

POTATO TECHNOLOGY
BEET TECHNOLOGY
VEGETABLE TECHNOLOGY

GRIMME

HARVESTING SUCCESS!

Separating technology

Shaping, separating and planting in bed cultivation

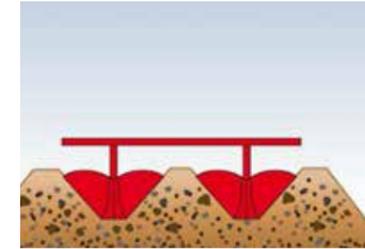


Highest quality on stony and cloddy soils

A prerequisite for growing high quality potatoes on stony and cloddy locations is an optimised soil cultivation as a first step. Growers all over the world use the advantages of an effective separation of clods and stones by means of a 3-phase cultivation system – comprising of forming,

separating and planting in a bed. The loosely sieved beds are free from trash and warm up quickly offer ideal growth conditions to ensure a fast emergence of the potatoes. In addition, subsequent planting with an optional shaping board behind the potato planter allows steps such as repeated ridge

shaping or the use of a rotary tiller to be dispensed with. Furthermore, there is less damage to the potatoes during the harvest and picking costs are reduced or can be eliminated altogether. Maintenance and repair costs are additionally minimised due to a reduction in wear.



Phase 1: Bed formers of the BF/BFL-Series shape the beds. The track and bed widths are determined during this step.

More information on pages 4–7.



Phase 2: Bed separation with the stone and clod separator of the CS-Series. The separator takes up the entire bed width and sieves the soil.

More information on pages 8–15.

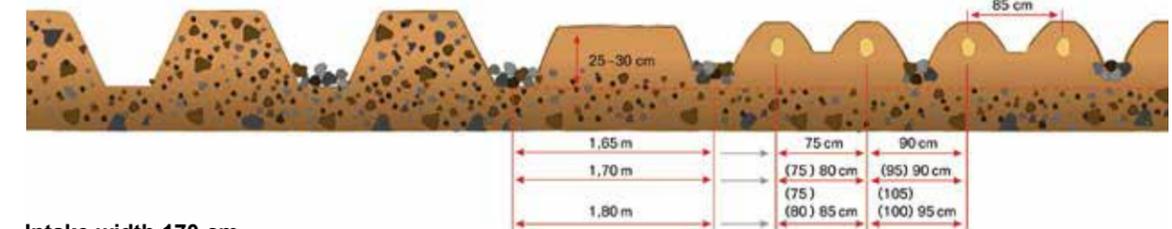


Phase 3: Potato planting with the bed planting system. Immediately after separation, the seed potatoes are planted using the 1-, 2- or 3-bed system.

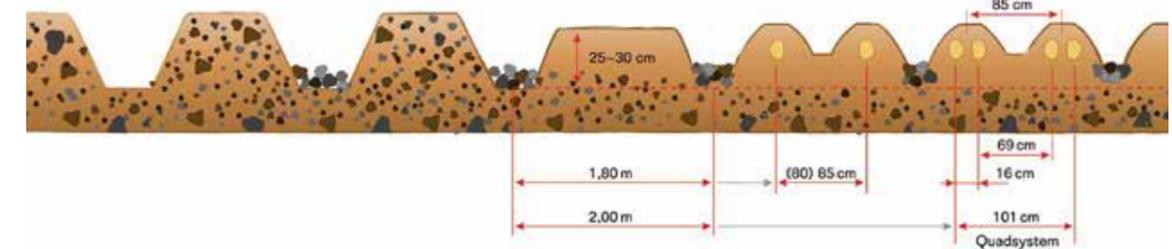
More information on pages 16–17.

Typical bed and row widths depending on planting direction, stone content and business structure of the farm

Intake width 150 cm



Intake width 170 cm



Ideally shaped beds

The first steps for successful separation are neatly drawn beds. Shaping the beds is a decisive working step, as subsequent machines are unable to make any corrections. Grimme offers two basic easy to pulled models for a successful start. The large

bed formers of the BF-Series are ideally suited for applications on medium to heavy soils with large amounts of stones and clods. The easier pulled BFL bodies are particularly suited for light to medium-heavy soils and are able to plough smaller beds. The long

mouldboards reduce the trickling of soil back into the furrow to a minimum. Three different working widths make it possible to shape two, three or four beds per crossing – creating the best requirements for subsequent separation.



Shaping of two beds

BF/BFL 200

The BF/BFL 200 is equipped with two plough bodies inside a fixed frame. Two beds are formed per crossing, one between the plough bodies and two halves at the sides. Small, structured areas can be cultivated particularly well.



Shaping of three beds

BFL 400

The BFL 400 is equipped with three plough bodies inside a fixed frame. The frame can be hydraulically folded as an option. Three beds are created per crossing, two between the plough bodies and two halves at the sides.



Shaping of four beds

BF/BFL 600

The BF/BFL 600 is equipped with four plough bodies inside a hydraulically foldable frame. Four beds, and in a folded state two beds, are shaped during each crossing.

For heavy conditions

BF body

The BF body is suitable for beds with a width of up to 2 m and for heavy soils and soils with a high clod and stone content. The sole width of 410 mm offers sufficient space to deposit larger amounts of stones and clods.



For light conditions

BFL body

The BFL body is suitable for beds with a width of up to 2 m and for light to medium-heavy soils. The long mouldboards ensure that the beds are evenly compacted and skimmed. In addition, a sole width of 330 mm provides for a compact depositing of the stones.



High stability

Stone protection

The mechanical shear bolt protection (1) ensures a longer service life of the ridging bodies.

The optional hydraulic stone protection with automatic resetting (2) considerably reduces potential downtimes.



A versatile range of options

Options for bed formers

Detachable wear + tear points and side shares (1) that can be used on both sides lead to an increased stability.

Subsoil loosening tines (2) make it possible to loosen the soil in front of the BF-/BFL bodies to provide for an easier plough body operation and an improved bed structure.

With fixed loosening tines, the soil directly underneath the future beds is loosened. For very stony conditions, a return spring at the tines is optionally available to increase stability. For road transport, the loosening tines can be retracted (3).

If the BF/BFL 600 is folded, it is also possible to shape a single bed at the headland (4).

To ensure an even working depth, the left hand and right hand outside of the BF/BFL 600 can be equipped with support wheels (5).

The two outer ridging bodies of the BF/BFL 600 are suspended on a parallelogram (6) so that their working depth can be adjusted. The two outer bodies work at approx. 2/3 of the depth during the first crossing and only at the full depth during the second crossing to avoid lateral tensile forces.

Preparing beds without clods and stones

The second step for high quality potatoes on stony and cloddy soils is optimum soil separation as a first step. Here the stone and clod separators of the CS-Series are called for. The CS-Series is

designed for high performance, best separating quality and the highest economy. Versatile options are available to choose from to achieve this goal. The four basic models CS 150

Combi-Star, Combi-Web, Multi-Web and Combi-Star XL with a separation width of 1500 or 1700 mm are convincing with their special combination of star rollers and main webs.



7 star rollers

CS 150 Combi-Star

The CS 150 Combi-Star is particularly suited for use on heavy, wet and sticky soils and in case of an increased humus content. The robust V-belt drive results in low maintenance costs for the machine.



3 star rollers and 1 main web

CS 150 Combi-Web

The CS 150 Combi-Web is particularly suited for use on sandy soils with a high stone content. At the same time, the power requirement is lower compared to the Combi-Star. A transfer roller supports the flow of material and reduces the jamming of flat stones.



3 main webs

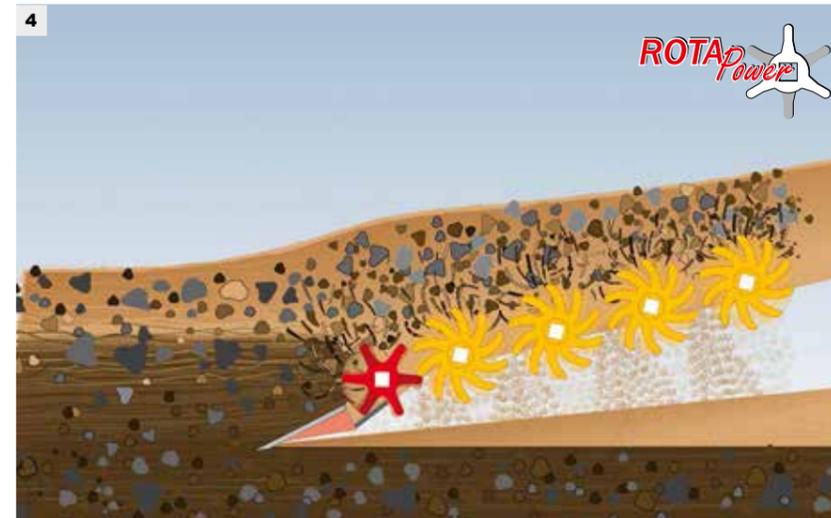
CS 150 Multi-Web

The CS 150 Multi-Web is particularly suited for use at sandy locations and on soils with a high content of sharp stones. The sieving area is increased by 20 % compared to the Combi-Star, while wear costs especially on fields with flint stones or very aggressive sandy soils are considerably reduced.

Peak separating performance

CS 150 Combi-Star XL

The CS 150 Combi-Star XL is suitable for universal applications. The extended second main web increases both the sieving performance on light soils and the grinding of clods on heavy soils by up to 15 %. Compared to the CS 150 Combi-Star, the sieving area is increased by 0.8 m². The intensity of separation is increased by a steeper setting angle of rollers and main web.



Flexible and accurate

Tractor attachment and working depth

The CS can be optionally attached to the lower links, cat. 3 or in the hitch (1, 2; federal state legislation).

The working depth is adjusted by means of the control box and is automatically controlled by the diablo rollers. A dial (3) indicates the depth visibly.

Less wear

RotaPower

With the standard RotaPower shaft (4, red) on models Combi-Star, Combi-Web and Combi-Star XL, the sieving performance can be increased by up to 25 % compared to conventional machines with the added advantage of lower wear and reduced power requirement and fuel consumption. The rotor crumbles the compacted soil, thus preparing it for improved sieving. The standard 3-finger-shaft (5) is suitable for larger main web pitches, while for smaller main web pitches up to 35 mm and flat stones, the shaft with 5-finger tines (6) for finest sieving can be selected as an option.

Easy maintenance

Drive unit

Star rollers and main webs are driven via the drive shaft, an angular gear and V-belts which are arranged in an easily accessible manner on the left and right of the machine (1).

As a standard, main webs are driven by means of wide PU-finger drives (2), resulting in less wear on the web bars than when steel finger discs are used. For frequent changes in main web pitch, the pitch independent, rubber covered friction drive with driven support roller (3) is available as an option.



Finer sieving

Clod mat

The clod mat effectively breaks up and grinds clods. As a standard, a light clod mat is installed (4). A heavy clod mat or a circulating, hydraulically driven clod mat (5) can be selected as an option. The circulating clod mat supports the transport of large stones and increases the clod grinding effect.

For heavily fluctuating streams of soil it is recommended to use the hydraulic height adjustment.



Comprehensive fixtures and fittings

Series and options

The standard cross conveyor (1) with 22 mm bar distance is laterally moveable for a directed placement of trash between the beds. As an option, the speed of the web can at the same be adjusted in infinitely variable steps.

Every sixth bar of the last main web has a diameter of 16 mm (2). This optimises the transport of soil on the main web, supports the breaking of clods and renders the web more stable.

The standard axle steering (3) with its 34° steering angle increases the manoeuvrability of the CS at the headland.

As a standard, the machine's angle of inclination can be adjusted up to a lifting height of 350 mm (4) to adapt the machine to sloping ground and to increase the sieving performance.

A selection can be made between wheels size 12.5-20 AS (standard) and the larger 14.5-20 AS wheels (5).

The control box (6) makes it possible to operate all machine functions from the driver's seat.



Perfect protection

Drawbar stone protection

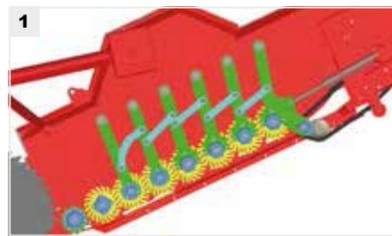
The optionally available drawbar stone protection absorbs the impulse of shocks when the intake share hits an obstacle. This protects tractor and separator against damage, thus increasing the stability of both machines.



Variably adjustable

7 star rollers

The distances between the seven star rollers can be optionally adjusted to regulate the sieving capacity (1, 2). In addition, wear of the stars can be compensated with this to ensure a longer useful life.



Fields without stones

Stone box/bunker

Three options are available to choose from: The stone box with grader assembly that uses a rake paddle tube (3) for large stones, the stone box with grader assembly that is equipped with three star rollers (4) to further separate big stones into the stone box instead of the cross conveyor (5).



Furrows without clods and stones

Unloading elevator

If stones and clods are not to be deposited in the furrow, the cart elevator is the choice to make. Sieved stones can be directly conveyed onto a trailer and removed from the field. Especially in the case of pointed and sharp-edged stones, this serves to protect the wheels of all following machines. The maximum loading height is 2.30 m. The cart elevator can be folded in for road transport and for use on the field, so that clods and stones can be deposited in the furrow.



High degree of convenience

Levelling and camera

The optionally available hydraulic levelling keeps the machine horizontal on sloping ground or in case of furrows of varying depths to ensure an optimum sieving result (1). As an option, it is possible to choose a camera with monitor for monitoring the stone collection box (2).



Versatile planting options

For the third step – planting in separated beds – differently equipped cup and belt planters are available, depending on the

requirements. Your advantage: Both series make use of the loose soil during planting and simultaneously shape the ridge. Trust our efficiency

and reliability when it comes to planting. Grimme offers the right solution for you.



2-row planting

GL 32 B, GB 215 and GB 230

Three 2-row models are available to choose from, a cup planter with 1000 kg bunker volume and two belt planters with 1500 or 3000 kg bunker volume. The short and compact design of the mounted machines facilitates a high degree of manoeuvrability and narrow headlands.



3-row planting

GB 330

With the GB 330, a belt planter is available for 3-row planting. This machine increases the number of potatoes that can be planted by means of a more even distribution on the same area. The result is a more even growth of the tubers and thus an increased quota of marketable commodities.



4- and 6-row planting

GL 430, GB 430 and GL 660

Two 4-row models are available to choose from for planting with the offset method: one cup and one belt planter. A 6-row cup planter can be used to cover large areas.

Technical data BF/BFL

	BF/BFL 200	BFL 400 fixed / BFL 400 foldable	BF/BFL 600
Length in transport position	2700 mm	2690 mm	4700 mm
Width in transport position	3000 mm	4440 mm / 3000 mm	3000 mm
Height in transport position	2760 mm	2760 mm	3600 mm
Weight	740 / 930 kg	1325 kg / 1925 kg	3000 / 3300 kg
3-point linkage	Cat. 2	Cat. 2	Cat. 3 or 4
Number of beds	1 + 2 half	2 + 2 half	3 + 2 half
Bed width	Up to 2 m	Up to 2 m	Up to 2 m
Tyres	10.0/75-15	10.0/75-15	10.0/75-15
Power requirement	From 90 kW	From 120 kW	From 175 kW
Required control valves (double acting)	1	1	3

Technical data CS/CW/MW

	CS 150 Combi-Star	CS 150 Combi-Web	CS 150 Multi-Web	CS 150 Combi-Star XL
Length	6800 mm	6800 mm	7700 mm	7300 mm
Width	2500 mm	2500 mm	2500 mm	2500 mm
Height	2400 mm	2400 mm	2400 mm	2600 mm
Track width	1800 mm	1800 mm	1800 mm	1800 mm
Weight	4170 kg	4170 kg	5070 kg	4800 kg
Tractor attachment	Cat. 2 or 3 Option: bottom attachment in hitch	Cat. 2 or 3 Option: bottom attachment in hitch	Cat. 2 or 3 Option: bottom attachment in hitch	Cat. 2 or 3 Option: bottom attachment in hitch
Drive input speed drive shaft	540 r.p.m.	540 r.p.m.	540 r.p.m.	540 r.p.m.
Tyres	12.5-20 / 14.5-20	12.5-20 / 14.5-20	12.5-20 / 14.5-20	12.5-20 / 14.5-20
Transport speed	25 km/h	25 km/h	25 km/h	25 km/h
Engine power (min.)	70 kW	70 kW	70 kW	70 kW
Oil flow	34 l/min	34 l/min	34 l/min	34 l/min
Required control valves (double acting)	1	1	1	1





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.



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