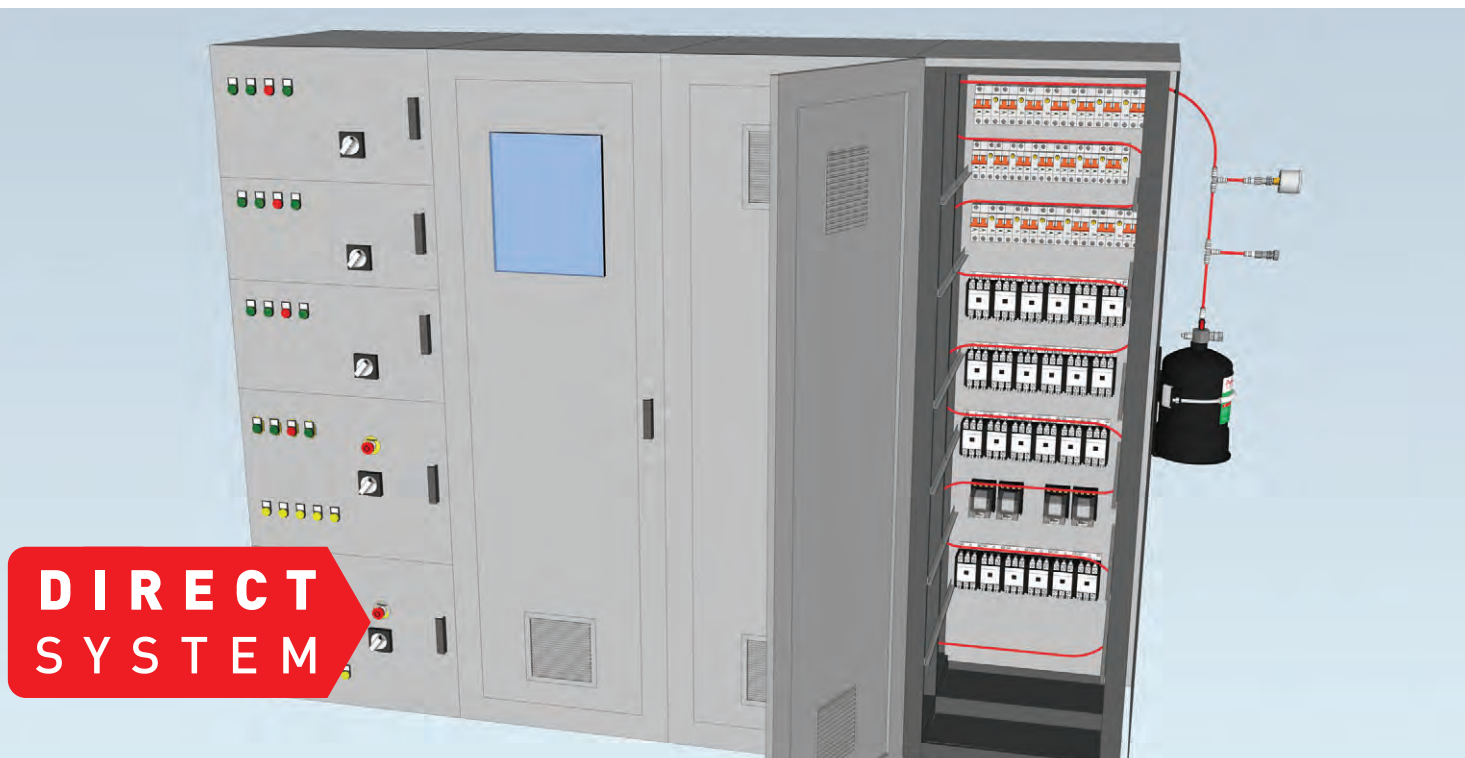


PNEUMATICALLY ACTUATED **FIRE** SUPPRESSION SYSTEMS



Electrical Enclosure Fire Protection

Automatic Fixed
Fire Suppression Systems
for Electrical Enclosures

Using FK-5-1-12 Agent



LPS1666
Cert/LPCB ref. 783d

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- › pafss@jactone.com



Why choose PAFSS®

THE PROBLEM

Electrical enclosures can be found, often in multiple numbers, in more or less every workplace, factory, warehouse or general commercial site.

These small enclosures, including those for distribution, control, communication and servers, can present a particular problem where faulty equipment, damaged wiring or improper installation can increase the risk of fire.

Fires in such enclosures can be difficult to identify, often until it is too late to take action, especially in well sealed enclosures where there would be limited escape of combustible products or heat.

THE PAFSS SOLUTION

Jactone PAFSS offers peace of mind for customers looking to specify a fully tested, approved and certified solution for fire protection of their electrical enclosures.

Jactone PAFSS Direct Low Pressure (DLP) fixed fire suppression systems have been specifically designed to protect small enclosures in accordance with **Loss Prevention Standard, LPS 1666**. **“Requirements and test procedures for the LPCB approval of direct low pressure (DLP) application fixed fire suppression systems”**.

PAFSS DLP systems provide protection **inside** the enclosure and discharge at the heart of the fire, suppressing quickly and preventing the fire from spreading to neighbouring enclosures, equipment and the wider building. This can significantly reduce the risk of injury to personnel and losses caused by equipment down time and operational disruption.

On guard 24 hours a day, 365 days a year



LPS1666
Cert/LPCB ref. 783d

**UK
CA**
0086

CE
2797



*UL Listing for
PAFSS detection tubing



How PAFSS® works

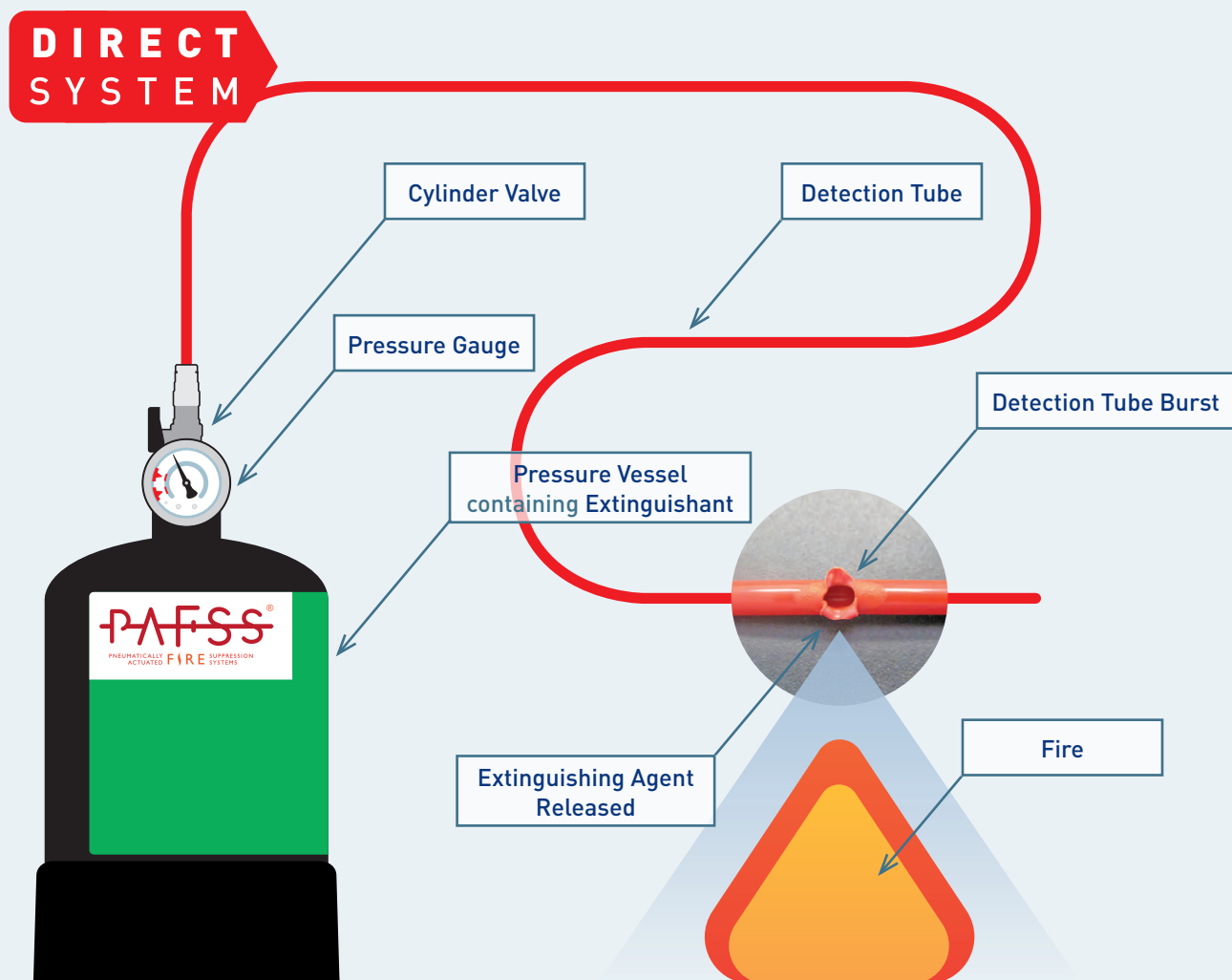
▶ PRINCIPLES OF OPERATION

PAFSS fire suppression systems are self-activating and require no external power for detection or operation making them ideal for unmanned or unsupervised applications.

At the heart of any PAFSS system is the special detection tubing which acts as a linear heat and flame detector. PAFSS detection tubing is completely flexible and is installed throughout the risk areas of the enclosure, providing fast and effective detection.

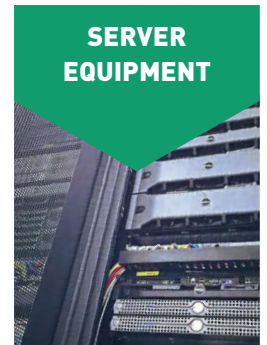
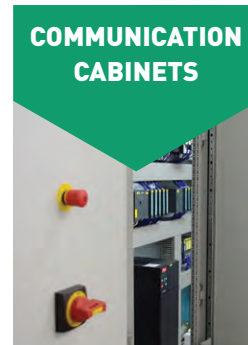
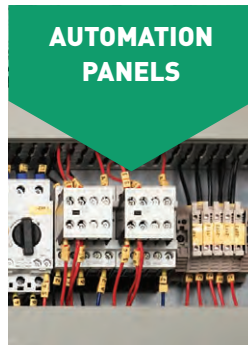
When the system detection tubing is exposed to flame or high ambient temperature, it ruptures with a burst at the hottest point and the drop in pressure activates the cylinder valve. The extinguishing agent is then discharged from the connected cylinder through the burst hole at the heart of the fire.

FIRE → TUBE BURSTS → EXTINGUISHING AGENT RELEASED THROUGH TUBE

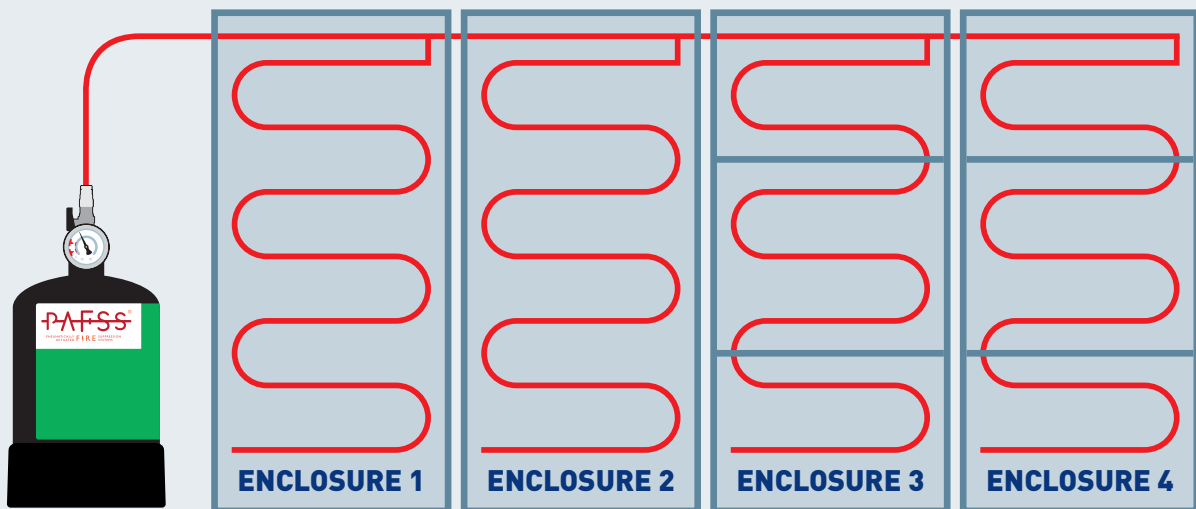


PAFSS® protection

➤ WHAT DO PAFSS DLP SYSTEMS PROTECT



➤ PROTECT UP TO **FOUR** ENCLOSURES WITH **ONE** SYSTEM



Four enclosures each protected by individual PAFSS detection tubing. Each enclosure can be multi-compartment.

NOTE: Risk assessment allows for only **ONE** fire in any **ONE** enclosure.

Detection: Tube Detection and Discharge

Due to its proximity to any fire or high ambient temperature, PAFSS detection tube can operate within the enclosure much earlier than detection devices outside the enclosure.

Suppression Performance

The discharge of the extinguishant is inside the enclosure and therefore right at the heart of the problem, meaning there is a much greater probability that the fire will be extinguished. The early detection and system discharge means the fire is suppressed at an earlier stage in its development. This minimises equipment damage and generation of combustion by-products.

Effectiveness against fire spread

PAFSS systems are able to prevent migration of the fire between cabinets e.g. from **Enclosure 1 → 2 → 3 → 4**

As electrical enclosures are often situated adjacent to each other and in multiples, this prevention of fire spread is absolutely critical.

Since systems are sized to protect the volume of enclosures only and not the whole room, this means there is a considerable reduction in the overall quantity of extinguishing agent required. This can result in significant cost savings when compared to much larger systems.

PAFSS® protection

› VENTILATION AND AIRFLOW

PAFSS DLP fixed fire suppression systems, which utilise FK-5-1-12 Fluid, are fully certified to LPCB standard LPS1666 with the added provision of being tested and approved for use on enclosures that have either **VENTILATION** (enclosed or open vents) and / or **AIRFLOW** (fans). The presence of either determines the system container size, as per the guidance and limits in the system manual.



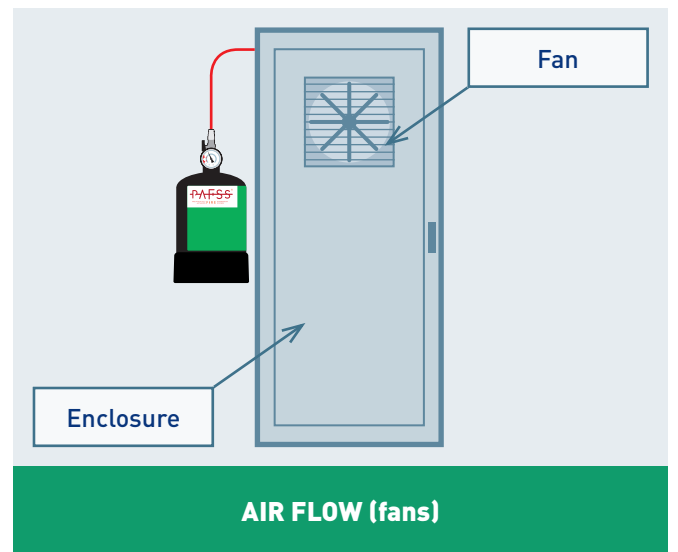
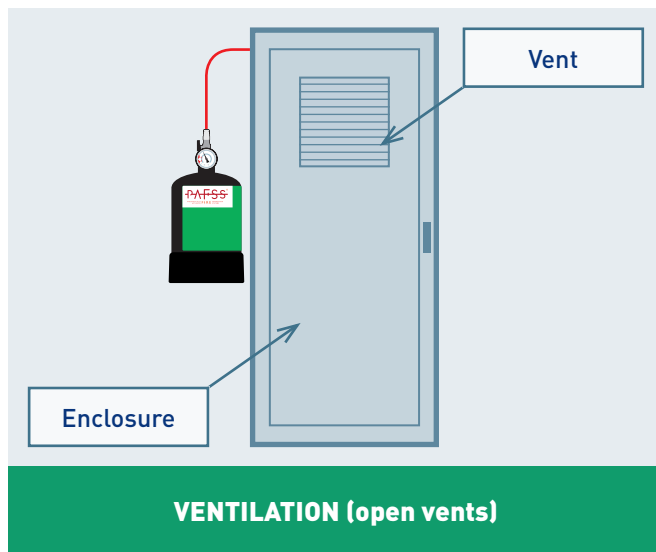
Appendix to Certificate No: 783d
Jactone Products Limited

Issue: 05

Jactone® PAFSS® 3M™ Novec™ 1230/FK-5-1-12 Direct Low Pressure (DLP) Application
Fixed Fire Suppression Systems

Product Name	Container Size	Description	Detector Tube	Ventilation (Enclosed or Open Vents)	Air Flow (Forced / Natural)	LPCB Ref. No.
PAFSSND2	2 kg	2 kg Novec™ 1230/FK-5-1-12 DLP system	FSTFV300	Enclosed & open options ⁴	Forced & natural ⁵	783d/01
PAFSSND25	2.5 kg	2.5 kg Novec™ 1230/FK-5-1-12 DLP system	FSTFV300	Enclosed & open options ⁴	Forced & natural ⁵	783d/02
PAFSSND3	3 kg	3 kg Novec™ 1230/FK-5-1-12 DLP system	FSTFV300	Enclosed & open options ⁴	Forced & natural ⁵	783d/03

This provision in PAFSS DLP fixed fire suppression systems also future proofs the systems performance against maintenance or modifications that introduce further vent areas or fans to the enclosure that is being protected.



› UL LISTED DETECTION TUBE

The special detection tubing used in all PAFSS fire suppression systems is UL Listed.

The UL Listing qualifies all Jactone PAFSS detection tube as a 'Heat-automatic Fire Detectors – Component', after comprehensive testing in accordance with ANSI / UL 521 – 'Heat Detectors for Fire Protective Signaling Systems'.



PAFSS® protection

➤ FK-5-1-12 AGENT

PAFSS DLP fixed fire suppression systems use the clean agent extinguishant FK-5-1-12.

What is FK-5-1-12?

Jactone offer our PAFSS DLP fixed fire suppression systems using FK-5-1-12, a leading clean agent extinguishant, offering a combination of efficiency, safety, and environmental responsibility.

FK-5-1-12 is a fluorinated ketone. It's an environmentally sustainable and fast-acting Halon 1301 replacement and hydrofluorocarbon (HFC) alternative. FK-5-1-12 has significantly lower global warming potential (GWP) than any alternative halocarbon agents accepted for use in occupied spaces.

FK-5-1-12 is stored as a liquid and discharged as a gas, making it ideal to extinguish fires in spaces where electronics or irreplaceable, critical assets are stored or where continuity of operations is crucial. It has a high margin of occupant safety and evaporates quickly, leaving no residue. In addition, it is electrically non-conductive, designed for applications where energised circuits and electronic systems cannot be shut down during an emergency.



Key Benefits

Environmentally Friendly

FK-5-1-12 has a minimal environmental impact. With zero ozone depletion potential (ODP), a global warming potential (GWP) of one and an atmospheric lifetime of just five days, it is a sustainable choice for fire suppression.

No Residue

Unlike traditional fire suppression systems that may leave behind contamination, FK-5-1-12 leaves no residue. This eliminates the need for post-discharge cleanup and prevents damage to sensitive electronic equipment or the data stored on it.

Rapid Suppression

FK-5-1-12 can reach extinguishing levels rapidly, providing swift fire suppression to minimise damage and downtime. Because it puts out fires fast, it reduces the likelihood of unnecessary activation of larger building protection systems and helps to preserve business continuity.

Safe for Electronics

Being electrically non-conductive and non-corrosive, FK-5-1-12 is safe to use around servers, storage devices, and other electronic equipment.

Occupant Safety

FK-5-1-12 has a wide margin of safety, ensuring the protection of both people and property.

The benefits of PAFSS®

› CERTIFIED

PAFSS Direct Low Pressure (DLP) fixed fire suppression systems using FK-5-1-12 are LPCB certified to LPS 1666, with allowance for vents (open or closed) and airflow (fans).

› EASY TO INSTALL

PAFSS is simple to install and maintain on both new and existing equipment.

› AUTOMATIC

PAFSS offers a fast and automatic operation from the initial detection of a fire, through to suppressing it.

› RELIABLE

Our UL listed highly reliable detection tube remains unaffected by dirt, dust, debris and oil.

› FLEXIBLE

The detection tubing allows for an unlimited number of fire detection points. It's flexible nature means it can be located adjacent to identified risk areas, providing fast effective detection.

› EARLY INTERVENTION

The early intervention of a PAFSS system can often prevent the release of a larger room suppression system, saving on expensive refill costs.

› NO ELECTRICAL POWER

PAFSS requires no power supply for detection or actuation, remaining operational during power interruption.

› SYSTEM MONITORING

Integral pressure switches allow remote system monitoring and initiation of safeguarding actions.

› QUALITY COMPONENTS

Superbly engineered specialist valves and pressure vessels containing clean agent extinguishant.

› BSI ISO 9001:2015

BSI audited quality management system ensuring our commitment to quality products and services.

On guard 24 hours a day, 365 days a year

PAFSS[®]

PNEUMATICALLY ACTUATED **FIRE** SUPPRESSION SYSTEMS



UK manufacturing and assembly



Fully certified system



Simple to install and maintain



On guard 24 hours a day, 365 days a year



Technical expertise, training and support



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Fire Industry Association

