

FireShield

CE Marked 'E' Rated Curtain Bladed Fire Damper



KEY FEATURES

- CE marked fulfilling the requirements of EN 15650.
- Approved by LPCB and conforms to LPS1162 issue 4.
- Fire tested to EN 1366-2.
- Classified to EN 13501-3.
- Patented design removable release mechanism cassette. Made of polyphenylene sulphide (PPS) resin reinforced with 40% glass (GF-PPS). Technically advanced engineering polymer. PPS is stable at temperatures up to 200 °C. Cassette construction is of very high strength and has excellent creep and fatigue resistance.
- The Cassette construction is environmentally friendly (recyclable material).
- The new Cassette is retrofittable to existing FireShield dampers (by use of a simple optional adaption bracket. Part Number: CNNN01981)
- One Cassette to suit all damper material options.

Contents

Advantages of FireShield	3
Selection Guide	4
Technical Description	5
Accessories	6
Installation	6
FireShield™ I/F Installation Frame	6
FireShield™ DWFX-C Dry Wall Fix Cleats.....	6
FireShield™ DWFX-F Flange and Cleats.....	6
FireShield™ DWFX-3F Flange and Cleats	6
Technical Data	7
Acoustic Data	8
Dimensions	9
Dimensions	9
Weights (Kg)	9
Ordering Key	10
Specification Text.....	10



Advantages of FireShield

The list below shows a few of the benefits enjoyed by the specifier and installer when using the Actionair FireShield range of dampers...

Specifiers will appreciate

- Dedicated technical support from Swegon through the project - from start to finish and beyond.
- Wide range of sizes to suit almost all square/rectangular, flat oval and circular ductwork.
- Easy to specify, select and quote using our damper sizing and pricing tool.
- Compliance with the latest standards and legislation.
- Tried, tested and trusted product family - over forty years of damper design and manufacture in the UK.
- Easy to interface and design with the dedicated ACTIONPAC damper control systems.

Installers will appreciate

- Tested Installation Method to suit Concrete/ Masonry Floors & Walls and Dry Walls.
- Easy Single Handed Reset.

Selection Guide

SPIGOT CONNECTIONS		Square / Rectangular	Circular	Flat Oval
Series	FS101 Blades partly in air-stream	FS201 Blades effectively out of airstream	FS301	FS401
INSTALLATION METHOD		IF	DWFX-C	DWFX-F
Concrete / Masonry Wall.	Yes AA/F10703			Yes AA/F10707 AA/F12827 (Against Soffit)
In to Concrete Floor / Slab.	Yes AA/F10701			
On to Concrete Floor / Slab.	Yes AA/F8018			
Dry Wall Fix (Typically fixed prior to encasement by the dry wall partition).		Yes AA/F10709 AA/F10723 AA/F11682 (Against Soffit)		
Dry Wall Fix (Typically Fixed in to existing dry wall partition).			Yes AA/F10705	Yes AA/F11944 (Against Soffit)
Ablative BATT infill in to dry wall partition.			Yes AA/F10711	
Ablative BATT infill in to Concrete / Masonry wall.			Yes AA/F10713	
				IMAGE PENDING

Technical Description

Casing Features

- The spigotted casing with continuously welded corners and spigot connections, makes these dampers suitable for inclusion into air distribution systems to the test methods of Eurovent Class A, B & C and HVCA Ductwork specification DW144.
- These galvanised casings are manufactured with either Square, Rectangular, Circular or Flat Oval duct connections

Blade Features

- The Type 1.4016 (430) Ferritic Stainless Steel folding blade curtain, providing maximum strength, forms a fire shield. The wide profile blades maximise the damper free area and ensure compact grouping to minimise blade stacking height.

Stainless Steel Closure Springs

- Stainless Steel constant tension springs are fitted and positioned out of the airstream to close and latch the damper, regardless of vertical or horizontal operation.

Application Parameters

- FireShield dampers are designed for application in normal dry filtered air systems. If exposed to fresh air intakes and/or inclement conditions the damper should be subject to a planned inspection programme.
- Any specialists and/or aggressive applications (e.g. swimming pools) will invalidate our warranty, please refer to [Actionair Sales Office](#) to find out more.

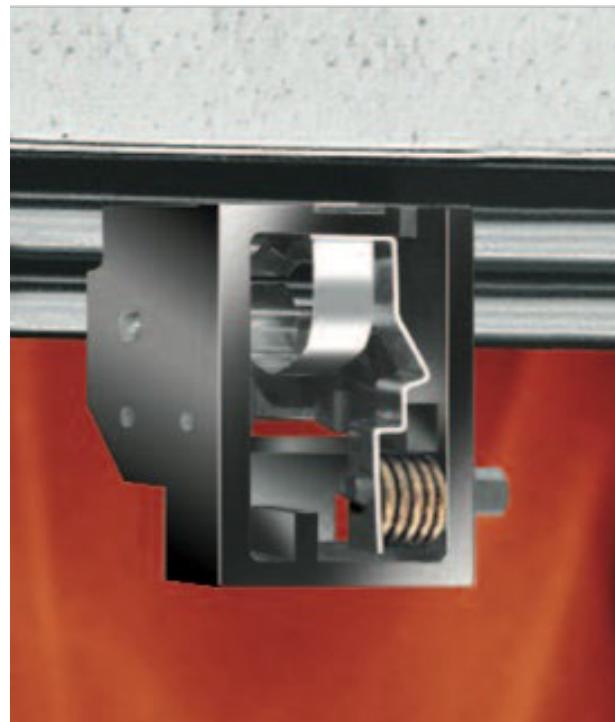
Cassette Mechanism

- Patented design.
- Made of Polyphenylene sulphide (PPS) resin reinforced with 40%glass (GF-PPS).
- Technically advanced engineering polymer.
- PPS is stable at temperatures up to 200 °C.
- Cassette construction is of very high strength and has excellent creep and fatigue resistance.
- Low smoke and toxic emissions in fire conditions.
- Halogen free.
- PPS has a very low moisture absorption.
- PPS is corrosion resistant.
- The Cassette construction is environmentally friendly (recyclable material).
- The new Cassette is retrofittable to existing FireShield Dampers (by use of a simple optional adaption bracket. Part Number: CNNN01981)
- One Cassette to suit all damper material options.

The cassette mechanism is completely removable from the FireShield damper by manually releasing the retaining clip. This allows replacement of the cassette without the use of tools.

- Simple hand operation enables the damper curtain to be reset and latched in the fully Open Position.

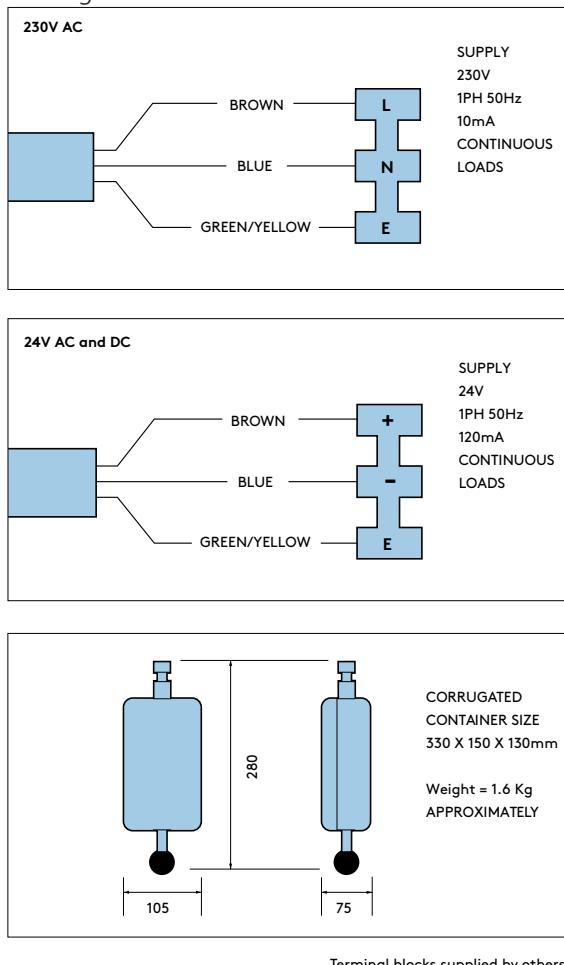
- This increases the ease and speed with which the FireShield damper can be reset following periodic functional testing in accordance with British Standard BS 9999:2017 Code of Practice for fire safety.
- The thermal actuator in the form of a helical memory metal compression spring is produced from a special Cu-Zn-Al brass alloy.
- On temperature rise this expands and at 72 °C, causes the FireShield damper blades to release.
- On cooling, the spring reverts to the close-coiled state offering the significant advantage of repeated operation, unless it has reached temperatures in excess of 170 °C, where it will remain extended, preventing reset.
- Cassettes are only available for 72 °C. For dampers where alternative thermal link temperatures are required a chain-link can be offered in place of a cassette. Electrical release is only available with a cassette i.e. 72 °C. please refer to Actionair Sales Office.
- Please note: For dampers with dimensions of 150mm and below, ensure that there is adequate access to enable re-setting.



Accessories

Electro Magnet Releases

- 230V AC and 24V AC and DC Electro magnet releases are available.



Indication Micro Switches

- All FireShield CE Marked 'E' Rated Curtain Fire Dampers are available with factory fitted single or double pole micro switches as optional extras to provide remote electrical indication of damper status and / or controls interface.

Micro Switch options include:

- C Type - Cassette Single Pole 230V Micro Switch.
- MSSP Type M - Single Pole 230V Micro Switch.
- MSSP Type T - Heavy Duty Single Pole 230V Micro Switch.
- MSDP Type T - Heavy Duty Double Pole 230V Micro Switch.

External Visual Blade Position Indication

- An external indicator is factory fitted to the access (Cassette) side of the damper casing giving visual indication of damper blade position.
- A spring steel actuator ensures automatic resetting of the external indicator in either horizontal or vertical applications.

- The external indicator is especially beneficial at the system balancing and commissioning stage eliminating the necessity of internal duct inspection to determine the fire damper open or closed position.

- Note: External visual blade position indication is not available with certain multiple assemblies, miscellaneous damper configurations and due to physical size limitations is not available below 125mm dia. on Series 301 dampers.

Installation

[Full installation details are available on our website](#) and are sent out with each damper.

FireShield™ I/F Installation Frame

CE Marked 'E' Rated Fire Dampers c/w HEVAC / HVCA Installation Frame. Typically installed into concrete/masonry walls and floors.

- HEVAC / HVCA Installation frame (I/F).
- CE marked to EN 15650.
- Fire tested to EN 1366-2.
- LPCB Type approved.
- Successfully fire tested up to 4 hours integrity.

FireShield™ DWFX-C Dry Wall Fix Cleats

CE Marked 'E' Rated Fire Dampers c/w Dry Wall Fix Cleats. Typically installed prior to encasement by the dry wall partition.

- Dry wall fix 'Cleats' Typically fixed prior to encasement by the dry wall partition.
- CE marked to EN 15650.
- Fire tested to EN 1366-2.
- LPCB Type approved.

FireShield™ DWFX-F Flange and Cleats

CE Marked "E" Rated Fire Dampers c/w Dry Wall Fix Flange and Cleats. Typically installed in to existing concrete / masonry, dry walls or Ablative BATT infills.

- Dry wall fix 'Flange & Cleats' Typically fixed into existing dry wall partition.
- CE marked to EN 15650.
- Fire tested to EN 1366-2.
- LPCB Type approved.

FireShield™ DWFX-3F Flange and Cleats

CE Marked "E" Rated Fire Dampers c/w Dry Wall Fix Flange and Cleats. Typically installed in to existing concrete / masonry and dry walls up against the construction edge (Soffit).

- Dry wall fix 'Flange & Cleats' Typically fixed into existing dry wall partition.
- CE marked to EN 15650.
- Fire tested to EN 1366-2.
- LPCB Type approved.

Technical Data

Approvals

- CE marked to Product Standard EN 15650:2010
- Fire tested to EN 1366-2
- Classified to EN13501-3 - E Rated
- Thermal fuse tested to ISO 10294-4 Factory Production Control to EN15650 This includes: Daily blade and casing leakage testing
Corrosion tested to EN 60068-2-52: 1996
- Classified 'E' in vertical and horizontal test installations.
- An LPCB approved product, compliant to the new Loss Prevention Council Design Guide for Fire Protection of Buildings.
- Fire tested in vertical and horizontal applications under dynamic conditions by The Loss Prevention Council.
- Complies with the latest DW 144 casing leakage specification.
- [For full classification details, please download the declaration of performance, available on our website.](#)

Acoustic Data

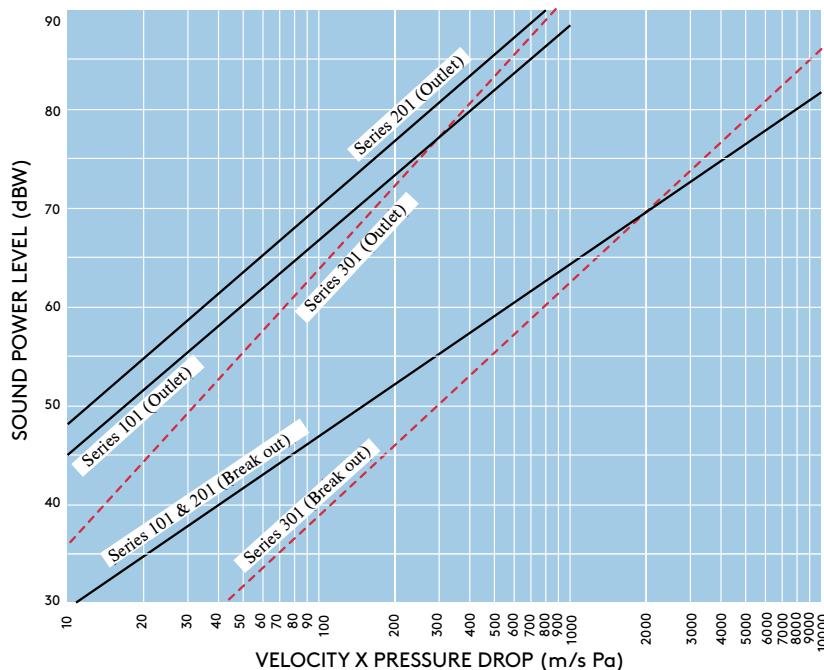
The data presented is from the Laboratory Determination of Acoustic and Aerodynamic Performance of FireShield Stainless Steel Curtain Fire Dampers.

A programme of extensive tests was carried out in the Reverberation Chamber and North Transmission Chamber of Sound Research Laboratories Limited, Holbrook Hall, Sudbury, Suffolk, generally in accordance with BRITISH STANDARDS Nos. 4196, 4773, 4856, 4857 and 4954.

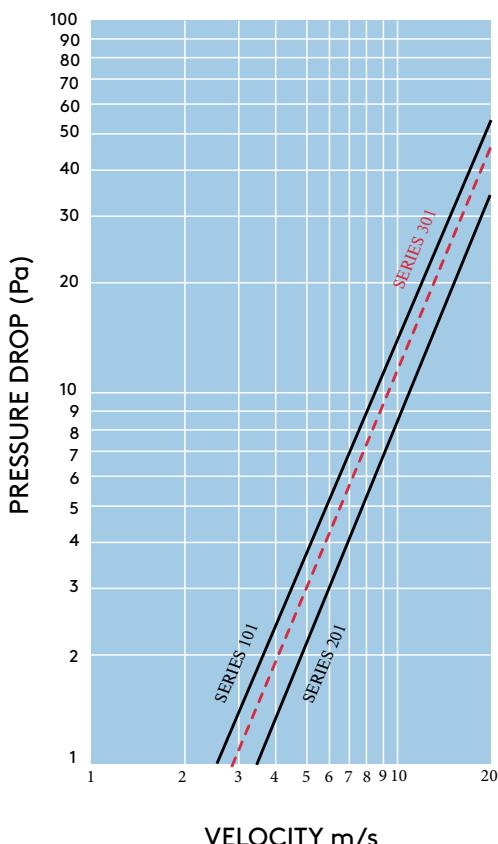
This independent test facility is approved under the NAMAS Scheme. For a selection of duct velocity within the operational parameters of the dampers a resultant

pressure drop can be determined and the sum of these two components applied to the Velocity X Pressure Drop Vs Sound Power Level Graph. The Sound Power Level Graphs are a result of a full range of acoustic tests on FireShield Series 101, 201 and 301 dampers. The Spectrum Correction Data is applied to the number obtained from the graph and a complete Sound Spectrum of Flow Generated Noise for both Breakout (casing radiated) and Outlet (in duct) is obtained.

Velocity (m/s) X Pressure Drop (Pa) Vs Sound Power Level (dBW)



Pressure Drop Vs Velocity



FireShield Breakout Spectrum Correction

Octave band	63	125	250	500	1K	2K	4K	8K	Hz
Series 101	-10	-7	-3	-9	-13	-20	-30	-33	dB
Series 201	-10	-7	-3	-9	-13	-20	-30	-33	-dB
Series 301	-13	-10	-3	-7	-11	-12	-26	-42	-dB

FireShield Outlet (Induct) Spectrum Correction

Octave band	63	125	250	500	1K	2K	4K	8K	Hz
Series 101	-4	-12	-16	-18	-22	-29	-32	-38	dB
Series 201	-4	-11	-17	-19	-22	-30	-33	-40	dB
Series 301	-4	-10	-16	-18	-21	-24	-30	-38	dB

Dimensions

Dimensions

- FireShield is available in a range of sizes to fit ducts from 1,000mm (height) x 100mm (width) to 1,000mm (height) x 1,250mm (width) (available in 1mm increments for both width and height between the minimum and maximum sizes).

Weights (Kg)

Square or Circular Duct Size (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Series 100	1.6	2.1	2.8	3.5	4.2	5.0	5.7	6.9	7.5	8.6	9.5	10.9	12.0	13.1	13.8	15.2	16.7	18.1	19.0
Series 101+I/F	3.8	4.6	5.7	6.8	8.0	9.2	10.7	11.8	12.9	14.1	15.8	17.9	19.1	20.2	21.3	23.3	25.2	27.4	29.2
Series 201	Please use series 101 dampers for duct height below 250mm		4.1	4.6	5.4	6.0	7.1	8.0	9.3	10.5	12.1	12.7	14.4	16.0	17.5	19.0	20.5	22.0	
Series 201 + I/F			7.4	8.5	9.6	10.4	12.6	13.8	15.3	16.8	18.0	20.3	21.7	23.6	25.5	27.6	29.8	32.0	
Series 301	2.3	3.0	4.0	5.4	6.5	7.6	8.8	10.2	11.7	13.2	14.9	16.9	18.7	20.5	22.4	24.5	26.7	28.8	31.0
Series 301 + I/F	4.4	5.5	6.9	9.0	10.4	11.7	13.6	15.5	16.5	18.5	20.3	22.2	42.5	27.8	30.4	32.8	35.2	38.9	42.0

Ordering Key

FireShield

FS101

FS201

FS301

FS401

Installation:

DWFX-F - Dry Wall Fixing System Flange plus Cleats

DWFX-C - Dry Wall Fixing System Cleats

I/F - HEVAC / HVCA Installation Frame

DWFX-3F - Dry Wall Fixing System Cleats (soffit)



Duct Size:

600(W) x (H)450

Example:

FS401-DWFX-F-600-450

Specification Text

The Actionair FireShield curtain fire dampers comprise of a stainless steel folding curtain having unbroken movable joints with stainless steel constant tension closure springs for positive closure.

The Self Resettable, Latching Removable Release Mechanism Cassette, shall ensure the closure of the stainless steel curtain under full fire conditions. All housed in a galvanised steel fully welded spigotted type casing suitable for square, rectangular, circular or flat oval connections.

A fire rated damper in accordance with British Standard BS9999:2017 should be held in the open position by means of a thermally actuated device set to operate at approximately 74 °C. All FireShield stainless steel curtain fire dampers are fire rated dampers as they are held in the open position by a thermally actuated cassette operating at a temperature of approximately 72 °C ± 4 °C.