

**Steel static storage systems - Specification of
storage equipment**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15629:2008 sisaldab Euroopa standardi EN 15629:2008 ingliskeelset teksti.

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English Version

Steel static storage systems - Specification of storage equipment

Systèmes de stockage en acier - Spécification du système
de stockage

Ortsfeste Regalsysteme aus Stahl - Spezifikation von
Lagereinrichtungen

This European Standard was approved by CEN on 5 October 2008.

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Foreword

This document (EN 15629:2008) has been prepared by Technical Committee CEN/TC 344 "Steel static storage systems", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2009, and conflicting national standards shall be withdrawn at the latest by May 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

0.1 Racking and Shelving as work equipment

When specifying the design requirements for racking and shelving, there should be an awareness of national legislation regarding work equipment. This legislation is based upon the European Directives:

- a) 89/391/EEC: "Concerning measurements to promote the improvement of safety and health for the use of work equipment by workers at work";
- b) 89/655/EEC: "Concerning the minimum safety and health requirements for the use of work equipment by workers at work"

This European Standard should be considered in conjunction with the application and maintenance of storage equipment (See EN 15635).

0.2 Structural Eurocodes for load bearing structures and buildings

The determination of the safe load bearing capacity of racking and shelving is a structural engineering task and therefore the Eurocodes are relevant, particularly EN 1993-1-1 and EN 1993-1-3, for the design. The codes and guidelines worked out by CEN/TC 344 are intended to amplify and clarify the requirements of the Eurocodes, since they particularly apply to design, while specification, installation, application and maintenance are considered as special requirements for racking and shelving products. This European Standard covers specification.

0.3 Additional European standards for racking and shelving

Due to the differences in the shape of structural components, detailing and connection types, additional technical information to the Eurocodes is required in order to provide state of the art guidance. This guidance is for the client or the consultant specifying the requirement, the practising engineer involved in the design, the installer building the structure and the user who maintains the structure in a sound condition suitable for safe use throughout its working life.

This, together with the need to provide harmonized design rules, is the reason why the European Racking Federation (ERF) has taken the initiative with the CEN/TC 344. This Technical Committee is preparing a number of European standards for specific types of racking and shelving used in specific applications as follows:

prEN 15512, Steel static storage systems — Adjustable pallet racking systems — Principles for structural design

EN 15620, Steel static storage systems — Adjustable pallet racking — Tolerances, deformations and clearances

EN 15635, Steel static storage systems — The application and maintenance of storage equipment

In drafting these documents, a liaison with other CEN TC's has been carried out as appropriate.

0.4 Additional information specific to this document

CEN/TC 344 documents may be useful for design cases not covered by the Eurocodes (other structures, other actions, other materials) and to serve as a reference document for other CEN TC's concerning design matters.

This European standard is applicable to:

- a) specifiers of storage equipment;
- b) committees drafting design-related product, testing and execution standards;
- c) clients (e.g. for the formulation of their specific requirements);
- d) designers and constructors;
- e) relevant authorities.

As part of the specification process, reference to prEN 15512, EN 15620 and EN 15635 ensures that both the user and the designer are aware of the constraints in each other's area and allows an effective design to be produced.

1 Scope

This European Standard supplies guidelines for the technical specification to allow the design of racking and shelving in its various forms such as adjustable pallet racking (APR), crane serviced racking, drive-in racking (DIR), cantilever racking and shelving systems, including their various forms of construction, using manually operated and controlled mechanical handling systems. Some other forms of storage equipments are only partially covered and further consideration, beyond the scope of this document, may be required.

This European Standard gives guidance for the specifier of storage systems to coordinate suppliers of all equipment including individual responsibilities.

This European Standard does not cover storage equipments manufactured from materials other than steel (except for certain accessories) and equipment intended to be used for domestic storage purposes.

2 Normative references

The following referenced documents are indispensable for the application 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.

prEN 15512, *Steel static storage systems — Adjustable pallet racking systems — Principles for structural design*

EN 15620, *Steel static storage systems — Adjustable pallet racking — Tolerances, deformations and clearances*

EN 15635, *Steel static storage systems — The application and maintenance of storage equipment*

3 Terms and definitions

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

3.1

adjustable pallet racking

APR

steelwork structure consisting of frames and beams adjustable in height, specifically designed to support pallets and unit loads

3.2

bay load

total allowable weight of all the unit loads in a bay of racking not including any unit loads that may be stored on the floor of the bay

3.3

compartment load

load which can be loaded into one compartment of a racking or shelving structure from one side

3.4

counterbalanced forklift truck

rider-operated type of forklift truck that carries its load cantilevered forward of its front main wheel axle and is stabilized with a counter weight at the rear of the truck

NOTE This type of truck is a general-purpose truck and may be used in wide-aisle pallet racking systems.