



SLOVENSKI STANDARD
oSIST prEN 1303:2024
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**Stavbno okovje - Profilni cilindri in Master-Key sistem (MKS) za ključavnice -
Zahteve in preskusne metode**

Building hardware - Cylinders and Master-Key-Systems (MKS) for locks - Requirements and test methods

Schlösser und Baubeschläge - Schließzylinder und Schließanlagen für Schlösser - Anforderungen und Prüfverfahren

Quincaillerie pour le bâtiment - Cylindres de serrures et systèmes de fermeture mécaniques - Prescriptions et méthodes d'essai

Ta slovenski standard je istoveten z: prEN 1303

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Building hardware - Cylinders and Master-Key-Systems (MKS) for locks - Requirements and test methods

Quincaillerie pour le bâtiment - Cylindres de serrures
et systèmes de fermeture mécaniques - Prescriptions
et méthodes d'essai

Baubeschläge - Schließzylinder und Schließanlagen
(SLA) für Schlösser - 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 33.

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prEN 1303:2024 (E)**European foreword**

This document (prEN 1303:2024) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1303:2015.

In comparison with the previous edition, the following significant changes have been made:

- a) the Scope has been extended to include cylinders suitable for use in locking systems, Master key systems (MKS);
- b) a new normative Annex F, Cylinders suitable for use in locking systems, has been added;
- c) definitions related to MKS have been added;
- d) requirements and evaluation methods for manipulation have been added;
- e) classification (digit 3) has changed from Door mass to Mechanical coding;
- f) the definition of ‘pulling screws’ has changed and an informative Annex G has been added;
- g) figures have been renumbered.

The European Federation of Associations of Lock and Builders Hardware Manufacturers, ARGE, collaborated in the drafting of this document.

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Introduction

This document for mechanic locking cylinders and locking systems specifies requirements and test methods for functionality, durability, environmental and security conditions for use on doors in buildings or related to buildings.

The aim of the test methods described in this document is to keep human influence on the test results to a minimum, thus improving reproducibility. This document does not specify any particular design or installation.

Suitability for use on fire resistance or smoke control doors is not essential in every situation; the manufacturer has the option to state if the cylinder conforms to these additional requirements according to Annex A.

Requirements and procedures to achieve and maintain protection of data and sensitive information related to mechanical Master Key Systems is given in CEN/TS 17814.

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prEN 1303:2024 (E)**1 Scope**

This document applies to cylinders and their keys for locks that are normally used in buildings and are designed to be used with cylinders, where the locks have an operational torque of maximum 1,5 Nm.

This document specifies performance and other requirements for the strength, security, durability, performance and corrosion resistance of cylinders and their original keys. It also specifies cylinders suitable for use in locking systems, Master key systems (MKS).

It establishes one category of use, three grades of durability, two grades for mechanical coding (single cylinders and MKS), three grades for fire and four grades corrosion resistance, all based on performance tests, as well as thirteen grades of key related security based on design requirements and five grades on performance tests that simulate attack.

This document includes tests of satisfactory operation at a range of temperatures. It specifies test methods to be used on cylinders and their protective measures linked with these cylinders and recommended by the manufacturer.

Corrosion resistance is specified by reference to the requirements of EN 1670 on corrosion resistance of building hardware.

The suitability of cylinders for use on fire or smoke-door assemblies is determined by fire performance tests conducted in addition to the performance testing required by this document. Since suitability for use on fire doors is not essential in every situation, the manufacturer has the option to state if the cylinder conforms to these additional requirements or not. If so claimed, cylinders will comply with the requirements in Annex A.

Assessment of fire resistance and smoke control (grade A and grade B) is beyond the scope of this document.

On occasions there can be a need for additional functions within the design of the cylinder. Purchasers should satisfy themselves that the products are suitable for their intended use.

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 636, *Plywood — Specifications*

EN 1634-1, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware — Part 1: Fire resistance test for door and shutter assemblies and openable windows*

EN 1634-2, *Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware — Part 2: Fire resistance characterisation test for elements of building hardware*

EN 1634-3, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware — Part 3: Smoke control test for door and shutter assemblies*

EN 1670, *Building hardware — Corrosion resistance — Requirements and test methods*

EN 1906:2012, *Building hardware — Lever handles and knob furniture — Requirements and test methods*

EN 12164:2016, *Copper and copper alloys — Rod for free machining purposes*

ISO 10899, *High-speed steel two-flute twist drills — Technical specifications*

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

active moveable detainer

permutable blocking element, which needs to be in the aligned or shearline position in order to unblock the cylinder and which may stay at least in one step before and in one step after the aligned or shearline position where the cylinder stays in the blocked condition

3.2

cylinder

device, usually distinct from its associated lock or latch, operated by a key

3.3

cam

component of the cylinder to provide the movement to effect locking

3.4

central locking cylinder

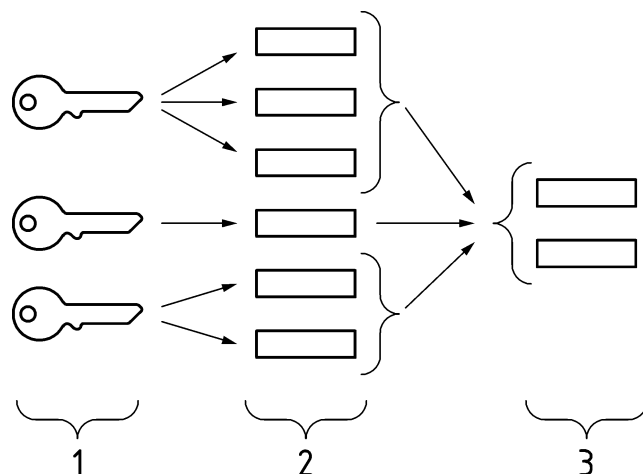
locking system is a coded cylinder where a number of different keys operates this cylinder

3.5

central locking system

locking system which has only one level of coded keys operating different cylinders whereby all keys operate central cylinders

Note 1 to entry: See Figure 1.

prEN 1303:2024 (E)**Key**

- 1 individual key
- 2 locking cylinder
- 3 central locking cylinder

Figure 1— Example for a central locking system**3.6****direct code**

marking on the key where the key steps can be determined without reference to another data source

3.7**effective differ**

difference between cylinders of similar design, achieved only by the movable detainer, which allows each cylinder to be operated only by its own key

3.8**grand master key system****GMK-system**

locking system which has 3 or more levels of coded keys operating different cylinders

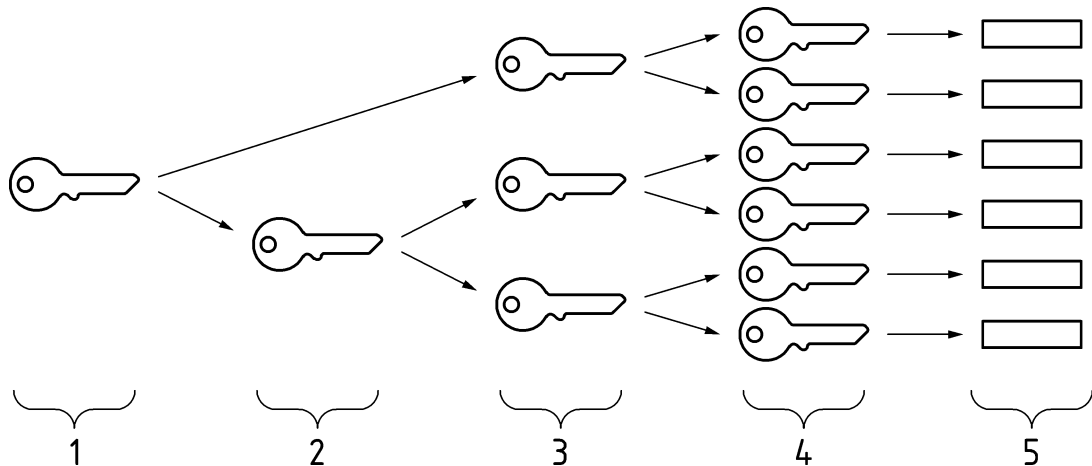
Note 1 to entry: See Figure 2.

Note 2 to entry: The combination of grand master key system with a central locking system is possible.

Note 3 to entry: Grand master key (GMK) operates all cylinders within a GMK system.

Note 4 to entry: Sub-master key (SMK) operates a defined group of cylinders within a GMK system.

Note 5 to entry: The combination of grand master key system with a central locking system 3.5 is possible.

**Key**

- 1 grand Master key
- 2 sub-Master Key (level 1)
- 3 sub-Master Key (level n)
- 4 individual keys locking cylinders

Figure 2 — Example of a (structured) Grand master key system

3.9**key**

separate device corresponding to the cylinder, which can mechanically operate the cylinder

3.10**keyway**

aperture extending along the whole or part of the length of the plug into which the key is inserted

3.11**legitimation ID**

security protocol issued by the manufacturer of a locking system that indicates to the manufacturer a reference to allow the holder to obtain additional keys, cylinders, lock chart, or locking system data

EXAMPLES

- Security card
- Security letter (document)
- Certificate of Eligibility
- Document of ownership
- Certificate of legitimation
- Electronic Legitimation

3.12**lock chart**

describes the interaction with all keys and cylinders in the locking system

prEN 1303:2024 (E)**3.13****locking system**

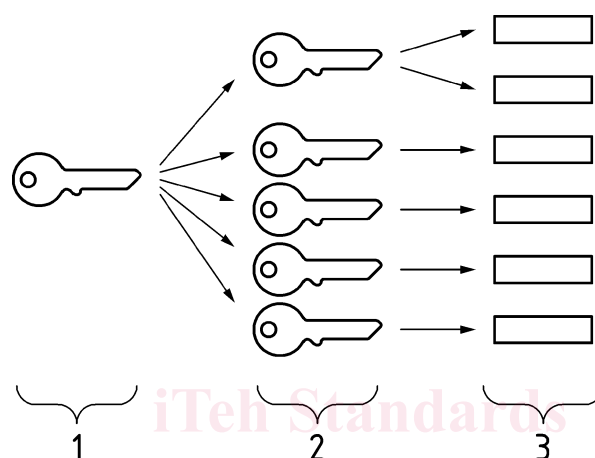
combination of different coded cylinders and keys that are functionally related to each other

3.14**master key system****MK-system**

locking system which has 2 levels of coded keys operating different cylinders whereby the master key can operate all cylinders

Note 1 to entry: See Figure 3.

Note 2 to entry: The combination of master key system with a central locking system 3.5 is possible.

**Key**

- 1 master key
- 2 individual key
- 3 locking cylinder

Figure 3 — Example for a master key system

3.15**moveable detainer**

permutable part of the mechanism of a cylinder which should first be moved by the key into a pre-determined position before the key and/or plug can move

3.16**passive moveable detainer**

blocking elements, which needs to be in the aligned or shearline position to unblock the cylinder and which may stay at least in one step before or alternatively in one step after the aligned or shearline position where the cylinder stays in the blocked condition

3.17**plug**

part of a cylinder that can be moved when the proper key is used

3.18**steps**

characteristics of a key which operates movable detainers