profi
THE PROFESSIONAL FARM MACHINERY MAGAZINE

SPECIAL REPRINT
From 09/2020

Amazone Ceus 4000-2TX cultivator:

Catros + Cenius = Ceus

Ceus blends Amazone's Catros disc harrow and Cenius tine cultivator. This type of disc/tine tool is now a familiar sight on UK arable farms, so how does the new Ceus compare with its many rivals?

In the UK, combined disc and tine primary cultivators are nothing new. Just look back through our online archive to see the number of featured farms that have run a Simba Solo, Quivogne Tinemaster, Besson Discordon, Vaddy TopDown … but the Germans generally like to keep things separate, which could explain why it's taken Amazone so long to join the race with the Ceus.

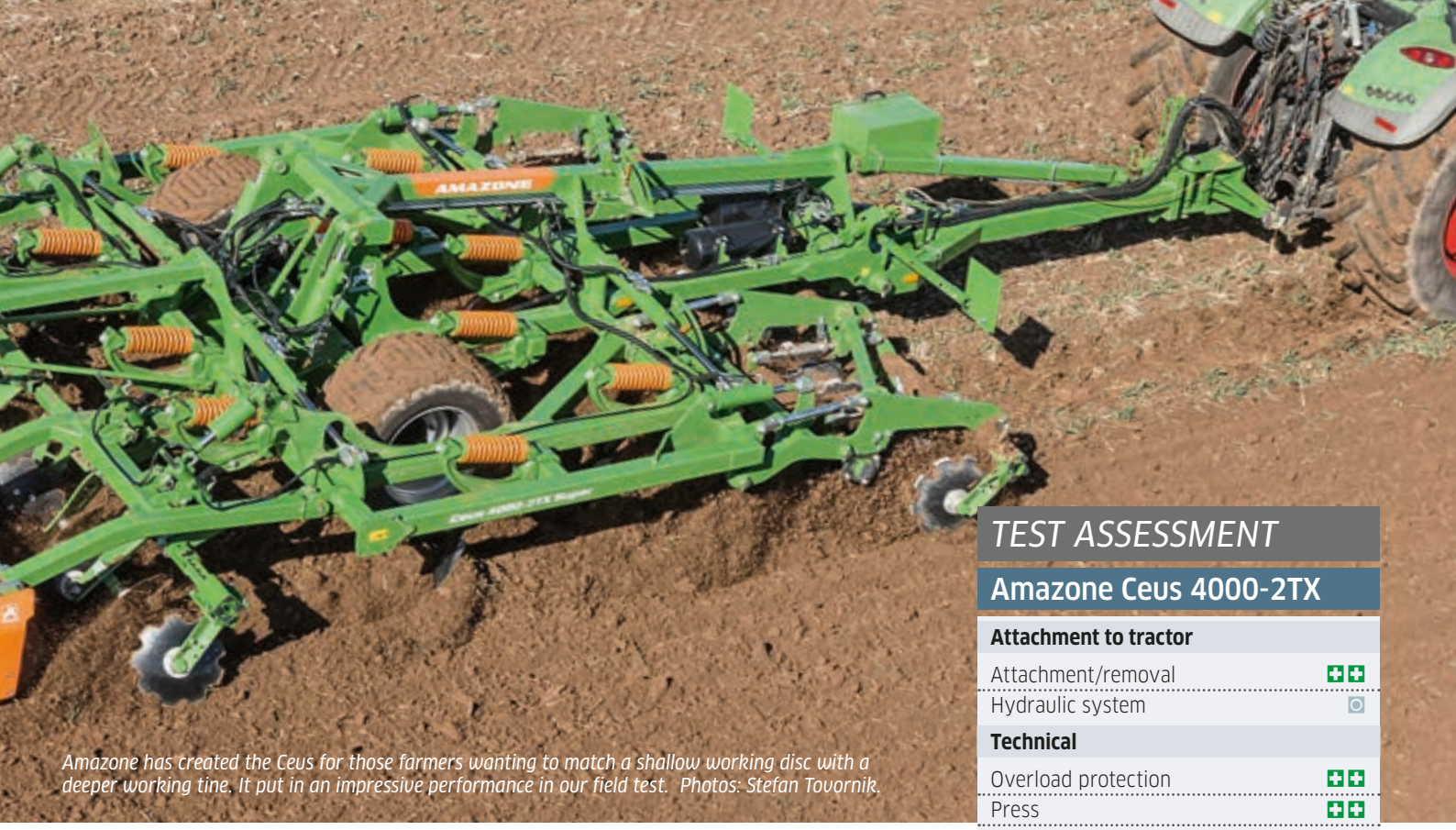
Though it's an injustice to over-simplify the project, Amazone engineers have, in effect, merely merged their proven Catros discs with the Cenius tines into a bigger frame. The semi-mounted machine is available in widths of 4.0m to 7.0m, going up in 1.0m increments.

Our 4.0m test machine weighed in at 8,080kg and is attached by Cat III lower links. There are Cat IV and V options, along with hitch rings and a K80 ball, so everyone is catered for. All the hoses and electric lines are neatly stored in a holder when the implement is unhitched and it can be left in its folded position to save space. The five double-acting hydraulic couplers are colour-coded and marked with +/- symbols – excellent. The matching decal on the machine was still confusing on the tested unit; however, Amazone has already designed a new sticker.

The 150mm by 200mm box section drawbar is 2.60m long, allowing 90° turns even with dual wheels. Moving back, the main frame is constructed from 120mm box sections that taper down to 100mm inside the machine. The 100mm box wings carry the familiar Catros+ disc harrow, with scalloped discs measuring 510mm in diameter and 5mm thick.

The long drawbar enables tight turns, even with dual wheels fitted. We like the hose holder and large storage box.

When the rear roller is not in use, the working depth is set by fitting stops to the running gear.



Amazone has created the Ceus for those farmers wanting to match a shallow working disc with a deeper working tine. It put in an impressive performance in our field test. Photos: Stefan Tovornik.

The discs cut and distribute the trash, while the following tines incorporate the chopped material. The mid-mounted running gear makes the Ceus very manoeuvrable on the headland and through gates etc.

Rubber cord sausages look after break-back. The maintenance-free disc bearings are bolted to the arm. Disc spacing on the same gang is 250mm; disc-to-disc spacing is 125mm.

The discs are mounted with a slant relative to the direction of travel: the lead gang at 17°, the rear row at 14°. At this angle they don't boil and bring up too much soil, but they still till the surface.

Hydraulic depth control for the discs and tines is standard, but, if you want to save £2,615, the Ceus can be down-specced to manual operation. Max disc depth is 14cm and 30cm for the tines. A scale ranging from -10 to +20 gives good guidance with the hydraulic option. In addition, four turnbuckles (two on each side) ensure the machine's tilt is correct.

Two additional turnbuckles, complete with ratchets, give extra assistance if the operator needs to raise the two wings even higher, wants to operate the rear tine cultivator on its own or work deeper than 25cm.

The disc gangs are spaced at 84cm. The front row of discs throws material to the left and the rear gang to the right. The two outboard discs have elongated holes for extra depth adjustment and leaving a level finish. Once we'd tinkered with their set-up they worked perfectly on our test machine. There is no point rummaging in the storage box for the proper size spanner for this job as it is not supplied with the machine.

Following the discs are the Cenius-derived tines. The longitudinal frame is made from

TEST ASSESSMENT

Amazone Ceus 4000-2TX

Attachment to tractor	
Attachment/removal	++
Hydraulic system	○
Technical	
Overload protection	++
Press	++
Folding system	+
Disc harrow performance	
Penetration	++
Levelling	++
Uniform work depth	++
Cultivation across full machine width	○
Risk of blockage	++
Cultivator performance	
Underbeam clearance	++
Inter-point clearance	○
Choice of tines	++
Penetration	++
Levelling	○
Risk of blockage	○
Overall performance	
Consolidation	++
Power requirement	+
Manoeuvrability	+
Headland ground clearance	+
Handling	
Depth control	++
Road conversion[1)]	+/−
Service and maintenance	+
Transport	
Lighting and warning panels	++
Running gear and brakes	++
Ride quality	+
General	
Operators manual/parts list	++
Build quality	++
Paintwork	++

[1)] Requires covering the tines with tarp pouches

Grading system: ++ = very good; + = good; ○ = average; − = below average; −− = poor

MEASUREMENTS

Amazone Ceus 4000-2TX

Working width	**4.00m**
Disc harrow	
Maximum work depth	**140mm**
Number of discs	**32 scalloped discs**
Disc diameter	**510mm**
Cutting angle[1)]	**17°/14°**
Overload trip	**Rubber dampers**
Disc spacing	**125mm**
Spacing of cuts	**250mm**
Bar spacing	**840mm**
Arrangement of disc gangs	**Fixed**
Cultivator	
No. of tines	**10**
No. of tine bars	**Three**
Spacing of cuts	**400mm**
Overload trip	**Spring**
Trip force[2)]	**600daN**
Underbeam clearance	**800mm**
Minimum inter-point clearance	**640mm**
Point widths tested	**40mm and 80mm**
Other points available	**100, 320, 350mm**
Levelling	
Tools	**12 discs**
Disc diameter	**460mm**
Overload trip	**Rubber dampers**
Rear press	
Type	**Interlocking double ring packer**
Tools	**Shouldered rings**
Outer/inner diameter	**600mm/210mm**
General	
Attachment to tractor	**Cat. III**
Tongue load/axle load	**800/7,280kg**
Total weight	**8,080kg**
Transport length/width	**10.67/2.99m**
Running gear	**550/45-22.5**
No. of double-acting spools	**Five**
Price in test specification excl. VAT	**£60,250**

[1)] Manufacturer information (front/rear), [2)] Manufacturer information

120mm box, while the cross beams used to carry the tines are 100mm. Overload protection is standard with a 600kg tripping force and 300mm break-back height. If you find something really big then there is secondary protection from a shear bolt.

The points for the tines come in a number of different designs and sizes: a 320mm duckfoot share and 350mm wing tine plus 40, 80 and 100mm C-Mix tines. The two smaller tines and the 350mm winged tines are also available in Amazone's HD hard-wearing metal. The three larger tines are also sold with deflectors.

A useful feature is the quick-release system that we looked at in our 03/2019 issue. This comprises a bolted-on deflector and three changeable points. Our test machine was fitted with the universal C-Mix-HD point and the twisted deflector to suit. Ideal working depth is about 15 to 30cm. The tine measures 50mm at its point and then widens to 80mm.

We also tried the narrower 40mm version, which has no deflector but a full width point with a tempered face. Working depths range from 5cm (duckfoot points) down to 30cm (slim tines). Working at max depth, our 240hp tractor was able to maintain 5km/hr.

We mostly used the 80mm and 40mm points. A maximum depth of 30cm is realistic.

German road regs require all sharp points to be covered for travel on the road. It's a proper faff.

The tines are spread across three rows on a 1.12m spacing, with the two tines on rows one and two only 0.51m apart. This gives a minimum inter-point clearance of 0.64m and didn't cause any issues on a patch of set-aside land we cultivated – no blockages.

Just behind the tines are 12 levelling discs. Our machine had the standard 460mm in diameter, 4mm thick scalloped discs. You can also opt for plain discs as a no-cost option or simple spring tines (£1,230 cheaper).

These rear discs are in two gangs, which are mounted on the frame for the trailing and depth-controlling press. After a bit of tweaking to the settings we got good levelling results. The outboard discs have lots of setting options from a pin-hole arrangement and again leave a tidy finish. The leveller depth is steplessly controlled via a centralised ratchet system or as an option via the hydraulic height control adjustment (£935).

At the rear of our test Ceus was the 600mm diameter DDW double ring roller. The staggered rings are on a 125mm spacing and have scrapers for blockage-free work. The DDW did an excellent job on our heavy soils and wasn't bothered by stones. The Simba DD-style rings have a good crumbling effect, breaking up the soil and leaving consolidated strips.

Rear roller weight is about 1,151kg and costs £10,140 for the pair. There are other roller options for medium and light soils. In total there are 11 different roller designs for the Ceus. Many of them provide the possibility to fit spring levelling tines. You can also opt to leave the roller out of work and rely on the following tines. In this instance the weight of the cultivator is carried on the BKT 550/45 R22.5 tyres and the depth controlled by fitting aluminium shims to act as stops on the running gear's hydraulic cylinders.

Cultivating a stubble field, the Ceus left a reasonably level finish in the dry conditions of 2018. We had a 240hp tractor up front with the discs set to 8cm and the tines 18cm. Forward speed was 12km/hr and fuel use up to

The working depth of the various tools is clearly shown on durable scales.

The double-disc roller put in an excellent performance on our heavy soils.

16l/ha. The Amazone also put in an excellent performance in maize, with the front end chopping up the stubble and the tines mixing it in.

Further details in a nutshell:

- Has a useful toolbox
- Lights at the front are LEDs; those at the rear are conventional bulbs (LED optional)
- Quality paint finish
- Operator manual is clearly laid out
- There are 48 grease nipples ... but no greasers on the bearings for the roller
- In base spec the Ceus 4000-2TX cultivator costs £52,950 (£60,250 in test spec).

Summary: With the Ceus, Amazone has taken some proven components and fitted them to a new frame to create an all-in-one disc and tine machine. It leaves a level finish, with the setting options practical and easy to use. Its interlocking shouldered ring packer did a good job on our test site's heavy soils.

Lüder Görtmüller, Christian Brüse, Mervyn Bailey