



Door & Hardware  
Federation

raising standards

# best practice guide

Door co-ordinator devices to

# BS EN 1158

in association with



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## • 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 standard. 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 1158 - Door coordinator devices (Door selectors)

The standard provides 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 standard includes annexes illustrating the various points made through diagrams and supplementary text.

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**No previous British Standard for these products existed.**

**Amendment A1 to BS EN 1158 was published early in 2003 and this amendment provides for CE marking of conforming products in accordance with the EU Construction Products Directive.**

## • INTRODUCTION

To ensure effective fire compartmentation in buildings, it is essential that the individual leaves of pairs of doors with rebated meeting stiles close in the correct sequence. This function is achieved by the use of door coordinator devices.



Examples of rebated meeting stiles

Door coordinator devices manufactured in accordance with this European standard are recommended for use wherever there is a requirement for reliable sequential closing of double leaf fire/smoke doors incorporating rebated meeting stiles.

## • SCOPE

This European standard specifies requirements for both separately mounted devices and mechanisms incorporated in door closers. There are additional requirements for devices for use on fire/smoke door assemblies.

A number of different types and designs are available as shown in the following illustrations.

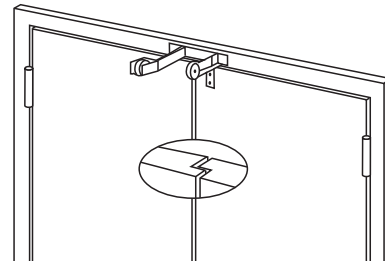


Figure 1. Gravity arm coordinator - example 1

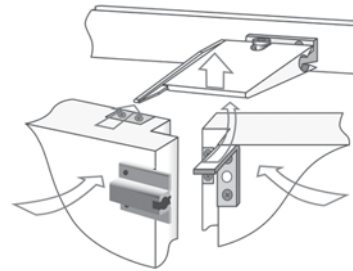


Figure 2. Gravity arm coordinator - example 2

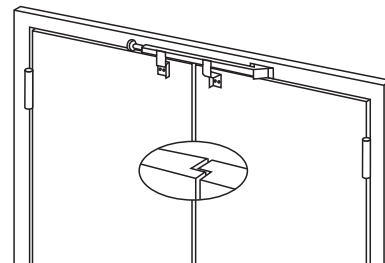


Figure 3. Swing arm coordinator

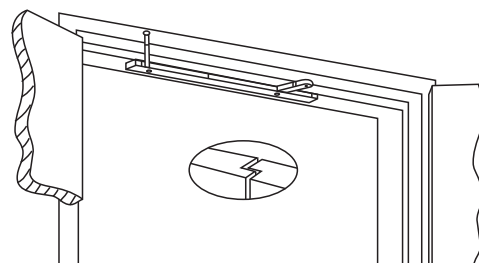


Figure 4. Double arm swing coordinator

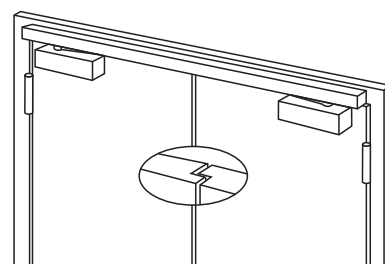
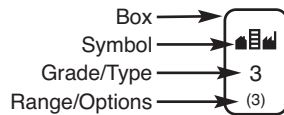


Figure 5. Coordinator incorporated in door closing device

## • CLASSIFICATION

BS EN 1158 classifies door furniture by using an 6 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 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 1158 stipulates only grade 3.

Full details on the ABHM graphic icons system can be found at [www.dhfonline.org.uk](http://www.dhfonline.org.uk)

### **Digit 1** **Category of use**

Only one category is identified:

- grade 3: for all internal and external doors for use by the public, and others, with little incentive to take care, i.e. where there is some chance of misuse of the door.

### **Digit 2** **Number of test cycles**

Two test durations are identified:

- grade 5: 50 000 test cycles: for all other door coordinator devices. Figures 1, 2 & 3.
- grade 8: 500 000 test cycles: for door coordinator devices incorporated in, or for use in conjunction with, automatic swing door operators, and for devices incorporated in a door closer. Figures 4 & 5.

### **Digit 3** **Test door mass**

Five door mass grades and related coordinator sizes are identified according to table 1 of this European standard.

Where a door coordinator device is suitable for a range of door closer power sizes, both the minimum and maximum sizes shall be identified.

**Table 1**

Door coordinator size	Test door leaf mass kg	Recommended door leaf width max. mm	Distance between hinge centrelines max. mm
3	60	950	1900
4	80	1100	2200
5	100	1250	2500
6	120	1400	2800
7	160	1600	3200

**Note:** This table relates to doors with equal leaves only.

### **Digit 4** **Fire resistance**

Two grades of fire resistance are identified for door coordinator devices manufactured to this European standard:

- grade 0: not suitable 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 door coordinator device to the fire resistance of specified fire/smoke door assemblies. Such assessment is outside the scope of this European standard (see EN 1634-1). Annex A indicates additional requirements for door coordinator devices.

### **Digit 5** **Safety**

All door coordinator devices are required to satisfy the essential requirement of safety in use. Therefore, only grade 1 is identified.

### **Digit 6** **Corrosion resistance**

Five grades of corrosion resistance are identified in accordance with EN 1670.

- grade 0: no defined corrosion resistance.
- grade 1: mild resistance.
- grade 2: moderate resistance.
- grade 3: high resistance.
- grade 4: very high resistance.

### • **EXAMPLE:**

The following marking denotes a door coordinator device suitable for a range of door closer power sizes from 4 to 6, for use on fire doors and with moderate resistance to corrosion.



### • **MARKING**

Each door coordinator device manufactured to this European standard shall be marked with the following:

- manufacturer's name or trademark, or other means of identification.
- product model identification.
- the six digit classification listed above.
- number of this European standard.
- year and week of manufacture.

Note: This information can be in coded form

### • **CE marking**

Door coordinator devices intended for use on fire resisting doors and smoke control doors are covered by a Construction Products Directive mandate issued by the European Commission. Consequently, this standard is regarded as a "harmonised" standard and compliance with it, supported by suitable evidence, allows the application of the CE mark.

As door coordinator 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 EN 1158, 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 his 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 1158: 1997
- 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

- Door coordinators incorporated on a fire door assembly shall have satisfied the appropriate criteria of a fire test (currently BS 476: Pt. 22).
- A door coordinator shall not include a hold open device unless it is an electrically powered device in accordance with BS EN 1155.
- Door closers which incorporate integrated door coordinators shall conform to the requirements of BS EN 1154 including those additional requirements for door closing devices intended for use on fire/smoke door assemblies as indicated in the annex of BS EN 1154 covering those requirements where applicable.
- Manufacturer's advice should be sought if door leaves are unequal or if projection hinges are being used as variations in door geometry may affect the efficient operation of the coordinator.

### • RELATED STANDARDS

As companion to BS EN 1158, two further amended and harmonised product standards have been published. The first, BS EN 1154 covers controlled door closing devices and has replaced BS 6459. The second, EN 1155 covers electrically powered hold-open devices and replaces BS 5839:Pt.3. Both these amended standards were published early in 2003.

British standards can be obtained from  
BSI Customer Services,  
389 Chiswick High Road, London W4 4AL  
Tel: +44 (0)20 8996 9001  
E-mail: [cservices@bsi-global.com](mailto:cservices@bsi-global.com)

## Additional important considerations

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

### • 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 specification and installation of door coordinator 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 1158. Test reports and/or certificates are available upon request.
- This product has been successfully type-tested for conformity to all of the requirements of BS EN 1158 including the additional requirements for fire/smoke door use\*. Test reports and/or certificates are available upon request.  
*\*Add as appropriate.*
- This product has been successfully type-tested for conformity to all of the requirements of BS EN 1158 including the additional requirements for fire/smoke door use\*. Regular audit testing is undertaken. Test reports and/or certificates are available upon 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 PROFILE

The Door and Hardware Federation (DHF) 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.

The 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.

The 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.

The federation now represents the interests of manufacturers and installers of industrial, pedestrian and garage doors as well as manufacturers of locks and building hardware. It provides professionals in all sectors of the building industry with a single source for technical expertise and creates a more powerful and representative lobbying force, with the ultimate aim of assuring progress and maintaining standards throughout the industry.

### 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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Unless stated otherwise, references in this document to BS EN 1158 refer to BS EN 1158: 1997 + A1: 2003.

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.