LPCB Red Book

Part: 3

Smoke and fire ventilation systems

bre

Last updated: 25 Apr 2025

Introduction

BRE Global Ltd, based in the UK near London, is an independent third party organisation offering certification of fire, security and sustainability products and services to an international market. LPCB is the certification brand used for fire and security products and services. The LPCB mark is accepted worldwide. We have representative offices in China, India and Dubai. We are owned by the BRE Trust, a not-for-profit organisation.

LPCB listings can be accessed, free of charge, at www.redbooklive.com. BRE Global additionally carries out:

- Fire Investigation
- Fire Risk Assessment
- Fire Safety Engineering
- Research
- Training

LPCB Listings

Listings are given in sections which list related groups of products and services such as suppression, security and so on. Each section also summarises the technical basis for the certification of each product or service. The Red Book listings should always be used in conjunction with rules, regulations and design specifications required by the relevant Authority having jurisdiction.

Listings comprise:

Volume 1:

- Fire detection and alarm products, systems, and cables
- Manual fire extinguishing equipment
- Automatic sprinkler, water spray and deluge systems
- Fixed fire fighting products and systems
- Watermist systems
- Related installers

Volume 2:

- Passive fire protection products
- Security protection products
- Fire doors and shutters
- Smoke and fire ventilation systems
- Security Assessments
- SABRE
- Related installers
- Management Systems
- Construction products

Listings are given in the name of the manufacturer or service provider, in alphabetical order. They can be downloaded free of charge from our website at www.redbooklive.com

Updates

Certification of products and services are updated regularly. To ensure that you are using the most up to date information please refer to www.redbooklive.com.

What is Third Party Certification?

A frequent concern of stakeholders is in knowing whether a product will perform in accordance with the

stated specifications. These concerns can involve such product attributes as safety, health or environmental impacts, durability, compatibility, suitability for intended purposes or for stated conditions, and other similar considerations. These issues can all be addressed through product certification.

Third party certification is a conformity assessment process, carried out by a body that is independent of both supplier and customer organisations. It provides confirmation that products and services have met and will continue to meet the requirements of specified standards and other normative documents.

LPCB third party product certification schemes are quality assurance schemes and comprise initial type testing and technical evaluation, assessment and surveillance of the manufacturer's quality system and factory production procedures, regular audit testing, labelling and listing.

Similarly, LPCB schemes for suppliers of services (installers) are also quality assurance schemes comprising a technical assessment of an installer's capability, assessment and surveillance of the installer's quality system and production procedures, regular inspection of completed installations and listing.

Benefits of Third Party Certification

For specifiers, regulators, insurers, manufacturers and installers, the benefits of an LPCB approval are:

For specifiers and regulators:

- Risk reduction - specifying LPCB approved products and services demonstrates due-diligence and best endeavour and mitigates against possible accusations of negligence.
- Avoidance of costly mistakes - you can trust LPCB approved products and services to conform each and every time.
- Time - using Red Book Live to search for and assess products and services can save you time.

For manufacturers and installers:

- Increased global sales - LPCB approval is recognised and specified widely throughout the world. In some territories LPCB approval is a mandatory requirement.
- Added value of the product or service - LPCB approved products and services are recognised as providing added value given their ability to conform each and every time.
- Reduced liability - LPCB approved products and services demonstrate due-diligence which can reduce liability for both you and your customers.

What does LPCB Certification offer?

LPCB certification is carried out against Loss Prevention Standards (LPS's). These LPS's include reference to BS, EN or ISO standards as appropriate. LPCB certification are level 5 schemes as detailed in ISO/ IEC 17067 with the added requirement to have a quality system certificated to ISO 9001.

The technical requirements of LPCB schemes are given in the Loss Prevention Standards (LPSs). These documents are drafted by LPCB technical experts in conjunction with appropriate external experts. They are then peer reviewed by representatives from trade bodies, regulators, insurers, specifiers, manufacturers and other suppliers. Finally these documents are approved for use by the BRE Global Governing Body; the Body that oversees all of the certification activities of BRE Global.

Product schemes comprise:

- Initial type testing and evaluation of product.
- Approval and surveillance of the manufacturer's (or supplier's) quality management system to ISO 9001
- Assessment and surveillance of the manufacturer's (or supplier) factory production control system (FPC).
- Periodic audit testing of the product from either the factory or marketplace.
- Labelling or marking as appropriate.

INSTALLER SCHEMES COMPRISE:

- Listing on Red Book Live

Installer schemes comprise:

- Technical assessment of the installation contractor's capability.
- Approval and surveillance of the contractor's quality management system to ISO 9001 or assessment against the requirements of the relevant Loss Prevention Standard where ISO 9001 is not appropriate.
- Regular surveillance inspections of on-going installations.
- The issue of Certificates of Conformity by the installer to demonstrate compliance for each installation.
- Listing in the Red Book.

The LPCB Mark - the Mark you can trust

After certification of a product or service the manufacturer or service provider may place the LPCB certification mark, as shown below, on the product, packaging and literature etc.

Where LPCB holds accreditation through the United Kingdom Accreditation Service (UKAS), the certified company may include the UKAS symbol (the Crown and Tick) alongside the LPCB mark for certain applications e.g. promotional literature or material and stationery, as shown below.

(Full details of LPCB accreditation can be found on the UKAS website at www.ukas.com)
Where for reasons of space or cost the use of the above full mark is not practical, then the following simplified mark may be applied directly to the product (for some schemes only). The LPCB scheme rules define how and where the marks can be used.

Part 3

Smoke and fire ventilation systems

introduction text from db for Smoke and fire ventilation systems*Requirements and testing procedures for the LPCB certification and listing of intruder resistant building components, strongpoints, security enclosures and free-standing barriers*.

Introduction to LPS 1175

With much attention being placed on the role of emerging technologies in the fight against crime and terrorism, it is often easy to become detracted from the basics. However, good physical security is the bedrock of effective security. Without the delay to intrusion provided by effective physical security, detection simply tells you the intruder has been and gone. It is therefore always important to ensure suitable physical security measures are in place and that those measures provide sufficient delay to enable the intruder to be detected and a suitable response mounted to apprehend the intruder.

The delay provided by physical security products and systems is typically measured in terms of the tools and time required to achieve entry through those products and systems. These combine to indicate the effort required by an intruder to gain unauthorised access through the physical security barrier.

Using products and systems that achieve a higher rating, or using a layered approach to physical security, can greatly increase the effort an intruder needs to exert to gain entry. That effort extends beyond the physical work required to overcome the physical security barriers. It also includes the effort required to plan and prepare for the attack. The greater the level of planning and preparation a criminal must invest in to conduct a successful attack, the less likely that criminal will consider the return on their investment will be sufficient to warrant attempting that attack.

As the security ratings increase, the size and weight of tools used increases. Using larger, heavier tools increases an intruders likelihood of being detected through natural surveillance. They can also slow down the intruder if they need to carry those tools onto the site being attacked. This also increases the risk to the intruder of being caught. The greater that risk, the less likely the criminal is to conduct the attack in the first instance.

So how do security managers and other specifiers confirm whether a physical security product will afford a suitable delay against the tools and techniques likely to be employed by a determined intruder?

LPS 1175 Requirements and testing procedures for the LPCB approval and listing of intruder resistant building components, strongpoints, security enclosures and free-standing barriers confirms the resistance to forced entry provided by security products, systems and building materials.

While Issues 6 and 7 specified eight levels of resistance (security ratings), the latest version (Issue 8) defines a performance classification formed of the following two elements:

- Threat level (first element) - Letter (A to H) corresponding with the tool kit used to evaluate the products intruder resistance and the number of attackers involved.
- Delay (second element) - Numeric value (1, 3, 5, 10, 15 or 20) corresponding with the minimum delay (in minutes) provided by the product when placed in a locked condition.

LPS 1175 covers the broadest scope of forced entry threat scenarios involving intruders that have little regard to the noise they make during attempts to achieve unauthorised access to assets, property and people. It also covers the broadest scope of physical security products and services of any publicly available standard in the world. This includes, but is certainly not restricted to, the following types of product:

· Access covers	· Garage doorsets	· Security screens
· Cladding systems	· Hinged doorsets	· Sheds and tool stores
· Containers	· Grilles	· Skylights
· Curtain walling systems	· Modular buildings	· Sliding doorsets
· Enclosures	· Partitioning systems	· Strongpoints
· Entrance portals	· Revolving doorsets	· Vehicles
· Fences and gates	· Roofing systems	· Walling systems
· Folding doorsets	· Security cabinets	· Windows

The classification system defined in LPS 1175 Issue 8 supports a layered approach to security, enabling the delay provided by products forming each layer of security to be determined against a common threat.

Further information on the security rating system and attack tools can be found in the standard itself, which can be downloaded for free from www.redbooklive.com.

TABLE OF CONTENTS

Wet Riser

AC Construction ltd

Wise street, Nottingham, Nottinghamshire, United Kingdom
Tel: 23456789 • Alt Tel: 2345678
E-mail: ACconstruction@test.com

Certificate No: CERT 031401 to EN671-1, LPS 1175
Certificate No: CERT 031402 to LPS 1209, EN671-1

Dampers 031401

Product Name	oremipsumtestte stingtesting12	security	test// Lorem ipsum dolor sit amet:: 12	test1	test2
Dampers031401/1testtesttesting	60 50 40 (120) ED (165) 90 50 40 (180) ED (247) 90 40 47.5 (171) 92 42 48.5 (187.4) 120 50 40 (240) ED (330) 120 40 47.5 (228) 122 42 48.5 (248.5) 150 50 40 (300) ED (412)	60 50 40 (120) ED (165) 90 50 40 (180) ED (247) 90 40 47.5 (171) 92 42 48.5 (187.4) 120 50 40 (240) ED (330) 120 40 47.5 (228) 122 42 48.5 (248.5) 150 50 40 (300) ED (412)	1Dampers031401/1testtest	loremipsumtesttestingtesting12345//	loremipsumtesttestingtesting12
Dampers031401/2testtesttesting	60 50 40 (120) ED (165) 90 50 40 (180) ED (247) 90 40 47.5 (171) 92 42 48.5 (187.4) 120 50 40 (240) ED (330) 120 40 47.5 (228) 122 42 48.5 (248.5) 150 50 40 (300) ED (412)	60 50 40 (120) ED (165) 90 50 40 (180) ED (247) 90 40 47.5 (171) 92 42 48.5 (187.4) 120 50 40 (240) ED (330) 120 40 47.5 (228) 122 42 48.5 (248.5) 150 50 40 (300) ED (412)	1Dampers031401/1testtest	loremipsumtesttestingtesting12345//	loremipsumtesttestingtesting12

test group notes

Certificate No: LPS-234 to LPS 1175

Dampers 16c

Product Name	LPCB Ref. No.
Dampers 16c-2	LPCB Dampers 16c-2
Dampers 16c-1	LPCB Dampers 16c-1

test

Wet Riser

Wet Riser

Wet Riser

Wet Riser

AC Construction ltd

Wise street, Nottingham, Nottinghamshire, United Kingdom
Tel: 23456789 • Alt Tel: 2345678
E-mail: ACconstruction@test.com

Certificate No: Test approval level blank to LPS 1209

Test approval level blank ------ test scope

Wet Riser