

## Innovations in soil tillage | Cayron 200 mounted reversible plough

With the in-house development of a plough, AMAZONE proves its strength of innovation as well as continuing a long-standing history of plough production at the company Rud. Sack and BBG Leipzig. In this way AMAZONE intends to expand its competence in soil cultivation and will be a strong partner for both dealers and also farmers alike in the area of inversion soil tillage.

### **A professional plough that comes fully equipped**

AMAZONE will enter the inversion soil tillage market with a series of medium sized ploughs. Initially, the Cayron 200 mounted reversible plough will be available in 5 and 6 furrows and suitable for tractors up to 240 HP.



The body to body clearance of 100 cm, in combination with a frame height of 83 cm and the smooth surface of the over-dimensioned main beam, guarantees maximum passage. In this way, even where large amounts of organic matter prevail, such as, for example during maize stubble incorporation, a blockage-free operation is ensured.

On the Cayron 200 V, the furrow width is adjustable steplessly from 30 to 55 cm offering the flexibly needed for different working conditions. The V in the name of the Cayron stands for infinitely variable working width adjustment – in the future, a plough that can be adjusted in steps is also planned.

One technical peculiarity is the over-dimensioned, 13.0/55-16 combined depth control and transport wheel. Attached to the side of the beam, it enables fields to be ploughed out right up to the border. The thought-through design allows the very comfortable conversion from field to the road transport position. The setting of the working depth is carried out mechanically with the aid of two stops.

As standard the Cayron 200 V is equipped with a double-action shear bolt safety device and hydraulic working width adjustment. Even hydraulic adjustment of the front furrow width comes as standard.

### **The highest operational reliability was the priority in the development**

The turnover mechanism is designed around a 130 mm diameter hollow shaft and equipped with two equally large, high quality, robust taper roller bearings. These are sealed against dirt ingress and can be lubricated to ensure a high longevity. Thanks to the hollow shaft, the hydraulic hoses can be neatly routed through the tower, preventing damage to the hoses during the turning procedure. The transport lock is located at the side of the headstock and thus comfortably accessed.

The headstock is equipped with a one-piece sprung cross shaft which provides a very good damping function and so clearly reduces the strain on the lift linkage of the tractor. This is enabled by two pivoting bearings located on the right and left hand side of the cross shaft which safely absorb any shocks. In addition, the cross shaft is adjustable in height to always allow the optimum mounting position of the tractor's lower links. As standard, the Cayron is equipped with a Cat. III

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linkage for mounting to the tractor. The lower link locating balls form one unit with the cross shaft and are characterised by a high cross-sectional area which makes mounting the plough considerably easier. For the top link, a fixed and two slotted hole positions are available. On the Cayron 200, the upright adjustment is carried out individually at each side via two spindles. The connection of the headstock to the beam is solved by a linkage system that provides a large scope of adjustment. Also the bearings on the main linkage are equipped with high class bearing bushings which can be lubricated.

The robust beam, consisting of a box section profile with dimensions of 200 x 120 mm, provides the highest rigidity and is the backbone of the entire frame design. The rectangular beam is the guarantee for maximum torsional stiffness. A more even working depth of all the plough bodies is ensured in comparison with usual box section executions. The frame is equipped with an end flange and thus can be subsequently enlarged by one more furrow.

A particularity is the attachment of the fixing console for the plough bodies to the frame. Via a specially formed flange, the torque from the plough body is positively transferred into the frame. All bolt connections are placed horizontally through the beam and so do not have to endure any varying degrees of torque.

The pivot point for the body mounting console is located on the outside of the frame. The plough furrows do not have to close up whilst turning at the headland and so no wear and tear occurs on the lifetime-lubricated furrow pivots. The setting lever for the furrow width adjustment directly accesses the furrow fixing console through the frame meaning that additional bearings are not necessary.

In 2014 the Cayron will be distributed as a pre-production series for use in the fields of West European farmers. Series production is planned for 2015.

