



The JOSKIN group, specialized in transportation and spreading, innovates once again by offering now the possibility to fit its range of transport vehicles with electrically driven axles.

In the past, tractor powers were lower and did not always allow to transport heavy loads or to face unfavourable working conditions. The use of driven axles was then the most common solution to address these issues. Through the years, tractor powers have significantly increased and the use of driven axles began to die out.

Nowadays, the transported volumes and loads have increased but the traction on the road could not be significantly improved. The use of wider wheels to transfer the tractor power to the ground became necessary, resulting in higher costs and a not so satisfying traction increase. Furthermore, the addition of weights on tractors in order to improve the grip has become a common practice but it results in a high fuel consumption and if the loads are not properly distributed, some parts and the tyres may wear prematurely. In difficult working conditions and with even bigger machines, tractors are put to a severe test, more fuel is consumed and the work output decreases.

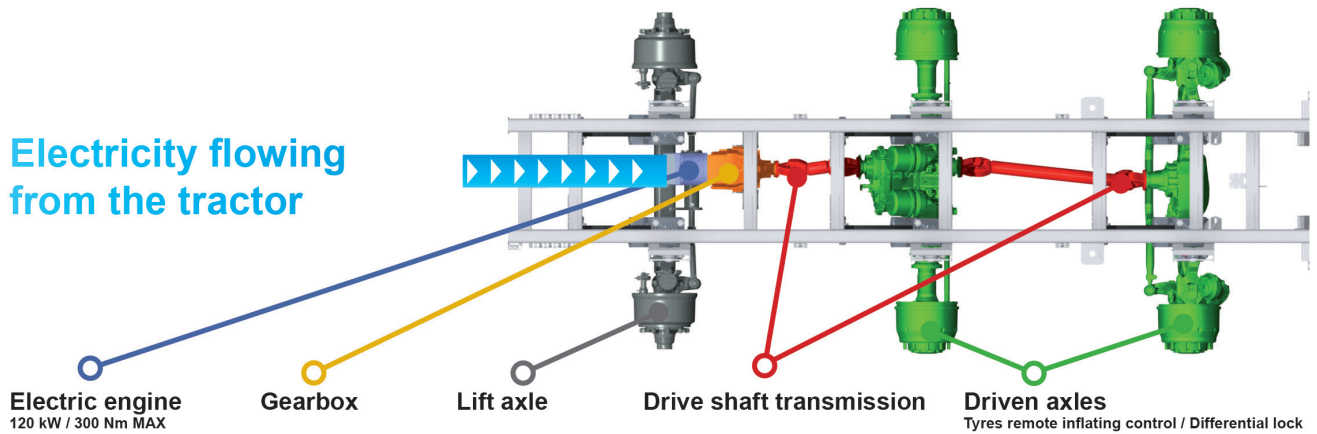
As manufacturer of transport material, JOSKIN is constantly looking for solutions to improve the output of its machines and solve the problems linked to transportation. In the past, a great attention was devoted to the reduction of the empty weight of machines through new manufacturing concepts and the use of appropriate material. The E-Drive will distribute the tractor power by transferring it to the whole tractor-trailer combination.

In concrete terms, at the start up, the JOSKIN E-Drive will partly transfer the tractor power by distributing it on two extra axles. The tractor traction is therefore supported by that of the vehicle behind it. It is consequently not necessary anymore to increase the weight on the tractor axles in order to gain grip during road transportation. The same applies for works in the fields, which require a higher tractor power in humid and unfavourable conditions.

Thanks to the traction brought by the E-Drive and the fact that no extra weights are needed on the tractor, savings are done at two levels: lower fuel consumption and less wear to the tyres.



Agricultural Hybrid



JOSKIN's E-Drive technique is a hybrid system based on many key elements, the most important of which is the motor. Real main piece of the system, this engine of the SCHABMÜLLER manufacturer transforms the received electric energy into a mechanical power up to 120 kW at a 210 Nm couple (max. 300 Nm). The clutch transmission box is provided and designed by DINTEC.

It is then through two P.T.O.-shafts that the electric motor drives the axles. Provided by MAN, well-known international manufacturer in the transport industry, the axles combine power and sturdiness.

On a triple-axle vehicle, the last two axles ensure the extra traction. In this way, the first lifting axle can be kept, which allows to reduce the wear to tyres, the resistance of the vehicle and the energy requirement. Furthermore, when the front axle is lifted in the field, the traction is increased by transferring weight on the tractor and the two drive axles. The running gear is also characterized by the presence of a differential lock, a tyres remote inflating control and brakes with a suitable diameter.

From the various check points and the data exchange between the tractor and the machine on the ISOBUS (driving speed, weight on the axle, steering angle, etc.), the system is going to automatically manage the power transferred to the electric motor of the JOSKIN machine.

This system is therefore very easy and clear for the driver.

A Generator as Power Supply

The electric energy is produced by a generator fed either by the front P.T.O.-shaft of the tractor or by the P.T.O.-shaft that is directly integrated into the motor block. The mechanical energy is then transformed into electricity, which is then transferred to the motor. The system is safe because it is in compliance with the AEF electric standards (Agricultural Industry Electronics Foundation).

E-Drive: Combining Flexibility and Simplicity

With its E-Drive hybrid solution, JOSKIN follows and supports current trends like fuel savings, use of "lighter" tractors to transport the same or heavier loads and the quest for optimal work performance in the fields.

Regarding the efficiency, the E-Drive is more efficient than a hydraulic system and more flexible than a mechanical traction system. Thanks to its automatic management of the power distribution, the device does not require any handling from the driver and is therefore very easy to use.

Developed in cooperation with the main actors of the agricultural world, JOSKIN's E-DRIVE is an innovative solution in an agricultural industry that is constantly looking for new solutions.