

AUCOS-Systems-GmbH-Logo-CMYK

automatic coupling and uncoupling system operated from the safety of the cab

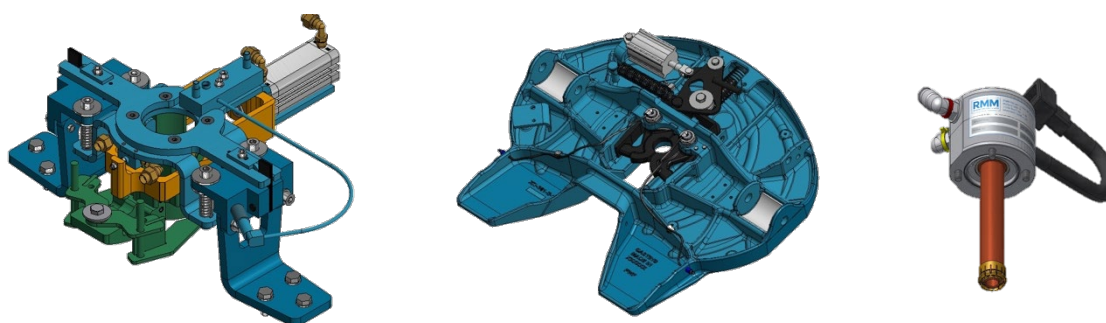
the challenge

When coupling and uncoupling (disconnecting) the trailer from the tractor unit, the driver must always leave the cab, disconnect the air and energy lines, lower or raise the support legs and then re-enter the cab. When transporting containers, the driver must release or close the locks every time a container is loaded or unloaded, and must also leave and re-enter the cab each time, regardless of whether it is sunny, raining, snowing or icy. These activities often result in accidents, especially in winter, with drivers slipping, bruising or similar.

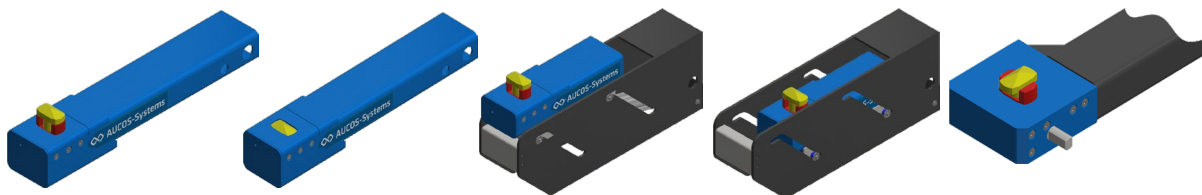
the innovation

With the three components AUCOS-Coup, AUCOS-Lock and AUCOS-Leg, all the described processes can be controlled automatically from the cabin. The driver no longer has to leave the cabin.

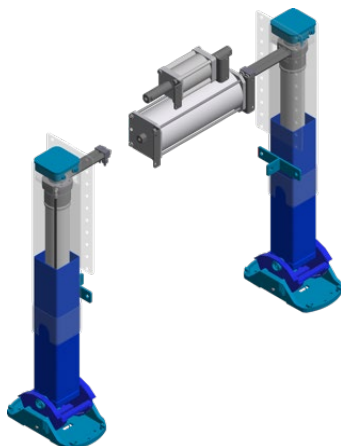
AUCOS-Coup: is the automatic connection for supplying the trailer with air for the brakes, energy for the lighting and any required data exchange.



AUCOS-Lock: remote controlled opening and closing of the twist locks on the trailer. In any desired configuration.



AUCOS-Leg: using the data connection between truck and trailer provided by AUCOS-Coup, it is possible to raise or lower the electrical or hydropneumatic support legs from the cab



how it was implemented

The first installations of AUCOS-Coup were carried out at Long Beach Container Terminal (LBCT) in 2016 on more than 50 tractor units and more than 100 trailers.

Also in 2016, an almost identical number of systems were installed in Vancouver. In 2021, the first systems were installed in the Port of Hamburg and since 2023, the first container trailer with automatic twist locks has been in operation in the Port of Hamburg.

In 2024, the first prototypes were also equipped with the AUCOS controlled leg and presented to the public in September at the IAA in Hannover on a Krone trailer. The Krone trailer presented there was the first trailer on which all three AUCOS controlled components were installed together.



result

In the past eight years, up to 270,000 couplings have been carried out at LBCT and the systems are still in use. All customers are very satisfied with the high availability.

In addition, LBCT was honoured by the Pacific Maritime Association (PMA) in 2017 and 2018 with the 'Overall Terminal Safety Award' for its significant



improvements in workplace safety, due in large part to the use of the AUCOS-Coup.

conclusion

The use of the current version of AUCOS-Coup is limited in Europe to use in closed facilities/terminals due to the lack of CE certification. In the rest of the world, however, the system can already be used on the road.

As we move towards autonomous driving, whether in closed systems or on public roads, automatic coupling on vehicles is almost essential. No one should be allowed to ride on systems with automatically controlled towing vehicles. If the truck or trailer without automatic coupling is tampered with, it must be driven as a unit to the workshop. This always means a significant interruption in the operational process, which can be avoided with AUCOS-Coup.

In addition to a significant reduction in accidents involving people. According to customers, AUCOS-Coup also significantly reduces damage to the cabling between the truck and trailer and leads to a significant reduction in the time required for coupling and uncoupling.

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