THE **UNIQUE FEATURES OF THE TLS** REVOLUTIONIZE THE LOADING ZONE

The pioneer spirit is part of the TRAPO-DNA. The **TRAPO Loading System TLS 3600** boasts many future-oriented advantages. For innovative spirit and automation, especially in the supply-securing sectors, TRAPO was included in the exclusive ,Club of Excellence' of the Top 100 Innovators – the most important award of the German mid-sized company sector.

Our knowledge – your advantage

- > High level of savings' potential: Swift, safe loading of pallet freight in transport logistics
- > Choice of stationary system or mobile between cargo hatch
- > ONE SYSTEM | ONE CONTROL: TRAPO-derived hard- and software
- > For employment no modifications are required to the truck-box
- > Autonomous loading and unloading diffuses any danger-zone
- > Starting of the loading process via operation outside the loading zone
- > Damage to the trailer is avoided
- > Swift loading: low temperature loss between temperature-controlled warehouse and refrigerated box
- > Delivery of Euro pallets optionally by shuttle-fleet or rigid conveying system
- > Direct connection to fully-automatic bay warehouse possible
- Integration in TIM, the TRAPO Intelligent Managementsystem: monitoring and administration of contracts plus control of shuttle-swarm

You can count on us

Required area for autonomous loading and unloading in the loading zone: Approx. 14.00m total length:

- 6,54m TLM
- +4,34m TLS
- +3,00m shunting distance TLS





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LOAD AND UNLOAD AUTONOMOUSLY INCREASE SAFETY AND EFFICIENCY IN THE LOADING ZONE

TRAPO | TRAPO LOADING SYSTEM TLS 3600

SAVE TIME, LOAD AND UNLOAD TRUCKS EFFICIENTLY: THE AUTONOMOUSLY FUNCTIONING TLS 3600

It was never simpler loading box trucks with Euro pallets – with the TRAPO Loading System TLS 3600. It is performed automatically, entirely without human intervention. Most critical goals are time-saving and increase in safety. The position of the TLS is controlled autonomously before and during entry into the truck.

The loading zone is instantly flexibly-employable: Blocking by deployment of one-shot solutions and forklift transport mode is dispensed with!*

One mobile TLS can serve several loading ramps

Its absolute trump card is played by the **autonomous loading and unloading system** with the mobility between the loading ramps. The **TRAPO Loading Mover (TLM)** picks up the loading system in order to move it, either rail- or wheel-driven, and to optimally position it. For where it is not possible to lay tracks in the warehouse floor, the mover travels to the desired loading ramp being placed on wheels.

For a **14-metre-trailer** the loading time for **33 Euro pallets** – depending on cargo – can be reduced by approximately 30 minutes. Truck unloading is accomplished in reverse order.



The TLS 3600 owes its name to the fact that it always loads **three pallets of 1200kg** each in parallel in a single work step; as such it features a **payload of 3600kg**.



* With one-shot loading the entire pallet freight of a truck is readied before the loading hatch with a forklift on conveyor rollers, in order to load the entire pallet-freight in one operation. Prerequisite is a fixed-install rail-system – both in the loading zone and the truck.

THE TLS 3600 IN THE OVERALL CONTEXT



- > One loading system can operate several loading ramps consecutively via TLM
- As a load carrier the TRAPO Loading Mover picks up the TLS in order to position it before the loading ramp, either rail- or wheel-driven

THE TLS 3600 IN DETAIL



FEED AND ALIGNMENT OF THREE EURO PALLETS

- Continuous feed of pallet loads
- > Buffering, alignment and readying of three pallets each

5 PALLET TRANSPORT

- > Optimized, tailored material flow for storage and loading areas
- > Flexible pallet transport via autonomously-navigating shuttle

6 WAREHOUSE LOGISTICS

- > Automatic feed and retrieval of pallets with warehouse-shuttle
- > Negotiating varying levels with warehouse-lift