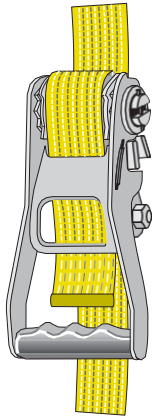
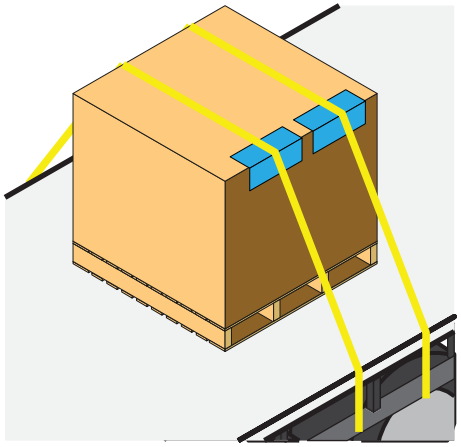
Load Restraint Guideline - Tie-down

This Guideline:

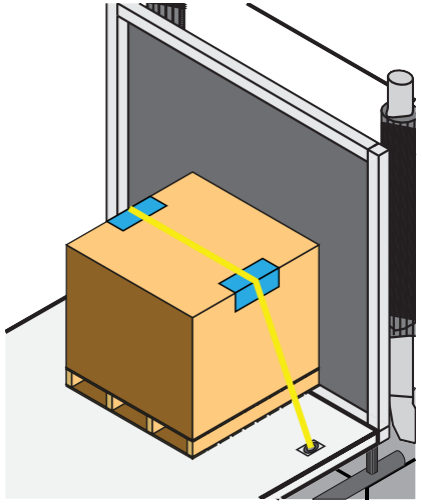
- ✓ Covers the transportation via road of items up to 7,000kg.
- ✓ Covers items with a maximum height of 2,600 mm, minimum length of 1,490 mm and a minimum width of 1,150 mm.
- ⚠ Items must be indivisible or unitised to meet the loading performance standards listed in Schedule 7 of the Heavy Vehicle (Mass, Dimension and Loading) National Regulation (1 October 2018).
- ✓ Refer to the Load Restraint Guideline - Packaging (reference: E01483-LRG3) for packaging guidance for divisible loads.



Key Requirements →Page 2-4



Load Configurations for Unblocked Loads →Page 5

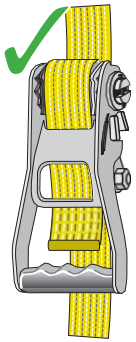


Load Configurations for Blocked Loads →Page 6

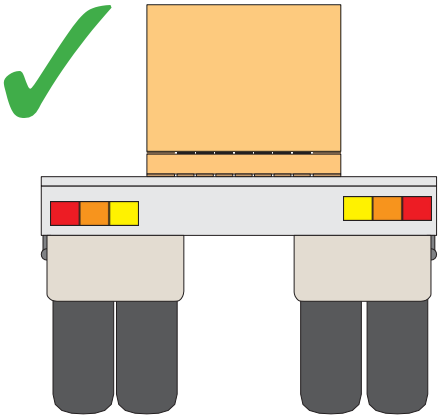
Load Restraint Guideline - Tie-down

Key Requirements

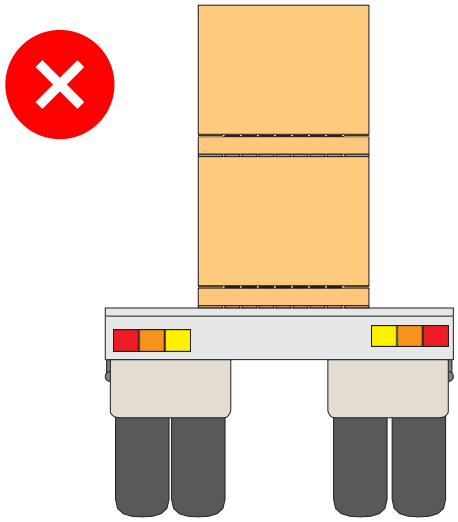
- ✓ Minimum 50mm webbing strap with a lashing capacity of 2,500kg.f conforming to AS/NZS 4380, fully tensioned.
- ✓ Maximise lashing angle where possible.
- ✓ Use only square hardwood dunnage.
- ✓ Industrial rubber (NOT conveyor belt) is a suitable alternative to timber dunnage.
- ✓ Avoid steel on steel contact between items/truck deck.
- ✘ Do not use modified webbing straps, ratchets or winches.



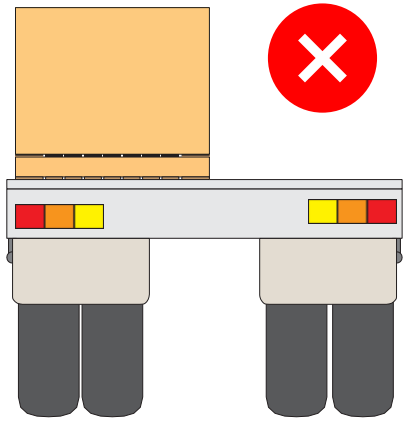
Standard Ratchet (push up)



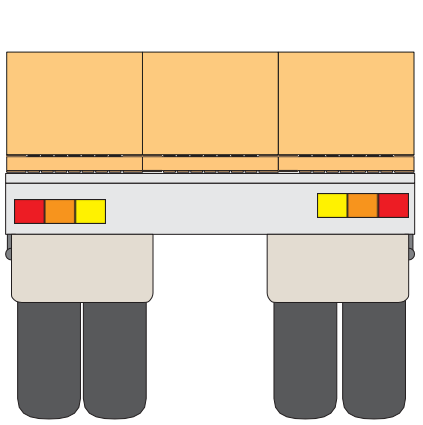
Centrally load single file pallets across the trailer.



Do NOT load pallets double stacked.

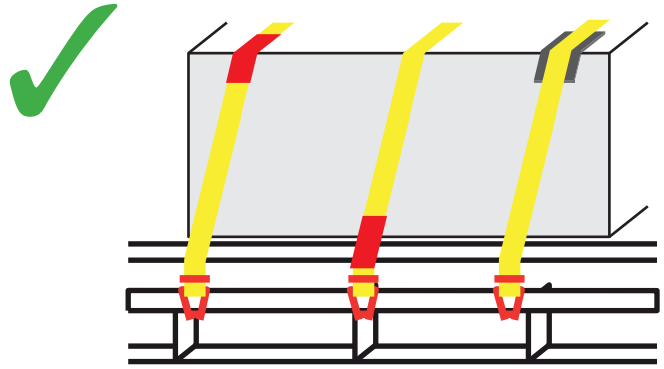


Do NOT load single file pallets on one side.

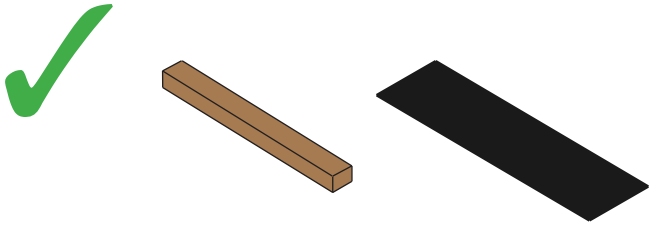


Do NOT load pallets three (3) abreast.

Load Restraint Guideline - Tie-down

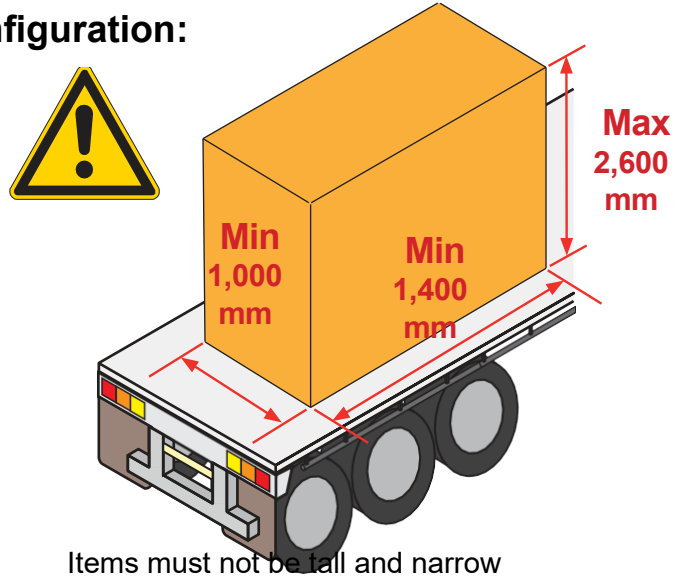


Sleeves or alternative can be used to protect the lashings and the freight

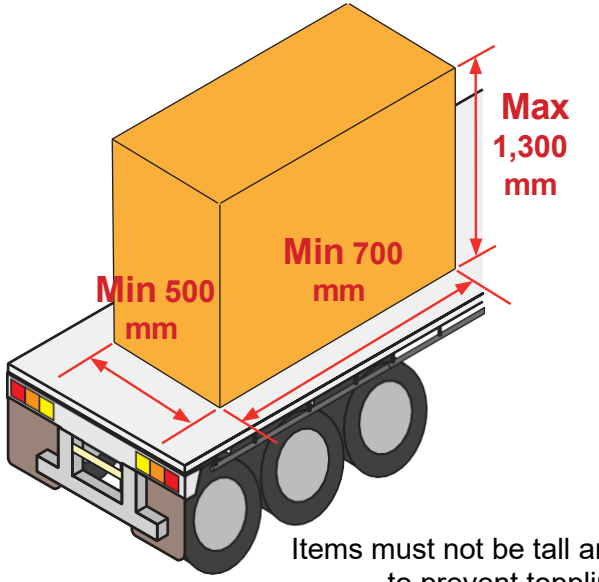


Place timber dunnage or rubber under non-wheeled items

Load Configuration:



Items must not be tall and narrow to prevent toppling



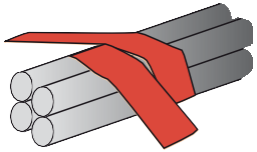
Items must not be tall and narrow to prevent toppling

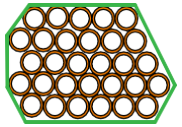
Load Restraint Guideline - Tie-down

Round Items on Timber Dunnage

- ✓ Loads must be belly strapped to ensure scaffold poles do not spear.
- ✓ Join two straps together and tension both sides to achieve the minimum clamping required
- ✓ Maximum load masses must not exceed the specified values for each configuration

Ensure load is belly wrapped at both ends

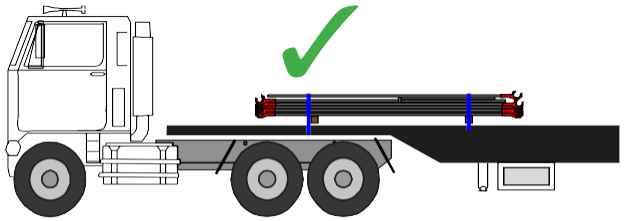




Ensure poles are bundled to prevent loads falling apart after lashings removed

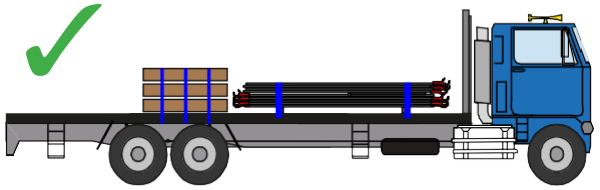
Lashing angles to be minimum 30º

Unblocked
Less than 600kg



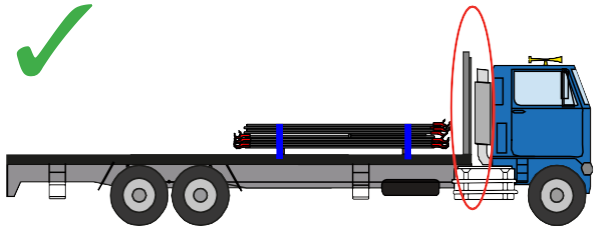
2 x 50mm webbing straps required

Blocked Forwards and Rearwards
Max 2400kg



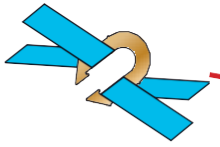
2 x 50 mm webbing straps required

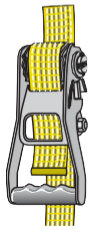
Blocked Forwards only
Max 1200kg



2 x 50mm webbing straps required

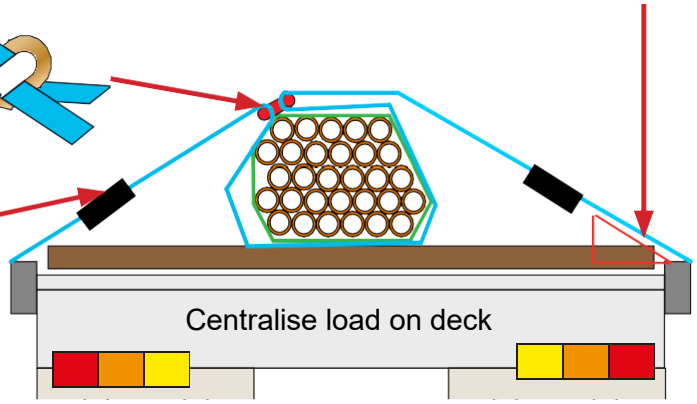
Use load chockers



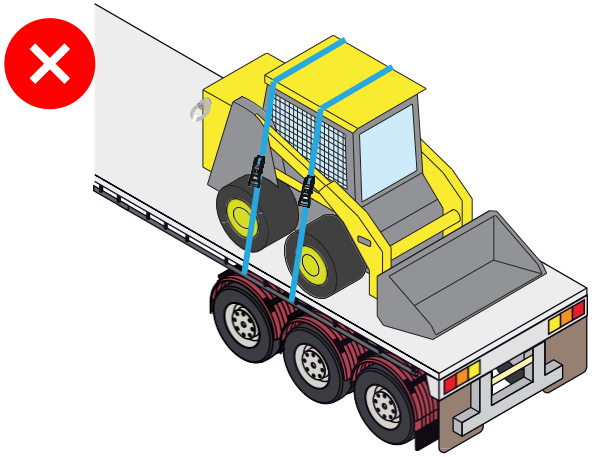


2 x

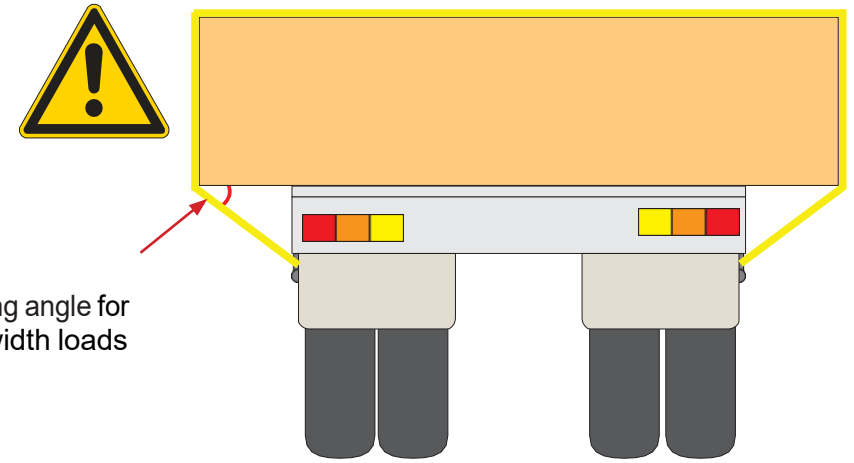
Ensure load is tensioned on both sides



Load Restraint Guideline - Tie-down

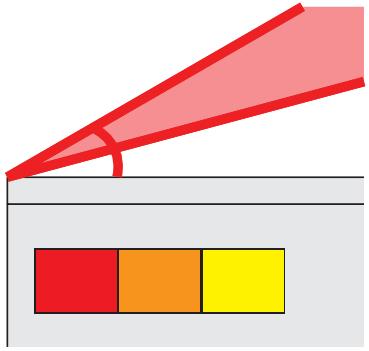


Tie Downs are not compatible with wheeled items.

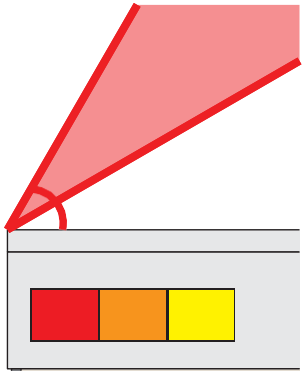


Lashing angle for overwidth loads

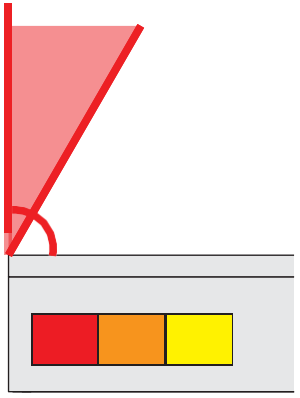
The wider the overwidth load the lower the lashing angle, ensure the correct lashing angle is measured.



Lashing angle 15° to 30°



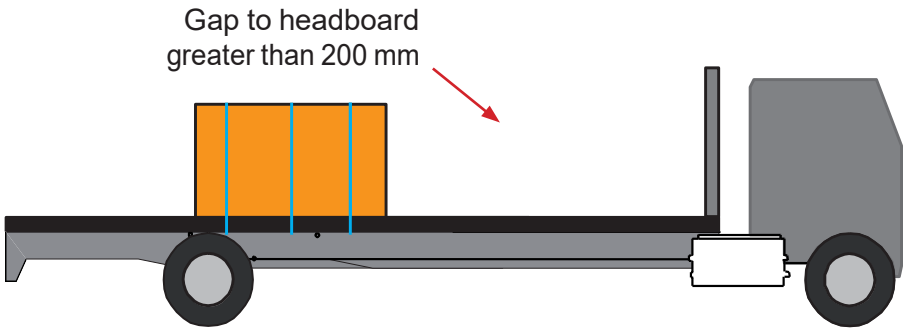
Lashing angle 31° to 60°

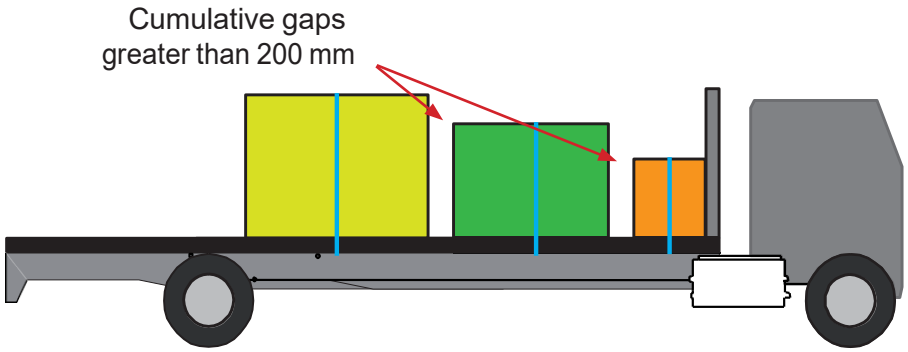


Lashing angle 61° to 90°

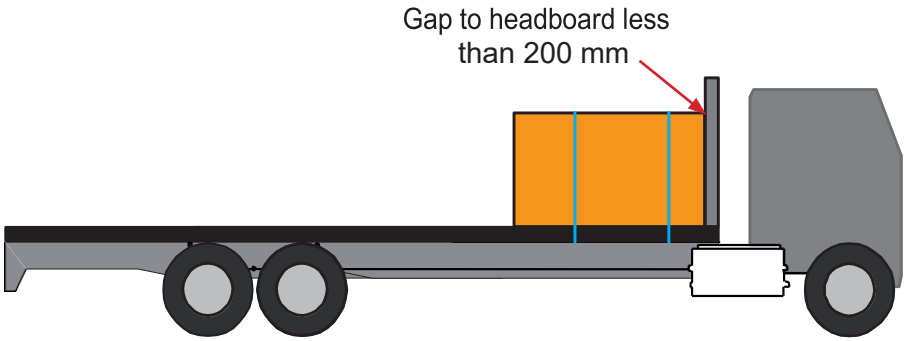
Load Restraint Guideline - Tie-down

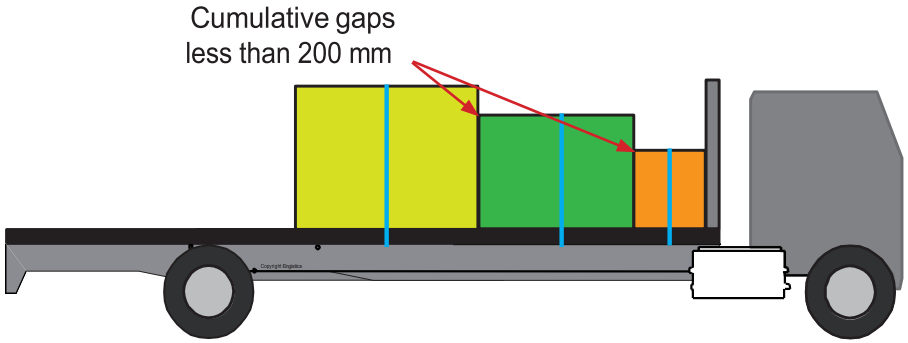
Unblocked Loads





Blocked Loads





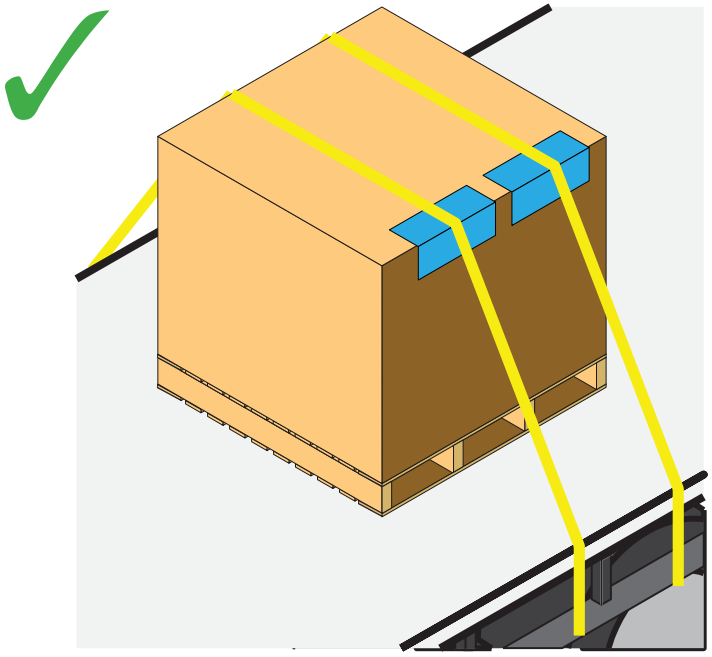
Load Restraint Guideline - Tie-down

Load Configuration - Unblocked Loads

✓ Minimum number of straps to restrain the load as per the table below.

Number of Straps	Lashing Angle	Maximum Freight Mass (kg)
1	15° to 30°	150
	31° to 60°	300
	61° to 90°	500
2	15° to 30°	300
	31° to 60°	600
	61° to 90°	1,000
3	15° to 30°	450
	31° to 60°	900
	61° to 90°	1,500
4	15° to 30°	600
	31° to 60°	1,200
	61° to 90°	2,000
5	15° to 30°	750
	31° to 60°	1,500
	61° to 90°	2,600

Minimum number of lashings for freight mass.



Unblocked load

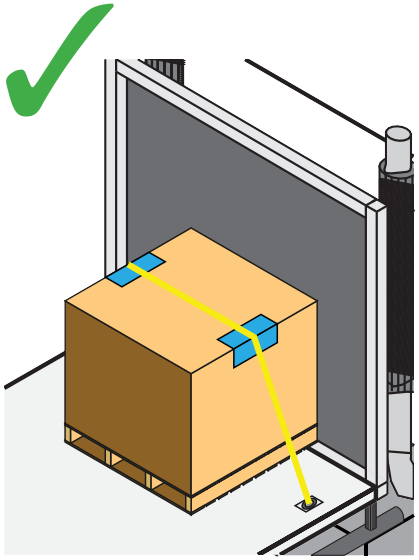
Load Restraint Guideline - Tie-down

Load Configuration - Blocked Loads

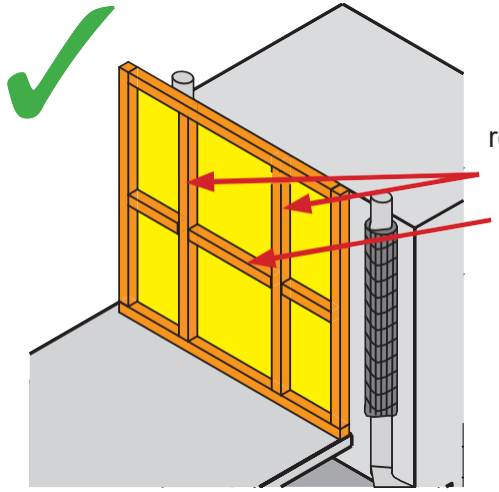
✓ Minimum number of straps to restrain the load as per the table below.

Number of Straps	Lashing Angle	Maximum Freight Mass (kg)
1	15° to 30°	620
	31° to 60°	1,200
	61° to 90°	2,000
2	15° to 30°	1,200
	31° to 60°	2,400
	61° to 90°	4,100
3	15° to 30°	1,800
	31° to 60°	3,700
	61° to 90°	6,200
4	15° to 30°	2,400
	31° to 60°	4,900
	61° to 90°	7,000
5	15° to 30°	3,100
	31° to 60°	6,100

Minimum number of lashings for freight mass.

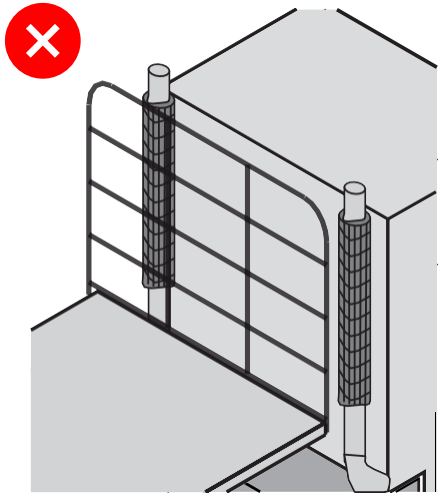


Blocked load



Engineered headboard has reinforced vertical and horizontal beams

Engineered headboard is required for blocking.



Pipe gates are not suitable for blocking.