INSTALLATION GUIDE

ThermShield MF On Wall / Floor Installation Method

Contents

Applies to...

- Actionair ThermShield FD
- Actionair Thermshield FD-C

Health and safety

- This process must be undertaken by competent persons. More than one person may be required to ensure the safe handling of large dampers and other materials. Use must be made of access equipment to ensure unsafe practices are not used to approach walls or difficult access areas.
- Standard site PPE should be used (minimum steel toe cap boots, hard hat); together with any protective eyewear, gloves and masks, when drilling or cutting is being undertaken. The latter should also be used when handing the wall construction materials, as defined by the material suppliers. If loud equipment is being used, hearing protection should be used.
- All waste materials should be collected and disposed of as defined by the relevant supplier.
- Actuators: All wiring should be carried out in accordance with the wiring details provided by the IEE and BS regulations and by a competent person. Care must be taken when installing and inspecting dampers, as they are likely to close without warning due to loss of electrical power or a temperature rise in the ductwork. This is their prime function. Do not insert any items, fingers or limbs between the blades. Larger dampers must be handled in accordance with current regulations and good practice due to weight.

actionair
by Swegon

CE Installation Method Overview

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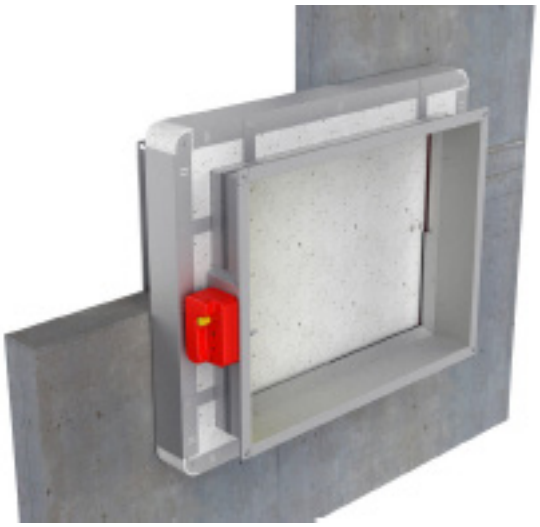
- For full classifications please refer to our Declaration of Performance (DoP), which can be found on our website.
- The methods in this manual should be followed to ensure a CE-marked installation.
- The instructions are based on the tested method using Actionair ThermShield fire/smoke dampers.
- Our ThermShield dampers are designed to be used with fire separating elements to maintain fire compartments. The ThermShield is an actuated failsafe close damper with low smoke leakage.
- Under the Fire Damper Product standard BS EN 15650 our Fire Damper products are tested to BS EN 1366-2 and classified under BS EN 13501-3.

Fire damper installation square openings

The FD25 / FD40 fire damper is always tested in standardised support frames (both in a concrete wall and in a flexible wall) in accordance with EN1366-2: 2015 table 3/4/5. The results obtained are valid for all similar support frames which have a thickness and / or density and / or fire resistance similar or greater than the one of the tests.

The duct connected to the fire damper must be supported or hung in such a way that the damper does not carry its weight. The damper must not support any part of the surrounding construction or wall which could cause damage and consequent damper failure. It is recommended to connect the damper to a dilatation compensator on either end of the damper.

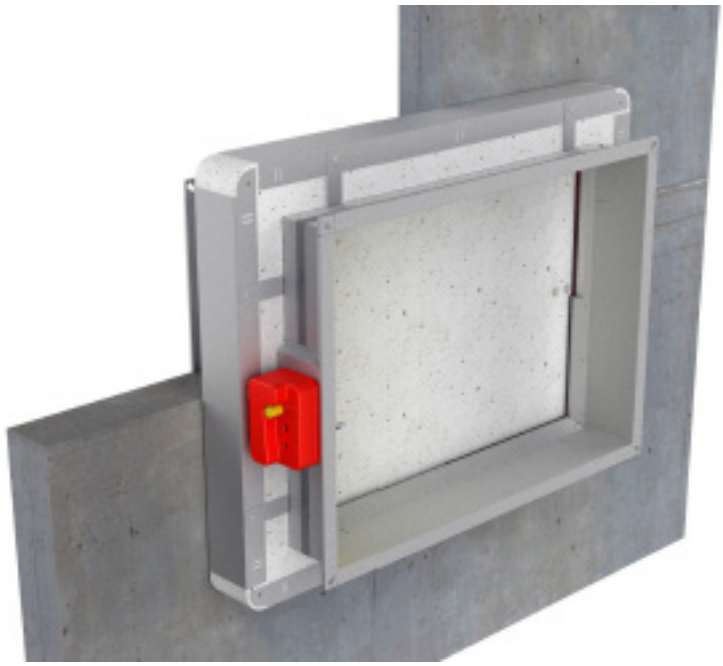


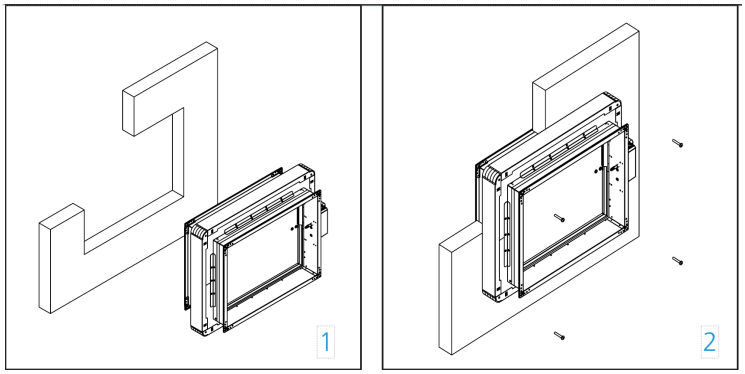
The damper driving mechanism can be placed on either side of the wall, however it needs to be placed so as to ensure easy access during inspection.

- The installation must comply with the tests that were performed during certification
- Avoid any obstruction of the moving blade by the connected ducts
- The class of air-tightness is maintained in case the installation of the damper is made in accordance with the technical manual
- General operating temperature: 50 °C max
- For indoor use only

All dampers can be installed with the blade axis in a horizontal position or a vertical position in all installation types except installation remote from the wall and battery installation. The fire damper must be installed into a fire partition structure in such a way that the damper blade in its closed position is located inside this structure.

Check the operation of the fire damper before commencing the installation.





Rigid wall installation
MF2 installation frame

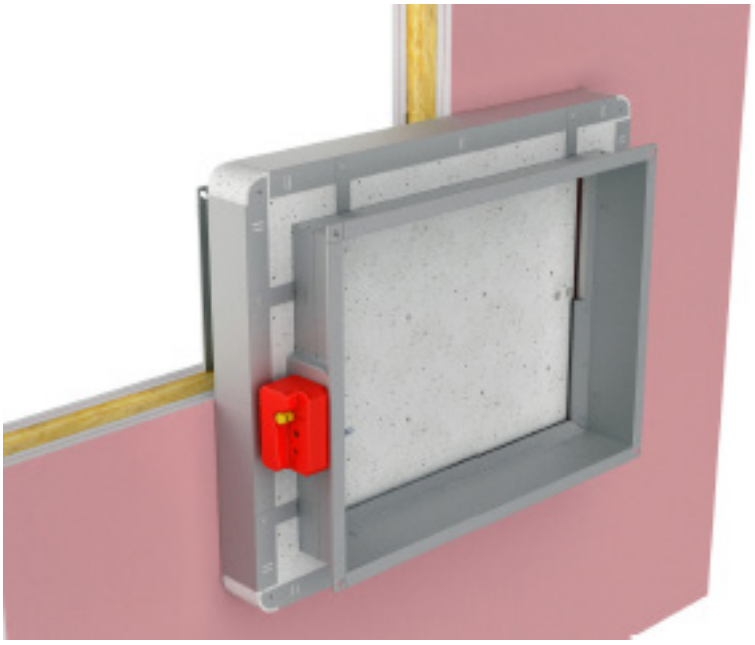
Damper blade must be closed during installation.

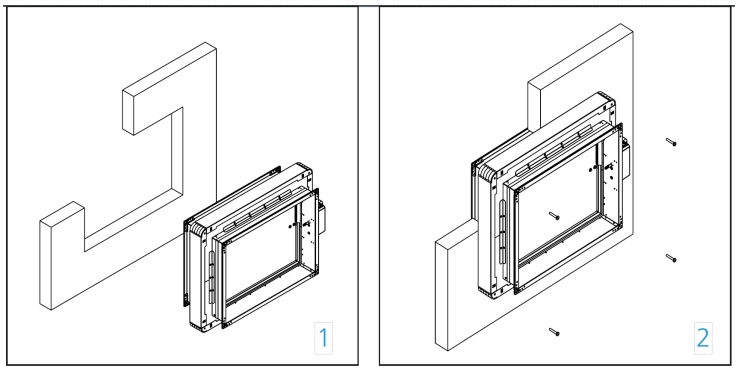
The wall is composed of concrete blocks (minimum density of 550 kg/m³) or reinforced concrete (minimum density of 2200 kg/m³) and with a minimum thickness of 100 mm.

1. Prepare opening in the wall according to B (H) + 80 mm. To find B and H please see the Dimension Data section.
2. Insert fire damper into wall and fasten with screws.
   FD25 - 4 pieces, 6(d)x140(l) mm,
   FD40 - 12 pieces, 6(d)x140(l) mm

Ensure that the damper is sufficiently supported.

Test the operation of the damper blade.





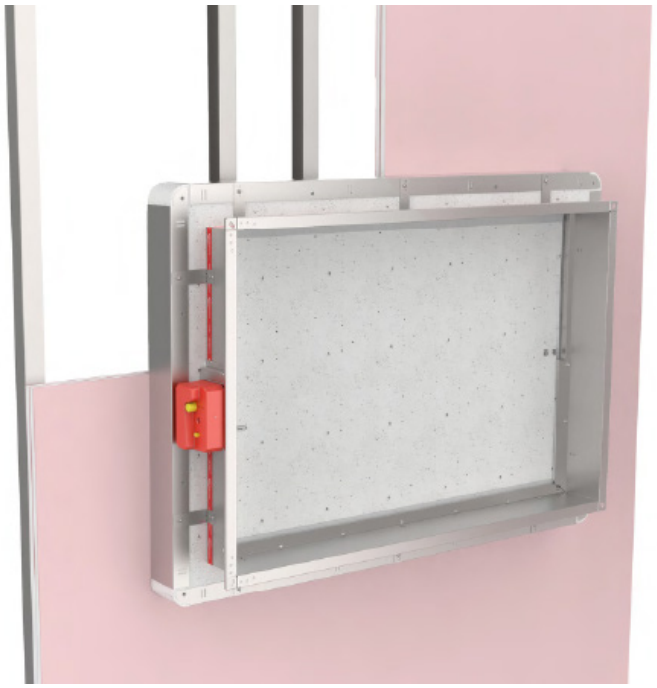
Flexible wall installation MF2 installation frame

Damper blade must be closed during installation.

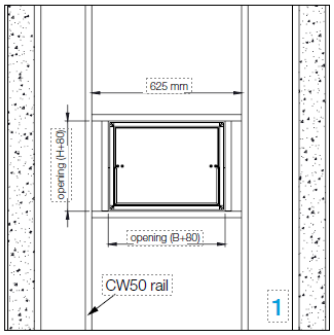
The wall is compose of 2x2 plasterboard boards, 12.5mm thick, installed on a steel frame construction. To fulfill the classification it is NOT mandatory to use the mineral wool inside the wall (mineral wool with density up to 100 kg/m³ can be used). The minimum installation thickness of the wall is 100 mm.

1. Create an opening according to the dimension of the fire damper and build the subframe according to the drawing.
2. Place the fire damper in the opening.
3. Fasten the fire damper with suitable fixing screws.
   FD25 - 4 pieces, 6(d)x140(l) mm,
   FD40 - 12 pieces, 6(d)x140(l) mm
   Ensure that the damper is sufficiently supported.
   Test the operation of the damper blade.

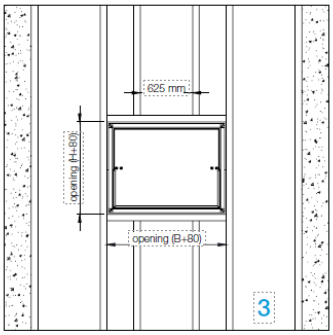
ThermShield MF On Wall Installation Method



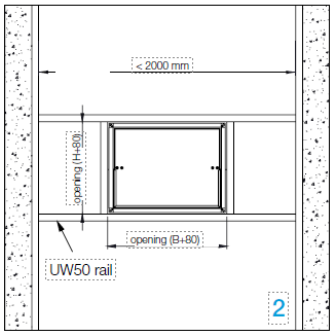
FD-MF2 Fire damper **(B < 625 mm)** installation in 90 mm shaft wall with metal studs



FD-MF2 Fire damper **(B > 625 mm)** installation in 90 mm shaft wall with metal studs



FD-MF2 Fire damper installation in 90 mm Shaft wall without metal studs **(< 2000 mm)**



Shaft wall installation
MF2 installation frame

Damper blade must be closed during installation.

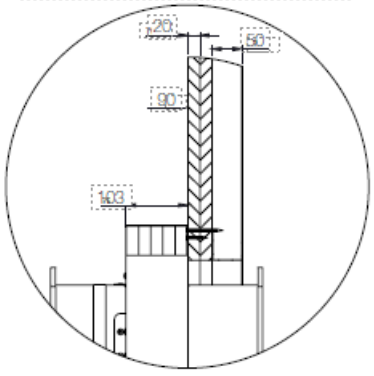
The wall is composed of 1x2 20mm thick Knauf Fireboard, installed on to a peripheral frame made from galvanised steel U-shaped rails with a section of 50x50mm and a thickness of 0.6mm.

1. For fire dampers B < 625 mm, make a steel subframe according to drawing (1). For fire dampers B > 625 mm, make a steel subframe according to drawing (2). For installation in shaft walls without metal studs, make a steel subframe according to drawing (3). To find B and H please see the Dimension Data section.
2. Place the fire damper in the opening.
3. Insert fire damper into wall and fasten with screws 12 pieces, 6(d) x 160(l) mm.

Ensure that the damper is sufficiently supported.

Test the operation of the damper blade.

FD25, FD40 - side cross section



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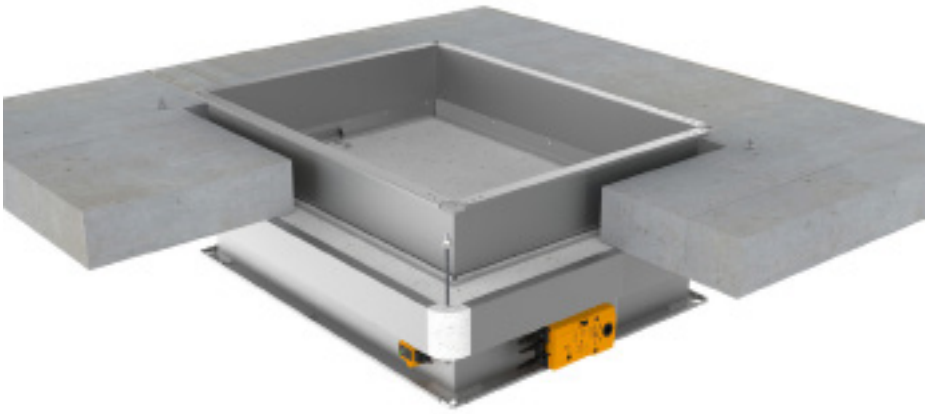
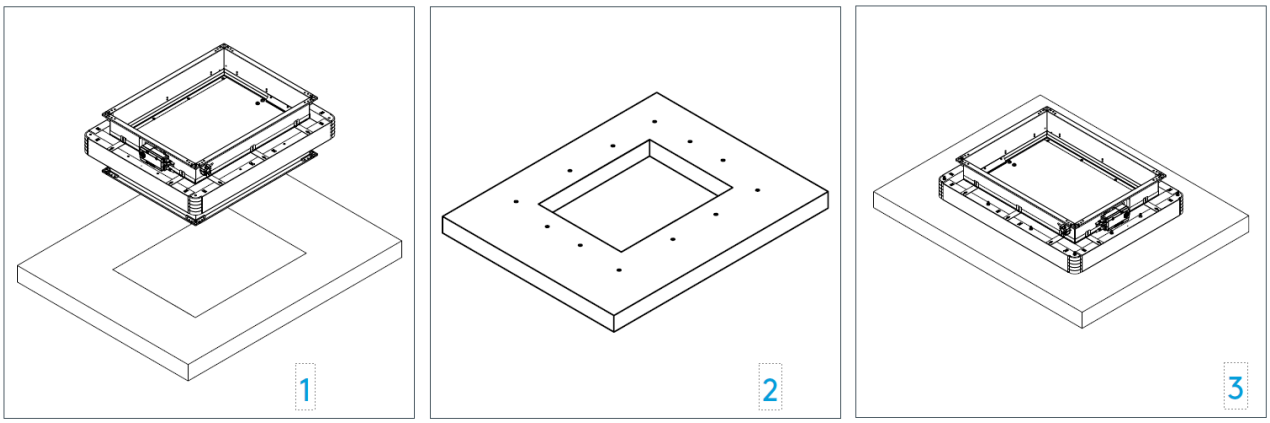




Rigid floor/ceiling MF2 installation frame

Damper blade must be closed during installation.

The floor/ceiling is composed of concrete blocks (minimum density of 550 kg/m³) or reinforced concrete (minimum density of 2200 kg/m³) and with a minimum thickness of 100 mm.

1. Recommended opening for the fire damper installation is B (H) + 80 mm. Insert the fire damper into the opening and mark the places for drilling holes. To find B and H please see the Dimension Data section.

2. Remove the fire damper and drill the marked places (8 mm). To find B and H please see the Dimension Data section.

3. Mount between 4 and 12 sets (depending on number of fixings on damper) of threaded rods along with washer, nut and locking-nut on one side.

Place preassembled threaded rods in holes in floor/ceiling, and place the damper in the opening.

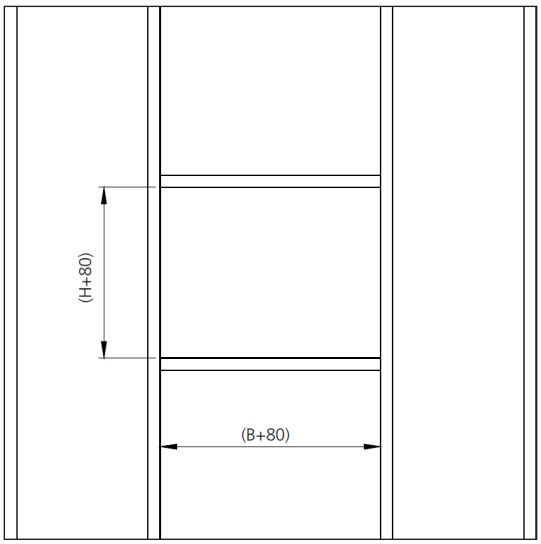
Tighten the tightening sets from oposite side with washer, nut and locking-nut.

Test the operation of the damper blade.

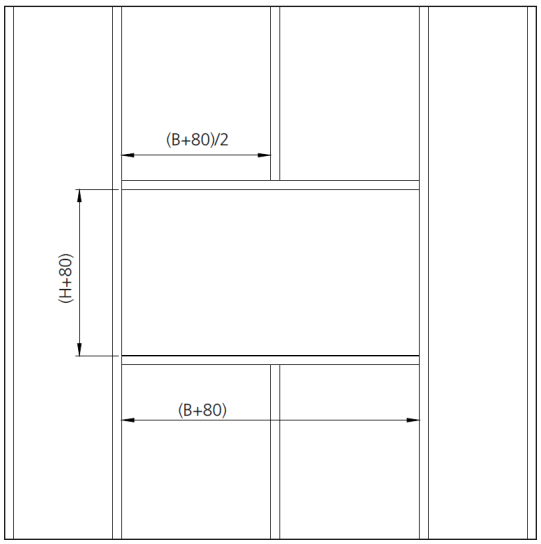
Flexible Wall Subframe

When installing the fire dampers in the flexible walls it is necessary to make a metal subframe onto which the damper will be fixed with screws. Subframe should be prepared according to the drawings below.

FD25



FD40



Fire damper installation circular openings

The duct connected to the fire damper must be supported or hung in such a way that the damper does not carry its weight. The damper must not support any part of the surrounding construction or wall which could cause damage and consequent damper failure. It is recommended to connect the damper to a flexible connection on either end of the damper.

The damper driving mechanism can be placed on either side of the wall, however it needs to be placed so that it ensures an easy access during inspection.

Mounting is possible with the blade axis in horizontal or in vertical position The installation must comply with the tests that were performed during certification

Avoid any obstruction of the moving blade by the connected ducts

The class of air-tightness is maintained when the installation of the damper is made in accordance with the technical manual

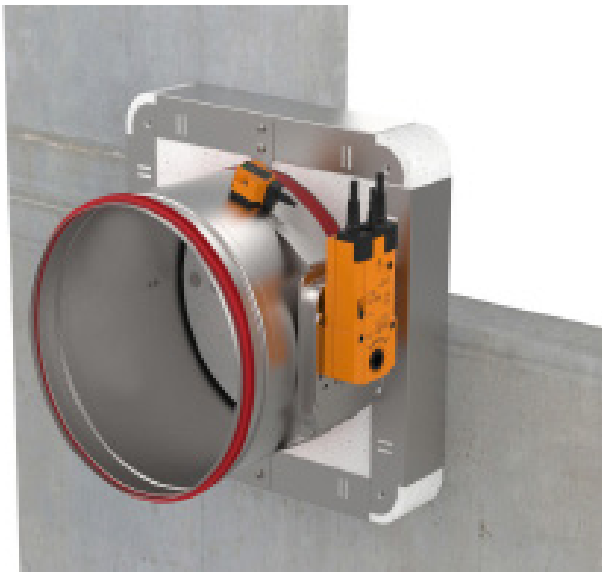
General operating temperature: 50 °C max.

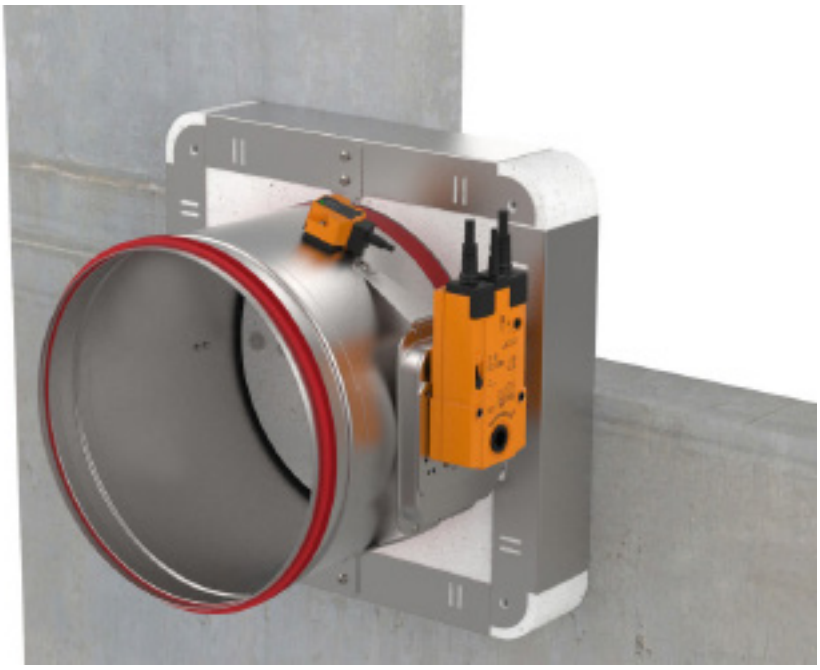
For indoor use only.

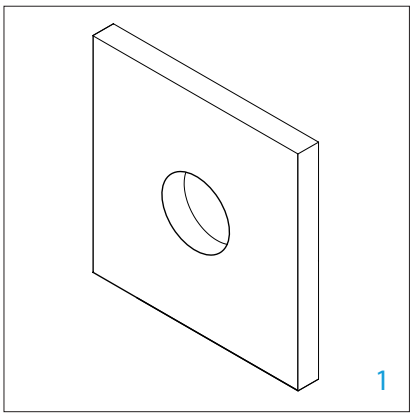
Installation in both, vertical and horizontal axis of rotation of the dampers blade is acceptable (with the axis angle 0 - 360°).

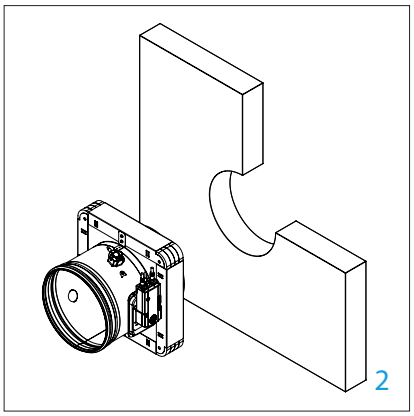
The fire damper must be installed into a fire partition structure in such a way that the damper blade in its closed position is located inside this structure (except for installation with MF installation frame).

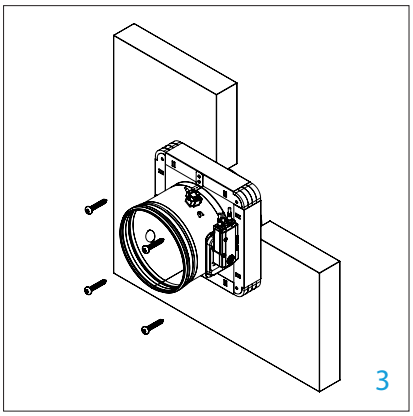
Check the operation of the fire damper before commencing the installation.











Rigid wall installation

MF2 installation frame

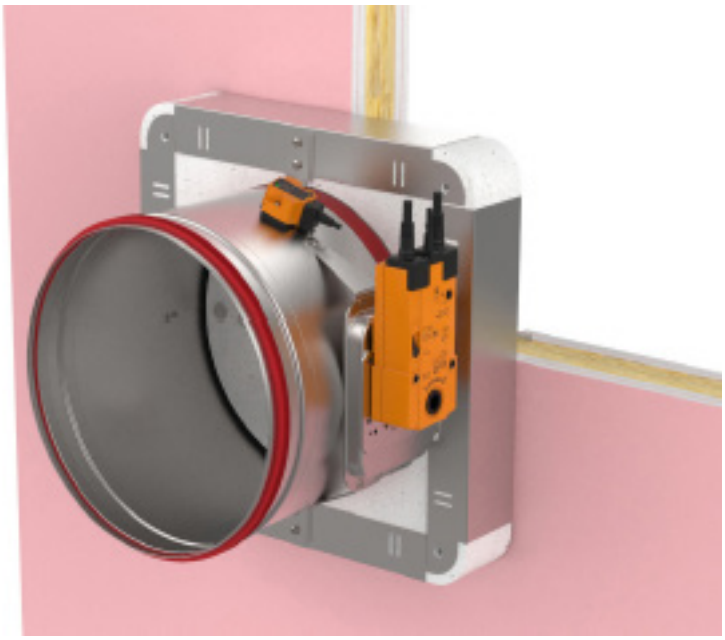
Damper blade must be closed during installation!

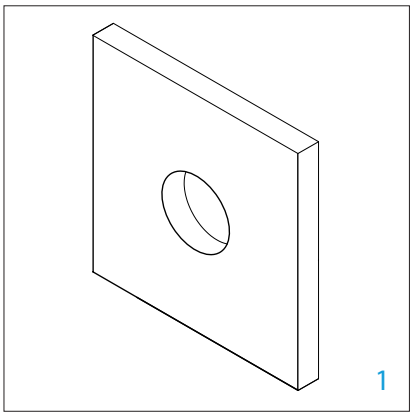
The wall is composed of concrete blocks (minimum density of 550 kg/m³) or reinforced concrete (minimum density of 2200 kg/m³) and with a minimum thickness of 100 mm.

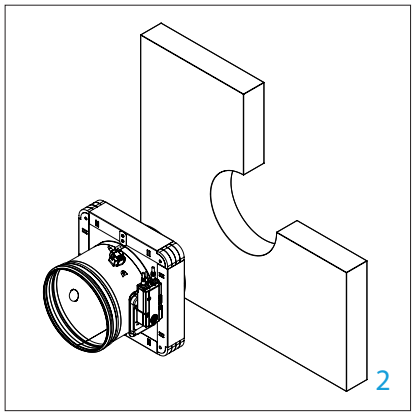
1. Create an opening in the wall (FDC25- Ød +10 mm, FDC40-Ød + 25 mm).
2. Place the damper in the opening.
3. Fasten the fire damper with screws
   FDC25- 4 pieces, 6(d)x160(l) mm,
   FDC40- 12 pieces, 6(d)x160(l) mm.

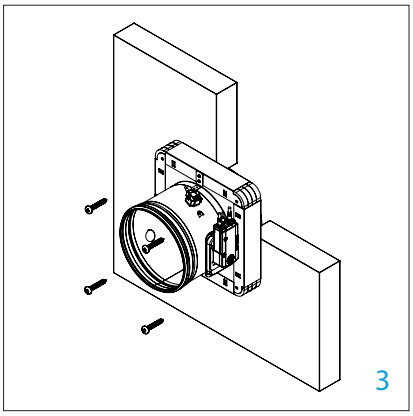
Ensure that the damper is sufficiently supported.

Test the operation of the damper blade.









Flexible wall installation MF2 installation frame

Damper blade must be closed during installation.

MF1 (EI 60 (ve‹—›io)S) - The wall is made out of type A (EN520) gypsum plaster boards. To fulfill the classification it is NOT mandatory to use the mineral wool inside the wall (mineral wool with density up to 60 kg/m³ can be used). The minimum thickness of the wall is 100 mm.

MF2 (EI 90 (ve i‹—›o)S) - The wall is made out of type F (EN520) gypsum plaster boards, installed on a steel frame construction. To fulfill the classification it is NOT mandatory to use the mineral wool inside the wall (mineral wool with density up to 100 kg/m³ can be used). The minimum thickness of the wall is 100 mm.

1. Create an opening in the wall (FDC25- Ød +10 mm, FDC40-Ød + 25 mm) and build the subframe according to the drawing.
2. Place the fire damper in the opening.
3. Fasten the fire damper with screws

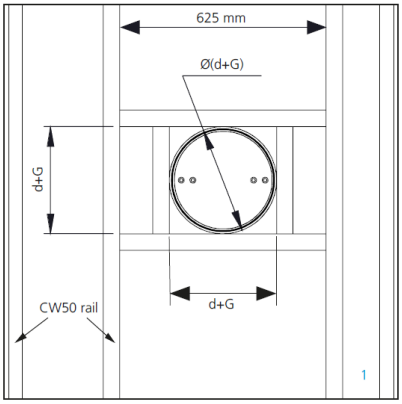
FDC25- 4 pieces, 6(d)x140(l) mm,

FDC40- 12 pieces, 6(d)x140(l) mm

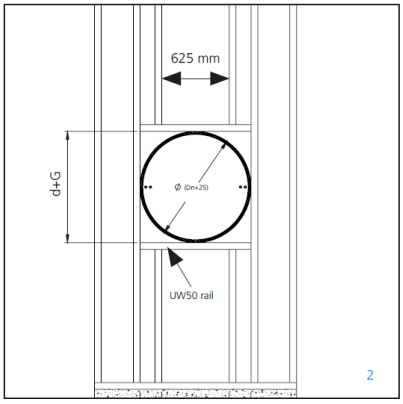
Ensure that the damper is sufficiently supported.

Test the operation of the damper blade.

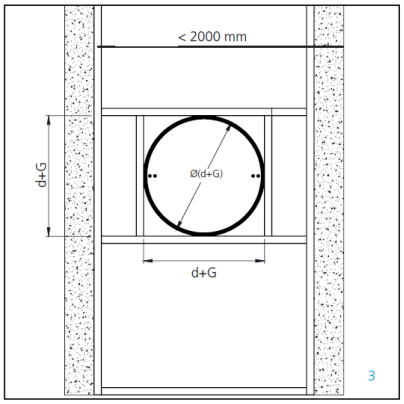
FDC-MF2 Fire damper (Ød < 625 mm) installation in 90 mm shaft wall with metal studs



FDC-MF2 Fire damper (Ød > 625 mm) installation in 90 mm shaft wall with metal studs



FDC-MF2 Fire damper installation in 90 mm shaft wall without metal studs (maximum wall width 2000 mm)



Shaft wall installation

MF2 installation frame

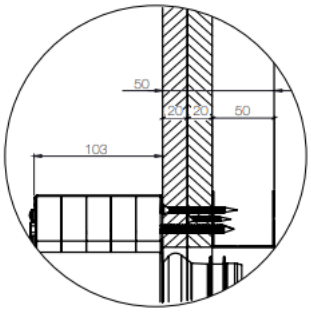
Damper blade must be closed during installation.

The wall is composed of 1x2 20mm thick Knauf Fireboard, installed on to a peripheral frame made from galvanised steel U-shaped rails with a section of 50x50mm and a thickness of 0.6mm.

1. For fire dampers Ød < 625 mm, make a steel subframe according to drawing (1). For fire dampers Ød > 625 mm, make a steel subframe according to drawing (2). For installation in shaft walls without metal studs, make a steel subframe according to drawing (3).
2. Place the fire damper in the opening.
3. Insert fire damper into wall and fasten with screws (12 pieces, 6(d)x140(l) mm).

Test the operation of the damper blade!

FDC25, FDC40 - side cross section



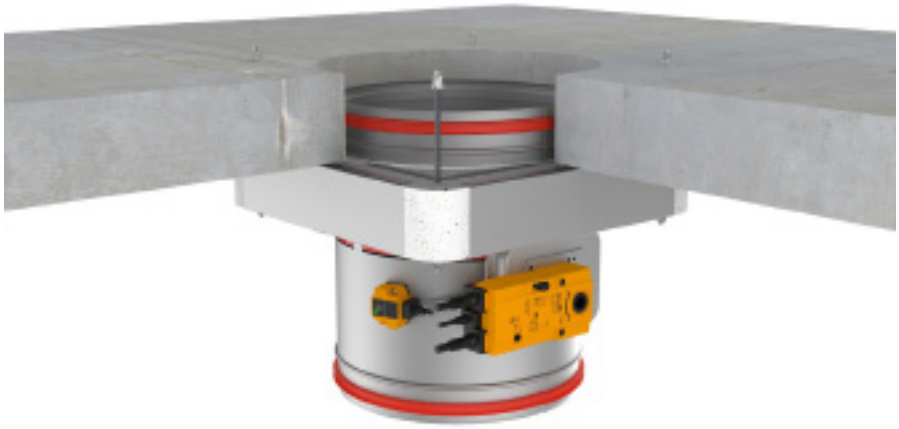
* Dimension G depending of the damper type is:

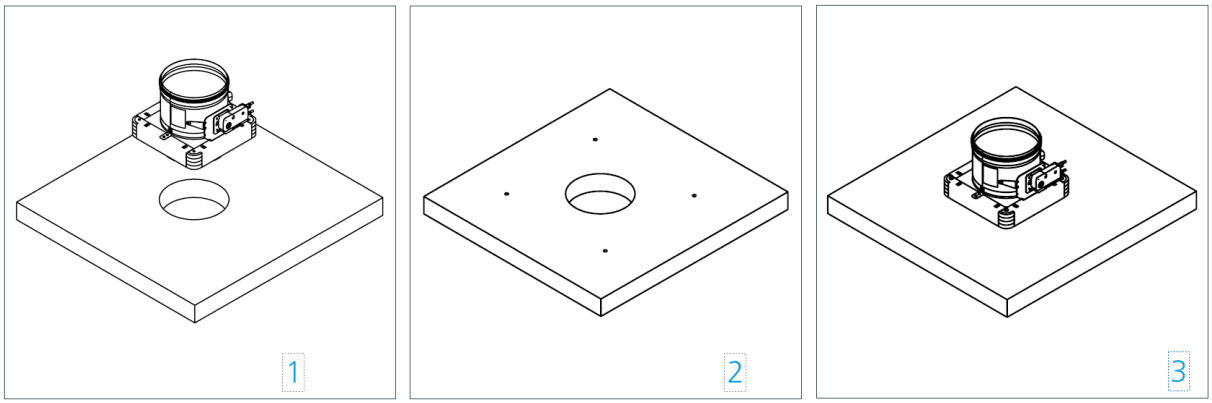
G=10 mm for FDC25

G=25 mm for FDC40

Ensure that the damper is sufficiently supported.

Test the operation of the damper blade.





Rigid floor/ceiling installation MF2 installation frame

Damper blade must be closed during installation.

The floor/ceiling is composed of concrete blocks (minimum density of 550 kg/m³) or reinforced concrete (minimum density of 2200 kg/m³) and with a minimum thickness of 100 mm.

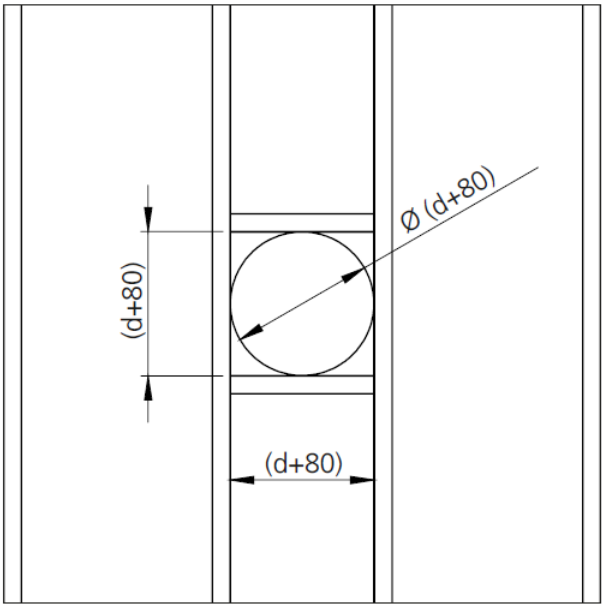
1. Create an opening in the floor/ceiling (FDC25- Ød +10 mm, FDC40-Ød + 25 mm). Insert the fire damper into the opening and mark the places for drilling holes.
2. Remove the fire damper and drill the marked places (8 mm).
3. Mount between 4 and 12 sets (depending on number of fixings on damper) of threaded rods along with washer, nut and locking-nut on one side. Place pre-assembled threaded rods in holes in floor/ceiling, and place the damper in the opening.

Test the operation of the damper blade.

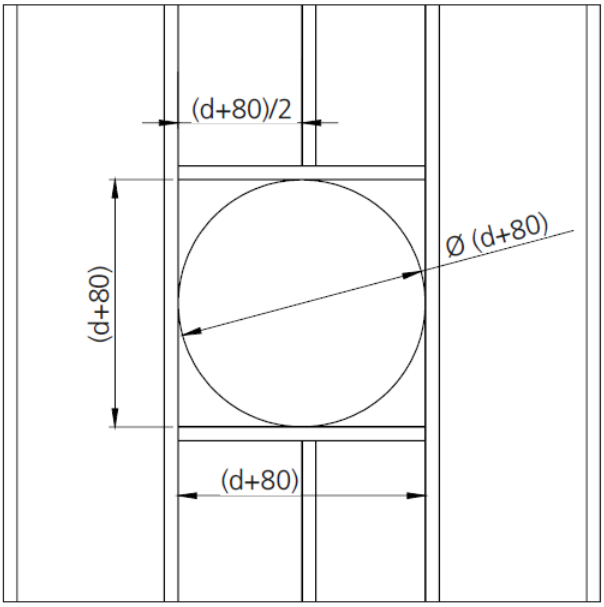
Flexible Wall Subframe

When installing the fire dampers in the flexible walls it is necessary to make a metal subframe onto which the damper will be fixed with screws. Subframe should be prepared according to the drawings below.

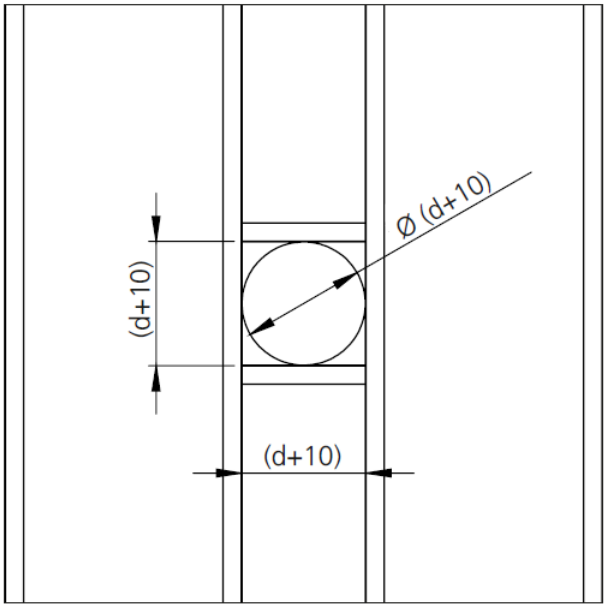
FDC25



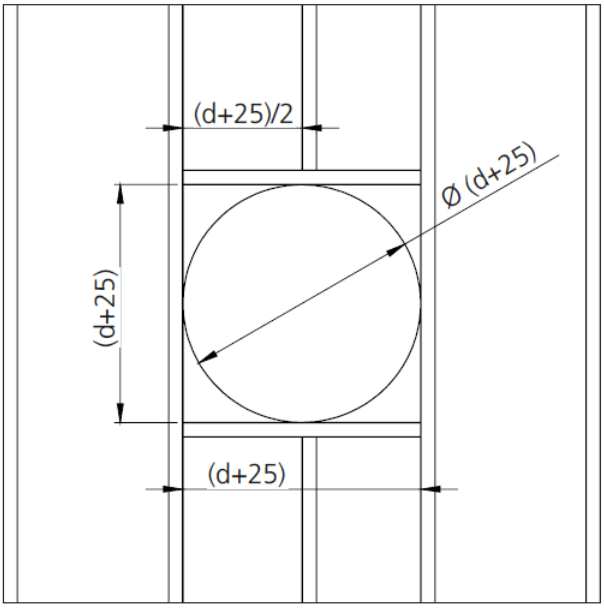
FDC40



FDC25-MF1



FDC40-MF2



Periodic Maintenance

Manufacturer Recommended Service Intervals

- After commissioning and handover (see DW145 check sheet), in order to remain compliant with 15650:2010, we recommend that you follow a regular service and inspection programme to ensure correct operation of dampers in the event the damper is required to actuate.
- In addition to regular physical inspections (in accordance with 15650:2010) we recommend using a dedicated damper control panel with a digital reporting mechanism (such as an Actionpac LNS system) to frequently monitor and report on regular remote damper testing.
- Ensure maintenance is performed in line with the latest best practice and relevant local or specialist guidance.
- Our recommended service intervals for life safety products are as follows:

Interval	Action	Competence
6 Months	Check Actuator Wiring (if applicable) for Damage	Specialist Persons
6 Months	Check Limit Switch Wiring (if applicable) for Damage	Specialist Persons
6 Months	Check Damper Cleanliness, Clean and Lubricate if necessary.	Specialist Persons
6 Months	Check Condition of Blades and Seals, report and rectify if necessary.	Specialist Persons
6 Months	Check for blade obstructions	Specialist Persons
6 Months	Check Damper Release Mechanism (through activation or release of the ETR or Thermal Fuse Device)	Specialist Persons
6 Months	Check damper is left in normal operational position after inspection.	Specialist Persons
Monthly	Complete actuation of damper from control panel (if installed) and check all faults. Consult specialist persons to investigate any reported faults.	Facility Manager

- *Specialist Persons: A recognised and experienced person with prior experience in the inspection and assessment of the functional safety of smoke and fire damper products. If in doubt, please consult with our technical support team for advice. To talk about our OEM maintenance inspections, contact our nationwide service team.

BS EN 15650:2010 - Ventilation for Buildings

- Fire Dampers

- Section 8.3 states regular testing/ inspection should be undertaken to meet regulatory requirements, or at intervals not exceeding six months.
- A comprehensive example of the maintenance procedure is given in Annex D of the standard. Some automatic systems may allow more frequent testing (48hr or less) and this may be required by a national standard.

Approved Document B, Volume 2

- Clause 10.12 states adequate means of access must be provided to allow inspection, testing and maintenance of both fire damper and its actuating mechanism.

BS 9999:2017 - Code of Practice for the Fire Safety in the Design, Management and Use of Buildings - Annex I

Smoke Control Systems

- For means of escape states actuation of the system should be simulated once a week. It should be ensured that any fans and powered exhaust ventilators operate correctly, smoke dampers close (or open in some systems), natural exhaust ventilators open, automatic smoke curtains move into position, etc.

Three Monthly

- In addition to the checks recommended in V.2, V.3 and V.4, the actuation of all smoke control systems should be simulated once every three months. All zones should be separately tested and it should be ensured that any fans and powered exhaust ventilators operate correctly, smoke dampers close (or open in some systems) etc.

Yearly

- In addition to the following checks should be made for annual inspections and tests of the following to be carried out by competent persons, for any defects to be logged and the necessary action taken, and for certificates of testing to be obtained.
  - Fire detection and fire alarm systems;
  - Self-contained luminaires with sealed batteries, if more than 3 years old;
  - Sprinkler, drencher and watermist systems;
  - Smoke ventilators and smoke control systems;
  - Fire dampers

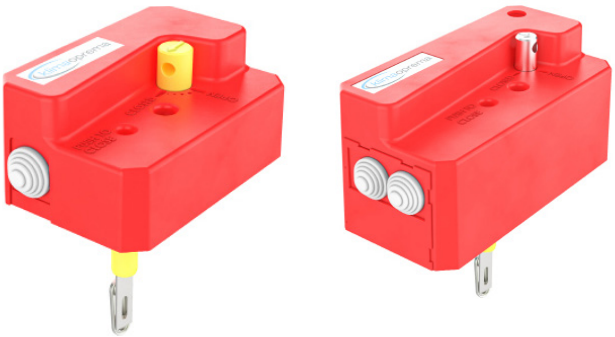
BS 9999:2017 - Code of Practice for the Fire Safety in the Design, Management and Use of Buildings - Annex W

- Maintenance of air conditioning and ventilation equipment including air filters, motors, fire dampers and their controls, smoke detectors and alarms is of paramount importance both in preventing fire and in ensuring that measures taken to mitigate its consequences are effective when needed. Arrangements should be made for all fire dampers to be tested by a competent person on completion of the installation and at regular intervals not exceeding 2 years. They are to be repaired or replaced immediately if found to be faulty. Spring operated fire dampers should be tested annually and fire dampers in dust laden and similar atmospheres should be tested much more frequently, at periods suited to the degree of pollution.

Actuators

Manual Actuators R, R-S

Manual operating mechanism, optionally with end switches (R-S). In case of fire, the fire damper closes automatically. Damper closing can be initiated either by thermal fuse melting, or by manual activation on the operating mechanism. Upon closure, damper blade is locked in closed position and can only be opened manually. Thermal fuse melting point is 72 °C.



R25

R25 (left) manual actuator is installed on FD25 fire dampers range from 100x200 to 800x600. It is available in version with (R-S) and without (R) end switches. End switches and thermal fuse are easily replaceable and available as service parts.

R40

R40 (right) manual actuator is installed on FD40 fire dampers from 800x600 to 1500x800. It is available in version with (R-S) and without (R) end switches. End switches and thermal fuse are easily replaceable and available as service parts.

Technical Specifications

Nominal voltage	N/A
Power	N/A
Switching capacity	1mA…500mA, 5VDC…48VDC
Blade closing time	Spring: 1 sec
Blade opening time	Manual
Manual activation	Release button on the casing
Degree of protection	IP 42
Ambient temperature range	min. -30 °C, max. 50 °C
Ambient humidity	95% r.h., non-condensing
Service life	Min. 30,000 cycles
Maintenance	Maintenance-free (see page 20)
Weight R25/R40	0,5 kg / 1,7 kg

Electric Actuators M24-S & M230-S

Damper is delivered in closed position. When electric actuator is connected to the power supply damper will open. When the damper reaches the end position (damper open), the electro motor will stop. Closing fire damper takes place automatically when a power failure occurs. Thermal tripping device that comes with fire damper causes power circuit break at a temperature of 72 °C, optional 95 °C (inside or outside duct). If checking is needed for proper functioning of fire damper, pushing the switch on the thermal tripping device will close damper. When switch on tripping device is released, the damper will open. Damper can be opened without connecting to a voltage with enclosed handle turning in the direction of the arrow on electric actuator (clockwise). Damper can be locked in the desired position by fast turning back handle a quarter of a turn (counter clockwise) for Belimo BF, and by puling brake on Belimo BFL and BFN.

To unlock the electro motor, turn handle clockwise for a quarter of a turn for Belimo BF, or release brake for Belimo BFL and BFN. After release, damper will be closed by return spring. When damper is opened manually, electric actuator will not move the damper into closed position in case of power failure.

Technical Specifications

Type of Belimo actuator		BFL24-T	BFN24-T	BFL230-T	BFN230-T	BF24-T	BF230-T
Nominal voltage / power consumption	voltage	AC/DC 24 V, 50/60 Hz	AC 24 V, 50/60 Hz	AC 230 V, 50/60 Hz	AC 230 V, 50/60 Hz	AC/DC 24 V, 50/60 Hz	AC 230 V, 50/60 Hz
	opening	2,5 W	4 W	3,5 W	5 W	7 W	8.5 W
	holding	0,8 W	1,4 W	1,1 W	2,1 W	2 W	3 W
	for wire sizing	4 VA	6 VA	6,5 VA	10 VA	10 VA	11 VA
End switch		1 mA...3 A (0,5 A), DC 5 V... AC 250V	1 mA...3 A (0.5 A), DC 5 V...AC 250 V	1 mA...3 A (0.5 A), DC 5 V... AC 250 V	1 mA...3 A (0.5 A), DC 5 V...AC 250 V	1 mA...6 A (3 A), DC 5 V... AC 250 V	1 mA...3 A (0.5 A), DC 5 V...AC 250 V
Running time	motor	< 60 s	< 60 s	< 60 s	< 60 s	< 120 s	< 120 s
	spring return	~ 20 s	~ 20 s	~ 20 s	~ 20 s	~16 s	~16 s
Ambient temperature range		min. -30 °C, max. 50 °C					

ThermShield MF On Wall Installation Method

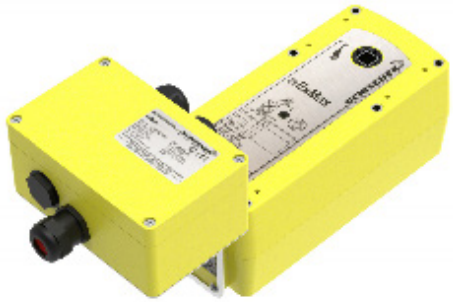
Electric Actuator Schischek ExMax

Damper is delivered in closed position. When electric actuator is connected to the power supply damper will open. When the damper reaches the end position(damper open), in which is it blocked, the electric actuator will stop. Closing fire damper takes place automatically when a power failure occurs. Thermal tripping device that comes with fire damper causes power circuit break at a temperature of 72 °C (inside or outside duct).

If checking is needed for proper functioning of fire damper, pushing the switch on the thermal tripping device will close damper. When switch on tripping device is released, the damper will open.

Damper can be opened without connecting to a voltage with enclosed Allen key, by turning in the direction of the arrow on electric actuator (clockwise). After release of Allen key, damper will go to closed position.

Type Examination Certificate Number: EXA 14 ATEX0064X Equipment complies with the essential health and safety requirements relating to the design and construction of equipment intended to use in potentially explosive atmospheres given in annex II of the directive 94/9/EC.

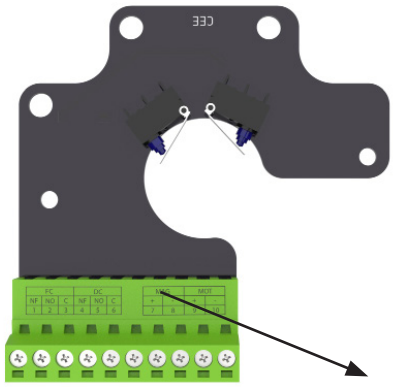


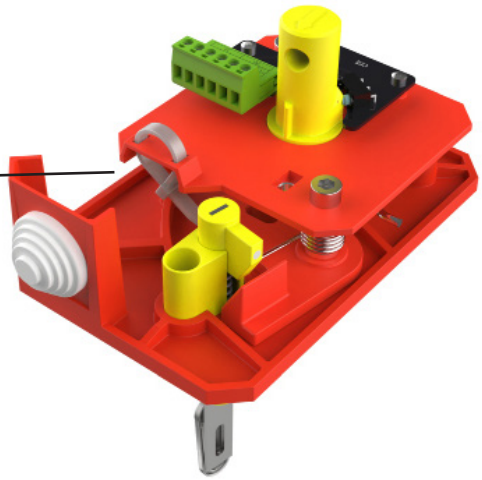
Technical Specifications

Type	ExMax -5.10-BF	ExMax -15-BF
Torque	5/10 Nm	15 Nm
Power Supply	24-230 V AC/DC	24-230 V AC/DC
Running time	3/15/30/60/120 s / 90°	3/15/30/60/120 s / 90°
Spring return	3 or 10s / 90°	3 or 10s / 90°
Control mode	On-Off, 3 position	On-Off, 3 position
Feedback	2 x aux switches + Ex. tripping device	2 x aux switches + Ex. tripping device
Ambient temperature range	min. -40 °C, max. 40 °C	min. -40 °C, max. 40 °C
Ambient humidity	0-90% r.h., non-condensing	0-90% r.h., non-condensing
Service life	Min. 10,000 cycles @ 10 s, min 1000 cycles @ 1s	Min. 10,000 cycles @ 10 s, min 1000 cycles @ 1s
Maintenance	Maintenance-free	Maintenance-free
Weight	3,5 kg	3,5 kg

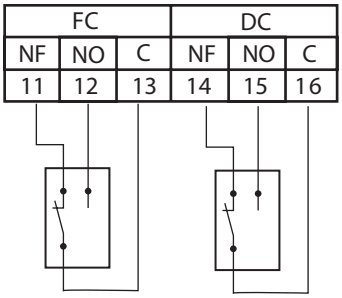
Wiring Diagrams

Manual Actuators R, R-S



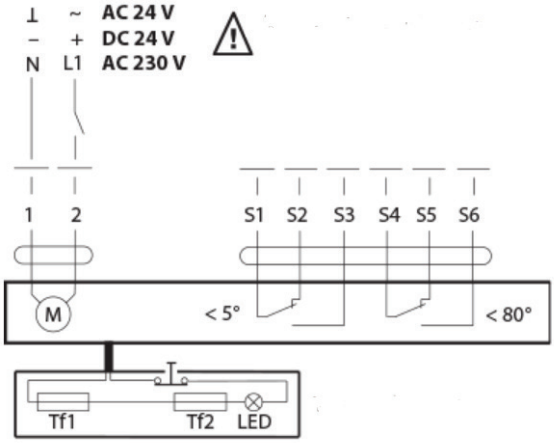


FC			DC		
NF	NO	C	NF	NO	C
11	12	13	14	15	16



FC = Limit switch - end
DC = Limit switch - start
NO = normally open
NF = normally closed
C = common

Electric Actuator M24-S & M230-S



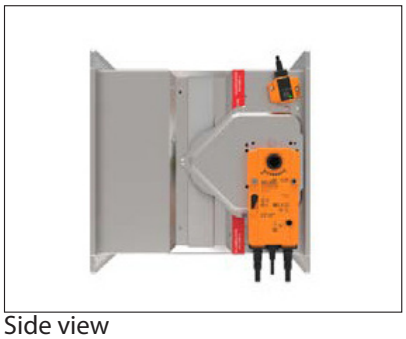
1	negative (direct-current) or neutral (alternating current)
2	positive (direct-current) or faze (alternating current)
S1	common micro switch closed damper
S2	normally closed micro switch closed damper
S3	normally open micro switch closed damper
S4	common micro switch open damper
S5	normally closed micro switch open damper
S6	normally open micro switch open damper
Tf	temperature sensor on the outer side of the duct (ambient temperature) max. 72 °C

ThermShield MF On Wall Installation Method

H < 300
Thermal fuse is located on the underside of the fire damper.

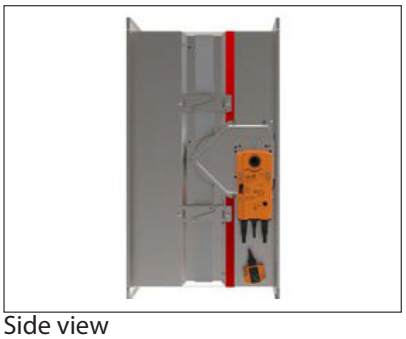
Bottom View

300 ≤ H ≤ 450
Thermal fuse is located on the same side as Belimo actuator.



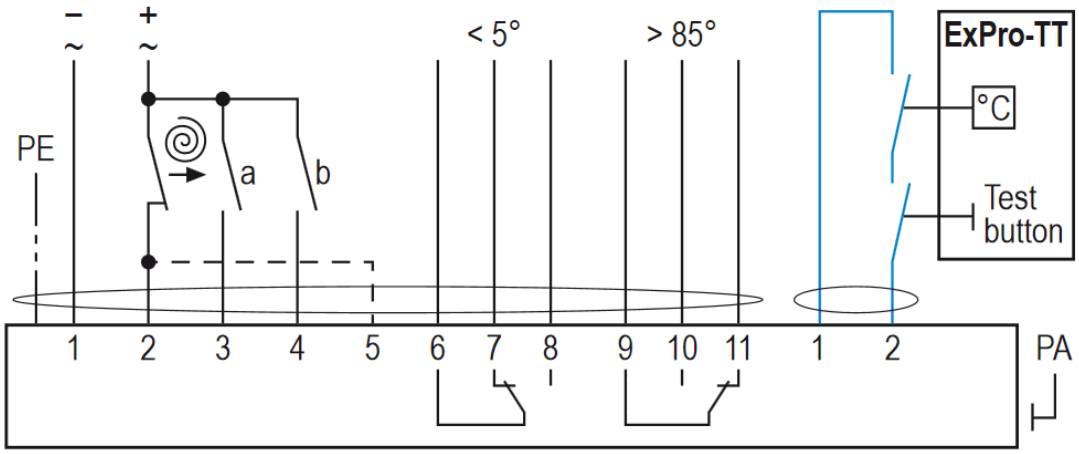
Side view

H > 450
Thermal fuse is located on the same side as Belimo actuator (below).



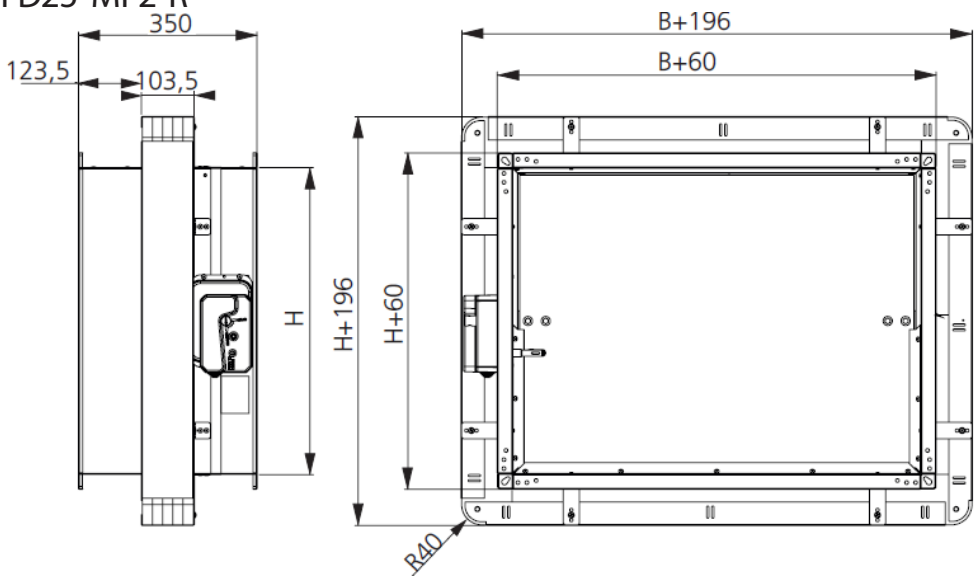
Side view

Electric Actuator Schischek ExMax

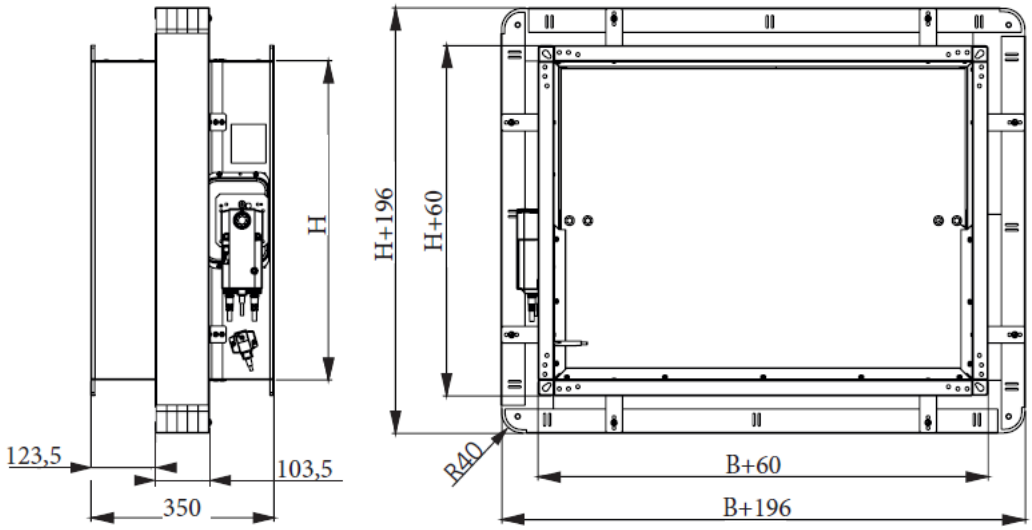


Dimensional Data

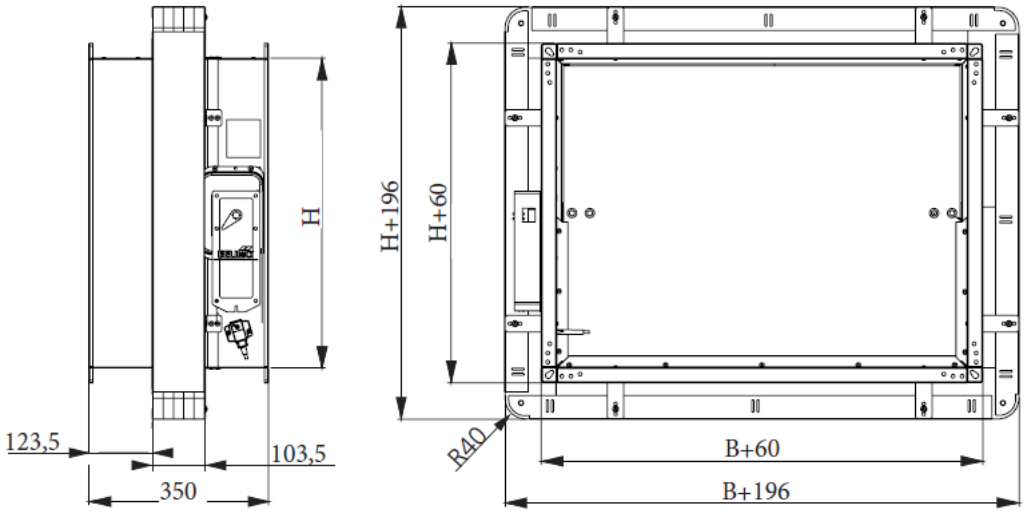
FD25-MF2-R



FD25-MF2-M

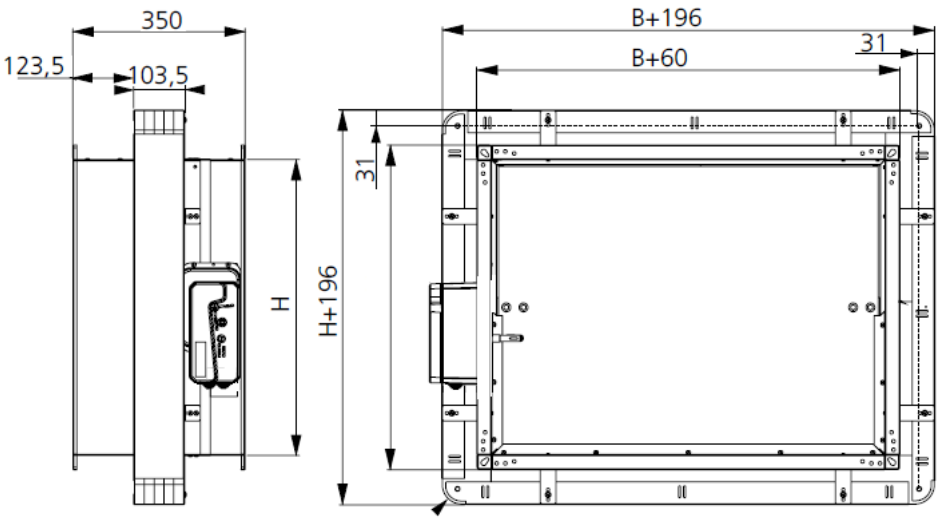


FD40-MF2-M



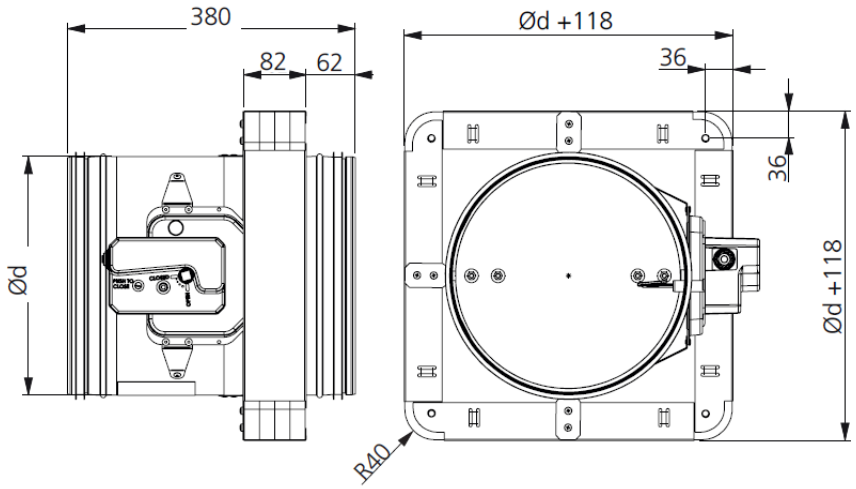
ThermShield MF On Wall Installation Method

FD40-MF2-R

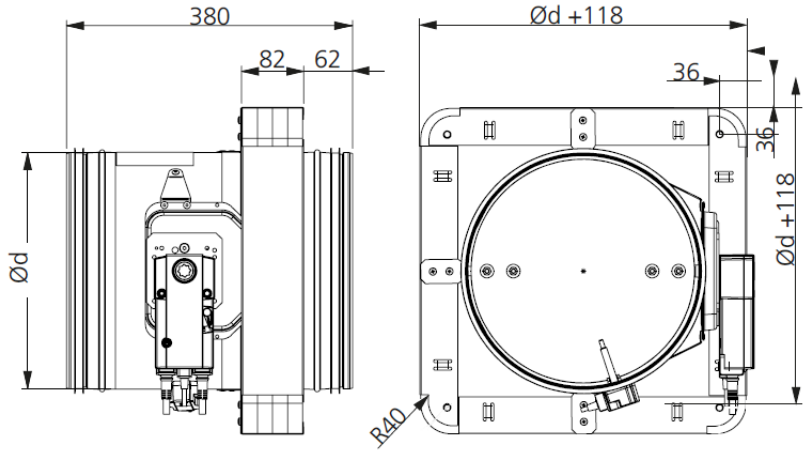


Dimensional Data

FDC25-MF1-R



FDC25-MF1-M



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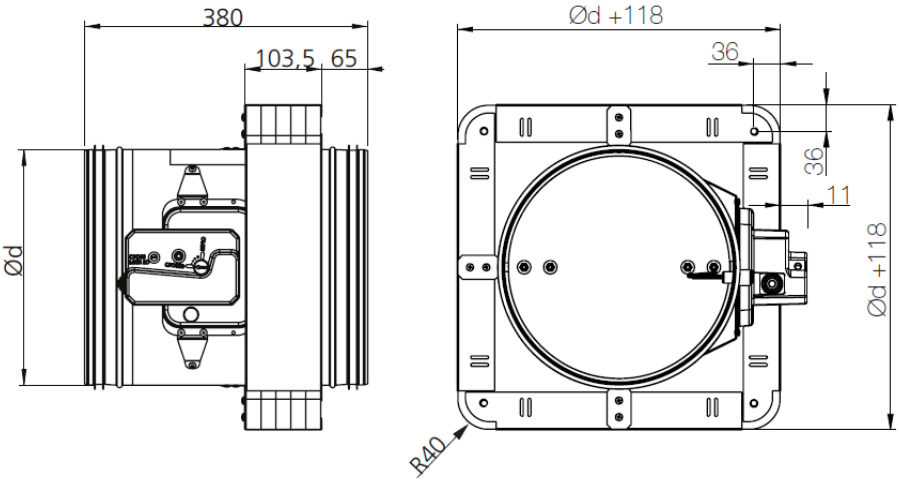
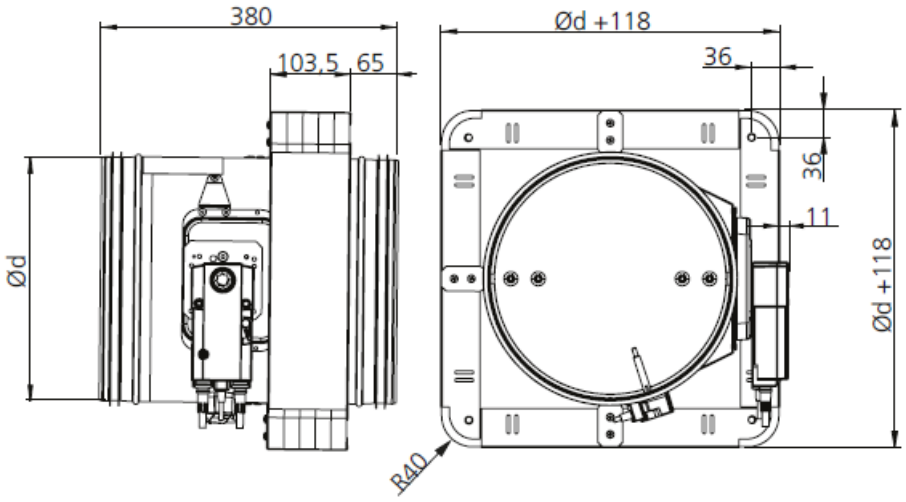
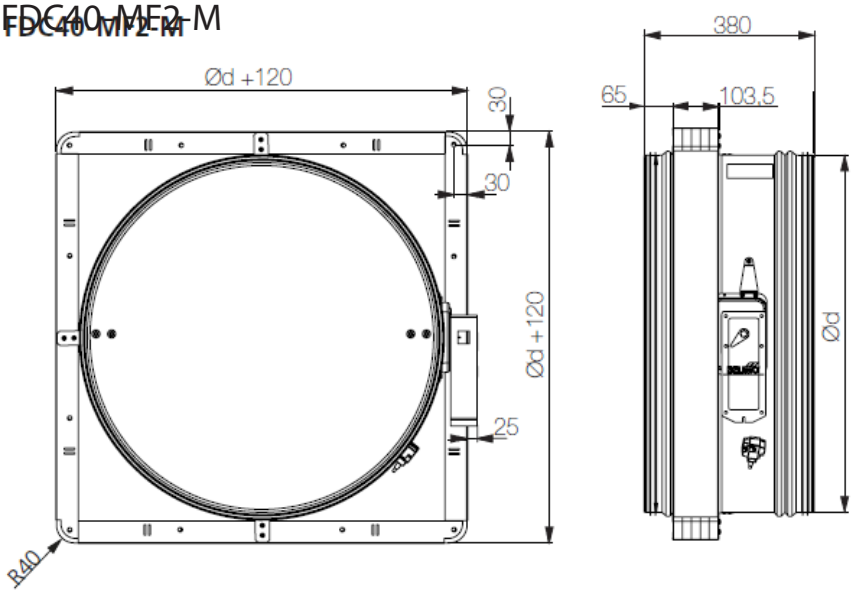


Dimensional Data

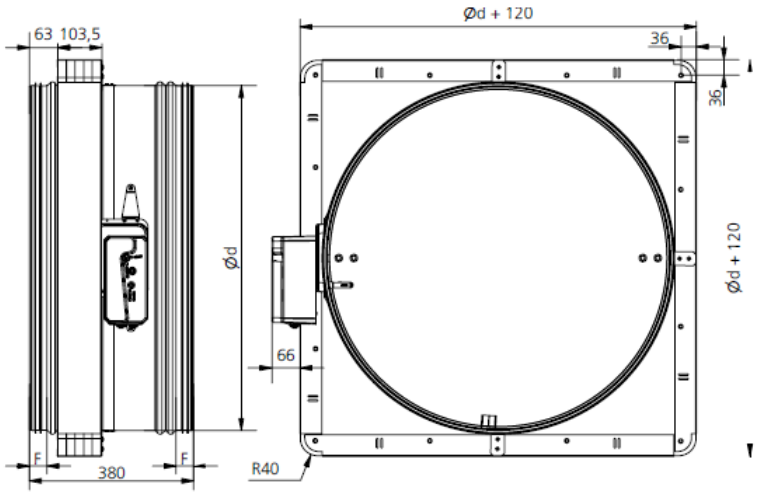
FDC25-MF2-M



FDC40-MF2-M



FDC40-MF2-R



Inspection and handover check sheet

This certificate applies only to Swegon Fire Dampers. The installer must complete this installation certificate when installing fire and smoke dampers. A separate certificate must be completed for each individual fire and smoke damper.

	Question	Action	
1	Are the dampers the correct type?	Confirm damper is correct type for the application	
2	Are the dampers located correctly?	The damper location is to be checked against the installation drawings/details	
3	Are the dampers correctly identified?	Unique system ID to be clearly indicated on the damper or other agreed location.	
4	Have supports for both the damper and the adjacent ductwork been installed in accordance with the approved manner?		
5	Are the dampers fitted in the correct orientation?	Confirm the damper is installed with any actuators (if applicable) on the left or right hand side. Not on the top or the bottom (i.e. blade pivot running vertically).	
6	Is access through the ductwork, to the damper unobstructed?	Unobstructed space should be provided for safe access to the damper. This must include access through ceiling voids and adjacent services. Damper installer to advise the system designer if problems are foreseen.	
7	Has the space around the damper and within the opening been left clear and not been used for other services?	Other services within the installation opening will invalidate the installation method. Damper installer to advise the lead contractor if problems are foreseen.	
8	Using the access opening provided, check that blades open and close.	Check position of damper blades.	
9	Has the damper been checked for internal cleanliness, free from damage and that vertical casings in particular are free from debris?	With the damper in the closed position, inspect for damage.	
10	Has the damper been released to simulate operation of the thermal release? (Damper drop test)	Ensure damper operation is free from interference.	
11	Have the damper blades been re-set following drop test and the access panel replaced?	After re-setting the damper, check the position shown on the blade position indicator is correct.	
12	At the time of damper handover, is the fire barrier and penetration seal complete?	Damper installer to record on the handover register if any following trades are still to complete their activities.	
13	Is the damper installation complete and available for handover prior to system commissioning?	Obtain the relevant acceptance of the damper installation from the CDM coordinator (or equivalent).	
14	Is the completed handover register cross-referenced back to the identification codes listed in the system designers damper schedule?		

Damper Unique System I.D: .....

Name of installation location:.....
Address:.....
Installation location identification section/floor/room: .....
Damper product type: .....
Release fuse temperature: .....
Notes/Considerations: .....
Installed by: .....
Company Name: .....
Address: .....
Company Telephone No: .....
Installers Name: .....
Installers Telephone No: .....
Date of installation: .....

It is hereby verified that the damper detailed above has been installed and tested according to the manufactures recommendations:

Installers signature: .....Date: .....