

TECHNICAL BRIEFING

TB15: Revision A

GAI Guidance on door closing
devices and access requirements



Introduction

There are certain questions which are often asked on the GAI technical helpline which relate to door closing devices and access requirements. This technical briefing seeks to assist our membership by seeking to answer some of these:

- Which takes precedence – fire protection or access requirements?
- Must door closing devices be DDA or EA compliant?
- What do the GAI recommend?

Which takes precedence - Fire safety or access?

The requirements for fire protection and accessibility have equal importance. Some people think that fire is paramount, because it is dangerous, and others think access is paramount, because a building is used every day, and the vast majority will never have a fire emergency. The two sides of this argument are opinion. The fact is that both fire safety and accessibility requirements must be met, to satisfy current building regulations and other legislation in the UK. It's "both / and", not "either / or".

Another misapprehension is that the various guidance documents to the building regulations have no real status, because they are "guidance". This mistake leads people to think that they can be ignored if the guidance is difficult to achieve, or generally problematic. Text from the Northern Ireland Technical Booklet R puts the situation succinctly:

"There are likely to be alternative ways of demonstrating compliance with the relevant requirements of the Building Regulations other than by following a design provision given in a Technical Booklet. There is therefore no obligation to adopt any particular provision set out in a Technical Booklet, should you decide to comply in some other way. However, you will have to demonstrate that your alternative solution meets the relevant requirements of the Building Regulations by those other means."

In other words, you can achieve the requirement in a different way, but you can't avoid, or do less than the requirement. An example would be the requirement for doors to be easy to open. This could be met by a suitable door closer able to offer not more than 30 N opening resistance

over the first 30° of door opening, and 22.5 N thereafter, as suggested in the guidance documents. Alternatively it might be met by an electro-magnetic hold open/swing free door closer; a low energy door operator; or a fully automated doorset. The first solution fulfils the requirement. The others remove the originating cause of the need – the manually-operated door closer. You have complied "in some other way".

Similarly, some think that BS 8300 can be sidelined, because it has in its title the words "Code of Practice". This conclusion is not correct. There are several types of British Standard. Some are "Specifications" such as our individual door hardware standards which set out test methods and performance requirements. Those standards which are "Codes of Practice" are generally less prescriptive, but still important nationally agreed documents. Here's how BSI defines them –

"Codes of practice recommend sound good practice as currently undertaken by competent and conscientious practitioners. They are drafted to incorporate a degree of flexibility in application, whilst offering reliable indicative benchmarks. They are commonly used in the construction and civil engineering industries."

This is much the same as complying with building regulations. There is flexibility in application, but you need to recognise the benchmarks of acceptable practice. You can do it differently, but you can't do it to a lesser standard and expect to have complied.





Standards and regulations

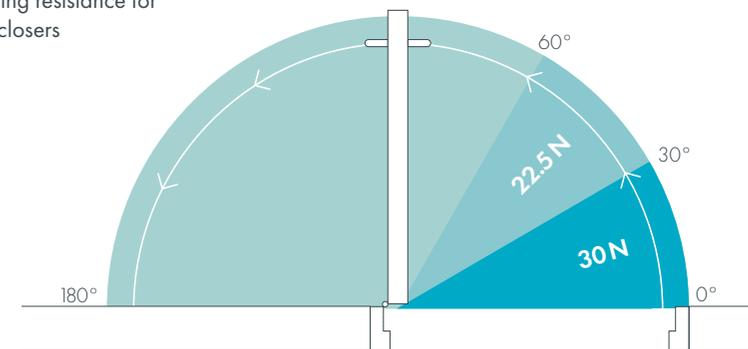
The following documents have equal weight as guidance to fulfilling their respective Building Regulation requirements:

- Approved Document B (ADB), and Approved Document M (ADM) (England & Wales)
- Technical Handbook: Non-domestic: Fire, and Technical Handbook: Non-domestic: Safety (Scotland)
- Technical Booklet E: Fire safety, and Technical Booklet R: Access to and use of buildings (Northern Ireland)
- Technical Guidance Document M : Access and Use (Republic of Ireland)
- Compliance with Regional Building Regulations is mandatory in all parts of the UK (England & Wales; Scotland; Northern Ireland) and in the Republic of Ireland.
- The Equality Act (EA) applies to all building owners/managers in GB, so new/refurbished buildings must enable these people to fulfil their responsibilities
- The Disability Discrimination Act still applies in Northern Ireland
- BS 8300 is a nationally agreed standard for the UK, which gives guidance on the parameters which make a building accessible. This makes it a reliable benchmark on the subject. It is referenced in all 3 UK regions' building regulation guidance documents, in addition to the Republic of Ireland. It has now been split in to parts 1 and 2.

Must door closing devices be (DDA)/EA compliant?

- It is impossible for a door closer (or any hardware product) to be (DDA)/EA compliant
- Some types of door hardware might assist a premises owner/manager in achieving EA compliance with regard to the operation of their building
- Access into and through buildings is a prime requirement of the Equality Act and Regional Building Regulations
- ADM (England & Wales) and Technical Booklet R (Northern Ireland) currently apply to ALL DOORS in a new building/refurbishment, with the exception of plant rooms, maintenance and service inspection areas. Technical Handbook: Non-domestic: Safety (Scotland) doesn't list any exceptions.
- The recommendation for not more than 30 N opening resistance (0° - 30°) and not more than 22.5 N (30° - 180°) occurs in
 - ADM (England and Wales)
 - Technical Handbook: Non-domestic: Safety (Scotland)
 - Technical Booklet R (NI)
 - Technical Guidance Document M (R.o.I.) -BS 8300
- Therefore the maximum 30 N / 22.5 N opening resistance applies to virtually all doors on new- build and refurbishment in the UK

Opening resistance for door closers



The Equality Act is concerned with civil rights, and does not mention door hardware at all! Some types of door hardware might assist a premises owner/manager in achieving EA compliance with regard to the operation of their building. This is why values for door opening forces have been put into building regulation guidance documents, and BS 8300. In turn, if we supply products which assist in achieving these values, the finished building will enable its owner/manager to meet the EA's requirements for equality of access.

When the original Disability Discrimination Act (DDA) became applicable to buildings, the focus was on existing building stock, and the creation of "accessible routes" into and through these buildings. For some, it rather went under the radar that ADM requires ALL doors in new buildings and refurbishments to be accessible. This reflects the requirements of Part M1 of the Building Regulations (England & Wales). The only exceptions are: "any part of a building which is used solely to enable the building or any service or fitting in the building to be inspected, repaired or maintained."

Northern Ireland has similar requirements, but the exclusion doesn't occur in Scotland's Technical Handbook: Non-domestic: Safety, which covers most of that country's access provisions. Therefore the maximum 30 N /22.5 N opening resistance applies to virtually all doors on new-build and refurbishment in the UK and in Ireland.

This has consequences with regard to price and performance as far as product specification is concerned. Als need to be mindful of this wide- ranging requirement for access, in order to protect themselves from any comeback after supply.



What are the recommendations of the GAI?

- Get door closer manufacturers' performance figures for various strengths/door widths as this gives you back-up if they perform less well on site, due to other factors
- Where possible, ensure other hardware you supply is low friction – e.g. hinges; seals; latches
- You might require a closer with very high efficiency for refurbishment of existing narrow doors
- Offer electro-magnetic hold-open/free-swing or automatic operator solutions
- Bear in mind that if closers are supplied as meeting access requirements with no supporting information on limitations, you might be expected to change them FoC if the opening force is too high when fitted and commissioned.

We know that many factors can affect the efficiency of a door assembly after installation. A door hardware manufacturer cannot guarantee that performance figures produced on a test rig will be replicated on site where the door frame might not be plumb and square, the area is subject to air pressure differentials, or the fixing instructions have not been followed.

This is akin to car manufacturers supplying "miles per gallon" figures for their various models. These are achieved under specified laboratory conditions, but are not guaranteed to be replicated by the rush-hour urban driver, the off-road enthusiast, or the speed merchant. The best Als can do is to ensure that:

- the products they specify and supply at least meet requirements in laboratory conditions
- they inform clients of the extent and limitations given in any additional performance figures supplied.

Several manufacturers have done tests to show the lowest door width at which their products can deliver not more than 30 N opening resistance, dropping to 22.5 N after 30°. It's wise to get this data in writing, if it is not already published or available in print.

Never rely solely on a claim of "DDA/EA compliant". Check that the figures stack up for the door widths you are dealing with. This shows a professional approach, and that you have tried to fulfil

the regulatory requirements as best you can, whilst supplying components for a door assembly installed by others.

BS 8300 clearly states "where hinged or pivoted fire-resisting doors need to be accessible the door closers fitted should ... be of a variable power type" Also that "Door closers whose power is adjustable by template are not suitable for this application". The resistance to opening created by hinges; seals; air pressures; door/frame alignment; etc. should be kept to an absolute minimum, to optimise conditions for the door closer.

Where any of these products/factors are not under the AI's control, the client should be informed of their possible adverse effects before supply, to ensure expectations are realistic. It is probably unwise to give cast iron guarantees about door closer performance on door assemblies where several critical factors are outside the AI's direct control, and where door widths are less than 950 mm.

Where clients/contractors are applying price pressure, and don't want to buy higher quality door closers, or electro-magnetic closers, or automatic solutions, AIs are advised to ensure that the door width limits for providing not more than 30 N opening resistance are made clear to the purchaser. This should prevent successful claims being made if a client/contractor's own choice proves to be non-compliant.

As professional specifiers, we are faced with the difficult task of supplying products which will meet both fire safety and access requirements simultaneously, whilst still under constant pressure of market forces. Members should be aware of the consequences of providing non-compliant product simply to fit in with a Contractor's cost programme. It is our responsibility to offer solutions which meet Regional Building Regulations, not to put ourselves at risk by ignoring them.



The Guild of Architectural Ironmongers

The Guild of Architectural Ironmongers (GAI) is the only trade body in the UK that represents the interests of the whole architectural ironmongery industry; architectural ironmongers, wholesalers and manufacturers. Its reputation is built on three key areas: education, technical support and community. Its qualifications, education and CPD programmes are widely respected in the UK and overseas, including the GCC and Hong Kong.

Its technical information service is the only specialist service of its kind, providing GAI members with comprehensive advice on issues relating to the legislation, regulations and standards governing the use of architectural ironmongery and related hardware. The GAI is run by the industry for the industry.

Further information

The GAI continually keeps its membership up to date through Technical Briefings which can be downloaded from the member's section of the GAI website.

The GAI have also produced a set of Guides to Standards which is available to download. These cover an Introduction to Standards as well as separate Guides to the main industry standards, including a new publication specifically on doorsets. GAI also publish continual updates on standards in their Quarterly Technical Review.



GAI Specifiers' Guides

GAI have also published a set of Specifiers' Guides relating to ironmongery and access control products for the Construction industry. These are aimed at assisting all who are involved in the specification process from the architect, architectural technician, interior designer, M&E consultant right through to the specifying architectural ironmonger. [These can all be downloaded from here.](#)

Where can I get further advice?

If you have any further questions then please contact:
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