

**Association of
Builders
Hardware
Manufacturers**

Best practice guide

Panic and emergency
exit devices
to
BS EN 1125 & BS EN 179

in association with



*Extracts from BS EN 1125:1997 and
BS EN 179: 1998 are reproduced
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• **ABHM 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.

• **BS EN 1125 - Panic exit devices**

Experience relating to escape from buildings and general safety have made it desirable that doors at 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.

• **BS EN 179 - Emergency exit devices**

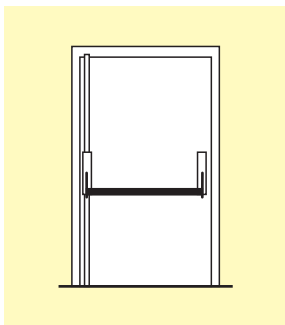
This standard covers devices to be used in emergency situations where people are familiar with the emergency exit and its hardware and therefore a panic situation is most unlikely to develop. Lever handle operated escape mortice locks or push pads may therefore be used.

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. Complete editions of the standards can be obtained from Customer Services, BSI Standards, Chiswick High Road, London W4 4AL.

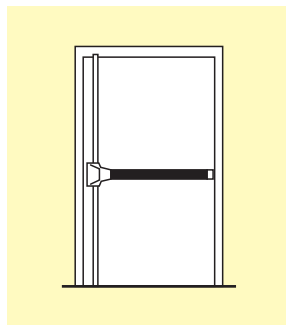
BS EN 1125 replaces BS 5725 which is withdrawn. BS EN 179 is a new standard.

• **SCOPE - BS EN 1125**

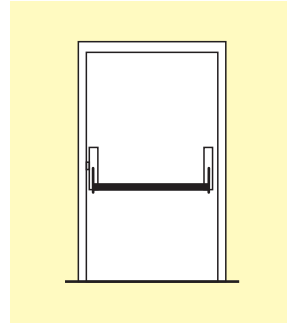
The main purpose of the performance requirements of this standard is to give safe and effective escape through a doorway with minimum effort and **without prior knowledge** of the device, i.e. for locked doors on escape routes where **panic situations can be foreseen**.



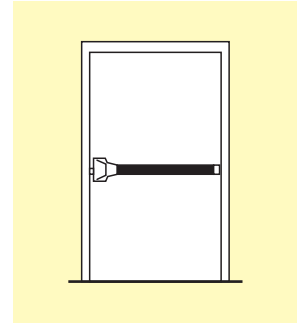
Type A: Panic bolt push bar



Type B: Panic bolt touch bar



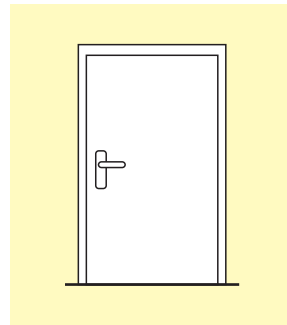
Type A: Panic latch push bar



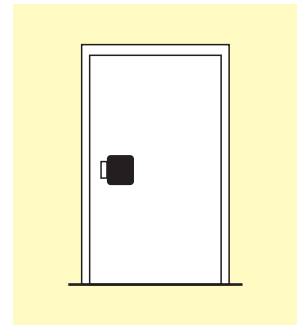
Type B: Panic latch touch bar

• **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 although this **can require prior knowledge of its operation**, i.e. for locked doors on escape routes where **panic situations are not foreseen**.



Type A: Emergency device lever handle



Type B: Emergency device push pad

• **CLASSIFICATION BS EN 1125 and BS EN 179**

These Standards classify panic and emergency exit devices by using a 9 digit coding system. A similar classification system 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.

Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7	Digit 8	Digit 9
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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 - Number of test cycles

Two categories of durability are defined:

- grade 6: 100 000 cycles.
- grade 7: 200 000 cycles.

Digit 3 - Test door mass

Two categories of test door mass are identified:

- grade 5: up to 100 kg.
- grade 6: up to 200 kg.

Digit 4 - Fire resistance

Two categories of fire door resistance are identified:

- grade 0: not approved for use on fire/smoke door assemblies.
- grade 1: 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.

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 prEN 1670:

- grade 3: High resistance.
- grade 4: Very high resistance.

Digit 7 - Security

Products covered by BS EN 179 have 3 identified categories and have the opportunity of greater security than devices covered by BS EN 1125. This is because BS EN 179 devices are subject to testing with doors under greater pressure.

BS EN 179

- grade 2: 1 000 N.
- grade 3: 2 000 N.
- grade 4: 3 000 N.

BS EN 1125

Only one category of security is identified

- grade 2: panic devices are primarily for the operation of a door from the inside. Safety considerations will always be given priority over security.

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 (standard projection).
- grade 2: projection up to 100 mm (low 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 pad operation

BS EN 1125

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

Example:

The following marking denotes a panic exit device tested to 200 000 operations for a door mass up to 200 kg, suitable for fire door use with very high corrosion resistance and low push bar projection. Type A.

3	7	6	1	1	4	2	2	A
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• MARKING

- Manufacturer's name or trademark or other means of positive identification.
- Classification as detailed.
- The number of the European standard.
- The month and year of final assembly by the manufacturer.

Note: This information can be in coded form. Items (b) and (c) should be clearly visible after installation.

• FIRE DOOR ASSEMBLIES

The panic or emergency exit device representative of its type shall have been subjected to a successful fire test to prove the contribution of the device to the fire resistance of the complete door assembly. Such assessments are outside the scope of these European standards but are covered by BS 476: Pt. 22 which remains in force.

• 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 cross 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 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 panic situations are not foreseen.

- If there is any doubt about the conditions relating to building occupancy, the ABHM recommends that devices covered by BS EN 1125 should be specified.

- For safety reasons 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" will **not** be permitted. 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 (low 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.

• 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. All ABHM members operate recognised BS EN ISO 9000 Quality Assurance Schemes.



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

• SUPPORT SERVICE

The correct 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.

• CE MARKING & AUDIT TESTING

These standards have been prepared as “harmonised” standards to demonstrate conformity with the requirements of European directives and as such it is intended that the products will in due course carry the ‘CE’ Mark. Until this final decision is made, CE marking is not permitted. As they have a critical life/safety function it will be necessary for manufacturers to operate a quality system such as ISO 9000 and have products tested in the manufacturer’s factory at intervals of not more than 6 months and by an independent laboratory or test house at intervals of not more than 1 year.

• 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*), including the additional requirement for (fire/smoke door use*). Regular audit testing is undertaken. Test Reports and/or Certificates are available on request.”

* *state as appropriate.*

ABHM PROFILE

Formed in 1897 to represent the interests of brassfounders, the ABHM and its members have been instrumental in the industry’s advancement over the last 100 years.

Innovations in material and manufacturing technologies as well as changes in the building industry throughout the world have resulted in the development of a wide range of new products and practices. These advances have, in turn, required new skills and knowledge from the designer and manufacturer of the products themselves through to the specifiers, stockists and installers in the various sectors of the building industry.

The association and its members have consistently risen to this challenge, 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 hardware with confidence.

The advances made throughout the industry are reflected in the Association’s structure, the diversity of its membership and the wide range of activities in which it is involved. The ABHM now represents the United Kingdom’s leading manufacturers of builders’ hardware, architectural ironmongery and door and window fittings as well as providing the technical expertise essential for the formulation of performance standards at home and abroad.

All members are listed in a Product Guide which includes an easy to use matrix of products and services available from each member.

British Hardware Federation

BHF represents some 3,500 ironmongery, hardware and DIY shops in the United Kingdom. In addition, it embraces the Independent Builders Merchants Service, a specialist division of the Federation.

Builders Merchants’ Federation

The Builders Merchants’ Federation represents the majority of bona fide merchants in the UK. Its members have a combined turnover of £6 billion a year. Members range from large nationals to small independents.

Guild of Architectural Ironmongers

Founded in 1961, the Guild represents 95% of bona fide distributors within the UK and the majority of manufacturers of architectural ironmongery. The Guild serves to further all aspects of architectural ironmongery by promoting the interchange of information to encourage better product design and high professional standards of ironmongery scheduling and specification.

Master Locksmiths Association

The MLA is recognised by the Home Office, Police and The British Standards Institution as being the authoritative body for locksmithing. It was formed to promote the membership to Central and Local Governments, Industry, Commerce and the Public.



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