

Information Bulletin No. 11

Back Stops

English Version
August 2019

This Information Bulletin gives guidance on the use of back stops. There are two types of back stops:

- **Safety back stop:** Component used to prevent accidental collision of a moving object with other unit loads or equipment when the unit load is placed in the storage location.
- **Buffer back stop:** Component used as an aid for forklift or other mechanical handling equipment to deposit the unit load in the correct position in the racking.

Safety back stop:

If racking systems are properly designed to give adequate clearance between back-to-back pallets and/or loads, or alternatively, between a pallet or load and any other obstructions at the back of a rack, then safety back stops are unnecessary to enable a competent driver to deposit a pallet correctly and safely. Therefore, the use of pallet back stops attached to the racking structure is generally not recommended.

Pallets are normally positioned with a 50mm overhang of the front and rear beams in pallet racking. If safety back stops are provided, then they should be located a minimum of 50mm behind the nominal location of the pallet so that they should only be impacted in an accidental situation (see Figure 1).

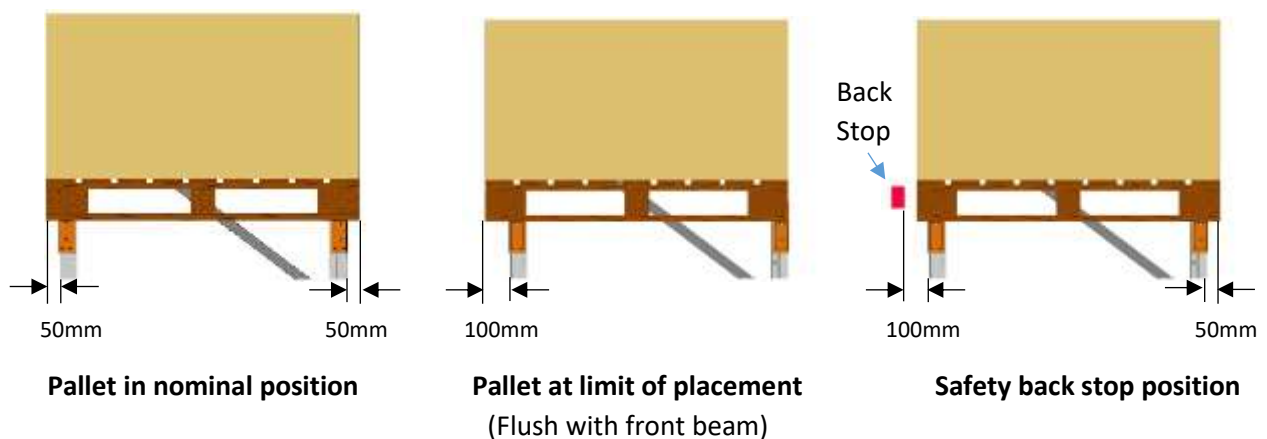


Figure 1. Pallet location and minimum clearances between unit load and safety back stop

Safety back stops must not be seen as a placement aid by the operators and this should be clearly stated during the fork truck operator training. The racking inspection regime should check that the rear gap between the pallet and the backstop is provided and maintained in practice.

The safety back stops should be designed as a replaceable warning device, which will give way without failure of any structural rack component.

The design of safety back stops fitted to the beam members should include any effect on the beam, including any torsion and horizontal bending.

Retrofitting safety back stops in existing racking normally requires the space between back-to-back runs to be increased by, at least, the space occupied by the back stop otherwise clearances are compromised (see Figure 2).

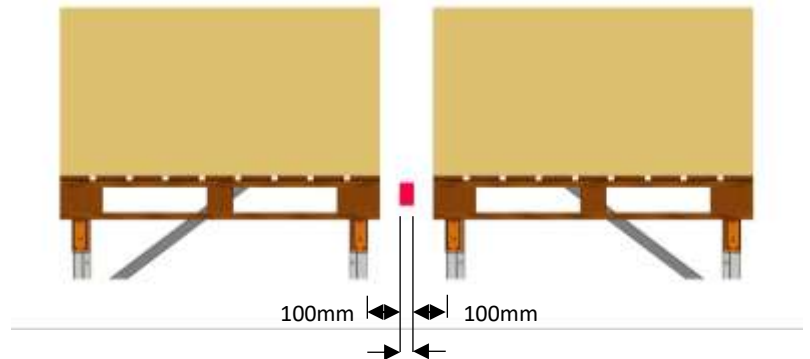


Figure 2. Extra space required for back stop

Buffer back stop:

Buffer back stops, if required, should be designed for the loads stated by the Specifier. The racking structure shall also be designed to transmit the loads to the floor slab, including any effects on the upright floor fixings.

Buffer back stops do not require any clearance from the the nominal location of the pallet (see Figure 3). However, retrofitting buffer back stops will compromise the racking design.

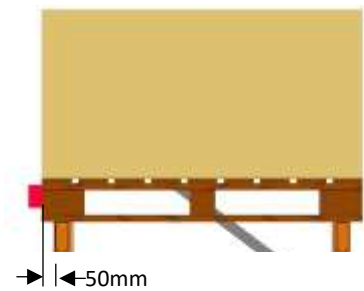


Figure 3. Buffering back stop position

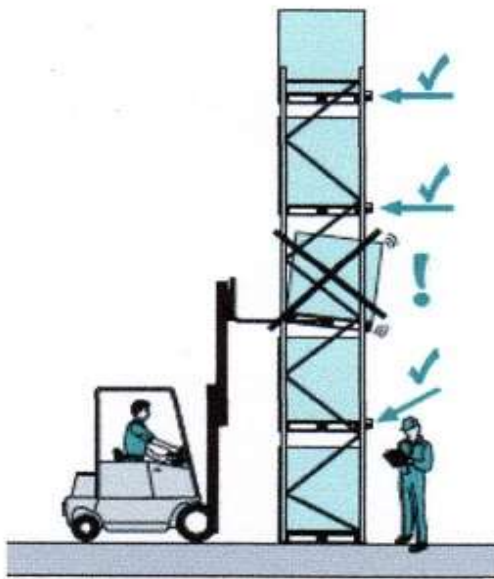
General:

The components used for back stops are not universal and different forms may be supplied depending upon the requirements of the backstop. Some typical examples are shown in the photographs below.



Safety mesh or netting:

If there is any chance of a pallet or a part of a load falling onto an area where pedestrians are present, a risk assessment should be carried out to determine the level of protection required. This will probably require the use of a safety mesh or netting (see Figure 4).



A situation requiring a risk assessment



An example of a safety mesh protection system

Figure 4. Safety mesh

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