

Palfinger

Improving Accessibility for Wheelchair Passengers with Easy-to-Operate Train Lifts

Discover Palfinger Passenger Lift's latest train lifts for high-speed and regional trains.

Palfinger Passenger Lifts has over 30 years' experience improving accessibility in the transport industry thanks to its customised lift and ramp solutions. Its factory near Bremen, Germany, has produced more than 2,800 train lifts for clients including Alstom, Pesa, Siemens and Stadler.

The company's flexible lifting range for trains features semi-automatic lifts, which can be equipped on both new and refurbished vehicles, as well as specially developed and produced designs to meet customers' bespoke requirements.

Safety features on all train lifts include automatic roll stops, safety markings, anti-slip surfaces and acoustic and visual signals.

All of Palfinger's solutions for the rail industry are manufactured to meet TSI PRM (EU) 2023 certification. During development the company goes so far as to hold on-site workshops with wheelchair users and operators, to ensure everyone's needs are met and the best solution developed.

Palfinger's Train Lifts

When it comes to customer lifts for trains, Palfinger offers both rotational (Trainlift TR) and vertical lifts (Trainlift TRV 2).

The Trainlift TR can be hydraulic or fully electric and has



been designed with high-speed and commuter trains in mind. A key advantage of this swivel lift is its ability to be fully stored and hidden behind cover elements.

The Trainlift TRV 2 has been developed specifically for high-speed trains, and this vertical lift provides semi-automated operation via two-button push.

Deutsche Bahn Chooses Palfinger Train Lift

The latter was recently put into service on Deutsche Bahn's (DB) fastest passenger trains, the ICE 3 neo, which has a dedicated door for passengers with limited mobility to enter and exit.

This provided a new challenge for the Palfinger team, as they had to factor in the limited space they had to

play with. TSI PRM certification requires a lift platform's width to be a minimum of 760mm, however this door was only 920mm wide, leaving little room for the two lifting arms required for the lift to operate.

Palfinger's engineers were able to overcome this challenge however, adapting their design to meet these specific requirements, and after the concept and first development phases, the first prototype was built.

This was reviewed in a joint workshop with Siemens, DB, train attendants and representatives from wheelchair users' associations. During this workshop practical tests were carried out by users of both electric and manual wheelchairs, with feedback from all parties taken on board and changes incorporated during the next phase.

The final solution was a two-arm vertical lift with a maximum lifting height of 900mm and a load capacity of 350kg. This ensures that electric wheelchairs can use the lift without issue.

Like all other Palfinger train lifts, this innovative model is perfectly adapted to the demanding specifications in the railway sector, being easy to operate, extremely reliable, durable and certified, according to TSI PRM.

Palfinger's Latest Train Lift Innovations

Palfinger continues to look for ways to improve and advance its solutions, and this innovative mindset has led to the creation of two new models.

With the **TRB 1000E**, an electric lift for regional trains, Palfinger's engineers have eliminated the hydraulics from its TRB 1000 model, making it possible to use an electric actuator, which in the case of the TRB 1000E comes from Schaeffler. The advantages of going fully electric include simpler operation and lower lifecycle costs.

This was showcased for the first time at InnoTrans 2024, with very positive results.

Palfinger also recently launched the hybrid lift TRV1 for commuter trains, which is a one-arm lift and cover 'all-in-one' solution. This has a maximum lifting height of 1250mm and a weight capacity of 350kg and provides the benefits of reduced material costs, manual

operation steps and component maintenance. The prototype was completed this July, and production of the model is scheduled for 2025.

Want to know more about Palfinger's lifting solutions?

For further information on any of **Palfinger's** train lifts, please visit www.palfinger.com/engb/products/passenger-lifts or contact a sales and service representative via passenger.service@palfinger.com.

The benefits of choosing Palfinger

Long experience in customisation

Palfinger offers customised solutions, designed and built in its factory near Bremen with more than 30 years' experience in the railway industry. The company adapts to customer requirements quickly while following all relevant technical specifications for interoperability (TSI) and railway norms.

Easy use and low maintenance

Palfinger passenger lifts have been proven to be user-friendly for wheelchair users and train attendants. Wheelchair users regularly visit the company's verification and validation (V&V) facilities to test new products and give first-hand feedback.

Quality and installation

All Palfinger wheelchair lifts undergo full testing procedures before they leave the factory. Furthermore, the lifts are designed for easy installation on your train.

Direct communication and transparent project management

Palfinger communicates in an open and fast manner. Transparent project management is a central element for the collaboration with its customers so they stay in the loop at all times.



PALFINGER PASSENGER LIFTS

MOBILITY WITHOUT BOUNDARIES

