

# TECHNICAL INFORMATION SHEET

## Side pins and deck stanchions

### 1. Introduction

Stanchions and side pins can form an integral part of the load restraint system for blocking, as well as increasing safety during loading, applying restraints, removing restraints and unloading.

The trailer structure must be capable of accepting the forces transmitted by the stanchions and side pins. The condition of the pockets is therefore just as important as the strength and condition of the stanchions.

- Stanchions and side pins are to be inspected regularly for corrosion and damage.
- Pockets are to be inspected regularly to check their integrity, including the condition of the pocket base.

### 2. Side pins

Side pins can provide a number of benefits. They can:

- become part of the primary restraint system for loads which fully utilise the width of the trailer;
- serve as secondary restraint in the event of a failure of the primary restraint system;
- provide added safety for the driver while applying and removing restraints;
- provide added safety for operators during loading and unloading operations.

The Tata Steel standard for trailer side pins is:

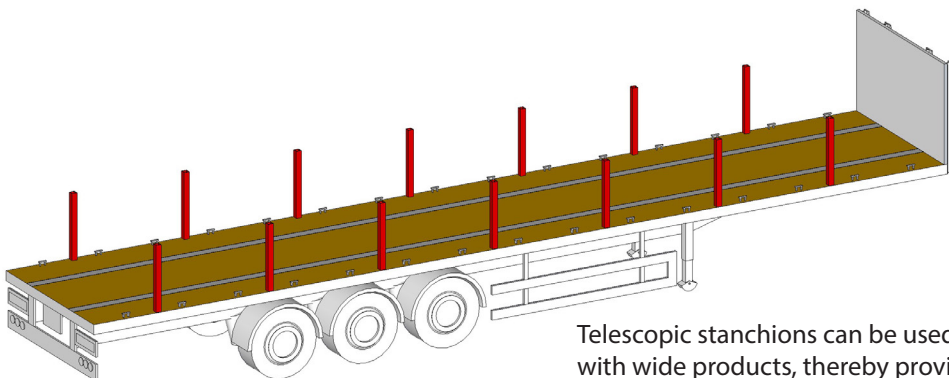
- Minimum of 4 pairs along the length of the trailer unless specified otherwise in a Load Restraint Guideline.
- All product lengths to be covered by a minimum of 2 pairs of side pins.
- Side pins must be of sufficient length to eliminate the potential of any material sliding or rolling over the top. Minimum recommended side pin heights above the trailer deck:
  - 500 mm for bar
  - 1000 mm for sections
  - 1500 mm for tubes.
- Side pins must be steel grade S 355 and be one of the section sizes listed overleaf. Side pins which deviate from this requirement must be able to provide the same level of restraint.

Side pins are **mandatory** for the following product types:

- Sections, pipe, circular hollow sections, rail, billets and multi-product loads.

Side pins are **strongly recommended** for the following product types:

- Special profiles, square/rectangular hollow sections, straight bar, plate/sheet packs and building systems products.



Telescopic stanchions can be used with wide products, thereby providing blocking for sideways restraint.



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### 3. Deck stanchions



Deck stanchions can be used to produce false headboards, thereby creating a means of blocking whilst maintaining appropriate weight distribution on the vehicle.

Stanchions must be inserted prior to loading to ensure there are no gaps between the load and the stanchions. This also ensures stanchion pockets are not covered up during loading, thereby preventing the driver from creating this means of blocking.

Stanchions can also be used to provide sideways blocking, which at the same time provides a gap to aid the customer off-loading.

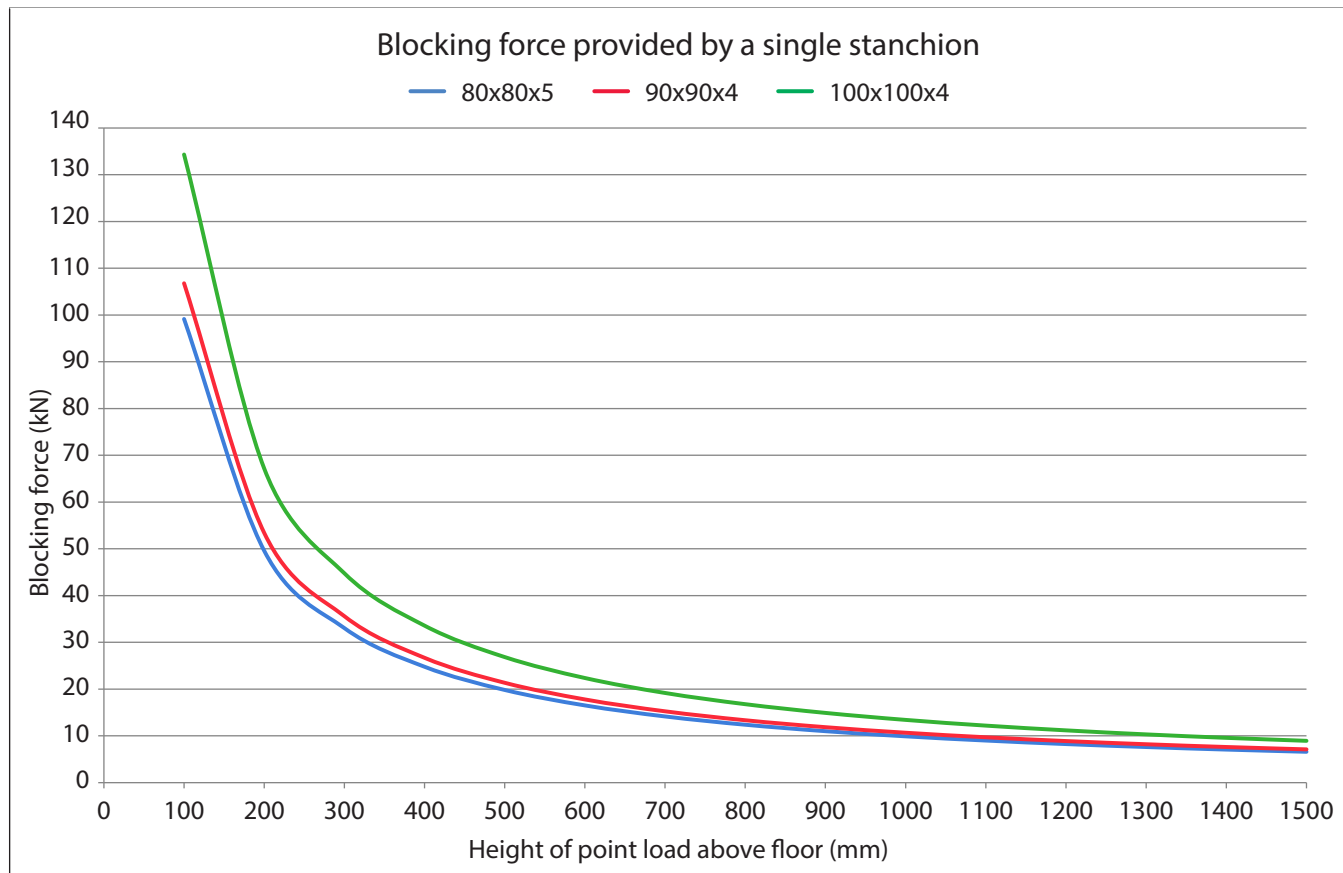
The maximum applied force on a stanchion is dependent on the nature of the load.

A force applied higher up a stanchion is more likely to cause the stanchion to fail, than a force applied at the lower part of the stanchion.

The chart below provides some guidance as to the blocking force provided by a single stanchion, depending on the section size of the stanchion and the height at which the force is applied. For example, a single 80x80x5 stanchion can provide 20 kN of blocking when a force is applied at a height of 500 mm above the floor. If the height of the applied force is increased to 1000 mm, then the amount of blocking is reduced to 10 kN.

As indicated, a 90x90x4 stanchion provides marginally greater blocking forces than an 80x80x5 stanchion, with the added benefit of a reduced weight.

The steel grade of all section sizes provided in the chart is S 355.



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