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**Innovations at
AMATECHNICA
2016**



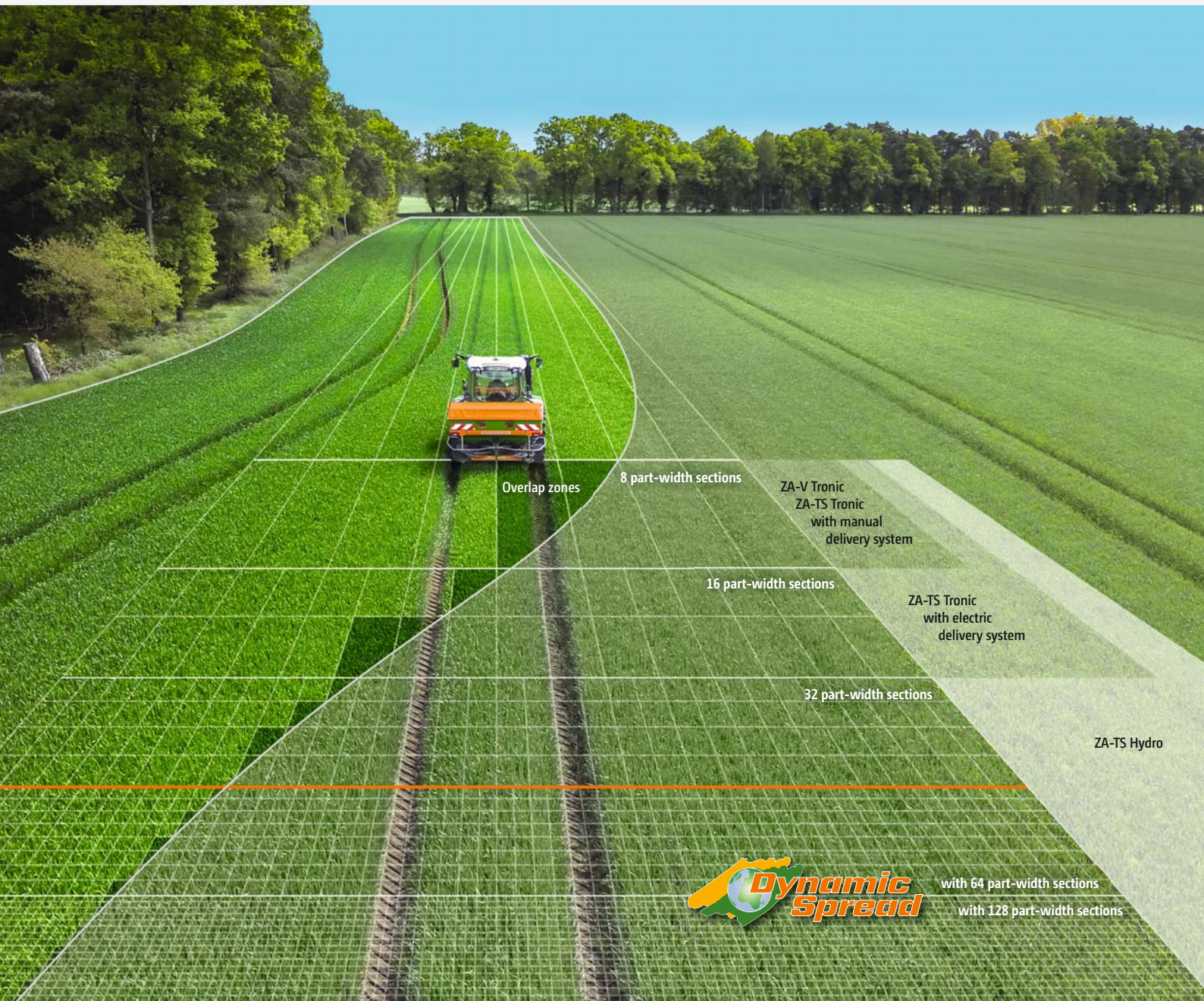
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DynamicSpread dynamic part-width Section Control for fertiliser spreaders

ZA-TS Hydro now DynamicSpread-ready



Schematic representation: differing automatic part-width Section Control on the spreader

As standard the ZA-TS and ZG-TS ISOBUS fertiliser spreaders feature a multiple part-width Section Control. This control can be actuated either manually or automatically via Section Control software. Up until now the maximum number of part-width sections has been 16 which, when operated in combination with the AMAZONE GPS-Switch Section Control software, can be switched automatically.

For users who wish to spread even more precisely in wedge-shaped fields, in short work or around obstacles, AMAZONE has developed an innovation: DynamicSpread dynamic part-width Section Control for the ZA-TS Hydro mounted and the ZG-TS Hydro trailed spreaders. The system is based on the newly developed software for the job computer on both fertiliser spreaders. In combination with GPS-Switch and the AMATRON 3, CCI 100 or AMAPAD terminals from AMAZONE, the new software is able to switch 64 or 128 part-width sections, resulting in a dynamic matching of spread width and the spread rate to the field shape. With a choice of 64 or 128 part-width sections, DynamicSpread significantly exceeds the currently available ISOBUS standard, meaning that although this high number of part-width sections is always possible with AMAZONE terminals, the ISOBUS terminals of other manufacturers, however, can possibly only actuate much fewer part-width sections.

The basic design of the ZA-TS Hydro and ZG-TS Hydro fertiliser spreaders has been already designed around the high accuracy of the dynamic part-width Section Control as the spreaders feature a delivery system adjustment and hydraulically-driven spreading discs that can be adjusted independently of each other to either the left or right hand side. In this way, the working width and spread rate can be adapted precisely and quickly to varying field shapes.

The most important benefits of the DynamicSpread dynamic part-width Section Control is the higher precision and so, in this way, even greater savings on fertiliser. So, the spreading of fertiliser in wedge shaped fields, and in short work as well as around obstacles, is thus further improved. The benefits get bigger the larger the working width of the spreader is, the higher the operational speed is and the more variable the field shapes are.

ZA-V fertiliser spreader with EasySet in-cab terminal



As an innovation for the ZA-V fertiliser spreader product line, AMAZONE now offers the EasySet operating computer. This new, in-cab terminal allows the specific, simple and comfortable actuation because all the basic functions of the spreader are electrically adjusted and actuated via the new machine-specific in-cab terminal.

As on all ZA-V product models, this EasySet variant is also equipped with the precision spreading unit for working widths of 10 to 36 m and features the SBS system. It is offered with hopper volumes from 1,700 to 4,200 l and can be equipped with the Limiter V⁺ border spreading device for side, border or water course spreading around the headland.

With the aid of the EasySet terminal, the apertures can be adjusted by key pressure independently on either the left or right hand side and they can be readjusted on the move. This also allows individual rate adaptation for the left and right hand side.

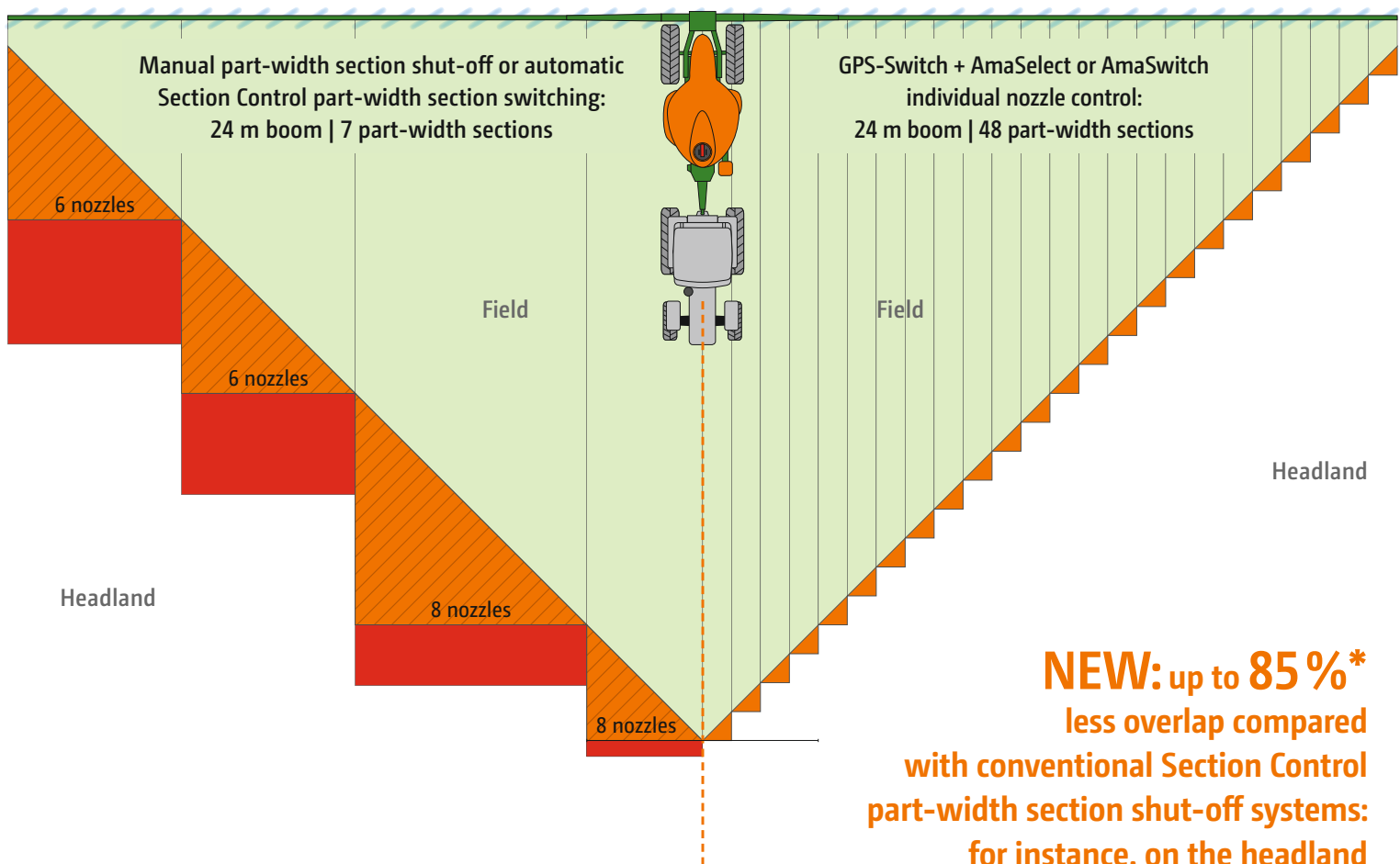
For operating the Limiter V⁺, initially the desired lowering depth for the relevant setting is pre-selected via the “+/-” keys on the in-cab terminal. Then the activation is done via that specific Limiter button. The change of the Limiter functions, for instance from field side to border or water course spreading is also done via the “+/-” keys. Depending on the situation, such as, for example, during water course spreading, the spread rate can also be reduced in the direction of the field's edge.



As no hydraulic connections are necessary, the ZA-V EasySet can be more quickly mounted and dismantled. So, to commence operation with the spreader, just a 3-pin power supply cable and the PTO shaft have to be first coupled to the tractor.




AmaSwitch entry-level individual nozzle switching

Example: 24 m boom width (6-6-8-8-8-6-6 = 48 nozzles)



-  Overlap zone with manual part-width section shut-off
-  Overlap zone via Section Control part-width section switching

-  Overlap zone on 50 cm GPS part-width sections



AmaSwitch individual nozzle switching

As an innovation to its range of crop protection sprayers, AMAZONE introduces its electric AmaSwitch individual nozzle switching system. If AmaSwitch is used in combination with the automatic GPS-Switch headland and part-width Section Control, the switching of individual nozzles on a 50 cm part-width section is carried out automatically.

The decisive benefit of this individual nozzle switching is the possibility of operating with smaller part-width sections in wedge shaped fields and in short work, as well as on the headland, meaning that it can be even more precise. The overlap areas are significantly reduced by up to 85 % reduced in comparison with conventional Section Control part-width section shut-off, for instance on the headland. In this way the combination of GPS-Switch and AmaSwitch, depending on the field structure, working width and the number of existing part-width sections, results in big crop protection agent savings compared with usual crop protection systems.

The new technology is based around 3-fold nozzle bodies with electric on/off switching to each body. In addition to the automatic switching with 50 cm part width sections, there

is also the possibility to freely configure the part-width sections. This is in comparison to the AmaSelect electric individual nozzle control with 4-fold nozzle bodies, which in addition to the 50 cm part-width sections features an automatic electric nozzle add-in or switch over, AmaSwitch is a favourably-priced alternative for users who do not attach importance to the principle of electric nozzle control, who though, however, wish to utilise the very precise switching in wedge shaped fields and overlap zones thanks to the 50 cm part-width Section Control.

The standard equipment of AmaSwitch includes DUS pro high pressure recirculation. DUS pro prevents deposits in the spray line and provides a uniform, consistent spray liquid concentration. Thanks to the pressure recirculation system, all the nozzles operate at full dose immediately over the entire working width. In addition when individual part-width sections are switched off and during turning or in transport, the spray agent is in constant circulation. In this way, deposits, blockages or segregation within the spray lines are safely prevented. As special option AmaSwitch can also be supplied in combination with LED individual nozzle lighting.

System overview

	Standard boom UF mounted UX trailed Pantera self-propelled	AmaSwitch UF mounted UX trailed Pantera self-propelled	AmaSelect UX trailed Pantera self-propelled
The advantages			
Part-width sections	up to 13	up to 80	up to 80
50 cm boom sections			
Manual nozzle switch over			
Automatic nozzle switch over and add-ins			
Choice of nozzle from the cab			
Combinable nozzle selection			
High-pressure recirculation (DUS pro)			
25 cm nozzle spacing			
Freely-programmable section layout			
No air required			
LED individual nozzle lighting			

■ = included ■ = optional □ = not possible

Cirrus 6003-2 and 6003-2C trailed sowing combinations now also with TwinTeC⁺ double disc coulters



Cirrus 6003-2 trailed sowing combination with TwinTeC⁺ double disc coulters

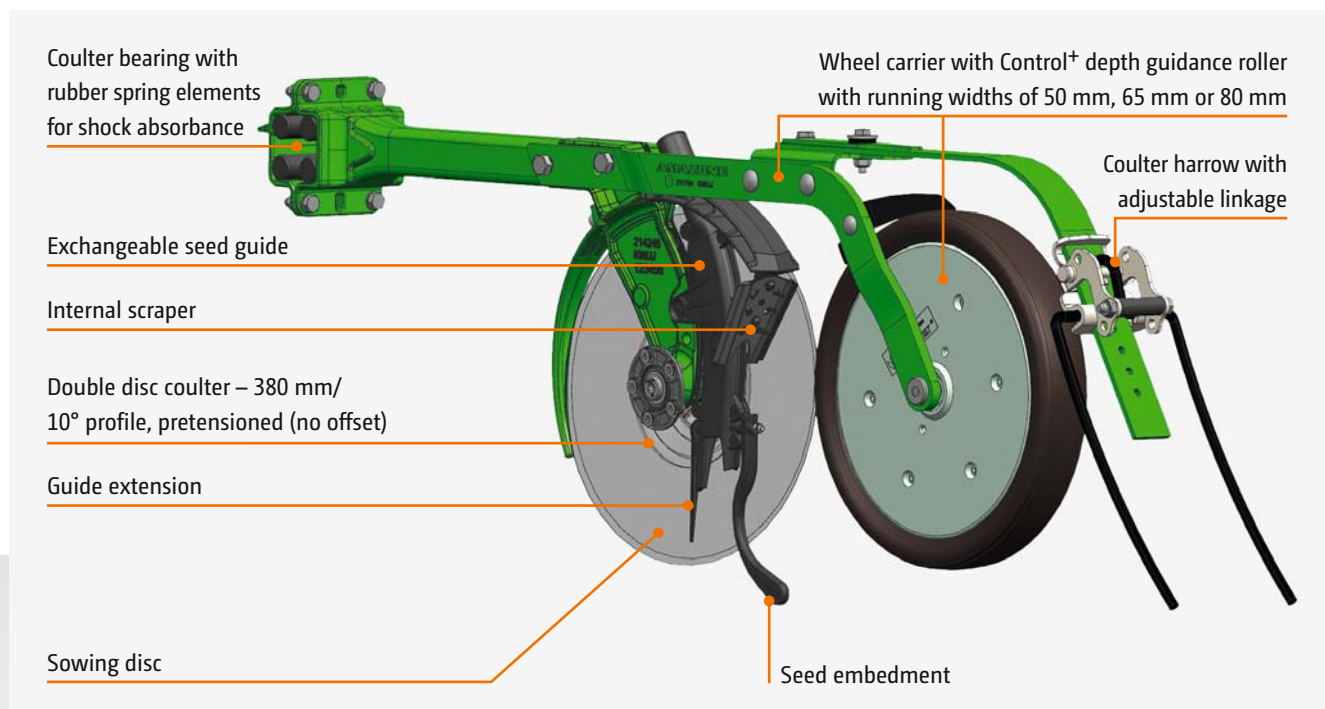
TwinTeC⁺ double disc coulters

As one of the innovations at AMATECHNICA 2016, AMAZONE introduces the 6 m Cirrus 6003-2 and 6003-2C trailed sowing combinations (including the combined application of fertiliser and seed) with the new TwinTeC⁺ double disc coulters. In the future AMAZONE will offer this new double disc coulters alongside the renowned RoTeC pro single disc coulters. In this way the Cirrus is the first seed drill which, from choice, depending on the farm situation, can be equipped with either a single disc or double disc coulters system.

The coulters systems in comparison

With the RoTeC pro single disc coulters and the TwinTeC⁺ double disc coulters AMAZONE offers two alternative, high-

quality coulters systems for the Cirrus 6003-2 and 6003-2C. Both systems complement each other in their scope of operation. So the Cirrus in combination with the RoTeC pro single disc coulters shows its strength above all on light to moist-heavy and sticky soils, where large amounts of harvest residues or small stones prevail. Additionally, when sowing on narrow row spacings and also where a good passage of material is necessary in wet, sticky sowing conditions, the RoTeC pro system also is the right choice. On the other hand, the Cirrus in combination with TwinTeC⁺ coulters is the ideal seed drill under hard, dry and cloddy sowing conditions, on heavily-changing soils and hilly, undulating ground and in fields with poor structure and no traffic carrying ability.

TwinTeC⁺ double disc coulters (cross-section)



TwinTeC⁺ double disc coulters

In addition to the site-specific focus of operation, there are further system related differences. So, the seed furrows are cleared with the RoTeC pro coulters and with the TwinTeC⁺ coulters they are cut. With RoTeC pro the Cirrus operates at an optimum speed range from 8 to 16 km/h, whereas with TwinTeC⁺ at 10 to 20 km/h. Both systems can be supplied with a row spacing of 16.6 cm, however, the Cirrus with RoTeC pro coulters also comes with a row spacing of 12.5 cm. For the RoTeC pro coulters, the Cirrus can be equipped with the following Exact harrow III-S for differing conditions or with the Roller harrow. The TwinTeC⁺ coulters always includes a following depth guidance roller. In addition, here still, a coulters harrow can be used.

Completely new development

The TwinTeC⁺ double disc coulters system is characterised by a number of technical innovations. As such it features a stepless, hydraulic adjustment of the coulters pressure which includes a wide setting range of 15 to 100 kg. In this way the pressure can be matched to changing soil conditions quickly and easily. As the pressure supply is carried out via a constant oil circuit, the consistent depth guidance of the coulters, even in changeable soil contours, is ensured.

Irrespective of the pressure, the working depth of the coulters can be adjusted. For this, AMAZONE has equipped the machine with a comfortable, central setting system which





Cirrus 6003-2 trailed sowing combination with TwinTeC⁺ double disc coulters

is operated via crank handles, located both to the outside of the machine and which are easily accessible via platforms in the centre of the machine. All the crank handles are additionally equipped with an easily-readable, numerical scale for easy depth adjustment.

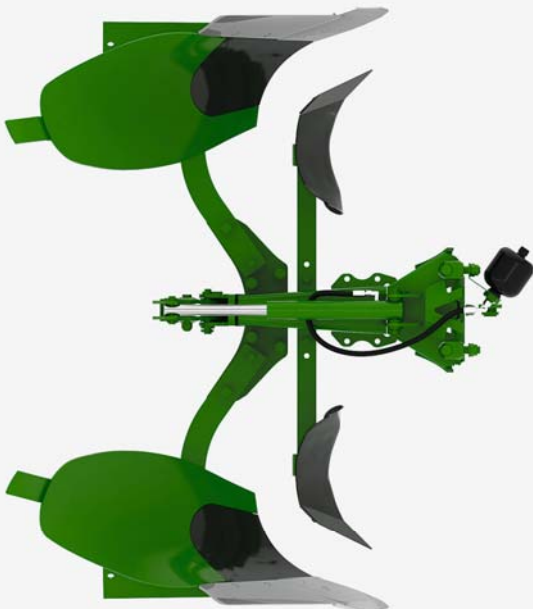
The robust 380 mm diameter TwinTeC⁺ double disc coulters each are fitted to a basic coult body. With its robust construction, the deflection of the coulters at the coult beam is designed for operation under the most arduous of conditions. Fitted behind each coult is a 380 mm diameter Control⁺ depth guidance roller with rubber tyre which follows the seed groove absolutely perfectly. It is attached to

the coult via a special wheel carrier made from hardened and tempered steel. Matched to light, medium or heavy soil conditions, depth guidance rollers with running widths of 50 mm, 65 mm or 80 mm can be fitted from choice. To the second coult row, and as an option, a coult harrow can be fitted to the wheel carriers. Via an adjustable linkage, the operating intensity of the harrow can be set in three steps.

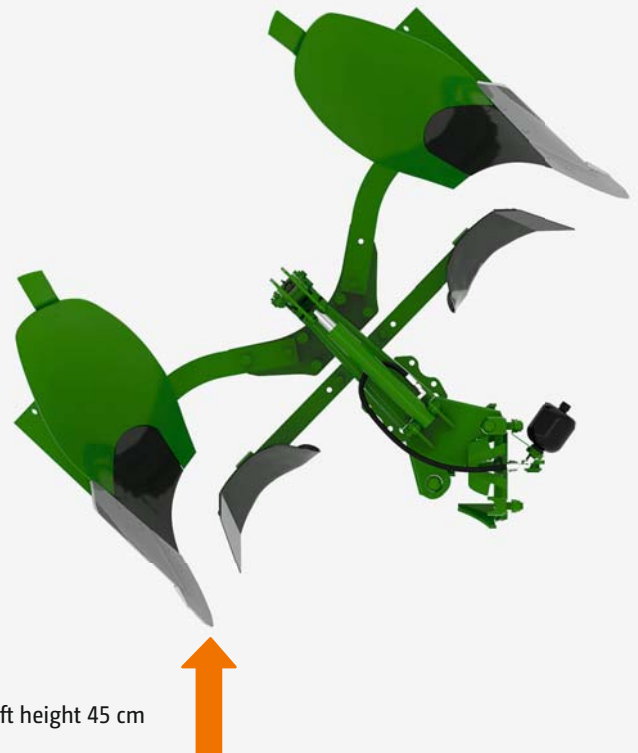
One peculiarity is also the seed guidance with an internal scraper fitted as standard which is mounted between the double disc coulters. The component can be very quickly removed upwards from the coult by loosening just one single bolt.



S-Force automatic stone safety release for the Cayron reversible plough



Stone protection system in work



Lift height 45 cm

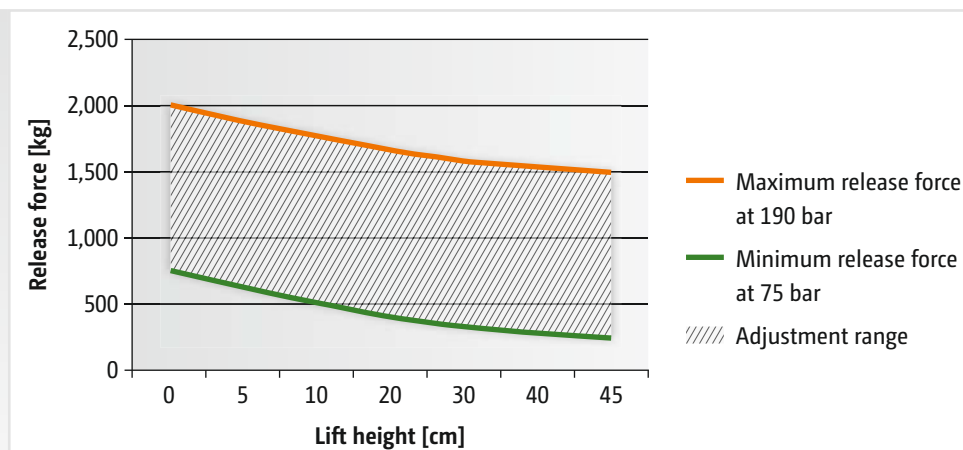
Stone protection released

AMAZONE introduces S-Force, the automatic stone safety release for its Cayron 200 and Cayron 200 V reversible ploughs. The objective of this development was always to ensure the plough's operation with a site-specific release force under all soil conditions to reliably prevent

the ploughing up of stones and simultaneously to ensure the protection of the material of the plough itself.

The result is a hydraulic system where the release force can be adjusted from the driver's seat. In this way the driver can, over a range from 750 to 2,000 kg, quickly and easily switch back and forth between a low release force on lighter and a higher pressure on heavier soils. The maximum value of





Optimised release force curve

2,000 kg has been designed to ensure that the plough bodies reliably and firmly run in the soil, even under very hard and dry conditions.

As a special feature, the stone safety device of the first plough body is equipped with a stronger ram so that the release force is here around 18% higher than on the other bodies. The reason is the stronger load on the first body which occurs when the plough is first lowered or due to furrow wall compaction caused by the tractor wheel tracks.

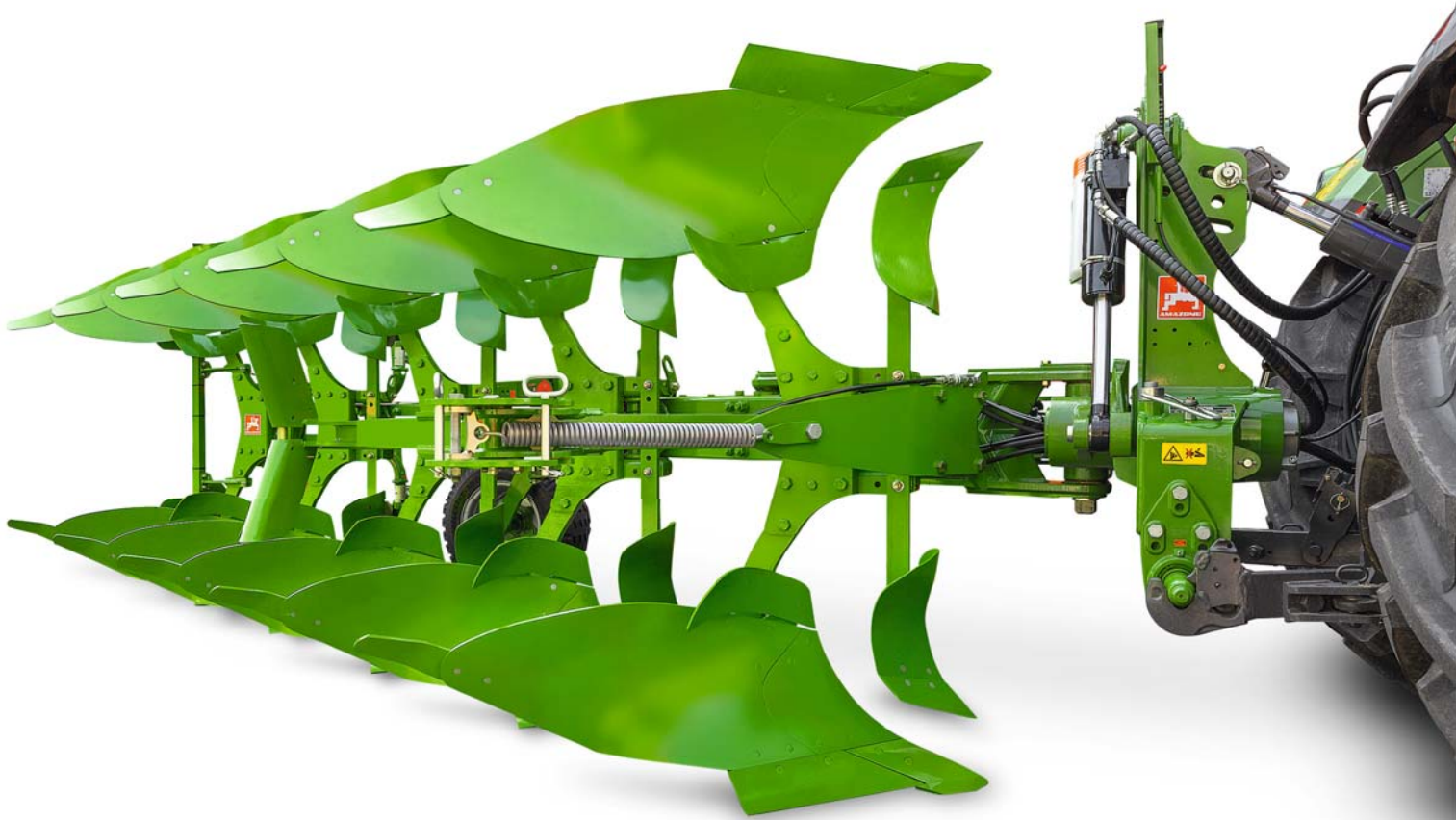
On the basis of a decreasing force path, the system has been also designed in such a way that the release force exponentially decreases at an increased trip height. As soon as an obstacle has been negotiated the force increases again so that the plough body is pulled quickly and reliably into the soil again.

For all bodies, the release of the stone safety device is carried out smoothly and elastically. The lift height has been designed to reach 45 cm so that, even at greater working depths, there is plenty of space to give way. To avoid damage on the plough even in extreme circumstances, such as, for example when the body is hooked underneath ledges or roots, AMAZONE has fitted an additional shear bolt on the leg.

In case a stone hits the edge of the plough body, the body, thanks to its ability to deflect to the sides, can give way laterally by up to 20 cm. In this way the stone safety device does not have to release upwards.



Helical mouldboards for medium-heavy clay and loamy soils



C-Blade W 35 helical mouldboard with optional trashboard



C-Blade plough body

For the Cayron and Cayron 200 V reversible ploughs, AMAZONE has a new plough body on offer: The C-Blade W 35 helical mouldboard is designed for operation on medium-heavy clay and loamy soils. The spiral shape of the mouldboard results in a clean turning of the soil furrow and a simultaneously low pulling power requirement. In addition, the C-Blade W 35 is characterised by its very wide furrow cleaning. The optimum working range of this body is between 18 and 30 cm furrow depth and 30 to 50 cm furrow width.

As well as the C-Blade U 40 universal body, this new helical mouldboard is also equipped with an enlarged front shin on the mouldboard which covers the entire main wear area of the body. This results in reduced running costs because, in case of wear in this area, only the front shin of the mouldboard has to be exchanged. As a second peculiarity, the wing of the C-Blade plough body has been designed in such a way that the point covers the wing so that the joint is well protected. So, foreign objects, such as, for example baler twine, wire or root residues are prevented from becoming trapped in the joint.



Cenius 4003-2 Super with C-Mix Super tines



C-Mix Super tines with pressure
spring overload protection

New to the AMAZONE cultivator programme, and available with immediate effect, is the folding Cenius 4003-2 Super mulch cultivator in 4 m working width. The Cenius 4003-2 is equipped with the new C-Mix Super tines. The special advantage of these tines is that they are protected via a pressurised spring overload safety device. With a release force of more than 600 kg and a 300 mm lift height, they provide reliable operation even on heavy and stony soils at working depths down to 30 cm. For obstacles larger than 300 mm, the leg of each tine is additionally secured via a shear bolt so that it can fold upwards completely and this prevents any potential damage to the tine.

The C-Mix system includes a variety of share options so that the three-row cultivator can be used flexibly either for shallow stubble cultivating and top soil deep loosening right through to seedbed preparation.

Especially for shallow operation, the C-Mix duck foot share or the C-Mix wing share are available. The ideal solution for medium-deep soil tillage is the C-Mix 100 tip with its 100 guide plate whereas, for deeper tillage, the C-Mix 80 tip with its 80 guide plate is preferred.

The latest innovation for the C-Mix share system is the C-Mix HD share which, thanks to its hard metal insert plates in the main wear areas, is characterised by an especially high resistance to wear. It is a one-piece share with integrated spiral guide plate and is ideally suited for intensive mixing at working depths from 12 to 30 cm. If combined with the 350 mm C-Mix wing share, it can be also used for stubble tilling.

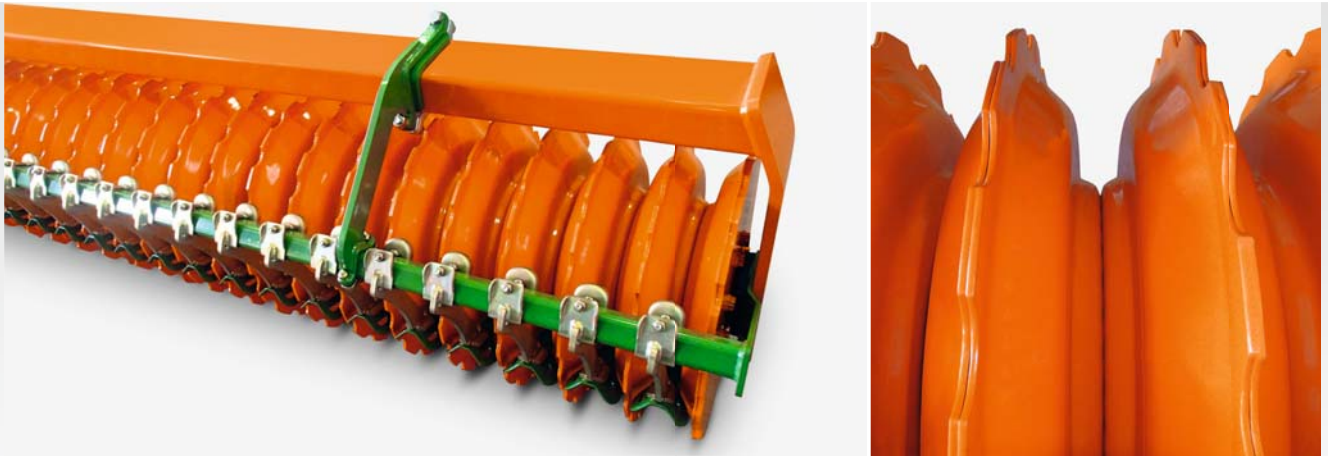
Adjustment of the Cenius is extremely comfortable. The depth setting is carried out centrally either via two spindles at the left and right hand side of the machine or, as an option, it can also be adjusted hydraulically from the tractor seat.

Depending on field and soil conditions, nine different rear consolidation rollers are, from choice, available for the Cenius 4003-2 Super. From the simple cage roller or tandem roller via the U profile and Double-U profile rollers through to either the wedge ring roller or wedge ring roller with Matrix profile. For operation in very arduous soil conditions there is the new Disc roller which can also be combined with the Cenius 4003-2.

Disc roller for passive soil tillage equipment



On heavy soils the Disc roller provides an excellent deep reconsolidation and a good crumbling effect.



The basic design of this roller consists of steel plate elements with serrated outer rims, enclosed and welded in pairs.

AMAZONE now has broadened its programme of following rollers for passive soil tillage implements with the new Disc roller. This new roller has been designed in the main for operation on heavy, moist soils.

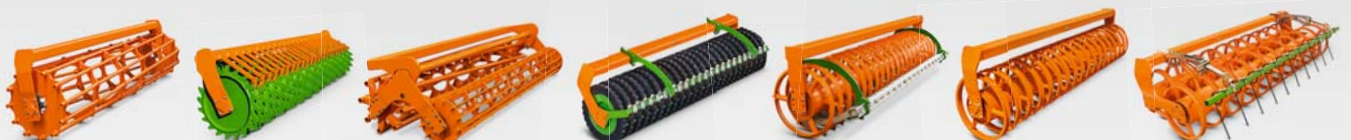
The basic design of this roller consists of steel plate elements with serrated outer rims, enclosed and welded in pairs. These elements feature a diameter of 600 mm and are arranged on a shaft at a spacing of 12.5 cm. To prevent the roller from being clogged with soil, it is equipped with individually bolted, adjustable scrapers. The plate elements are designed for little wear and can be exchanged, if necessary, without any problem.

Thanks to its high weight of 220 kg/m working width and a narrow rim, the Disc roller, in heavy soils, performs an excellent deep reconsolidation and offers a good crumbling effect. Soil clods are cut and stones are pressed into the soil. In this way, the roller leaves a coarse soil surface and thus works towards reducing capping susceptibility and creates a good air and water exchange in the cultivated soils.

The new roller can be fitted to all passive soil tillage implements from AMAZONE. To allow the flexible response to all soil conditions it can be exchanged for one of nine other roller versions from within the AMAZONE programme without any problem. So, for instance, for operation on medium and changeable soils, the KW wedge ring roller or, for work in sandy soils, the DUW Double U-profile roller is available.



- ✓ The full AMAZONE roller programme: cage, tooth packer, tandem, wedge ring or Matrix wedge, angle, U-profile or Double U-profile roller with following harrow for reconsolidation of the soil.



Hydraulically actuated offset-slide unit for the Catros/Catros⁺ compact disc harrow





Transport position



Operational position

As standard the Catros/Catros⁺ 3001 and 3501 compact disc harrows are equipped with an offset-slide unit of the disc rows. This is utilised, on the one hand, to adjust the optimum offset between the first and the second disc row and, on the other hand with these rigid machines, the offset is also used to change between the transport and the operational position. As the offset-slide procedure is carried out with the aid of the ground resistance, the machine has to be lowered onto the ground and moved to and fro for a short distance.

To further simplify this adjustment, AMAZONE now also offers a hydraulic actuation of the offset-slide unit, allowing the driver to set the disc offset very easily via a tractor hydraulic valve and thus to change very simply between transport and the operational position of the machine.

AMAZONE offers the hydraulic actuation factory-fitted as a special option for all new Catros/Catros⁺ 3001 and 3501 compact disc harrow whereas, for older machines, a retrofit kit is also available.



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en_GB 06.2016