

Presseinformation vom 12. November 2019

Anzahl der Textzeichen: 5293

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Perfect soil protection with the latest Fliegl crab steering technology

"An invention is a creative achievement which enables the solution of a problem." This precisely describes the Fliegl slurry tanker TWIST with crab steering. It's a true innovation that has only been waiting to be developed.

Agricultural vehicle combinations mainly consist of tractor and trailer. This is also the case with manure spreading. With their weight, they both exert a high pressure on the soil and its organisms. Now, if tractor and slurry tanker drive in one lane, the ground is stressed twice. This can have long-term consequences for the soil and the crop. The more widely the load can be distributed, the less pressure is exerted punctually. Therefore, agricultural engineering needs solutions to distribute the pressure more widely.

For the purpose of soil protection, Fliegl developed the single-axle slurry tanker TWIST with crab steering. The revolutionary technology is giving the agricultural industry a quantum leap in reducing ground pressure and maneuverability.

TWIST does not realize the crab steering with an axle steering device as usual, but with a turntable steering. The axis as a whole is hydraulically rotated around the vertical axis. This allows the chassis of approximately 4 m in length to be offset by approximately 1 m (965 mm). As a result, the chassis can drive completely off-set track to the towing vehicle. The tires of the chassis do not touch the track of the tractor because the technique gives each tire its own lane. In the following illustrations the technique and the result are explained again schematically.

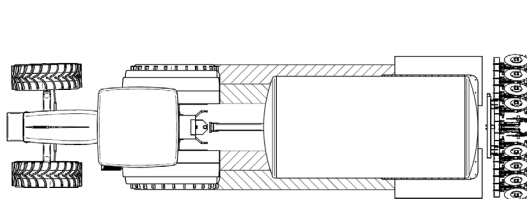


Bild 2: TWIST with attachment at pivot point driving straight

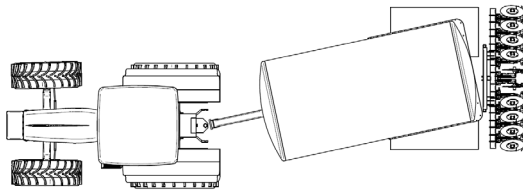


Bild 3: TWIST with attachment at pivot point

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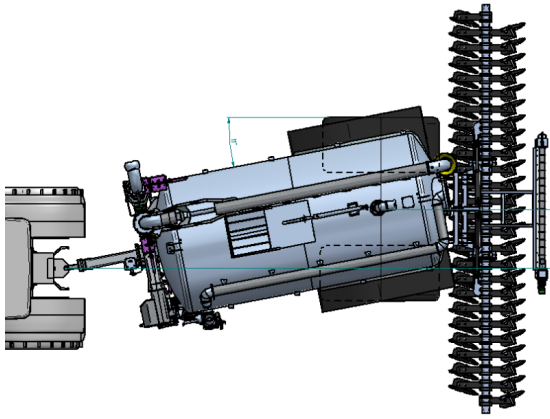


Bild 4: TWIST with attachment – angle

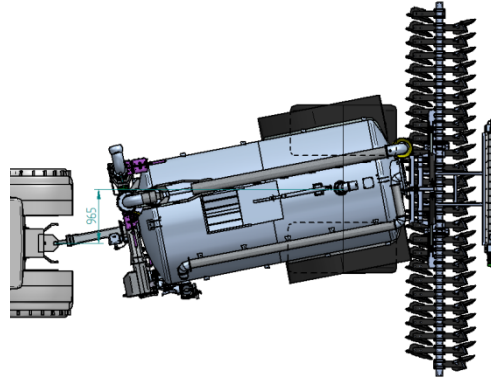


Bild 5: TWIST with attachment – offset

In addition, steering does not take place actively on the tractor, but only directly on the axis. The steering process is triggered by a manual intervention via a control unit on the tractor. The inclination can be adjusted continuously here.

The tanker TWIST with crab steering by Fliegl offers many improvements in practice. It enables a comfortable driving behavior and a perfect maneuverability due to the turntable steering. Furthermore, the Fliegl system makes TWIST considerably more versatile than an axle-steered tanker. This makes obstacles, such as electricity pylons and curved fields an easy task.

In addition, the Fliegl slurry tanker TWIST has a significantly better pull point compared to conventional crab steering techniques because the tire is not cambered. A conventional axle is designed for cornering and not for crab steering and therefore the inner wheel steers much stronger than the outer wheel. So the wheels do not run parallel to each other due to this differential angle. This causes a constant resistance and thus a rubbing on the ground. The tires of Fliegl's slurry tanker TWIST run parallel due to the pivoting of the axle and thus create an exact track.

At the same time a straight tilling of the soil with an attachment is possible. The single-axle slurry tanker TWIST has a device for attaching implements at the pivot point of the axle. With this type of mounting, the implement rotates with the axle relative to the chassis. This means that the attachment moves complementary to the direction of travel of the towing vehicle and thus a straight tillage is always ensured. This is not guaranteed with all other existing systems for off-set track driving. Therefore, this is a decisive advantage!

When using the Fliegl tanker TWIST with crab steering, the parallel position of the tires leads to less back pressure which makes driving over the soil easier. It requires less effort and thus consumes less fuel. There is also less soil compaction and gutters and thus less damage with the result that on the one hand, a higher yield can be achieved

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due to a good soil structure. On the other hand, less work steps are required to loosen up, whereby costs in the form of working hours, diesel and wear can be saved.

Furthermore, the Fliegl slurry tanker TWIST can be equipped with significantly larger tires (900/60R32) than tankers with axle steering device. The pivoting axle guarantees a greater steering angle so that the tires do not hit the frame. In addition, larger tires are soil-friendly due to the larger footprint and thus larger-scale pressure distribution.

Furthermore, the lower soil compaction also makes work easier, since less work is required for soil remediation.

Fliegl intends to automate the steering of the tanker. Then, the slurry tanker TWIST no longer needs to be controlled separately and manually. Instead, TWIST queries the steering angle of the towing vehicle and directs its own turn. This is a tremendous relief for the driver, especially when turning on the field. At the same time TWIST initiates the desired change of sides during the turning procedure. (This maneuver can be seen in the attached video.)

This technology of the Fliegl single-axle slurry tanker TWIST has a number of significant advantages. Most noteworthy are the greatly reduced ground pressure and the increase in ride comfort and maneuverability.

Fliegl Agrartechnik stands for innovative agricultural logistics from most modern production - for maximum efficiency and profitability in agriculture. The company operates globally and exports to all continents. The Fliegl group also offers system solutions for forestry and the energy industry and manufactures truck trailers and semitrailers. The Fliegl Agro-Center is the XXL shop for attachments and accessories.

Europe's largest manufacturer of agricultural trailers is located in Mühldorf am Inn in Upper Bavaria. The plant has four assembly lines for dump trailers, components for biogas plants, manure barrels and the patented Fliegl push-off technology which has revolutionized the transport of agricultural products. Fliegl particularly focuses on research and development - among other things, on the implementation of the uniform global standard ISOBUS in agricultural practice, for electrification, transport documentation and the responsible handling of manure.

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