



PRESS RELEASE

Combined Powers

Krone and Lemken autonomous system on field demo

Alpen, Spelle, 19 May 2022. The joint Krone/Lemken design concept premiered in a field demonstration to the international trade press today. Combined powers is a process unit designed to carry out cultivating, ploughing, sowing, mowing, tedding and raking as an innovative option to traditional methods. After passing all trials successfully last year, the system was now demonstrated in the field to the international trade press. The demonstration went ahead in a field not too far from the headquarters of the two companies, where one unit operated the 4m Krone EasyCut F 400 Fold front mower.

After completing the mowing job, the unit was quickly changed over for tedding using the Vendro 820 which tedded the freshly cut material across an 8.20m work width. The second process unit demonstrated its cultivating abilities in an adjacent plot using Lemken equipment – an 8-row Azurit 10 K 8 precision drill and an adapted Karat 10 cultivator.

Both prototypes impressed by an excellent quality of work, high work rates and traction as well as plenty of lugging power and of course superb soil protection. Depending on the specific application and machine attached, the weight of the 2.70m wide and 2.60m high unit is between 7.5t and 8t. Fitted with 23inch wheels all-round, the process unit is powered by a fuel-electric drive and delivers 170kW (230hp) – enough to take on any of the tasks it is designed to carry out: ploughing, cultivating, seeding, mowing, tedding and raking. This level of versatility guarantees an excellent year-round utilisation.

The story behind the innovation

The unit was designed with the input requirements of the mentioned processes in mind. Its diesel engine develops a maximum power of 170kW (230hp) which is transferred electrically to the wheels and pto. The attachments are coupled to a three-point linkage. The base machine boasts multiple and extensive sensor systems which monitor the immediate surroundings and the attachments. The focus is on safe operation and optimum results. Operators control and monitor the combination from a mobile device, sending jobs and job reports through a communication module and via the established agrirouter data exchange hub.

The speciality about the process unit is that the unit is controlled by the attachment and not the other way round. This approach was considered as the primary requirement for achieving optimum results. As such, the attachment and the process unit behave like one smart and homogeneous unit. Benefitting from the long experience in the application of ISOBUS and TIM on Krone and Lemken machines, the drive unit and the implement communicate and interact, sharing literally all types of data.

As further pluses of the Combined Powers design concept, the unit was developed to offer a sustained solution to the increasing lack of skilled labour in agriculture. Farmers will no longer spend long working days in the field but act as system operators who monitor the VAT as it delivers a consistently accurate quality of work. The machine's versatility and longevity enables its owners to operate the unit in all seasons and for a long time. Intensive trialling in all types of conditions whilst seeking feedback from farmers and contractors will continue this year.

Further information is available at www.combined-powers.com

Caption: Combined Powers premieres in a field demonstration to the international trade press. Photo: Krone/Lemken.