a few fillings of the planter.

More convenience

The automatic tipping hopper ensure a gentle, constant filling of the planting element with tubers. At the same time a blockage (bridging) in front of the feeder belts is prevented.

Box turning unit

The GB 430 can be equipped with a box turn unit for a particularly gentle handling of the seed tubers. The box turn unit provides a direct transfer from the boxes into the hopper of the potato planter.

Improved ridge shaping

For light to medium soils the trailed potato planters can be equipped with additional spring tines. The spring tines loosen the tractor track and thus enable better ridge shaping.

Combining work steps

The GB 430 belt planter can be equipped with a tank system, a fertiliser box and a granular applicator for the optimal start of tuber growth and to save work steps. The approved GRIMME barrel system ensures either an even application of liquid chemicals onto the tuber or an application of agents into the furrow. Due to separated chambers inside the furrow opener, the liquid and granulated agents can be applied simultaneously without sticking together. This prevents uncontrolled spreading.

Plant protection equipment

The GRIMME TS 820 tank system is designed and approved for the application of liquid chemicals to be applied onto the seed potatoes and/or into the furrow. Thanks to a container volume of 800 l, large area outputs can be achieved without any problems. The integrated agitator prevents deposits in the tank system and thus ensures nonstop consistency of the liquid chemicals.

Improved ballasting

The GRIMME TS 820 tank system is also available in a version to be mounted on the front of the tractor for an improved, balanced ballasting of the tractor or to increase capacity. In order to be able to manoeuvre the tank system easily in the yard/in buildings, removable rollers are fitted as standard.

Simple changing

In order to make it easy to change between the application of liquid chemicals onto the seed potatoes and/or into the furrow the potato planter can be equipped with two couplable interfaces.

Perfectly moistened

For the application of liquid chemicals into the furrow or onto the seed tuber, the machine can be equipped with two separate nozzle systems, which are fitted in the furrow opener.

Infinitely adjustment

The hydraulically driven pump, which is independent of the tractors engine speed, can be conveniently adjusted via the operator terminal.
The hydraulic drive of the pump enables a constant application rate.

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Constant application rate

In order to ensure that the application rate is always exact, it is automatically adjusted to the respective working speed. The defined application rate [l/ha] can be set conveniently on the operator terminal.

Fertiliser box

The large stainless steel fertiliser box has a capacity of 900 litres. Thanks to the speed-dependent spreading, an efficient and resource-conserving output of fertiliser is achieved.

Switch-off fertiliser box

The fertiliser can optionally be switched off electrically when the outer two rows are used to create spray tracks. Excess fertiliser can thus be saved and the environment is protected accordingly.

Fertiliser outlet

For a reliable application of fertiliser next to and also below the tubers, either injection tines or a injection discs are available. GRIMME injection discs have a large circumference and are extremely resistant to blockages, especially on soils with high proportions of organic residues.

Precise output

The speed-dependent dosage of the granular applicator ensures an exact application in kg/ha. When the planter is switched off or lifted, the spreader's cellular wheel is automatically turned in the opposite direction to the drive direction, which prevents granules from dribbling out.

Well combined

For an optimal start into the vegetation, the tubers can be treated simultaneously with liquid chemicals for plant protection and with granules Separate chambers in the furrow opener allow a simultaneous application of liquid and granulal pesticides without sticking.

Traditional planting

The GB 430 is equipped with covering discs as standard, which keep the seed tubers in place and cover them with soil. For the complete "final" ridging the machine can be extended by a shaping board or cage rollers. The shaping board ensures a loose to firm ridge with a smooth surface, which is suitable for an easy and effective haulm removal and harvest preparation. Using the XL shaping board, the circumference of the ridges can be increased to up to 1.05 m, providing more growing volume for large tuber nests and keeping the risk of green tubers to a minimum. Due to the possibility of placing the tuber at a higher level within the ridges, the shaping board XL is suitable for fields endangered by waterlogging. The cage rollers provide a light, airy ridge with an open-pored surface. In combination with the spring-mounted ridging bodies, they ensure improved water absorption on light soils.

Covering discs

Each ridge is piled up with soil by two, spring loaded covering discs. The quick fixing of the seed tubers prevents it from rolling within the furrow. Due to the serrated design, the discs grip even in dry conditions and ensure a fine crumbling of the soil.

Improved warming of the soil

For planting in classical two-phase-procedure, the GB 430 can be equipped with covering discs that cover the tubers slightly without a final ridge construction. Finished ridge shaping is carried out in a second work step. In addition to reduced traction power requirements, this method ensures better warming on heavy soils.

Airy and loose

The cage roller creates an open-pored surface of the ridges for good water absorption, especially on light soils.
The tines in front of the cage rollers are equipped with ridging bodies to make the ridge flanks firm and the rest of the ridges airy and loose.

More volume for growth

The shaping board XL creates ridges with a large volume and ridge circumferences of up to 1.05 m. The large ridges are particularly suitable for potato varieties with large tuber nests as well as for soils with risk of waterlogging, as a higher placement of the tuber in the ridges is possible.

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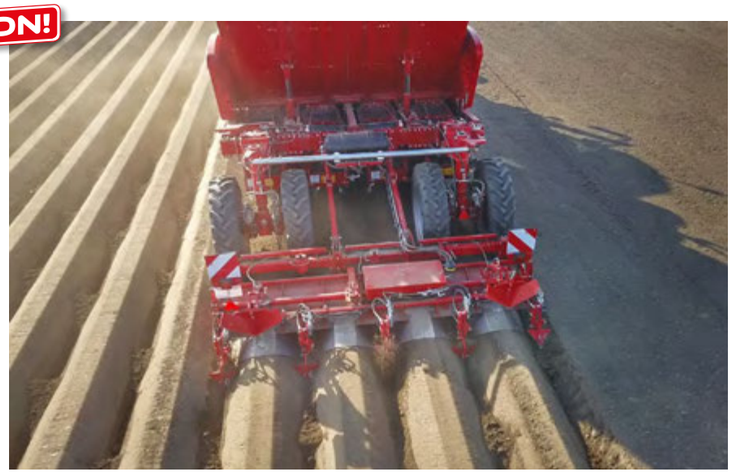
Protection against erosion

For the best-possible erosion protection, the TerraProtect Pro System prevents the soil from being washed away. The specific combination of a loosening tine and a dyker improves the water absorption of the soil (infiltration rate) and creates "calming zones" for rainwater. Lifting and lowering of the dykers is automatically adjusted to the working speed so that the distance between the dykes always remains the same. The improved use of rainwater on slopes can increase yields by 5-10 %.

Terra Protect



No rolling of tubers

On planters, which are equipped with two large wheels, the shaping board XL can be mounted in front of the wheels without an additional tine frame. As the final ridge shaping is carried out by the shaping boards directly behind the covering discs, the seed tubers do not roll. Even in hilly terrain the machine enables perfect tuber placement and a loose soil without recompaction by the wheels.

Automatic depth control

To ensure a constant cover of the seed tubers the tine frame and the following shaping board can be automatically guided in height. The preferred working depth can be conveniently adjusted from the driver's seat via operator terminal.

Spraying tracks

Due to the plane soil a stable and comfortable driving is ensured, when large tyres are mounted on machines for chemical plant protection or fertilisation. The spray track eradicators can be operated manually or hydraulically (option) from the driver's seat.

Planting in beds

For potato cultivation in separate beds, the GB 430 can be equipped with the GRIMME XL Flow-Board, an additional lateral swivelling wheel, soil guiding plates and a three-point side shift. As the machine is not pulled centrally but "offset", the additional swivelling wheel ensures a constant depth control and thus enables an even field emergence of the potatoes. In order to enable the machine to be pulled in a straight line, the pulling point can be placed behind the tractor by using a hydraulic three-point side shif. At high working speeds, the Flow-Boards and deflector plates guide the soil in an accurate way to provide stable ridges when planting in beds.

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Flow-Board XL

The long XL Flow-Boards enable stable ridges in separate beds - even at high working speeds. Stainless steel deflector plates keep the loose soil in the bed together, so that as much soil as possible can be used for ridge shaping.

The mechanical coupling of the furrow openers with the Flow-Board allows a constant coverage of the seed potatoes for an even field emergence.

Bed divider

The bed divider ensures optimum soil flow when growing potatoes in separated beds. The bed is divided in the middle which ensures the Flow-Boards are evenly filled with soil.

Driving/Planting in offset mode

The hydraulic three-point side shift is used to adjust the traction point of the planter behind the rear wheel of the tractor. Thus reducing lateral traction forces when driving in offset process.

Even deep guidance

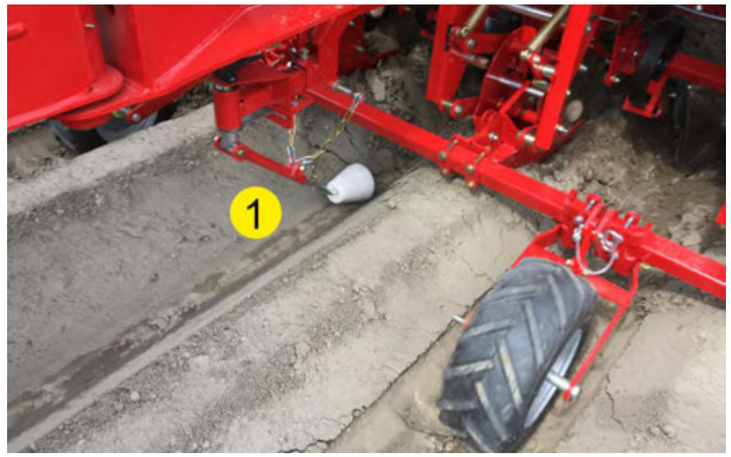
When planting in offset procedure the machine is supported by a swivelling wheel, to ensure a uniform depth control in the bed.

Telescoping drawbar

For optimum adaptation to the tractor, all drawbars are mechanically telescopable. When using tractors with twin wheels, manoeuvrability is not affected.

Hydraulic steering drawbar

The hydraulic steering drawbar offers the advantage that the potato planter can be perfectly guided parallel to the next, neighbouring ridges by means of a manual control. Furthermore, the drawbar is equipped with an automatic self-centering that moves the drawbar to straight forward position at the push of a button.



Cam follower

The optionally available cam follower (1) is used to control the drawbar when planting in pre-formed ridges. In this way the cam follower liberates from additional regulation work and thus relieves the driver.

Machine lifting system

The hydraulic machine lifting provides high ground clearance on the headlands.

Hydraulic jack stand

For convenient coupling and uncoupling of the machine, all drawbars are equipped with a hydraulic jack stand.

No soil compaction between the ridges

For planting potatoes in separate beds. growing them in conventional ridges, the GB 430 can be equipped with two large wheels as standard. The laterally mounted wheels enable a clod-free intake of the ridges during harvesting with four-row harvesters, as no compaction occurs between the ridges during planting. Especially when turning on narrow headlands, this axle shows its strengths thanks to the hydraulic axle steering with its 42° steering angle. In addition, the hydraulic axle steering ensures an accurate placement of the potatoes, even on slopes, as the machine can manually be kept accurately in the track.

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Maximum protection against ground compaction

The gantry pivot axle with its four large wheels ensures an even weight distribution across the whole working width between all ridges. For conventional planting, a shaping board or cage rollers can be assembled behind the axle. The hydraulic axle with its self-centre steering system offers high manoeuvrability on headlands thanks to its 35° steering angle. It ensures accurate placement of the tubers on slopes, as the machine can be easily kept on track. The axle self-centre steering relieves the driver in case of manoeuvring, as the wheels are automatically moved into a straight forward position.

VC 50

The operator terminal type VC 50 (standard) enables simple touch operation. Individually programmable membrane keys, which are easily accessible by the thumb on both sides of the display, enable a reliable operation of the machine even on difficult terrain.

CCI 100

The manufacturer independent ISOBUS operator terminal, type CCI 100, offers a large intuitive touch display with additional membrane keys. In combination with an appropriate software licence, the CCI 100 enables the feature of Section Control.

Versatile operation

Thanks to the optional available ISOBUS technology, the GB 430 can be equipped with a future-proof operation concept. The ISOBUS connectivity enables an operation by means of appropriate tractor-terminals and compatible ISOBUS operator terminals of other manufacturers.

Control box

The control box type GBX 860 is to complement the VC 50 or CCI 100 operator terminals of spring or harvest machines. The control box enables quick access to frequently used functions. Such as drawbar self-centering, axle steering, levelling axle and field start / field end.

Multi-functional lever

High operating comfort by use of sensitive and intuitive machine operation with quick access to frequently required functions. I.e. axle steering or field start / field end. The operator is free to assign five double-acting functions to hardware-keys, as well as the X- and Y- axes of the multi-functional lever.

GRIMME Video system

With up to 8 cameras, the GRIMME video system offers optimum monitoring of the entire machine. The camera image is changed automatically according to a user-defined interval.

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Visual Protect

To relieve and support the operator and to protect the machine, Visual Protect automatically detects error sources, such as an incorrect adjustment of the ridge shaping unit, and displays them on the monitor.

Visual PROTECT

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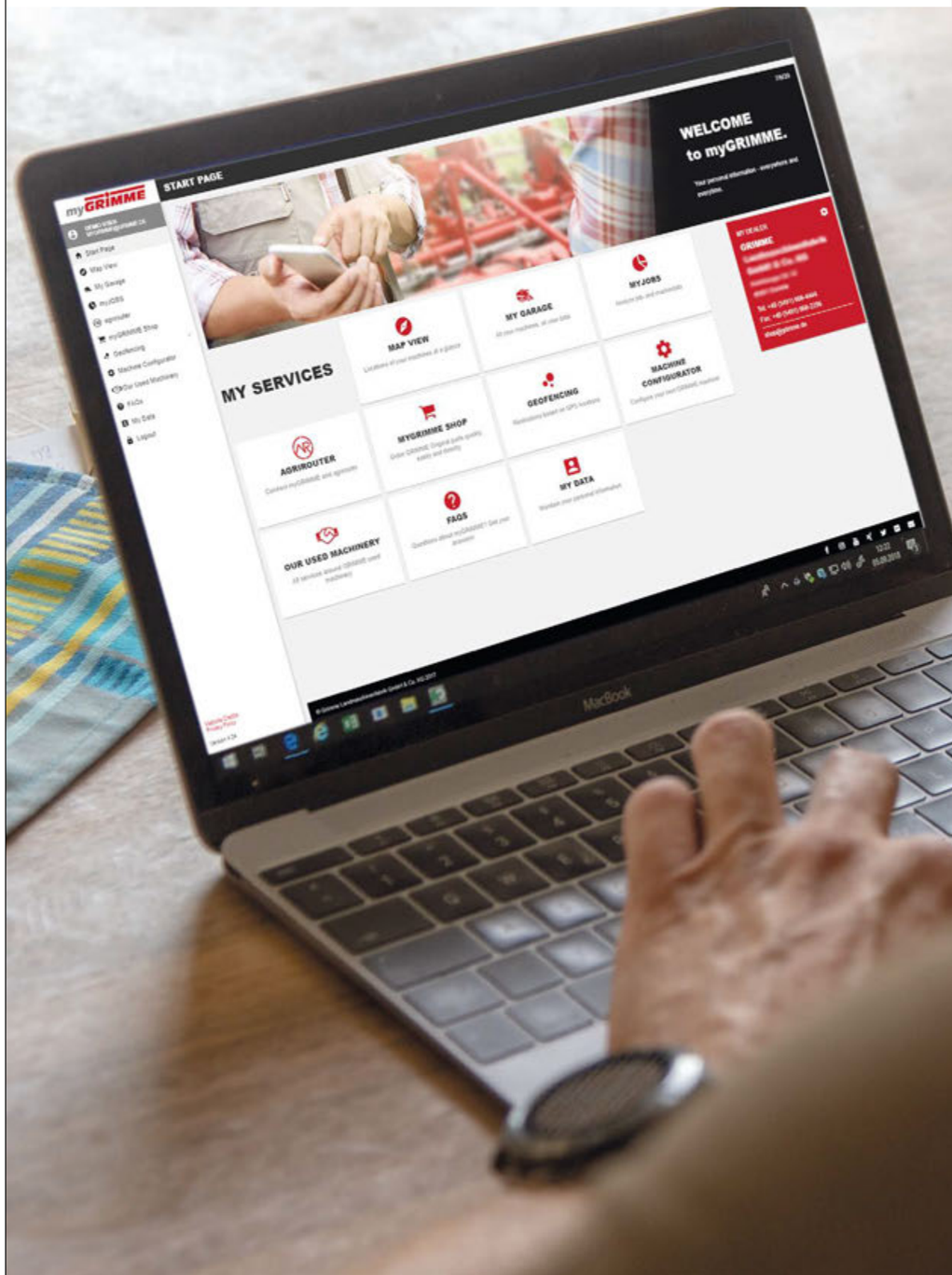
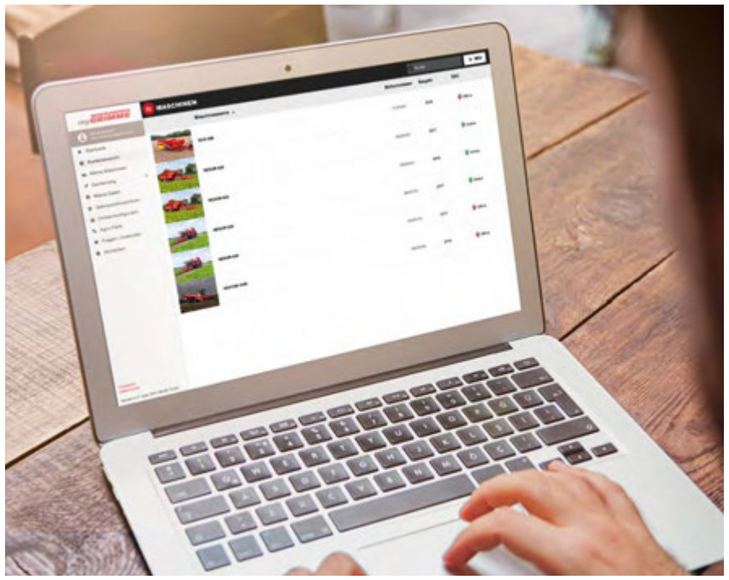


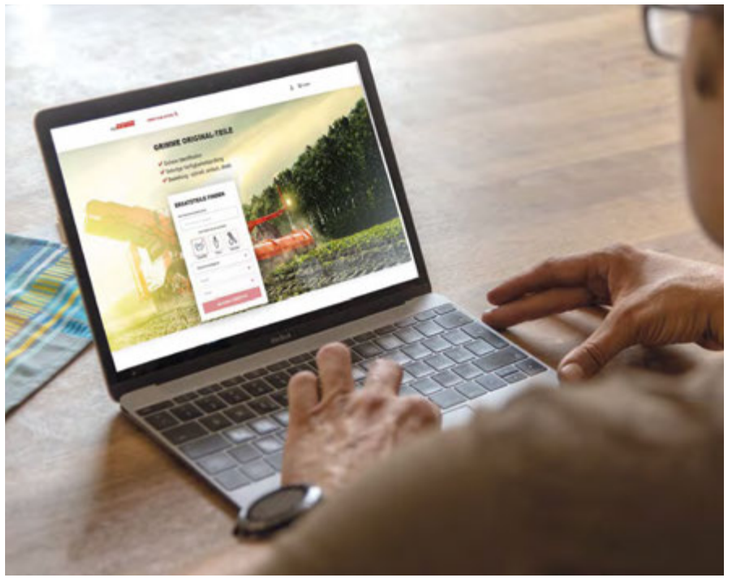
My Machines

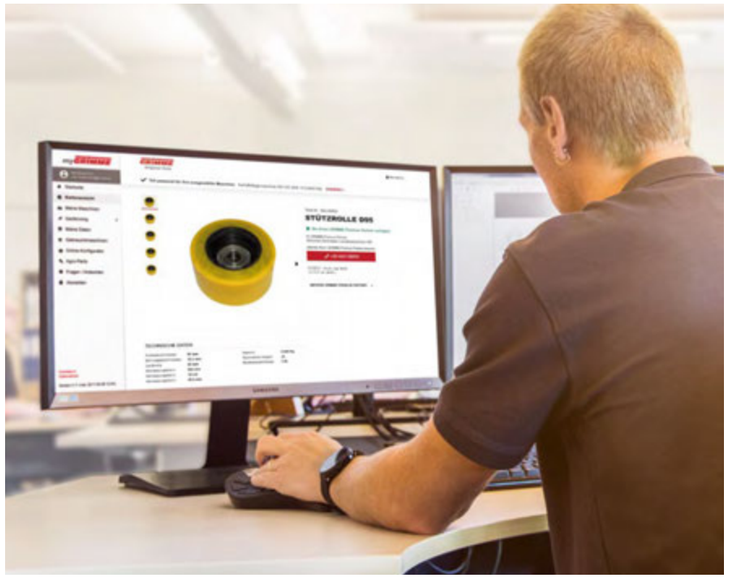
All machines are displayed clearly with their relative machine options. Machine specific documents such as operator manual and spare parts book can be accessed at any time



Identify spare parts

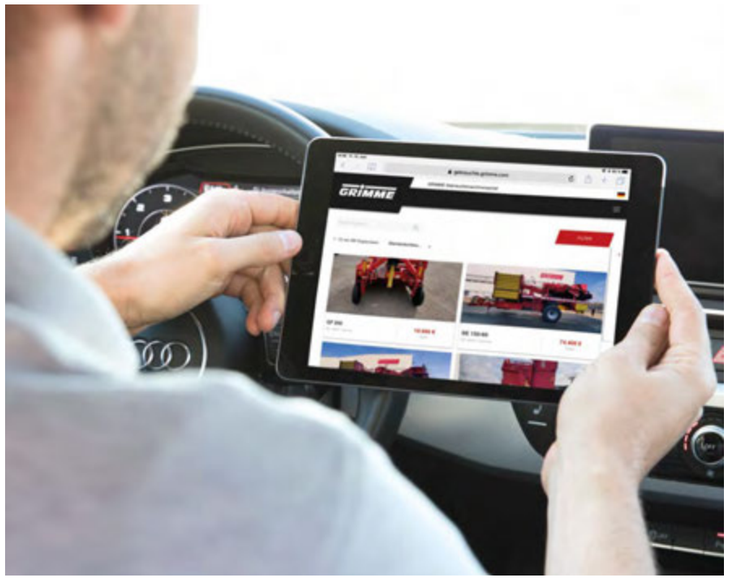
Due to the specific spare parts book in myGRIMME, a quick identification of parts as well as checking the availability of parts is possible.





myGRIMME Shop

Spare parts which have been identified and located can be ordered conveniently on-line at the myGRIMME webshop.



Used machinery

On the Internet portal "GRIMME used machinery" (https://gebrauchte.grimme.com) machinery can easily be sold or searched by dealers and by customers. An offer for refurbishing a machine can also be requested. On request, GRIMME will take over the complete marketing, worldwide, including any customs issues that may arise. This saves the seller a lot of time and effort.

More information on **www.grimme.com**

and on social media platforms

facebook.com/GRIMMEUK
twitter.com/GrimmeUK
youtube.com/user/GrimmeLandmaschinen
instagram.com/grimme_group

Download on the App Store

or download our GRIMME app from the Apple App Store onto your iPad.

Technical data

Standard equipment

Dimensions	
Length with axle incl. 2 outer running wheels without / with fertiliser box	6560 / 7300 mm
Length with gantry pivot axle incl. 4 running wheels without / with fertiliser box	5640 / 6380 mm
Length with spray track eradicator and with axle incl. 2 outer running wheels without / with fertiliser box	6560 / 7300 mm
Length with spraying track lever and gantry pivot axle incl. 4 running wheels without / with fertiliser box	7030 / 7770 mm
Width at row width of 75 cm	3300 mm
Height	2800 mm
Height in transport position	3200 mm
Filling height tipping hopper flat	2230 mm
Support length for machines with an axle incl. 2 outer running wheels, without / with fertiliser box	6560 / 7300 mm
Support length for machines with gantry pivot axle incl. 4 running wheels without / with fertiliser box	5030 / 5770 mm
Overlapping length at the rear side	1300 mm
Track width	3000 mm
Track width adjustable up to	3660 mm
Weight	
Empty weight with basic configuration	4000 kg
Working width	
Number of rows	4
Row width	75 - 90 cm
Drawbar	
Drawbar eye / low hitch	x
Low hitch	x
Low hitch ball bearing (K 80)	x
Bunker	
Capacity of tipping hopper, at RW 75 cm	3000 kg
Capacity of tipping hopper, at RW 90 cm	3500 kg
Wheels	
Wheels (option 1)	2 x 270/95 R44
Wheels (option 2)	4 x 280/85 R28
Chassis and engine	
Transport speed	25 km/h
Tractor requirements	
Without shaping board (min.)	60 kW
With shaping board (min.)	90 kW
Oil flow	50 l/min
Required control valves (single acting)	2
Required control valves (double acting)	1

No claims can be raised in respect of texts, illustrations, technical specifications, dimensions and weights, equipment as well as performance specifications.
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