



**Association of
Builders
Hardware
Manufacturers**

Best practice guide

Door coordinator
devices
to
BS EN 1158

in association with



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

No previous British Standard for these products existed. This is, therefore, a new standard.

• **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.

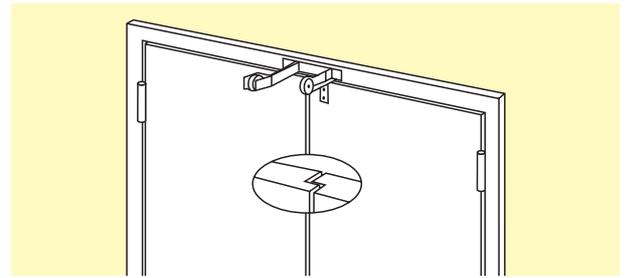


Figure 1. Gravity arm coordinator

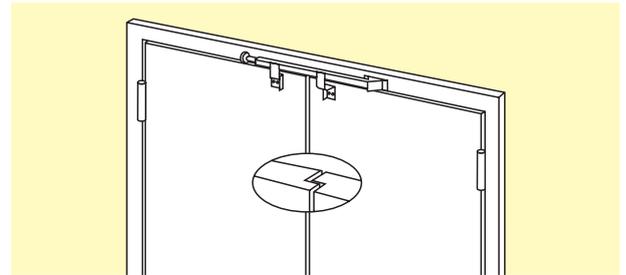


Figure 2. Swing arm coordinator

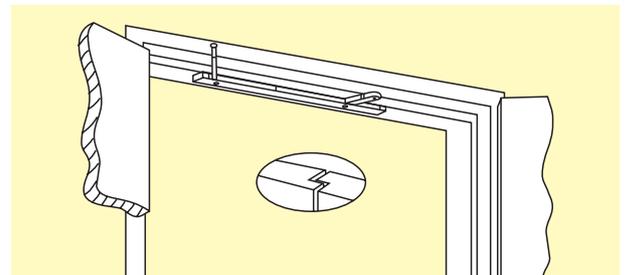


Figure 3. Double arm swing coordinator

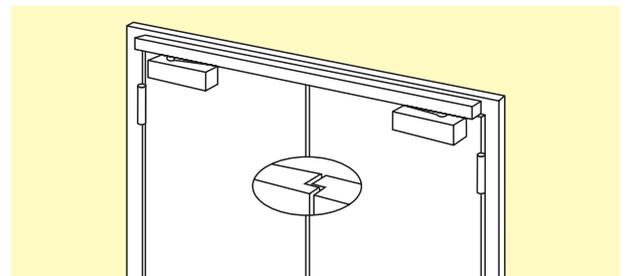


Figure 4. Coordinator incorporated in door closing device - example 1

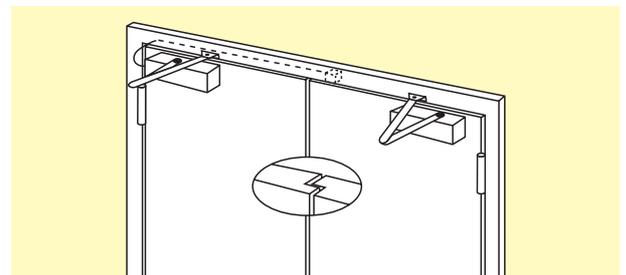


Figure 5. Coordinator incorporated in door closing device - example 2

• **CLASSIFICATION**

This standard classifies door coordinators (selectors) using a 6 digit coding system. This 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 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.

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.

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

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 prEN 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 prEN 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.

| | | | | | |
|---|---|--------|---|---|---|
| 3 | 5 | 6 4 | 1 | 1 | 2 |
|---|---|--------|---|---|---|

• 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

This standard has been prepared for use as a 'harmonised standard' 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. When used on fire doors these products have a critical safety function and it will, therefore, be necessary for manufacturers to operate a quality system such as ISO 9000.

• 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 product standards are now available. EN 1154 covers controlled door closing devices. EN 1155 covers electrically powered hold-open devices for swing doors.

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 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:

- a) 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.
- b) 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.*
- c) 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.*

ABHM PROFILE

Formed in 1897 to represent the interests of brassfounders, the ABHM and its members has 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 member 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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