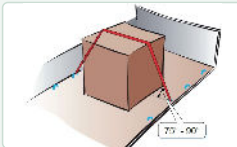


Cargo Securing

The 5 methods

Compliant with **EN 12195-1** (securing forces) & **EN 12195-2** (webbing lashings). **LC** = Lashing Capacity · **STF** = Standard Tension Force · **1 daN** $\approx$ 1 kg.

1



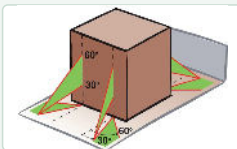
Tie-down / frictional

HOLDS BY Friction (STF). Strap over the top presses the load onto the deck.

RULE Angle **75-90°**. Use anti-slip mats. At 30° you lose ~half the force.

MISTAKE Running the strap too flat & skipping mats.

2



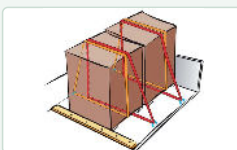
Diagonal / direct

HOLDS BY The strap itself (LC). Hooked directly into the load, crosswise.

RULE **Min. 4 straps** · angles **30-60°**. For heavy machinery & steel.

MISTAKE Hooking a random point — use certified securing points.

3



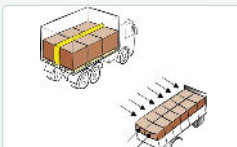
Loop / round-turn

HOLDS BY Sideways containment. A loop over the load, fixed both sides.

RULE Space **several loops** along the length. For pipes, timber, rolls.

MISTAKE One loop on a long batch — the middle still shifts.

4



Blocking / against headboard

HOLDS BY Rest against a wall or stops. Load physically can't move that way.

RULE **No gaps** — fill voids with dunnage. Foundation for every load.

MISTAKE Leaving 20-30 cm of play — the load slams into the board.

5



Spring / anti-tipping

HOLDS BY Resistance to tipping. Sling over the corner + two diagonals.

RULE Angle **$\leq 45^\circ$** . For tall stacks that lean forward under braking.

MISTAKE Using only tie-downs on tall loads — they don't stop tipping.

► **Golden rule — combine methods.** Blocking at the front + tie-down or diagonal straps is the norm, not over-caution. One method rarely covers all directions of force: forward, backward, sideways, up.

CHECK BEFORE YOU ROLL OUT

- ☐ Load rests against the headboard or a front stop
- ☐ Angles right — tie-down 75-90°, spring $\leq 45^\circ$
- ☐ All gaps filled (spacers / dunnage bags)
- ☐ LC & STF legible on labels, straps free of cuts
- ☐ Method matches load — heavy→diagonal, tall→spring
- ☐ Anti-slip mats placed under the load