

Fire / Smoke Control Dampers

Description

Our range of fire and smoke dampers are designed to stop the spread of both fire and smoke through ductwork, walls, floors and ceilings. All fire/smoke dampers are tested and conform to the standards listed on page 164. All are suitable to work in conjunction with the BMS system and suitable damper control panel.

Function

The fire and smoke damper will be held in the fully open position for as long as the power supply is maintained to the unit. In the event of a fire, the built in thermal fuse will trip and cut off the electrical supply to the motor, causing the built in return spring to drive the damper closed.

The thermal fuse consists of a duct mounted probe with a replaceable fuse to detect internal duct temperature, and a non replaceable fuse element which detects ambient room temperature. Both fuses are rated at 72°C. A test button is included in the fuse unit for local testing of the damper operation.

Please note that where the dampers are for smoke evacuation purposes and are required to fail open, they will not be fitted with thermal fuses.

Construction

The casing is manufactured from 1.2mm galvanised mild steel whilst the blades are double skin airfoil sections from 0.7mm galvanised mild steel or from 0.7mm stainless steel grade 430 or 316 optional.

Size

From 100 x 100 to 1000 x 1000 and from 100mm to 1000mm Ø.

How to specify

STATE THE QUANTITY, THE PRODUCT CODING AND THE SIZE X WIDTH X HEIGHT
 e.g. 10 Qty. E3GHF+10+600x600



Product Type	Construction	Mounting	Options
EB Square or Rectangular Spigot	G Galvanised Steel	H Horizontal or Vertical	0 None
EC Circular Spigot	M Galv. Casing S/Steel Blades Grade 430		F HEVAC Installation Frame
ED Flat Oval Spigot	S S/Steel Casing S/Steel Blades Grade 430		
	T S Steel Casing S Steel Blades Grade 316		

+

Control Mode	Seals
1-6 See table for control option code	0 S/Steel Side Seals Interlocking Blades

Options And Weight Charts Fire / Smoke Dampers Control

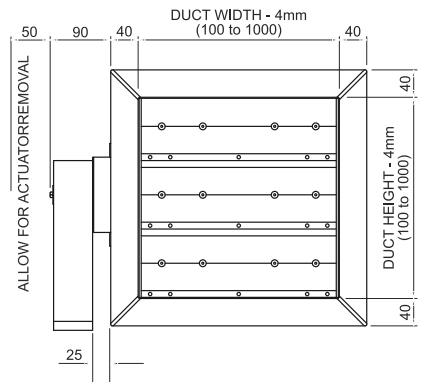
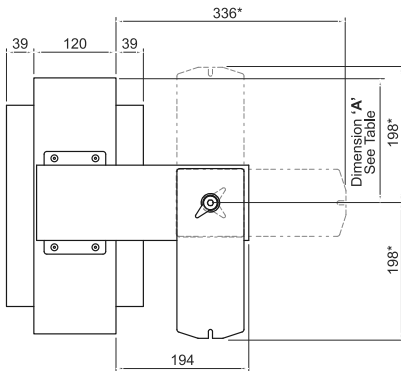
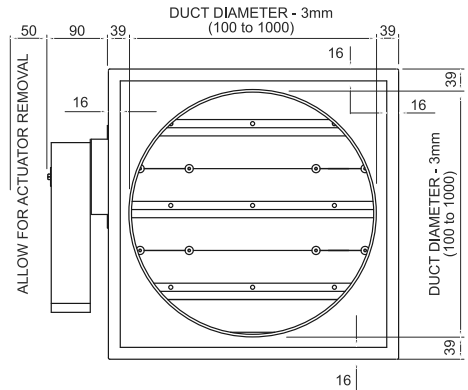
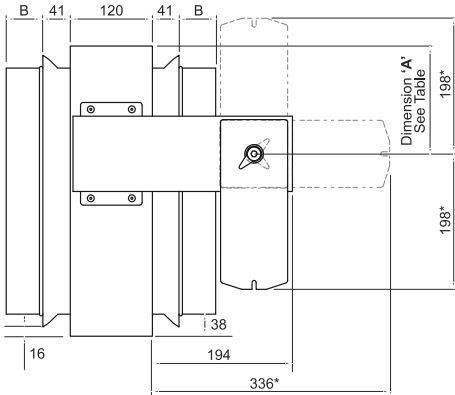
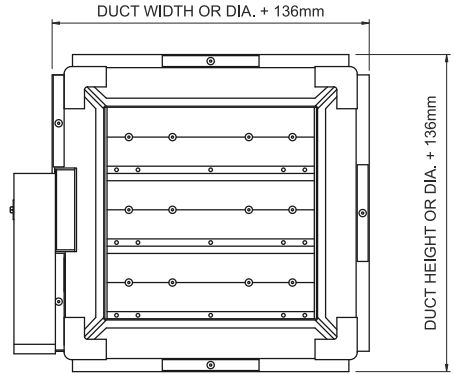
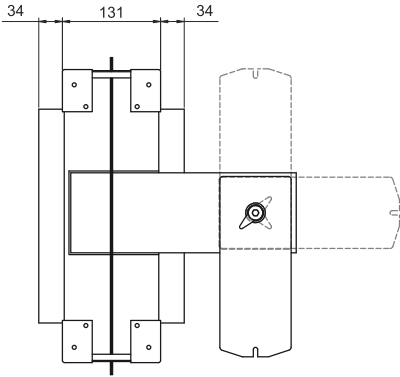
Reset Method	Failsafe Position	Control Mode	Control Option Code	Application & Operation Principle	Supply/Control Voltage	Motor end switches
Motorised remote	Closed	Option 5a	1	Fully open to fully closed, automatic electronic BF24-T motor drive fitted with a failsafe spring return mechanism operated via a thermal fuse.	24V AC/DC	Yes
Motorised remote	Closed	Option 5b	2	Fully open to fully closed, automatic electronic BF240-T motor drive fitted with a failsafe spring return mechanism operated via a thermal fuse.	240V AC	Yes
Motorised remote	Open	Option 6a	3	Fully open to fully closed, automatic electronic BF-24 motor drive fitted with a failsafe spring return mechanism (without thermal fuse).	24V AC/DC	Yes
Motorised remote	Open	Option 6b	4	Fully open to fully closed, automatic electronic BF230 motor drive fitted with failsafe spring return mechanism (without thermal fuse).	240V AC	Yes
Pneumatic	Closed	Option 8a	5	Pneumatic opening and closure fitted with a failsafe spring return mechanism operated via a 72°C fusible link.	Specify pressure operating range in psi or bar	
Pneumatic	Open	Option 8b Open/Closed Spring return	6	Pneumatic closure and opening fitted with a failsafe spring return mechanism (with or without 72°C fusible link).	Specify pressure operating range in psi or bar	

Weight Chart (kg). Model EBGH0+0

- 1) The reference values below are for Model EBGH0+0
- 2) For Models ECGH0 and EDGH0, apply the following respective multiplier: 1.1
- 3) To include a HEVAC / HVCA installation frame, apply the following respective multiplier: 20%

Damper Height (mm)	Fire / Smoke Damper with Motor - Width (mm)									
	150	200	300	400	500	600	700	800	900	1000
150	10	10	11	12	13	14	15	16	17	18
200	10	11	12	13	14	15	16	17	19	20
300	12	13	14	15	16	17	19	20	21	22
400	13	14	15	17	18	19	21	22	23	25
500	15	16	17	18	20	21	23	24	26	27
600	16	17	19	20	22	23	25	27	28	30
700	18	18	20	22	24	25	27	29	31	32
800	19	20	22	23	26	27	29	31	33	35
900	20	21	23	25	28	29	31	34	35	37
1000	22	23	25	27	30	31	33	36	38	40

Technical Measurements Fire / Smoke Control Dampers



VARYING LENGTHS OF OPTIONAL STUB DUCT AVAILABLE
210MM TO 450MM. PLEASE REFER TO SALES OFFICE

Testing & Conformities

Tested to EN1366-2
Tested/Assessed & Achieved Equivalent Classification to:

ES Classification (BS EN 1366-2/BS EN 13501-3)

- BSB FSD-TD-HF fitted with HEVAC Frame ES240 (E240S) - Blockwork/Masonry wall ES240 (E240S) - Concrete floor
- BSB FSD-TD-SA fitted with Sleeve & Angle Frame ES120 (E120S) - Dry Partition wall ES120 (E120S) - Blockwork/Masonry wall
- BSB FSD-TD-BF fitted with Batt Frame ES120 (E1120S) - fitted with Firetherm Intubatt
- BSB FSD-TD-CL fitted with Cleats ES120 (E20S) - Dry Partition wall
- BSB FSD-TD-AF fitted with Angle Frame ES120 (E120S) - Dry Partition wall

ES Classification (BS ISO 10294-1/2)
• As BS EN 1366-2/BS EN 13501-3 above

Integrity Only (BS 476-20/22 - ADB - fan off)

- BSB FSD-TD fitted with HEVAC Frame 240 mins - Blockwork/Masonry wall 240 mins - Concrete floor
- BSB FSD-TD fitted with Sleeve & Angle Frame 120 mins - Dry Partition wall 120 mins - Blockwork/Masonry wall
- BSB FSD-TD fitted with Cleats 120 mins - Dry Partition wall 120 mins - Blockwork/Masonry wall 120 mins - away from wall associated with fire resisting ductwork
- BSB FSD-TD fitted with Z2000 Frame 240 mins - Concrete floor 240 mins - Blockwork/Masonry wall

Corrosion Testing (ASTM B117)

- Tested and satisfies LPS 1162

FSD-TD Blade Leakage (BS EN 1751)

- Class 2

Casing Leakage (BS EN 1751)

- Class C

Aerodynamic Testing (BS EN 1751)

- Tested

Regulations and Standards

Approved Document B: Fire safety (ADB) ADB is the UK government's guide to fulfilling the Building Regulations in terms of fire safety. It is available as a free download from the planning portal website.

It gives clear guidance on where fire dampers are to be used and what their performance or classification shall be. The GDL Unit fulfils the ES classification and reference should be made to the model section to confirm exact time periods. These will generally be 120 minutes, but may be up to 240 minutes.

Health Technical Memo 05/02 (HTM05/02)

HTM05/02 is the Department of Health Firecode - fire safety in the NHS: Guidance in support of functional provisions for healthcare premises.

It basically underlines the requirements stated in ADB, requiring fire damper testing to BS EN 1366-2 and classification to BS EN 13501-3 - ES for escape routes etc).

It supersedes HTM81 and should be read in conjunction with HTM2025: Ventilation in healthcare premises, as it gives guidance on maintenance and testing.

Building Bulletin 100

BB100 is the Department for Children, Schools and Families document on Fire safety in schools.

It basically underlines the requirements stated in ADB, requiring fire damper testing to BS EN 1366-2 and classification to BS EN 13501-3 - ES for escape routes etc).

It also states: 'For property protection, fire dampers should also satisfy LPS 1162'.

Regulatory Reform (Fire safety) Order (RRFSO)

This is the regulatory requirement that allows people to self fire certificate their buildings. There are requirements for keeping testing and maintenance records for all passive fire protection equipment, which includes fire dampers.

BS EN 1366-2

The fire resistance test standard for fire dampers.

BS EN13501-3

The fire resistance classification standard that includes fire dampers.

BS EN 1751

The standard for aerodynamically testing dampers. This includes both casing leakage (as DW 144 requirements), blade leakage, torque and heat transfer.

Other Publications

DW 144 (HVCA)

This states the general requirements for HVAC ductwork, including the use of fire dampers. It also states ductwork leakage limits. The GDL Unit fulfils the requirements of classes A, B & C.

DW 145 (HVCA)

This document will give guidance on the whole process of the selection and installation of fire dampers, with responsibilities and project planning and guidance.

The Grey Book (ASFP)

This gives further guidance on the application and installation of fire dampers.

Scotland

These are technical standards (AMD's). They give similar guidance to ADB.

They already include direct references to the application of European standards. They are obtainable as a free download from the Scottish Executive website.