



Beginner's Guide to Loading Platform Design & Inspection



Loading Platforms are important temporary works equipment used for loading and off-loading of material on building sites. They come in various sizes in Fixed or Retractable (adjustable) types. Their design, use and application is critical to material movement on sites, sometimes open to abuse and overloading, resulting in fatal accidents on sites.

There is no specific EN standard for Platform Design. However, limit state structural design can be followed for designs.

Lifting Operations and Lifting Equipment Regulations 1998

Provision and Use of Work Equipment Regulations 1998

EN 1990 (all parts), Eurocode — Basis of structural design.

ENV 1991 (all parts), Eurocode 1 — Basis of design and actions on structures.

ENV 1993 (all parts), Eurocode 3 — Design of steel structures.



This schematic guidance provides best practice basic knowledge to designers and safety managers to ensure safe design and use of such equipment.

Telescopic legs must be designed to 4 x Calculated Reaction Load at Max. Extension.

Telescopic legs must be bolted to avoid being accidental dislodged.

Back-Propping is required under Platform edge and Telescopic legs to avoid cracking of slabs.

Telescopic legs must have bracing to prevent buckling and aid stability during crane handling.

Threaded jacks used for final adjustment must have double nut to lock the jack to prevent loosening due to cyclic loads and vibration.

Crane lifting lugs must be tested to 4 x self weight of platform and positioned for balanced lifting.

Loading Design Considerations: limit state design

Self wt + 10% material factor

Live Load + 50% load factor

Dynamic load Live Load + 25%

General Design to be within elastic limits with max. deflection criteria of L/100 to L/150

Calculation to prove capacity: A MUST HAVE

Independent Test Report: ADVANTAGE

Site Proof Load: SWL x 1.5

User Instruction: A MUST HAVE

Data Sheet: A MUST HAVE

EN 1090-S Certified Factory: A MUST HAVE

Overall length of Platform to be L x 1.75 min.

L = cantilever length (Outbound)

Overall width of platform is determined by site application, transport and load size.

Generally, between 2.0m-3.0m wide.

Capacity of Platforms must be clearly marked.

Traceability Label must be permanently attached to the unit with ID number, manufacturer, SWL and date of manufacture.



No gaps more than 20mm on side panels allowed.

Height of side panels to be 1.0m min.

Side panels must be load bearing and bolted or hinged for ease of transport and storage.

4mm min. deck plate (anti-slip) for 2.5T and 5-6mm min. for 5T capacity platforms. In Europe, Australia and US they use up to 8mm thick plates.



End gate or panel must be removable to allow long loads. Safety lock is a must.