

## Press Release

Alpen and Spelle, September 2023

### Tractor instead of Low Loader

**The autonomous towing units (VTE) of Krone and Lemken can be transported quickly and easily from field to field on their own wheels with the aid of a drawbar.**

With the new transport solution from Krone and Lemken, in the future it will be easy to hitch an autonomous process unit (VTE) – consisting of the towing unit together with the attached machine – to a tractor. This clever solution saves much time, energy and personnel costs because transport from field to field over public roads with a low loader is eliminated.

The Vehicle Transport System (VTS) connects the autonomous towing machine directly with the tractor via a coupling system. Since the drive train of the autonomous vehicle is deactivated during transport, it is classified as a towed work machine and is therefore approved for road traffic. Coupled attachment devices such as cultivators or mowers can also be moved together as a tractor-trailer unit in this way with the new transport system. All that is needed is a driver's license for the tractor.

### Minimum Setup and Transport Times

In contrast to transport on a low loader, the connected attachment devices do not have to be disconnected and transported in addition. That cuts down on setup and transport times significantly.

For safe and convenient driving on public roads, both axles of the autonomous towing machine are controlled as for a forced steering trailer. This makes the tractor-trailer unit extremely manoeuvrable. The steering response is adapted to the driving speed, thus ensuring that the tractor-trailer unit drives with straight-running stability even at high speeds and can pass reliably through narrow gates and along curves with a tight turning radius. The steering system has undergone a rigorous safety inspection with a check for faulty operation.

In addition to the mechanical drawbar, the two vehicles are coupled by agricultural hydraulic and electrical connections. This makes it easy for

drivers to become familiar with the new transport systems very quickly and service work is easy to perform.

The new transport concept provides the framework for the flexible use of autonomous process units independently of the field structures of agricultural operations.

The towing connection is another of the many innovative ideas of Krone and Lemken created under the working title "Combined Powers". What began with a concept study for an autonomous "process unit" (VTE) has now become part of another trailblazing solution.

Manufacturers Krone and Lemken offer solutions to counter the threat of an agricultural skills shortage. The farmer of the future will be a system supporter of autonomous working machines. In the future, long working days in the field will be a thing of the past.

<https://combined-powers.com/>

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Fig. 1: The Vehicle Transport System (VTS) from Krone and Lemken enables transport by tractor.



Fig. 2: The combination of tractor and VTE with Vehicle Transport System is safe on bends

