

Panic or emergency?

From 1st January 2010 it became mandatory for all exit devices to comply with the latest revisions of EN 1125 or EN 179 and CE marking.

All Briton 560 - 570 and 376 Series exit devices have been tested and certified to prove compliance with the latest standards EN 1125 & EN 179 which govern the application of panic and emergency exit hardware, but which standard applies to which application?



Panic Applications - Conforming to EN 1125

A 'panic' application is where the exit door is used by members of the public and must provide "safe and effective escape through the doorway with minimum effort and without prior knowledge of operation".

Typical applications include:

- Shops
- Schools
- Hospitals
- Theatres and Cinemas

According to EN1125 the length of the panic exit device should be as near as possible the effective width of the opening and not less than 60% of the width of the opening.



Emergency Applications - Conforming to EN 179

An 'emergency' application is where the exit door is in a low occupancy environment and will only be used by trained personnel, such as in a place of work never accessed by the public or people unfamiliar with the escape drill.

Typical applications include:

- Offices
- Private Flats & Apartments
- Store Rooms & Boiler Rooms

Products used in emergency applications require only a single point of operation e.g. pushpads or levers.

Testing and CE Marking

Rigorous testing is continually being carried out on the Briton range of exit hardware providing peace of mind for specifiers, distributors, installers and users.

Low operating force

Repeatedly tested to operate at 50% lower than the standard requirement, ensuring that the door can be operated with minimum force, for example by small children, the elderly and people with special needs.

Two tests are undertaken. The first is to operate the door with a maximum force of 80 Newtons.

The second test simulates a panic situation whereby the door is put under 1000 Newton pressure to simulate a group of people pushing against the door.

The operating force on the device with this weight should not exceed 220 Newtons.

Abusing the push bar

The push bar is attacked with a force equivalent to a 16 stone man (1000 Newtons) pulling/pushing it in all directions and standing on it, after which the bar must still operate.



Cycle testing

All Briton products exceed the highest EN requirement of 200,000 cycles, ensuring durability for everyday use. Von Duprin panic exit hardware is tested beyond 500,000 cycles.

The finger trap test

To reduce the risk of trapping fingers and/or the blocking of the panic device, any gap shall not trap a test rod of 10mm dia. at any position of the bar travel during the operation of the panic device.

Abusing the bolt

Testing the bolt strength involves the equivalent of the combined strength of 4 people trying to pull the bolt away from the door.

An attempted break-in is simulated to test the security of the bolt, force is applied to the anti-thrust device as if the bolt were being 'jimmied' out of its socket.

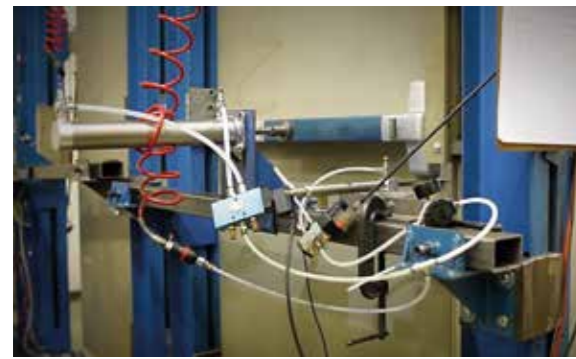
Corrosion resistance

A test which measures how suitable the exit device is for varying environmental conditions. All Briton 376 Series hardware has been tested to EN 1670 Building Corrosion Requirements and has achieved at least grade 3 (high resistance). This ensures the product will function correctly in wet, polluted and exterior environments. Note, for panic and emergency exit hardware the corrosion resistance grade is based on performance not aesthetic finish.



Independently tested in excess of 5 million cycles

In addition to CE marking for applications in Europe, Von Duprin exit devices are also tested to comply with ANSI standard A156.3 developed and maintained by BHMA in North America.



Von Duprin exit devices undergoing cycle testing beyond 5 million cycles, far in excess of the requirement for ANSI grade 1.



Salt spray corrosion tests being carried out on Von Duprin exit devices.

Testing Criteria

Listed below are only some of the tests and criteria covered in this standard. For simplification, all tests and details of tests are not elaborated on. For exact and complete details of tests, etc. refer to the complete ANSI/BHMA standard.

1. Cycle test

Door shall be opened by pushing on the actuating bar. The door shall then close and latch.

Grade Cycles

Grade 1 500,000 cycles

Grade 2 250,000 cycles

Grade 3 100,000 cycles

2. Exit test (unloaded door)

With the door closed and latched and with no load on the door which might cause it to open, a horizontal force on the actuating bar, not to exceed 15 pounds (6.8kg) shall release the latching mechanism. (All grades).

3. Exit test (loaded door)

With the door closed and latched, a force of 250 pounds shall be applied in the area of the center case of the exit device in the direction of door opening. Applying a force of not more than 50 pounds (22.7kg) must release the latch bolt allowing the door to open. (All grades).

4. Force to latch door

With the door closer disconnected, a force applied in the area of the center case of not more than 4.5 pounds (2.04kg) shall cause the door to latch.

A guide to specifying panic and emergency exit hardware

Which system to choose

Having first determined whether the application requires a panic or emergency exit solution there are number of additional considerations which will determine the most appropriate product. These could include:

- Aesthetic considerations - push bar or touch bar
- Designed to satisfy ANSI or EN standards
- Single point or multi-point latching for security
- Frequency of use may require a heavy duty solution
- Additional features such as hold-back or alarm connection
- Access from outside required

Single or multi-point security

Both panic and emergency exit solutions are available as rim devices providing a single central latch point or with latching points at the top and bottom of the door. The modular nature of the Briton 560 - 570 Series allows you to build a solution which is tailored specifically to the needs of your door providing up to 5 latching points on a single door.

Series	Von Duprin 98/99 Series	Briton 570 Series	Briton 560 Series	Briton 581
Description	Very heavy duty panic exit hardware	Modular panic exit hardware system	Modular panic exit hardware system	Modular emergency exit hardware system
Touch bar operation	■	■		
Push bar operation			■	
Push pad operation				■
CE marked to EN 1125	■	■	■	
CE marked to EN 179				■
Approved to ANSI A156.3	■			
Rim latch device	■	■	■	■
Vertical bolt device	■	■	■	■
Electric latch retraction	■			
No. of latching points	1 to 3	1 to 5	1 to 5	1 to 5
No. of test cycles	500,000	200,000	200,000	200,000
Certified for use on fire doors	2hr timber	2hr timber/2hr steel	2hr timber/2hr steel	2hr timber/2hr steel
Suitable for single doors	■	■	■	■
Suitable for double doors	■	■	■	■
Budget comparison	££££	££ - £££	££ - £££	££
Typical applications	High specification applications and situations requiring a heavy duty solution	Medium to high end commercial applications	Medium to high end commercial applications	Medium to high end commercial applications