SE CONTROLS
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SHEVTEC® Smoke Shaft Door Actuator and Door

Smoke Control for Smoke Shafts

SHEVTEC® Smoke Shaft Door Actuator and Door

SE Controls SHEVTEC® Smoke Shaft Door Actuator and SHEVTEC® Smoke Shaft Door is a ventilation solution that can be used in a natural or mechanical shaft as an alternative to dampers within a commercial or residential application.

Tested to BS 476-22:1987, BS 1634-1:2000, BSEN 1363-1:1999, BSEN 1364-2:2000 and to the principles of EN12101-2:2003 Annex G, the SHEVTEC® Smoke Door Actuator and SHEVTEC® Smoke Shaft Door offers the construction industry a fully certified fit for purpose solution. The actuator can be fitted to either side of the smoke shaft door and can be removed for maintenance via security tooling. To meet the stringent requirements of opening and closing a sealed smoke door, the actuator has been rigorously cycle tested for reliability and operation at 300˚C in accordance to EN12101-2:2003. The actuator is power open, power close to maintain shaft integrity for the unaffected floors when subjected to high temperatures within the shaft.

The fully tested SHEVTEC® Smoke Shaft Door is available in a standard range of sizes depending on the shaft geometry (see table on page 2). A range of finishes is available to suit each project requirement.

The SHEVTEC® Smoke Shaft Door is fitted with acoustic intumescent smoke seals to ensure noise from the shaft is not transmitted to other floors and the fire rating of the shaft is maintained on unaffected floors. The SHEVTEC® Smoke Shaft Door is fitted with the fully tested SHEVTEC® Smoke Shaft Door Actuator (shaft or corridor side) that can open the door against an expanded seal. Under the new Approved Document B of the Building Regulations the smoke shaft door must deliver 1 m² of free area for a natural shaft application which allows installation above 1100mm from FFL if correctly co-ordinated. This negates the need to install grilles to the shaft, but advice should be sought from S E Controls.

SHEVTEC® Smoke Shaft Floor Grilles

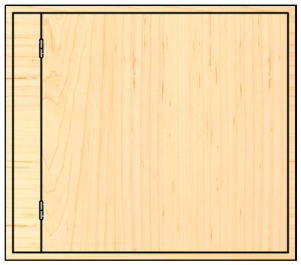
Should the shaft require floor grilles SE Controls can install this item complete with structural calculations for its application.

Safety grilles are provided to facilitate maintenance access within the smoke shaft. Also where the AOV is located below 1100mm from FFL, the inclusion of a safety floor grille will alleviate the need for additional fall protection.

Version 2.1

SHEVTEC® Smoke Shaft Door and Actuator

Technical Drawing



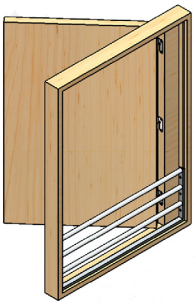
Solution 1

Solution 2

Solution 3

Solution 4

24V dc



Solution 5

Note: The above drawings are shown from the perspective of inside the smoke shaft with the exception of Solution 5

Technical Data

SE Controls has created five solutions to meet the requirements of different aspect ratios and free area requirements of natural smoke shafts, under Approved Document B of the Building Regulations. Solutions 1 and 5 have been created to be installed 1100mm above FFL to negate the need to install a safety floor grille.

	Shaft Sizes On Plan (W x D) mm						
SHEVTEC® Door & Frame Dimensions	1250 x 1250	1500 x 1000	1000 x 1500	1765 x 850	850 x 1765	Aperture Size in brick work (W x H) (mm)	Free Area Required (m^2)
Solution 1 Half Door, 4 Sided Frame, Vertical Infill Panel with MCP*	√	√				1260 x 1110	>1.0
Solution 2 Full Height Slim Door, 4 Sided Frame at Floor Level MCP* located remotely	√	√	√	√		918 x 2129	>1.5
Solution 3 Full Height Door, 4 Sided Frame at Floor Level, Horizontal Panel with MCP*	√	√	√	√		918 x 2260	>1.5
Solution 4 Full Height Door , 4 Sided Frame at Floor Level, Vertical infill Panel with MCP					√	859 x 2129	>1.0
Solution 5 Half Door 4 Sided Frme Vertical Infill Panel with MCP*			√	√		1039 x 1436	>1.0

*Note: (MCP) Manual Control Point

Product	Product / Solution Compliance
SHEVTEC® Smoke Shaft Actuator and Door	Principles of EN12101-2: 2003 Annex G - Door to operate after 5 minutes at 300° and open the door to 90° and remain open for 30 minutes
SHEVTEC® Door	BS EN 1363: Part 1: 1999 - Maintain temperature / time relationship during test and not breach the doors integrity within 30 minutes
SHEVTEC® Door	Principles of BS EN 1634:1 - Maintain temperature / time relationship during test and not breach the doors integrity within 30 minutes
Intumescent / Smoke Seals	In accordance to BS 476: part 31: section 31.1
Door frame	BS EN 942:1996 - Specification of material and minimum density

Product	Door opener
Type	Actuator
Usage	Smoke Ventilation
Voltage	24V dc
Current	0.5A
Max Force	2000N
Speed with Nominal Load	Door to open to 90° within 60 seconds
Operating Temperature	In line with EN12101-2:2003 Annex G
Life Cycle	5000
Flex	2 core silicone
Switching	Electronic
Type of Switch	Positional Limiting
Fixing options	Door or frame
IP rating	IP20
Intumescent seal within	Situated around mounting bracket

Product	Fire Rated Smoke Door
Type	Door
Usage	Smoke ventilation
Fire Rating	FD30
Intumescent seal around door	Head and Jambs of frame reveal
Smoke/Intumescent seal	Acoustic Smoke Seal & Intumescent Seal comes as standard

SE Controls SHEVTEC® Smoke Door actuator requires a low voltage control system such as OSLoop or OS2.

Please call an SE Controls sales representative for recommendations.

CE CERTIFIED

Compliant to applicable regulations.

Version 2.1