AOV Kits for Smoke Control of Common Escape Routes

A guide to AOV kits for application in lobbies, corridors and stairwells

GROUP SCS | systemair

Our certified product range

The AOV Kit components

Our AOV kits contain ventilators, control panels, smoke detectors, and switches designed to work out of the box without the need for specialist installation or commissioning services. The kits can be installed as either stand-alone systems, or be inter-connected to form modular “smoke shaft” systems without the need for additional interfaces or software.

Glazed Louvre

EN 12101-2 Compliant Window Louvre complete with glass blades, suitable for smoke ventilation to corridors and stairwells.

Lobby Damper

EN 12101-8 compliant 24V smoke damper for use in smoke control systems serving multi-storey buildings.

Smoke Detector

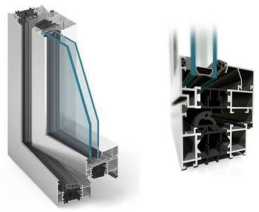
The standalone smoke detector will trigger dedicated control panels upon detection of smoke in the protected corridor/lobby.

Fireman’s Override Switch

Secure switch to allow fireman’s override within the stairs.

Louvred & Hatch Ventilators

24V ventilators certified to EN-12101-2 used to ventilate smoke from the top of the smoke shaft or stairwell.



Casement Window

EN 12101-2 certified stylish vent for use in natural ventilation and smoke and heat extraction in building facades.

Maintenance Switch

Local override switch for testing purposes

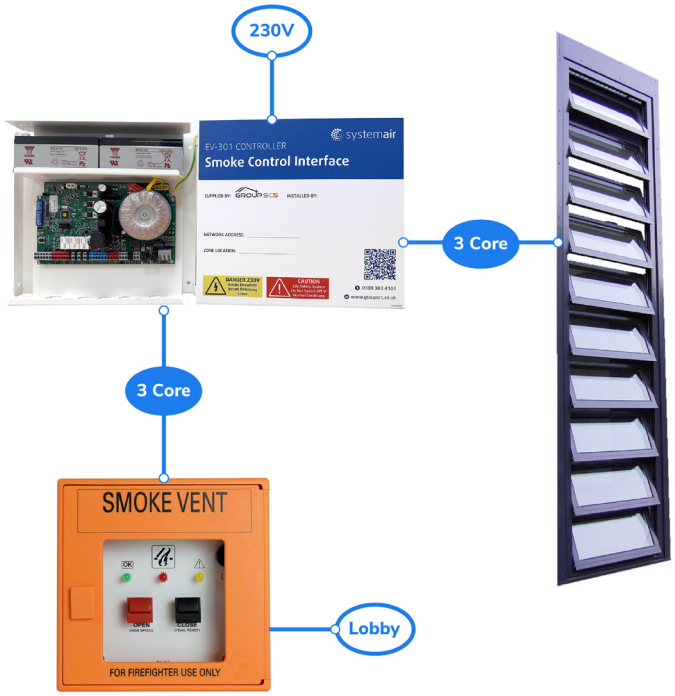
EV-301 interface panel

Certified to EN 12101-10, the EV-301 interface panel monitors and controls smoke control ventilators and interface devices.

AOV Kit A

Stairwell Kit with 1.0m² Louvred Window

View on website



KIT CONTENTS

1 x AOV Control Panel
1 x 1.0m² Louvred Window
1 x Fireman's Override Switch

FUNCTIONALITY

Provides smoke clearance to stairwells by automatically opening upon actuation of the control panel.

APPLICATION

Where an automatically opening vent is required to provide minimum free area of 1.0m² as specified in Approved Document B of the Building Regulations.

SPECIFICATION

Our Stairwell AOV Louvred Window and Controls kit has been specifically designed to ensure you have everything you need, without the need for specialist installation or commissioning services.

This kit can be installed as either stand-alone systems or be interconnected to form modular "smoke shaft" systems without the need for additional interfaces or software.

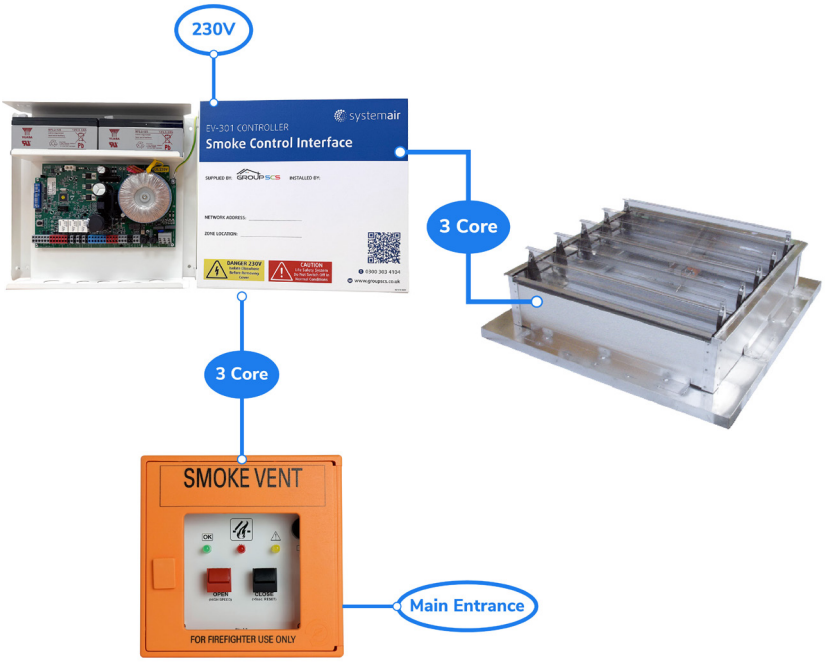
KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
AOV Control Panel	EV-301-MC-BB-IP
Fireman's Override Switch	EV-HE077
Geometric Free Area	1 x 1.0m² geometric free area
Louvre Window Dimensions	
Weight	48Kg
Actuator	24V, 0.65A
Frame Size	1,000mm W x 1,350mm H
Uw	2.6W/m².K Louvre
Blades	4 no. Laminated glass, 24.4mm thickness

AOV Kit B

1.0m² Louvred Stair Vent & Controls

View on website



KIT CONTENTS

1 x AOV Control Panel
1 x 1.0m² Louvre Vent
1 x Fireman's Override Switch

FUNCTIONALITY

Provides smoke clearance to stairwells by automatically opening a louvred ventilator on the stairwell roof.

APPLICATION

In a location where ventilation is to be achieved through the roof and where the system may be used for summer ventilation and/or where insulation is required to the vent.

SPECIFICATION

Our Louvred Stair Vent & Controls AOV kit has been specifically designed to ensure you have everything you need for projects that incorporate a "small single stair" design, without the need for specialist installation or commissioning services.

This kit can be installed as either stand-alone systems or be interconnected to form modular "smoke shaft" systems without the need for additional interfaces or software.

KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
AOV Control Panel	EV-301-MC-BB-IP
Fireman's Override Switch	EV-HE077
Geometric Free Area	1 x 1.0m² geometric free area
Insulated Base	c/w 250mm flange
Louvre Vent Dimensions	
Weight	50Kg
Base Colour	Mill finish aluminium
Vent Throat Dimensions	1.0m² - 1,104 mm L x 1,200 mm W
Blades	8 no. Opal Polycarbonate
SL	750
WL	1500
Re	1000
B	300
Temperature	- 5 ° C

AOV Kit C

1.0m² Hatch Stair Vent & Controls

View on website

KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
AOV Control Panel	EV-301-MC-BB-IP
Fireman's Override Switch	EV-HE077
Geometric Free Area	1 x 1.0m² geometric free area
Hatch Vent Dimensions	
Weight	50Kg
Vent Throat Dimensions	1100mm x 1100mm
SL	250
WL	1500
Re	50
B	300
Temperature	- 15 ° C

KIT CONTENTS

1 x 1.0m² Hatch Vent
1 x AOV Control Panel
1 x EV-HE077

FUNCTIONALITY

Provides smoke clearance to stairwells by automatically opening a roof hatch on the stairwell roof.

APPLICATION

This easy to install and commission kit is ideal for a smoke control project that incorporates a "small single stair" design.

SPECIFICATION

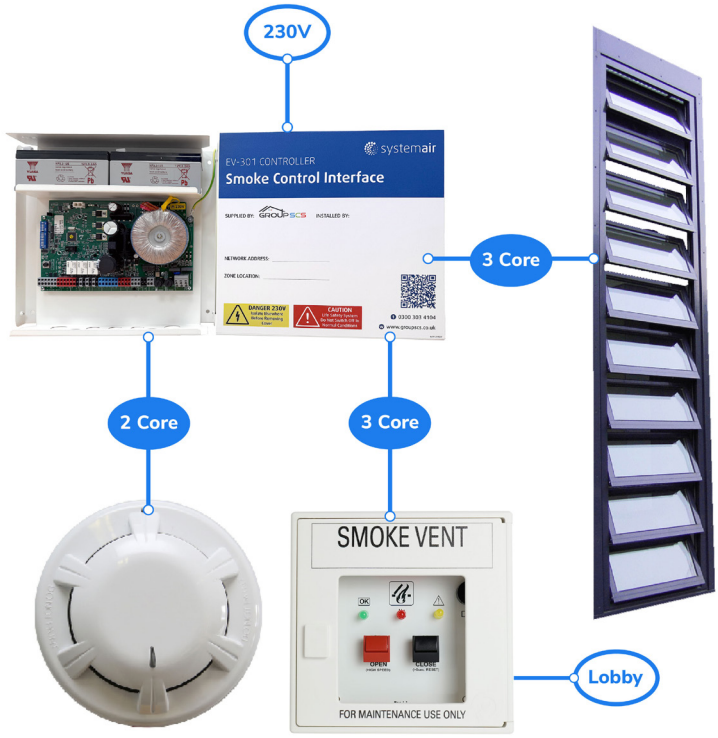
Our Hatch Stair Vent & Controls AOV kit has been specifically designed to ensure you have everything you need, without the need for specialist installation or commissioning services.

This kit can be installed as either stand-alone systems or be interconnected to form modular "smoke shaft" systems without the need for additional interfaces or software.

AOV Kit D

Corridor AOV Louvred Window & Controls

View on website



KIT CONTENTS

1 x AOV Control Panel
1 x 1.5m² Louvre Window
1 x Maintenance Switch
1 x Smoke Detector

FUNCTIONALITY

Provides smoke clearance to a protected corridor or lobby by automatically opening upon actuation of the control panel.

APPLICATION

Where an automatically opening vent is required to provide minimum free area of 1.5m² as specified in Approved Document B of the Building Regulations.

KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
AOV Control Panel	EV-301-MC-BB-IP
Maintenance Switch	EV-HE077-WHT
Smoke Detector	EV-SD
Geometric Free Area	1 x 1.5m² geometric free area
Louvre Window Dimensions	
Weight	70Kg
Frame Details	1,000 mm W x 2,000 mm H
Blades	5 no. Laminated glass, 24.4mm thickness
UG	1.1W/m²

SPECIFICATION

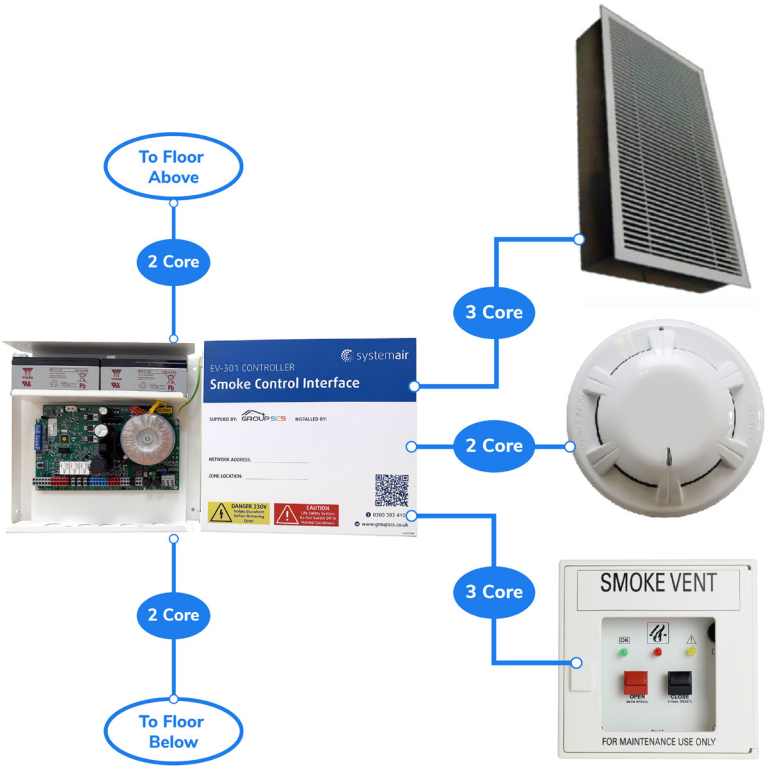
Our Corridor AOV Louvred Window & Controls kit has been specifically designed to ensure you have everything you need, without the need for specialist installation or commissioning services.

This kit can be installed as either stand-alone systems or be interconnected to form modular “smoke shaft” systems without the need for additional interfaces or software.

AOV Kit E

Lobby Vent Damper Into Shaft

View on website



KEY INFO / SPECIFICATIONS

Certification	EN12101-8 & EN1366-10
Modular Control Panel	EV-301-MC-BB-IP
Maintenance Switch	EV-HE077-WHT
Smoke Detector	EV-SD
Damper Details	
Damper	1.0m^2 c/w 24v actuator
Damper Casing	990 mm W x 1,490 mm H x 350 mm D
Builder's Work Opening	1,000 mm W x 1,500 mm H

KIT CONTENTS

1 x AOV Control Panel
1 x 1.0m^2 Damper
1 x Maintenance Switch
1 x Smoke Detector

FUNCTIONALITY

Provides smoke ventilation into a shaft by automatically opening a CE-marked Smoke Shaft AOV into the shaft.

APPLICATION

Where a natural or mechanical smoke shaft system is employed and a tested smoke shaft vent is required.

SPECIFICATION

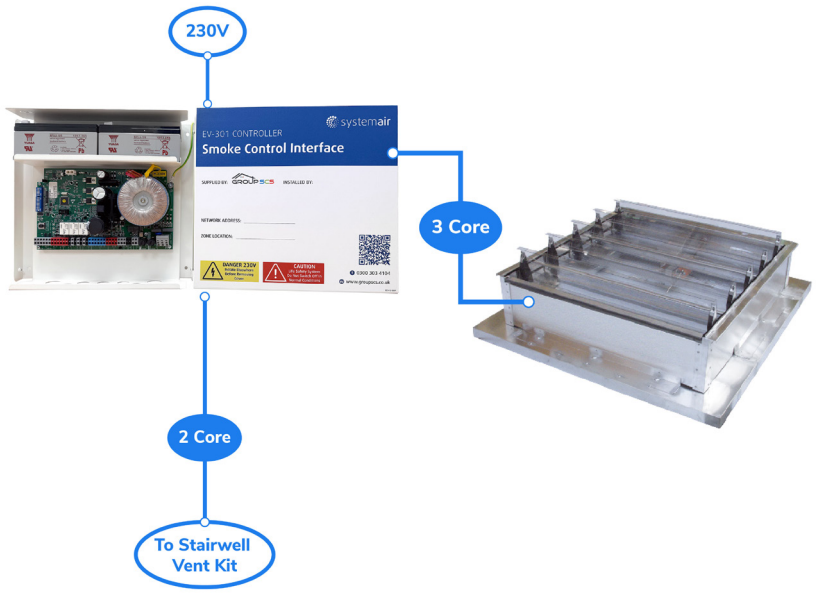
Our Lobby Vent Damper Into Shaft AOV kit has been specifically designed to ensure you have everything you need, without the need for specialist installation or commissioning services.

This kit can be installed as either stand-alone systems or be interconnected to form modular "smoke shaft" systems without the need for additional interfaces or software.

AOV Kit F

1.5m² Louvred Smoke Shaft Vent & Controls

View on website



KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
AOV Control Panel	EV-301-MC-BB-IP
Geometric Free Area	1 x 1.5m² geometric free area
Louvre Dimensions	
Weight	70Kg
Frame Details	1,270 mm L x 1,900 mm W
Blades	Insulated aluminium
UG	0.67

KIT CONTENTS

1 x AOV Control Panel
1 x 1.5m² Louvered Vent

FUNCTIONALITY

Provides smoke evacuation from a smoke shaft by automatically opening a roof louvre on the roof at the head of the shaft.

APPLICATION

At the top of natural smoke shafts where the shaft may be used for day-to-day ventilation.

SPECIFICATION

This smoke control kit will ventilate smoke from the top of natural smoke shafts and features an insulated aluminium automatic opening roof louvre with a control panel.

This kit can be installed as either a stand-alone system or be interconnected to form a modular "smoke shaft" system without the need for additional interfaces or software.

It can be used in conjunction with the stair vents and lobby kits to form a BRE Shaft scenario without the need for specialist installation or commissioning services.

AOV Kit G

1.5m² Hatch Smoke Shaft Vent & Controls

View on website

KEY INFO / SPECIFICATIONS

Certification	EN12101-2
Modular Control Panel	EV-301-MC-BB-IP
AOV Hatch Details	
Specification	1.0m² c/w 24v actuator
Vent Throat Dimensions	1100mm x 1500mm

KIT CONTENTS

1 x AOV Control Panel
1 x 1.5m² Hatch Vent

FUNCTIONALITY

Provides smoke evacuation from a smoke shaft by automatically opening a roof hatch on the roof at the head of the shaft.

APPLICATION

At the top of natural smoke shafts.

SPECIFICATION

This smoke control kit will ventilate smoke from the top of natural smoke shafts and features an automatic opening roof hatch with a control panel.

This kit can be installed as either a stand-alone system or be interconnected to form a modular "smoke shaft" system without the need for additional interfaces or software.

It can be used in conjunction with the stair vents and lobby kits to form a BRE Shaft scenario without the need for specialist installation or commissioning services.

AOV Kit H

1.0m² Casement Window & Controls

View on website

KIT CONTENTS

1 x AOV Control Panel
1 x 1.0m² Casement Window
1 x Fireman's Override Switch

FUNCTIONALITY

Ideal for a smoke control project designed for single stairwells offering 1.0m² free area.

APPLICATION

Suitable for natural, day-to-day ventilation and smoke ventilation. With the window's slim profile, the system is ideally suited for use in facades.

SPECIFICATION

Our Stair Vent Casement & Controls AOV kit has been specifically designed to ensure you have everything you need, without the need for specialist installation or commissioning services.

This kit can be installed as either stand-alone systems or be interconnected to form modular "smoke shaft" systems without the need for additional interfaces or software.

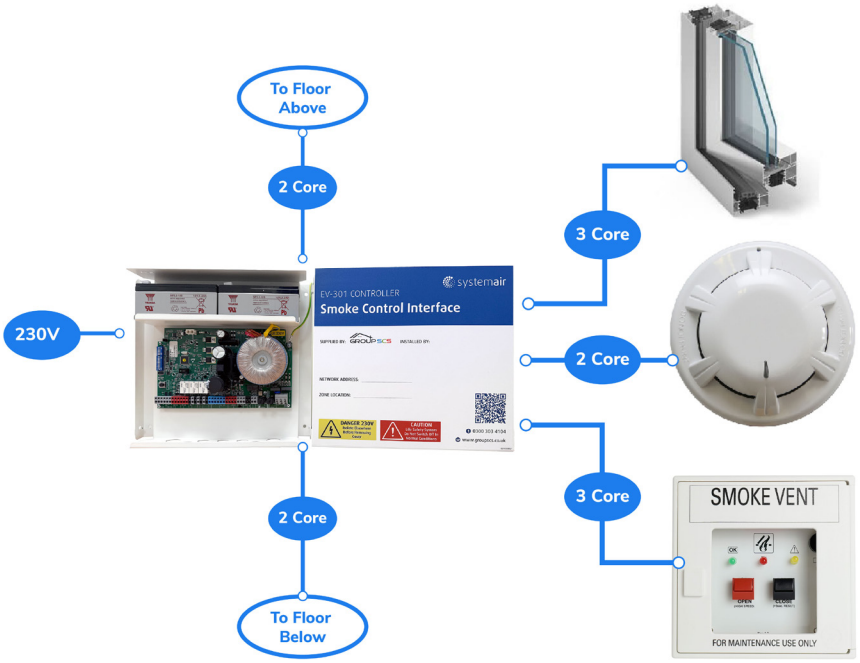
KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
AOV Control Panel	EV-301-MC-BB-IP
Fireman's Override Switch	EV-HE077
Smoke Detector	EV-SD
Geometric Free Area	1.0m²
Casement Window Dimensions	
Connecting Cable	2.5m Silicone
Dimensions	Confirmed upon application
Finish	Powder coated aluminium
Geometric Free Area	1.0m²
Nominal Current	1.4A
Nominal Voltage	24 V DC (- 15 % / + 15 %)

AOV Kit I

1.5m² Casement Window & Controls

View on website



KEY INFO / SPECIFICATIONS

Certification	EN 12101-2
Modular Control Panel	EV-301-MC-BB-IP
Maintenance Switch	EV-HE077-WHT
Smoke Detector	EV-SD
Geometric Free Area	1.5m²
Casement Window Dimensions	
Connecting Cable	2.5m Silicone
Dimensions	Confirmed upon application
Finish	Powder coated aluminium
Geometric Free Area	1.5m²
Nominal Current	1.4A

KIT CONTENTS

1 x AOV Control Panel
1 x Maintenance Switch
1 x Smoke Detector
1 x 1.5m² Casement Window

FUNCTIONALITY

Ideal for a smoke control project that incorporate a BRE type smoke shaft with a corridor/lobby window offering 1.5m² free area.

APPLICATION

Smoke control projects that incorporate a BRE type smoke shaft with a corridor/lobby window.

SPECIFICATION

The Lobby Casement & Controls AOV kit has been specifically designed to ensure you have everything you need for a smoke control project that incorporates a BRE type smoke shaft with a corridor/lobby window.

This kit can be installed as either stand-alone systems or be interconnected to form modular "smoke shaft" systems without the need for additional interfaces or software.

BRE Smoke Shaft System

View on website

Modular natural smoke ventilation system for multi-storey buildings

Each BRE Smoke Shaft System is made up of a set of AOV Kits, each containing a ventilator and associated controls.

At the roof level, there is an AOV Kit for the top of the smoke shaft (AOV Kit F) and one for the top of the stairwell (AOV Kit B). At each floor level, there is a damper kit (AOV Kit E) for the inlet into the smoke shaft. Finally, there is an optional touchscreen panel that can be used for central monitoring and diagnostics if required.

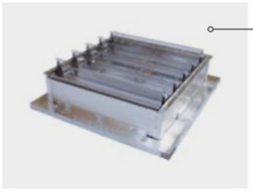
The control system is fully compliant with BS EN 12101:10 and ISO 21927:9 and has built-in safety features, including 'locking out' functionality and battery backup power supplies to ensure safe operation.

SYSTEM COMPONENTS

Roof:
1 x AOV Kit F (shaft head)
1 x AOV Kit B (stairwell)

Each floor:
1 x AOV Kit E (per floor)

Optional:
1 x HMI panel (per system)



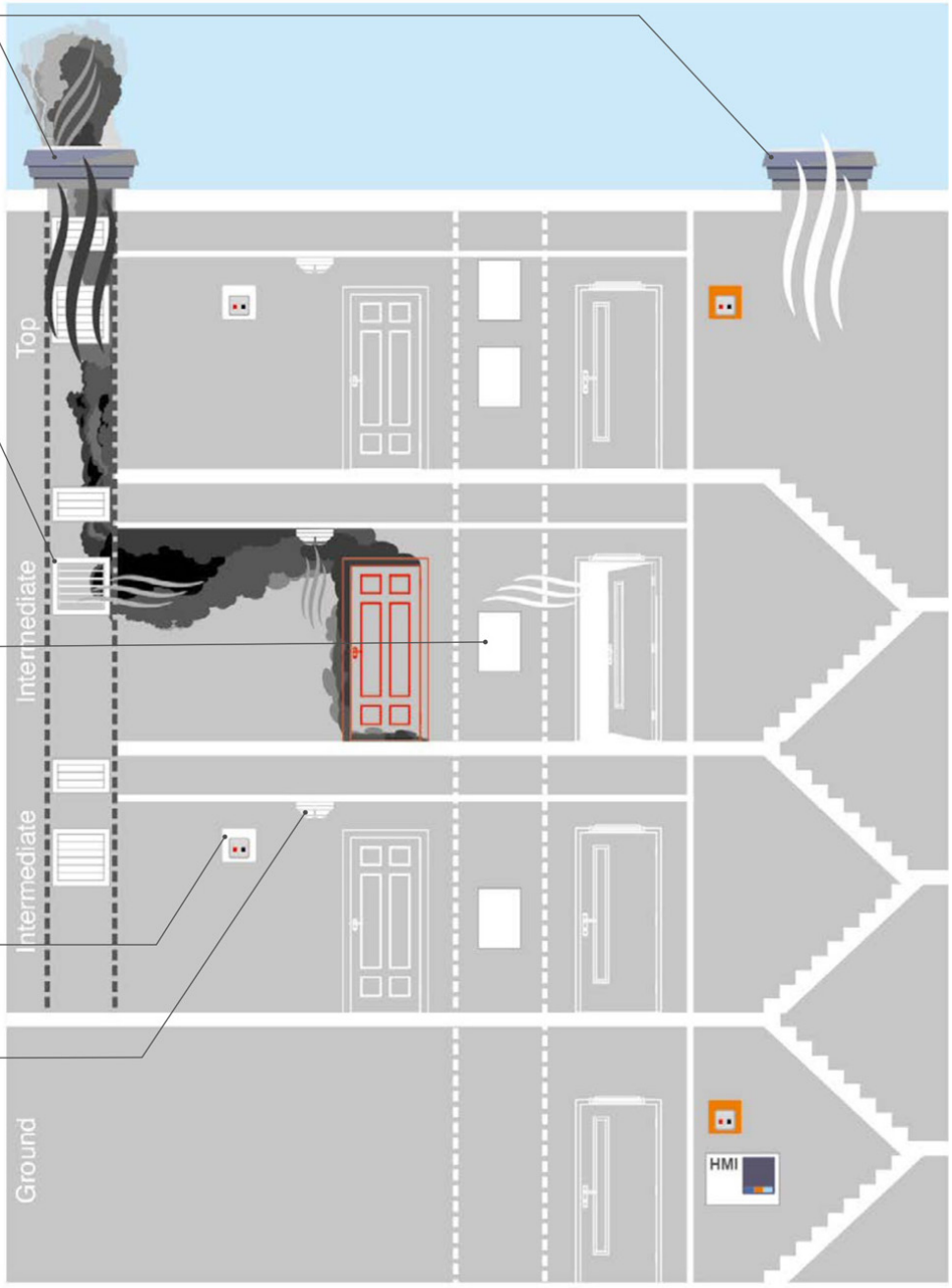
Louvred Ventilator
Certified to BS EN12101-2

Lobby Ventilators
Certified to BS EN12101-8

Lobby Interface Panels
Certified to BS EN12101-10

Maintenance Switch
BS ISO 21927-9, prEN 12101-9

Smoke Detector
Tested and approved to EN 54-7



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