
LPCB Red Book



Part: 3

Smoke and fire ventilation systems

bre

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.

RE 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

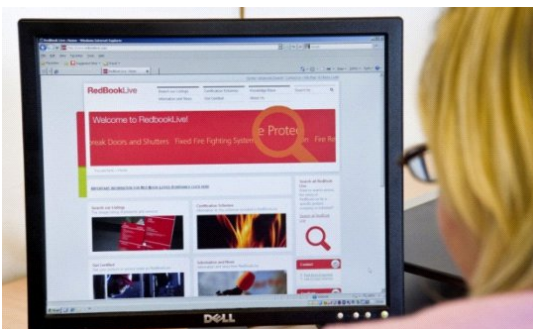
Volume 2: (This Volume)

- **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.

VOLUME 2 LIST OF APPROVED PRODUCTS AND SERVICES

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.
- 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.



The products listed in Volume 2: Part 5 - Construction Products, are approved under our BRE Global Certification brand - the certification mark for this brand is:-



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| Elta Fans Limited | 14 | K | |
| F | | Kent Ductwork Limited | 8 |
| Fenland Fire Contracts Limited | 5 | R | |
| Fire Protection Limited | 5 | Rockwool Limited | 8 |
| Firespray International Limited | 5 | S | |
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Part

3

*SMOKE AND FIRE
VENTILATION SYSTEMS*

PART 3: SMOKE AND FIRE VENTILATION SYSTEMS

INTRODUCTION

Fire ventilation systems are installed to:

- Keep escape and access routes free from smoke.
- Facilitate fire fighting operations by creating a smoke free layer.
- Delay and/or prevent flashover and the subsequent full development of the fire.
- Protect equipment, furnishings, contents, etc.
- Reduce the thermal effects on structural components during a fire.
- Reduce damage caused by thermal decomposition of products and hot gases.

The key components of smoke and fire ventilation systems, i.e. fire dampers, ductwork, smoke curtains and powered smoke and heat exhaust ventilation fans, are listed in this section.

Their functions are:

Fire dampers:

- To maintain compartmentation where air distribution ducts pass through compartment walls and floors.

LPCB approves fire dampers to LPS 1162: *Requirements for the approval of fire dampers.*

Fire resistant ductwork:

- To maintain compartmentation when air distribution ducts pass through compartment walls and floors and where fire resisting dampers are not used to provide the compartmentation.
- To achieve the same fire resistance in terms of integrity and, if required, insulation as required for the compartment walls or floors.

LPCB approves fire resistant ductwork to BS 476: Part 24 *Fire tests on building materials and structures: Method for determination of the fire resistance of ventilation ducts and/or EN 1366 Part 1 Fire resistance tests for service installations Ducts.*

Smoke Extraction Ducts

The purpose of smoke duct systems are for the prevention of transmission of smoke and combustion products from a fire zone, smoke control duct sections are utilised to contain the spillage of otherwise harmful and toxic extinguishing gases from the affected area, and for the control of pressurising and excess air relief within pressurisation systems.

Smoke control ducts are commonly used in smoke and heat control systems. They may serve single compartments or a number of different fire compartments. The systems may be dedicated smoke extraction or possibly a combined environmental ventilation/smoke extraction.

LPCB approves Smoke Extraction Ducts to EN 1366 Part 8 or EN 1366-9 *Fire resistance tests for service installations. Single compartment smoke extraction ducts*

Smoke curtains:

- To create a smoke reservoir by containing and limiting the travel of smoke.
- To channel smoke in a predetermined direction.
- To prevent or retard smoke entry to another area or void.

LPCB approves Smoke curtains to LPS 1182: *Requirements for the approval of fixed fabric smoke curtains, fixed metal smoke curtains and powered smoke curtains.*

Powered smoke and heat exhaust ventilation fans:

- To channel heat and smoke in a predetermined direction.
- To prevent smoke logging of the protected space.

Powered smoke and heat exhaust ventilation fans are approved in accordance with EN 12101-3 *Smoke and heat control systems. Part 3 Specification for powered smoke and heat exhaust ventilation.*

PART 3: SMOKE AND FIRE VENTILATION SYSTEMS

Grease filters used in commercial kitchen extract systems:

- To reduce flammable and volatile grease droplets from the cooking exhaust of commercial cooking equipment.

LPCB categorises and approves grease filters in accordance with the requirements of LPS 1263:

Requirements for the approval and listing of the fire performance of grease filters used in commercial kitchen extract systems.

PART 3: SECTION 1

FIRE DAMPERS

Fire dampers are installed:

- To maintain compartmentation where air distribution ducts pass through compartment walls and floors.
- To achieve the same fire resistance in terms of integrity as required for compartment walls or floors.
- To close completely as soon as a fire is detected.

All the fire resistant dampers listed in Section 1 of this part of the list have been tested and assessed against the requirements of LPS 1162 *Requirements and tests for the LPCB approval of fire dampers*.

Swegon Air Management Limited

Joseph Wilson Industrial Estate, South Street, Whitstable, Kent CT5 3DU, United Kingdom

Tel: +44 (0)1227 276100 • Fax: +44 (0)1227 264262

Website: www.swegonair.co.uk

Certificate No: 017a to LPS 1162: Issue 4

| Product Name | LPCB Ref. No. |
|---------------------------|----------------------|
| Fire Shield | 017a/01 |
| Smoke Shield PTC | 017a/04 |
| CSS Circular Smoke Shield | 017a/05 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Fire resistant ductwork is installed:

- To maintain compartmentation when air distribution ducts pass through compartment walls and floors where fire resisting dampers are not used to provide the compartmentation
- To achieve the same fire resistance in terms of integrity, and if required insulation, as required for the compartment walls or floors.

All the fire resistant ducts listed in here have been tested and assessed against the requirements of BS 476:Part 24 *Fire tests on building materials and structures: Method for determination of the fire resistance of ventilation ducts* and/or EN 1366 Part 1 *Fire resistance tests for service installations Ducts*.

Certification is limited to the applications and fire resistances given.

Fenland Fire Contracts Limited

Unit 3, Laburnum Farm, East Hyde, Near Luton, Bedfordshire LU2 9PW, United Kingdom

Tel: +44 (0)1582 723979 • Fax: +44 (0)1582 723980

E-mail: info@ffcducting.co.uk • Website: www.ffcducting.co.uk

Certificate No: 1176a to BS 476: Part 24

Fire Resistant Ducts

| Product Name | LPCB Ref. No. |
|-----------------------------|----------------------|
| Fenland Fire Rated Ductwork | 1176a/01 1176a/02 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Fire Protection Limited

Flamebar House, South Road, Templefields, Harlow, Essex CM20 2AR, United Kingdom

Tel: +44 (0)1279 634 230 • Fax: +44 (0)1279 634 231

E-mail: info@fireprotection.co.uk • Website: www.fireprotection.co.uk

Certificate No: 277a to BS 476 Part 24

| Product Name | LPCB Ref. No. |
|---------------|---------------|
| Flamebar BW11 | 277a/01 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Firespray International Limited

Flamebar House, South Road, Templefields, Harlow, Essex CM20 2AR, United Kingdom

Tel: +44 (0)1279 634 230 • Fax: +44 (0)1279 634 232

E-mail: info@firespray.eu.com • Website: www.firespray.eu.com

Certificate No: 415a to BS 476 Part 24

| Product Name | LPCB Ref. No. |
|---------------|---------------|
| Flamebar BW11 | 415a/01 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

PART 3: SECTION 2.1

FIRE RESISTANT DUCTS

Firetrace Ductwork Limited

19 Marshall Road, Eastbourne, Sussex BN22 9AD, United Kingdom

Tel: 01323 400680 • Fax: 01323 400690

E-mail: clive@firetrace-ductwork.co.uk • Website: www.firetrace-ductwork.co.uk

Certificate No: 1345a to SD 198 (Appendix B12)/BS 476-24:1987

| Product Name | Duct Type | Condition | Duct Orientation Vertical V- or Horizontal H- | Type/density of insulation | Insulation Thickness (mm) | Fire Resistance (Integrity/Stability) | Fire Resistance Insulation | LPCB Ref. No. |
|---------------------|--------------------------------|--|--|---------------------------------------|---------------------------------|--|----------------------------------|------------------|
| Caswell Firesafe | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | V or H | None | - | 240 | - | 1345a/01 |
| | Kitchen Extract | Fire inside (Type B) & Fire outside (Type A) | V or H | Mineral wool 160 kg/m ³ | 25 | 30 | 30 | 1345a/02 |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | H | Mineral wool 160 kg/m ³ | 40 | 60 | 60 | |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | H | Mineral wool 160 kg/m ³ | 40 | 30 | 30 | |
| | Kitchen Extract | Fire inside (Type B) & Fire outside (Type A) | H | Mineral wool 160 kg/m ³ | 40 | 30 | 30 | |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | V or H | Mineral wool 160 kg/m ³ | 70 | 90 | 90 | |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | H | Mineral wool 160 kg/m ³ | 90 | 120 | 120 | |
| | Kitchen Extract | Fire inside (Type B) & Fire outside (Type A) | H | Mineral wool 160 kg/m ³ | 90 | 60 | 60 | |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | V | Mineral wool 160 kg/m ³ | 30 | 60 | 60 | |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | V | Mineral wool 160 kg/m ³ | 50 | 90 | 90 | |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | V or H | Mineral wool 100 kg/m ³ | 50 | 30 | 30 | 1345a/03 |
| | Ventilation Smoke Outlet | Fire inside (Type B) & Fire outside (Type A) | V or H | Mineral wool 100 kg/m ³ | 100 (2x50) | 60 | 60 | 1345a/04 |

Notes:

1. LPCB Ref. No's 1345a/01, 1345a/02, 1345a/03 and 1345a/04 - Uninsulated and Insulated Ductwork systems to be manufactured and installed to the specifications as detailed in Report no 335274 Issue 2 dated 15 July 2014.
2. LPCB Ref. No 1345a/02 Mineral wool specification: Rockwool FirePro Duct Slab with a nominal density of 160kg/m³. The boards of maximum size 2000mm x 1200mm, have thicknesses of 25, 30, 40, 50, 70 and 90mm.
3. LPCB Ref. No 1345a/03 Mineral wool specification: Rockwool RW5 Slab, 50mm thick and 100 kg/m³ nominal density.
4. LPCB Ref. No 1345a/04 Mineral wool specification: Rockwool Marine Firebatt 2000, 100mm (2 x 50mm) thick and 100 kg/m³ nominal density.
5. LPCB Ref. No's 1345a/01 - covers rectangular and circular ductwork up to 3000mm wide x 3000mm high, reference Firesafe Tables 1 to 4 and circular ductwork up to 1250mm diameter Table 9. The Firesafe systems may also be employed as attenuator casings as defined in Assessment Report no.335274 Issue 2 dated 15 July 2014 however the LPCB approval does not cover the attenuator itself.
6. LPCB Ref. No's 1345a/02 - maximum size of steel duct without extra support to insulation for rectangular and circular insulated ductwork when insulation material thick 25mm, 30mm, 90mm is up to 1000mm x 1000mm, when insulation material thick 70mm - up to 1200mm x 1200mm and when insulation material thick 40mm, 50mm, 70mm - 1500mm x 1500mm. Where insulation is required for circular ducts, Firepro Duct Slab is fitted around the duct as a square box in the same manner as for rectangular ducts. On horizontal ducts additional hangers are fitted at 1510mm maximum centres. Where the diameter of the steel duct exceeds 610mm then studwelded pins and washers must be fitted at the mid-width of the board in the same manner as for rectangular ducts.
7. LPCB Ref. No's 1345a/03 1345a/04 - covers rectangular and circular insulated ductwork up to 1000mm x 1000mm.
8. LPCB Ref. No's 1345a/01, 1345a/02, 1345a/03 and 1345a/04 - Details of the modified penetration seal system, where the duct passes through fire compartment walls or floors, are shown in Firesafe drawings no's. CF213A, CF311B & CF312. The parts of the steel collars are bolted together instead of welded and that, for insulated ducts, a gasket of ceramic tape 100mm wide x 3mm thick is fitted between the collar and the duct wall on all four sides of the duct.
9. LPCB Ref. No's 1345a/01, 1345a/02, 1345a/03 and 1345a/04 - thin film paint finishes may be applied to the outside of the steel ductwork. The foil facing of insulated ducts may also be painted provided that the paint is water based. The paint finish must comply with the reaction to fire requirements for the building in which the ductwork is being installed.
10. LPCB Ref. No's 1345a/01, 1345a/02, 1345a/03 and 1345a/04 - an assessment report No 335274 covers systems manufactured from galvanised steel, mild steel and stainless steel and ducts over 3m longest side (in panel construction).

Ductwork Manufacturers

The following Companies manufacture the products listed on this certificate to a specification issued and controlled by Firetrace Ductwork Limited

These Companies are audited by the LPCB to ensure the product certification requirements are met.

Airtrace Sheet Metal Limited (LPCB Ref. No. 1345)
 19 Marshal Road
 Eastbourne
 East Sussex
 BN22 9AD

Flameshield Products Limited

9 Zillah Gardens, Wigmore, Gillingham, Kent ME8 0EE, United Kingdom

Tel: 0800 3289980

E-mail: info@flameshieldproducts.co.uk

Certificate No: 785d to SD198 (Appendix B12) / EN 1366-1

| Product Name | LPCB Ref. No. |
|---------------------|----------------------|
| FlameshieldEN | 785d |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Certificate No: 785a to BS 476: Part 24

Flameshield Vertical and Horizontal insulated and uninsulated ducts

| Product Name | LPCB Ref. No. |
|---------------------|----------------------|
| Flameshield | 785a/03 |
| | 785a/04 |

PART 3: SECTION 2.1

FIRE RESISTANT DUCTS

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Kent Ductwork Limited

Units 7-9 Swaisland Drive, Crayford Industrial Estate, , Kent DA1 4HS, United Kingdom

Tel: 01322 558887

E-mail: info@kentductwork.co.uk • Website: www.kentductwork.co.uk

Certificate No: 1336b to SD198 (Appendix B12)/EN 1366-1

| Product Name | LPCB Ref. No. |
|---------------------|----------------------|
| FlameshieldEN | 1336b/01 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Certificate No: 1336c to SD198 (Appendix B17)/EN 1366-8

| Product Name | LPCB Ref. No. |
|---------------------|----------------------|
| FlameshieldEN | 1336c |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Certificate No: 1336a to BS 476-24

Flameshield Vertical and Horizontal insulated and uninsulated ducts

| Product Name | LPCB Ref. No. |
|---------------------|----------------------|
| Flameshield | 1336a/03 |
| | 1336a/04 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Rockwool Limited

Wern Tarw, Pencoed, Bridgend, Mid Glamorgan CF35 6NY, United Kingdom

Tel: +44 (0)1656 862621 • Fax: +44 (0)1656 862302

E-mail: info@rockwool.co.uk • Website: www.rockwool.co.uk

Certificate No: 022f to BS476 : Part 24 : 1987

| Product Name | Duct Type | Condition | Maximum Duct size (ht x wt) (mm) | Insulation Thickness (mm) | Fire Resistance Integrity (min) | Fire Resistance Insulation (min) | LPCB Ref. No. |
|---------------------|----------------------------------|------------------|---|----------------------------------|--|---|----------------------|
| FirePro | Ventilation vertical orientation | Fire Outside | 100 x 1000 | 25 | 30 | 30 | 022f/01 |
| | Ventilation vertical orientation | Fire Outside | 1000 x 1000 | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Outside | 1500 x 1500 | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Outside | 1500 x 1500 | 70 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 25 | 30 | 30 | |

PART 3: SECTION 2.1**FIRE RESISTANT DUCTS**

| Product Name | Duct Type | Condition | Maximum Duct size (ht x wt) (mm) | Insulation Thickness (mm) | Fire Resistance Integrity (min) | Fire Resistance Insulation (min) | LPCB Ref. No. |
|--------------|------------------------------------|--------------|----------------------------------|---------------------------|---------------------------------|----------------------------------|---------------|
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 70 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Outside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Outside | 1500 x 1500 | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Outside | 1200 x 1200 | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Outside | 1000 x 1000 | 90 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 90 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Inside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation vertical orientation | Fire Inside | 1000 x 1000 | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Inside | 1500 x 1500 | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Inside | 1500 x 1500 | 70 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 70 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Inside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Inside | 1500 x 1500 | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Inside | 1200 x 1200 | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Inside | 1000 x 1000 | 90 | 120 | 120 | |

PART 3: SECTION 2.1

FIRE RESISTANT DUCTS

| Product Name | Duct Type | Condition | Maximum Duct size (ht x wt) (mm) | Insulation Thickness (mm) | Fire Resistance Integrity (min) | Fire Resistance Insulation (min) | LPCB Ref. No. |
|--------------|------------------------------------|--------------|----------------------------------|---------------------------|---------------------------------|----------------------------------|---------------|
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 90 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Outside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation vertical orientation | Fire Outside | 1000 x 1000 | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Outside | 1500 x 1500 | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Outside | 1500 x 1500 | 70 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Outside | 1525 dia. | 70 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Outside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Outside | 1500 x 1500 | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Outside | 1200 x 1200 | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Outside | 1000 x 1000 | 90 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Outside | 1525 dia. | 90 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Inside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation vertical orientation | Fire Inside | 1000 x 1000 | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Inside | 1500 x 1500 | 50 | 90 | 90 | |

PART 3: SECTION 2.1**FIRE RESISTANT DUCTS**

| Product Name | Duct Type | Condition | Maximum Duct size (ht x wt) (mm) | Insulation Thickness (mm) | Fire Resistance Integrity (min) | Fire Resistance Insulation (min) | LPCB Ref. No. |
|---------------------|------------------------------------|------------------|---|----------------------------------|--|---|----------------------|
| | Ventilation vertical orientation | Fire Inside | 1500 x 1500 | 70 | 120 | 120 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 30 | 60 | 60 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 50 | 90 | 90 | |
| | Ventilation vertical orientation | Fire Inside | 1525 dia. | 70 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Inside | 1000 x 1000 | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Inside | 1500 x 1500 | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Inside | 1200 x 1200 | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Inside | 1000 x 1000 | 90 | 120 | 120 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 25 | 30 | 30 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 40 | 60 | 60 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 70 | 90 | 90 | |
| | Ventilation horizontal orientation | Fire Inside | 1525 dia. | 90 | 120 | 120 | |
| | Kitchen extract | Fire Outside | 1500 x 1500 | 40 | 30 | 30 | |
| | Kitchen extract | Fire Outside | 1000 x 1000 | 90 | 60 | 60 | |

PART 3: SECTION 2.2

SMOKE EXTRACTION DUCTS

The purpose of smoke duct systems are for the prevention of transmission of smoke and combustion products from a fire zone, smoke control duct sections are utilised to contain the spillage of otherwise harmful and toxic extinguishing gases from the affected area, and for the control of pressurising and excess air relief within pressurisation systems.

Smoke control ducts are commonly used in smoke and heat control systems. They may serve single compartments or a number of different fire compartments. The systems may be dedicated smoke extraction or possibly a combined environmental ventilation/smoke extraction.

LPCB approves Smoke Extraction Ducts to EN 1366 Part 8 *Fire resistance tests for service installations. Smoke extraction ducts* or EN 1366-9 *Fire resistance tests for service installations. Single compartment smoke extraction ducts*

Flameshield Products Limited

9 Zillah Gardens, Wigmore, Gillingham, Kent ME8 0EE, United Kingdom

Tel: 0800 3289980

E-mail: info@flameshieldproducts.co.uk

Certificate No: 785e to SD198 (Appendix B17)/EN 1366-8

| Product Name | LPCB Ref. No. |
|---------------------|----------------------|
| FlameshieldEN | 785e/01 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

Smoke curtains are used:

- To create a smoke reservoir by containing and limiting the travel of smoke.
- To channel smoke in a predetermined direction.
- To prevent or retard smoke entry to another area or void.

All the smoke curtains listed in Section 3 of this part of the list have been tested and assessed against the requirements of LPS 1182 *Requirements and tests for fixed fabric smoke curtains, fixed metal smoke curtains and powered smoke curtains*.

Currently there are no products listed in this section.

PART 3: SECTION 4

POWERED SMOKE AND HEAT EXHAUST VENTILATION

Powered smoke and heat exhaust ventilation fans are used:

- To channel heat and smoke in a predetermined direction.
- To prevent smoke logging of the protected space.

All the fans listed have been approved against the requirements of EN 12101-3 *Smoke and heat control systems. Part 3 Specification for powered smoke and heat exhaust ventilation.*

Elta Fans Limited

17 Barnes Wallis Road, Segensworth East Industrial Estate, Farnham, Hampshire PO15 5ST, United Kingdom

Tel: +44 (0) 1489 566555 • Fax: +44 (0) 1489 566555

E-mail: bcrisp@eltafans.co.uk • Website: www.eltafans.com

Certificate No: 937a to SD 198 (Appendix B13/EN 12101-3:2002)

Smoke and Heat Control Systems

| Product Name | LPCB Ref. No. |
|--|----------------------|
| SmokeVent axial fan | 937a/01 |
| JetVent Impulse (flanged - standard thrust) axial fan | |
| JetVent Impulse (flanged - enhanced thrust) axial fan | |
| SmokeVent axial fan | 937a/02 |
| JetVent impulse (flanged - standard thrust) axial fan | |
| JetVent impulse (flanged - enhanced thrust) axial fan | |
| JetVent impulse (flanged standard and enhanced thrust) axial fan | |
| SmokeVent axial fan | 937a/03 |
| JetVent centrifugal (Mark I) fan | 937a/04 |
| JetVent centrifugal (Mark II) fan | 937a/05 |
| JetVent impulse (unflanged - standard thrust) axial fan | 937a/06 |
| JetVent impulse (flanged standard and enhanced thrust) axial fan | 937a/07 |
| JetVent - centrifugal (Mark III) fan | 937a/08 |

A copy of the certificate, confirming the full scope of approval including notes relating to the superscript references in the above table, may be viewed online by clicking on the certificate link in the associated entry on www.RedBookLive.com

LPS 1263 *Requirements for the LPCB Approval and Listing of the Fire Performance of Grease Filters Used in Commercial Extract systems.*

This standard covers the test procedures and method of calculating the fire performance rating of grease filters used for the reduction of flammable and volatile grease droplets from the cooking exhaust of commercial cooking equipment in such situations as restaurant kitchens, canteens or similar food preparation areas where it is necessary to reduce the cooking exhaust via a ventilation system.