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Incorporating Corrigendum No. 1

BRITISH STANDARD

Thief resistant lock assembly — Keyless egress

ICS 91.190

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Contents

Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 16 August 2007. It was prepared by Subcommittee B/538/4, *Building hardware*, under the authority of Technical Committee B/538, *Doors, windows, shutters, hardware and curtain walling*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

BS 8621:2007+A2:2012 supersedes BS 8621:2007+A1:2009, which is withdrawn.

Relationship with other standards

BS 8621 incorporates the requirements of BS EN 1303:2005 for cylinders for locks.

It also incorporates the requirements of BS EN 12209 for mechanically operated locks, latches and locking plates. It uses specific performance grades from BS EN 12209 to specify thief resistant lock assemblies that ⟦A1⟩ do not require ⟨A1⟧ a key for egress.

Attention is drawn to the fact that BS EN 12209 fully takes into account the regulatory requirements of the EC Construction Products Directive (89/106/EEC) [1] which is implemented in the UK as the Construction Products Regulations 1991 [2].

This British Standard is complemented by BS 3621, *Thief resistant lock assembly – Key egress*, and by BS 10621, *Thief resistant dual-mode lock assemblies* (in preparation).

Information about this document

The start and finish of text introduced or altered by Amendments No. 1 and No. 2 are indicated in the text by tags ⟦A1⟩ ⟨A1⟧ and ⟦A2⟩ ⟨A2⟧.

The start and finish of text introduced or altered by Corrigendum No. 1 is indicated in the text by tags ⟦C1⟩ ⟨C1⟧.

This British Standard was published to provide a means of assessing the security of lock assemblies that provide keyless egress. These lock assemblies are not covered by BS 3621, a standard that specifies lock assemblies that necessitate the use of a key for egress. It is necessary to specify thief resistant keyless egress lock assemblies in a standard that is separate from BS 3621 because they are sufficiently different in terms of what they offer for means of escape (from fire) and security.

BS 8621 has been revised to incorporate further requirements for lock cylinders and lock assemblies that incorporate a cylinder, particularly in respect of emergent criminal techniques. The principal changes appear in Clauses **6**, **7** and **8** and Annex A ⟦A1⟩ and Annex B ⟨A1⟧.

For security purposes, there is a need to maintain confidentiality about some characteristics of a thief resistant lock assembly. Moreover, in order to assess a lock's capability of withstanding a criminal attack, it is necessary for it to be exposed to skilled manual testing that simulates such an attack. Such a simulation cannot, by its very nature, be codified so as to be fully reproducible in all circumstances, and for these reasons a formal test method is not published in this standard.

Instead, the standard requires that lock cylinders and lock assemblies, for which conformity to this standard is claimed, be submitted to ⟦A1⟩ a panel of expert assessors ⟨A1⟧ to be examined and assessed for their general vulnerability (see Clause **6**). Details of this examination vary according to the design and type of lock assembly. ⟦A1⟩ *Text deleted*. ⟨A1⟧

〈A1〉 Details of the general nature of the assessment to which lock assemblies need to be submitted 〈A1〉 appear in Annex A, which should be regarded as normative for the purposes of designing and constructing products in conformity with this standard.

〈A1〉 Amendment No.1:2009 modifies the requirements for the vulnerability assessment so as to allow manufacturers to undertake their own assessments and make a valid claim of conformity accordingly. Requirements concerning the necessary qualifications for personnel undertaking such assessments are specified in Annex B.

It is recognized that, within a free and open market, the controls that can be applied to such assessments and claims might not be adequate to offer the degree of assurance that is expected of the types of locks specified in this British Standard. **Particularly in view of the security nature of this British Standard, users are therefore strongly advised to consider the desirability of third-party certification, inspection and testing of products conforming to this British Standard.** Appropriate conformity attestation arrangements are described in BS EN 45011.

Users seeking assistance in identifying appropriate assessment bodies or schemes may ask BSI to forward their enquiries to the relevant association. 〈A1〉

Use of this document

〈A1〉 *Text deleted.* 〈A1〉

It is important that doors and their frames, to which thief resistant lock assemblies are attached, are of adequate strength to suit the lock assembly and are designed to prevent access other than by attacking the lock assembly.

In order to offer a robust and reliable set of criteria for lock assemblies offering high levels of resistance to potential burglars and thieves, it is likely that this British Standard will be subject to frequent revision. ***Users should therefore ensure that they are referring to the most recent edition.***

〈A1〉 It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced. 〈A1〉

〈A1〉 Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with *The BSI guide to standardization – Section 2: Rules for the structure, drafting and presentation of British Standards*, subclause **11.3.1**, which states, "Requirements should be expressed using wording such as: 'When tested as described in Annex A, the product shall ...'". This means that only those products that are capable of passing the specified procedures will be deemed to conform to this standard. 〈A1〉

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies performance requirements and test methods for a thief resistant mechanically operated single-point lock assembly (including locking plates, fixing screws, fitting instructions, cylinders and protective furniture where appropriate) that:

a) incorporates a lock conforming to BS EN 12209 field of door application grades A, B, C, D, E, F or J, i.e. a lock that can always be unlocked from the inside without a key thereby only allowing keyless egress; and

b) is used in doors, window doors and entrance doors in buildings.

This standard does not cover thief resistant lock assemblies that only allow egress using a removable key, or lock assemblies that provide a secure (no egress) mode in addition to keyless egress.

NOTE 1 Thief resistant lock assemblies that only allow egress using a key or assemblies that provide a secure (no egress) mode in addition to keyless egress are specified in separate standards, BS 3621 and BS 10621 (respectively), because they are sufficiently different in terms of what they offer for means of escape (from fire) and security.

NOTE 2 It is possible that lock assemblies conforming to this standard are not suitable for use on doors constructed from certain types of material, e.g. plastic or aluminium. The marking on the packaging of the lock assembly will provide this information in accordance with ***9.2****.*

NOTE 3 A lock or latch assembly conforming to this standard can be included as part of an exit device that conforms to BS EN 179 or BS EN 1125.

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.

BS 7398:1991, *Specification for hand hacksaw frames.*

BS EN 1303:2005, *Building hardware – Cylinders for locks – Requirements and test methods.*

BS EN 12209:2003, *Building hardware – Locks and latches – Mechanically-operated locks, latches and locking plates – Requirements and test methods.*

A2 PAS 24:2012, *Enhanced security performance requirements for doorsets and windows in the UK – External doorsets and windows intended to offer a level of security suitable for dwellings and other buildings exposed to comparable risk.* A2

3 Terms and definitions

For the purpose of this standard, the terms and definitions given in BS EN 12209, BS EN 1303 and the following apply.

3.1 lock assembly

lock together with the associated parts that are needed to enable the lock to perform the locking function and maintain lock security

NOTE A lock cylinder and protective furniture are examples of hardware that might be supplied as part of a lock assembly.

A2 *Text deleted.* A2

3.2 protective furniture
part of a lock assembly that provides added resistance of the lock and/or lock cylinder to manual attack

3.3 locking point
point of interaction between a locking bolt (or any combination of locking bolts that are less than 150 mm apart and move in the same direction) and the associated locking plate(s)

3.4 night latch
lock with automatic bolt which is withdrawn from outside the protected area by key and from inside the protected area by handle or knob

3.5 single-point lock
lock with only one locking point

3.6 one up key
key on which a single step height differs from the correct key by one interval up

3.7 one down key
key on which a single step height differs from the correct key by one interval down

4 Locks

4.1 General

A lock shall conform to the following minimum BS EN 12209 classification.

2	H (see **4.2**)	4	0	0	F	7 (see **4.3**)	A, B, C, D, E, F or J (see **4.4**)	A, B, D or E (see **4.5**)	0, 1, 2 or 3 (see **4.6**)	0, B (see Note)

NOTE The eleventh digit in the BS EN 12209 classification covers key identification and should always be grade 0 for locks with cylinders.

4.2 Durability (second digit in BS EN 12209 classification)

NOTE Where the durability test regime is not fully defined in BS EN 12209 for a particular lock type, a suitable test regime should be devised in line with the principles of BS EN 12209.

4.2.1 Deadbolt mechanism

Where a lock is designed to be used in conjunction with a cylinder, testing of the deadbolt mechanism in accordance with BS EN 12209:2003, **6.3.2** shall be performed on a lock assembly that includes the cylinder with which it is intended to be used.

*NOTE Requirements for a cylinder for a lock are given in Clause **5**.*

4.2.2 Night latches

When testing durability in accordance with BS EN 12209:2003, **6.3.1** for the latch action of a night latch, the minimum number of test cycles shall be 200 000 in accordance with BS EN 12209:2003, **5.3.1** for durability grade H.

When testing durability in accordance with BS EN 12209:2003, **6.3.2** for the withdrawal by key of a sprung bolt on a night latch, the minimum number of test cycles for manual locking shall be 50 000 in accordance with BS EN 12209:2003, Table 3 for durability grade H.

4.3 Security and drill resistance (seventh digit in BS EN 12209 classification)

Where a lock is designed to be used in conjunction with a cylinder, testing in accordance with BS EN 12209:2003, **6.8.4** shall be performed on a lock assembly that includes the cylinder with which it is intended to be used.

*NOTE Requirements for cylinders for locks are given in Clause **5**.*

4.4 Field of door application (eighth digit in BS EN 12209 classification)

A lock shall conform to BS EN 12209:2003, **5.9** for one of the seven field of door application grades given in Table 1.

Table 1 **Field of door application**

Grade	Lock type	Door	Forend supported	Egress control by key
A	Mortice	Unrestricted (hinged and sliding)	No	No
B	Mortice	Hinged		
C	Mortice	Sliding		
D	Rim	Unrestricted (hinged and sliding)		
E	Rim	Hinged		
F	Rim	Sliding		
J	Rim	Hinged (inward opening only)		

4.5 Type of key operation and locking (ninth digit in BS EN 12209 classification)

A lock shall conform to BS EN 12209:2003, **5.10** for one of the four types of key operation and locking grades given in Table 2.

Table 2 **Type of key operation and locking**

Grade	Lock type	Mode of locking
Grade A	Cylinder lock or latch	Manual locking
Grade B	Cylinder lock or latch	Automatic locking
Grade D	Lever lock or latch	Manual locking
Grade E	Lever lock or latch	Automatic locking

4.6 Type of spindle operation (tenth digit in BS EN 12209 classification)

A lock shall conform to BS EN 12209:2003, **5.11** for one of the following four types of spindle operation grades.

a) Grade 0: Lock or latch without follower.

b) Grade 1: Lock or latch for knob or sprung lever handle operation.

c) Grade 2: Lock or latch for unsprung lever handle operation.

d) Grade 3: Lock or latch for heavy-duty unsprung lever handle operation.

5 Cylinder for a lock

A cylinder for a lock shall conform to the following minimum BS EN 1303 classification.

1	6	0	0	0	C	5	2

6 General vulnerability of lock assembly

6.1 General

6.1.1 All locks

A thief resistant lock assembly shall be submitted for test in accordance with Annex A (but see **A.5**, note 2). In order to [A1] be deemed to <A1> conform to the requirements of this standard, each lock assembly shall pass the panel's examination for general vulnerability.

6.1.2 Cylinders for locks (integral or separate)

Cylinders shall be submitted in accordance with Annex A (but see **A.5**, note 2). In order to [A1] be deemed to <A1> conform to the requirements of this standard, each cylinder type shall pass the panel's examination for additional vulnerability for cylinders.

6.2 Lock assemblies incorporating a cylinder

6.2.1 Where a lock assembly incorporates a cylinder, its vulnerability to manual attack shall be tested in accordance with [A2] PAS 24:2012 <A2>, [C1] **A.3** <C1>, with the following modifications.

a) A test sample shall be either a new lock assembly or one that has been used as "Sample B and J" in BS EN 12209:2003, Table C.1.

b) A test sample shall be mounted in a wooden block (in place of a test door), with a thickness that equates to the minimum door thickness for which the lock is intended to be used. It shall be mounted in such a way that it does not move by more than 5 mm in any direction during the test and that the lock forend is vertical. It shall be at a height of (1 000 ± 100) mm.

c) The side on which any protective furniture is fitted shall be treated as the attack face.

6.2.2 Any protective furniture incorporated into the lock assembly shall be included as part of the test sample.

6.2.3 The lock shall [A1] be deemed to <A1> have failed if it can be opened as a result of testing in accordance with [C1] PAS 24:2012, **A.3**. <C1>

7 Differs

For each model of lock, no lock shall be manufactured that has the same differ as any other lock in that model until at least the full number of required differs has been made for that model. Locks supplied keyed alike shall count as one lock (one differ) for this purpose.

The manufacturer shall maintain differing charts by which it can be demonstrated that this requirement has been met.

NOTE Any number of locks with the same differ may be supplied for one end user.

8 Master keyed locks

No lock shall be used in a master keyed suite in such a way that its performance is less than the minimum provided by this standard.

A1 *NOTE A master keyed suite, for example, should be designed so that the probability of opening any lock in the suite with a key, randomly selected from the original differ chart used to calculate the total number of effective differs, is less than 1 in 1 000. Fixed obstructions should not be used for differing purposes. At least one step or notch on any superior key should always be higher than the corresponding steps on any other key which controls the same lock(s).* A1 A2 *A master keyed suite should also be designed so as not to compromise any anti-manipulation feature.* A2

9 Marking

9.1 Labelling and literature

The labelling or literature for a thief resistant lock assembly shall be marked in accordance with BS EN 12209:2003, Clause **7** [2) 3)], including at least one instance of the eleven character classification system in **4.1**.

*NOTE In addition to at least one instance of the eleven character BS EN 12209 classification system, the three character classification system shown in Table 3 can also be used. It is made up of the eighth, ninth and tenth digits of the BS EN 12209 classification system (see **4.1**). This three character system is intended to provide an additional and simpler mark for a thief resistant lock assembly. However, it is not intended as a replacement for the BS EN 12209 system of marking.*

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2) Marking BS EN 12209:2003 and/or BS EN 1303:2005 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third-party certification of conformity.

3) BS EN 12209 is a harmonized European Standard. This means that products manufactured in accordance with BS EN 12209 benefit from a "presumption of conformity" to the essential requirements of the EC Construction Products Directive (CDP) [1] which is implemented in the UK as the Construction Products Regulations 1991 [2]. CE marking is the only method of signifying that the product conforms to the provisions of the CDP, including any conformity assessment procedures. CE marking is not mandatory for construction products in the UK, however, in most EC member states products must have the CE mark affixed before they can be sold. Therefore, serious consideration should be given to CE marking a product that conforms to BS EN 12209. Further advice is given in BS EN 12209:2003, Annex ZA.

Table 3 **Marking using a three character system of classification**

8	9	10
Field of door application	Type of key operation and locking	Type of spindle operation

Where a thief resistant lock assembly includes a cylinder, the labelling or literature for the lock assembly shall be marked in accordance with BS EN 1303:2005, Clause **7** [2)], including at least one instance of the eight character classification system.

9.2 Packaging

The packaging for a thief resistant lock assembly shall include (in a form that is easily visible when the product is stored on shelves):

a) the manufacturer's name, trade mark or other means of identification;

b) clear product identification;

c) classification in accordance with **4.1**;

d) the number and publication date of this British Standard, i.e. BS 8621:2007 [4)];

e) application limitations, e.g. suitable for timber doors only.

NOTE The packaging may also include classification in accordance with Table 3.

9.3 Product

A thief resistant lock assembly shall be marked, in a position where it is clearly visible after the product has been installed, with:

a) the manufacturer's name, trade mark or other means of identification;

b) the number and publication date of this British Standard, i.e. BS 8621:2007 [4)].

10 Information to be supplied by the manufacturer

Thief resistant lock assemblies shall be supplied with clear and detailed instructions for their installation and maintenance.

[4)] Marking BS 8621:2007 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third-party certification of conformity.

Annex A (normative) General vulnerability assessment

Principles of assessment

A.1 The assessment is to be undertaken by a panel of three [A1] expert assessors qualified in accordance with Annex B 〈A1〉. Each expert shall undertake an individual assessment and report back independently. In order for conformity to this British Standard to be claimed, each member of the panel shall report the test sample as having satisfactorily withstood the test [A1], or where a suitable test key cannot be manufactured due to the design of the product, each expert shall confirm that the product is not vulnerable to the attack method described in this annex 〈A1〉. The test is intended to assess the general vulnerability of a lock to an attack using knowledge, skill and professional ability. It is not intended to assess the lock's ability to resist attack involving significant force or by the use of tools only available to locksmiths.

[A1]Where an individual lock has more than one locking mechanism, all mechanisms accessible and operable from the outside face of the door shall be subject to assessment. 〈A1〉

A.2 Submission of samples

A total of six complete lock/cylinder assemblies shall be submitted. These shall be representative of normal production and shall contain the most vulnerable combination of differs as determined by the panel. Two samples shall be supplied to each [A1] assessor 〈A1〉, one for examination and one for assessment purposes. Where a range of products is assessed, the panel shall agree with the manufacturer [A1] (*text deleted*) 〈A1〉 which samples are required for assessment, and the decision shall be based on the examination of detailed drawings, specimens and discussions with the interested parties. If, during the assessment process, [A1] an assessor 〈A1〉 identifies a particular vulnerability and believes that further tests are required, a maximum of two further samples shall be requested.

A.3 Preparation of the test sample

The test sample shall be mounted in accordance with the manufacturer's instructions in a wooden block or similar and the sample shall be verified as fully functional. For the majority of lock designs a block nominally 380 mm × 150 mm × 44 mm is suitable. Where the lock design is not compatible with this size block, the width and/or height may be increased with the agreement of the panel. The thickness of the block shall not be changed. During the test the lock shall be mounted in a rigid fixture at a working height similar to the intended location when installed in a door; nominally 1000 mm from floor level.

A.4 Assessment procedure

NOTE Testing specified in BS EN 12209 and BS EN 1303 does not form part of this procedure.

Each [A1] assessor 〈A1〉 shall dismantle and examine the first sample prior to testing and assessing the second sample. There is no overall limit to the time required to dismantle and examine the first sample.

For the second sample, the overall duration of the assessment detailed in **A.5** shall not exceed 15 min and no one test technique shall be used for more than 3 min.

The maximum duration of the assessment detailed in **A.6** shall be 3 min, with a further 4 min allowed to conduct any modification deemed necessary in accordance with **A.6** iv).

A technique is considered to be a combination of tools and location; any change in either shall constitute a new technique. All types of lock are deemed to have failed if it is possible for any of the [A1] assessors [A1] to withdraw the dead bolt such that its projection is less than 5 mm, or if any part of the lock can be removed from its mountings in such a manner that it would render a door insecure. A cylinder lock is deemed to have failed if it becomes possible to fully rotate the cam from the front face of the lock using the specified tools.

A.5 Assessment of all lock types (lever, cylinder, etc.)

i) The [A1] assessors [A1] shall be familiar with the lock construction.

ii) Using the tools specified in **A.7**, the [A1] assessors [A1] shall attempt to open the lock using manual dexterity and manipulative skills, rather than excessive force.

*NOTE 1 Should the [A1] assessor [A1] believe that it is possible to open the lock using a tool that is not listed in **A.7** but which is of similar availability and aggressiveness, this shall not, at that point, be recorded as a failure, but shall be reported to the BSI committee responsible for this British Standard (see Foreword).*

iii) Locks shall be assessed from the side defined by the installation instructions as being the attack side.

NOTE 2 In the case of a range of locks, comprising those designed against the requirements of BS 3621, and those designed against the requirements of BS 8621, it is necessary to submit only the former for assessment. In such cases, if the BS 3621 locks are judged to have passed the assessment, the BS 8621 locks will be deemed also to have done so.

iv) The principal objective when assessing a range of locks is to identify the most vulnerable lock within the range. This may require more than one lock within a range to be assessed.

[A2] *NOTE It is acknowledged that attacks on locking devices can result in the device becoming inoperable and could thereby prevent occupants from exiting premises. This could be dangerous, particularly in the event of a fire or similar emergency, therefore locks should, as far as is reasonably practicable, be designed to remain operable from the inside after attacks, particularly attacks not involving force.* [A2]

A.6 Additional procedure for the assessment of lock cylinders (integral or separate)

Cylinders used in a lock design shall additionally be assessed in accordance with the following procedure, for which a further time allowance is made (see **A.5**).

i) Sample cylinders shall have combinations in which all step heights are in the mid-range, and are as close together as possible, but which also conform to manufacturer's specification and the requirements of EN 1303.

ii) During assessment, cylinders shall be installed in a lock, which in turn shall be mounted as detailed in **A.3**.

iii) The test key used for this assessment shall be machine cut by the manufacturer and shall comprise all bottom steps. A test key shall be rejected if the [A1] assessor [A1] does not consider it to be representative of a machine cut key, or is of the opinion that the steps are cut in such a way that it would reduce the likelihood of defeating the cylinder.

iv) The length of the test key and its shoulder shall not be modified by the manufacturer; this may be done by the [A1] assessor [A1].

v) [A2] Where a cylinder has a non-random feature as part of the combination (e.g. in a combination supplied to a specific distributor and/or region) the test key shall exhibit that non-random feature. [A2]

vi) In the case of double sided cylinders, where one side only is intended for use on the outside of the door, only this side shall be subjected to test and the higher security side shall be clearly marked accordingly.

A.7 Permissible tools

Only the tools listed in Table A.1 may be used in undertaking the general vulnerability assessment.

NOTE This list is intended to give a general description of the tools allowed. It is not intended to give precise dimensions, or to fully detail the type of tool. A general tolerance of ± 10% is acceptable on all dimensions and values.

Table A.1 **List of tools permitted for use in the general vulnerability assessment**

Item	Additional details
Screwdriver 0.10m with slotted tip (may be used as a lever)	100 mm chrome vanadium screwdriver
Screwdriver 0.15m with slotted tip (may be used as a lever)	150 mm chrome vanadium screwdriver
Screwdriver 0.20m with slotted tip (may be used as a lever)	200 mm chrome vanadium screwdriver
0.5 kg (nom.) ball peen hammer	
Miniature hand hacksaw frame in accordance with BS 7398:1991, Type A, with integral tension	Junior blades
0.5 kg (nom.) claw hammer	
Mild steel tube 0.3 m long with 32 mm diameter, wall thickness 2 mm	
Pair of pliers	Combination pliers 200 mm
Allen key set – 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 mm	
Craft knife	Precision knife set
Tweezers	6 piece tweezer set
Wire	Various diameter to 4 mm – any length
Wedges	Various plastic/timber wedges as required
Multiple slip joint pliers (240 mm)	Slip joint utility pliers
6 mm wood chisel	
25 mm wood chisel	
Additional screw/nuts drivers suitable for the head forms shown in EN 12209, Figure B.7	
Parallel punch set (100/150 mm) 3.2, 4.0, 4.8, 5.5, 6.4 mm	

Table A.1 **List of tools permitted for use in the general vulnerability assessment** (*continued*)

Item	Additional details
20 piece screwdriver set, variety of sizes including slotted tip 3–12 mm, Phillips No. 0–3, Pozidrive No. 0–3	1. Instrument 75 × 3 2. Instrument 150 × 3 3. Parallel tip 100 × 4 4. Parallel tip 150 × 5.5 5. Flared tip 40 × 6.5 stubby 6. Flared tip 150 × 6.5 7. Parallel tip 250 × 6.5 8. Flared tip 200 × 8 9. Flared tip 250 × 10 10. Flared tip 300 × 12 11. Pozidrive 60 × 0 12. Pozidrive 75 × 1 13. Pozidrive 30 × 2 stubby 14. Pozidrive 100 × 2 15. Pozidrive 150 × 3 16. Phillips 60 × 0 17. Phillips 30 × 1 stubby 18. Phillips 75 × 1 19. Phillips 100 × 2 20. Phillips 150 × 3
Drill bits HSS (1–13 mm)	1.0 HSS drill bit 2.0 HSS drill bit 3.0 HSS drill bit 4.0 HSS drill bit 5.0 HSS drill bit 6.0 HSS drill bit 7.0 HSS drill bit 8.0 HSS drill bit 9.0 HSS drill bit 10.0 HSS drill bit 12.0 HSS drill bit 13.0 HSS drill bit
Vice grip set (125mm & 250mm, parallel jaws)	125 mm 250 mm
Cordless drill (10–24 V, max 3 Ah)	
Pad saw & HSS blades	
Picking tools – cylinders	Rake pick – HPC novice pick set Tensioner
Picking tools – lever	2 in 1 pick Overlift
Self tapping screws	Assorted – including purpose-designed traction screws or equivalent
Test key	[see Clause **A.6**, iii) and iv)]
Impactor	Any proprietary impactor appropriate to the manipulation techniques considered in Clause **A.6** *NOTE Other tools in this list may also be used as impactors e.g. the handle of a screwdriver*
Resilient device for attaching to the test key 〚A1〛Petroleum based water displacement lubricant spray〚A1〛 〚A2〛One up key One down key〚A2〛	

A1 Annex B (normative) Assessment panel

For a valid claim to be made in respect of conformity of a product to this British Standard, it shall have successfully undergone the general vulnerability assessment in accordance with Annex A.

The assessment shall in all cases be undertaken by a panel of three locksmiths each of whom can demonstrate expertise and experience such as to be able to form a reliable and disinterested judgement as to the probability of a lock being able to withstand the types of attack simulated by the procedures specified in **A.4** to **A.7**.

NOTE 1 Such expertise and experience could be demonstrated by the following criteria:

A recognized qualification in locksmithing, achieved by examination (e.g. BLI; ALOA) supplemented by:

- *ten years experience as a practising locksmith; and*
- *current full membership in good standing, of not less than five years' continuous duration, of a professional locksmithing body.*

NOTE 2 For assessments undertaken by a lock manufacturer, the experts may be directly employed or may be contracted for the purpose. A register containing details of some of those known to be appropriately qualified within the UK can be accessed by application to the BSI Knowledge Centre. A1

Bibliography

Standards publications

BS EN 179, *Building hardware – Emergency exit devices operated by a lever handle or push pad – Requirements and test methods.*

BS EN 1125, *Building hardware – Panic exit devices operated by a horizontal bar – Requirements and test methods.*

BS EN 45011, *General requirements for bodies operating product certification systems.*

Other publications

[1] EUROPEAN COMMUNITIES. 89/106/EEC. Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products. Luxembourg: Office for Official Publications of the European Communities (EUR-OP), 1988, www.eur-op.eu.int.

[2] UNITED KINGDOM. Statutory Instrument 1991, No. 1620, The *Construction Products Regulations 1991*, London: HMSO, www.opsi.gov.uk.

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W4 4AL