# SLOVENSKI STANDARD
# oSIST prEN 1125:2017

**01-januar-2017**

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**Ključavnice in stavbno okovje - Zapore z vodoravnim potisnim drogom za zasilne izhode ob paniki - Zahteve in preskusne metode**

Build hardware - Panic exit devices operated by a horizontal bar, for use on escape routes - Requirements and test methods

Schlösser und Baubeschläge - Paniktürverschlüsse mit horizontaler Betätigungsstange für Türen in Rettungswegen - Anforderungen und Prüfverfahren



Quincaillerie pour le bâtiment - Fermetures anti panique manœuvrées par une barre horizontale, pour portes situées sur les voies d'évacuation - Prescriptions et méthodes d'essais



**Ta slovenski standard je istoveten z:** **prEN 1125**

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| 91.190 | Stavbna oprema | Building accessories |

**oSIST prEN 1125:2017** **en,fr,de**

EUROPEAN STANDARD

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# DRAFT prEN 1125

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ICS 91.190

Will supersede EN 1125:2008

English Version

# Build hardware - Panic exit devices operated by a horizontal bar, for use on escape routes - Requirements and test methods

Quincaillerie pour le bâtiment - Fermetures anti-panique manœuvrées par une barre horizontale, pour portes situées sur les voies d'évacuation - Prescriptions et méthodes d'essais

Schlösser und Baubeschläge - Paniktürverschlüsse mit horizontaler Betätigungsstange für Türen in Rettungswegen - 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.

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
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (prEN 1125:2016) 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 1125:2008.

The major changes in this revision are as follows:

— different sealing forces have been introduced for classification of the durability (2nd digit);

— a new bar type C has been introduced (9th digit);

— an additional grade has been introduced for release force, in relation with safety classification (5th digit);

— definition of field of door application has been modified (10th digit);

— safety requirements about Outside Access Device have been added;

— security grades have been added (7th digit);

— durability tests have been clarified;

— a pictogram to recognise the active leaf has been added.



A full contribution to the preparation of this European Standard has been made by The European Federation of Associations of Lock and Builders Hardware Manufacturers (ARGE).

This European Standard is part of a group of standards dedicated to building hardware products. It is one of a group of standards for exit devices and exit systems developed by Technical Committee CEN/TC 33.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

# Introduction

Experience relating to escape from buildings, fire and/or smoke hazards and general safety has made it desirable that doors, in public areas, public buildings, places of public entertainment, shops etc, or those that have to be operated in a panic situation, be fitted with panic exit devices operated by a horizontal bar to common European Standard specifications.

The main purpose of the performance requirements contained in this European Standard is to give safe and effective escape through a doorway with one single operation by hand and/or body pressure to release the panic exit device, with minimum effort and without prior knowledge of the panic exit device.

In a panic situation, a group of people will react differently from an individual. When two or more people are rushing to an exit door located on an escape route, probably in darkness and/or smoke, it is possible that the first one to reach the door shall not necessarily operate the panic exit device, but can push the surface of the door leaf (door leaf under pressure) while other people shall be trying to operate the horizontal bar by hand or body pressure. See Figure 1.

Whilst reasonable external security shall be provided by the panic exit devices covered in this standard to avoid potential misuse of the device (chains, bolts, etc.), the main objective is to enable a door to be opened at all times by hand or body pressure along its inside face on the panic exit device and not requiring the use of a key or any other object.

The performance tests incorporated in this European Standard are considered to be reproducible and, as such, should provide a consistent and objective assessment of the performance of these panic exit devices.



Where emergency exit devices are required for situations in which people are familiar with the use of the door hardware in their surroundings, where exit doors are required to be inwardly-opening, and/or where a panic situation is unlikely to develop, reference can be made to EN 179, covering emergency exit devices. See definition 3.1.11.



Where additional security is required for exit doors, reference should be made to EN 13637 covering electrically controlled exit systems, for use on escape routes. See Bibliography.

Due to the wide range of panic exit devices, the reader is advised to refer to the scope and the detailed contents of this European Standard for coverage but, for information and general guide, this revised European Standard now deals with:

— panic exit devices designed to be used in panic situations: type A (push bar), B (touch bar) or C (pivot touch bar);

— panic exit devices for use on hinged or pivoted door leaves only;

— panic exit devices for use on double leaf doorsets (see 7.10);

— two categories of panic exit device projection in order to maximize the effective width of the escape route, and minimize the projection from the door leaf face where either or both of these criteria are of importance (see 4.2.1.4);

— two specific designs of panic exit devices: those designed for use on single leaf doors only, and those specifically designed for use on single leaf doors and/or double leaf doorsets.

This European Standard does not cover the following:

— any particular design of panic exit devices, and only such dimensions as are required for safety reasons are specified;

— specific panic exit devices intended for use by the severely disabled (due to the wide range of disabilities, such panic exit devices and their performances should be agreed between specifier and manufacturer);

— emergency exit devices operated by a lever handle or push-pad (see EN 179) or electrically controlled exit systems (EN 13637).



**Figure 1 — A panic situation**



NOTE A lock, which is a part of a Panic Exit Device conforming to this standard can at the same time be in accordance with EN 179, EN 12209, prEN 15685, EN 13637 or EN 14846.

# 1 Scope

This European Standard specifies requirements for the manufacture; performance and testing of panic exit devices mechanically operated by a horizontal bar, for the purpose of achieving a safe exit under a panic situation on escape routes.

This European Standard covers panic exit devices which are either manufactured and placed on the market in their entirety by one manufacturer or assembled from sub-assemblies produced by more than one manufacturer and subsequently placed on the market as a kit in a single transaction.

# 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 179, *Building hardware — Emergency exit devices operated by a lever handle or push pad, for use on escape routes — Requirements and test methods*

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 1670:2007, *Building hardware — Corrosion resistance — Requirements and test methods*

# 3 Terms, definitions, symbols and abbreviations

## 3.1 Terms and definitions

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

**3.1.1**
**active leaf**
leaf of a multi-leaved hinged or pivoted doorset intended to be moved first to provide opening

**3.1.2**
**automatic re-latching device**
part of a panic exit device to enable the automatic securing of a door leaf in the closed position, after it has been operated

Note 1 to entry: For example, a spring loaded latch bolt or an automatically thrown bolt head.

**3.1.3**
**bar**
horizontal part of a panic exit device which, when pushed, shall operate the mechanism

**3.1.4**
**bolt head**
part of a panic exit device that engages with the keeper to secure the door in the closed position

**3.1.5**
**deadbolt**
part of a panic exit device that can be deadlocked manually by key or automatically and which is released when the exit device is operated

Note 1 to entry: A panic exit device can be designed to incorporate additional deadbolt(s) thrown by a key or thumbturn, used only at certain periods of time for additional security.

**3.1.6**
**dogging mechanism**
part of a panic exit device for holding the bolt head(s) in the withdrawn position until manually reset

**3.1.7**
**doorset**
complete unit consisting of a door frame and door leaf (or leaves) being hinged or pivoted vertically in a frame, supplied with relevant building hardware

Note 1 to entry: The meeting stiles of double leaf doorsets can be either plain or rebated.

Note 2 to entry: A double leaf doorset where only one leaf is equipped with a panic exit device is considered to be a single panic exit doorset.



Note 3 to entry: A double leaf doorset where the first opening leaf is equipped with a panic exit device conforming to EN 1125 and the second opening leaf is equipped with an emergency exit device conforming to EN 179 is considered to be a double emergency exit doorset, or a single panic exit door.



**3.1.8**
**double leaf doorset panic exit device**
panic exit device designed for use on the leaves of double leaf doorsets, such that the operation of either horizontal bar shall release at least the door leaf to which it is fitted

**3.1.9**
**effective length of bar**
length of the bar (dimension X) including any member to which the bar is fixed and which shall itself yield to hand or body pressure thereby causing the panic exit device mechanism to operate (See Figure 5)

**3.1.10**
**effective width of the door frame**
un-obstructed width of the escape route when the door is in the locked position

**3.1.11**
**emergency exit device**
exit device conforming to EN 179, intended for emergency purposes where panic situations are not likely to arise, to give safe and effective escape through a doorway with one single operation to release the emergency exit device, although this can require prior knowledge of its operation

Note 1 to entry: An emergency exit device contains bolt head(s) that engage(s) with a keeper(s) in the surrounding door frame and/or floor for securing a door when closed. The bolt head(s) can be released by the lever handle or the push pad positioned on the inside face of the door.

Note 2 to entry: Exit devices conforming to EN 179 are intended for emergency purposes where panic situations are not likely to arise. Where a pressure against the door caused by people in a panic is foreseen, then a panic exit device conforming to EN 1125 should be used.

Note 3 to entry: Emergency exit devices are suitable also for inwardly opening single leaf exit doors, where local building regulations allow.

**3.1.12**
**exit door**
door on an escape route equipped with an exit device conforming to EN 179 and/or EN 1125

**3.1.13**
**field of door application**
door configurations for which the panic exit devices are designed and claimed by the manufacturer

**3.1.14**
**functional test**
assessment made by operating the test door (opening or closing) and/or operating any element of the exit device

**3.1.15**
**inactive leaf**
last opening and first closing leaf of a hinged or pivoted double leaf doorset with a panic or emergency exit function



**3.1.16**
**inside**
face of the door on which the bar is fitted for operating a panic exit device in order to exit towards the escape direction



**3.1.17**
**keeper**
part of a panic exit device such as a strike, a socket or other fitting with which the bolt head(s) engages

**3.1.18**
**latch bolt**
spring-loaded movable part of a lock that usually engages a component fixed to a frame, and withdraws into a lockcase that automatically engages a locking plate to keep the door leaf in its closed position

**3.1.19**
**limits of door leaf mass and dimensions**
dimensional and mass limits of the door leaves for which the panic exit devices are designed

**3.1.20**
**manufacturer**
producer, distributor, importer or any organization that has legal responsibility for placing the product on the market

**3.1.21**
**measurement**
assessment made by using a measuring tool

**3.1.22**
**outside**
face of the door opposite to the face on which the bar for operating the panic exit device is situated

**3.1.23**
**outside access device**
optional part of a panic exit device for opening an exit device from the outside

Note 1 to entry: An outside access device can be supplied with optional re-entry function.

**3.1.24**
**panic exit device**
exit device conforming to EN 1125 intended to give safe and effective escape through a doorway with minimum effort and without prior knowledge of the panic exit device allowing safe escape even in the event of the door being under pressure such as by people being pushed against the door in the direction of escape

Note 1 to entry: A panic exit device contains bolt head(s) that engage(s) with a keeper(s) in the surrounding door frame and/or floor for securing a door when closed. The bolt head(s) can be released by the bar positioned horizontally across the inside face of the door when it is moved anywhere along its effective length in the direction of travel and/or in an arc downwards.

Note 2 to entry: Panic exit devices are intended for use where panic situations can arise. In a panic situation, a group of people shall react differently from an individual. When two or more people are rushing to an escape door, probably in darkness and/or smoke, it is possible that the first one to reach the door shall not necessarily operate the panic exit device, but can push the surface of the door (door under pressure) while other people shall be trying to operate the horizontal bar by hand or body pressure.



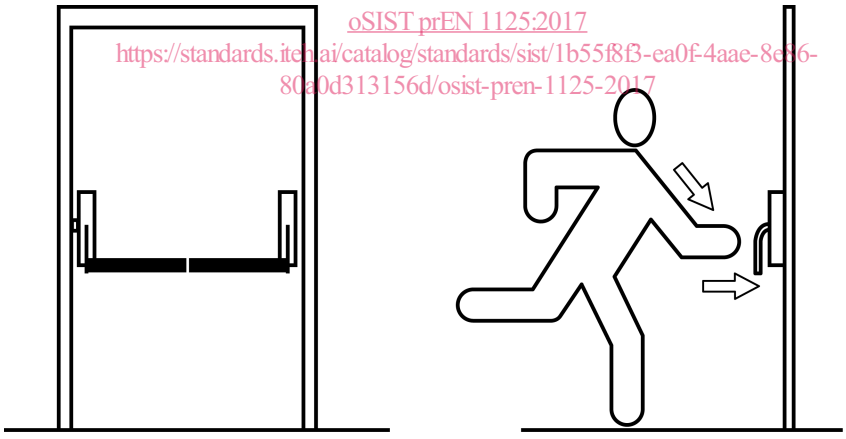


**Figure 2 — Panic exit device with type A bar operation (push-bar)**

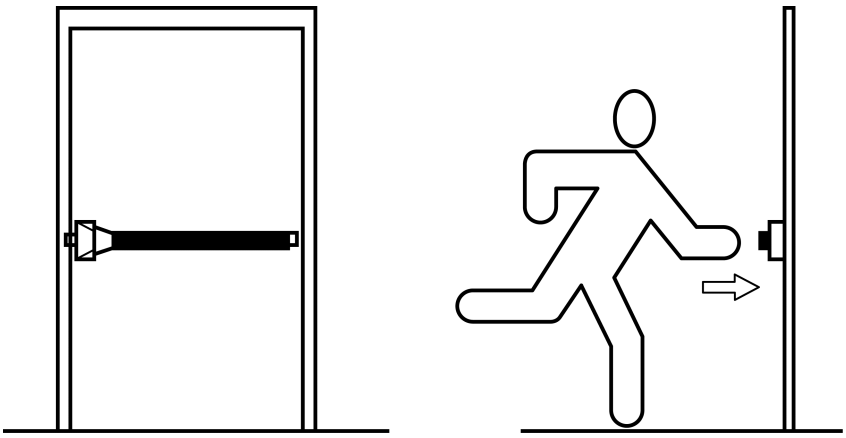


**Figure 3 — Panic exit device with type B bar operation (touch-bar)**

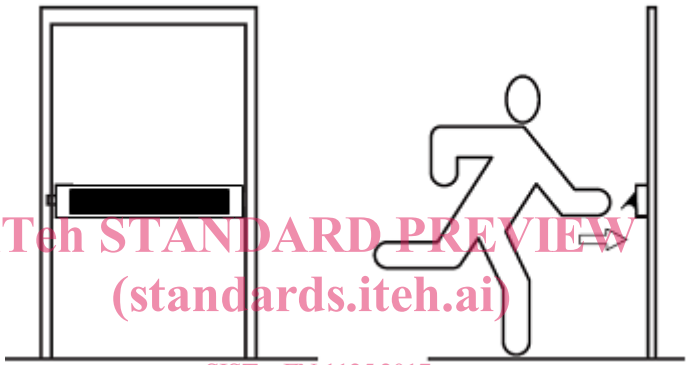




**Figure 4 — Panic exit device with type C bar operation (Pivot touch-bar)**

**3.1.25**
**passive leaf**
lockable leaf equipped with locking devices (e.g. barrel bolts, flushed bolts), only opened in case of need , without any emergency or panic function

**3.1.26**
**pivot touch bar**
activating horizontal bar of a panic exit device (type C), designed to be part of a chassis or other mounting assembly, integrating a pivot, that operates in the direction of exit

**3.1.27**
**push-bar**
activating horizontal bar of a panic exit device (type A), designed to be fixed between pivoted support brackets that operates in the direction of exit and in an arc downwards (See Figure 2)

**3.1.28**
**re-entry function**
optional function that allows, for safety reasons, an individual to re-enter a room from outside without a key once the inside operating element has been actuated. After having released the device from the inside, any handle (or other means) to operate the exit device from outside remains unlocked until manually reset by key or other means

**3.1.29**
**release force**
force applied to the bar in a direction perpendicular to the door face, which is necessary to withdraw or release all the bolt head(s) from the keeper(s), such that the door can be opened

**3.1.30**
**sealing force**
force which could be generated by the seals, if any, when the door leaf is in the closed position, and which could influence the locking elements when operated

**3.1.31**
**sub-assemblies**
pre-assembled set of components that form one part of the panic exit device, for example: pullman catches, operating boxes and lock cases

**3.1.32**
**touch-bar**
activating horizontal bar of a panic exit device (type B), designed to be part of a chassis or other mounting assembly, that operates in the direction of exit (see Figure 3)

**3.1.33**
**vertical rod**
extension of the bolt head of a panic exit device that links it to the horizontal bar via the operating mechanism



**3.1.34**
**visual inspection**
assessment made with the naked eye, adjusted for normal vision and use of the appropriate measurement equipment



## 3.2 Symbols and abbreviations

### 3.2.1 List of different forces used in this standard

F3: Sealing Force

F10: Dynamic Closing Force

F11: Release Force under influence of F3

F12: Release Force under load of 1000N

F13: Security Force

F14: Abuse Force

### 3.2.2 Abbreviations used in this standard

AVCP Assessment and Verification of Constancy of Performance) (previously: attestation of conformity)

DoP Declaration of Performance

FPC Factory Production Control

NPD No Performance Determined

CWFT Classification Without Further Testing

OAD Outside Access Device

CPR Regulation (EU) no. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

# 4 Product characteristics

## 4.1 General

The characteristics below are listed according to the essential characteristics of the panic exit device.

The numbering of relevant clause of testing each characteristic in 5 corresponds to the one in 4.

## 4.2 Ability to release

### 4.2.1 Design characteristics

#### 4.2.1.1 Exposed edges and corners

A panic exit device shall have all edges and exposed corners, that are likely to cause injury to persons using the exit, rounded to a radius of not less than 0,5 mm.

#### 4.2.1.2 Double leaf doorset

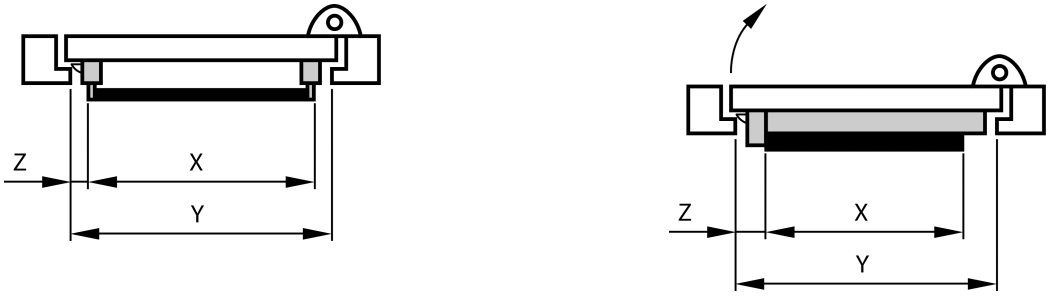
The design of a panic exit device intended for use on double leaf doorset leaves shall allow both leaves to be opened simultaneously and to swing freely in the direction of exit once the door has been released.



NOTE 1 The construction and installation of a specific doorset assembly, including choice of hinges, leaf thickness and leaf width, can have a significant effect on the ability of both leaves to open simultaneously. These issues are beyond the scope of this European Standard. Additional guidance is given in A.5.



NOTE 2 For example, on rebated double doors, operating the panic exit device on the inactive leaf will release both the inactive and the active leaf.




**Key**

X is the effective length of horizontal bar

Y is the width of the door leaf

**Figure 5 — Type A, B and C panic exit devices**

#### 4.2.1.3 Bar length

The design of a panic exit device shall be such that the effective length (dimension X) of the horizontal bar shall be as near as possible to the width (dimension Y) of the door leaf for which it is recommended, but no less than 60 %.