

Panic and Emergency Exit Devices

BS EN 1125: 2008 & BS EN 179: 2008





dhf Best Practice Guide: Panic and Emergency Exit Devices

BS EN 1125: 2008 & BS EN 179: 2008

dhf Best Practice Guides

This publication is one in a series of guides addressing the major issues that should be considered when specifying, ordering or using the products it describes. It aims to provide the reader with a concise document which includes a summary of relevant sections from the new European product standards. The reader will then be in a position to seek further specialist advice where necessary and recognise GENUINE conformity to the new standards.

NOTE: Unless stated otherwise, references in this document to BS EN 1125 and BS EN 179 refer to BS EN 1125:2008 and BS EN 179:2008 respectively. Information in this guide is correct at time of publication and intended for guidance only. Information may since have changed and readers should consult the appropriate standards and authorities to confirm its veracity.

BS EN 179 Emergency Exit Devices

This standard covers devices to be used in emergency situations where people are familiar with the emergency exit and its hardware and therefore a panic situation is most unlikely to develop. Devices operated by a lever handle or push pad may therefore be used.

BS EN 1125 Panic Exit Devices

Experience relating to escape from buildings and general safety have made it desirable that doors at final exits in public buildings, places of entertainment, shops, etc should be fitted with panic devices operated by a horizontal bar. The emphasis for products covered by this standard is on safe exit rather than security.

These standards provide details on product types, classification by use, test cycles, door mass, corrosion resistance, as well as definitions, product performance requirements, test apparatus, test methods and marking of products. In addition, the published standards include annexes illustrating the various points made through diagrams and supplementary text.

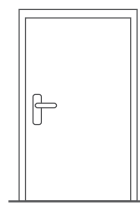
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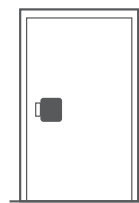
SCOPE BS EN 179

The main purpose of the performance requirements of this standard is to give safe and effective escape through a doorway with one single

operation to release the device. However, escape can require prior knowledge of the operation of the device which is consequently considered suitable for locked doors on escape routes only where panic situations are not foreseen.



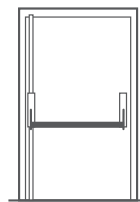
Type A: Emergency device lever handle



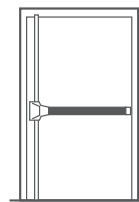
Type B: Emergency device push pad

SCOPE BS EN 1125

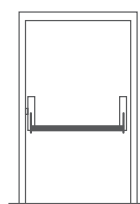
The main purpose of the performance requirements of this standard is to give safe and effective escape through a doorway with minimum effort and **without prior knowledge of the device**, i.e. for locked doors on escape routes where panic situations can be foreseen.



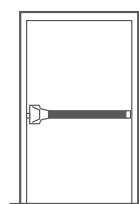
Type A: Panic bolt push bar



Type B: Panic bolt touch bar



Type A: Panic latch push bar

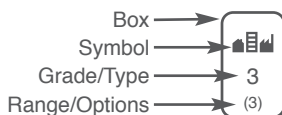


Type B: Panic latch touch bar

Classification

BS EN 1125 and BS EN 179 classify panic and emergency exit devices by using a 10 digit coding system. A similar classification applies to all building hardware product standards so that complementary items of hardware can be specified to, for instance, a common level of corrosion resistance, category of use, etc. Each digit refers to a particular feature of the product measured against the standard's performance requirements.

The **dhf** recommends the use of graphic icons to enhance clarity of information and has devised a system to facilitate assimilation of the various product classifications. Each feature within the product classification code is represented by an icon comprising four elements; Symbol, Grade/Type, Range/Options and Box:-



The icon above is for a product which meets Grade 3 in the category of use classification, where EN 1125 and EN 179 stipulate only grade 3.

Full details on the **dhf** graphic icons system can be found at www.dhfonline.org.uk

Digit 1 Category of use

Only one category is identified, that being -

Grade 3: high frequency of use by public and others with little incentive to exercise care

Digit 2 Durability

Two categories of durability are defined:

- Grade 6: 100 000 cycles
- Grade 7: 200 000 cycles

Digit 3 Door mass and closing force

Three categories of test door mass are identified:

- Grade 5: up to 100 kg
- Grade 6: up to 200 kg
- Grade 7: over 200 kg

Digit 4 Fire resistance

Three categories of fire door resistance are identified:

- Grade 0: Not approved for use on fire/smoke door assemblies
- Grade A: Suitable for use on smoke door assemblies, subject to satisfactory assessment of the contribution of the panic/emergency device to the smoke resistance of specified smoke door assemblies
- Grade B: Suitable for use on fire/smoke door assemblies, subject to satisfactory assessment of the contribution of the panic/emergency device to the fire resistance of specified fire/smoke door assemblies

Such assessments are outside the scope of this European standard (see EN 1634-1)

Digit 5 Safety

All panic and emergency devices have a critical safety function therefore only the top Grade - 1 - is identified

Digit 6 Corrosion resistance

Two grades of corrosion resistance are identified according to EN 1670:

- Grade 3: high resistance (96 salt spray hours)
- Grade 4: very high resistance (240 salt spray hours)

Digit 7 Security

Products covered by BS EN 179 have 4 identified categories and generally have the opportunity of greater security against forced opening than devices covered by BS EN 1125.

BS EN 179

- Grade 2: 1 000 N
- Grade 3: 2 000 N
- Grade 4: 3 000 N
- Grade 5: 5 000 N

Digit 8 Projection of device

Two grades are identified relating to the projection of the device from the door face:

- Grade 1: projection up to 150 mm (large projection)
- Grade 2: projection up to 100 mm (standard projection)



Digit 9
Type of device

Two categories are identified for each standard:

BS EN 179

- Type A: emergency device with lever handle operation
- Type B: emergency device with push or pull pad operation

BS EN 1125

- Type A: panic device with push bar operation
- Type B: panic device with touch bar operation



Digit 10
Field of application

EN179

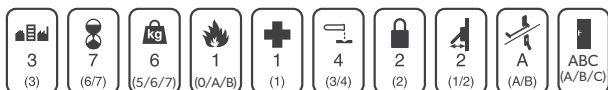
- **A: Outward opening**
Single & double exit doors; active & inactive leaf
- **B: Outward opening**
Single exit door only
- **C: Outward opening**
Double exit door; inactive door
- **D: Inward opening**
Single exit only

EN1125

- **A: Outward opening**
Single & double exit doors; active & inactive leaf
- **B: Outward opening**
Single exit door only
- **C: Outward opening**
Double exit door; inactive door

Example

The following marking denotes a panic exit device tested to 200 000 operations for a door mass up to 200kg, suitable for fire door use with very high corrosion resistance with standard bar projection for use on single & double doors.



Marking

What marking should be visible on the product when fitted:-

- Manufacturer's name, trademark or other means of positive identification
- Identification number of the certification body

c) CE mark symbol (as detailed in annex of standard)

Other markings which must be visible before fitting:

- Classification code for the product
- The number and year of the European standard
- The month and year of final assembly by the manufacturer, which can be in a coded form

CE marking

Panic and emergency exit devices intended for use on escape route doors are covered by a Construction Products Directive mandate issued by the European Commission. Consequently, these standards are regarded as "harmonised" standards and compliance with them, supported by suitable evidence, allows for the application of the CE mark.

As panic and emergency exit devices have a critical safety function, application of the CE mark will require the involvement of a notified certification body to provide verification of the compliance claims. This will involve initial type testing of the product to either EN 1125 or EN 179, initial inspection of the manufacturer's factory production control and continuing surveillance and approval of the factory production control. On satisfactory fulfilment of these tasks, the notified body issues an EC Certificate of Conformity which then permits the manufacturer to declare compliance and affix the CE marking to the product.

The standard requires the following additional information to accompany the CE marking:-

- the identification number of the notified certification body
- the name or identifying mark of the manufacturer
- the registered address of the manufacturer
- the last two digits of the year in which the marking was applied
- the number of the EC certificate of conformity reference to EN 1125:2008, or EN 179:2008, as appropriate
- the classification code of the product

Note that although the notified body has to be involved to verify the manufacturer's claims, the manufacturer remains responsible for designing and producing the product, for affixing the CE marking, and for ensuring that the product meets the requirements of the directive.

Specification issues

The decision as to which products are specified should be made on the basis of the building use and occupancy. Products incorporating a horizontal bar (BS EN 1125) to operate the exit device must be used in public buildings, places of public entertainment, shops and any other location where the building occupants do not have prior knowledge of the escape device and where a panic situation can be foreseen.

- Products incorporating a push or pull pad or lever handle to operate the exit device (BS EN 179) should only be used where building occupants are familiar with the emergency exit and its hardware and where a panic situation is not foreseen.
- If there is any doubt about the conditions relating to building occupancy, the DHF recommends that devices covered by BS EN 1125 should be specified.
- For safety reasons, the standard requires that the push bar of a type "A" panic device shall not protrude beyond either of the end supports. This means that for pairs of rebated doors, the traditional British designed "double panic bolt" cannot comply with the standard. An acceptable solution is for a single vertical panic bolt to be fitted on the "inactive leaf" and a panic latch on the "active leaf".
- A grade 2 (standard projection) panic device should be used in situations where there is restricted width for escape or where doors are not able to open beyond 90°.
- Panic device push and touch bars should be installed to provide the maximum effective length but never less than 60% of the door leaf width.

Devices complying with these standards will either be sold complete, i.e. including all the necessary components, or, if this is not done, the manufacturer must identify, in the product information supplied with the device, all the components and accessories which have been tested as compatible with the product.

Dogging devices or hold back features on exit devices cannot be used on fire doors, unless the hardware has been tested on a fire door in the unlatched condition. It is also important that the door to which the hardware is fitted has been tested in the unlatched condition.

EN 179:2008 includes devices for inward opening single doors. These devices were added to the standard to deal with situations where an outward opening door would risk causing an obstruction in a corridor.

In addition to ensuring that products satisfy the requirements of this standard, other factors should be taken into consideration when selecting lever handles and knob furniture. These not only include sourcing products from a reputable manufacturer, but also quality assurance, support services and unequivocal conformity.

Quality assurance

The internationally recognised standard for quality assurance, BS EN ISO 9000 provides confidence that the products are being manufactured to a consistent quality level.



Companies displaying this symbol are registered under the BSI Registered Firm Scheme.

Support service

The correct specification and installation of panic and emergency exit devices is essential to ensure that they are able to operate efficiently within the performance levels described in this standard.

Specialist advice is available from ABHM members in support of their products from specification stages through supply to effective operation on site.

Conformity

Conformity to the standard must be clearly and unequivocally stated. Such phrases as "tested to ...", "designed to conform to ...", "approved to", are not sufficient. To avoid misleading or confusing claims it is recommended that one of the following phrases is used when stating conformity.

"This product has been successfully type-tested for conformity to all of the requirements of (BS EN 1125 & BS EN 179: 2008), including the additional requirement for (fire/smoke door use*). Regular audit testing is undertaken. Test Reports and/or Certificates are available on request."

* Add as appropriate.

It is recommended that an ARGE Declaration of Compliance is also completed, as this gives a clear and unambiguous method of demonstrating test evidence and compliance.

dhf

dhf (Door and Hardware Federation) was created by a merger between the Association of Building Hardware Manufacturers (ABHM) and the Door and Shutter Manufacturers Association (DSMA), both of which have established excellent reputations in their respective industries, particularly in the area of technical expertise and the development of performance standards in national and international arenas.

dhf aims to build on these reputations by exploiting the synergies that exist between the two associations and combining their technical and financial resources to provide a unified, authoritative voice for the entire industry.

dhf and its members have consistently risen to the challenges posed by an ever-changing market, creating products which meet the needs of a changing world and developing performance standards alongside national and international organisations, such as BSI and CEN, which enable the industry to select and compare products with confidence.

dhf now represents all the key players in the following sectors: locks and building hardware, doorsets, industrial doors and shutters, domestic garage doors and automated gates/traffic barriers.

With the ultimate aim of maintaining and raising quality standards throughout the industry, all **dhf** members must meet minimum standards of competence and customer service. They all operate within a Code of Conduct governing standards of workmanship, quality assurance, training, safety, business integrity and CE marking compliance.

Guild of Architectural Ironmongers

Founded in 1961, the GAI represents the majority of Architectural Ironmongers in the UK. The GAI serves to further all aspects of architectural ironmongery by promoting the interchange of information to encourage better products design and high professional standards of ironmongery scheduling and specification. GAI has also expanded its offering to include overseas clients, who are increasingly taking advantage of its comprehensive education programme.



This document has been produced in association with **Guild of Architectural Ironmongers (gai)** and **Master Locksmiths Association (MLA)**.

Master Locksmiths Association

The MLA is the leading trade association for the locksmithing industry. It is recognised as the authoritative body by the police, government, insurers and other such groups. MLA licenced companies can provide customers with peace of mind regarding the security of their property. Its members undergo strict vetting and regular inspections.





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