



# SLOVENSKI STANDARD

## oSIST prEN 18121:2025

01-februar-2025

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**Načrtovanje in uporaba prostostojećih jeklenih zaščitnih regalov za nastavljive paletne regale - Pokončne zaščite in okvirne pregrade - Zahteve in prekusne metode**

Design and use of free standing steel rack protection for adjustable pallet racking - Upright protectors and frame barriers - Requirements and test methods

Auslegung und Verwendung von Anfahrerschutz für verstellbare Palettenregale - Pfosten- und Rahmenschutz - Anforderungen und Prüfverfahren

Conception et utilisation de protections en acier pour rayonnages à palettes réglables - Protecteurs des montants et des échelles - Exigences et méthodes d'essai

**Ta slovenski standard je istoveten z: prEN 18121**

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**ICS:**

53.080

Skladiščna oprema

Storage equipment

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 18121**

December 2024

ICS 53.080

English Version

## Design and use of free standing steel rack protection for adjustable pallet racking - Upright protectors and frame barriers - Requirements and test methods

Conception et utilisation de protections en acier pour rayonnages à palettes réglables - Protecteurs des montants et des échelles - Exigences et méthodes d'essai

Auslegung und Verwendung von Anfahrschutz für verstellbare Palettenregale - Pfosten- und Rahmenschutz - Anforderungen und Prüfverfahren

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 344.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## **European foreword**

This document (prEN 18121:2024) has been prepared by Technical Committee CEN/TC 344 “Steel static storage systems”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN enquiry.

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**prEN 18121:2024 (E)****Introduction**

The purpose of this document is to provide information on the requirements, design, use and test procedures of steel upright protectors and steel frame barriers, not connected to the rack (free standing), for pallet racking.

Such protection reduces the risk of contact to uprights and upright frame bracing members depending on the level of impact, but are usually incapable of stopping a travelling truck.

Adequate protection depends on a number of parameters, to be defined as part of a risk assessment.

Appropriate operator training and safety measures avoid contact caused by fork-lift trucks or other moving equipment against rack-uprights.

As requirements and test procedures given in this document base on free-standing steel upright protectors and free-standing steel frame barriers, these requirements and test procedures may be taken as guideline for non-steel products, whereas a declaration of those products against this document is explicitly not intended.

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## 1 Scope

This document defines requirements and test methods for free standing and floor fixed steel upright protector and free standing and floor fixed steel frame barriers for pallet racking.

Frame barriers and upright protectors, according to this document, are not connected to the rack. Frame barriers and upright protectors connected to the racking are excluded from this document.

This document does not apply to:

- devices for traffic- or driveways
- guide rails and guide-ins;
- safety and buffering backstops;
- handrails and stair rails;
- protection from falls at height;
- pick and deposit (P and D) stations;
- protection requirements for dynamic storage; including mobiles;
- protection requirements for crane racking;
- sacrificial legs.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15629, *Steel static storage systems - Specification of storage equipment*

EN 15512, *Steel static storage systems - Adjustable pallet racking systems - Principles for structural design*

EN 15620, *Steel static storage systems - Tolerances, deformations and clearances*

EN 15635, *Steel static storage systems - Application and maintenance of storage equipment*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **frame barrier**

free standing and floor fixed steel component(s) to protect the lower part of upright frames at the ends of runs and at passageways against accidental impact from mechanical handling equipment (MHE)

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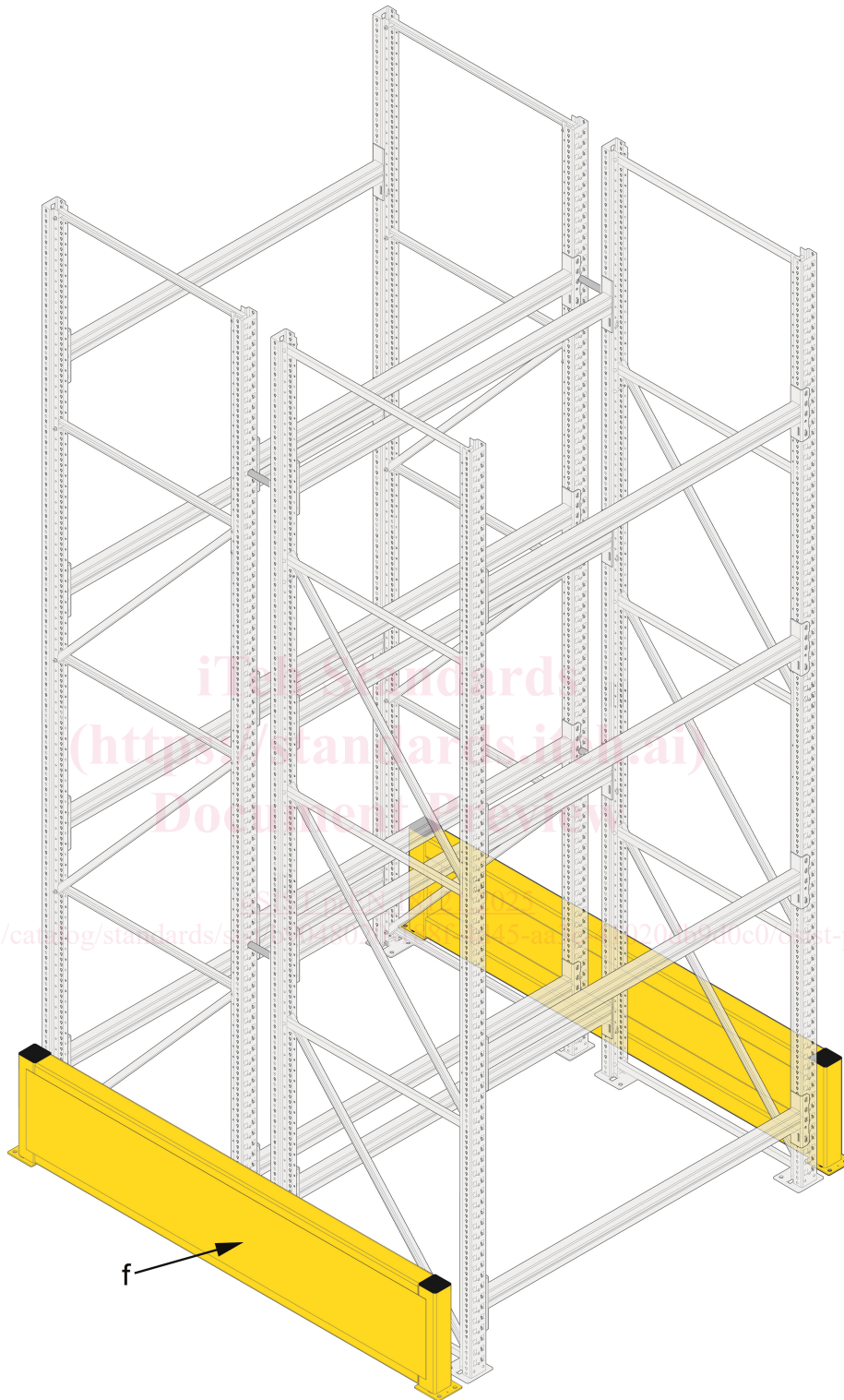
Note 1 to entry: See Figure 1.

Note 2 to entry: Figure 1a shows a possible combination of a frame barrier with an upright protector. According to the design of the frame barrier it could also be installed by itself (see Figure 1b).

**Key**

- m frame barrier
- g upright protector



**a) Examples of a frame barrier in combination with an upright protector****Key**

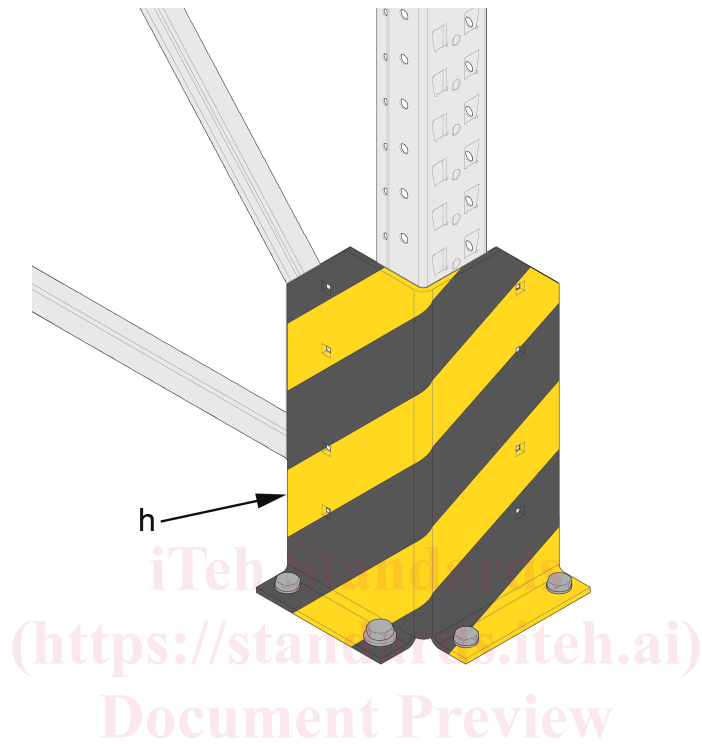
f frame barrier

**b) Example of a frame barrier****Figure 1 — Examples of frame barriers**

**prEN 18121:2024 (E)****3.2****upright protector**

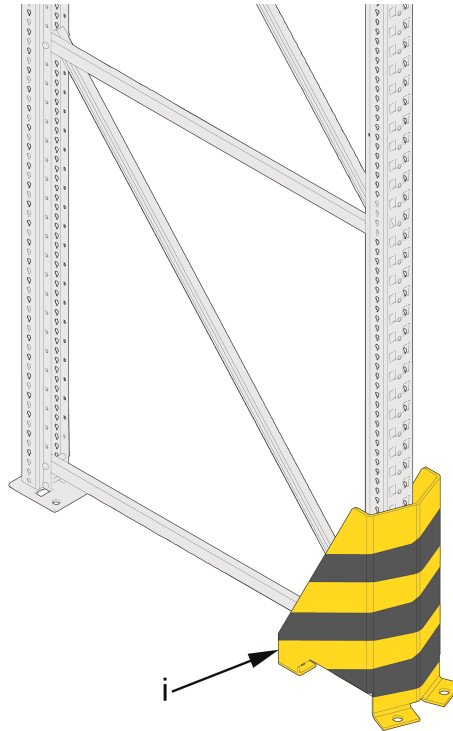
free standing and floor fixed steel component to protect the lower part of uprights against accidental impact from mechanical handling equipment (MHE)

Note 1 to entry: See Figure 2.

**Key**

h upright protector (for corner protection)

**a) Example of an upright protector (for corner protection)**



#### Key

- i upright protector (in-aisle protection)

#### b) Example of an upright protector (for in-aisle protection)

Figure 2 — Examples of upright protectors

## 4 Requirements

### 4.1 Specification, design and inspection / maintenance

Frame barriers and upright protectors shall be specified according to EN 15629 and designed in accordance with EN 15512 and EN 15620.

NOTE 1 Annex A provides further information about the selection criteria of rack protection.

Installation instructions shall include instructions for person(s) responsible for storage equipment safety in accordance with EN 15635 and training information of the staff / operator.

Inspection and maintenance shall be in accordance with EN 15635.

NOTE 2 Rack protection included in the rack design is part of the design of the rack.

### 4.2 Frame barrier

Frame barriers can optionally be located close to the rear uprights of the end frame and frame bracing at each side of a passage way (see Figure 3) to provide

- a visual warning,
- a physical barrier for the front and side of the corner upright for mechanical handling equipment entering an aisle