TRAPO

Automated Intralogistics



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

TRAPO | TRAPO LOADING SYSTEM (TLS 3600)

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

With the autonomously acting **TRAPO Loading System (TLS 3600)**, TRAPO closes the safety gap between the warehouse and the loading bay.

Our knowledge – your advantage

- High level of savings potential: swift, safe loading of pallet freight
- Choice of stationary system or mobile between cargo hatches
- ONE SYSTEM | ONE CONTROL: Hardware and software from TRAPO
- For employment no modifications are required at the truck
- 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
- Delivery of Euro pallets optionally by shuttle fleet or rigid conveying system
- Direct connection to fully automated rack storage possible
- Integration in TIM, the TRAPO Intelligent Managementsystem

New features of the TLS Generation 2026

- A shortened dock for up to 17% more usable space in the loading area*
- New, even more intuitive visualisation of the panel interface*
- Optional performance package: up to 20% faster loading times*
- Optional sequencer with 33–66 storage spaces for perfect timing of upstream processes

You can count on us

Required area for autonomous loading and unloading in the loading zone:
approx. 10.00 m total length



More about the TRAPO Loading System (TLS 3600)

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

Loading or unloading box trucks with pallets has never been easier – 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.

From now on, the loading zone can be used flexibly: blocking due to the provision of one-shot solutions and forklift traffic is a thing of the past!

For a **14-meter trailer** the loading time for **33 Euro pallets** – depending on cargo – can be reduced to less than **25 minutes**.



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

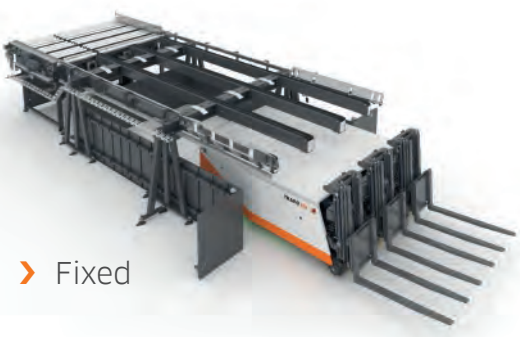


Loading takes place in three steps: First, up to three pallets are placed side by side on the conveyor and aligned (step 1). This is followed by picking up (step 2) and loading of the row (step 3). During the loading process, the subsequent row of pallets is formed and staged. Unloading is performed in reverse order.

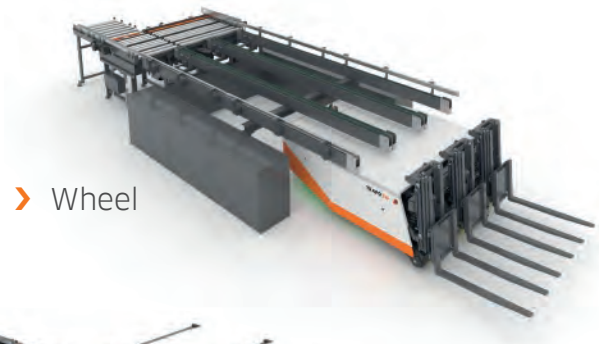
Optimal teamwork: The TLS 3600 is always composed of a vehicle and a dock which can be combined as desired.

The dock is available as a fixed variant when it serves only one charging hatch. In the mobile version, the dock can serve up to three loading bays in succession. In the case of the rail-mounted variant, it must be clarified whether structural modifications are possible on the hall floor.

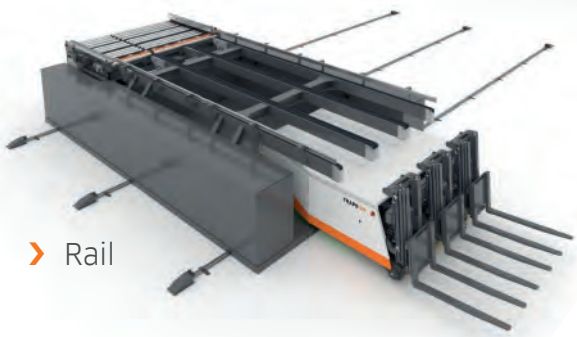
The three variants of the TLS 3600



› Fixed



› Wheel



› Rail

THE TLS 3600 **IN THE OVERALL CONTEXT**

TLS 3600 ›
TRAPO Loading System



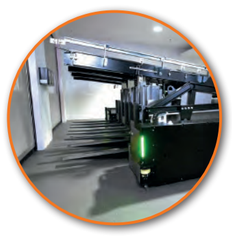
1
CHECK-IN / CHECK-OUT

- Truck driver reports via operator panel in the waiting area
- Fold out of the dock leveller/ start request
- Check-out after completion of the loading procedure/departure



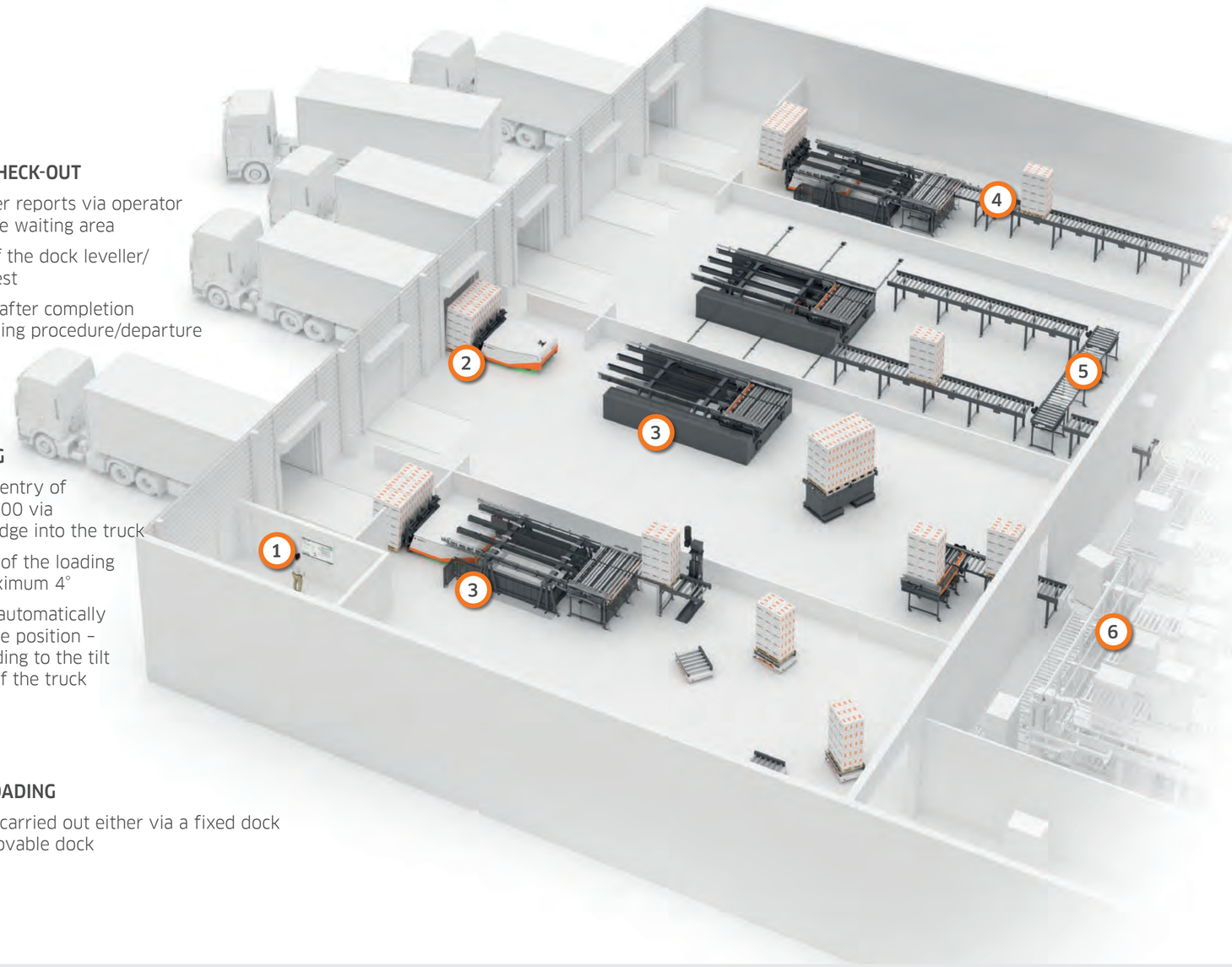
2
POSITIONING

- Automatic entry of the TLS 3600 via loading bridge into the truck
- Inclination of the loading bridge maximum 4°
- TLS 3600 automatically corrects the position – corresponding to the tilt positions of the truck



3
FLEXIBLE LOADING

- Loading is carried out either via a fixed dock or via a movable dock



4
FEED AND ALIGNMENT OF THREE EURO PALLETS

- Continuous feed of pallet loads
- Buffering, alignment and provision of three pallets each
- Use of a sequencer possible



5
PALLET TRANSPORT

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



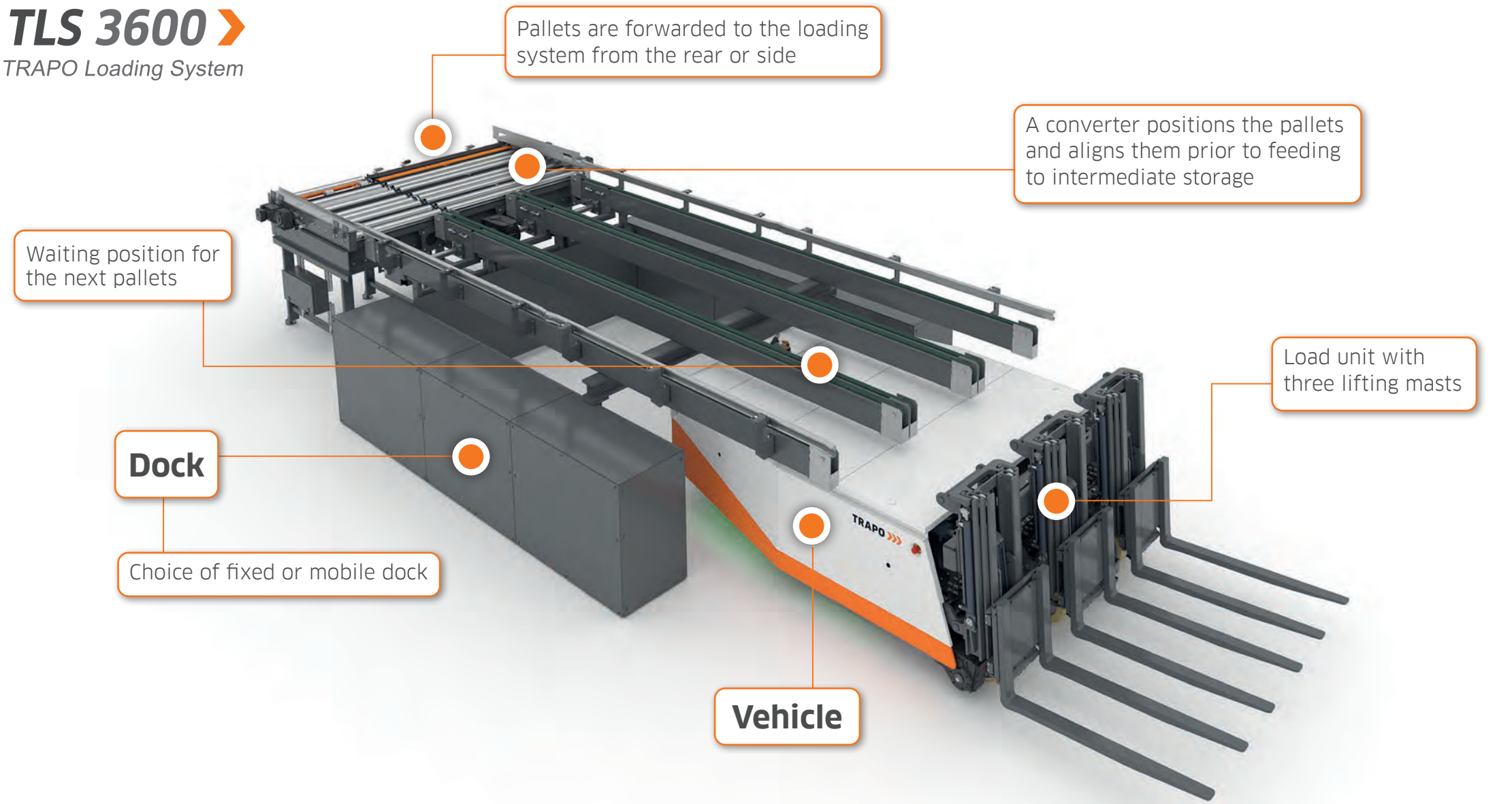
6
WAREHOUSE LOGISTICS

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



THE TLS 3600 **IN THE OVERALL CONTEXT**

TLS 3600 ›
TRAPO Loading System



Facts & figures

Features

- Autonomously operating system consisting of vehicle and dock
- Corrects height differences and misalignmentsof the truck autonomously
- Max. 4° inclination of the dock leveller

Dimensions

Overall length: approx. 10.00 m

Vehicle:

Length:	4.40 m (incl. tines)	Weight unloaded:	approx. 4.00 t
Width:	2.15 m	Weight at full load:	approx. 8.90 t
Height:	1.35 m (lift mast retracted)	Power supply:	wired
Lifting:	1.60 m		
Payload:	3.60 t		

Dock:

Length:	4.90 m
Width:	4.30 m
Lifting height:	1.50 m

Headquarters

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