

# LOAD RESTRAINT GUIDELINE

## Slab

### 1. This guideline applies to:

- Transportation of profiled, shot blasted and as cast slabs by road.
- Minimum product width of 1100 mm.
- Maximum product length of 12 m.
- Maximum product weight of 30 tonnes.

The lowest friction factor, determined as per EN 12195-1:2010 Annex B.1.2, is  $\mu=0.6$ .

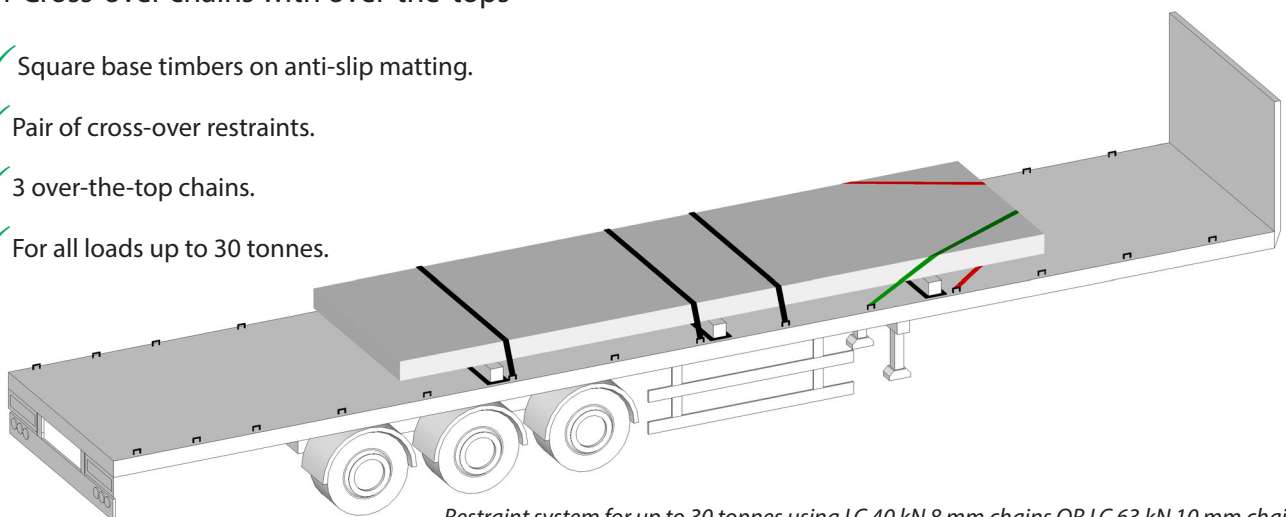
### 2. Essential requirements

- All restraints must be minimum 8 mm Grade 8, LC 40 kN chains compliant with EN 12195-3.
- Lightweight trailers to be used to cater for heavier loads.
- Minimum lashing point rating of 3 tonnes for cross-over option.
- Anti-slip matting must be placed between base timbers and the trailer deck.
- Loads to be placed on a single layer of timber dunnage with a minimum square cross-section of 125 mm x 125 mm.
- The product must be loaded away from the headboard to achieve correct axle loadings.  
See Technical Information Sheet TIS-0012 *Axle weights and load distribution* for more details.

### 3. Overview of restraint system

#### 3.1 Cross-over chains with over-the-tops

- ✓ Square base timbers on anti-slip matting.
- ✓ Pair of cross-over restraints.
- ✓ 3 over-the-top chains.
- ✓ For all loads up to 30 tonnes.



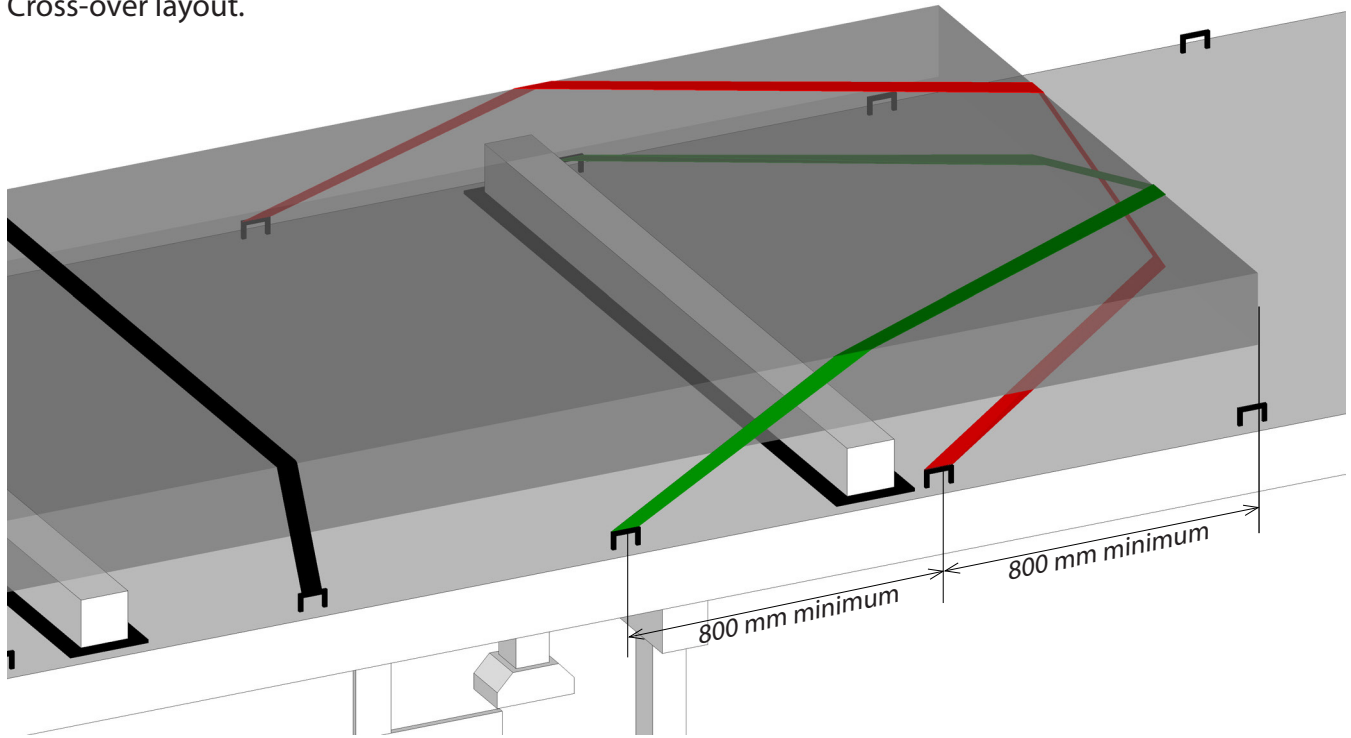
*Restraint system for up to 30 tonnes using LC 40 kN 8 mm chains OR LC 63 kN 10 mm chains.*

*This Load Restraint Guideline is designed to meet the forces for road transport as stated in EN 12195-1:2010 and VDI 2700.*

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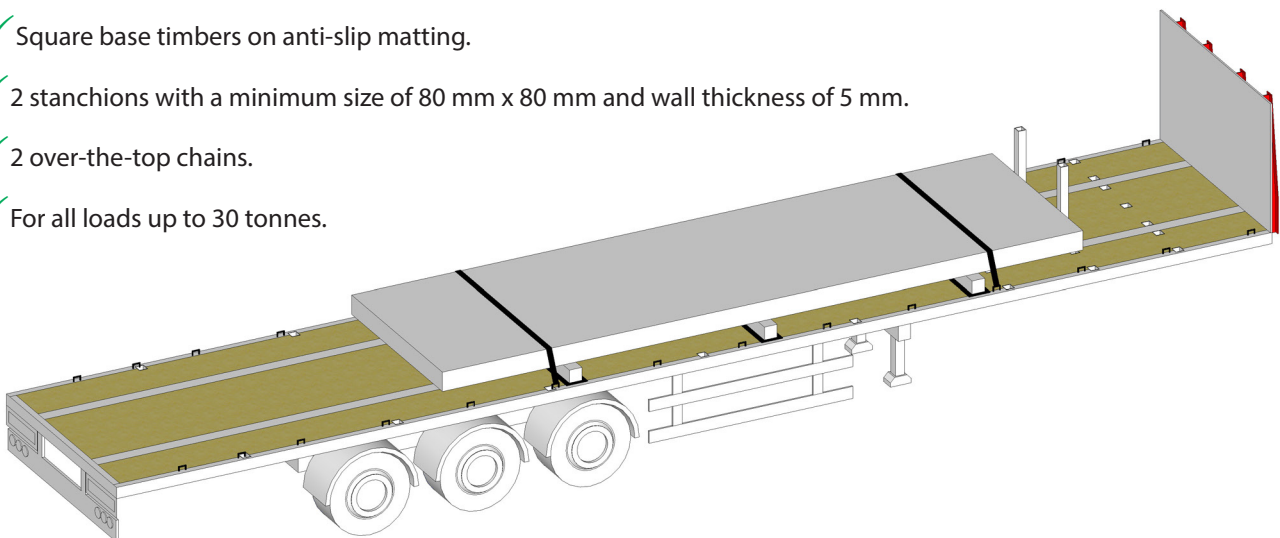
Cross-over layout.



- ✓ Base timbers must NOT interfere with cross-over chains.
- ✓ Minimum lashing point rating of 3 tonnes.
- ✓ Minimum distance from front of product to first lashing point of 800 mm.
- ✓ Minimum LC 40 kN 8 mm chains.
- ✓ Tensioner to be placed on the rear leg of the cross-over chain.

### 3.2 Stanchions with over-the-tops

- ✓ Square base timbers on anti-slip matting.
- ✓ 2 stanchions with a minimum size of 80 mm x 80 mm and wall thickness of 5 mm.
- ✓ 2 over-the-top chains.
- ✓ For all loads up to 30 tonnes.

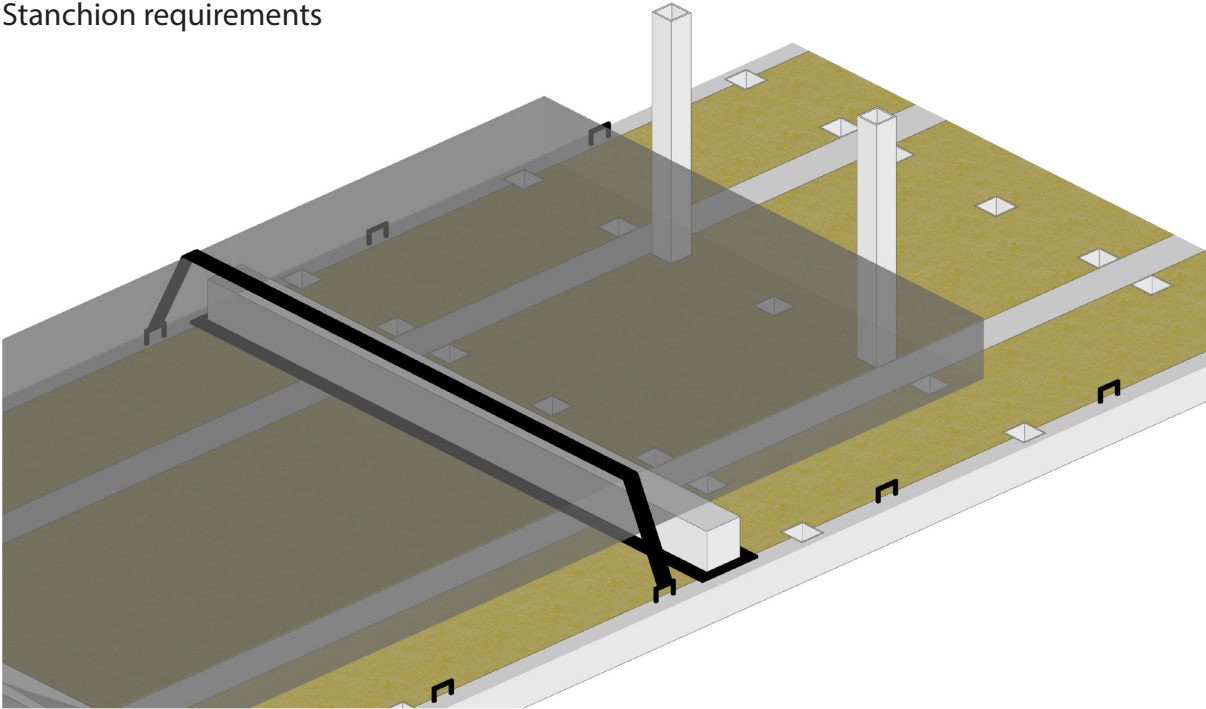


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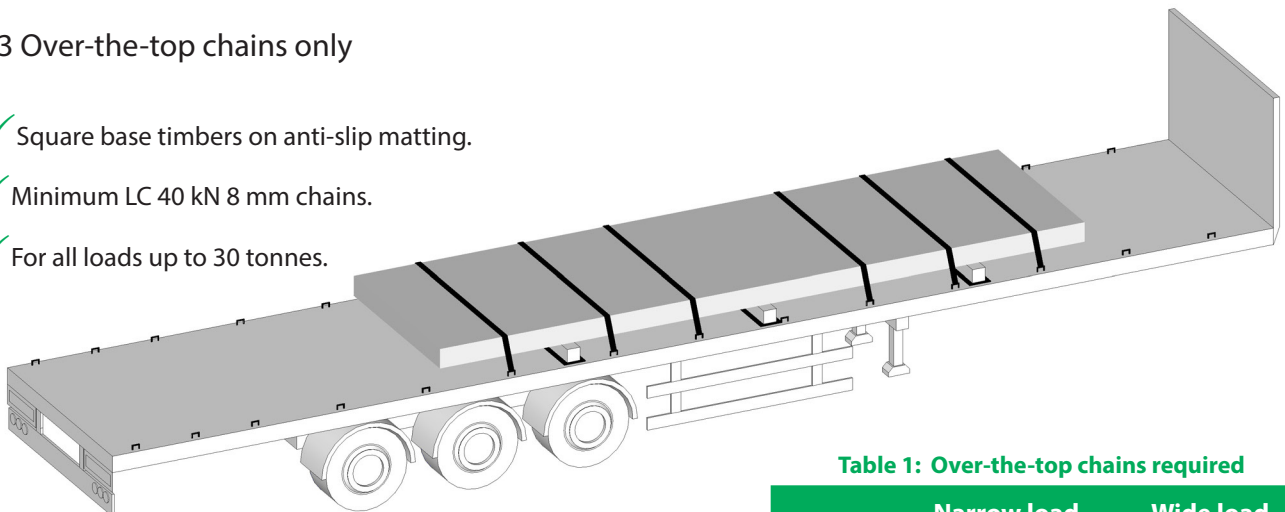
### Stanchion requirements



- ✓ Stanchions must be a minimum size of 80 mm x 80 mm and wall thickness of 5 mm.
  - See Technical Information Sheet TIS-0011 *Side pins and deck stanchions* for further details.
- ✓ Ensure stanchions and stanchion pockets are in good condition.
  - Stanchions and pockets are to be inspected regularly for corrosion and damage.
- ✓ Stanchions must be fitted before loading to ensure minimal gaps between product and stanchions.
- ✓ Ensure that the stanchions are evenly spaced across to the load.

### 3.3 Over-the-top chains only

- ✓ Square base timbers on anti-slip matting.
- ✓ Minimum LC 40 kN 8 mm chains.
- ✓ For all loads up to 30 tonnes.



Restraint system for a wide load up to 20 tonnes using LC 40 kN 8 mm chains.

- ✓ Narrow loads classed as **under** 1800 mm wide.
- ✓ Wide loads classed as **over** 1800 mm wide.

**Table 1: Over-the-top chains required**

Load	Narrow load		Wide load	
	8 mm	10 mm	8 mm	10 mm
up to 16t	6	4	5	3
16t > 20t	6	4	6	4
20t > 23t	7	5	6	4
23t > 27t	8	6	7	5
27t > 30t	9	6	8	6

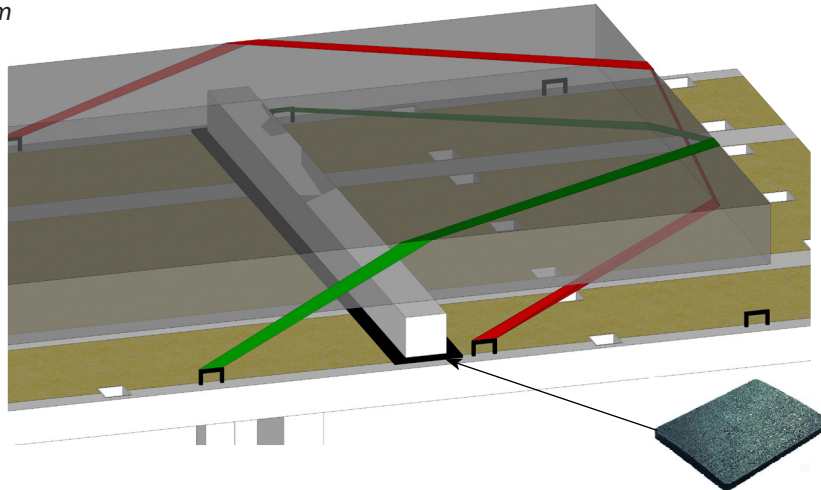
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### 4. Anti-slip matting

- Recommended thickness: 10 mm is suitable for most applications.
- Anti-slip matting is to be applied in strips to effectively prevent timber on deck, or steel on wood contact where required.

Standard restraint system

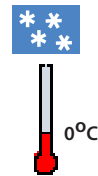


✓ Anti-slip matting under base timbers.

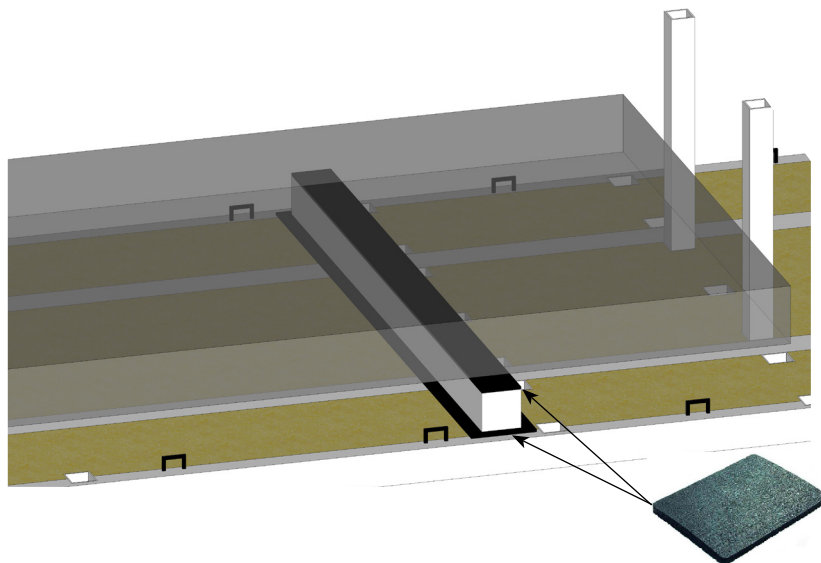
Note: It is important to ensure that the anti-slip matting is visible beneath the product for inspection purposes.

### 5. Severe winter weather advisory periods

- During severe winter weather advisory periods, additional measures are required.
- Anti-slip matting to be placed on both sides of ALL base timber dunnage.



Winter restraint system



✓ Anti-slip matting on both sides of base timbers.

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