

**TECHNICAL SPECIFICATION**

**TS 005:2009**

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**INSTALLATION OF  
DOORS & SHUTTERS**

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**Door & Hardware  
Federation**

**raising standards**

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## FOREWORD

This standard has been produced by DHF (Door & Hardware Federation) to identify the requirements for DHF member companies installing doors and shutters.

The standard covers the requirements based on the NVQ (National Vocational Qualifications Unit No. CM 12 - Install Door Systems).

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

**Compliance with this standard does not in itself confer immunity from legal obligations.**

## 1 SCOPE

This standard identifies the requirements for DHF members undertaking the installation of doors and shutters.

Requirements are based on the following:

- a. Satisfactory installation experience of member companies and their personnel, in accordance with the requirements of the DHF.
- b. Verification of the establishment and maintenance of the member's installation administration control (IAC) system which shall be fully documented.
- c. Training to the specific product via the qualifications of CSCS cards and/or NVQ in the installation of:

- Vertical sliding industrial & commercial doors
- Vertically rolling industrial & commercial doors
- Horizontally acting industrial & commercial doors, gates & barriers
- Fire resisting industrial & commercial doors
- Manual pedestrian slide, swing & folding doors
- Domestic garage doors with panel construction
- Domestic garage doors with rolling construction
- Power operation for domestic garage doors
- Power operated pedestrian slide and swing doors
- Manual and powered pedestrian revolving doors

- d. Records kept for a minimum of seven years.
- e. Compliance with BS EN 12635:2002+A1 - Industrial, commercial and garage doors and gates-Installation and use.

## 2 TERMS & DEFINITIONS

### 2.1 Doors

For the purposes of this document, the term "door" comprises any product referred to in the Scope 1c and includes "doorsets".

### 2.2 Installation

Work to ensure the safe and satisfactory operation of the doors referred to in 2.1.

## **2.3 Company**

The DHF member undertaking the installation of the doors referred to in 2.1.

## **2.4 Client**

The end user, owner or occupier of premises requesting the installation of the doors referred to in 2.1.

## **2.5 Installation Administration Control (IAC)**

The documented procedures to cover: personnel, training, process control, control of purchasing of materials, components, etc, non-conformances and corrective actions.

# **3 REQUIREMENTS**

**3.1** The minimum installation requirements for doors are laid down in Annex 1. These requirements shall be documented in the company's procedures and/or work instructions.

**3.2** Damage to the structure of the opening for fire resisting doors shall be noted and brought to the attention of the client.

**3.3** The company shall define what equipment (tools and spare parts) shall be carried on its vehicles, as a minimum.

**3.4** The product shall be stored and handled appropriately at all stages including, where appropriate, whilst in or on the installer's vehicle. The keys, components and installation instructions shall be available in accordance with procedures.

**3.5** The precise conditions of acceptance of the order for installation shall be agreed with the client and recorded, and an order acknowledgement confirming those conditions shall be supplied to the client for their records. The client shall be informed of the date and time of the installation work and any special requirements for effective installation of the door.

**3.6** The process from receipt of an enquiry and order through to completion of the installation shall be covered by documented procedures in the company's FPC system. These shall include:

**3.6.1** Appointing a suitable installer to an installation job on the basis of training, location, availability, etc.

**3.6.2** The requirements for each installation being documented and the documents transmitted to the installer concerned.

**3.6.3** The installer, whether directly employed or sub-contracted, being in possession of the relevant controlled and up-to-date procedures, a copy of the DHF Manual - Site safety recommendations and installation instructions for the product being installed.

**3.6.4** The installer, being in possession of the necessary hardware and tools in good condition to enable him to fit the product in accordance with the product installation instructions.

**3.6.5** The fixing components being of the correct type and size and fitted in the correct position.

**3.6.6** The installer leaving the place of work in a clean and tidy condition and configuring the client's equipment as closely as possible to the customer's satisfaction. The workmanship of the installer shall be of a good standard and acceptable to the client.

- 3.7 Corrective/preventative action procedures shall apply to the whole installation process. There shall be a system of monitoring installers and the installing company's response to installation orders in order to detect failures to meet appointments, failure to complete during first call, unsatisfactory installations, etc.
- 3.8 On-site welding of doors shall not be undertaken without specific authorisation by the installation company's management. Any hot work shall be done only after the consent of the client's management has been obtained and any hot work permit system in operation complied with. Any welding to be carried out by trained competent personnel and to be undertaken using properly maintained welding equipment.
- 3.9 Any installation work that is outside the scope of the planned installation requirements shall be recorded on the installation company's documentation and brought to the attention of the client in writing.
- 3.10 On completion of installation, the installer shall check for correct operation of the product, explain the operation to the client, hand over applicable documentation, any keys and complete the inspection record.
- 3.11 Where electrical work on **wiring of the building** is carried out, certification shall be produced to confirm that wiring has been tested and found to comply with BS 7671: 2008/IEE Wiring Regulations, 17th Edition or Part P of Building Regulations (England & Wales), where appropriate.
- 3.12 Training records shall be retained for all installation personnel, including sub-contractors. These shall confirm that personnel are aware of the requirements defined in Paragraphs 3.1 to 3.11 and that they have been trained against the company's installation instructions, as appropriate.
- 3.13 The product shall be adequately identified during all stages of despatch, transport, delivery and installation, whether delivered by a separate carrier or carried by the installer.

The company shall maintain the following records relating to the products that they install and the sites where they have installed them:

- Fire/smoke/security performance related to the product
- Manufacturer's instructions for installation
- Manufacturer's instructions for safety in use
- Any difficulties experienced with the product, either during installation, or in use
- Appropriate methods for carrying out in-process and final inspection checks

- 3.14 The company shall keep detailed records of each installation undertaken. These shall, as a minimum, include the following:

**3.14.1 General Records**

- (i) Client
- (ii) Site address
- (iii) Location (if known)
- (iv) Start and finish date
- (v) Project number
- (vi) Names of the installers undertaking the work
- (vii) Details of in-process inspections/checks carried out prior to, during and after the product's installation
- (viii) Details of problems and any additional work carried out
- (ix) Completion certificate, as defined in Section 5
- (x) Unique reference number applied to the installed product

### **3.14.2 Installed Product Records**

- (i) Manufacturer's name
- (ii) Trade name of the product
- (iii) Product serial numbers
- (iv) Any limitations in respect of the compatibility of the installed product with other elements of construction
- (v) Manufacturer's instructions for the installation of doors
- (vi) Installation instructions – including perimeter requirements (where applicable)
- (vii) Commissioning procedure including operational checks
- (viii) Power requirements and connections (where applicable)
- (ix) Operating instructions (where applicable)
- (x) Maintenance instructions (where applicable)

## **4 USE OF SUB-CONTRACTORS**

**4.1** Sub-contractors shall comply with all the requirements defined in Section 3.

**4.2** The method of evaluating sub-contractors shall be clearly defined within the company's procedures.

**4.3** The company shall ensure that records are available to show that staff working for sub-contractors have been properly trained. Requirements for each installation shall be communicated in writing to the sub-contract installer and shall include all necessary details to enable the work to be carried out efficiently and to the client's satisfaction.

Any purchasing by the installer of components, spare parts, etc shall be strictly in accordance with documented procedures.

**4.4** The company shall train all installation engineers employed by the sub-contractor on work for the company and records of this training shall be made available for DHF, if required.

**4.5** The company shall be responsible for any work undertaken by a sub-contractor.

**4.6** The company shall keep records to show the areas of the country for which each sub-contractor is used.

## **5 ON SITE DOCUMENTATION**

In all cases, a certificate shall be issued to the client on completion of the work, the certificate shall include:

**5.1** The name, address and telephone number of the company.

**5.2** Identification of the installation engineer.

**5.3** The client's name and address, and the location involved.

**5.4** A list of all doors included in the installation recording all non-conforming equipment.

**5.5** A record of any work carried out.

**5.6** Confirmation that, where appropriate, a test of the closing mechanism has been carried out. If this test is not done in the client's presence for any reason, this shall be recorded on the certificate.

For power operated doors the following shall be supplied:

- 5.7 A Declaration of Conformity, operating and maintenance instructions.
- 5.8 A recording log
- 5.9 An Electrical Installation Certificate, where appropriate.

## **6 INSTALLATION LEVELS**

### **6.1 General installation**

The company's personnel shall work with appropriate storage and workshop facilities.

### **6.2 Installation contracts**

Companies working on installation contracts shall comply with 6.1 and ensure attendance in accordance with the contract.

## **7 MARKING & LABELLING**

Any certification labels or marks on fire resisting or security doors removed during installation work shall be replaced. If this is not possible, the company shall be advised to obtain a new one from the manufacturer of the original fire or security doors.

Power operated doors must be labelled with the company's CE label on completion of the commissioning process and supplied with a recording log (see annex 2).

## **8 PUBLICATIONS REFERRED TO**

|                        |  |
|------------------------|--|
| BS 7671: 2008          | Requirements for electrical installations. IEE Wiring Regulations. Seventeenth edition |
| BS 7036: 1996          | Code of practice for safety at powered doors for pedestrian use                        |
| NVQ unit CM12          | Specialist Installation Occupations Door Systems NVQ Level 2                           |
| DHF site safety manual | Site safety guidance and recommendations   |
| BS EN12635:2002+A1     | Industrial, commercial and garage doors and gates - Installation and use               |

*For undated references, the latest edition of the publication referred to applies*

## **Annex 1      General installation summary**

All personnel carrying out installation shall:

1.      Work in accordance with the Company's health and safety policy, including a site method statement and the DHF Site Safety manual
2.      Carry out a site risk assessment before commencing work
3.      Check the opening details against drawings or specification
4.      Check that the materials supplied are correct to specification
5.      Check that any required scaffolding or mobile towers used are erected and secured as per the manufacturer's instructions
6.      Install the door in accordance with the manufacturer's installation instructions
7.      Inspect and adjust (if fitted) electric operator, ancillary controls and safety devices
8.      Ensure all fixings are secure
9.      Test all functions and leave in good working order. Fit all labels and provide all documentation in accordance with statutory regulations as appropriate
10.     Remove all tools and equipment, surplus materials and waste from site, leaving all in clean and tidy order

**Annex 2      Example of recording log for powered doors**

| Installation company         |          |           | Unique Door No |             | Date installed   | Comments |
|------------------------------|----------|-----------|----------------|-------------|------------------|----------|
| Door No                      | Location | Door type | Manufacturer   | Power unit  | Safety device(s) |          |
|                              |          |           |                |             |                  |          |
|                              |          |           |                |             |                  |          |
| <b>Maintenance company</b>   |          |           |                |             |                  |          |
| <b>Maintenance work done</b> |          |           | <b>Date</b>    | <b>Name</b> | <b>Condition</b> |          |
|                              |          |           |                |             |                  |          |
|                              |          |           |                |             |                  |          |
| <b>Changes or upgrading</b>  |          |           | <b>Date</b>    | <b>Name</b> | <b>Condition</b> |          |
|                              |          |           |                |             |                  |          |
|                              |          |           |                |             |                  |          |
| <b>Other work done</b>       |          |           | <b>Date</b>    | <b>Name</b> | <b>Condition</b> |          |
|                              |          |           |                |             |                  |          |
|                              |          |           |                |             |                  |          |

### **Annex 3      Specific installation requirements for domestic garage doors**

All personnel carrying out installation shall:

1. Check that there is vehicle access to within 20m of the garage opening
2. Check that there is clear and safe pedestrian access to the garage door opening for the manual transportation of the door, via final driveway surface, or suitable compacted sub-surface
3. In the event that the final driveway is not laid, check that the working area of the opening is a level and compacted surface with the final driveway level clearly marked
4. Check that the garage floor and screed is complete
5. Check that the garage is roofed in and joist locations clearly visible to enable the fixing of tracks and operators, where required
6. Where any ceiling is boarded, ensure that the customer is aware that any making good is their responsibility
7. Any timber framing (if installed by others) is plumb, square and securely fixed
8. For power operated doors, a live 13 amp switched socket is provided in the specified location and where an internal push button is required a 2 core bell wire has been provided between the specified locations
9. Ensure that both the door and its operator are compatible with each other by means of Declarations of Incorporation