

SmokeCommand MCD

CE Marked Smoke Control Damper



KEY FEATURES

- Smoke control damper with slim, lightweight design.
- Designed for use in dedicated smoke control systems and combined smoke and environmental systems.
- Suitable for both multiple compartment and single compartment applications.
- Actuator protected by robust thermal enclosure.
- Damper drives to open or closed position <60 seconds.
- CE marked fulfilling the requirements of EN 12101-8, fire tested to EN 1366-10 and 1366-2 and classified to EN 13501-4.
- HOT400/30 classification means SmokeCommand can cycle and adjust position for 30 minutes at 400°C.
- Maintains free area in open position at elevated temperatures.
- Unique SnapLock™ drive interface ensures user friendly connection of actuators.
- For use in systems from negative -1000 Pa to +500 Pa.
- Optimised for use with ACTIONPAC control panels.
- E 90 ($V_{ew} \text{ i} \rightarrow \text{o}$) S 1000 C₁₀₀₀₀ HOT 400/30 AA multi.
- E 120 ($V_{ew} \text{ i} \rightarrow \text{o}$) 1000 C₁₀₀₀₀ HOT 400/30 AA multi.
- E 120 Maintenance of opening.

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Advantages of SmokeCommand MCD

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

Specifiers will appreciate

- Dedicated technical support from Swegon through the project - from start to finish and beyond.
- Cause and effect knowledge with experience and support to create a holistic design that works well for all parties.
- Wide range of sizes to suit duct-work sizes (up to a maximum size of 1,000 X 1,000 square rectangular spigot).
- Easy to specify, select and quote using our damper sizing and pricing tool.
- Compliance with the latest standards and legislation.
- HOT400/30 damper can cycle for 30 minutes at 400°C.
- 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

- Compact dimensions - slim, easy to install design.
- Light weight and robust thermal actuator enclosure.
- SnapLock™ interface allows actuator purchase and install after the installation of the dampers.
- Uses familiar installation methods shared across fire and smoke dampers (motorised fire smoke dampers and motorised smoke dampers).
- Installation support from Swegon, with years of experience and best practice.
- Easy commissioning with a dedicated specialist team available to commission alongside ACTIONPAC control panels.

Technical Description

SmokeCommand-MCD Dampers

- CE Marked rectangular or square smoke control dampers classified to product standard EN 13501-4 and tested to both EN 1366-10 and EN 1366-2.
- HOT400/30 classification means SmokeCommand can cycle and adjust position for 30 minutes at 400°C.
- Designed for installation in smoke extract systems. As these ductwork systems regularly serve more than one fire zone or floor when smoke extraction is conducted from one area, it is essential to use the smoke control damper to fully fire protect adjoining fire zones from ductwork penetrations that are connected to the smoke extract duct and keep positive pressure in pressurisation systems.
- This damper uses a two position actuator for drive open and drive close operation. When used for smoke extraction, under authorised control, the SmokeCommand-MCD damper will remain open and maintain cross sectional area in excess of 120 minutes at elevated temperatures.
- This fire-resistant smoke control damper for multiple compartments is suitable for installation in a variety of walls.
- SmokeCommand-MCD Smoke Control Dampers may also be used for controlled supply of make up air as a function of the fire engineering process.
- As smoke can spread rapidly and efficiently through a building ductwork system, damper operation needs to be initiated by a smoke detection system, as thermal sensing can often be too late. SmokeCommand-MCD dampers are designed to be interfaced with the buildings fire alarm via a dedicated ACTIONPAC damper control panel for automatic activation upon detection of fire or smoke.

Casing Features

- With double skin spigotted galvanised steel (to BS EN 10142) casing the SmokeCommand-MCD dampers comply to Class A and B of Eurovent Document 2/2 and Test Procedures for Classes A, B and C of HVCA Ductwork Specification DW144. Damper casings are manufactured with welded spigotted connections suitable for Square and Rectangular duct connections.

Blade Features

- The Damper blades are aerodynamic, double skin 430 grade (Type 1.4016) to BS EN 10088-2 Ferritic stainless steel which are 81.5mm deep and interlock to form a positive smoke and fire resisting shield.
- Incorporated within the blade profile is a high temperature silicone seal to ensure low closed blade leakage at elevated temperatures.
- Interlocking blades close against stainless steel gasketing resulting in low closed blade leakage under full fire conditions.
- Optional blade construction 316 grade (Type 1.4401) Stainless Steel.

Actuators

- Two actuators are available to suit both 24V (DC) and 230V (AC) applications - Mode SCHM5-2P PTC and Mode SCHM6-2P PTC. Please see further information in the table below.
- Actuator is located outside the ductwork and protected by its own thermally insulated enclosure.
- These actuators are drive open, drive closed and supplied without an electronic thermal release.
- x2 end switches SPDT - used for communication with panels and for diagnostics.
- Halogen Free Low Smoke and Fume cables, allows SmokeCommand-MCD Smoke Control Dampers control up to 400 °C for a period of thirty minutes. Si HF Low Smoke and Fume, Halogen Free, to IEC 754-1. Conforming to 73/23/EEC directive.
- Cable (FP200 GOLD) supplied factory fitted with one meter long tail, terminated inside thermal enclosure.
- Actuators have two separate volt free contacts for the provision of external damper status indication.
- IP54 Rated.

Actuator Name	Specification
Mode SCHM5-2P PTC	24V AC/DC @ 50/60 Hz (8W MAX)
Mode SCHM6-2P PTC	230V AC @ 50/60 HZ (12W MAX)

Thermal Enclosures

- The enclosure is constructed from a robust, light-weight material with excellent endothermic properties, designed specifically for Swegon. It has the ability to absorb heat energy at high temperature and thus prolonging the duration of the actuator's drive open or drive close operation at elevated temperatures.



PTC™ Drive Interface

- The drive interface which is totally independent of the ductwork, eliminates the need for costly dedicated duct sections, and provides ease of connection to square, rectangular, circular and flat oval ductwork.
- The drive interface can be used up to wall thicknesses of 250mm. The interface allows the actuator be fitted in multiple orientations. This can be simply and easily carried out on site, by the using “multi-position kit”. This maximises the flexibility and space efficiency of SmokeCommand-MCD.

Application Parameters

- SmokeCommand-MCD Dampers to maximum width and height dimensions can be used where the operating total system pressure is up to 1000 Pascals and duct velocities to 15m/second.
- As with any life safety damper product, a planned inspection programme should be implemented.
- It is recommended the product is controlled with an ACTIONPAC control panel.
- For support with application or cause and effect, please contact Swegon.

Installation

- Full installation details are available on our website and are sent out with each damper.

DWFX-F Installation system

- The DWFX-F installation system consists of a 1.2mm galvanised steel peripheral flange with 50 x 50mm angle cleats with 14 x 24mm oval slots, welded to damper casing for drop rod support if required for ease of installation.

Maintenance

- The SmokeCommand-MCD range of dampers are designed for applications in normal dry filtered air systems and should be subjected to a planned inspection programme, with cleaning and light oil lubrication in accordance with local requirements.
- It is possible to schedule maintenance using dedicated ACTIONPAC damper control panels, this must be done in accordance with local requirements.

Technical Data

Classification

- SmokeCommand-MCD has been tested to EN 1366-10 and EN 1366-2 and classified to EN 13501-4.
- E 90 (V_{ew} i \rightarrow o) S 1000 C₁₀₀₀₀ HOT 400/30 AA multi
- E 120 (V_{ew} i \rightarrow o) 1000 C₁₀₀₀₀ HOT 400/30 AA multi
- E 120 Maintenance of opening

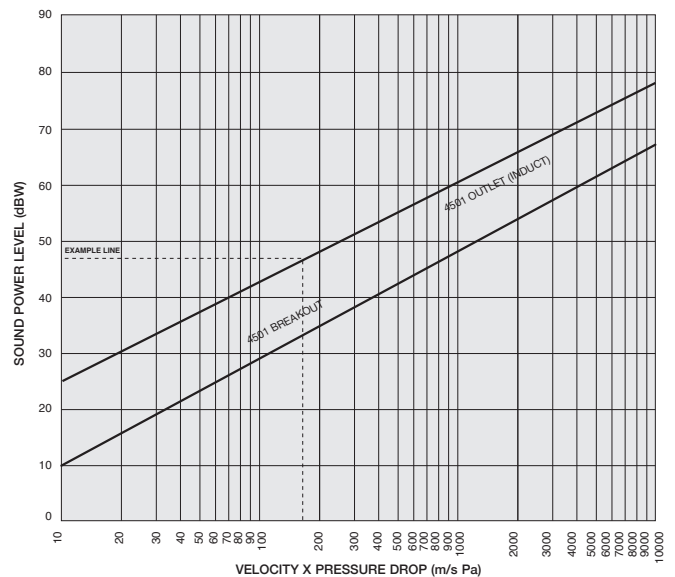
Acoustic Data

- From the selection of a duct velocity within the operational parameters of the damper a resultant pressure

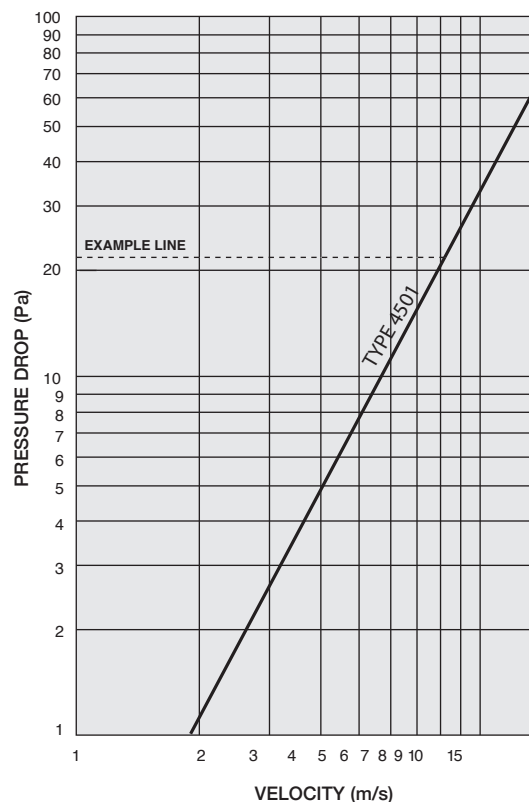
drop from the Pressure Drop Vs Velocity table can be determined and the sum of these two components applied to the Velocity x Pressure Drop Vs Sound Power Level Graph.

- The graph is the result of a full range of acoustic tests on SmokeCommand-MCD dampers with the blades set in the fully open position.
- The Spectrum Correction Data is applied to the number obtained from the graph and a complete Sound Spectrum of Flow Generated Noise for both Outlet (in duct) and Breakout (casing radiated) is obtained.

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



Pressure Drop vs Velocity



Outlet (Induct) Spectrum Corrections

Outlet (Induct) Spectrum Corrections		
Octave Band (hz)	4501 (dB)	4601 (dB)
63	+5	+9
125	+4	+4
250	+5	+4
500	+5	+5
1000	+3	+3
2000	+1	+1
4000	-3	-3
8000	-5	-6

Breakout Spectrum Corrections

Breakout Spectrum Corrections		
Octave Band (hz)	4501 (dB)	4601 (dB)
63	+8	+6
125	+11	+10
250	+9	+8
500	+6	+4
1000	-3	-3
2000	-6	-3
4000	-14	-11
8000	-17	-14

Accessories

HSDI

- Dedicated Smoke Damper Interfaces will provide a communication interface between the damper actuator and dedicated ACTIONPAC damper control panels (or alternative panels) to control the damper in accordance with the programmed cause and effect.

ACTIONPAC

- We recommend using an ACTIONPAC panel with SmokeCommand-MCD dampers to deliver the smoke control cause and effect. A range of intelligent and hard wired panels are available.

Dimensions and weights

Dimensions

- SmokeCommand-MCD is available in a range of sizes to fit ducts from 200mm x 200mm to 1000mm x 1000mm (available in 1mm increments for both width and height between the minimum and maximum sizes).

Weights

- Weights below are in KG based on square dampers.
- Weights to fit ductwork sizes: <200mm - 3.4kg; 400mm - 6.5kg; 600mm - 10.8kg; 800mm - 16.2kg; 1000mm - 23.5kg;
- Weights provided exclude actuator and thermal enclosure. For total weight please add 13kg for the actuator.
- Shipped as a complete assembly including actuator and thermal enclosure.

Specification

Product ordering key

SmokeCommand MCD

Multi-compartment smoke control damper	a	b	c	d	e
Version: - 4501 Square or rectangular					
Installation - DWFX-F - Flange fixing system plus cleats					
Duct Size: - Nominal damper spigot size (w x h)					
Actuator - Mode SCHM5-2P PTC (24v) - Mode SCHM6-2P PTC (230v)					
Quantity - No of dampers required					

Example: SmokeCommand-MCD-4501-DWFX-F-300x300-HM5-2P-50

Specification Text

Swegon ACTIONAIR SmokeCommand-MCD Smoke Control Dampers. A multi compartment Smoke control damper that complies with the requirements of BS EN 12101-8 for use mounted on to a compartment structure that can be put into operation on receipt of a smoke or fire alarm. Performance requirements: E 90 ($V_{ew-i<->o}$) S 1000 C_{10000} HOT 400/30 AA multi, E 120 ($V_{ew-i<->o}$) 1000 C_{10000} HOT 400/30 AA multi. Classified to EN 13501-4. Tested to EN 1366-10 and EN 1366-2. The dampers comprise of 75mm stainless steel aerodynamic interlocking blades incorporating a high temperature synthetic seal, with stainless steel blade end bearings and peripheral gasketing. Housed in a galvanised fully welded, spigotted casing suitable for square or rectangular ductwork connections. The totally enclosed precise movement opposed blade drive shall be positioned out of the airstream for protection against damage, be hard wearing and free running. The Actuator/Damper connection shall be by means of the snaplock™ drive interface mechanism, which is totally independent of the ductwork. Swegon ACTIONAIR SmokeCommand-MCD dampers in association with their appropriate insulated actuators drive open and drive closed in operation and suitable for automatic activation smoke extract systems. Once initiated, if required, the system can allow the smoke control damper position to be changed by external input/firemen's' override up to 400°C.