

Half-leaf doors and closers: An open and shut case?

We frequently find half-leaf doors left open that should be kept shut to provide fire protection. In this paper, we look at how this problem can be addressed.



Half-leaf doors are smaller doors to the side of a main door, which allow for the widening of doorways when a large item needs to pass through. In offices, this could be to facilitate the occasional movement of large furniture, such as desks and cabinets, or in hospitals it might be to enable patient trolleys to pass. According to the needs of the building's occupants, half-leaf doors can vary in size, with a width sometimes as small as 150mm.

Half-leaf doors must perform just as well as main doors in preventing the spread of fire, but in many cases, their ability to do this is compromised because they are left open permanently. This can be down to carelessness or because it is more convenient to keep them open. Indeed, there may be sound reasons beyond mere convenience involved. In hospitals, for example, patient trolleys and pieces of equipment are moved around throughout the day, with speed often at a premium.

Common practice is to simply sign a door as, 'Fire door – keep shut', and fit bolts to secure them shut. This is perfectly acceptable from a legal perspective, but relies on users complying with the notice. Unfortunately, the frequency with which half-leaf doors are left open when they should not be suggests that the notices are all too often disregarded. Human nature being what it is, a more reliable way to ensure protection in the event of fire is called for.

The obvious solution is to fit self-closers, but because people think that door closers are generally designed with full-size doors in mind, they often incorrectly assume that closers cannot work with half-leaf doors.

Closers for half-leaf doors

In fact, it is perfectly possible to fit closers to half-leaf doors. The skill is in knowing, given the variety of sizes of half-leaf doors that exist, which specific closer is best in each situation. The space available for closing mechanisms and the power required to close different sizes of door are the key factors to consider.



^ The Rutland TS.9205 Scissor Arm Door Closer is power-adjustable from EN2-5

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Power-adjustable closers can be dialled down to the necessary strength

Although the same height as main doors, half-leaf doors are, by definition, not as wide. The width of a door is a key factor in the amount of pressure required to close it, so half-leaf doors require less powerful closers to close them. This is where power-adjustable closers come into their own, as the power setting can be dialled down to exert the lower pressure needed to close the door securely. As long as the door has a closer rated at EN3 or above, fire safety regulations will be satisfied.



The space available will dictate the closer fitting options available

The size of a half-leaf door not only helps to determine the pressure required to close it, but also affects how closers can be mounted.



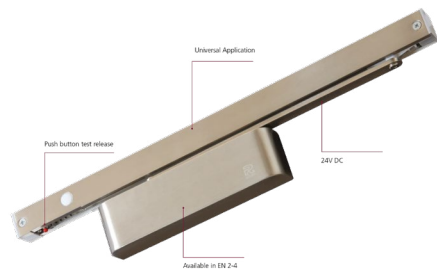
Conventionally and transom mounted overhead closers

Conventional installation of a scissor arm, slide arm, or concealed arm closer may be possible if the door is wide enough. If the closer body is wider than the half-leaf door itself, though, it can be transom (or figure 61) mounted. In this instance, the body of the closer is fixed to the door frame and the closer arm shoe fixed to the door. In the case of scissor arm closers, the body can be mounted so that it extends to the width of the architrave beyond the hinge side of the door, while with slide arm and concealed arm closers the closer can extend over the top of the adjacent main door without affecting its operation.



Floor spring closers

Floor spring closers are also an option as the closing mechanism is located in the body of the floor and all that needs to be fitted within the door is a relatively short pivot, which is unlikely to be a problem in even the narrowest of half-leaf doors.



Electromagnetic closers

In many instances, the ideal solution, offering the perfect balance of convenience and fire safety, is to have both the main door and the half-leaf door fitted with electromagnetic closers. Both doors will be held open usually – perfect in the busy hospital scenario – but close automatically if a fire alarm is activated, thus providing the all-important barrier to help prevent a fire spreading. The viability of an electromagnetic closer comes down to the same essential considerations identified above – the width available and the power required to close the half-leaf door. A slide arm can span the half-leaf door when the long rail is fitted to the frame (spanning the meeting stiles) and the power adjustable cam action body fits nicely, even on a narrow half-leaf door.

⋈ An electromagnetic, power adjustable slide arm closer, such as Rutland's TS FIRETRAK.114 delivers convenience and safety.

Discuss your specific requirements with Rutland

We hope that we have demonstrated the principle that half-leaf doors and closers can – and often should – go together. However, we appreciate that there are many variables involved, so we are always happy to discuss your specific needs and find solutions that work in real world environments. From recommending appropriate closers for specific half-leaf door scenarios to helping to arrange fire testing of agreed solutions, we can work with you to ensure that half-leaf doors can operate without sacrificing safety.

Call 01246 261491 or email sales@rutland.co.uk to start a conversation.

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