



AMAZONE

GO for Innovation

Innovations
at SIMA 2015



SIMA
SIMAGENA SIMAVIP

22nd – 26th February 2015 - Paris



Technical progress as standard



Cost Cutting Concept

“GO for Innovation”: it still drives AMAZONE on in 2015 as well

So, at the SIMA 2015 agricultural exhibition in Paris we will yet again introduce numerous innovations and improvements to our extensive product programme and, as always, we continue to look for ways to reduce costs and to improve output, to refine precision and to perfect operational comfort.

In the background to all these innovations is our objective which is to always offer to our customers the best machinery and systems based on the 3C concept – and that means for all steps in the process – from soil tillage via sowing through to crop care. As a “full-liner for worldwide arable farming” we pursue this objective, of course, for our customers everywhere on the globe.

In order to meet the demands from practice, again and again that continuing technical progress has become standard at AMAZONE and especially today where a great deal of progress happens in the area of electronics. These innovations are externally barely visible but, however, they offer new possibilities which one could not foresee just a few years ago. Thanks to ISOBUS electronics, the agricultural machinery sector made considerable progress in regard to

manufacturer overlapping machine control. So there are already at AMAZONE today three operator terminals available which fulfil the ISOBUS communication in accordance with UT 2.0. AMAZONE sprayers and the new fertiliser spreader series as well as the new ED precision seeders are, of course, available with an ISOBUS-ready machine ECU.

We have summarised for you all the information with regard to the current AMAZONE innovations in this brochure. Please look forward to an interesting read and find out the advantages that “GO for Innovation 2015” offers.

Your AMAZONE Team



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Contents

Innovations at SIMA 2015

| | Page | | Page |
|--|------|---|------|
| Fertilising technology 750,000 ZA | 4 | Sowing technology ConTeC pro coulter | 40 |
| Fertilising technology ZA-V | 6 | Soil tillage Certos TX | 42 |
| Fertilising technology ZA-TS – new levels of specification | 10 | Soil tillage Cenius TX | 46 |
| Fertilising technology Argus – the spreader’s eye | 12 | Soil tillage New following rollers | 50 |
| Crop protection technology Pantera 4502-H self-propelled sprayer | 14 | Soil tillage New C-Mix share programme | 52 |
| Crop protection technology ProfiClick for boom control and steering | 16 | Soil tillage Cayron with X-Blade | 54 |
| Crop protection technology Super-S1 boom | 18 | Soil tillage Packer C-Pack 900 for ploughs | 56 |
| Crop protection technology Super-L boom | 20 | Electronics New AEF functionality certification | 58 |
| Crop protection technology DistanceControl | 21 | Service Driver Training E-Learning | 60 |
| Crop protection technology 1,032 hectares in 24 hours | 22 | | |
| Precision sowing ED precision air seeders – the 3 rd generation | 26 | | |
| Sowing technology AD-P Special – electrifyingly new | 32 | | |
| Sowing technology Cirrus 4003 | 36 | | |
| Sowing technology Crushboard for Cirrus | 38 | | |
| Sowing technology T-Pack packer for Cirrus | 39 | | |

750,000 ZA fertiliser spreaders from AMAZONE



ZA-TS



ZA-M



ZA of 1958

750,000 ZA



The basic design principle of that first ZA has been maintained up until today:
a twin hopper with two contra-rotating spreading discs, however, running at a constant speed.

With more than 750,000 ZA fertiliser spreaders now sold, AMAZONEN-WERKE is celebrating another special anniversary in 2014. Three quarters of a million fertiliser spreaders is an impressive figure and possibly one that hardly any other agricultural machinery manufacturer has achieved up to now.

The origins of the ZA go back to the year 1958. At that time Prof. h.c. (SAA Samara) RAAS Dr. Dr. h.c. Heinz Dreyer had, together with his cousin Klaus Dreyer, just taken over as the third generation owners of AMAZONE and he immediately invented the first ZA twin disc fertiliser spreader with its 330 l capacity and a 10 m working width. In accordance with its design as a “Zentrifugalstreuer Anbaumaschine” (centrifugal mounted spreader) he called it ZA.

Immediately this first ZA provided enormous improvement in the effectiveness of mineral fertiliser application. In comparison with the then existing full width box spreaders, it was unique in its larger working width and, compared to the single disc and pendulum fertiliser spreaders around, offered a much higher precision. In the course of ZA history, AMAZONEN-WERKE since then has launched to the market numerous subsequent ranges – each with higher and higher capacities and wider and wider working widths. However the basic design principle of that first ZA has been maintained up until today: a twin hopper with two contra-rotating spreading discs running at a constant speed, creating a mirrored spread pattern and a maintained accuracy to the left and right hand side of the tractor.

Also with regard to precision, ZA fertiliser spreaders have again and again set new standards resulting in both sav-

ings in the material being applied as well as a more environmentally-friendly application. Here, the milestones were, for example, swivel blades for late top dressing, the interchangeable disc system for wider and variable working widths, the Limiter boundary spreading device and SBS, the Soft Ballistic System, which ensures gentle fertiliser treatment during spreading. Also important progress has been achieved thanks to the introduction of hydraulics and electronics. So, today’s ZA programme fulfils the highest demands on precision thanks to weigh-cell technology, GPS automatic headland and part-width section control as well as the use of convenient ISOBUS terminals.

The most recent ZA-TS series consists of models with weigh-cell technology and ISOBUS regulated electronics and comes in hopper sizes from 1,700 up to 4,200 l and with working widths from 18 m to 54 m. This means a maximum capacity today that is ten times bigger and in a maximum working width which is more than five times wider than those first ZA-spreaders of 1958. With the new spreader series, AMAZONE has also introduced the TS spreading system with its disc integrated AutoTS border spreading device onto the market, via which the fertiliser can be spread quite exactly up to the field’s border. Thanks to AutoTS, a lateral distribution to a level of precision that up to now has not been possible is achieved also on the headland. This means, in comparison with other border spreading systems currently available, significantly higher yields are achieved in the area encompassed by the field’s border.

➕ Additional pictures are available on the DVD

Original ZA of 1958



ZA-V – the spreader for all situations

In the fast lane with the ZA-V



ZA-**V** for (more) speed



Spreading unit with V-Set discs and star agitator for fertiliser-protecting application

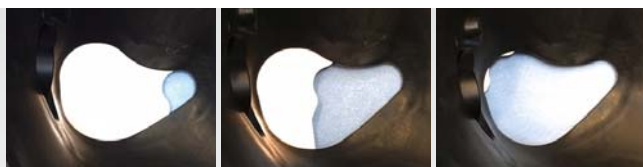
At SIMA 2015 AMAZONE will present for the first time the new ZA-V mounted spreader which supplements its existing product range.

Also on the ZA-V, AMAZONE is relying on that third dimension. The new spreading system has been developed entirely with the aid of three-dimensional spread patterns. With up to 20% more throwing width, compared with other twin disc spreaders in its class, the spread patterns are even more consistent and more precise. And even at the larger working widths, stable, triangular, flat spread patterns are achieved.

The ZA-V is a completely new development based on the fundamental principles of the ZA and proven by the hundreds of thousands.

The weigh-cell frames, available for the ZA-V Super Profis (up to a max. payload of 3,200 kg) and Ultra Profis (up to a payload of max. 4,500 kg) are equipped as standard with a deep-pressed base hopper and with a 200 Hz weighing system. The ZA-V is available in a filling width of 2.22 m for the 1,700 l and 2,000 l hopper sizes. The wider version of the ZA-V, with a filling width of 2.71 m, is available with hopper capacities of 2,200 l, 2,700 l, 3,200 l and 4,200 l.

The new star agitator of the ZA-V is positioned directly above the deep aperture and in this way provides a reliable and consistent fertiliser flow, both at low and high application rates. Turning at just 45 rpm, it makes for fertiliser-



Aperture with automatic re-adjustment for quantity effect



Spreading unit of the ZA-V

protecting operation. The new agitator drive-line is designed in such a way that, when the shutter slides are closed, the agitator speed is automatically reduced down to a complete standstill to avoid unnecessary damage of the fertiliser in this situation.

The aperture of the ZA-V, developed with the aid of the AMAZONE spreading hall, offers the advantage that it automatically re-adjusts for quantity effect. The spread pattern is maintained at all application rates and at all forward speeds and is completely independent to the spread rate. The maximum application rate of both apertures is 6.4 kg/s meaning at a 27 m working width, and at an operational speed of 12 km/h, more than 700 kg/ha can be spread.

Due to the lateral agitator drive, the aperture has been able to be positioned freely above the spreading disc. The position is very close to the centre of the spreading disc offering the advantage that the fertiliser is taken up especially gently by the spreading discs at the lowest circumferential speed. The fertiliser is then accelerated very gently by the comparatively long spreading vanes. The basic idea of this gentle handling of the fertiliser, known as the Soft Ballistic System, has been further developed in the ZA-V to the Soft Ballistic System pro.



ZA-V 2700 Profis Tronic in operation

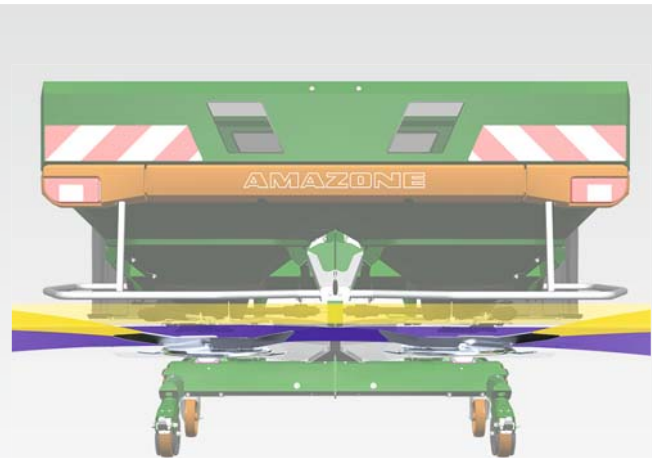


- ① Spreading vane, ② Spreading disc body,
- ③ Easy-to-read scale positions,
- ④ QuickSet system for the vane position adjustment

The spreading unit

To adjust the ZA-V to differing fertilisers and working widths, the angle of the short and of the long spreading vane on each spreading disc is quickly adjusted via QuickSet without needing any tools. In this way the ZA-V is quickly and precisely adjusted to any fertiliser.

Thanks to their specific profile, and having several fertiliser feed-on points at the upper and lower end of the spreading vane, the newly developed spreading vanes on the ZA-V provide an especially good lateral distribution pattern. The different angle of inclination of the short and long spreading vanes ensure that the spread fan of the long spreading vane flies over the spread fan of the short spreading vane resulting in an excellent fertiliser distribution even at large application rates:



Multi-layer spread fan – particularly good lateral distribution, as the spread fan of the long vane flies over that of the short vane.

Working width range of the spreading discs:

- V-Set 1: 10 m to 21 m
- V-Set 2: 21 m to 28 m (hard metal coated spreading vanes)
- V-Set 3: 27 m to 36 m (hard metal coated spreading vanes)

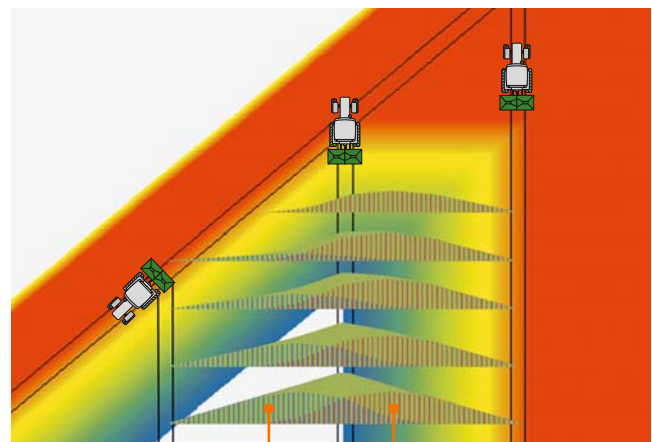
8 fold part-width section control

All ZA-V Tronic spreaders with ISOBUS communication are equipped with 8 fold part-width section control via spread rate adaptation. On request, this can be also carried out via GPS.

Due to the completely newly developed spreading unit, with its quantity effect-free aperture and consistent, triangular shaped spread patterns, very good results can be achieved when spreading in short work found in wedge shaped fields thanks to the new part-width section control via spread rate adaptation.



V-Set 3 ZA-V spreading disc



Left hand spreading disc

Right hand spreading disc

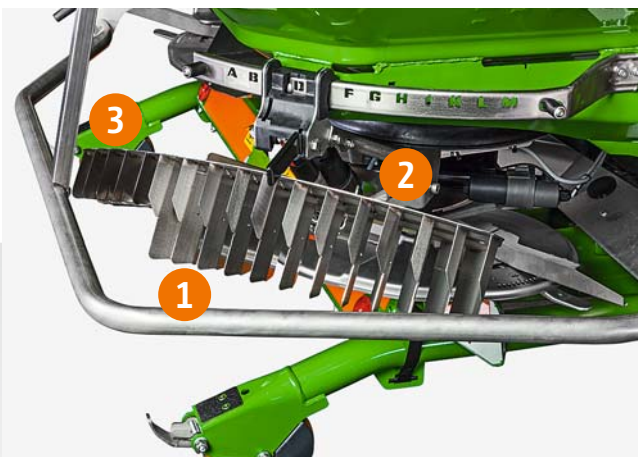


Limiter V⁺ electric border spreading system

New functions of the Limiter

With the Limiter V⁺, AMAZONE has managed to develop an electrically remote-controlled border spreading system for a mechanically driven fertiliser spreader which can be variably matched to the border situation, on the move, without changing the spreading disc speed.

Due to the design of Limiter V⁺ being open at the bottom, this can be swivelled down in fine steps from above into the spread fan that is going towards the field border. Due to the steeper angle of inclination of the long spreading vane in comparison with the short spreading vane, the fertiliser from the long spreading vane is thrown off higher. In this way, with just a slight lowering of the angle of the Limiter V⁺, only the fertiliser flow of the long spreading vane is deflected ①. If the angle of the Limiter V⁺ is lowered further, the fertiliser throw from both spreading vanes is deflected. Due to the lamellar ② shape, the fertiliser is further deflected when in its completely lowered position. Moreover, in this completely lowered position, additional lamellae ③ provide an accurate spread pattern towards the field's border. Thanks to the sensitive electrics, an adaptation of the Limiter V⁺ can be made to spread up to the prevailing field's border. The change between side, border and water course settings can



SafetySet – the surrounding guard tube fulfils the health and safety regulations. Large marker boards and the road lighting kit provide better visibility in road traffic.

be comfortably achieved from the tractor cab whilst spreading. This flexibility of the Limiter V⁺ is unique.

ISOBUS control

All ZA-V spreaders are equipped as standard with an ISOBUS job computer which can be accessed via the AMAZONE AMATRON 3, CCI 100, AMAPAD ISOBUS terminals or any other ISOBUS compatible terminal. For an even quicker and more comfortable operation, the AmaPilot multi-function joystick can additionally be utilised.

Tilt sensor

As an option, the ZA-V Profis can be also equipped with a tilt sensor, resulting in more precise spread rates even in heavily sloping ground.

Low-level sensors

When one-side spreading or when spreading with one side at a reduced spread rate, the uneven emptying of the two hopper tips may occur. For monitoring of both apertures, AMAZONE offers a low-level sensor system for the ZA-V. This can be positioned if desired above the apertures and can be mounted at three different heights. So, the driver receives via the terminal an early enough alarm signal that one hopper tip is almost empty.

- ① Deflection of the fertiliser flow of the long spreading vane
- ② Deflection of the fertiliser flow of both spreading vanes
- ③ Additional lamellae for an accurate spread pattern up to the field border

ZA-TS – new levels of specification

Always comfortable – increasingly better



Mechanical delivery system adjustment for the ZA-TS

For price-conscious customers AMAZONE now offers a mechanical delivery system adjustment for the ZA-TS.

Due to the quantity effect-free aperture, the ability to mechanically adjust the delivery system for the ZA-TS often is sufficient as the delivery system only requires matching when either the working width or fertiliser type is changed. At varying application rates and forward speeds no matching is necessary. Needless to say, the more comfortable electric delivery system adjustment is also still available.



Mechanical delivery system adjustment



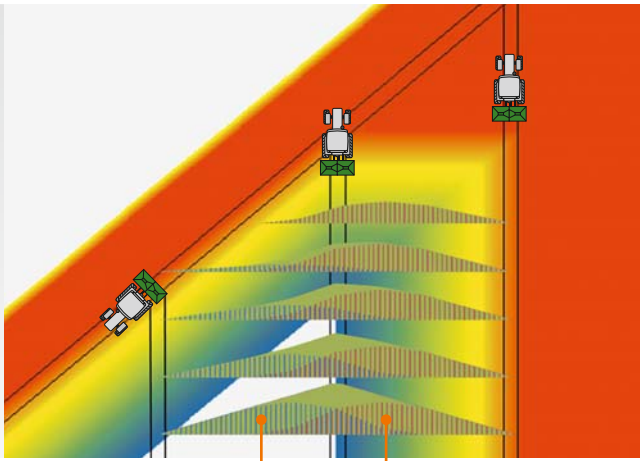
Border spreading with ClickTS

In addition to the AutoTS system on both sides, which is controlled remotely from the tractor cab, there is now the option of a one-side AutoTS system as well as a manually-adjusted new ClickTS available.

Customers that always travel around the headland spreading to the same side, also now have the possibility to order the AutoTS remote controlled border spreading system to one side only. On the other side then the ClickTS version is automatically fitted. So, with this version, border spreading to both sides still is available but with one side remotely controlled and the other side manually actuated. As an additional option, the manual ClickTS adjustment can be also ordered for both sides.



ClickTS manual border spreading system



Left hand spreading disc

Right hand spreading disc



Low level sensors in the ZA-TS

Optimised fertiliser distribution at the headland

The mechanically driven ZA-TS Tronic spreader now comes as standard with an 8 fold part-width section control via spread rate adaptation.

Due to the completely newly developed spreading unit of the ZA-TS, with its quantity effect-free aperture and consistent, triangular shaped spread patterns, very good results can be achieved when spreading in short work found in wedge shaped fields thanks to the new part-width section control via spread rate adaptation.

Also due to this quantity effect-free aperture, the lateral distribution of the fertiliser is always maintained at different application rates. So, individual part-width sections can be switched via spread rate adaptation.

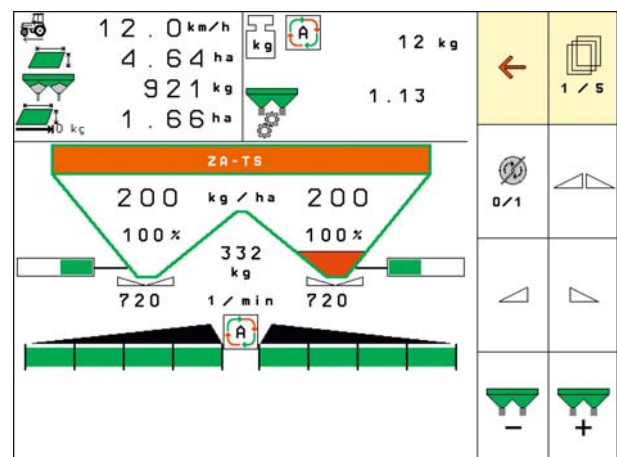
In order to control the part-width sections, especially at the larger working widths, the yet more precise solution of the ZA-TS Hydro, where the 8 fold part-width section control is carried out by both spread rate and individual adjustment

of the spreading disc speed, still is available. Of course, part-width section control for the ZA-TS Tronic and the ZA-TS Hydro can also be accessed via GPS-Switch.

Low-level sensors

When one-side spreading or when spreading with one side at a reduced spread rate, the uneven emptying of the two hopper tips may occur.

For monitoring of both apertures, AMAZONE offers a low-level sensor system for the ZA-TS. This can be positioned if desired above the apertures and can be mounted at three different heights. So, the driver receives via the terminal an early enough alarm signal that one hopper tip is almost empty.



⊕ As an alternative, the ZA-TS Hydro still is the 8 fold part-width method for section control via both spread rate reduction and throwing width adaptation.

Early alarm signal in the ISOBUS terminal

Argus – the spreader's eye

The future of mineral fertiliser spreading





Argus System 2007 for automated mineral fertiliser application



Argus development project – radar sensor system 2013

Optimum lateral distribution

The innovation that will lead to additional improvements in operational comfort and work rates is the future-orientated Argus technology.

The Argus system for detecting the spread fan was originally developed as an optical system and, as such, was introduced at Agritechnica 2007 where it was awarded a gold medal.

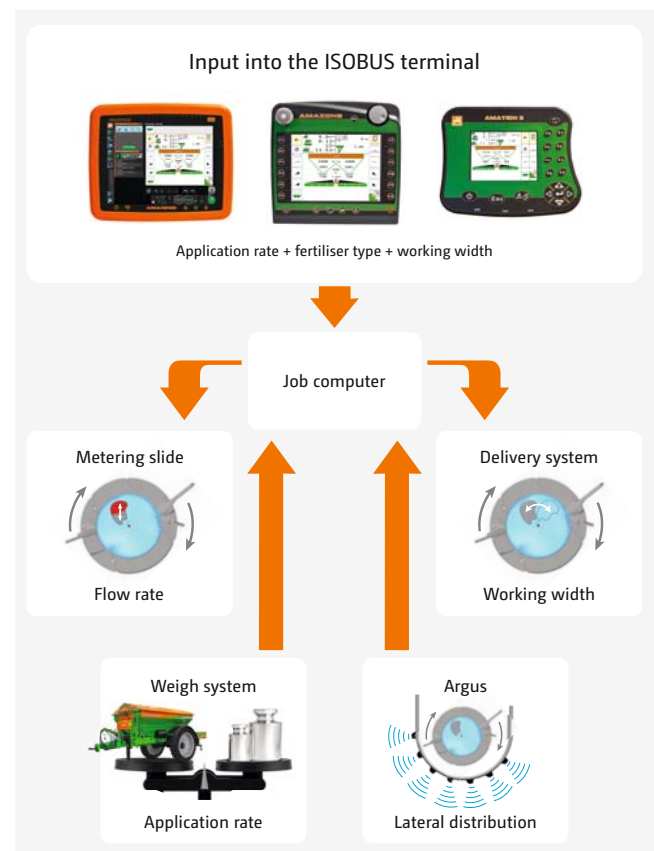
The name remains the same, the technology has been improved

In the meantime the detection method for the lateral distribution is now based on radar technology which is independent from dust and dirt and thus ends up with results that are significantly safer in practice. At Agritechnica 2013, AMAZONE showed this new Argus system of automating mineral fertiliser application as a development project.

With Argus, the concept of a fully automatic fertiliser spreader is realised

Via an ISOBUS terminal, the application rate and also the fertiliser type and the working width are entered. Then with the job computer working alongside the electronic control unit, the working width (via the delivery system) and the flow rate (via the metering shutter) are regulated. During application, the weighing system sends out a mes-

sage informing of the application rate. The Argus radar sensor system monitors the lateral distribution and, if necessary, intervenes via the job computer to always maintain a perfect spread pattern even with a change in the physical properties of the fertiliser.



Concept of the fully automatic fertiliser spreader

Pantera 4502-H self-propelled sprayer

The success story continues



Chassis Pantera H



Pantera 4502-H with Reichardt row scanner



Pantera 4502-H with lift module 700

Increased flexibility

For crop protection treatments in high maize crops or in sunflowers, AMAZONE now offers the Pantera 4502-H with a hydraulically height adjustable chassis. By just pressing a button on the on-board computer, the driver can lift the entire machine to a ground clearance of up to 1.7 m. If the machine is in its lifted position its track width can be adjusted between 2.1 and 2.6 m. In this way the Pantera 4502-H, despite of its higher centre of gravity, maintains its high stability and at the same time can be flexibly utilised in a variety of crops and row spacings.

One unique characteristic of the AMAZONE solution is in the still very wide track width range. So, in normal operation where only 1.25 m ground clearance is required, the track width of the machine can be adjusted from 1.8 to 2.4 m. Especially agricultural contractors, who wish to offer a flexible crop protection service for a greater variety of customers and crops, are still able to operate at narrower

track widths in small field regions. With the Pantera 4502-H, the range of crop protection applications enables a significant extension and thus an increase of the machine's capacity.

In addition to the automatic steering system via GPS, the Pantera 4502-H can be equipped with the row scanning system from the company Reichardt. This is optimally suited to guide the Pantera along row crops, such as, for example maize or sunflowers. As an alternative, the ultra-sonic sensor from Reichardt can be utilised for automatic track guidance.

The optionally-available lifting module 700 enables the Super-L boom to lift by another 70 cm. In conjunction with this lift module, the Pantera H provides an application height of 3.75 m – measured from the bottom edge of the nozzle.



⊕ 1.7 m ground clearance

⊕ 3.75 m lift height

ProfiClick for boom control and steering

The small switchbox with a huge comfort factor

The new ProfiClick switchbox offers the simple and precise actuation of all hydraulic functions of the booms and steering with AMAZONE crop protection implements.

It is available in combination with the electro-hydraulic pack "Profi-fold I" for the entire crop protection sprayer product range from AMAZONE. All the operational func-

tions of the ProfiClick switchbox are ergonomically arranged and directly linked with a function. The potentiometer for the re-adjustment of boom tilt or for the automatic steering of a trailed sprayer can be controlled on the move without looking thanks to the centre position via a detent function. So the driver can concentrate perfectly on driving.



- ⊕ ProfiClick switchbox without steering
 - for UF mounted and UG/UX trailed sprayers
 - only boom functions controlled via the oil circuit

- ① Ergonomic hand rest
- ② On/Off
- ③ Boom locking
- ④ Boom folding

- ⑤ Boom lifting/lowering
- ⑥ Boom tilting

Comfortable mounting of ProfiClick with AMASPRAY⁺

The ProfiClick switchbox for actuating the hydraulic functions of an AMAZONE sprayer can be combined with AMASPRAY⁺, AMATRON 3 or with any other ISOBUS terminal. Thus it offers a favourable and comfortable control of the hydraulic functions via an oil circuit. On the tractor, only one single acting spool valve with a pressure-free return flow is required.

ProfiClick is available for UF, UG and UX without steering and the UG with drawbar steering or for a UX with axle steering.



- ProfiClick switchbox with steering
 - for UG trailed sprayer with drawbar steering
 - for UX trailed sprayer with axle steering
 - Boom functions and automatic steering for true track following via an oil circuit

- ① Ergonomic hand rest
- ② On/Off
- ③ Steering automatic/manual
- ④ Manual steering
- ⑤ Boom locking
- ⑥ Boom folding
- ⑦ Boom lifting/lowering
- ⑧ Boom tilting

New Super-S1 boom for UF

For any farmer and agricultural contractor – always the right equipment



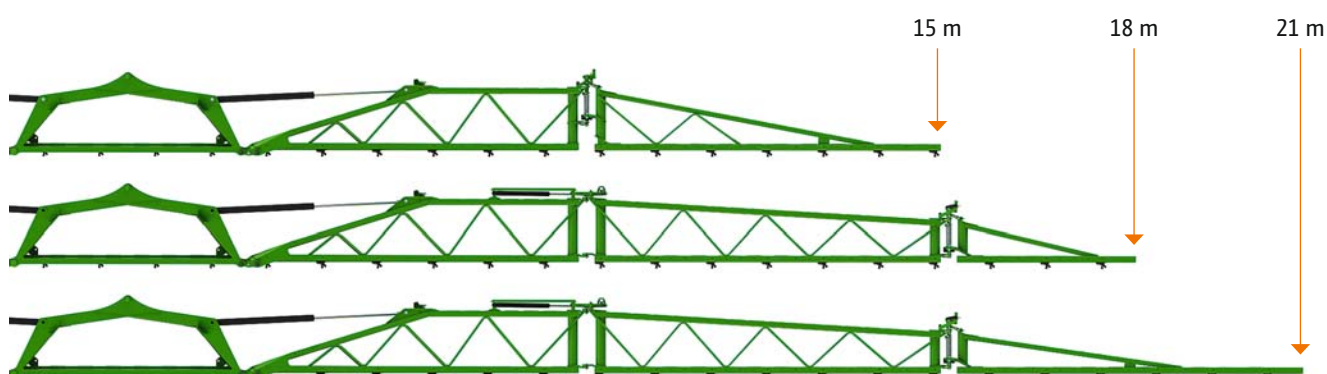
UF 1201 mounted sprayer with 21 m Super-S1 boom

New Super-S1 boom for the UF mounted sprayer

In the year of the 20th anniversary of the Super-S boom, the range is expanded by the new, cheaper Super-S1 boom, available in the working widths of 15 m, 18 m and 21 m for the UF series.

The working width of the 18 and 21 m versions can be easily reduced to 15 m by simply folding in the outer boom sections. The new Super-S1 boom thus provides flexible operational possibilities in small field sizes.

A reduction in the number of boom segments results in less hinge points enabling a quicker folding. The renowned, robust aircraft wing design still impresses, even on these models. Despite the 50 cm longer individual sections of the Super-S1 boom in comparison with the conventional Super-S2 boom, the transport height still is below 4 m. The compact transport width of 2.4 m is also maintained.



New Super-L boom

series in working widths of 21 to 40 m

Super-L boom now also at 21 m

The width of Super-L boom for the UX trailed and the Pantera self-propelled sprayer has been expanded downwards by the inclusion of a 21 m model. In this way the demand from many customers for a laterally-folding boom in this working width has been taken into account.

This new boom can also be operated at a reduced working width of 15 m. This applies both to the layout of the nozzles as well as the actual boom sections.

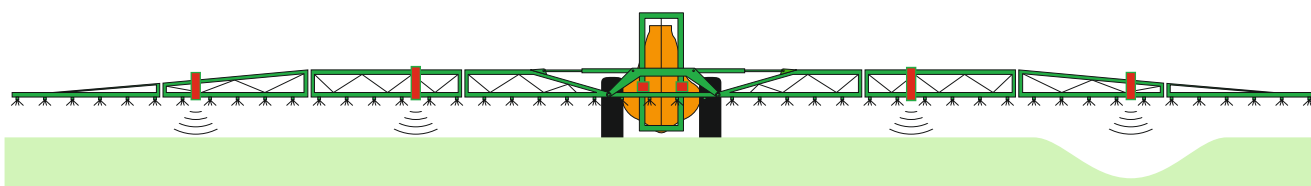
Now, the Super-L boom series is available from 21 to 40 m in many width options.



⊕ 21 m Super-L boom,
folds laterally to 15 m working width

DistanceControl

Now as option with 4 sensors



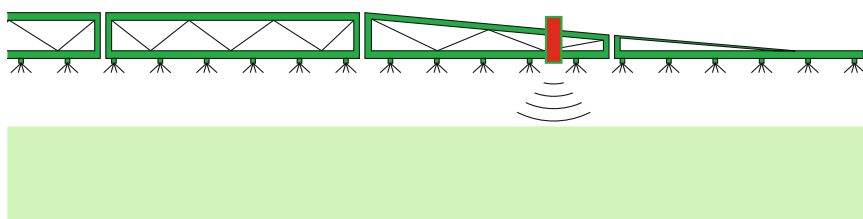
The well known and proven DistanceControl boom guidance can now, as an option, also be equipped with four sensors.

In many cases, with the aid of DistanceControl, the boom follows the target surface at an optimised height and angle so that the correct distance between the nozzle and the target surface is maintained. Under very difficult conditions, however, two sensors are not sufficient. Especially in heavily differing crop heights, or in areas with partially lodged corn,

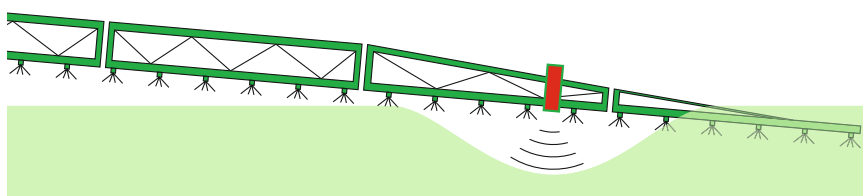
it can happen that the boom dips into the crop. In this case the optional to use four sensors will prevent this.

The four sensors are electrically connected in parallel and it is always the sensor that is closest to the target surface that is actuated. In this way the optimum boom height above the crop surface is ensured even under the most testing conditions.

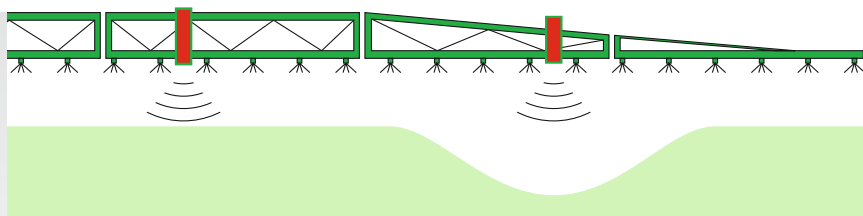
DistanceControl when equipped with two sensors: measuring from the crop



DistanceControl when equipped with two sensors: with lodged corn, the boom, for example, may dip into the crop



Remedy for difficult conditions – the optional four sensor solution



1,032 hectares in 24 hours

AMAZONE sets the world record in crop protection



At 43 ha/hour, the UX 11200 set a second new record for modern crop protection equipment



Depending on weather and field conditions the sprayer was operated in the daytime at 13 to 15 km/h and at night – thanks to the absence of wind and dew formation on the plants – at 17 km/h

Is it possible to cover an area of 1,000 ha with a crop protection application within 24 hours? This question can be now answered with an emphatic Yes: and with a treated area of 1,032 hectares in just 24 hours, the UX 11200 sprayer from AMAZONE has recently set a new world-record.

Converted into an average work rate, the UX 11200 – at 43 ha per hour – also set a second new record for output from today's modern crop protection technology. With its tank capacity of 12,000 l and tandem axle running gear, the UX 11200 is currently the biggest trailed sprayer in the AMAZONE range. Equipped with a 40 m wide Super-S boom and pulled behind a 330 HP Fendt tractor during the world-record attempt the sprayer was operated, depending on the weather- and field conditions, at daytime speeds of 13 to 15 km/h and during the night – thanks to the absence of wind and dew formation on the plants, of 17 km/h. The sprayer was filled directly in the field from a 21 m³ l water bowser along with a 1,000 l crop protection agent bulk container on the load platform of the towing vehicle.

The world-record operation, which was projected to last exactly 24 hours, started on September 3rd, 2014 at 12 o'clock at Golzow farm near the village of Golzow in Brandenburg. The farm covers, in total, an area of 6,490 ha and is representative of European crop protection conditions in practice and thus shows where the UX 11200 can fully demonstrate its strengths.

The actual treatment programme was, following on from harvesting rape the spraying of volunteer rape with

glyphosate at an application rate of 100 l/ha of water across 15 different fields. The treatment was carried out with the full agreement of the farm's crop protection manager. The nozzles utilised were TurboDrop High Speed from Agrotop in different sizes (025, 03, 04). However, during the entire 24 hours, only the 03 nozzles were used.

Due to the variation in stubble length and the emergence of the volunteer rape plants at different heights, the fields proved to be very uneven thus making it especially demanding on the boom guidance system on the sprayer. In addition, work was made even more difficult by pylons and irrigation points in the fields. Therefore, all these obstacles and exclusion zones were stored in the tractor terminal prior to the record attempt to warn the non-local drivers of these areas in good time. Also the tractor was equipped with an automatic steering system which was supplemented by an RTK correction signal via a mobile base station. The sprayer was operated via an AMATRON 3 in-cab terminal from AMAZONE, and the automated headland and part-width shut-off via the SectionControl software within the tractor's terminal.

Almost 30 % of non-productive time

The statistics created in the course of the world-record attempt, showed emphatically the effect of field size and shape on actual work rates: for field sizes between 40 and 124 ha and tramline lengths of approx. 0.5 to 1.5 km, this value ranged between 38 ha/h on the most unfavourable and 45 ha/h in the best fields. This represents a difference of 18 % in the area covered.



1,032 ha covered in 24 hours – the AMAZONE team after the world record



Despite the 103,200 l of spray agent applied, the UX 11200 had only to be refilled 10 times



All the treatments were carried out in cooperation with the crop production manager at Golzow farm

Even more noticeable was the importance of unavoidable non-productive periods. Compared with a theoretical acreage output of 60 ha/hour, there is a non-productive differential of 28%. Here, thanks to the large tank capacity on the UX 11200, only 8% of the non-productive periods could be directly attributed to filling the sprayer. So, despite the 103,200 l of spray agent applied in total, the sprayer had to be refilled only ten times during its world-record course. Depending on the residual amount in the tank, the time needed for each filling procedure was between 10:55 min and 13:45 min and thus equated to just two hours in total.

Moving the sprayer between the different fields lost nearly 1.5 hours and thus approximately 6% of the non-productive time. For this the sprayer and tractor combination had to cover, in total, a distance of almost 20 km. Finally, the majority of non-productive time was attributed to driving around pylons and irrigation points and turning on the 40 m wide headland. Despite the favourable field structure, this required a time expenditure of 3.5 hours in total and thus almost 15% of the overall non-productive time.

Comprehensive documentation

The staff mainly responsible for the organisation and execution of the world-record attempt was the AMAZONE sales promotion team. So, the 24 hour world-record beating operation was divided into three shifts with three different sprayer drivers on a Fendt 933. Also working on these shifts were the drivers of the Unimogs with Annaburg tankers attached who were responsible for supplying the water and carrying out the filling procedure.

During the world-record attempt, a weather station was installed especially on the Golzow farm with numerous data recorded, such as wind speed, air temperature, humidity, etc. Directly on the side of the field, an additional mobile measuring facility was available to also measure wind speed, temperature and humidity in the field to allow, if necessary, reaction by a change of spray rate or by a complete break in the spraying procedure. However, conditions were almost completely constant with a wind speed during the day of 2 to 3 m/sec and at night next to nothing.

At the same time, two students from the University of Soest monitored the procedure scientifically. Together with the manager responsible for crop protection at Golzow farm, they carried out the accurate analysis of all the treatments across the different fields. So all the crops prior to and after treatment were documented and additionally the application variables, such as spray agent usage, fuel consumption along with the times for filling and spraying registered.

✚ At the same time the film team Gläser videoed the world-record attempt and this film is available to download at www.amazone.tv



Precision air seeders – the 3rd generation

ED – simply well thought-through: precise like clockwork



ED 6000-2C Super



Hydraulic drive line



Transport position

With many new functions on the in-coming generation

After more than 25 years of the ED success story, AMAZONE will present for the first time at SIMA 2015 the third generation of the ED precision seeder. The new ED includes numerous innovations from the drive of the singling system and fertiliser metering via the electronics up to the design. The proven system of vacuum singling has been adopted from the previous generation.

State-of-the-art drive concepts

For the first time AMAZONE will pioneer new techniques within the ED drive-line. Besides the electrically-driven fertiliser metering, the hydraulically-driven singling is one of the main focus areas of the new ED Super enabling the very easy change of seed and fertiliser rates via the terminal – and even on the move. In conjunction with the automatic GPS-Switch part-width section control and the individual row shut-off there is now the possibility to

offer the chance for the individual seeding units to be automatically switched via GPS in wedge-shaped fields or on the headland. The individual row switching allows the very simple and comfortable creation of tramlines and irrigation lines.

For determining the forward speed and depending on the preferred choice, a radar sensor in conjunction with a working position sensor, a speed signal from the pulling tractor or a GPS speed signal can be chosen.

As a low-cost entry level model, the ED Special is still available with mechanical drive to the seeder units and to the fertiliser metering. In this case the fertiliser application rate is comfortably adjusted via the Vario gearbox, well-known and proven on the conventional seed drills.

The blower drive is driven either hydraulically or mechanically via the PTO shaft.

ED range overview

| | ED 3000-C | ED 4500-C | ED 4500-2C | ED 6000-2C | ED 6000-2FC |
|---------------------------|-----------|--|------------|------------|-------------|
| Frame | rigid | | folding | | |
| Working width (m) | 2.80–3.20 | 4.20–4.80 | 4.20–4.80 | 5.40–6.40 | 5.40–6.40 |
| Number of seeder units | 4, 5, 6 | 6, 7, 8*, 9* 8 and 9 rows are only possible without fertilising | 6, 7* | 8, 9* | 8, 12 |
| Possible row spacing (cm) | 45–80 | 45–80 | 60–80 | 60–80 | 45–80 |

* available from 2016



ED 6000-2C Super





ED Contour seeder unit with additional seed press roller



Optimised soil contact due to the seed press roller in front of the Super-V press rollers

At the heart of the machine: the seeder units

The singling of the ED functions via a vacuum principle. This offers the advantage that the singling of the seeds is carried out mechanically by a stripper finger and is virtually independent of either forward speed or seed shape.

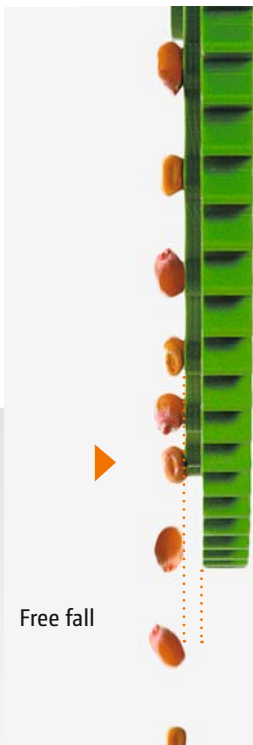
The seeds are drawn by vacuum on to the raised holes and are delivered to the stripper. These raised holes function also as an agitator as these protrusions on the surface of the disc stir the seed. The raised holes on the singling disc ensure that the seed leaves the disc in free fall so that it is not influenced by the disc which is especially important for the accuracy of placement.

So, also in the future a wide-variety of differing crops – such as maize, sunflowers, sugar beet, peas, rape, etc. can be singled.

Depending on the prevailing conditions the customer can choose between the proven Classic and the Contour sowing unit. For the Contour coulter now new options can be selected. For very light and sandy conditions every coulter unit can be equipped with a second depth guidance roller to ensure the optimum depth control even under these conditions. In addition the seed press roller can be selected as an option. After the seed has been placed in the pre-shaped seed furrow the seed is pressed by the roller resulting in the optimum seed/soil contact, ensuring the quick and reliable field emergence. The pressure intensity can be changed in three positions depending on the prevailing conditions. Under very moist conditions the roller can be completely removed, quickly and without tools.

For the seed coverage and to press the soil above the seed the Super-V press rollers are used on the Contour unit.

In connection with the on-going ED development the seed hoppers have also been matched to the increasing demands on work rates. So, the volume of each hopper is now 60 l, which means 720 l for a 12 row machine. In addition, fill level monitoring for the seed hopper is available so that the driver is informed well in advance of a low fill level.



Free fall



Optimum sealing



Calibration trays which can be pulled out on the left hand side



Control via ISOBUS communication

Comfortable calibration of the fertiliser rate

The volume of the fertiliser hopper starts at 900 l on both the ED 3000-C and ED 4500-C, via 1,100 l on the ED 6000-C, right up to 2,000 l with a front tank combination. The rear fertiliser tank is equipped with large sight glasses on the front and rear sides enabling a simple visual fill level monitoring from the tractor seat. In the dark this is assisted by the optionally available internal tank lighting. In addition, electric fill level monitoring of the rear fertiliser tank can be specified so that the driver is reminded when to refill the fertiliser tank.

New here is the very comfortable electric drive of the fertiliser metering. So, the fertiliser rate can be variably matched on the move. Also calibration has reached an unprecedented level of convenience. The operation of the complete calibration procedure is comfortably possible just on the left hand side of the machine. In this way, there is no need for the operator to walk around the machine several times. The calibration procedure, in conjunction with the electric fertiliser metering is carried out via the calibration button located on the machine. This is kept pressed until the trays are full, with then both trays being pulled out of the machine in the left hand direction. The collected quantity is entered into the terminal and the calibration procedure is over just like that.



Calibration button

For any application, the right electronic and hydraulic equipment

Apart from the Basic equipment level with its AMASCAN⁺ on-board computer, the Profi version features ISOBUS control allowing, in addition the use of different ISOBUS terminals, also the utilisation of various ISOBUS applications, such as, for example, GPS-Switch automatic part-width section control.

Depending on the choice made, the hydraulic system is available in three versions. There is the entry-level standard hydraulics, where every function has to be actuated from a spool valve on the tractor. On modern tractors with sufficient spool valves, this equipment level might be sufficient. For tractors with a limited number of spool valves, the Comfort hydraulics can be selected. Here the functions of wing and track marker folding can be combined via an electric change-over valve supplied by one spool valve. For those customers who intend to operate all functions via the terminal or the optional joystick, then Profi hydraulics is available, requiring one single acting spool valve with a pressure-free return flow on the tractor or alternatively Load Sensing.

ED

Special

- mechanical drive for fertiliser
- mechanical singling drive

Super

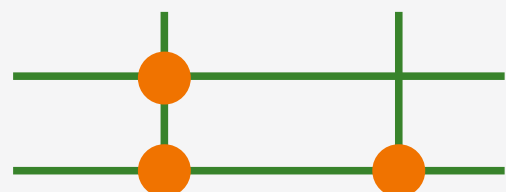
- electric drive for fertiliser
- hydraulic singling drive

Basic

AMASCAN⁺

Profi

ISOBUS





Filling auger for filling the rear fertiliser tank



Micro plus micro-granular applicator

Tailored accessories

For filling the machine a high performance filling auger, integrated in the machine concept, is available. No matter whether in the transport or in the operating position, the fertiliser hopper can be comfortably filled from the ground without having to climb onto the machine. In case climbing up on to the machine is necessary to access the fertiliser hopper, the comfortable step is available which can be simultaneously used as a transport box for buckets, seed, scales, etc.

For loosening the tractor wheel marks AMAZONE relies on the re-designed new tractor wheel mark eradicator. New is the improved overload safety device, ensuring the maintained release force in all tine positions and thus is able to negotiate obstacles under all conditions. Also new are the different shares which can be simply exchanged on the tip of the tractor wheel mark eradicator. In this way, depending on soil type and operational conditions, the operator can always operate with the right wearing metal.

Micro plus micro-granular applicator

AMAZONE offers the possibility, to equip the ED with one or two Micro plus micro-granular applicators enabling the application of up to two micro-granules along with the seed during one pass in the field, depending on the machine type. Depending on the preference, the granules can be applied at two different points. Micro plus features a central 110 l hopper and one central electric metering for all rows making filling and emptying very easy. The application rate of the granules can be very simply adjusted and changed via the terminal.

LED spotlights

Good visibility in the dark is offered by optional LED worklights attached on and in the fertiliser hopper, lighting both the operating area and also the interior of the fertiliser hopper.



Tractor wheel mark eradicators



LED worklights

AD-P Special – electrifyingly new

Comfortable and multi-talented



AD-P 3000 Special



Optimised seed hopper on the AD-P Special 850 l and 1,250 l

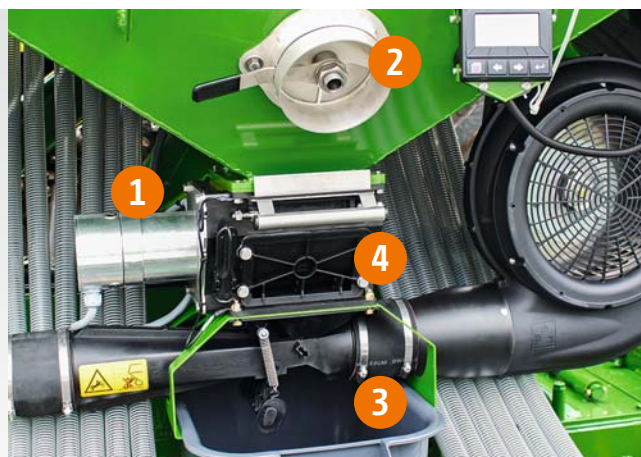
At SIMA 2015 AMAZONE will present for the first time the new AD-P pneumatic seed drill with electric metering.

The new series supersedes the very successful previous model. Apart from many attractive detail solutions, the outstanding improvement in operational comfort is the major change.

So, in particular, the access to both the metering unit and the hopper are integrated into the total concept. Last, but not least, the easy handling of the roll-over cover rounds off the function concept. The optimised hopper shape is impressive with its shallow design which is especially characterised in the smaller machine with its 850 l hopper volume. The larger version of the AD-P Special features a 1,250 l hopper. At 2.2 m wide, both hoppers have been designed specifically so that filling via a wide front end loader shovel is also no problem. With the aid of an extension, the capacity can be increased to a total of 1,100 l or 1,500 l respectively.



An especially-wide loading board eases filling



① Electric metering drive, ② Quick emptying, ③ Emptying of the hopper residues, ④ Seed metering unit with metering cassettes

Electric metering

The metering unit, well-known from the large area seed drills, is now also integrated in the new AD-P Special. It is characterised, above all, by the improved access when calibrating and when changing the various metering cassettes. In addition, the metering cassette can be easily removed with nothing hampering the metering cassette change, even when the hopper is full.

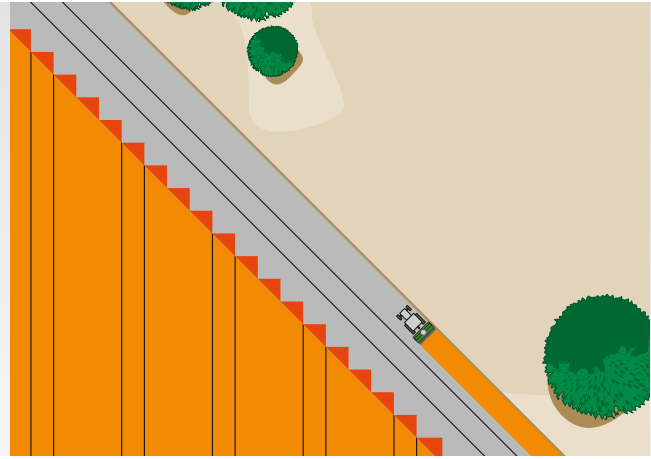
As standard, the metering unit of the AD-P Special is driven electrically allowing, on the one hand, calibration by the press of a button and, on the other hand, meaning the very simple adjustment of the seed rate from the tractor cab. For this, from choice, the AMADRILL⁺ on-board computer or the AMATRON 3 operator terminal can be used. For determining the forward speed, various speed signal sources can be utilised on the AD-P Special. Depending on preference, there is a choice of a space-saving radar sensor in conjunction with a working position sensor, using the speed signal of the tractor, a GPS speed signal or the current impulse wheel system can be used.



Easily-accessible metering unit



Hydraulic blower fan drive



Position-dependent automatic switching on and off of the electric metering unit via GPS-Switch

One important detail has been realised with the addition of two extra seed rows that can be switched off when tram-lining. So, now up to 5 rows per side can be shut off, resulting in a maximum tyre width of the following tractor of up to 99.6 cm at a row spacing of 16.6 cm or 75.0 cm with a row spacing of 12.5 cm. In this way the demands from the market for still wider tyres on the following husbandry tractor have been taken into account.

Hydraulic blower drive

The high performance blower fan is characterised by its very low oil requirement of just 21 l/min and a very low noise emission.

ComfortPack – the interesting equipment option

One very interesting option for the AD-P Special is the new ComfortPack. It includes the TwinTerminal 3.0 with its 3.2" big display. This TwinTerminal allows the driver to save making unnecessary trips between the tractor cab and seed drill during calibration. The repeated climbing on and off the tractor cab during one calibration procedure thus is history, because it is not only possible to start the calibration from outside but also, following calibration, the weighed calibra-

tion quantity can be input directly into the terminal. This option is rounded off by the added function of emptying the seed tank residues which makes it easier for the user to change over between seed types.

GPS-Switch with AMATRON 3

As on all seed drills from AMAZONE that are equipped with electric metering drive, the AD-P Special can be controlled on the headland automatically as well via GPS-Switch part-width section control. The increase in efficiency created by saving seed corn and reducing overlapping on the headland, even in any field size, can be enormous. Additionally, by using an automatic switching system the stress on the driver can also be considerably reduced. It also doesn't matter how many AMAZONE machines are used, only one GPS-Switch licence needs to be activated for them all.

Coulters and harrows

The AD-P Special can still be equipped with a choice of either the well-known WS suffolk or the proven RoTeC disc coulter. The RoTeC coulters have been further developed on the new AD-P Special and, in this context, the layout of the adjuster for the depth limiting disc has been optimised so that setting the depth on the handle is even easier still. And furthermore there has been a complete improvement to the coulters pivot bearing so that the bearing pivot is better sealed. Through this improvement, the side forces which act on a single disc coulters are better absorbed as well as the wear on the bearing pivot being considerably reduced.



The mounting of the TwinTerminal is carried out via a magnetic console



Roller harrow: ① Drag tine harrow and ② Roller harrow in operation on the AD-P Special



Roller harrow in the neutral position: ② Roller harrow on the AD-P Special raised out of work – ① drag tines still in work

These improved RoTeC coulters are carried over onto the conventional gravity seed drills as well.

New Roller harrow

As an alternative to the well-known Exact following harrow, which is the perfect all-rounder for seed embedment under the widest variety of different conditions and which can be used also on almost any soil type, the Roller harrow is also available for light soils. In conjunction with the newly developed AD-P Special, the Roller harrow has also been further improved. In addition to the integrated overload safety device, the contour following has to be regarded as the major feature. The Roller harrow, adjustable independently from the coulters pressure, can follow the contours over a range of –100 mm to +100 mm. This means that even on heavily undulating ground that the seed corn is evenly consolidated. The benefit of the Roller harrow is that the press wheels are kept separate from the coulters. In this way the coulters and the press wheels follow the

contours independently of each other. The coulters pressure and the press wheel pressure can be adjusted individually – on light soils high roller pressure and little coulters pressure and on heavy soils low roller pressure and much more coulters pressure. In addition, the Roller harrow features a real neutral position of the roller. Plus, under moist conditions, the roller can be raised completely so that only the drag tines are in work.

Safe operation in darkness

For the safe operation in the evening and at night, optional LED working lights, attached to the tank, illuminate the rear ensuring a safe view of the area worked. In addition, the sowing coulters are also now illuminated. As a practical touch, the work lights can be easily turned around so that the area around the metering unit can also be illuminated. In this way calibration or the emptying of the hopper residues is no longer a problem even in darkness.

AD-P 3000 Special, 3 m working width with the KG Super rotary cultivator



New trailed Cirrus 4003 sowing combination



Cirrus 4003-C

Cirrus 4003

After the successful introduction of the Cirrus 03 series last year, the family will be supplemented by three additional models in 2015. For the spring season, a Cirrus 4003 and 4003-C will be available. With this rigid machine in a 4 m working width, the needs of the specific markets of Scandinavia and the Baltic States are addressed. But also for farms operating within a ring fence this working width is also a very interesting alternative.

As already on the Cirrus 6003-2, the Cirrus 4003 will be available in two versions. Apart from the one-tip, open hopper version, a Cirrus 4003-C model with its split, twin tip pressurised tank will be offered. This double tank, in a ratio of 60 to 40, enables the drill to sow using the Single-Shoot principle of either two different types of seed, seed and fer-

tiliser or also just one seed type via the sowing coulter. Thanks to the two metering units which can be individually calibrated, two different materials can be sown with the optimum rate regulation and yet without any de-mixing effects.

In summer 2015, the rigid Cirrus 3503 Compact in a 3.5 m working width will follow.



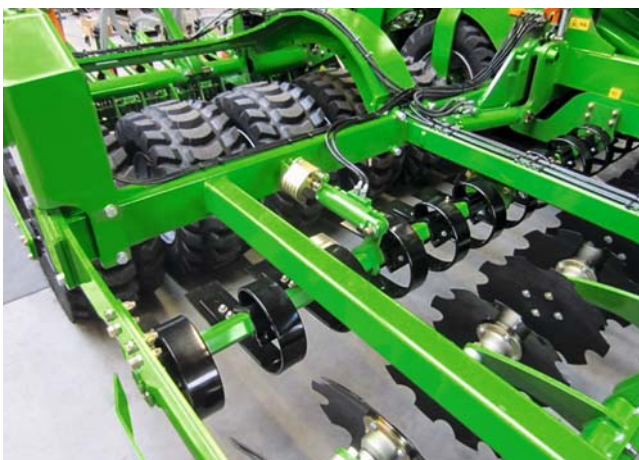
New Crushboard for Cirrus

New Crushboard for Cirrus

The Crushboard in front of the disc segment can now, as an alternative for the Cirrus 4003 and 6003-2, be also fitted behind the cultivation discs. That means between disc segment and tyre packer. In this way the customer can choose between one of three mounting possibilities – without Crushboard, Crushboard in front or Crushboard at the rear. With this variety of cultivation elements, the Cirrus provides an even, finely crumbled seedbed across the majority of all differing soil conditions, irrespective of whether mulch sowing or sowing after the plough.

New scrapers

For operation on especially heavy, moist and very sticky soils, all Cirrus 03 models can be equipped with an optional scraper which helps prevent either the AS or Matrix tyres from any substantial build-up over the entire tyre surface.



Optional Crushboard at the rear of the cultivation disc segment



Optional scrapers for AS or Matrix tyres

New T-Pack packer for Cirrus

T-Pack packer

An additional innovation for the Cirrus 4003 and 6003-2 is the front T-Pack S wing packer which, in combination with the new front T-Pack U intermediate axle packer, roll in front of the cultivation disc segment. In this way, the soil in front of the machine is reconsolidated prior to the cultivation on the drill which is of particular benefit on very light land and on ploughed soils. The pre-running T-Pack U intermediate axle packer can also be operated with the Cirrus 3003 Compact and in solo operation as a front packer.



Side mounted T-Pack S wing packer



T-Pack U intermediate axle packer (universal)

ConTeC pro for accurate placement depth

The innovative coulter system for the Condor direct seed drill



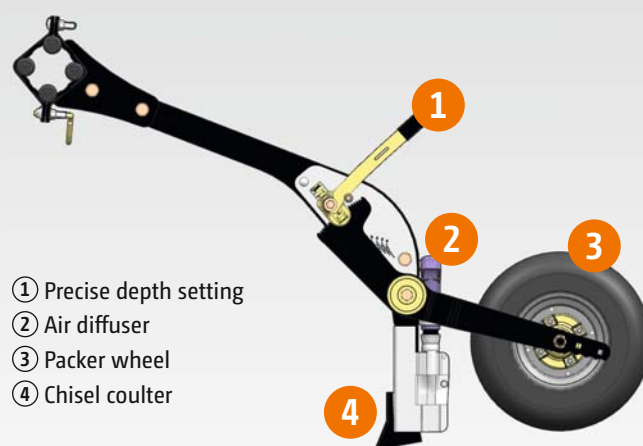
The AMAZONE Condor is the ideal machine for operation in arable farming systems with extensive soil tillage and in direct sowing. Especially under large area conditions where time and soil moisture are the limiting factors, the Condor stands for high efficiency, precision and soil moisture conservation.

When opening the seed furrow, the narrow ConTeC pro coulter moves little soil so that the valuable soil moisture remains in the soil, however, it provides sufficient fine soil to ensure the optimum contact between soil and the seed

corn and achieves the quickest possible germination. Straw is safely cleared from the seed furrow, preventing the “hair-pinning effect”, the pressing of straw into the sowing slit.

The coulter tips are hard metal coated, ensuring a long service life even under the most arduous of operating conditions.

Every coulter is individually guided in depth via the following packer wheel, ensuring the optimum reconsolidation of the soil.



ConTeC pro coulters

The new depth control of the ConTeC pro coulters system ensures the maximum of comfort and precision at setting the placement depth. Thanks to the tool-less adjustment of the sowing depth all the coulters on the machine can be re-adjusted to the desired placement depth within the shortest time period. This is especially important when a change of the crops to be sown is intended. On large farms, this allows for the quickest possible response to changing weather conditions. When sowing, under very dry conditions, the sowing depth can be matched without any problem to find the continuously retreating moist horizon in the soil, increasing the time frame for sowing and peaks within the sequence of operation can be compensated for.

The new standard air diffuser on the coulter provides a constant air stream in the delivery pipe from metering up to the coulter without any blowing of the seed out of the furrow.

For any kind of soil, the optimum coulter tip

The existing coulter tip with an angle of attack of 68° is also supplemented by a tip with a 50° angle of attack. Especially under very hard soil conditions, the tip, with its shallower angle, shows its advantages. The improved undercut and the improved way it is pulled into the soil ensures a reliable penetration of the coulter.

The different packer wheel profiles

Air filled wheel

The air filled wheel is suited for a large variety of operational conditions. By the flex in the tyre it is kept free from wet soil. Under dry conditions, it provides a reliable reconsolidation of the soil.

Fully foam-filled wheel – round profile

Due to its robust design, this wheel is ideally suited for operating in extremely dry conditions and where rigid stubbles prevail. Burst tyres and cost-intensive down times are no longer a matter of risk. The hard wheel provides optimum reconsolidation of the seed furrow.

Fully foam-filled wheel – triangular profile

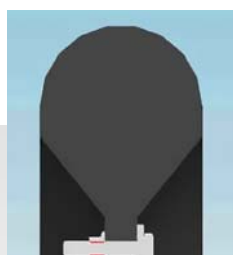
Due to its wedge shape, this wheel provides the maximum contact pressure in especially dry conditions and on light soils. Its robustness pays off especially when sowing in rigid stubbles.

Semi-pneumatic wheel

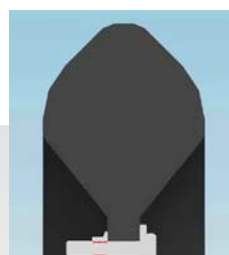
This tyre is the real all-rounder indeed. Its thick rubber wall makes it extremely resistant against even the stiffest of stubbles. Under dry conditions, this tyre achieves a very good reconsolidation. The air chamber provides this tyre with a very good flexibility preventing the sticking of wet soil on the wheel.



Air filled wheel



Fully foam-filled wheel – round profile



Fully foam-filled wheel – triangular profile



Semi-pneumatic wheel

Certos TX – the flexible powerpack

Large discs for the most intensive of soil tillage



Certos 5001-2TX in 5 m working width



The working depth indicator is easily visible from the tractor seat

The specialist with a wide range of application

With the heavy Certos compact disc harrow AMAZONE supplements its programme in the range of passive soil tillage. The Catros compact disc harrow, with its 460 mm diameter discs, is well-established and has been proven for many years as the ideal tool for shallow soil tillage of between 3 and 12 cm depth.

However, apart from its use for very shallow soil tillage, again and again a deeper operation of the Catros has been requested. Therefore, since 2011, AMAZONE has offered the Catros⁺ with its 510 mm serrated discs enabling a more aggressive operation and working depths of 5 to 15 cm.

The trailed Certos TX series with integrated centre running gear in the working widths of 4, 5, 6 and 7 m supplements both the ranges and the operational possibilities of compact disc harrows at the top end.

Wide operational spectrum

The Certos TX with its 660 mm disc diameter is designed for the intensive mixing in of organic matter at working depths which, so far, have been reserved just for tined implements. The large 660 mm diameter discs enable working depths of up to 20 cm and, in connection with the machine's own weight, they ensure a reliable penetration, even on heavy soils.



Maintenance-free disc bearings with integrated slide seal and oil filled

As a professional implement for medium deep soil tillage it features an operational spectrum of 7 to 20 cm. In this way, the Certos TX offers very versatile possibilities of operation, from breaking up stubbles, via the medium-deep and intensively mixing soil tillage up to the loosening of pasture land and fallow.

Available as option, the GreenDrill 500 seeder box enables the sowing of catch and cover crops alongside this intensive soil tillage all in one operational pass.

The Certos TX is linked to the tractor from choice via the lower links or a K80 ball coupling.

The disc segment of Certos TX is equipped with serrated 660 mm diameter discs. The angle of attack of 22° in the first row and 17° in the second ensures a very aggressive operation, an intensive mixing and a good penetration force into the soil. In this way, even on soils with plenty of surface organic matter, an intensive mixing operation is possible.

The proven-Catros system of maintenance-free disc bearings, oil filled with integrated slide seals is also used on the Certos.



Catros discs
460 mm diameter
Working depth 3 to 12 cm



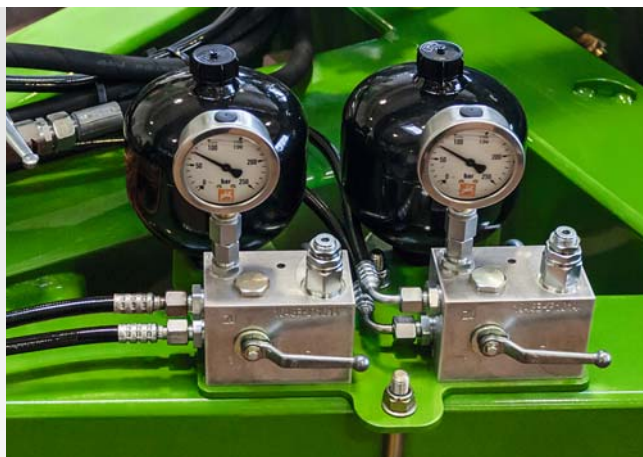
Catros⁺ discs
510 mm diameter
Working depth 5 to 15 cm



Certos TX discs
660 mm diameter
Working depth 7 to 20 cm



Certos 7001-2TX with GreenDrill 500 seeder unit



As standard the Certos TX is equipped with a drawbar shock absorbance system

However, the dimension of the bearings in the Certos with its 130 mm outer diameter is almost twice as big as on the Catros.

The integrated centre running gear, equipped with 550/45-22.5 or 400/60-22.5 tyres ensures an excellent manoeuvrability of the machine, both in the field and on the road. The position of the running gear guarantees good weight distribution and allows the use of all AMAZONE following rollers – this means the most suitable roller depending on the soil conditions can be utilised. When equipped with an air braking system, it is approved for speeds of up to 40 km/h allowing for quick road transport.

Optimal operational performance

To realise the even depth control of the machine, Certos is guided at the rear via the following roller and up front via the support wheels. As standard, Certos is equipped with a drawbar shock absorbance system to ensure a very smooth ride and a maintained working performance. The 350 mm distance between the discs in combination with the individual suspension of the discs provides sufficient passage for a blockage-free operation, even where much organic matter prevails, such as, for example, following grain maize. From a working depth of 7 cm or more, the 22° angle of attack ensures the full area of the discs is worked.

The large distance between the discs and the following roller allows the soil to settle. The optional Crushboard in front of the following roller is available providing an



Stepless hydraulic adjustment of the working depth

additional levelling and crumbling effect. Especially when used for seedbed preparation, the Crushboard option makes sense. For following rollers, the Certos can be equipped with all known rollers from the AMAZONE roller programme. With the two new roller versions – the larger wedge ring roller with matrix profile and the double-U profile roller – AMAZONE offers additional roller options also for the Certos TX.

Comfortable adjustment

On the Certos TX, the hydraulic adjustment of the working depth is standard. This allows the stepless matching of the working depth also on the move to be able to respond to different conditions. As an orientation to when setting the working depth, an easily visible scale is provided. The adjustment of the optionally available Crushboard is comfortably carried out at the left and right hand side via a centralised spindle. For maximum comfort, the hydraulic adjustment of the Crushboard is also possible from the tractor seat.



Cenius TX trailed mulch cultivator

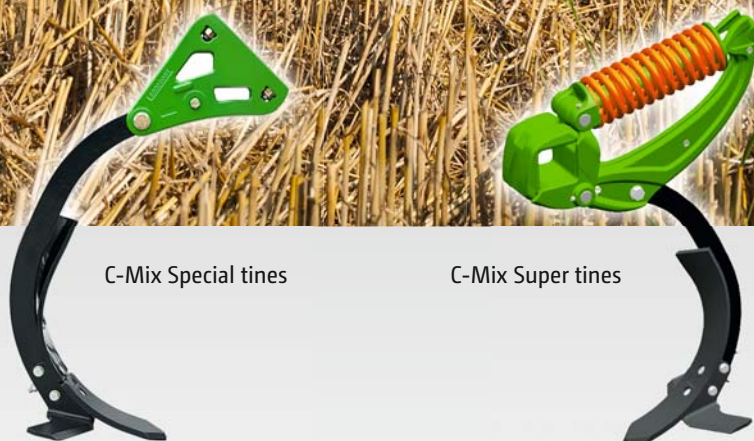
New models – new equipment versions



Cenius 4003-2TX Super

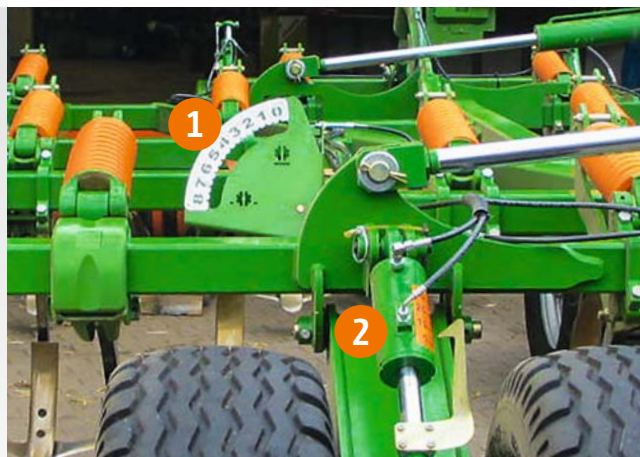
C-Mix Special tines

C-Mix Super tines





Serrated levelling discs with central adjustment



- ① Scale for the working position of the levelling discs
- ② Scale for the working position of the tines

Complete Cenius TX series from 4 m to 7 m

With the Cenius 5003-2 TX and 4003-2TX in 5 and 4 m working width, AMAZONE, with immediate effect, offers two new universal cultivators. Together with the 7 m and 6 m Cenius models, which were introduced for the first time at Agritechnica 2013, AMAZONE, with its new TX series, now covers the range of 4 m to 7 m working width.

All Cenius TX models with integrated centre running gear, each with four rows of tines arranged in a staggered layout and with a frame height of 80 cm, provide the optimum preconditions for a trouble-free straw passage. Thanks to the newly developed C-Mix share system, they offer completely flexible operation – from shallow stubble work, via top soil deep loosening, to seedbed preparation.

The alternatives for stone safety protection

Two alternatives are available as a tine overload safety device for the TX cultivators. The C-Mix Super tines are protected via a pressurised spring with a release force of 600 kg and 300 mm lift height. In this way, even when used deep and under the most difficult of operating conditions, a perfect working performance is achieved. For operation on light to medium soils without stones, however, the C-Mix Special tine with a shear bolt safety device has been designed.

Centralised and simple depth adjustment

The depth guidance of the TX cultivators is carried out via both by the front support wheels and the following roller. This depth system allows adjustment, from choice, either mechanically or via a hydraulically actuated set-up. If it is intended to operate the cultivator under very wet conditions and without a following roller, the centre running gear can also be used for depth control.

Simple and comfortable adjustment of the levelling unit

For levelling the soil surface, an additional levelling element is arranged behind the four rows of tines. Three alternatives are available for the customer. Apart from the spring tine levelling element one can also select as an alternative, depending on the location, serrated or smooth discs for the levelling work.

On the Cenius TX, the adjustment of the levelling unit is quickly, safely done without any tools via two spindles at each side of the machine. For additional operational comfort, there is now also possible hydraulic adjustment of the levelling unit from the tractor cab. The hydraulic adjustment offers maximum comfort and operational reliability. Via a clear scale, easily visible from the tractor seat the current height position of the levelling discs can be read.





Cenius 5003-2TX Super



Centre running gear of the Cenius TX



Road transport speeds of up to 40 km/h

Excellent manoeuvrability thanks to the centre running gear

The centre running gear not only makes the Cenius TX very manoeuvrable, but also allows, in combination with the mix of 550/45-22.5 and 400/600 tyres and air braking, quick road transport speeds of up to 40 km/h. The machine is raised via the hydraulically-actuated drawbar which, on request can be equipped with a traction control system for improved forced between the tyres and the soil surface.

GreenDrill for Cenius TX

As an additional option for the Cenius TX, the GreenDrill seeder box is now also available, enabling soil tillage and the sowing of catch crops in just one operational pass. The seed hopper with a capacity of 500 l is very well accessible via access steps. The hydraulic blower fan delivers the seed to the rear where it is distributed in front of the roller via baffle plates.



Cenius 7003-2TX Super with GreenDrill seeder box

Transport box

With immediate effect an optional tool box is available for all Cenius TX. The box, made from rigid sheet metal, offers sufficient space for tools, bolts and shares. Safely stored, the required wearing metal is always present on the machine where it is needed.



Optional tool box

New following rollers for Cenius TX and Certos TX



DUW 580 Double U-profile roller

For any application – a suitable roller

Depending on the soil conditions these cultivators can be also equipped with different following rollers for the final reconsolidation. Here, AMAZONE offers, apart from the wedge ring roller, the knife ring roller, the tandem roller and the cage roller.

DUW 580 double U profile roller

With the double U profile roller, AMAZONE now offers an additional following roller for passive soil tillage equipment. The 580 mm diameter double roller encompasses a wide operational spectrum. The open U-profile with its large contact surface provides a very high carrying capacity of



KWM 650 wedge ring roller with matrix profile



Removal and supporting of the roller with the roller carrier

the roller. In conjunction with the modular design that ensures a very good passage, the double-U profile roller shows its strengths especially on very light sites. As the soil can flow easily through the roller, the levelling effect is additionally improved. During operation the U-profiles, open at the sides, are filled with soil resulting in a minimum material wear. Due to the weight distribution on the U-profile rings across the two rollers, a significantly more intensive reconsolidation is provided. As an option, the double U profile roller can be also equipped with a following harrow.

KWM 650 wedge ring roller with matrix profile

AMAZONE has further developed the wedge ring roller with a Matrix profile to expand its scope of application. This results, together with the deeper rings of the Matrix profile, in an improved carrying ability and a higher passage, especially on lighter land. In addition, the Matrix profile ensures an improvement in the self-driving effect and thus a reduction in the pulling power required. On heavier soils, the Matrix profile provides an improved crumbling effect even under moist conditions. Here also as an option, a following harrow is available.

Storage system for following rollers

In very wet conditions, in late autumn or when preparing fields prior to winter, the Cenius TX can be operated without a following roller. In this specific case the running gear serves as the depth control. Via swivel spacers, the running gear is set at the desired depth. Tines following the wheels eradicate the wheel tracks and provide a level, worked profile.

In order to simplify the storage of the dismantled rollers, AMAZONE now offers a specific roller carrier. When removed the rollers are supported on the carrier. After loosening the clamps, the cultivator then can be easily driven away. Vice versa, when remounting the roller, one backs up with the machine to the roller and fixes the roller on the cultivator again, without having to use a telescopic forklift or front end loader.

Thanks to the new roller carrier the customer not only can quickly dismount a roller and use the Cenius TX without roller, but they can also very easily exchange two different rollers.



New C-Mix share programme

The heart of any cultivator: the shares



With the new C-Mix share system, AMAZONE provides a comprehensive spectrum for its cultivator range. For shallow soil tillage the C-Mix duck foot share or the C-Mix wing share, for medium deep operation the C-Mix 100 point with the 100 guide plate and for deeper soil tillage the C-Mix 80 point with the 80 guide plate are available.

At SIMA 2015, the new C-Mix HD shares for increased longevity will be introduced.

Due to the use of hard metal inserts in the main wearing zones, this is a highly wear resistant share version.

C-Mix HD 80 mm share

- Working depths of 12–30 cm
- Highly wear-resistant hard metal inserts (HD – Heavy Duty) in the main wearing zones
- One-piece share with spiral guide plate for an intensive incorporation
- In combination with the 350 mm C-Mix wing share they are also suitable for breaking up stubbles
- Maintain their working depth over the entire period of use, no re-adjustment of the depth system required
- Reduced system costs due to the significantly higher service life





C-Mix-HD share from different angles



With the new share system AMAZONE now offers a superb spectrum of shares, e.g. for the Cenius 4003-2TX

The additional share versions in an overview

C-Mix duck foot share 320 mm

- Working depths of 3–10 cm
- The specialist for shallow stubble tillage
- Complete surface area disturbance of stubbles and interruption of the capillary water draw
- Shallow surface mixing of volunteer grains and weed seeds
- Intensive mixing effect when used in combination with the C-Mix guide plate

C-Mix wing share 350 mm

- Working depths of 8–12 cm
- Complete surface area disturbance of stubbles and interruption of the capillary water draw
- Shallow surface mixing of volunteer grains and weed seeds
- An intensive mixing effect when in combination with the C-Mix 80/100 point and guide plate
- Removable wings for utilising the C-Mix 80/100 for deep loosening

C-Mix 100 mm share with 100 mm guide plate

- Working depths of 10–20 cm
- Universal use, from stubble tillage to primary soil tillage
- For the use on very light soils with good flow behaviour to improve the mixing effect
- Intensive soil movement, distinct mixing effect in combination with the spiral guide plate

C-Mix 80 mm share with 80 mm guide plate

- Working depths of 12–30 cm
- For primary soil tillage at medium down to full top soil depth
- Intensive loosening and straw incorporation in conjunction with the spiral guide plate
- Also suitable for stubble tillage when in combination with the 350 mm C-Mix wing share
- The share is tapered in its width to 50 mm at the tip resulting in:
 - Perfect entry force even under the most arduous of conditions
 - Simultaneously the material thickness is increased at the share tip by 20%
 - Improved protection against wear



C-Mix HD share
80 mm



C-Mix duck foot share
320 mm



C-Mix wing share
350 mm



C-Mix 100 mm point
with 100 mm guide plate



C-Mix 80 mm point
with 80 mm guide plate

Optimum furrow widening using the AMAZONE X-Blade



The additional X-Blade on the last plough body creates, on average, a 30% wider furrow bottom of the rear furrow.

Wider rear furrow profile

Often, when ploughing, tractors with very wide tyres are used but, if standard plough bodies are utilised, this results in damage to the furrow wall plus compaction of part of the just-loosened soil structure. To solve this problem, AMAZONE offers, for the C-Blade U40 universal body as fitted to the Cayron reversible plough, the new X-Blade widening share. The X-Blade is a specific mouldboard extension mounted on the last plough body and creates, on average, a 30 % wider furrow bottom of the rear furrow.

The result of this wider furrow bottom is a clean next furrow without leaving a depression or groove in the soil profile. At the same time, the rolling resistance of the tractor tyre in the furrow is reduced so that the tractive forces are transferred at a reduced slip.

In comparison with the alternatives as found currently on the market, which equip the whole plough with wider clearing plough bodies, the X-Blade works so much more effectively. So, the tractive force and wear are reduced because the functionality of the other bodies remains entirely unaffected by the mouldboard extension on the last body. The front bodies are still working at their optimum so that the



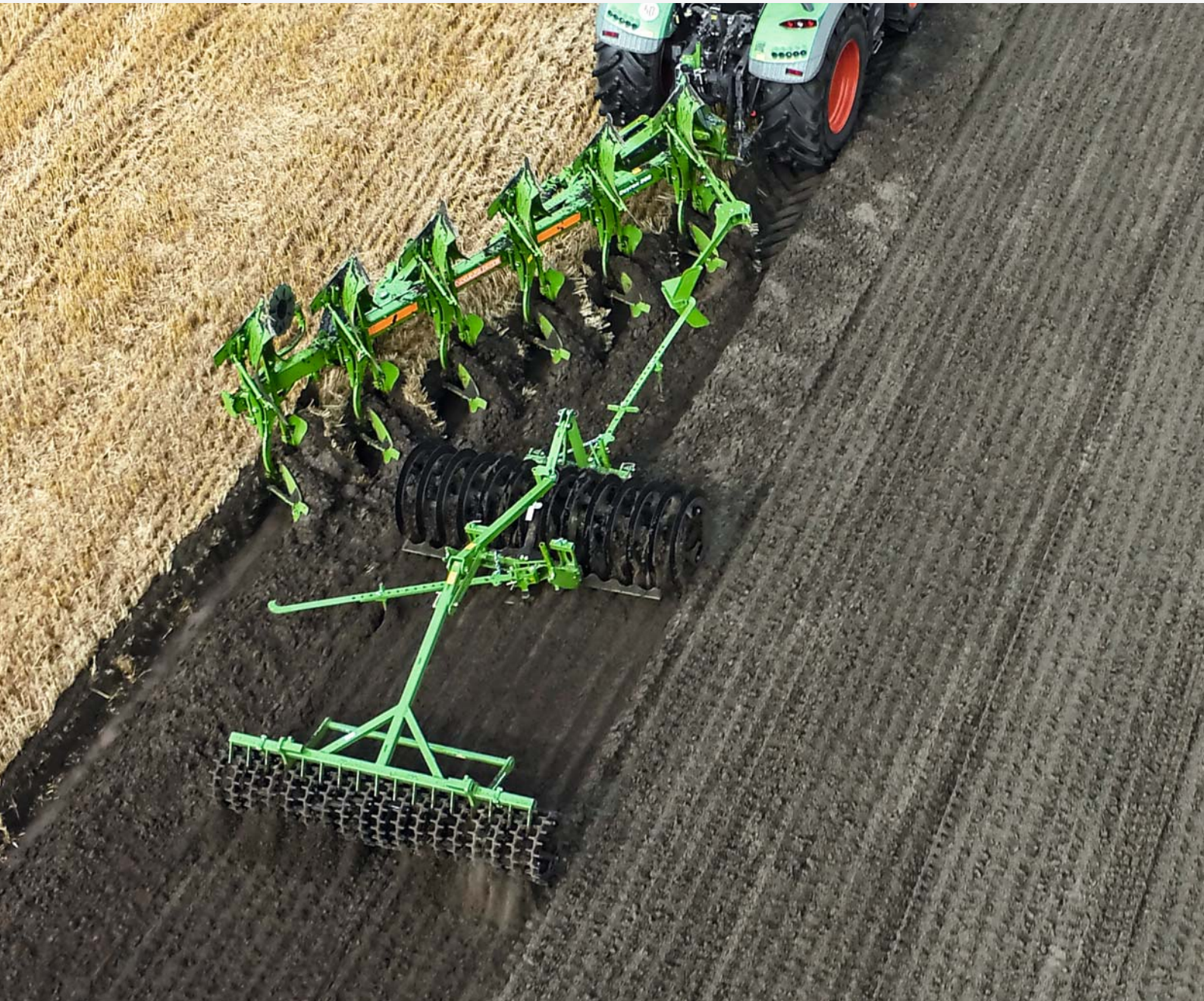
increase of the total tractive force capacity is kept down to a minimum. The fact that there is noticeably less compacted soil in the area of the next furrow is an additional advantage of using the X-Blade.

X-Blade also provides a bigger operational flexibility. The design as an exchangeable wearing part makes the removal of the widening share simple when it is being pulled by a tractor with narrower tyres. On the other hand, when changing from narrow to wider tyres, the quick retrofitting is equally possible.



Cayron 200 reversible plough with X-Blade

C-Pack 900 Packer for Cayron reversible plough



Cayron reversible plough with Packer C-Pack 900
and NW breaker ring roller as an additional packer



C-Pack Packer with ring profile for universal use

In conjunction with the Cayron reversible plough, AMAZONE now also offers a packer. The C-Pack 900 is a single packer with a 900 mm diameter ring. The ring profile of 36° enables its universal use on different kinds of soil as the rings feature a shouldered profile allowing for a support of 42° on light soils. Hereby the packer rings have a spacing of 200 mm and are fixed without a central axle. In this way, the hub-free design provides a modular construction. By the simple bolting together of the individual rings, the packer can be flexibly expanded. In addition, the renunciation of the centre axle provides sufficient space and prevents blockages. Wear resistant cleaning belts ensure that the packer is kept clear. The catching rod of the packer, made from tempered steel, is individually settable in height and in length.

Breaker ring roller as a following packer

As an option, the NW breaker ring roller is available as a following packer which ensures a more intensive levelling and crumbling. So, on light to medium soils, a finished seedbed is created in one pass across the field.

Especially comfortable conversion between work and the transport position

For road transport the packer is just backed up to the ring roller. By raising the packer the following roller is fixed in the carrier for road transport.



Sufficient space is created by the lack of the centre axle



C-Pack 900 with NW breaker ring roller in the transport position

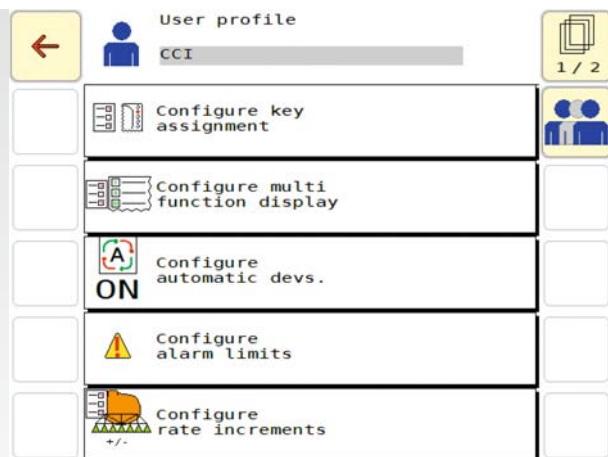
AMAZONE ISOBUS

New AEF functionality certification

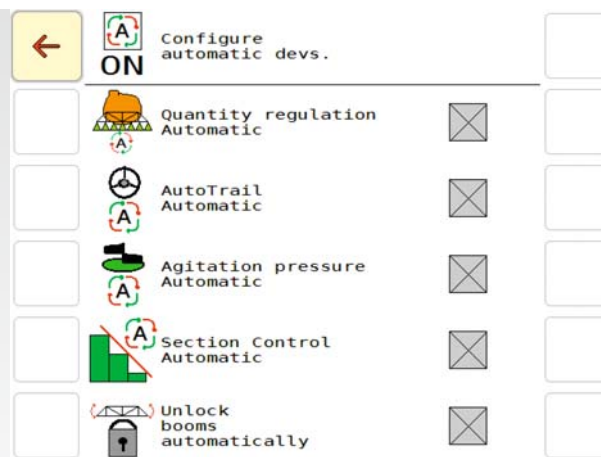
MEMBER OF



All AMAZONE terminals support ISOBUS communication according to UT 2.0



Creation of up to three user profiles



Time saving by configuration of the automatic functions

AEF certification

All AMAZONE ISOBUS machinery is now certified according to the AEF conformity test UT 2.0. In this way operational functionality, via any terminal in the market which has also been certified according to UT 2.0, is guaranteed for all these AMAZONE implements. In addition, AMAZONE ISOBUS machinery with an ISOBUS conformed section-control licence can be operated via a third-party ISOBUS terminal without any problem.

Also the AMAZONE AMATRON 3, CCI 100 and AMAPAD terminals as well as all AMAZONE ISOBUS machinery support the AEF functionality AUX-N. This means that, for example, the keys of an existing AUX-N compatible multi-function joystick can be reprogrammed to the functions that suit the choice of the customer. So any function is exactly there, where the customer needs it.

Simple, uncomplicated documentation

Within the current software version of our field sprayers and fertiliser spreaders, the customer now can select between documentation via the ISOBUS task manager or via the machine's internal documentation offering summarised values, such as, for example, the worked area, operational time, applied quantity. In this mode, the documentation is carried out directly on the terminal. This simple job management control is especially suited to farmers and agricultural contractors who need, either for themselves or for their customers, an uncomplicated documentation memory without any data transfer to a PC.

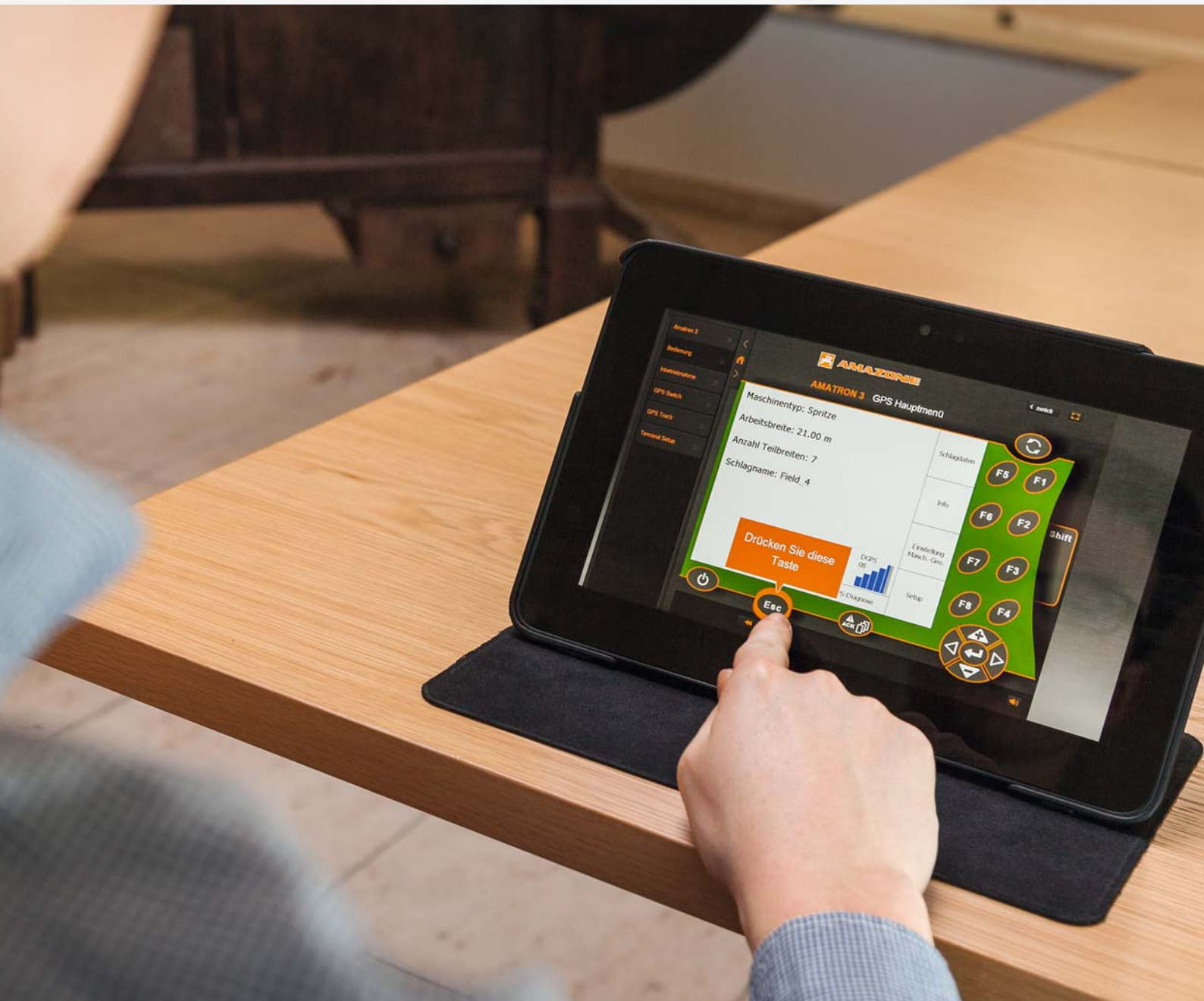
If wishing to transfer a field-mapping file, the data can be transferred via the task manager and a USB stick. Here the standardised data format ISO-XML is utilised.

Freely programmable user profiles: optimum matching to different terminals or applications

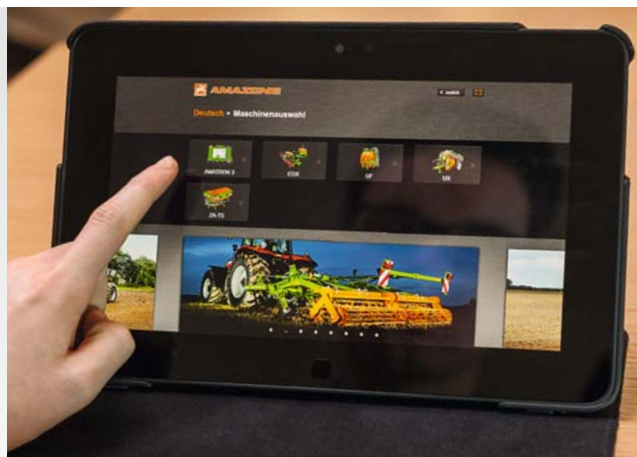
Due to the storage of up to three user profiles, the AMAZONE ISOBUS software for fertiliser spreaders and field sprayers is optimally able to adapt, for example, to the different number of keys of the various terminals. Within the three profiles, all the operator functions can be individually positioned allowing the free design of the operator interface. The time where frequently needed functions have to be selected in any kind of sub-menu by cumbersome paging is a matter of the past. The user profiles can be also used to match the operator interface to different applications or drivers. The creation of individual user profiles is simple and intuitive. In a few minutes a new personalised operator interface can be created.

An additional unique characteristic of ISOBUS machinery from AMAZONE is the possibility to activate several automatic functions at once, such as, for example, the AutoTrail axle or drawbar steering or the automatic boom control via DistanceControl using one centralised key in the machine menu. Hereby the customer is freed from the time consuming individual activation of each automatic function in the relevant sub-menu, but he has the possibility to freely select, which automatic functions he wishes to be centrally activated. For this, the desired functions just have to be pre-selected in the main menu, making the operation of AMAZONE ISOBUS machines yet more comfortable and saving valuable time. So, any driver can select the operational sequence that suits his individual needs.

New module for the interactive driver training – E-Learning



Via "E-Learning", among others, the operation of the AMATRON 3 terminal can be trained directly at the screen of a PC or of a tablet PC.



On-line or off-line training for increased efficiency

The new “E-Learning” internet tool expands AMAZONE’s service offering on its homepage with a very useful function. “E-Learning” is the interactive driver training system which enables the on-line and off-line operator training of a complex machine via PC or Tablet. This new service provides drivers with the chance to familiarise themselves with a new machine and its operation prior to going out into the field. However, even skilled operators can refresh their knowledge for an improved exploitation of the potential of these machines.

The on-line driver training includes many video clips explaining, via spoken word and simulations, the technology behind the machine. Not only does it provide the driver with the technical peculiarities of the machine, but also how to initially put it into work, what has to be observed during field operation as well as how to remedy possible malfunctions. With this tool, in addition to end users, even service technicians from AMAZONE dealers are also able to update their knowledge prior to the initial operation.

The existing content includes the modules EDX high speed precision air seeder, UF mounted sprayer with FT front tank, UX trailed sprayer and ZA-TS spreader as well as the AMATRON 3 operator terminal. In 2015 this offer is expanded by additional training modules. So, for SIMA, the Cayron plough is also included in the E-Learning programme. In this way the customer quite simply has the possibility to interactively learn the correct mounting of

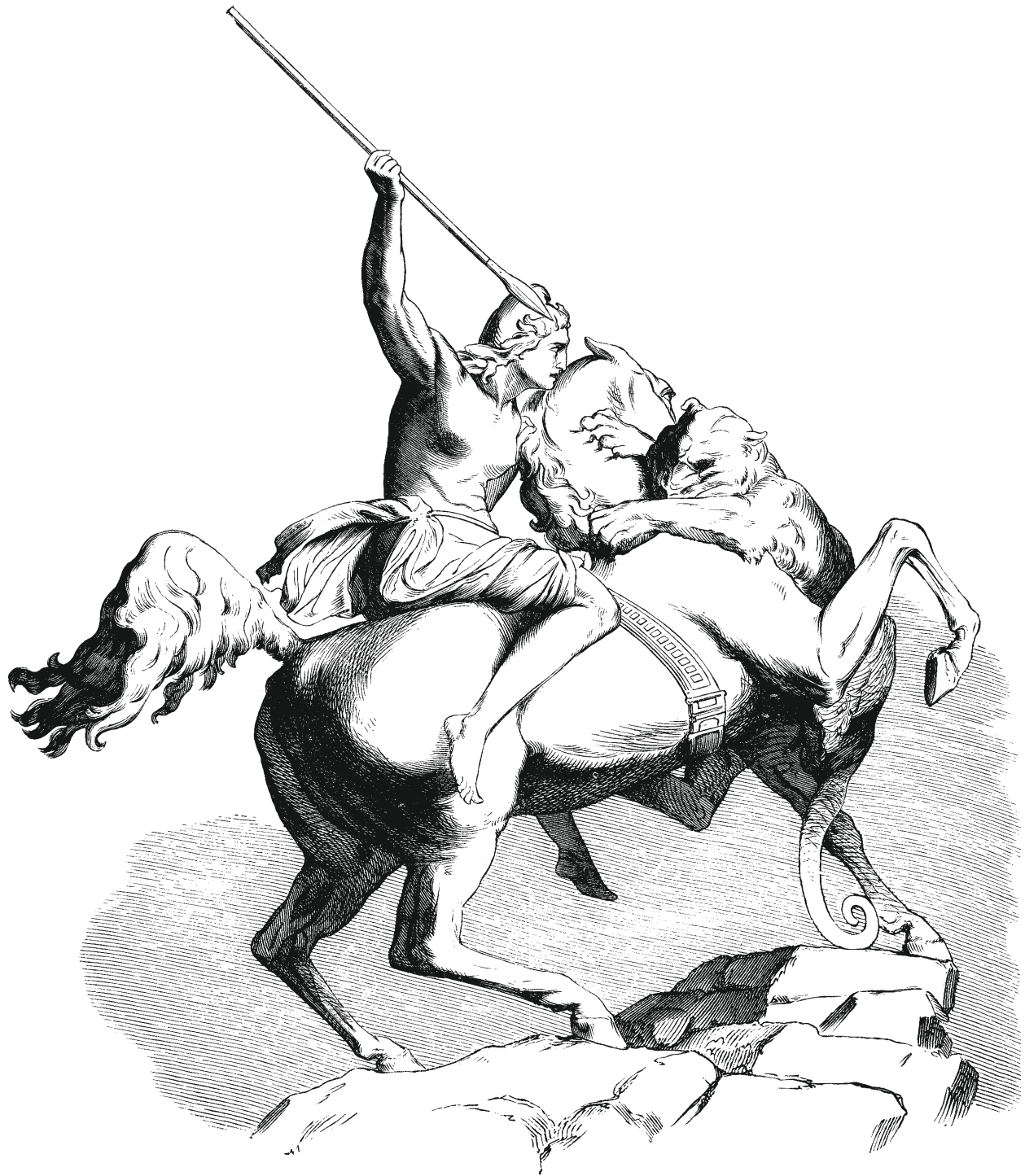
the plough to the tractor, the correct front furrow adjustment, the adjustment of the working depth etc. In addition, interested farmers can see for themselves the easy adjustment of the plough and how quickly it can be transferred from work to the transport position, prior to the purchase of a plough. In spring then the programme will also be supplemented by the Condor, Citan 01, Cirrus 03 seed drills and the AMADRILL⁺ on-board computer.

AMAZONE offers “E-Learning” in German, English, French or Russian and is free to access. It can be found on the AMAZONE Homepage www.amazone.de under the tab “Service” then “E-Learning”. System requirements are the latest Flash Player Version.

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