



ARE YOU AWARE OF THE DDADocMBS8300?

THESE DOCUMENTS HAVE AN IMPORTANT IMPACT ON
ARCHITECTURAL IRONMONGERS. HERE WE OFFER SOME GUIDANCE

● Locks and Lock Cases

- * All lock cases should have 72 mm centres or the cylinder should be fitted above the lever handle.
- * On bathroom and privacy functions, the turn to release the dead bolt should be large enough to operate easily.
- * All lock cases should have a minimum backset of 54 mm.

● Lever Furniture

- * For lever handles, the diameter should be a minimum of 19 mm but do not need to be round.
- * The lever should be operable without having to fully grip the handle.
- * A minimum of 45mm clearance behind the lever grip to the door face, excluding roses or backing plate.
- * On external handles -textured or not cold to the touch grip, would assist people with special needs such as sensitive skin.
- * The levers should not have sharp edges or sudden changes of direction.

● Pull Handles

- * Pull handles should have a minimum clearance from behind the pull grip to the door/backing plate face.
- * Pull handles should not exceed a diameter of 35 mm.
- * To aid wheelchair users, pull handles should be fitted vertically and horizontally.
- * Pull handles should be fitted with cover rose or trim to provide a larger surface area of support and allow easier recognition for people with impaired vision.
- * External handles on accessible routes should not be cold to the touch - ie not bare metal.

● General points for your guidance

- * If a door has no closing device, a horizontal pull handle should be fitted to the closing face for wheelchair users.
- * Bolt through fixing on lever furniture together with captive and/or grub screw fixed spindles.
- * The lever handles should be fixed at a constant height with horizontal pull fixings throughout the building.
- * In general, knob furniture which is cylindrical or ball shaped, should not be used because of the difficulty in gripping.
- * Entrances to buildings should have low rise thresholds and/or changes of floor level surfaces - 15 mm being the maximum.
- * No item should project from the door face which exceeds 100mm unless protected by a guard rail, within the designed free access space of a doorway.

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● Design Guide for Inclusive Design

The Centre for Accessible Environments is to publish a Design Guide about architectural Ironmongery which the Guild is sponsoring. It will include the following text:

● Door opening and closing forces

Within the Recommendations of BS8300 and DocM there is currently some discrepancy in the guidance relating to door opening and closing forces, in particular between a number of British and European Standards, the requirements of the Construction Product Regulations, CE Marking requirements and the guidance in Approved Documents B and M (England and Wales).

In addition, BS 8300 guidance for fire resisting doors fitted with door closing devices refers to a maximum closing force of 20 Newtons. Above this level, fire resisting doors are recommended to have an electrically powered hold-open device to avoid the need for the door to be opened manually.

AD M includes the provision for doors to be subject to a maximum opening force of 20 Newtons for comparable situations.

The force required to manually open a door fitted with a door-closing device is more than the mechanical force available to fully close the door. The scientific explanation for this is that a proportion of the energy used to open the door against the resistance of the door-closing device is lost as the door closes through friction in the hinges, latch and door seals. The degree of friction, and consequently the amount of energy lost, will depend on the type and quality of the hinge, latch and seal components. Nonetheless, because of the friction within the door-closing device itself, the force exerted by the door closer as it moves the door to the fully closed position, is less than the energy input of the person opening the door.

What this means in practice is that to achieve an opening force not exceeding 20 Newtons, the closing force will be in the region of 13-15 Newtons, which in many cases, is unlikely to be sufficient to fully close the door. This situation will not satisfy the provisions of Approved Document B (England and Wales), Technical Standard D (Scotland) or Technical Booklet E (Northern

Ireland) where the doors in question are required to provide fire resisting or smoke control. The same situation will apply to the increasing number of common area doors with acoustic performance required by Part E (England and Wales).

A maximum closing force of 20 Newtons equates to an opening force in the region of 27-30 Newtons.

This Design Guide should be published before the end of the year and each member company will receive a free copy.

● Visual contrast

Door furniture, pull handles, rails and push plates on accessible routes should always contrast visually with the door surface to improve identification by visually impaired people.

The Approved Document "M" has a provision for a minimum difference in Light Reflectance Values between the face of the door and the door furniture of "30 points". Aside from the use of extreme contrast between elements, such as black door handles on a white door leaf, how can a satisfactory level of LRV difference be assessed and achieved?

From a scientific point of view, this contrast can be measured, but the equipment needed to undertake such tests is expensive and although portable it has not been available outside test laboratories. For the designer, specifier or building manager, the judgement has been a subjective one largely informed by experience.

No definitive research has been carried out into the ability of people with visual impairment to locate door furniture on doors and therefore the 30 points provision may or may not be valid for these particular elements.

The Guild of Architectural Ironmongers has recently commissioned The Research Group for Inclusive Environments (RGIE) to undertake research to answer this question and whether "shiny" fittings are more or less acceptable than "dull" or "mat" ones.

The RGIE is based at the University of Reading and this research will follow on from the many projects involving visual impairment and the built environment previously carried out by the group.

The results of this research are expected to be made available early in 2005.



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