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FDC

ThermShield EIS Classified Fire Damper

Fire protection

Installation and Operation Manual

Version 1.3

Issue Date: 31.07.2026

Read this before using this manual

This installation and operating manual is designed to assist operational or service personnel in properly installing and utilizing the Safegard Systems products, ensuring safe and effective use. This manual is intended for installation companies, in-house technicians, technical personnel, trained individuals, and certified electricians. It is crucial for these individuals to read and fully comprehend this manual before commencing any work. Adhering to the safety guidelines and all instructions within this manual is fundamental for safe operations.
Local health and safety regulations, along with general safety standards, are also applicable.

Upon commissioning of the system, this manual should be provided to the system owner, who must retain it with the system documentation. The manual should be stored in an easily accessible location at all times.

The illustrations in this manual are primarily for informational purposes and may not accurately represent the actual design.

Limitation of Liability

The information provided in this manual has been compiled in accordance with relevant standards and guidelines, reflecting the current state of technology and our extensive expertise and experience.
The manufacturer disclaims any liability for damages arising from:

- Non-compliance with this manual
- Operation or handling by untrained personnel
- Technical alterations
- Improper use
- Unauthorized modifications
- Use of non-approved replacement components

The delivery contents may differ from what is described in this manual due to customized designs, extra order options, or recent technical modifications.
The responsibilities outlined in the order, along with the general terms and conditions, the manufacturer's delivery terms, and the applicable legal regulations at the time the contract is signed, will be in effect.
We reserve the right to implement technical modifications.

Copyright

This document is protected by copyright. Any unauthorized use may constitute a copyright infringement, and the infringer will be liable for any resulting damages.

Qualified Personnel

Warning

Risk of Injury from Insufficiently Qualified Individuals.
Improper use may lead to significant injury or property damage. Only trained specialists should perform this work.
Personnel Requirements:

Skilled Qualified Electrician:
A skilled qualified electrician is an individual with adequate professional or technical training, knowledge, and hands-on experience necessary to work on electrical systems. They should be able to identify potential hazards associated with their tasks and recognize and mitigate any associated risks.

Specialist Personnel:
Specialist personnel possess sufficient professional or technical training, knowledge, and experience to fulfill their assigned responsibilities. They should be aware of potential hazards related to their work and capable of recognizing and avoiding any risks involved.

SAFETY

Proper Use
The fire damper functions as an automatic shut-off device to prevent the spread of fire and smoke through ductwork. It is suitable for both supply and exhaust air in HVAC systems. The fire damper can be utilized in potentially explosive environments if the appropriate special accessories are employed and the product displays the CE conformity marking in accordance with Directive 94/9/EC. Fire dampers intended for such atmospheres are labeled for the zones for which they have been certified. The operation of the fire dampers is permitted only in accordance with installation regulations and the technical specifications provided in this installation and operating manual. Altering the fire damper or using unapproved replacement parts is strictly prohibited.

CAUTION

Risk of Injury from Sharp Edges, Corners, and Thin Sheet Metal Parts. Sharp edges, pointed corners, and thin metal components can lead to cuts or abrasions. Exercise caution when performing any work. Always wear protective gloves, safety footwear, and a hard hat.

DANGER

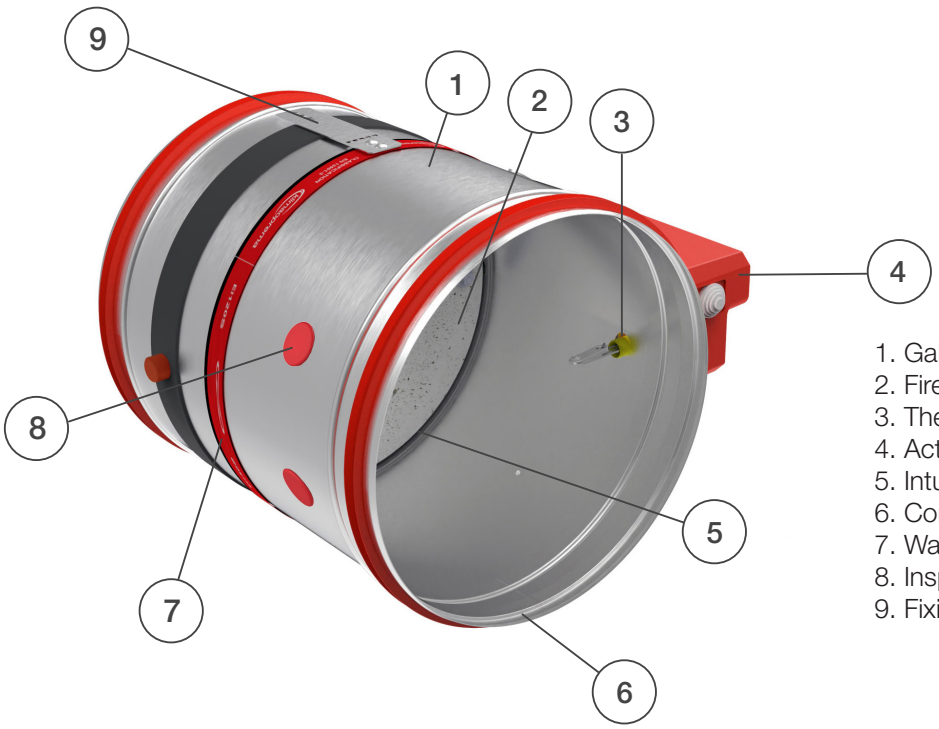
Risk of Electric Shock. Do Not Touch Live Components. Electrical equipment carries hazardous voltage.
Only qualified electricians are permitted to work on the electrical system. Always turn off the power supply before servicing any electrical equipment.

WARNING

Risk of Danger from Improper Use.
Incorrect use of the fire damper can create hazardous situations. Never use the fire damper:

- Without specially approved attachments in potentially explosive environments
- As a smoke control damper
- In environments where chemical reactions, whether intended or unintended, could damage the fire damper or cause corrosion.

* The images shown are for illustration purposes only and may not be an exact representation of the product.



1. Galvanized steel casing
2. Fire resistant damper blade
3. Thermal fuse
4. Actuator
5. Intumescent joint
6. Connection flanges
7. Wall limit mark label
8. Inspection hatch (optional)
9. Fixing bracket

PRODUCT OVERVIEW

Fire dampers FDC are used for prevention of fire spread through the ventilation ducts and between fire sections. Fire dampers consist of steel sheet casing, calcium silicate damper blade, damper blade mechanism outside of the airflow and a manual, electromagnetic or electric actuator.

Fire damper casing is made out of galvanized steel sheet. Variants produced from stainless steel and powder coated steel are also available. Calcium silicate blade is equipped with brass bearings and seals made out of elastomer rubber.

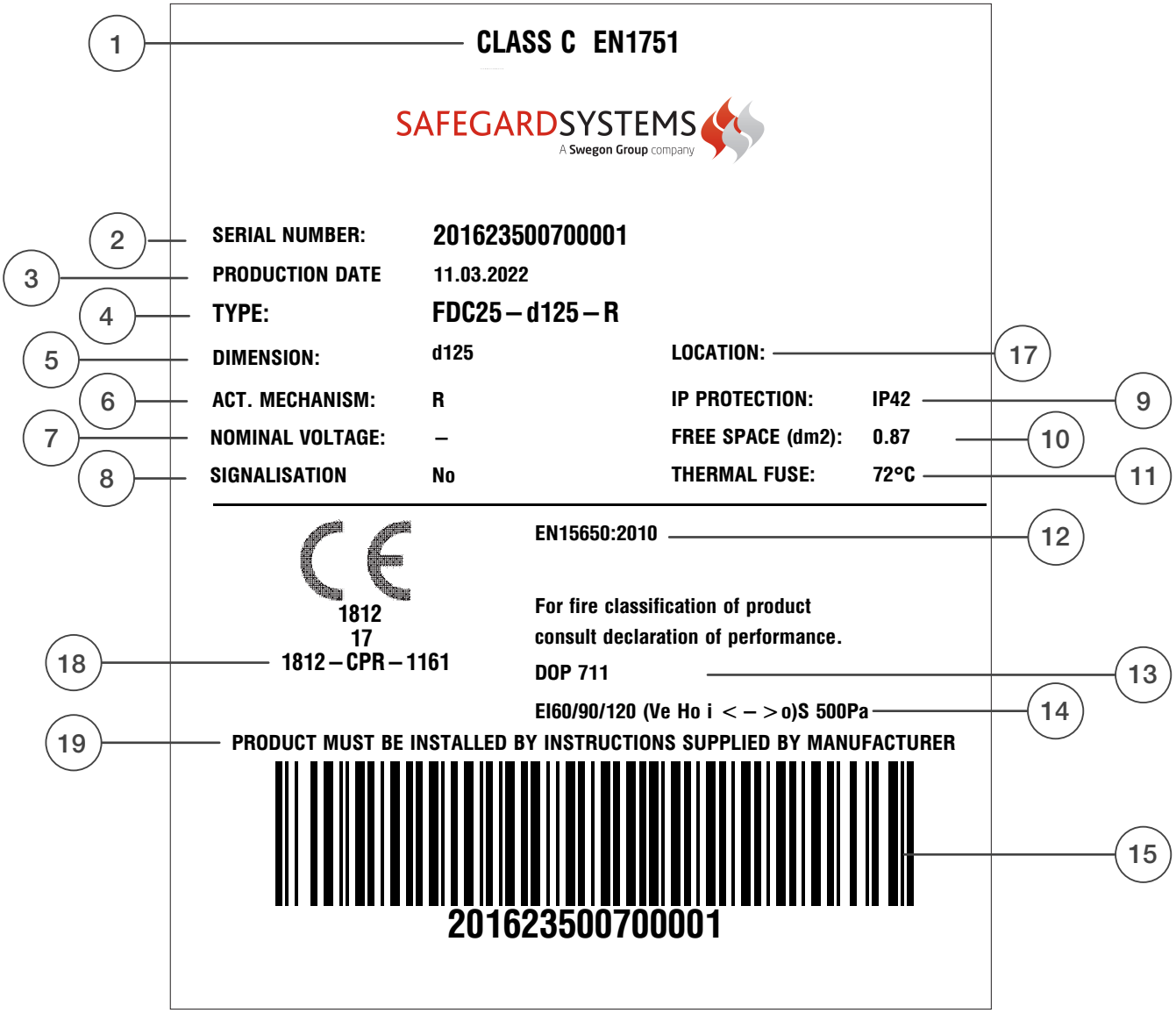
All fire dampers are tested according to the EN 1751 for airtightness and retain class 3 leakage on the closed damper blade and class C on the casing air leakage.

Fire dampers FDC25 are produced from Ø100 up to size Ø315 and have 25 mm thick damper blade. Fire dampers FDC40 are produced in sizes from Ø355 up to Ø800 and have 40mm thick damper blade.

FDC25 fire dampers are equipped with R25 manual mechanism and FDC40 fire dampers are equipped with R40 manual mechanism.
Manual spring return mechanism is equipped with thermal link fuse that is triggered automatically when the temperature inside the duct reaches 72°C. It can also be activated manually by the push of the button on the mechanism. Additional equipment for manual mechanism include end contact switches for damper position signalling.
Electromagnetic actuators feature spring return mechanism with electromagnet for remote activation. Additional fire and smoke spread equipment for electromagnetic mechanism include end contact switches for damper position signalling. Rearming compartments of the electromagnetic actuator is manual.
Fire dampers with electric actuators are equipped with Belimo actuator drives in 24V or 230V versions. Activation of fire dampers equipped with electric drives can be via 72°C or 95 °C thermal fuse or remotely via control signal. Rearming of the electric fire damper can also be done remotely via control signal. The control signal is simply applying power to open the damper and removing it to close on a spring.

ATEX rated versions of fire dampers can be delivered with Schischek 24V / 230V electric actuators that are rated for installation in zone 1 explosive atmosphere.

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Product label

1 - Casing air leakage classification
2 - Serial number
3 - Production date
4 - Type
5 - Dimension of the fire damper
6 - Mechanism type
7 - Nominal voltage
8 - Signalisation (end contacts)
9 - IP protection
10 - Free space
11 - Thermal fuse temperature
12 - Number of the European standard and year of its publication
13 - Declaration of performance
14 - Classification according to EN 13501-3
15 - Barcode
16 - QR code link to user manual
17 - Location-if specified
18 - CE- Classification
19 - Notified body Products Regulation

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MODELS

Casings

FDC25
Cylindrical fire damper with 25mm damper blade and fire classification up to EI120S. Sizes range from Ø100 up to Ø315.

FDC40
Cylindrical fire damper with 40mm damper blade and fire classification up to EI120S. Sizes range from Ø355 up to Ø800.

FDC25 - APP
Cylindrical fire damper with integrated Applique installation frame with 25mm damper blade and fire classification up to EI90S.
Sizes range from Ø100 up to Ø315.

FDC25 - MF1/MF2
Cylindrical fire damper with integrated MF1 installation frame with 25mm damper blade and fire classification up to EI60S (MF2 EI90S). Sizes range from Ø100 up to Ø315.

FDC40 - MF2
Fire damper with integrated MF2 installation frame with 40mm damper blade and fire classification up to EI90S. Sizes range from Ø355 up to Ø800.

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.

EMS-S
Electromagnetic operating mechanism, comes with end switches as standard. In case of fire, the fire damper closes automatically. Damper closing can be initiated either by thermal fuse melting or remotely by triggering the electromagnet. Electromagnet is constantly under power and activates closing of the damper blade in case the power cuts out. Upon closure, damper blade is locked in closed position and can only be opened manually. Thermal fuse melting point is 72°C.

M230-S/M230-S-ST
Belimo 230V electric actuator operating mechanism, comes with integrated end switches. In case of fire, the fire damper closes automatically.
Damper closing can be initiated either by thermoelectric release device or remotely by removing power from the actuator. Upon closure, damper blade is locked in closed position and can be opened by sending a signal to electro motor. Standard thermoelectric release point is 72°C, optional 95°C. M230-S-ST actuator is additionally equipped with connection plug for easy connection with power supply and communication modules.

Product specifications

Nominal sizes FDC	100 - 800 [mm]
Casing length	380 mm
Temperature range	-30 °C ... 50 °C
Release temperature	72 °C (standard) or 95 °C (optional with electric actuator)
Volume flow rate range	Electric drive up to 12m/s EMS up to 10m/s Manual drive
Differential pressure range	up to 1000 Pa
Casing air leakage	Class C, EN 1751
Closed blade air leakage	Class 3, EN 1751
Upstream velocity	< 12 m/s
EC conformity	EN 13501-3, EN 1366-2, EN 15650, EN 1751, CPR no.305/2011
Declaration of performance	DoP 711 XXX

M24-S/ M24-S-ST
Belimo 24V electric actuator operating mechanism, comes with integrated end switches. In case of fire, the fire damper closes automatically.
Damper closing can be initiated either by thermoelectric release device or remotely by removing power from the actuator. Upon closure, damper blade is locked in closed position and can be opened by sending a signal to electro motor. Standard thermoelectric release point is 72°C, optional 95 °C. M24-S-ST actuator is additionally equipped with connection plug for easy connection with power supply and communication modules.

M24-S-SR
Belimo 24V electro motor operating mechanism, comes with integrated end switches. In case of fire, the fire damper closes automatically.
Damper closing can be initiated either by thermoelectric release device or remotely by removing power from the actuator. Upon closure, damper blade is locked in closed position and can be opened by sending a signal to electro motor. Standard thermoelectric release point is 72°C. The actuator is connected with an proportional analogue control signal Y (2-10V) and drives the damper to the operating position at the same time as tensioning the return spring.

EX
Category 2 ATEX classified fire dampers are equipped with Schischek ExMax-5.10-BF actuators, ExPro-TT thermal switches and Ex-Box junction boxes.
Optional casing can be produced in AISI 316 stainless steel.

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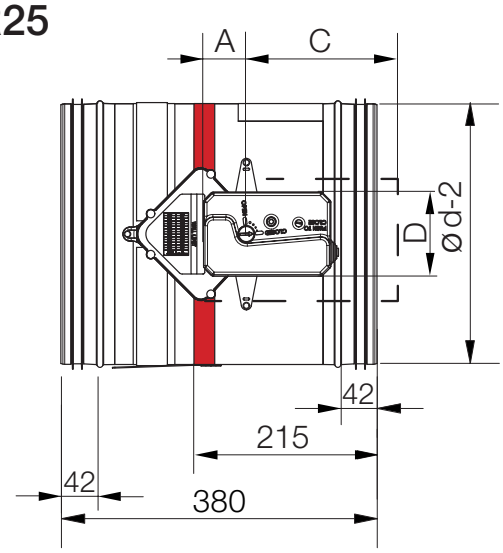
FDC25/FDC40 - R (manual mechanism)

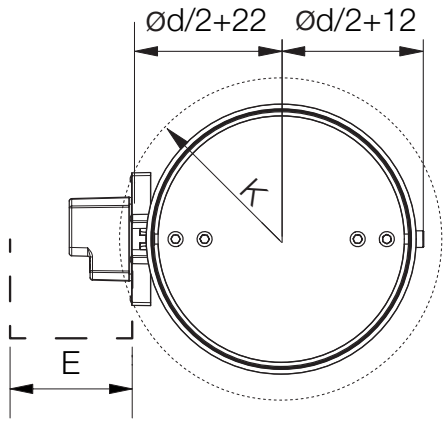
- Automatic closure when the temperature in the duct exceeds 72°C
- Manual rearming
- Manual unlocking possible for periodical test of fire damper
- Optional with end position switches (-R-S)
- FDC25 fire dampers are equipped with R25 manual mechanism
- FDC40 fire dampers are equipped with R40 manual mechanism



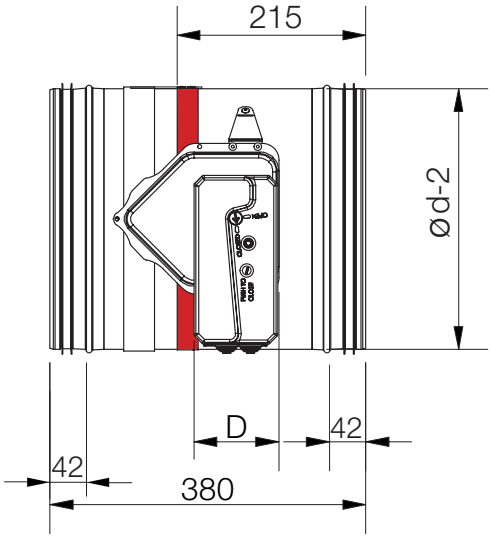
Product	A [mm]	C [mm]	D [mm]	E [mm]
FDC 25	55	150	105	150
FDC 40	55	200	105	200

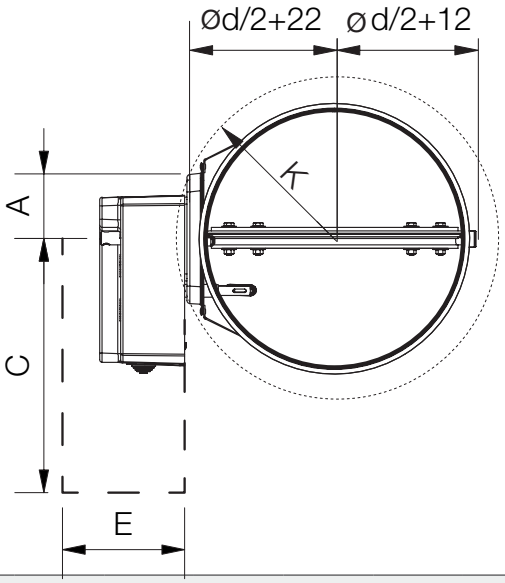
FDC25-R25





FDC40-R40





	FDC25-R						FDC40-R							
Ød [mm]	100	125	160	200	250	315	355	400	450	500	560	630	710	800
Weight [kg]	3,8	4,2	4,7	5,4	6,3	7,7	11,9	13,5	15,4	17,5	20,4	23,6	27,7	33,7
K [mm]	120	128	140	155	176	204	221	242	265	289	317	351	389	433

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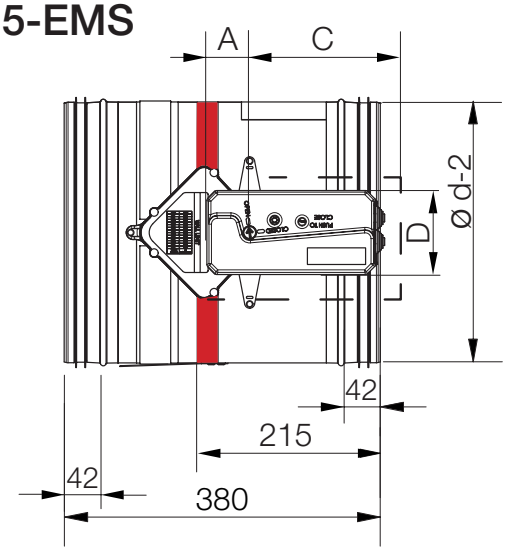
FDC25/FDC40 - EMS (solenoid actuator)

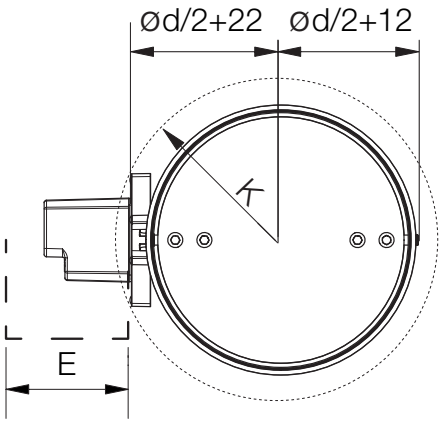
- Electromagnetic actuator with integrated limit switches and thermal fuse release mechanism (72°C)
- Manual rearming
- Remote closing with electromagnetic actuator
- Manual closing possible
- EMS - solenoid actuator is constantly under power. Actuating mechanism is tripped when the power is interrupted, or thermal fuse is melted.



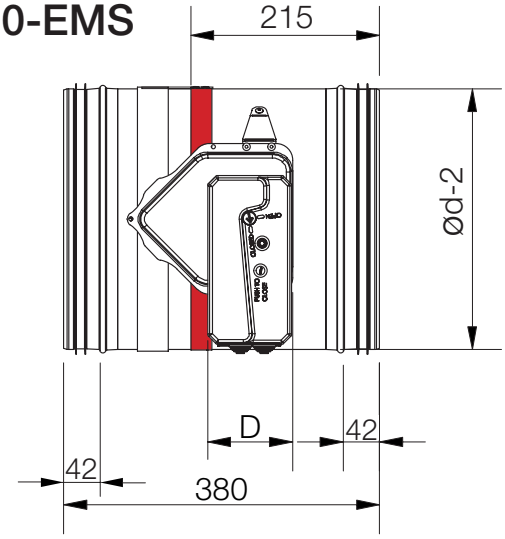
Product	A [mm]	C [mm]	D [mm]	E [mm]
FDC 25	55	150	105	150
FDC 40	55	200	105	200

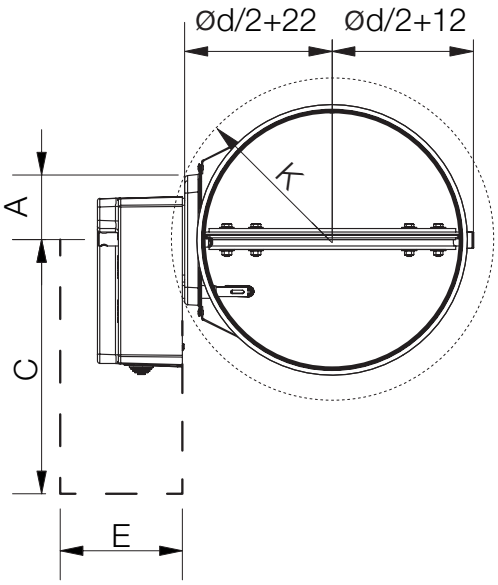
FDC25-EMS





FDC40-EMS





	FDC25-EMS						FDC40-EMS							
Ød [mm]	100	125	160	200	250	315	355	400	450	500	560	630	710	800
Weight [kg]	5,3	5,7	6,2	6,9	7,8	9,2	12,2	13,8	15,7	17,8	20,7	23,9	28	34
K [mm]	120	128	140	155	176	204	221	242	265	289	317	351	389	433

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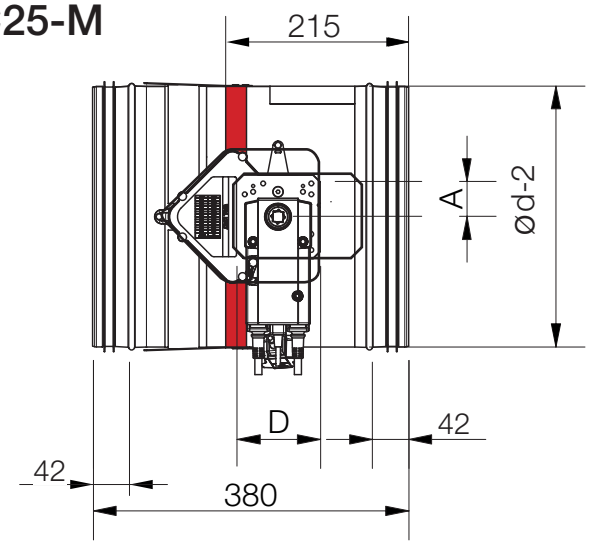
FDC25/FDC40 - M (electric actuator)

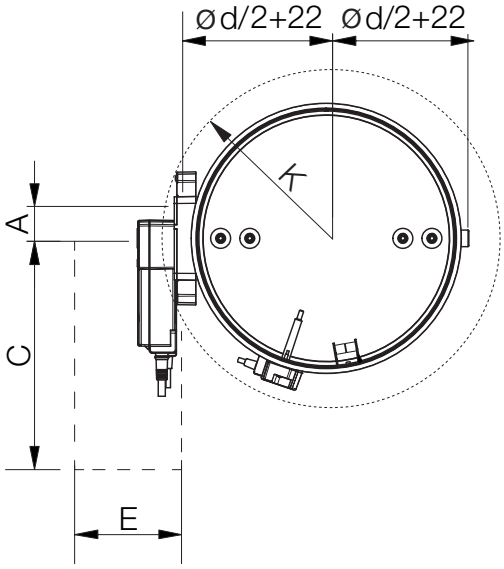
- Thermoelectric release device (72°C) with electric actuator and return spring
- Integrated end switches
- Fully automatic operation
- Optional 95°C thermoelectric release device for warm air installations



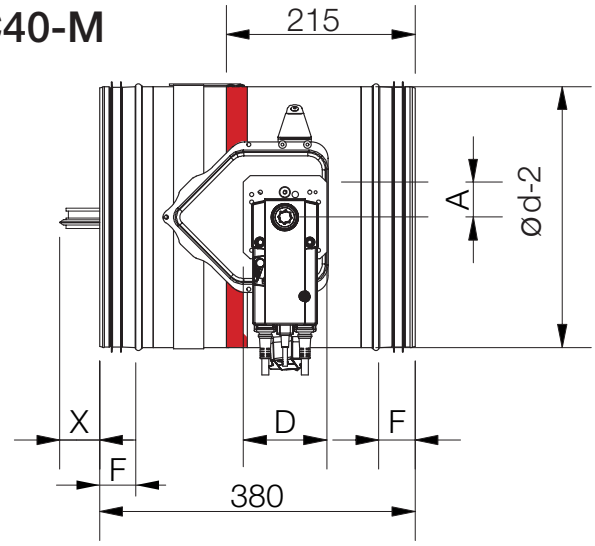
Product	A [mm]	C [mm]	D [mm]	E [mm]
BFL (M)	25	200	90	120
BFN (M)	25	225	100	120
BF (M)*	50	250	100	120

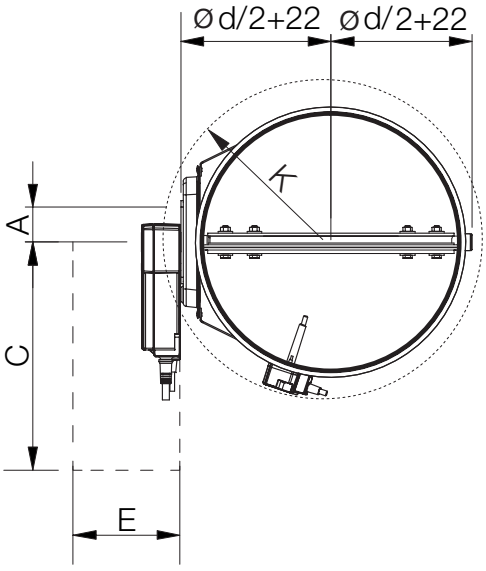
FDC25-M





FDC40-M





	FDC25-M						FDC40-M							
Ød [mm]	100	125	160	200	250	315	355	400	450	500	560	630	710	800
Weight [kg]	4,5	4,9	5,4	6,1	7	8,4	11,7	13,3	15,2	17,3	20,2	23,4	29,1	35,1
Actuator type	BFL	BFL	BFL	BFL	BFL	BFL	BFN	BFN	BFN	BFN	BFN	BFN	BF	BF
K [mm]	120	128	140	155	176	204	221	242	265	289	317	351	389	433

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FDC25/FDC40 - EX (electric actuator)

- Thermoelectric release device (72°C) with electric actuator and return spring
- Integrated end switches
- Fully automatic operation
- The EX version of the damper comes with:
  1) Safety temperature trigger Schischek ExPro-TT
  2) Electric actuator Schischek ExMax-5.10-BF
  3) Terminal box Schischek ExBox-BF



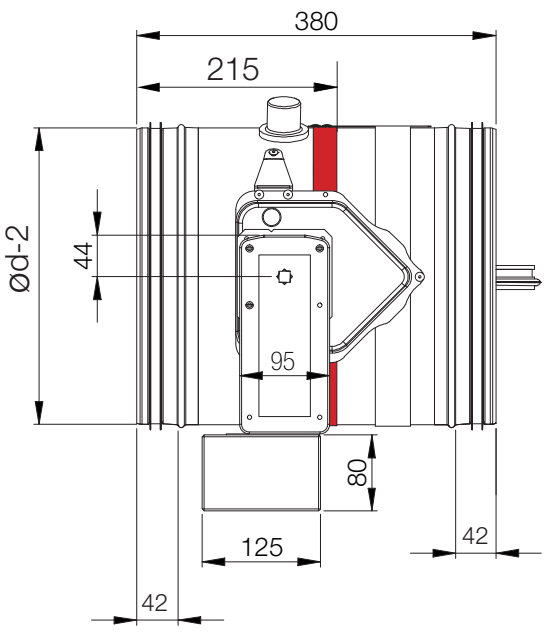
Ex classification of product:

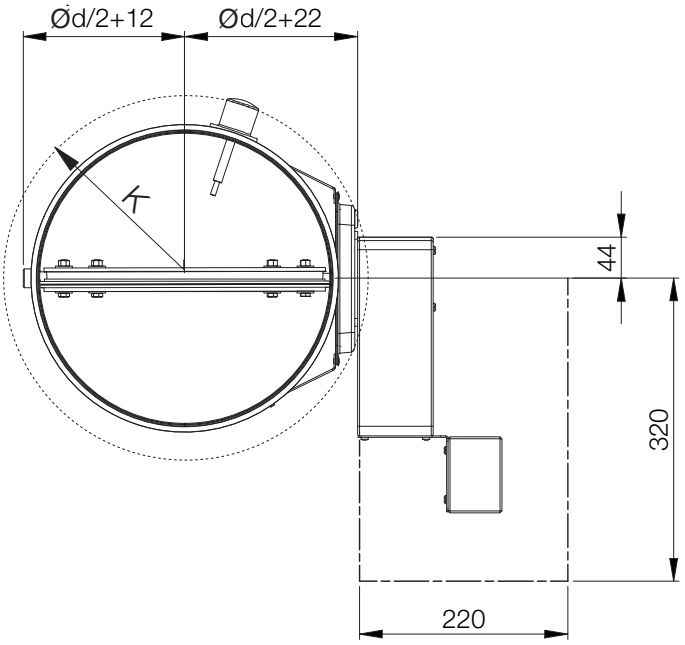
II 2G Ex h IIC T6 Gb

II 2D Ex h IIIC T80°C Db

Type Examination Certificate Number: FIDI 21 ATEX D059. 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 VIII of the directive ATEX 2014/34/EU.

Please consult latest Declaration of Conformity on our website





	FDC25-EX						FDC40-EX							
Ød [mm]	100	125	160	200	250	315	355	400	450	500	560	630	710	800
Weight [kg]	7,9	8,3	8,8	9,5	10,4	11,8	14,8	16,4	18,3	20,4	23,1	26,5	30,6	36,6
Actuator type	ATEX rated Schischek 24/230 V electric actuator+ExPro-TT+ExBox-BF													
K [mm]	120	128	140	155	176	204	221	242	265	289	317	351	389	433

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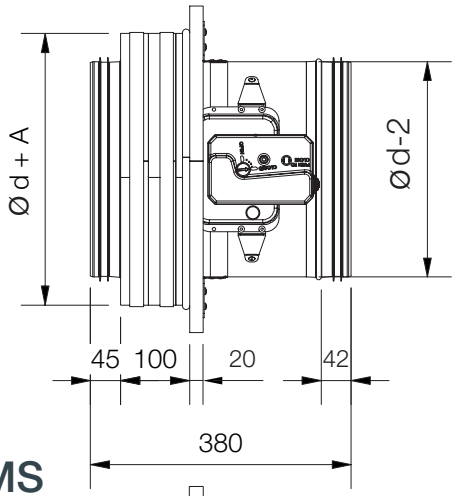
FDC25 - APP
Applique installation frame

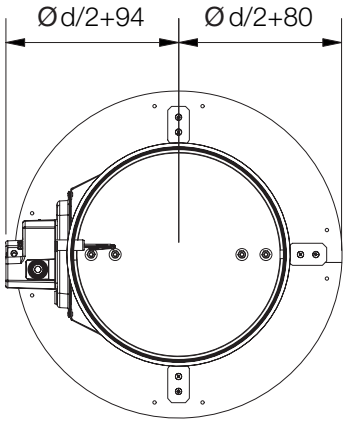


- Applique kit is an installation subframe for quick and easy installation in rigid and flexible walls
- Made out of calcium silicate boards
- Quick wall mounting with screws
- Factory assembled to the fire damper

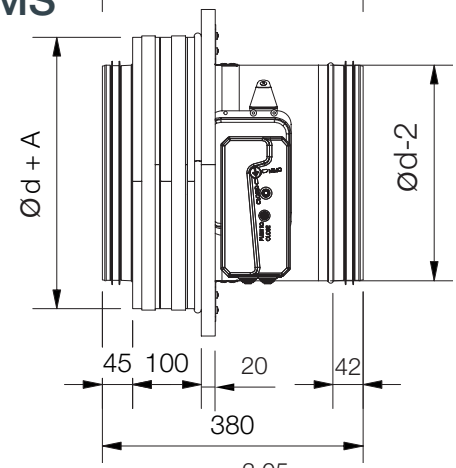
Damper diameter Ød[mm]	Applique frame diameter Ød + A[mm]
100	Ød +105 mm
125 - 160	Ød + 95 mm
200 - 315	Ød + 80 mm

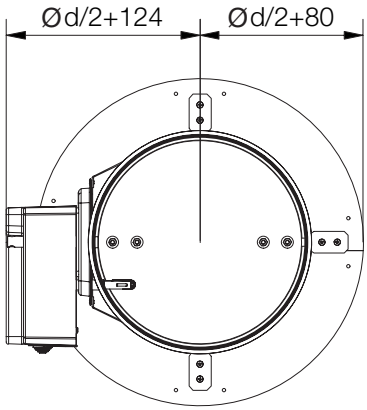
FDC25-APP-R



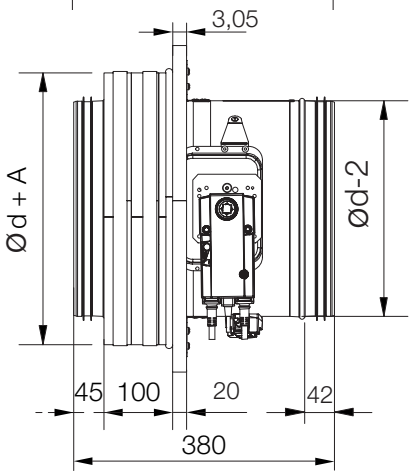


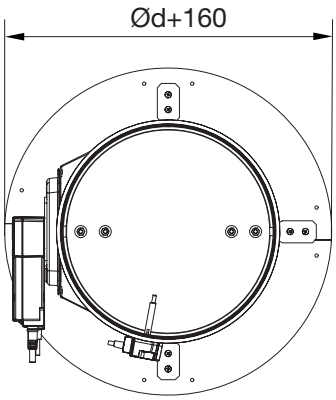
FDC25-APP-EMS





FDC25-APP-M





	FDC25-APP-R						FDC25-APP-EMS						FDC25-APP-M					
Ød [mm]	100	125	160	200	250	315	100	125	160	200	250	315	100	125	160	200	250	315
Weight [kg]	6,2	6,7	7,8	8,5	10,1	12,3	7,7	8,2	9,3	10	11,6	13,8	6,9	7,4	8,5	9,2	10,8	13

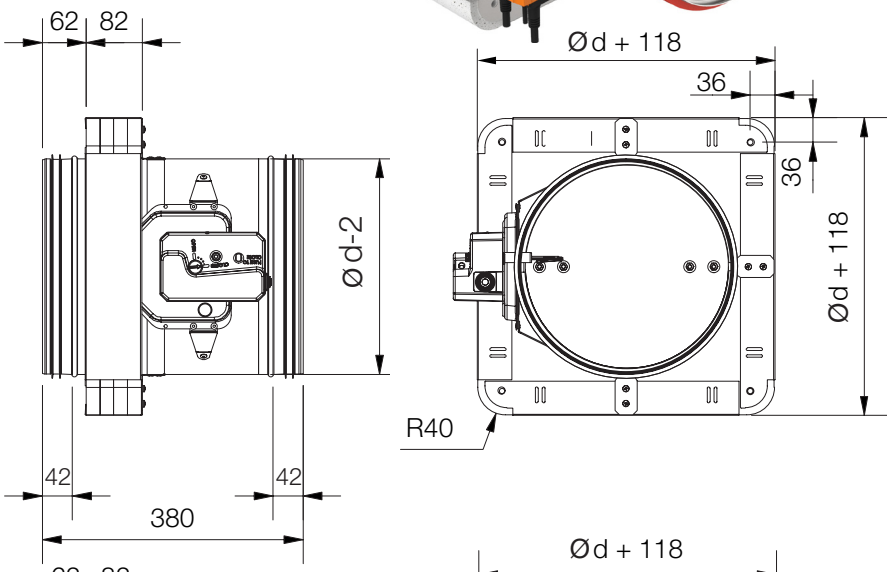
* The images shown are for illustration purposes only and may not be an exact representation of the product.

FDC25
MF1 installation frame

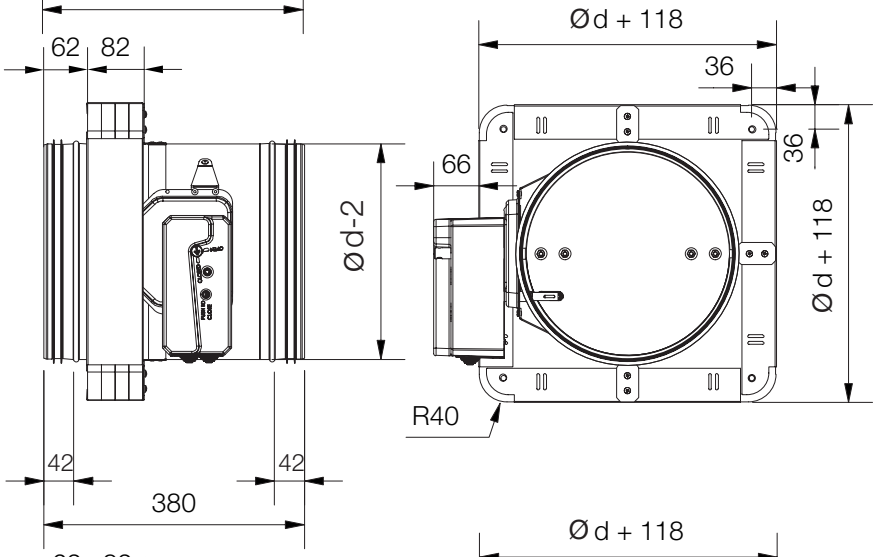


- MF1 is an installation frame for quick and easy installation in rigid and flexible walls
- Made out of calcium silicate boards
- Quick wall mounting with screws
- Factory assembled to the fire damper

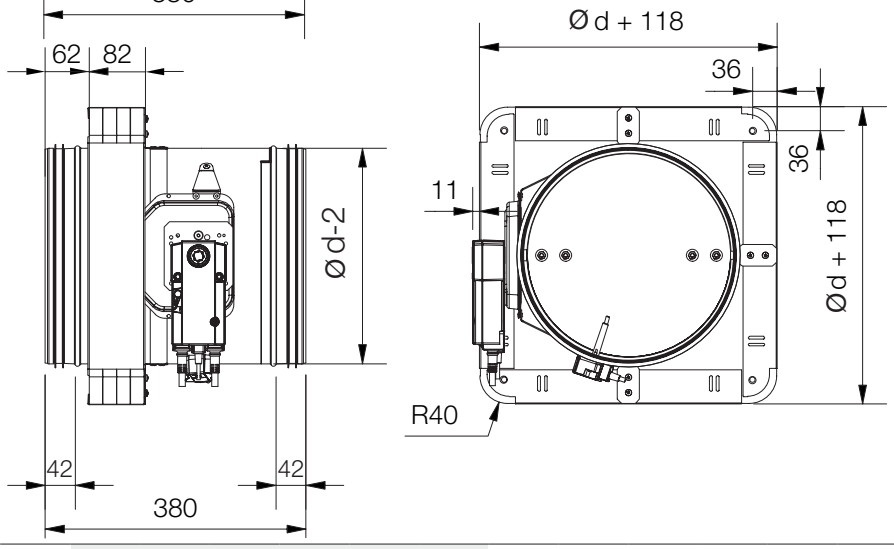
FDC25-MF1-R



FDC25-MF1-EMS



FDC25-MF1-M



	FDC25-MF1-R						FDC25-MF1-EMS						FDC25-MF1-M					
Ød [mm]	100	125	160	200	250	315	100	125	160	200	250	315	100	125	160	200	250	315
Weight [kg]	6,6	7,4	8,7	10,3	12,5	15,5	8,1	8,9	10,2	11,8	14	17	7,3	8,1	9,4	11	13,2	16,2

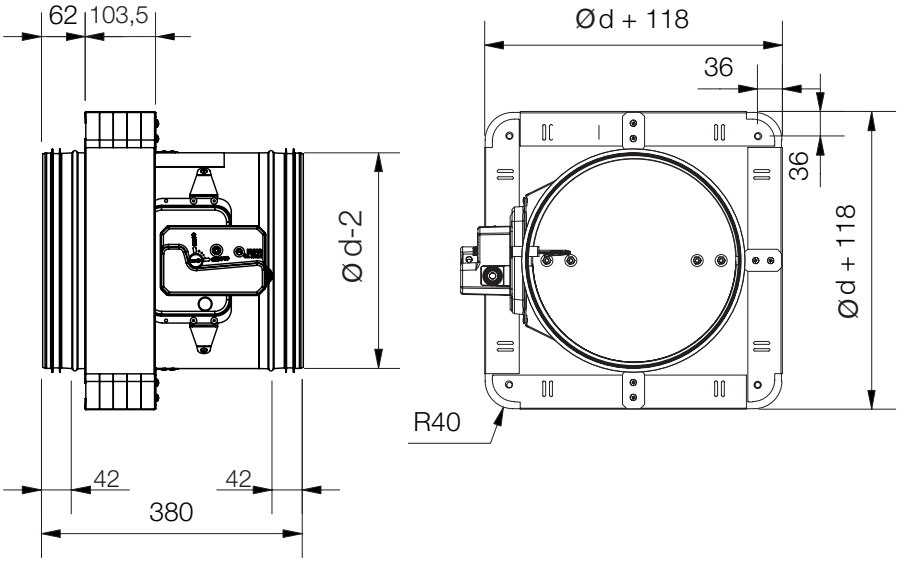
* The images shown are for illustration purposes only and may not be an exact representation of the product.

MF2 installation frame

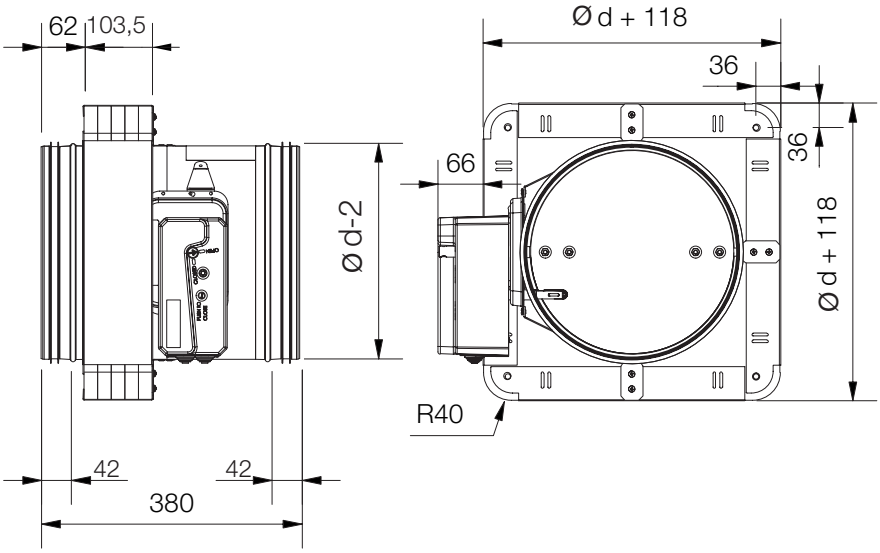
- MF2 is an installation frame for quick and easy installation in rigid and flexible walls
- Made out of calcium silicate boards
- Quick wall mounting with screws
- Factory assembled to the fire damper



FDC25-MF2-R

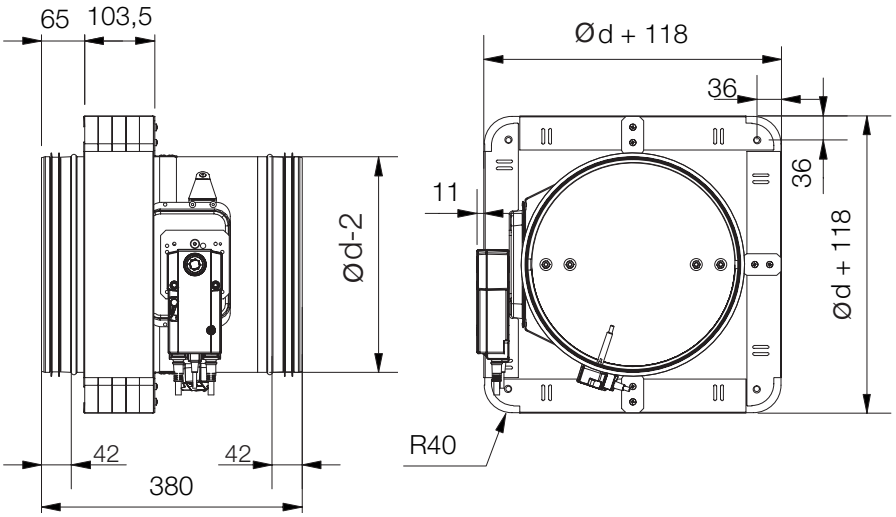


FDC25-MF2-EMS



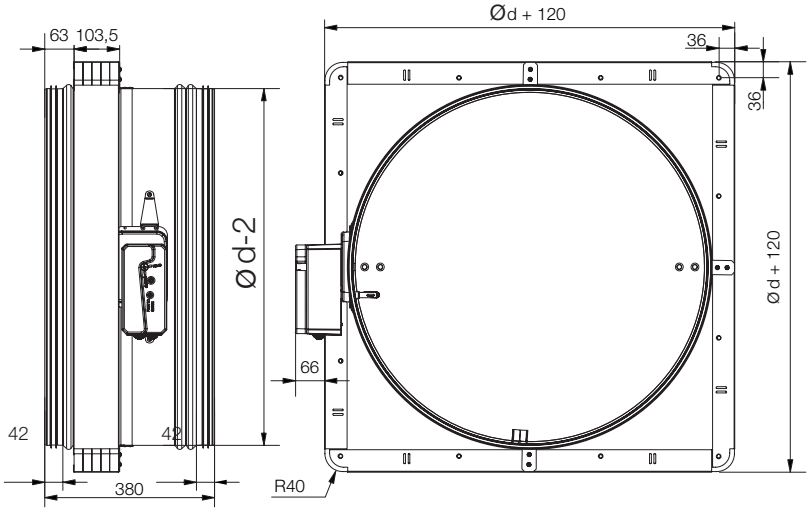
* The images shown are for illustration purposes only and may not be an exact representation of the product.

FDC25-MF2-M

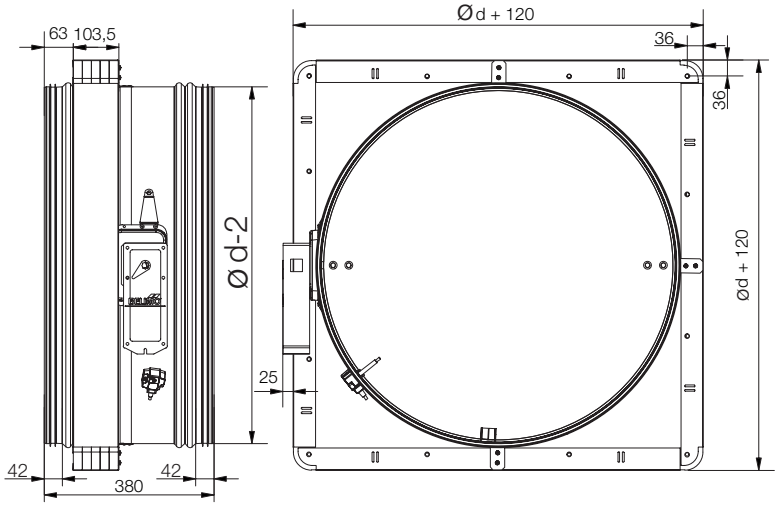


	FDC25-MF2-R						FDC25-MF2-EMS						FDC25-MF2-M					
Ød [mm]	100	125	160	200	250	315	100	125	160	200	250	315	100	125	160	200	250	315
Weight [kg]	7,1	8,1	9,6	11,4	13,8	17,2	8,6	9,6	11,1	12,9	15,3	18,7	7,8	8,8	10,3	12,1	14,5	17,9

FDC40-MF2-R / FDC40-MF2-EMS



FDC40 -MF2-M



	FDC40-MF2-R							FDC40-MF2-EMS							FDC40-MF2-M						
Ød [mm]	355	400	450	500	560	630	800	355	400	450	500	560	630	800	355	400	450	500	560	630	800
Weight [kg]	22,8	25,9	29,6	33,6	39,1	45	62,8	23,1	26,2	29,9	33,9	39,5	45,3	63,1	22,6	25,7	29,4	33,4	39	44,8	64,2

* The images shown are for illustration purposes only and may not be an exact representation of the product.

INSTALLATION

The FDC25/FDC40 fire damper has predominantly been tested in standardised supporting constructions (both in a rigid wall and in a flexible wall) in accordance with EN 1363-1. As such, the results obtained for standard and non-standard supporting constructions are valid for all similar supporting constructions which have a thickness, density and fire resistance equal or greater than tested.

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. It is essential to connect the damper to the adjacent ductwork (both sides) with a breakaway joint. 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 in case the installation of the damper is made in accordance with the technical manual
- Operating temperature: 50°C max
- For indoor use only

The recommended / maximum cilindrical installation opening is in the table below. The smallest installation opening is where there is enough space to install the seal! K=GS

Recommended opening dimensions:

Damper size - Ød [mm]	Gap size - GS (Recommended)	Opening size - (Recommended) Ød+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	395 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

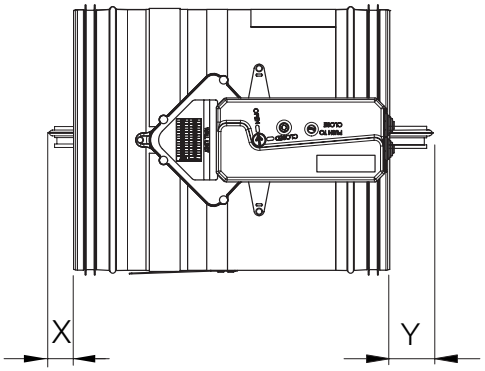
Installation at other angles is possible if mentioned on the specific install page which follows.

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 Applique/ MF1/ MF2 kit installations).

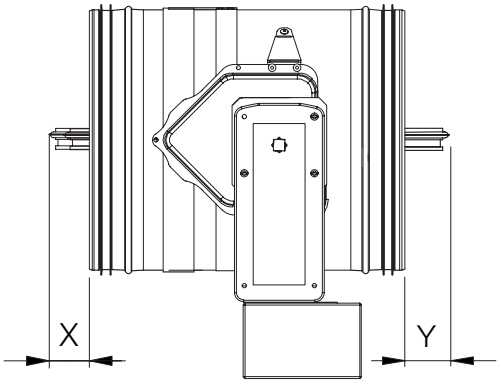
Casing extension pieces

Length of damper blade outside of casing (X dimension on front side): **X=(Ød/2)-110 [mm]**

*If the damper is larger than Ø 560, use formula (Y dimension on back side): **Y=(Ød/2)-270 [mm]**



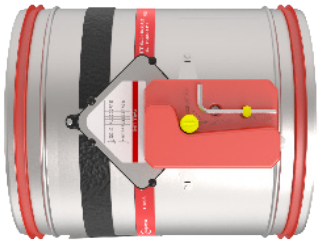
Casing type for manual and electric actuator



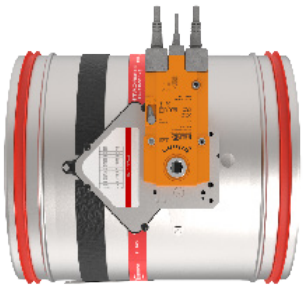
Casing type for Ex actuator and installation frames

Standard actuator positions

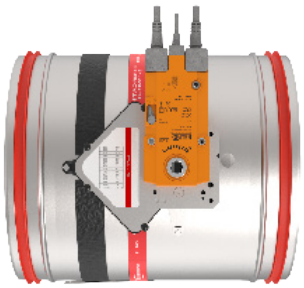
FDC-R25 MANUAL ACTUATOR



FDC25 ELECTRIC ACTUATOR



FDC40 ELECTRIC ACTUATOR



FDC-R40/EMS MANUAL ACTUATOR



FDC-R40/EMS ACTUATOR (Ød < 316)



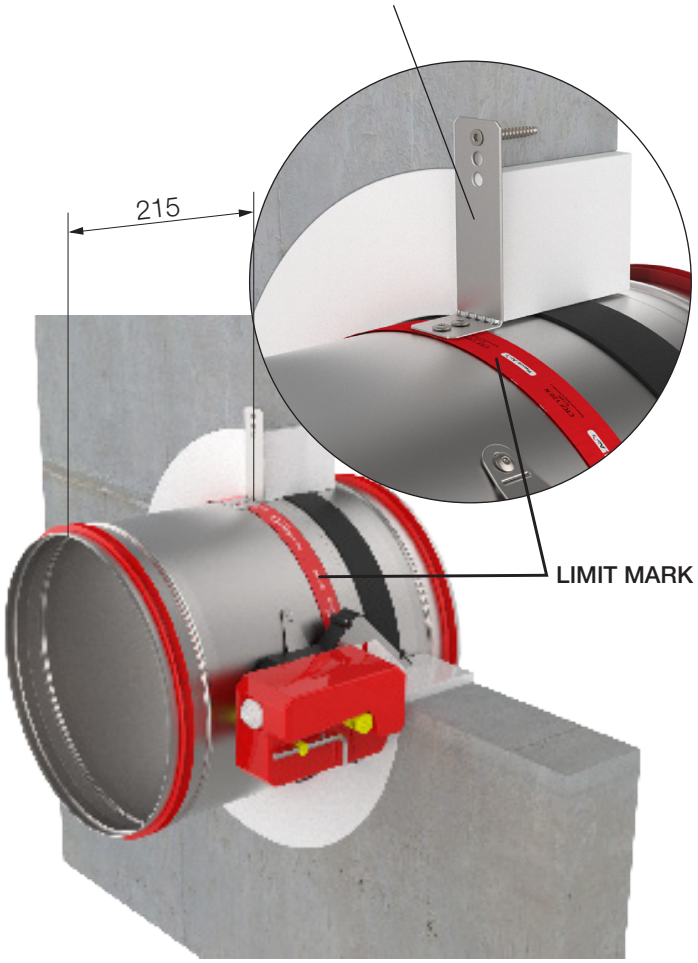
FDC EX ACTUATOR

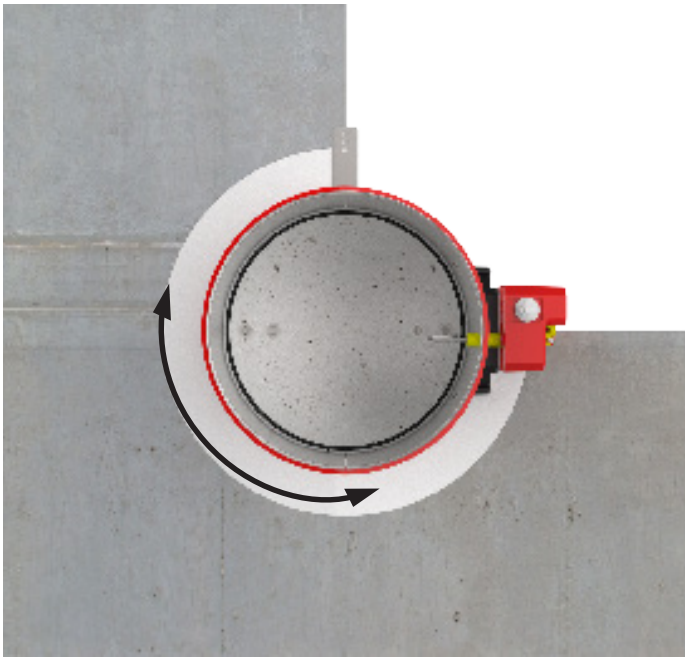


Assembly aid / Installation depth

To help you find the suspension plane, a bendable fixing bracket is provided on the damper body **(the use of bendable fixing brackets is not required to meet the classification but they need to be bent up or broken in case they are not used. They must not stay in flat position.)** and the red tape is placed on the casing to mark the location of the wall/ ceiling limit **(distance from wall/ceiling limit to the end of fire damper is 215mm)**. This does not apply for Applique/ MF1/MF2 kit installations. **Check the operation of the fire damper before commencing the installation!**

ASSEMBLY AID WITH FIXING BRACKET





Installation possibilities

Independent Support Guidance

The ThermShield fire damper has been tested in accordance with BS EN 1366-2. As part of the BS EN 1366-2 test procedure, a plenum box is hard fixed to the damper casing and connected to a duct and fan assembly to measure smoke leakage for "S" classification purposes.

No additional or independent support mechanisms were fitted during laboratory testing. Consequently, there is no mandatory certification requirement for additional supports in order to maintain the classification of the damper.

Site Installation Considerations

A marked difference often exists between laboratory test configurations and the practical realities of site installation. While additional support is not a strict certification requirement, unless otherwise stated in specific ThermShield product literature, independent support mechanisms are strongly recommended, in line with standard UK industry guidance.

UK guidance:

- Independent support of the damper, separate from the wall construction
- Breakaway fixings or flexible joints between the damper and adjoining ductwork

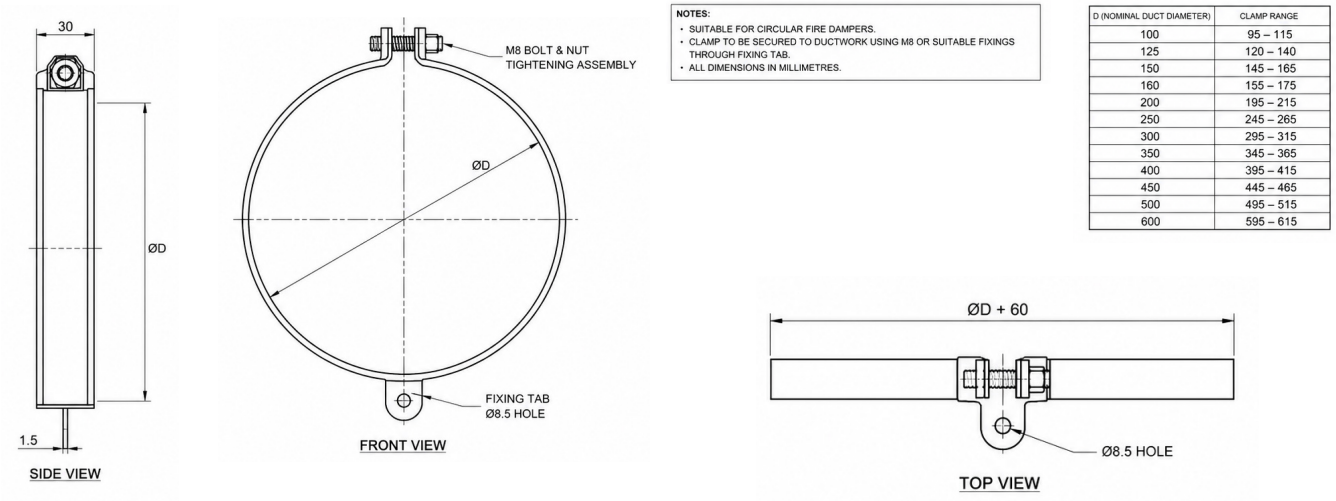
Independent support significantly reduces the risk of lateral movement of the damper casing and transfers the weight of the assembly away from the wall, a requirement increasingly specified on site.

Support Methodology

The specific method of support is intentionally non-prescriptive, as it did not form part of the original BS EN 1366-2 test and its purpose is to enhance, not replicate, the support provided to the tested assembly.

Any support mechanism used must be fully capable of bearing the weight of the damper. Recommended method is via a Unistrut sling installed to the bottom of the damper and hung via drop rods.

IMAGE OF DUCT CLAMP GUIDANCE BELOW



D (NOMINAL DUCT DIAMETER)	CLAMP RANGE
100	95 – 115
125	120 – 140
150	145 – 165
160	155 – 175
200	195 – 215
250	245 – 265
300	295 – 315
350	345 – 365
400	395 – 415
450	445 – 465
500	495 – 515
600	595 – 615

Extension Pieces for Thicker Wall Installations

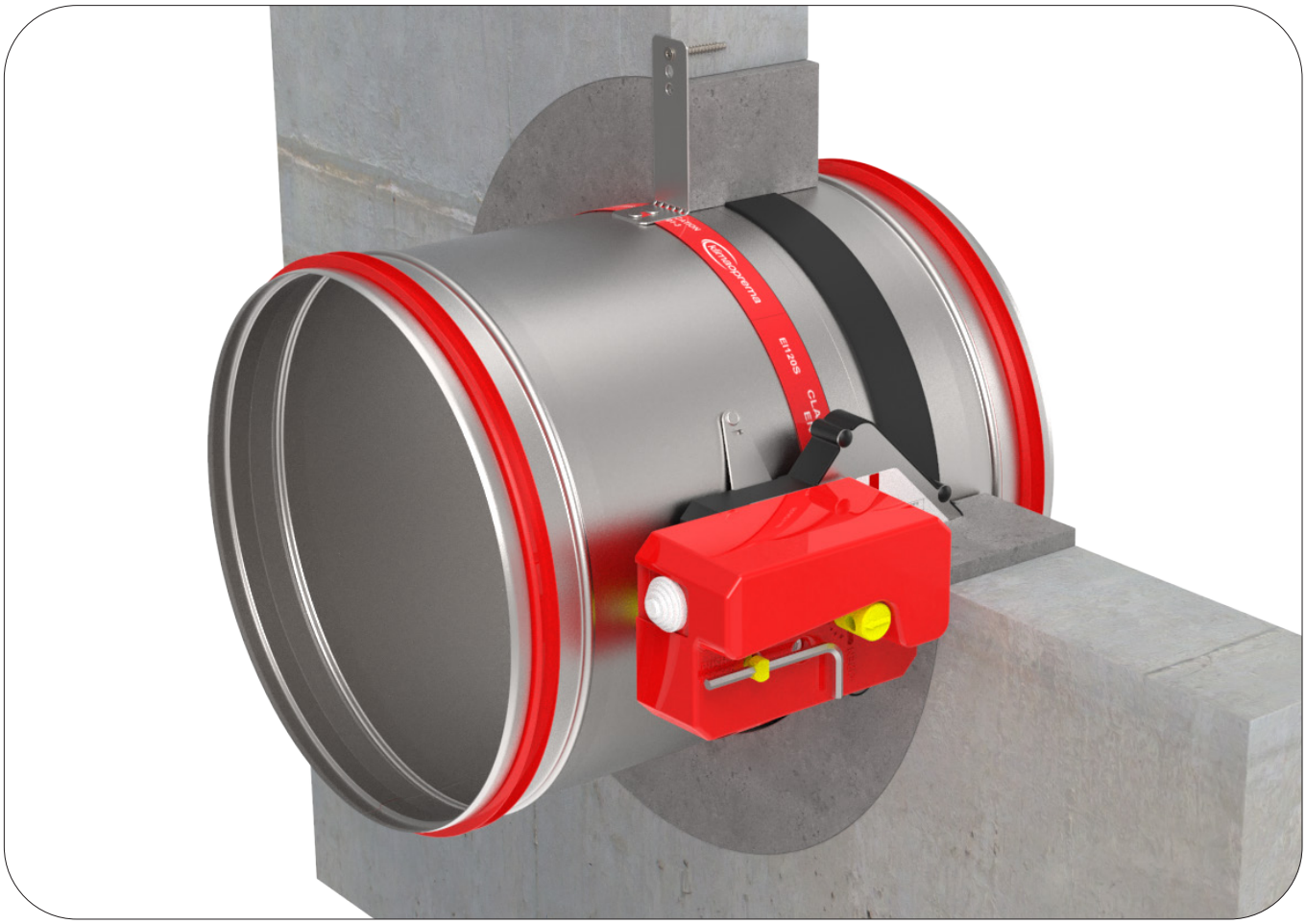
Where a ThermShield damper is installed within a thicker wall construction, we recommend that the breakaway joint be relocated clear of the wall line. This is achieved by fitting a hard-fixed stub duct to the damper, with the breakaway fixing then positioned outside the wall.

This arrangement ensures the breakaway joint remains fully accessible and functional beyond the wall thickness, rather than being embedded within the construction.

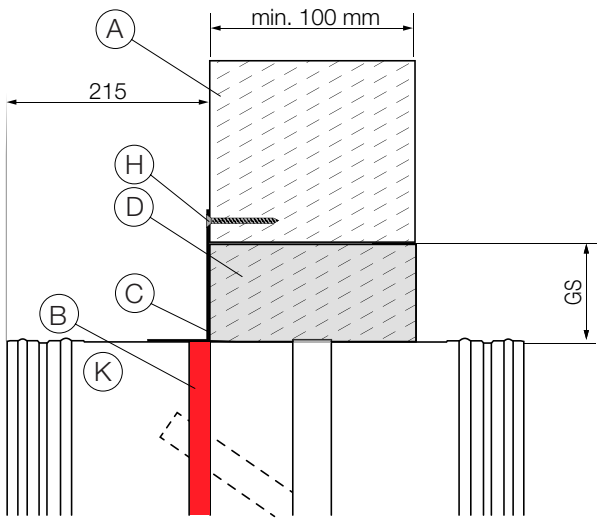
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid wall installation (mortar sealing)

DOP WALLS MATERIALS



The wall is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm. Installation material is gypsum plaster or mortar.



Rigid wall installation

A Rigid wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
H Masonry screw 6x50mm (optional)
K Fire damper casing

Classification

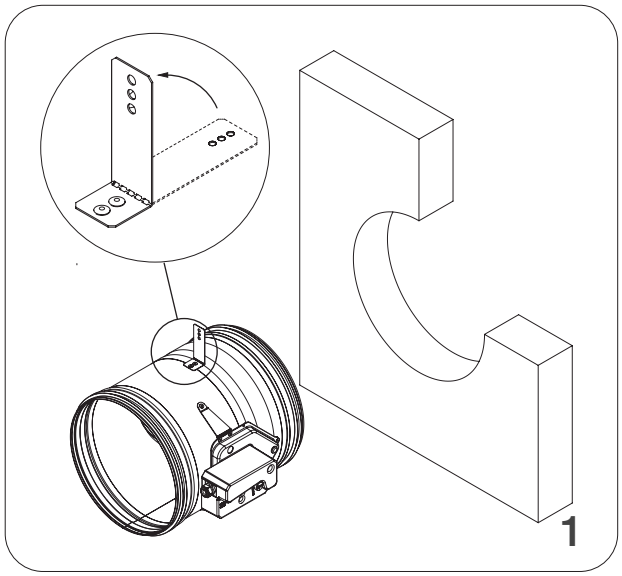
FDC25: EI 120 (ve i↔o)S
FDC40: EI 120 (ve i↔o)S

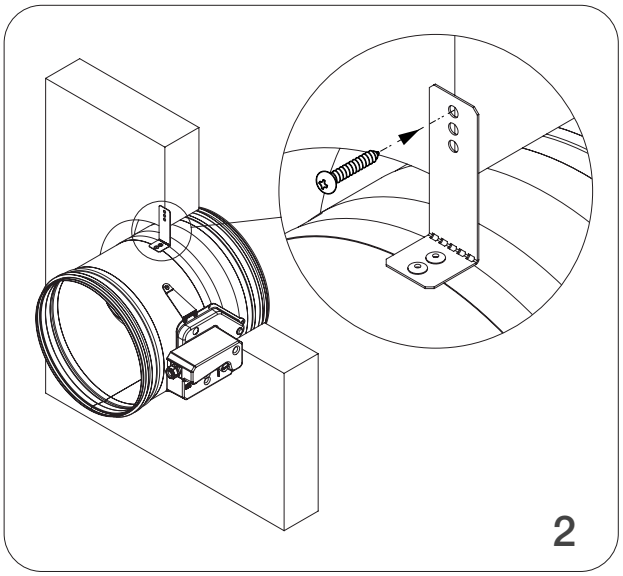
* The images shown are for illustration purposes only and may not be an exact representation of the product.

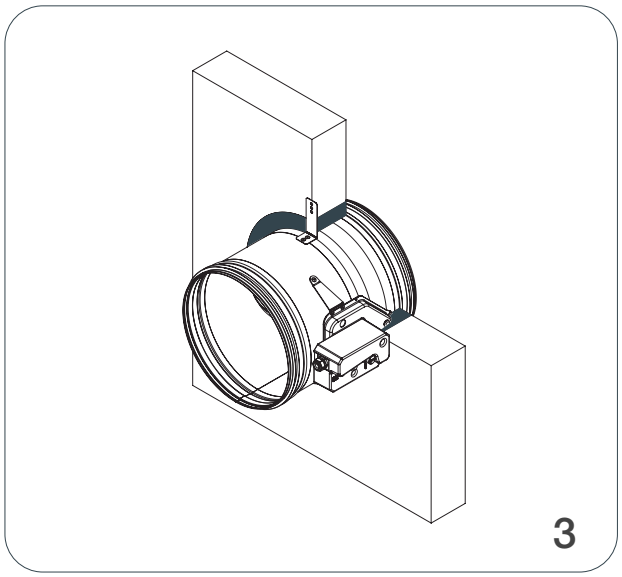
Possible damper orientations



0-360°







Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

Damper blade must be closed during the installation!

1. Create an opening in the wall. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the wall using screws. Bracket screw hole is 6 mm in diameter.

3. Fill the space between the damper and the wall with gypsum plaster or mortar.

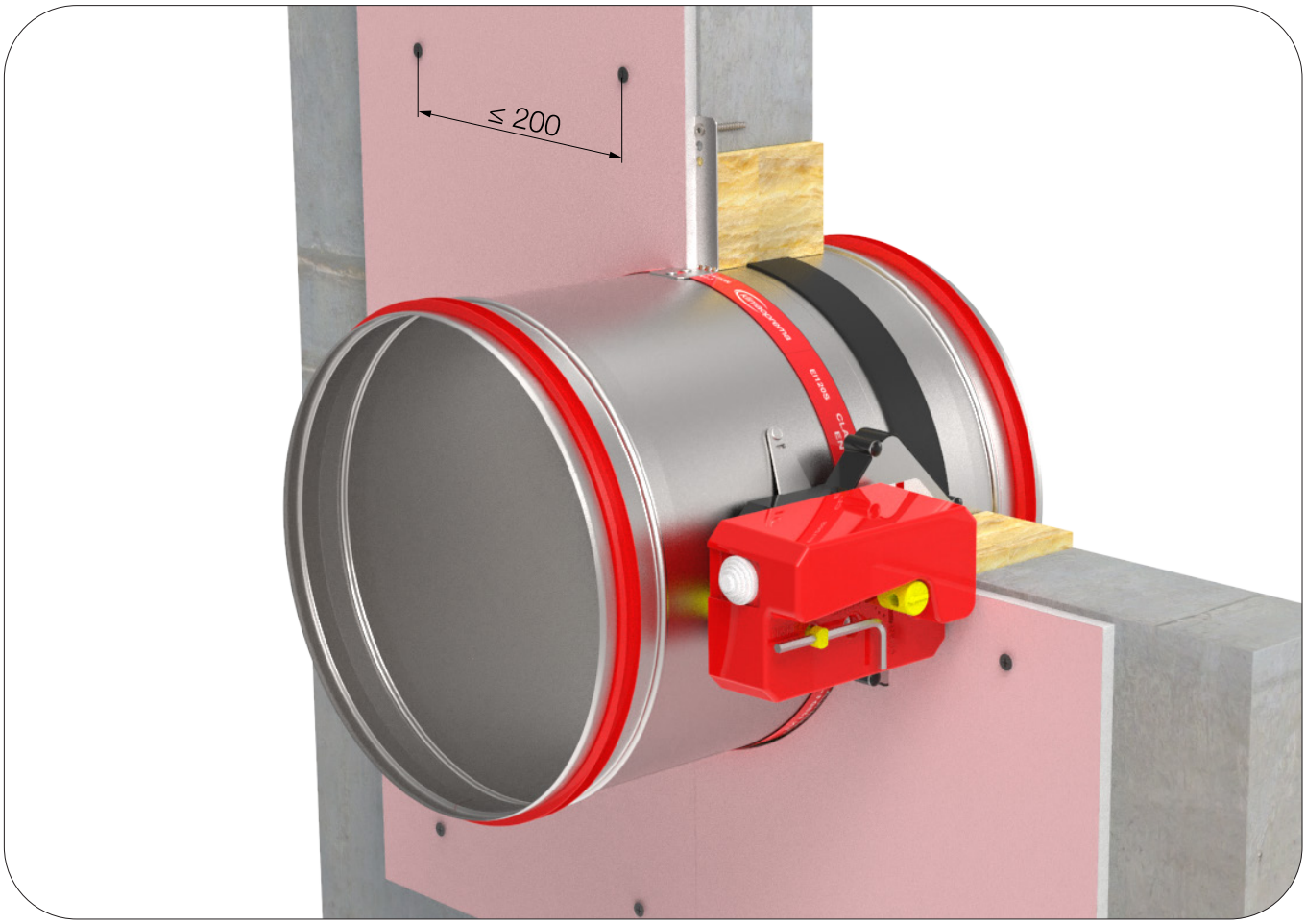
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

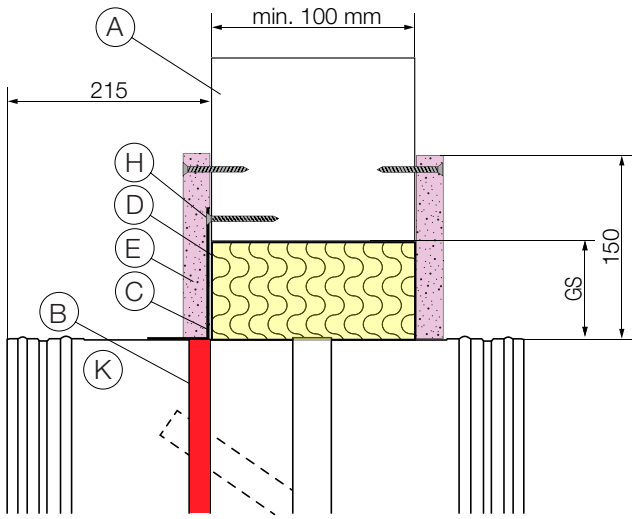
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid wall installation (mineral wool sealing)

DOP WALLS MATERIALS



The wall is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.
Installation material is mineral wool (minimum density of 100 kg/m^3) covered with plasterboard cover boards.



Rigid wall installation

A Rigid wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E GKF cover boards with masonry screw 6x50mm
H Masonry screw 6x50mm (optional)
K Fire damper casing

Classification

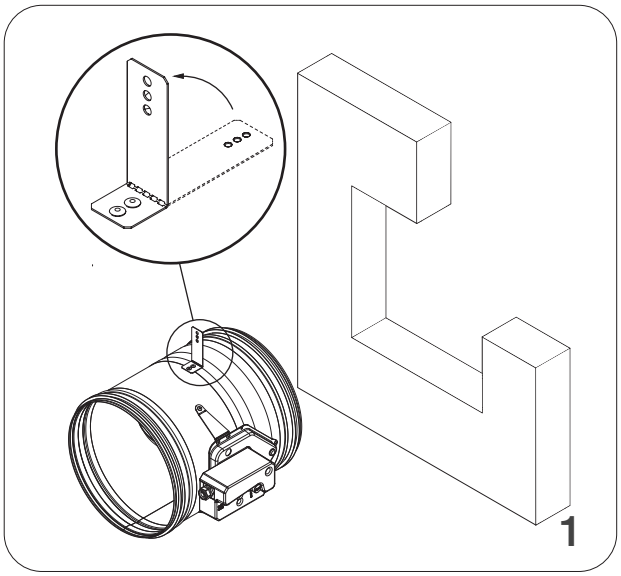
FDC25: EI 90 (ve i↔o)S
FDC40: EI 90 (ve i↔o)S

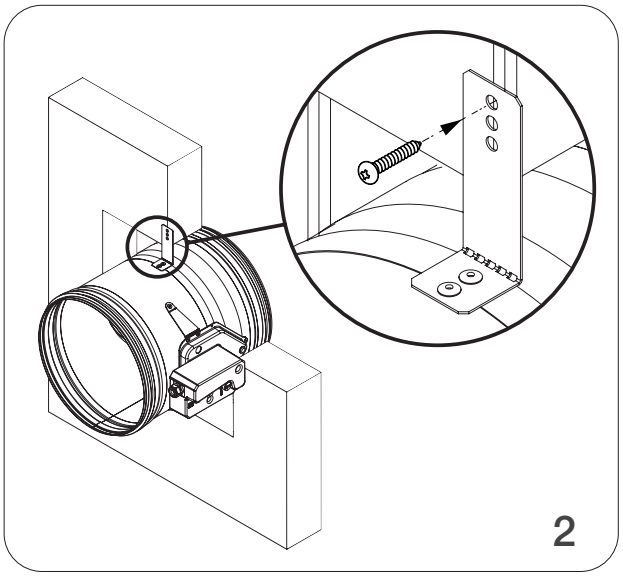
* The images shown are for illustration purposes only and may not be an exact representation of the product.

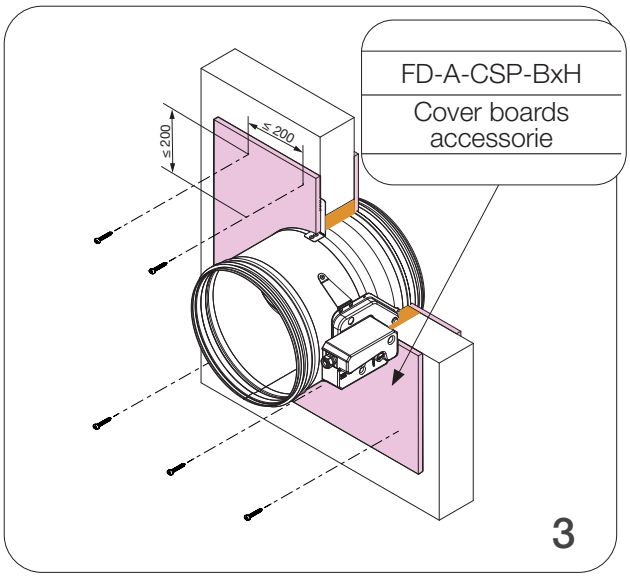
Possible damper orientations



0-90˚-
180˚-270˚







Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

Damper blade must be closed during the installation!

1. Create an opening in the wall. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the wall using screws. Bracket screw hole is 6mm in diameter.

3. Fill the space between the damper and the wall with mineral wool. Cover the mineral wool with GKF gypsum boards (12,5 mm thick), fix them with screws.

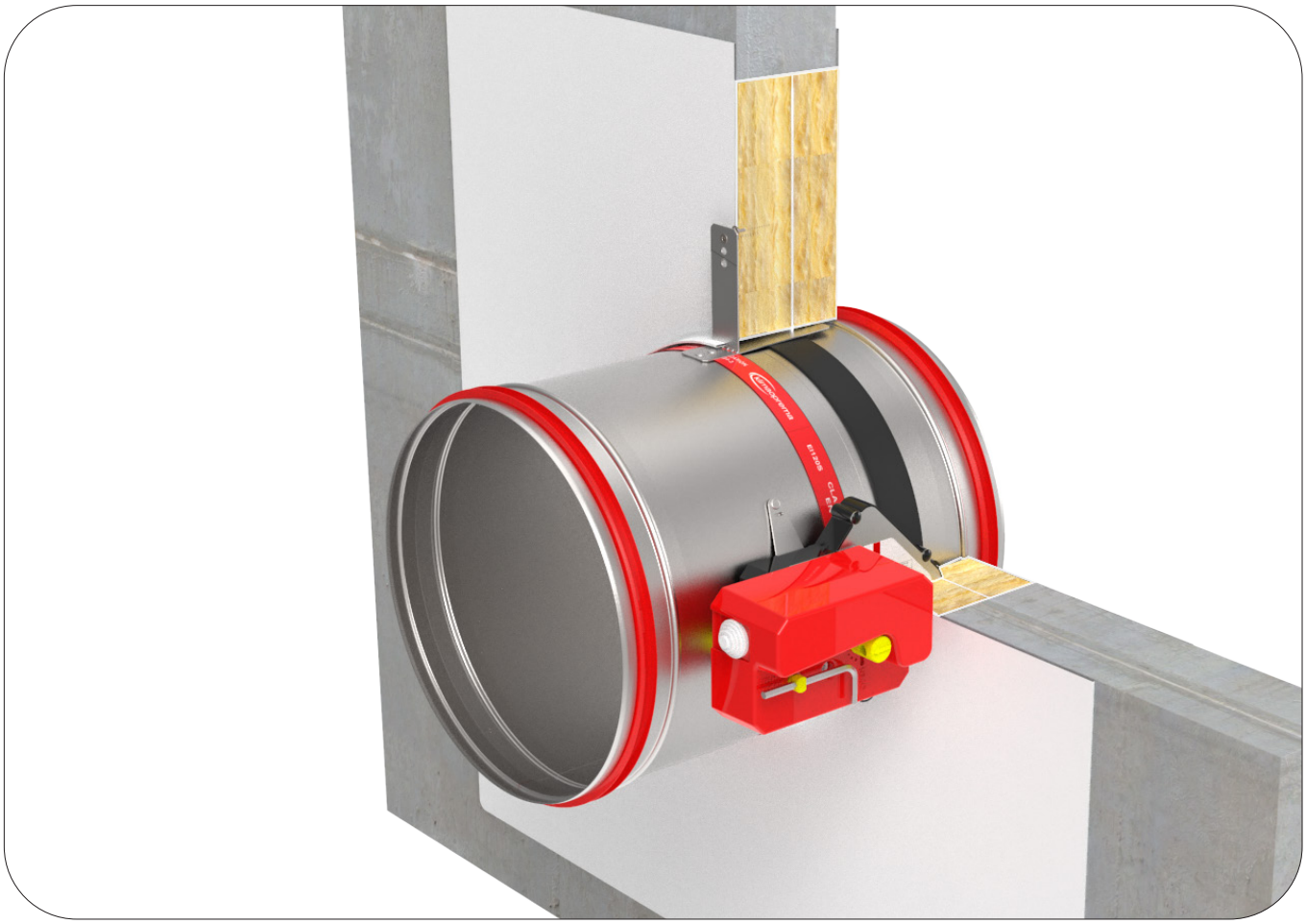
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

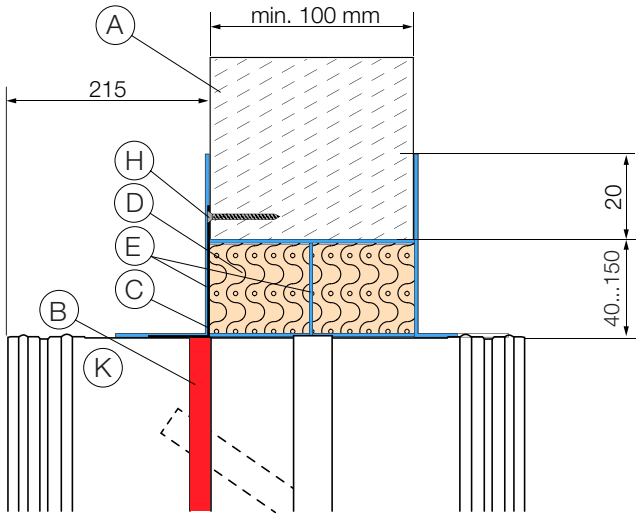
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid wall installation (Fire Batt/Weichschott)

DOP WALLS MATERIALS



The wall is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.
Installation material: Mineral wool (minimum density of 140 kg/m^3), fire protection coating.



Rigid wall installation

A Rigid wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
H Masonry screw 6x50mm (optional)
K Fire damper casing

Classification

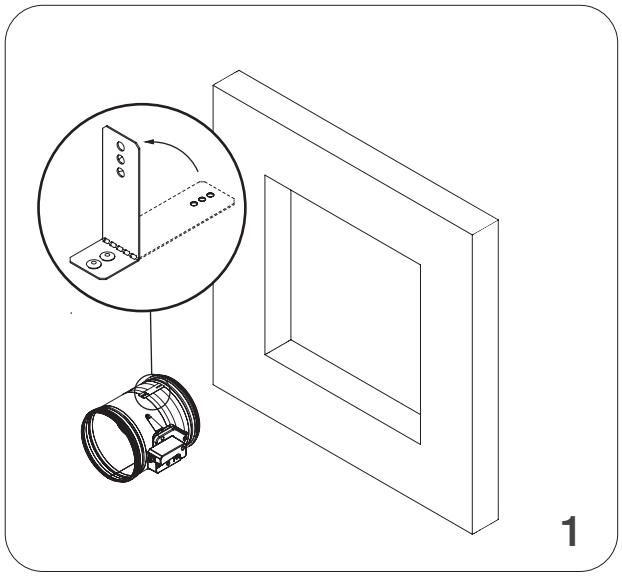
FDC25: EI 90 (ve i↔o)S
FDC40: EI 90 (ve i↔o)S

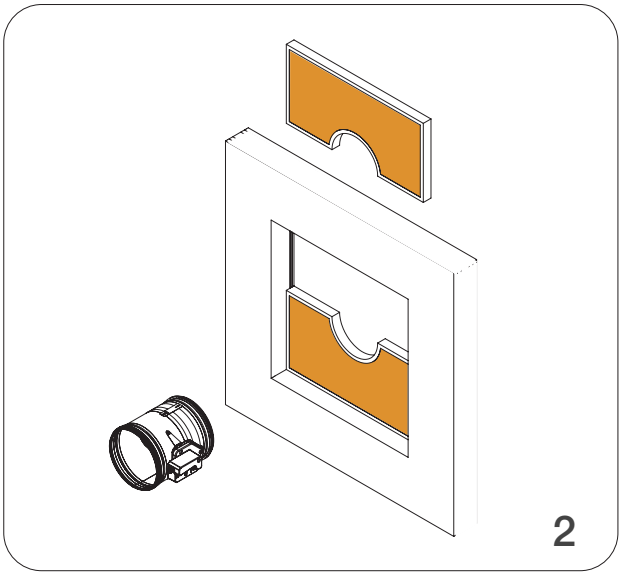
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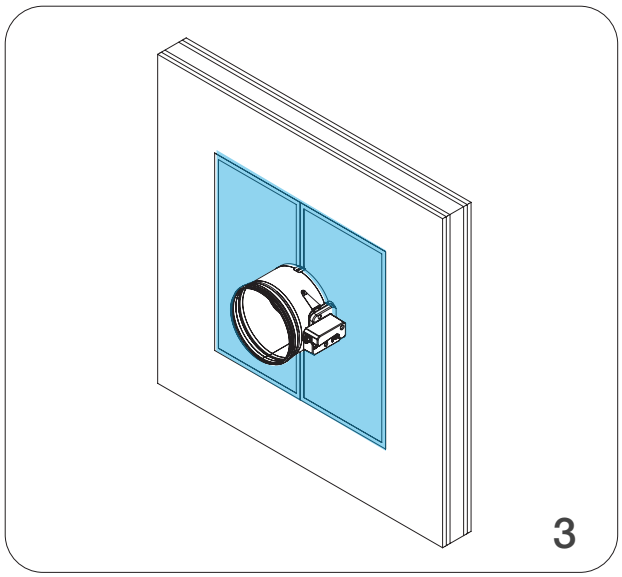
Possible damper orientations



0-90˚-
180˚-270˚







Damper blade must be closed during the installation!

1. Create an opening in the wall (Ød + 80...300 mm). Bend the mounting bracket by 90°. Insert the damper into the opening up to the wall boundary mark on the damper.

2. Close the gap between the housing and the wall with the first layer of mineral wool (50mm thick, coated on the inside). Seal the joints between the pieces of mineral wool with intumescent, fire-resistant sealant.

3. Close the gap between the housing and the wall with the second layer of mineral wool (50mm thick, coated on the inside). The joints between the mineral wool pieces must be sealed with intumescent, fire-resistant sealant.
The outside of the mineral wool and the damper housing must be coated with a 2 mm thick fire protection coating. The damper housing should be coated up to the profile projections.

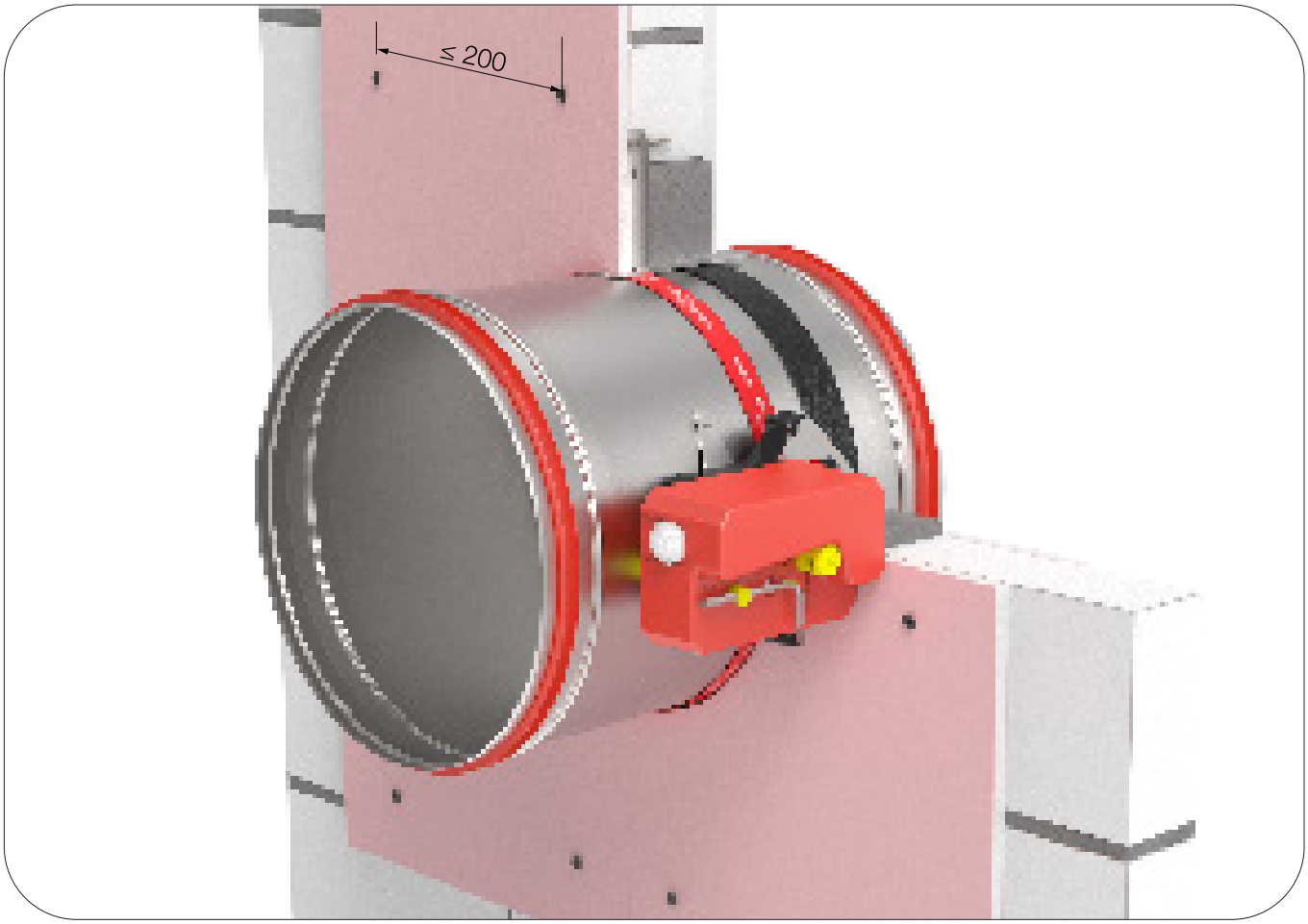
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

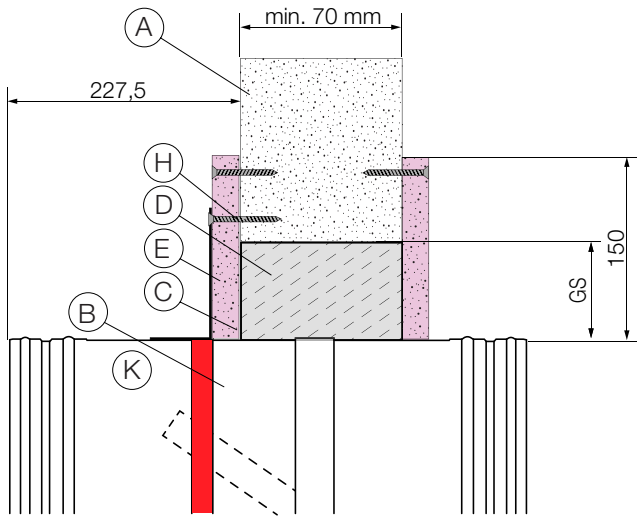
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Gypsum blocks wall installation (mortar sealing)

DOP WALLS MATERIALS



The wall is composed of gypsum blocks (minimum density of 995 kg/m^3), with minimum thickness of 70mm. Installation material is gypsum plaster or mortar covered with plasterboard cover boards.



Gypsum blocks wall installation

A Gypsum blocks wall
B Limit mark
C Fixing bracket with screw hole Ød 6 mm
D Sealing material
E GKF cover boards with drywall screws
H Masonry screw 6x50 mm (optional)
K Fire damper casing

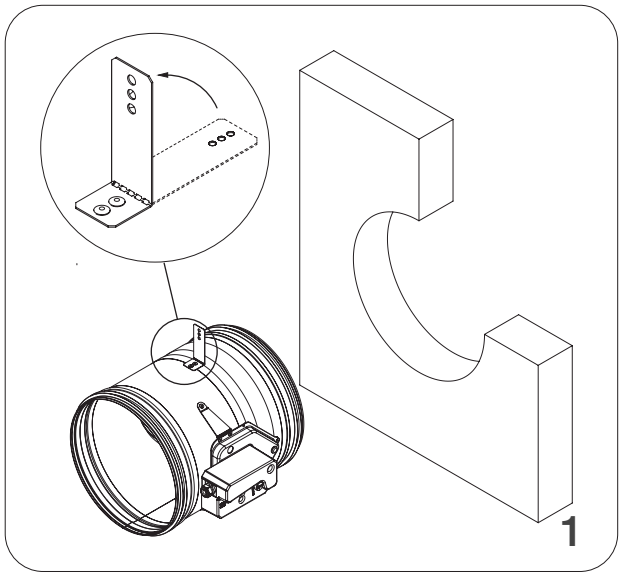
Classification

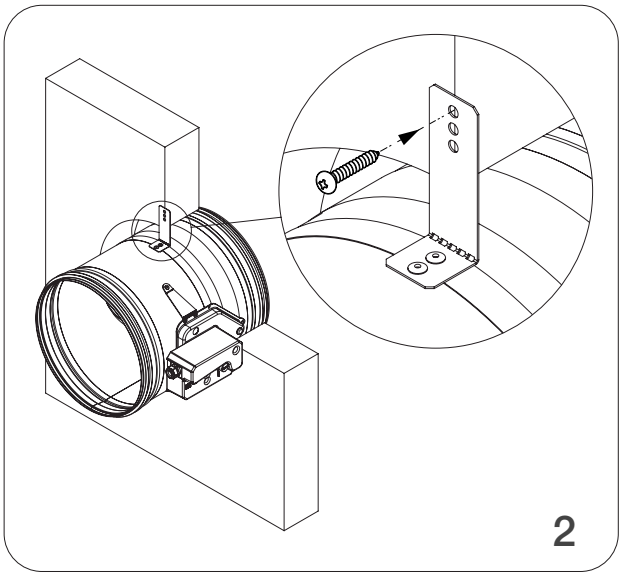
FDC25: EI 120 (ve i↔o)S
FDC40: EI 120 (ve i↔o)S

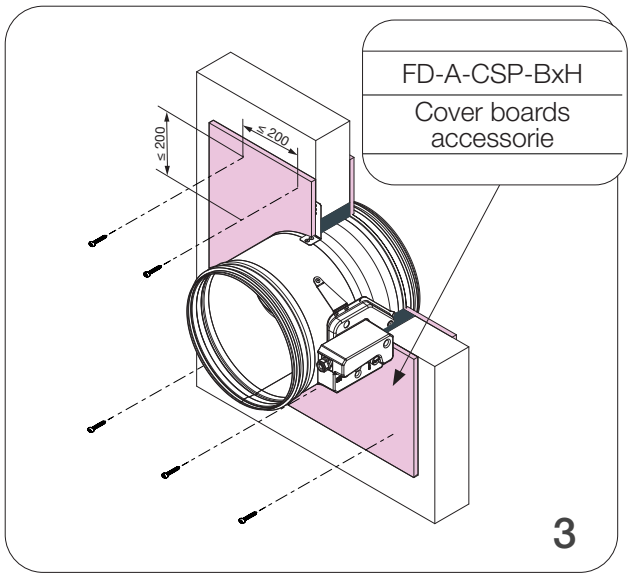
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations









Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

Damper blade must be closed during the installation!

1. Create an opening in the wall. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the wall using screws (bracket screw hole is 6mm in diameter).

3. Fill the space between the damper and the wall with mortar. Cover the mortar with GKF gypsum boards (12,5mm thick), fix them with masonry screw Ø 6 x 50mm.

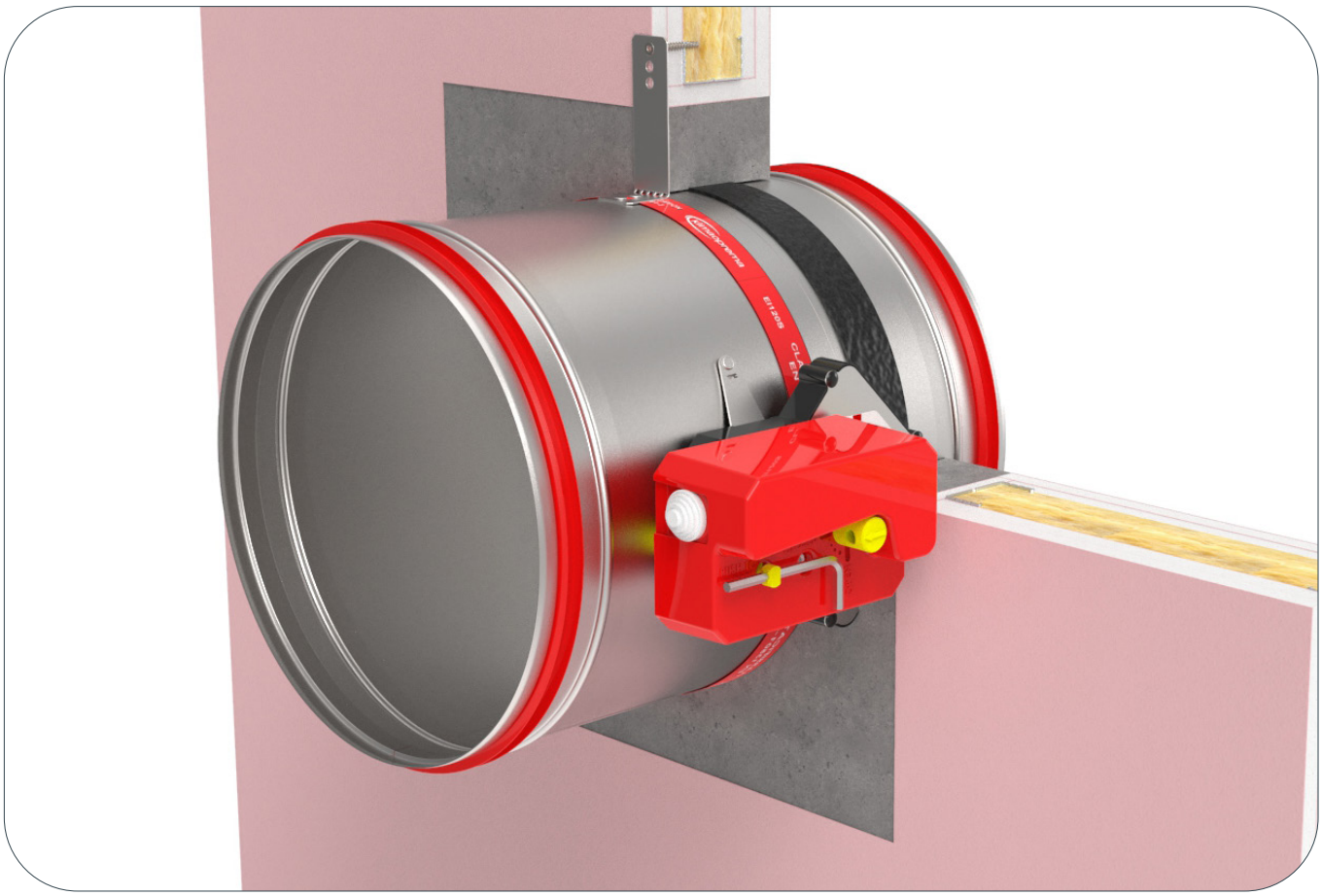
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexible wall installation (mortar sealing without cover boards)

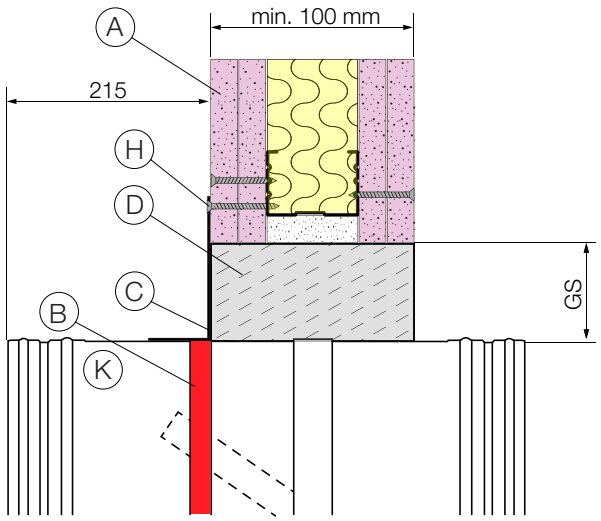
DOP WALLS MATERIALS



The wall is composed of 2x2 plasterboard boards, 12,5 mm thick, installed on a steel frame construction. Installation material: gypsum plaster or mortar . The minimum thickness of the wall is 100mm.

EI120S FDC40 / EI90S FDC25
The wall is made out of type F (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 115 kg/m^3 can be used).

EI 60 (ve i↔o)S - FDC 25 / FDC40
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/m^3 can be used).



Flexible wall installation

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6 mm
D Sealing material
H Drywall screw 3,5 x 35/45 mm (optional)
K Fire damper casing

Classification

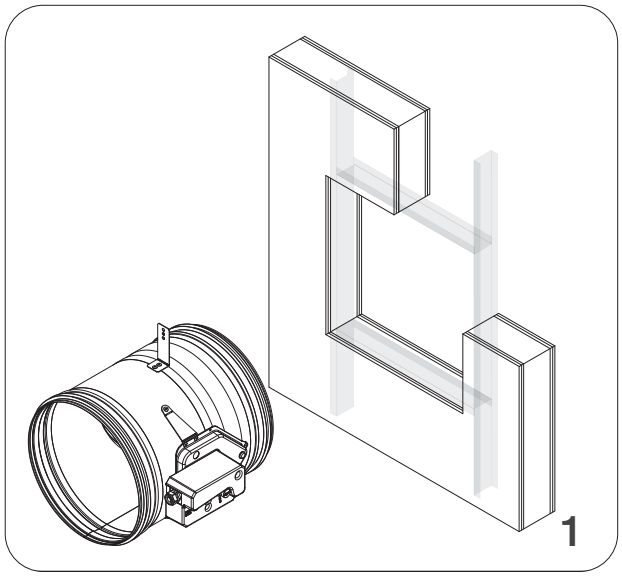
(type F wall) FDC25: EI 90 (ve i↔o)S
(type F wall) FDC40: EI 120 (ve i↔o)S
(type A wall) FDC25: EI 60 (ve i↔o)S
(type A wall) FDC40: EI 60 (ve i↔o)S

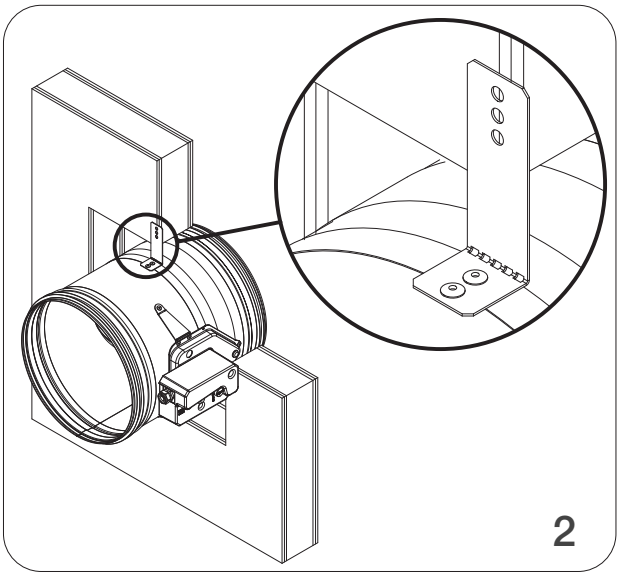
* The images shown are for illustration purposes only and may not be an exact representation of the product.

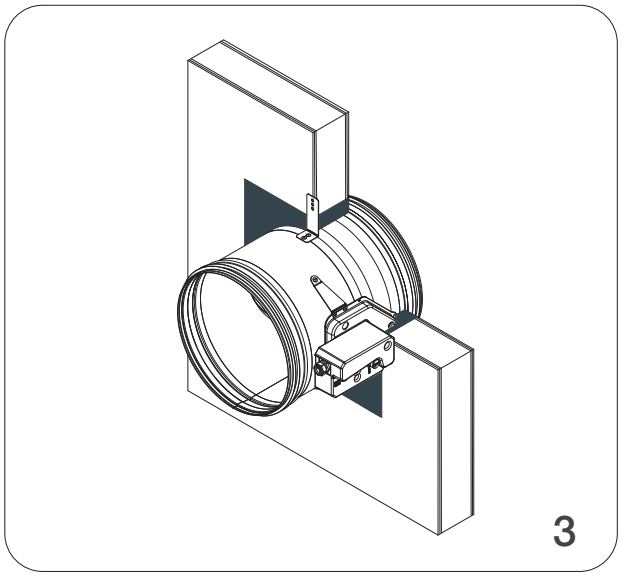
Possible damper orientations



0-90˚-
180˚-270˚







Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

Damper blade must be closed during the installation!

1. Create an opening in the wall and build the subframe according to the drawing. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the wall using screws (bracket screw hole is 6mm in diameter).

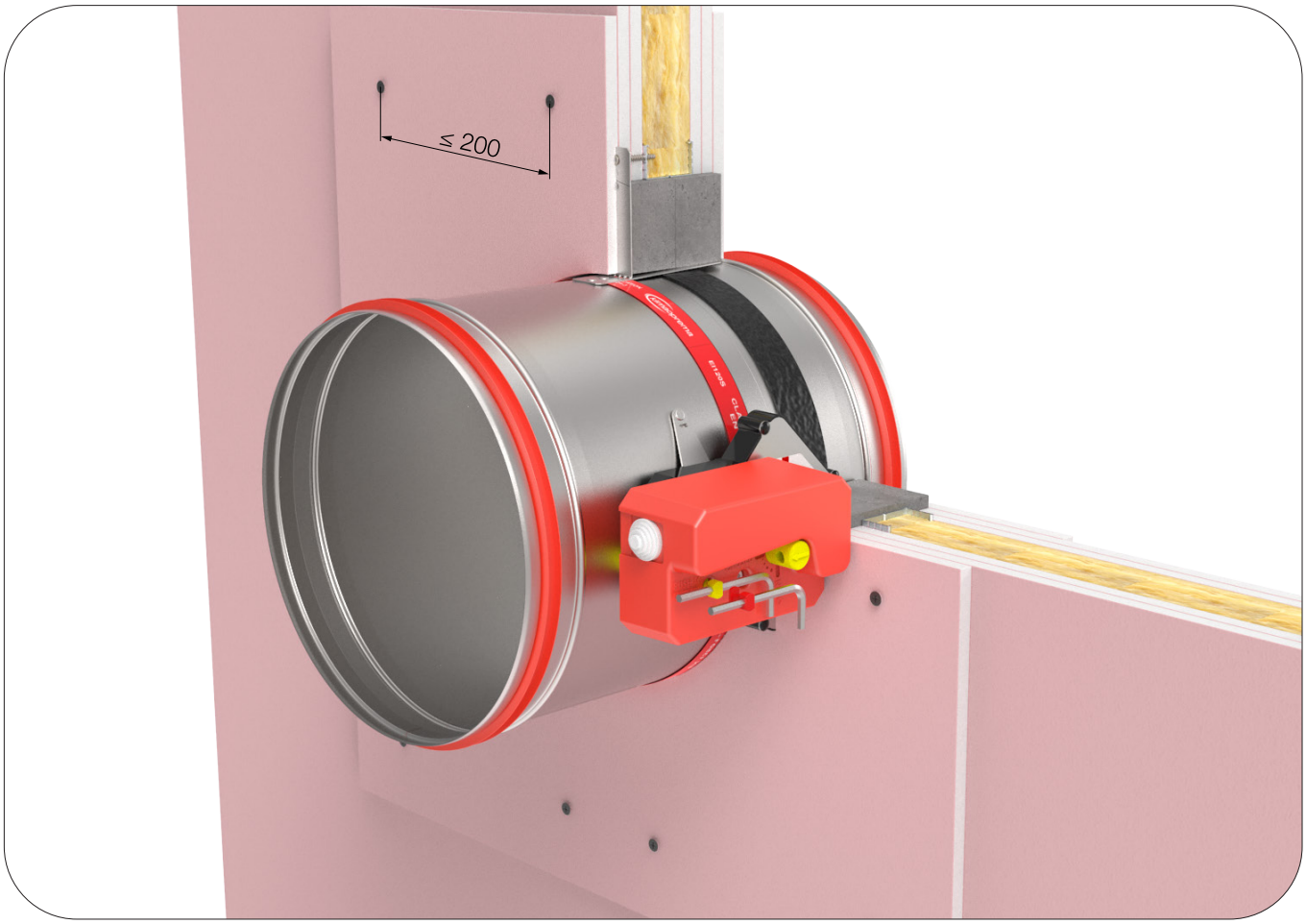
3. Fill the space between the damper and the wall with mortar.

*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them
Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexible wall installation (mortar sealing)

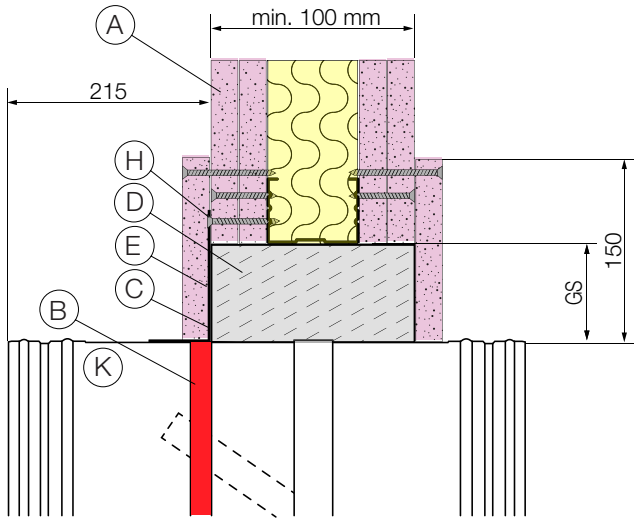
DOP WALLS MATERIALS



The wall is composed of 2x2 plasterboard boards, 12,5 mm thick, installed on a steel frame construction. Installation material: gypsum plaster or mortar covered with type F(**EI 120**) or type A(**EI 60**) cover boards. The minimum thickness of the wall is 100mm.

EI 120 (ve i↔o)S
The wall is made out of type F (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 115 kg/m^3 can be used).

EI 60 (ve i↔o)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/m^3 can be used).



Flexible wall installation

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6 mm
D Sealing material
E GKF cover boards with drywall screws 35 and 45mm
H Drywall screw 3,5 x 35/45 mm (optional)
K Fire damper casing

Classification

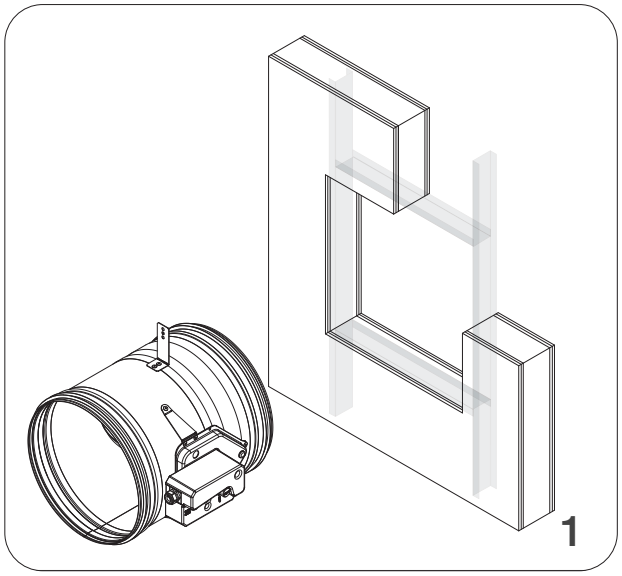
(type F wall) FDC25: EI 120 (ve i↔o)S
(type F wall) FDC40: EI 120 (ve i↔o)S
(type A wall) FDC25: EI 60 (ve i↔o)S
(type A wall) FDC40: EI 60 (ve i↔o)S

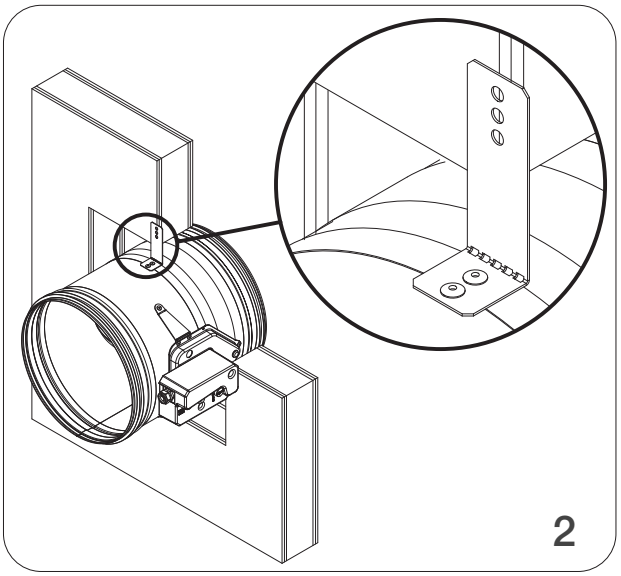
* The images shown are for illustration purposes only and may not be an exact representation of the product.

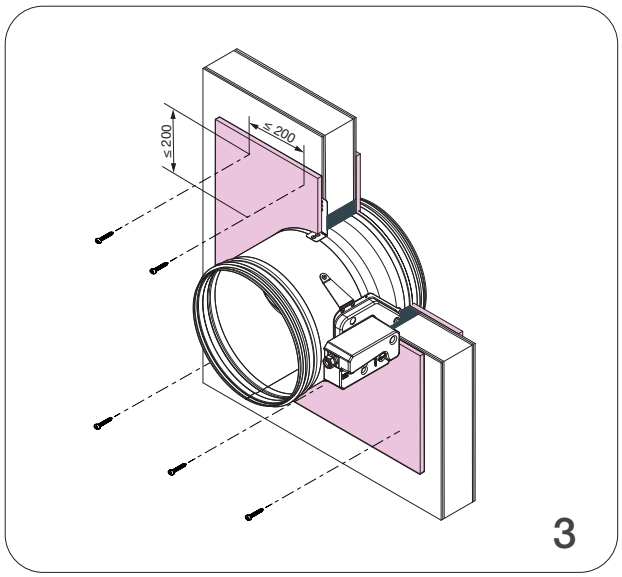
Possible damper orientations



0-90˚-
180˚-270˚







Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

Damper blade must be closed during the installation!

1. Create an opening in the wall and build the subframe according to the drawing. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the wall using screws (bracket screw hole is 6mm in diameter).

3. Fill the space between the damper and the wall with mortar . Cover the mortar with GKF gypsum boards (12,5m thick), fix them with drywall screw, 3,5 x 55mm.

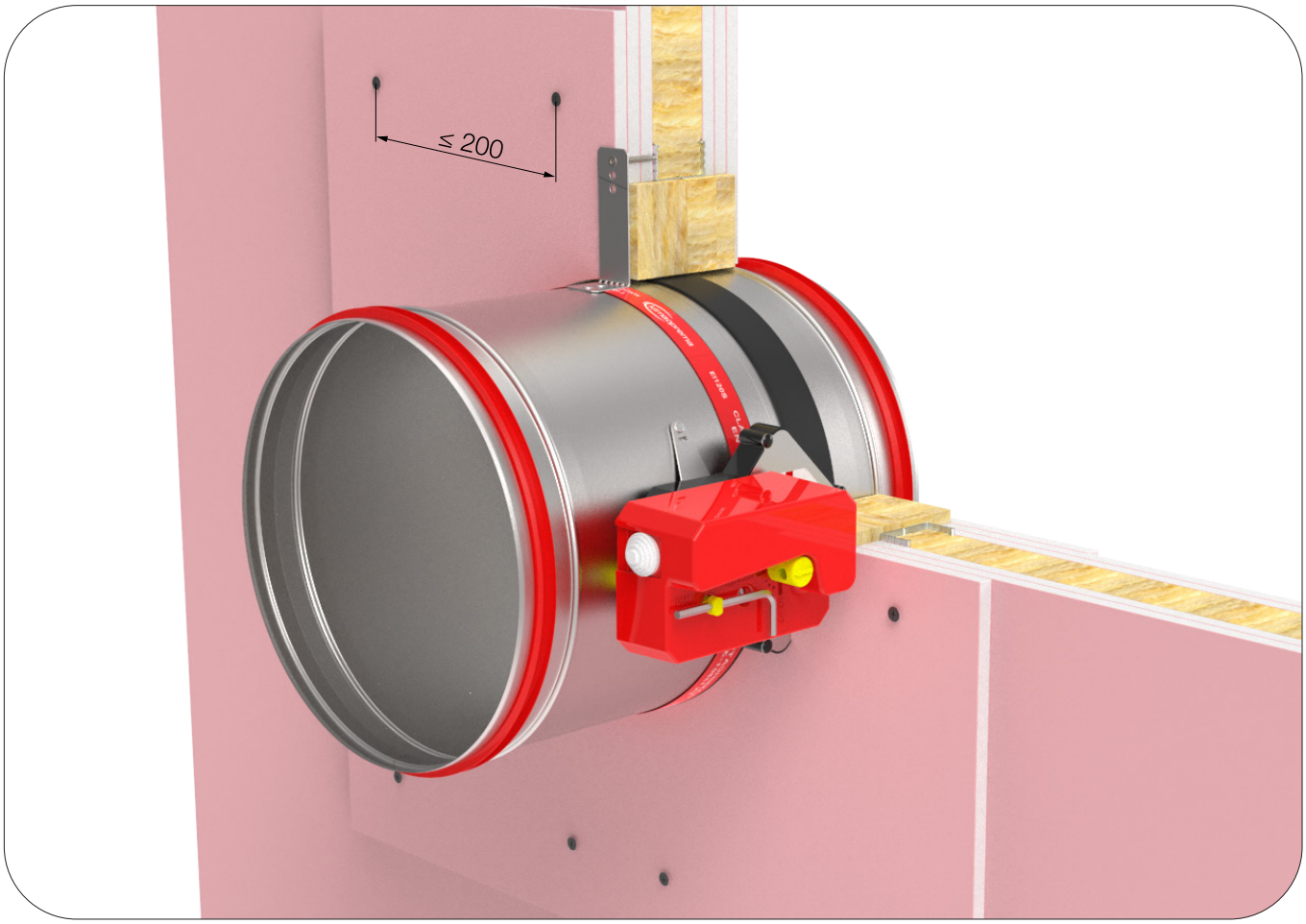
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexible wall installation (mineral wool sealing)

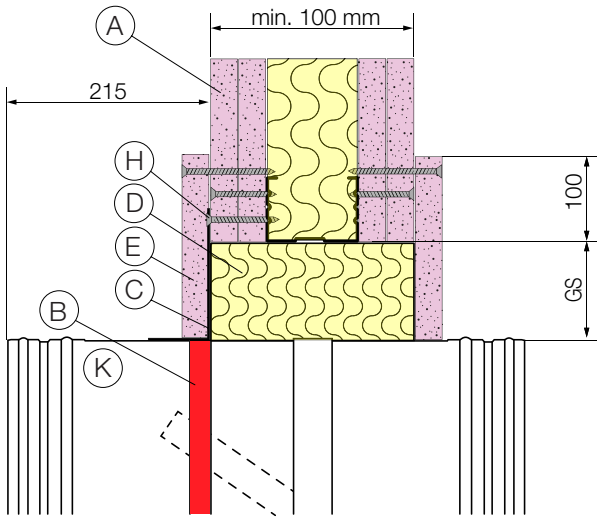
DOP WALLS MATERIALS



The wall is composed of 2x2 plasterboard boards, 12,5 mm thick, installed on a steel frame construction. Installation material: mineral wool (minimum density of 100 kg/m^3) covered with type F (**EI 90**) or type A (**EI 60**) cover boards. The minimum thickness of the wall is 100mm.

EI 90 (ve i↔o)S
The wall is made out of type F (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 115 kg/m^3 can be used).

EI 60 (ve i↔o)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/m^3 can be used).



Flexible wall installation

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E GKF cover boards with drywall screws 35 and 45mm
H Drywall screw 3,5 x 35/45 mm (optional)
K Fire damper casing

Classification

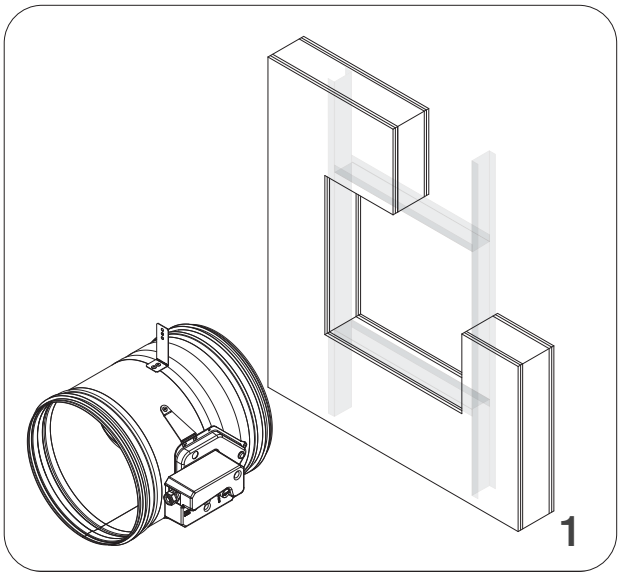
(type F wall) FDC25: EI 90 (ve i↔o)S
(type F wall) FDC40: EI 90 (ve i↔o)S
(type A wall) FDC25: EI 60 (ve i↔o)S
(type A wall) FDC40: EI 60 (ve i↔o)S

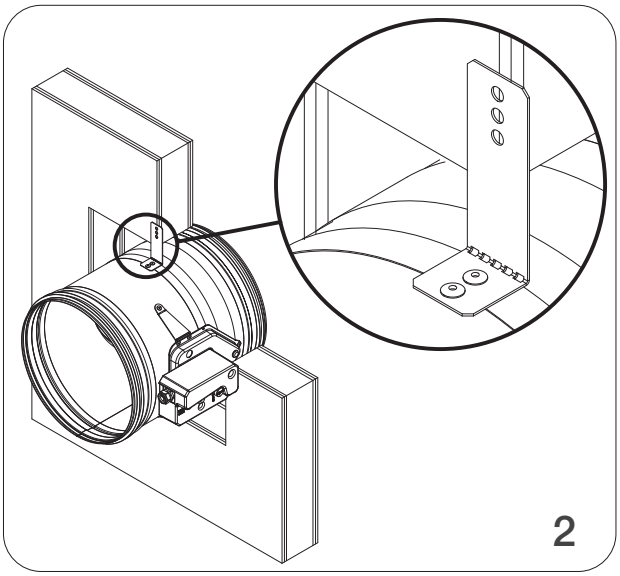
* The images shown are for illustration purposes only and may not be an exact representation of the product.

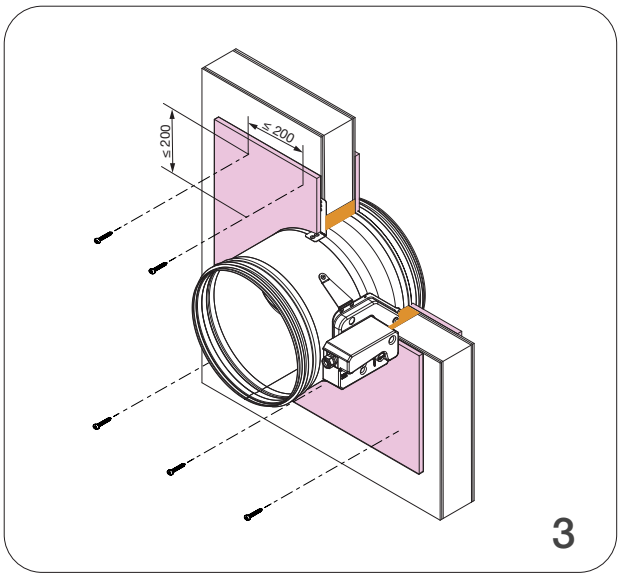
Possible damper orientations



0-90˚-
180˚-270˚







Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

Damper blade must be closed during the installation!

1. Create an opening in the wall and build the subframe according to the drawing. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the wall using screws (bracket screw hole is 6mm in diameter).

3. Fill the space between the damper and the wall with mineral wool. Cover the mineral wool with GKF gypsum boards (12,5 mm thick), fix them with drywall screw, 3,5 x 55mm.

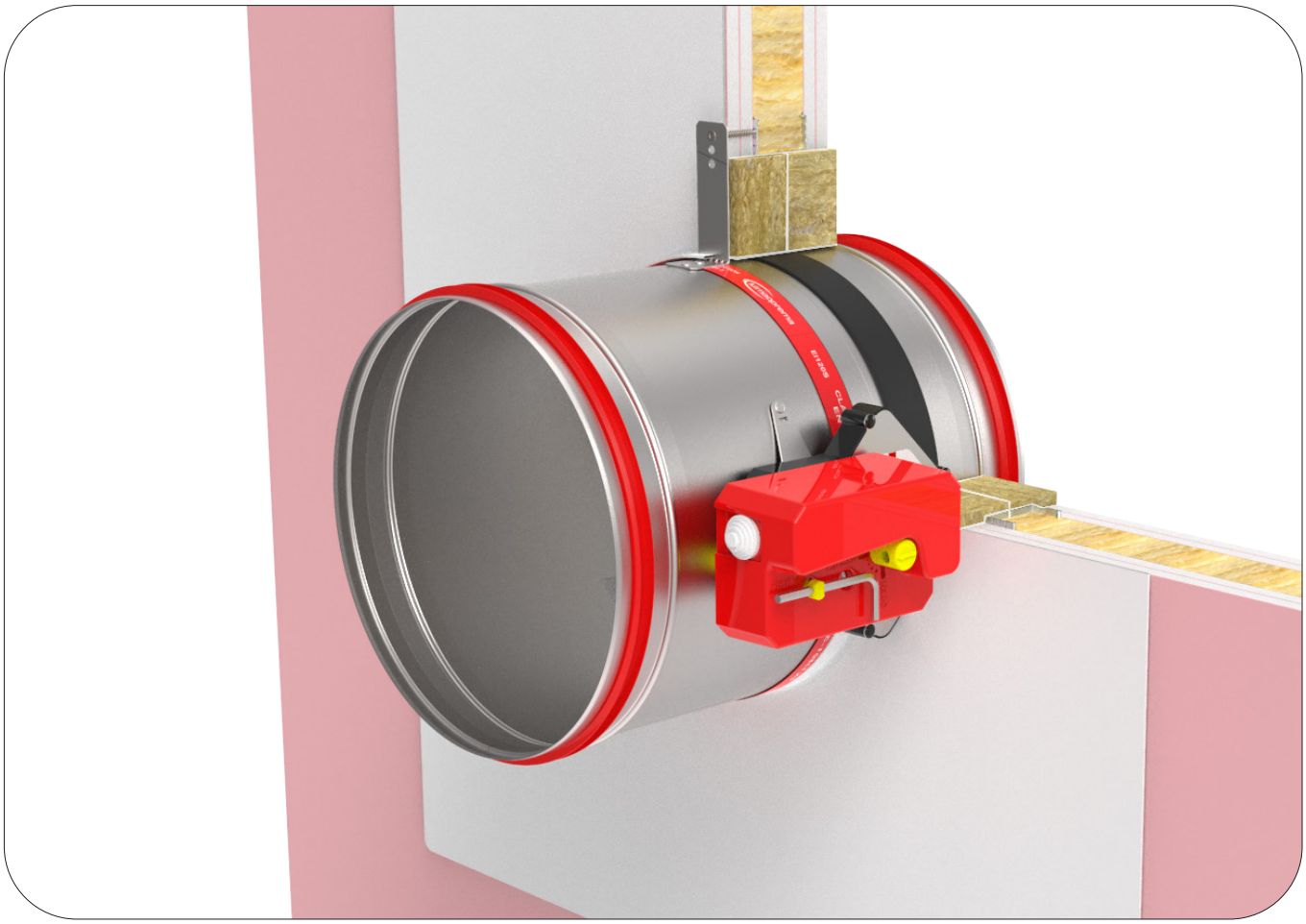
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexible wall installation (Fire Batt/Weichschott)

DOP WALLS MATERIALS



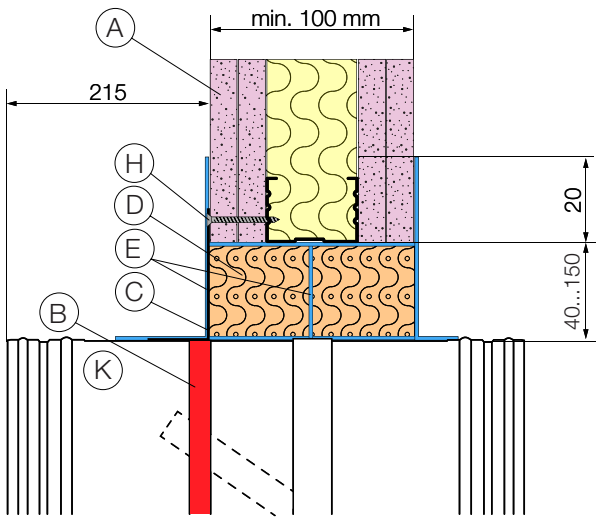
The wall is composed of 2x2 plasterboard boards, 12,5mm thick, installed on a steel frame construction.

EI 90 (ve i↔o)S

The wall is made out of type F (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 115 kg/m^3 can be used). Installation material: mineral wool (minimum density of 140 kg/m^3) and fire protection coating. The minimum thickness of the wall is 100mm.

EI 60 (ve i↔o)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/m^3 can be used). Installation material: mineral wool (minimum density of 140 kg/m^3) and fire protection coating. The minimum thickness of the wall is 100mm.



Flexible wall installation

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
H Drywall screw 3,5 x 35/45 mm (optional)
K Fire damper casing

Classification

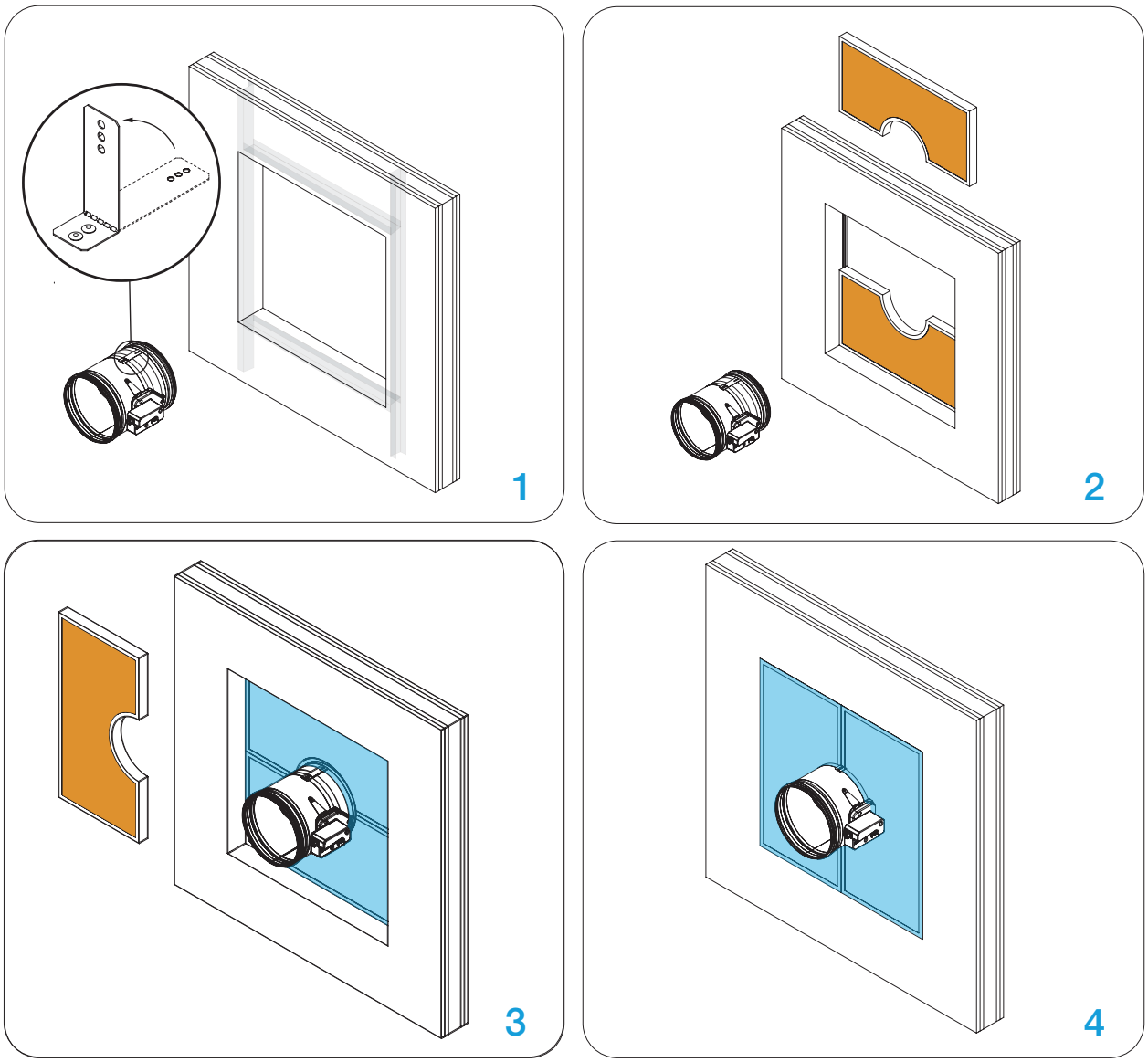
(type F wall) FDC25: EI 90 (ve i↔o)S
(type F wall) FDC40: EI 90 (ve i↔o)S
(type A wall) FDC25: EI 60 (ve i↔o)S
(type A wall) FDC40: EI 60 (ve i↔o)S

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚



Damper blade must be closed during the installation!

1. Create an opening in the wall (Ød + 80...30mm) and build the subframe according to the drawing. Bend the mounting bracket by 90 degrees and insert the damper up to the red wall boundary mark on the damper.

2. Close the gap between the housing and the wall with the first layer of mineral wool (50mm thick, coated on the inside). Seal the joints between the pieces of mineral wool with intumescent, fire-resistant sealant.

3. Close the gap between the housing and the wall with the second layer of mineral wool (50mm thick, coated on the inside). The joints between the mineral wool pieces must be sealed with intumescent, fire-resistant sealant.

4. Outside of the mineral wool and the damper housing must be coated with a 2mm thick fire protection coating. The damper housing should be coated up to the profile projections.

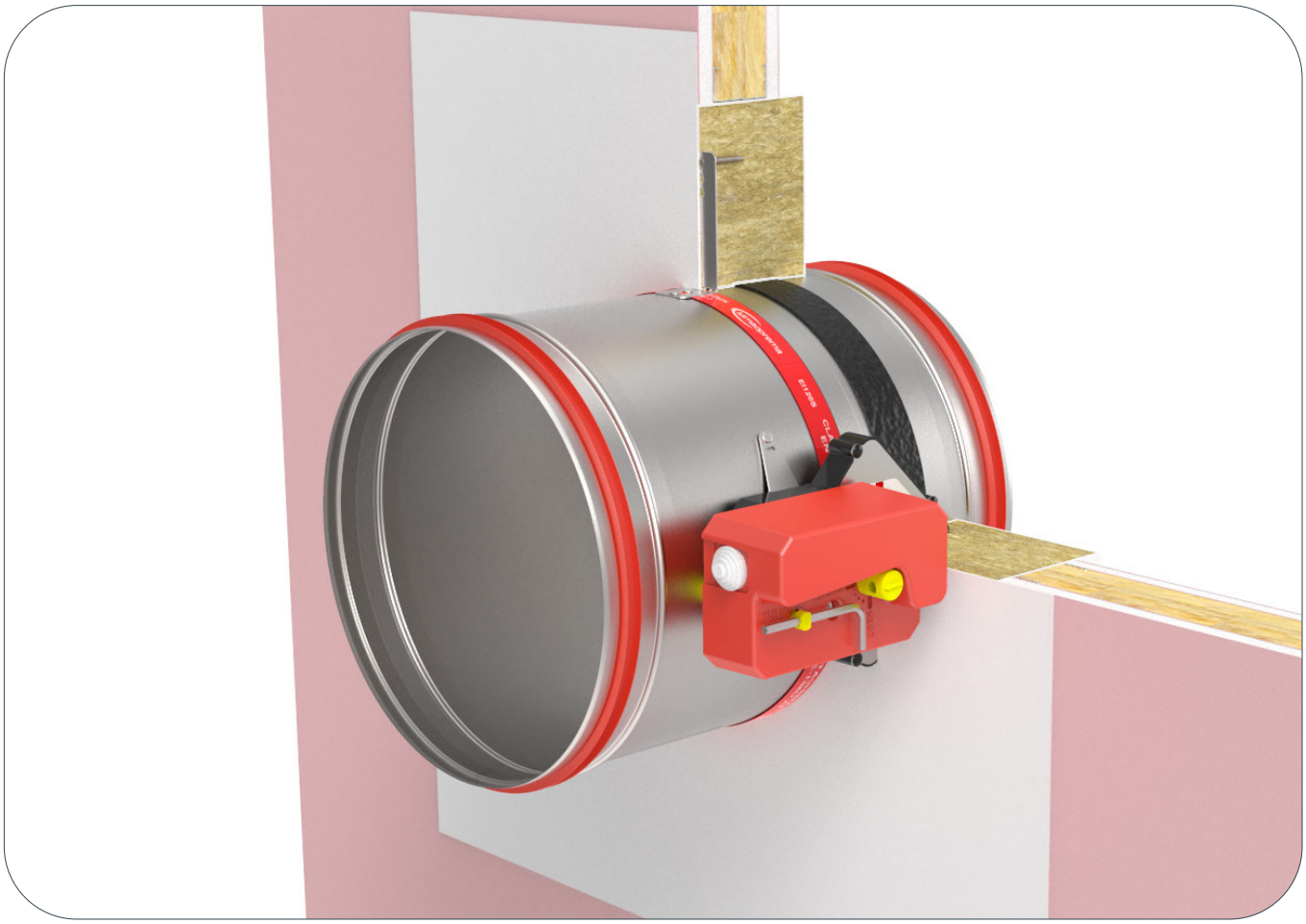
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

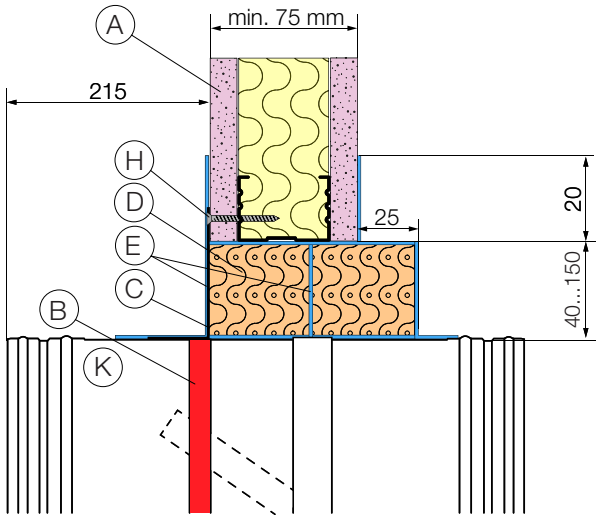
Flexible wall installation 75 mm (Fire Batt/Weichschott)

DOP WALLS MATERIALS



The wall is composed of 1x1 plasterboard boards, 12,5 mm thick, installed on a steel frame construction.

EI 45 (ve i↔o)S
The wall is made out of type F (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 115 kg/m^3 can be used). Installation material: mineral wool (minimum density of 140 kg/m^3) and fire protection coating. The minimum thickness of the wall is 75mm.



Flexible wall installation

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
H Drywall screw 3,5 x 35/45 mm (optional)
K Fire damper casing

Classification

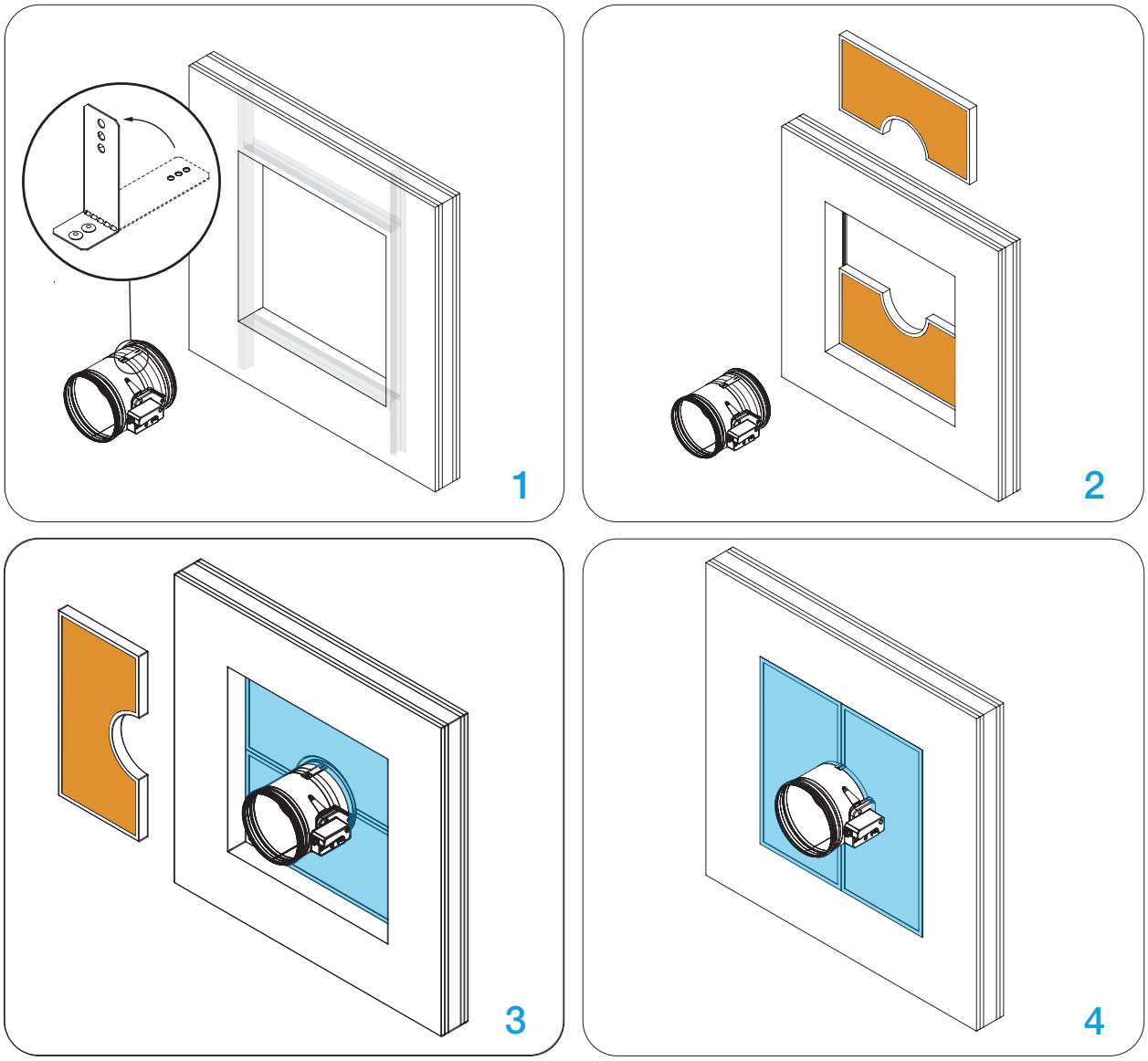
FDC25: EI 45 (ve i↔o)S
FDC40: EI 45 (ve i↔o)S

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚



Damper blade must be closed during the installation!

1. Create an opening in the wall (Ød + 80...300 mm) and build the subframe according to the drawing. Bend the mounting bracket by 90°. Insert the damper into the opening up to the wall boundary mark on the damper.

2. Close the gap between the housing and the wall with the first layer of mineral wool (50mm thick, coated on the inside). Seal the joints between the pieces of mineral wool with intumescent, fire-resistant sealant.

3. Close the gap between the housing and the wall with the second layer of mineral wool (50mm thick, coated on the inside). The joints between the mineral wool pieces must be sealed with intumescent, fire-resistant sealant.

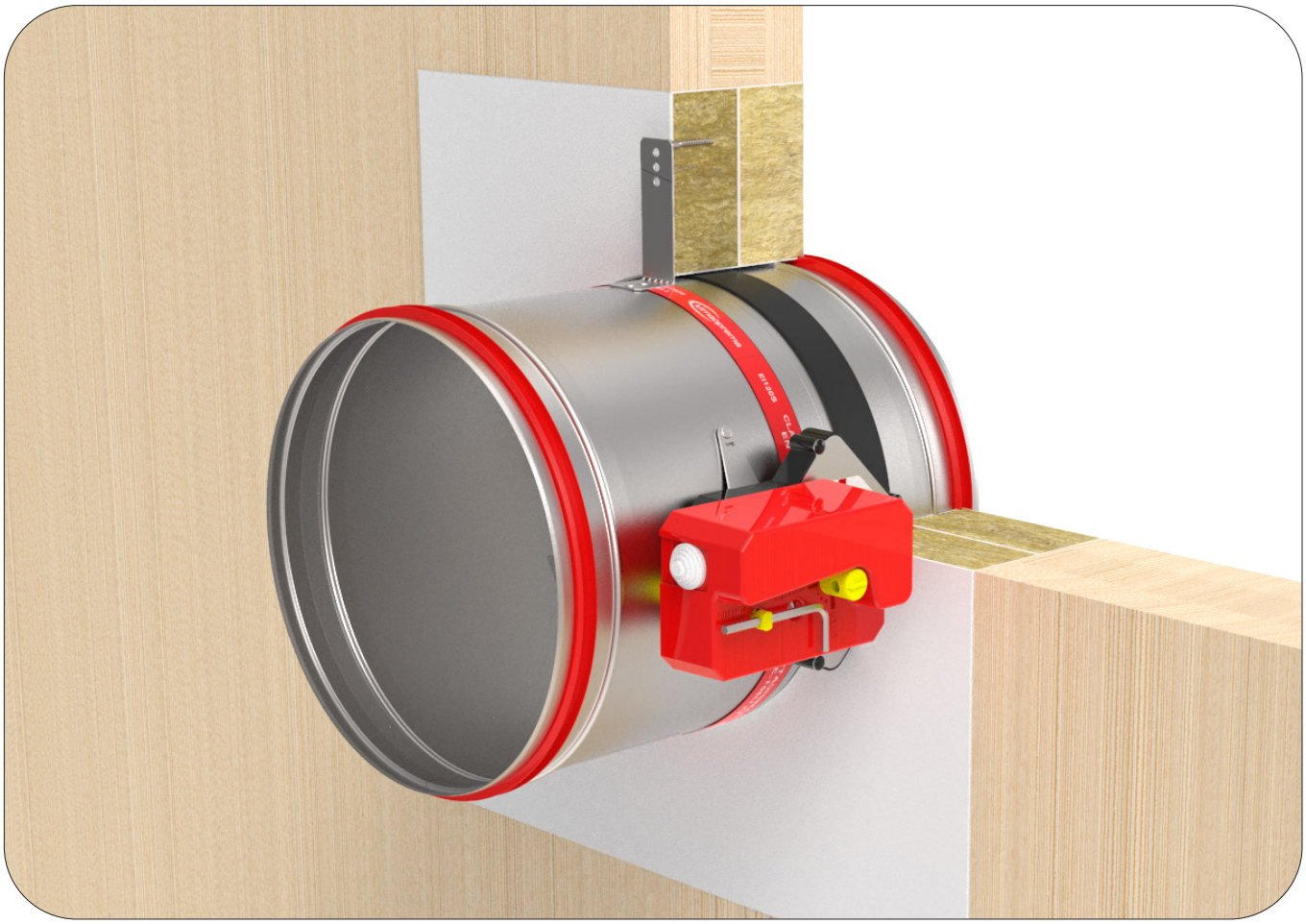
4. Outside of the mineral wool and the damper housing must be coated with a 2mm thick fire protection coating. The damper housing should be coated up to the profile projections.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Solid wood wall installation
CLT wall

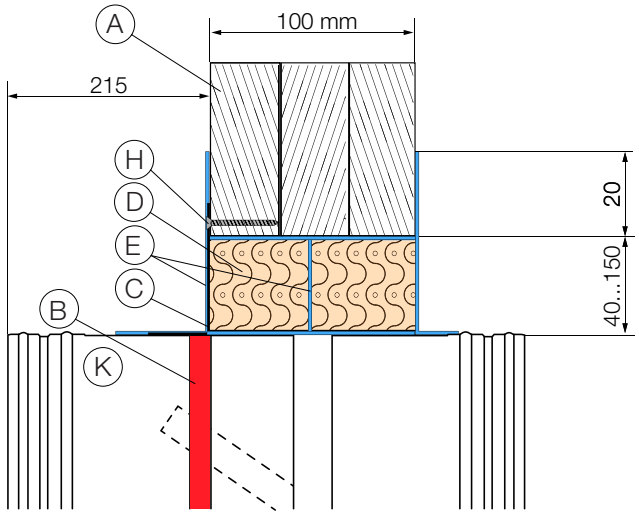
DOP WALLS MATERIALS



(Fire Batt/Weichschott)

Fire dampers are mounted in CLT (Cross laminated timber) wooden wall with density 480 kg/m³. Wall is made of 3 layers (30 – 40 – 30mm).

EI 90 (ve i↔o)S
Installation material: Mineral wool (minimum density of 140 kg/m³, fire protection coating.



Flexible wall CLT

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
H Wood screws 6x50 mm (optional)
K Fire damper casing

Classification

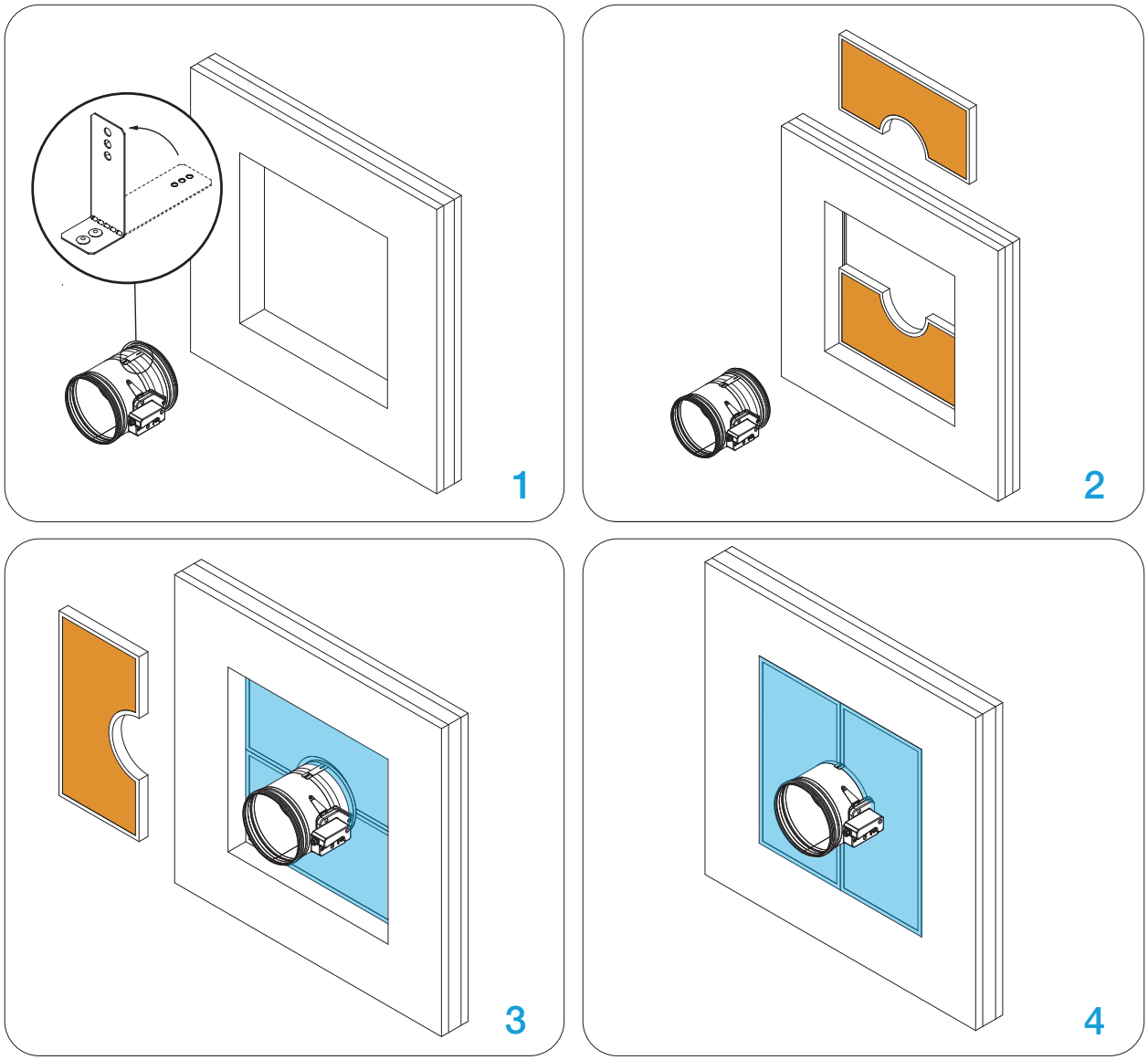
FDC25: EI 90 (ve i↔o)S
FDC40: EI 90 (ve i↔o)S

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚



Damper blade must be closed during the installation!

1. Create an opening in the wall (Ød + 80...300mm). Bend the mounting bracket by 90°. Insert the damper into the opening up to the wall boundary mark on the damper.

2. Close the gap between the housing and the wall with the first layer of mineral wool (50mm thick, coated on the inside). Seal the joints between the pieces of mineral wool with intumescent, fire-resistant sealant.

3. Close the gap between the housing and the wall with the second layer of mineral wool (50mm thick, coated on the inside). The joints between the mineral wool pieces must be sealed with intumescent, fire-resistant sealant.

4. Outside of the mineral wool and the damper housing must be coated with a 2mm thick fire protection coating. The damper housing should be coated up to the profile projections.

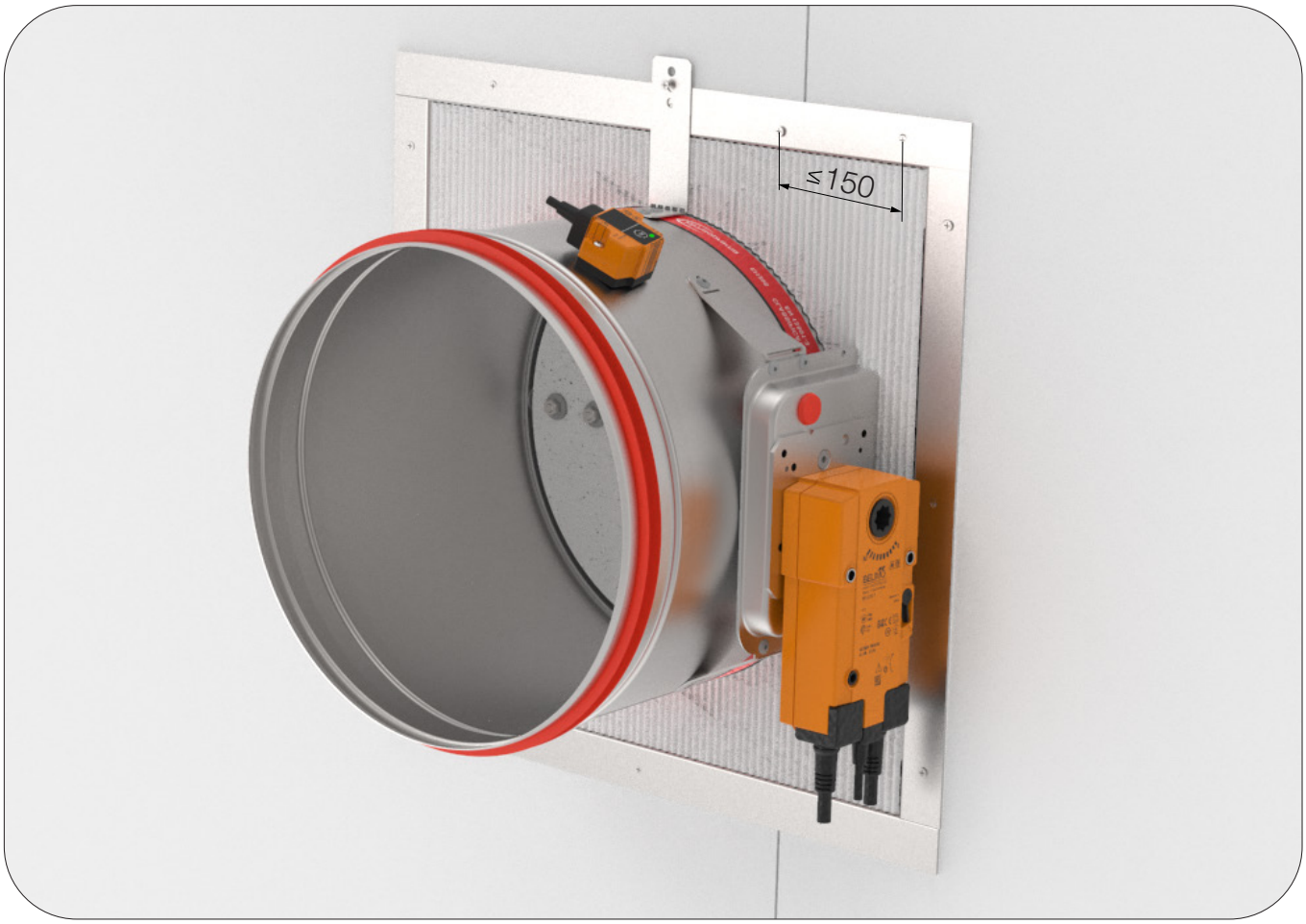
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

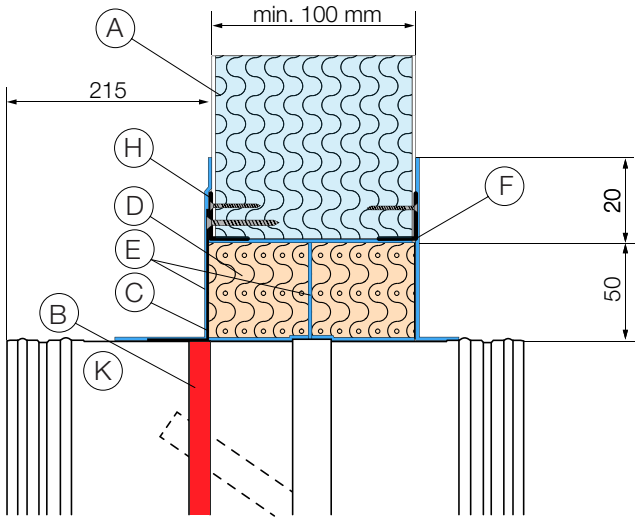
Flexible wall installation Eurobond

DOP WALLS MATERIALS



The wall is composed of Eurobond Firemaster boards, in 100mm thicknes, installed in a steel frame construction.

FDC 25 EI 60 (ve i↔o)S
FDC 40 EI 60 (ve i↔o)S / E 90 (ve i↔o)S
Sealing between dampers and wall is 2 layers of Rockwool Firepro 50mm thick sealed with intumescent fire resistant sealant.



Flexible wall installation Eurobond

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
F L profiles screwed according to the drawing with screws 6,3x25 and 6,3x120mm
H Self tapping screw connected between hanger and L profile
K Fire damper casing

Classification

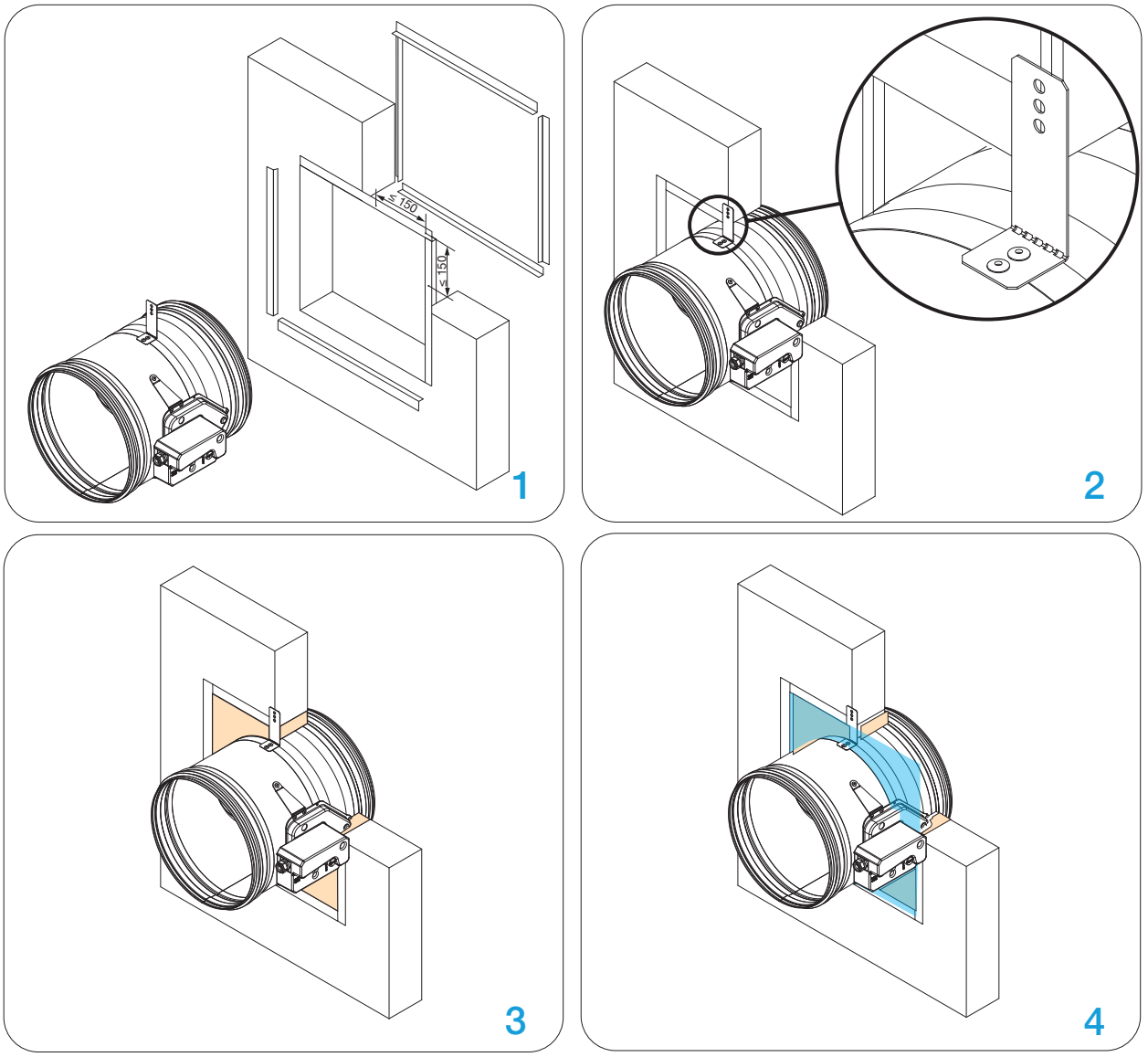
FDC25: EI 60 (ve i↔o)S
FDC40: EI 60 S/ E 90 S (ve i↔o)S

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚



Damper blade must be closed during installation!

Create the wall, see technical drawing.

1. Make the opening in the wall (D + 100mm) on the connection of two boards.
The opening is re-inforced with L profiles screwed to the wall with 6,3x25mm screws on horizontal and vertical side from both sides of the wall. Horizontal L profiles are on the edges screwed with 6,3x120mm screws to the L profiles from opposite side of the wall. For details see technical drawing. The opening in the wall panel must be coated with a 2mm thick fireproof coating on the inside.

2. Bend the fixing bracket 90°. Place the damper in the opening up to the wall limit mark on the damper.

3. Close the gap between the housing and the wall with two layers of mineral wool (50 mm thick, coated on the inside). Seal all gaps between the pieces of mineral wool with intumescent, fire-resistant sealant.

4. Outside of the mineral wool and the damper housing must be coated with a 2mm thick fire protection coating. The damper housing should be coated up to the profile projections.

Test the operation of the damper blade!

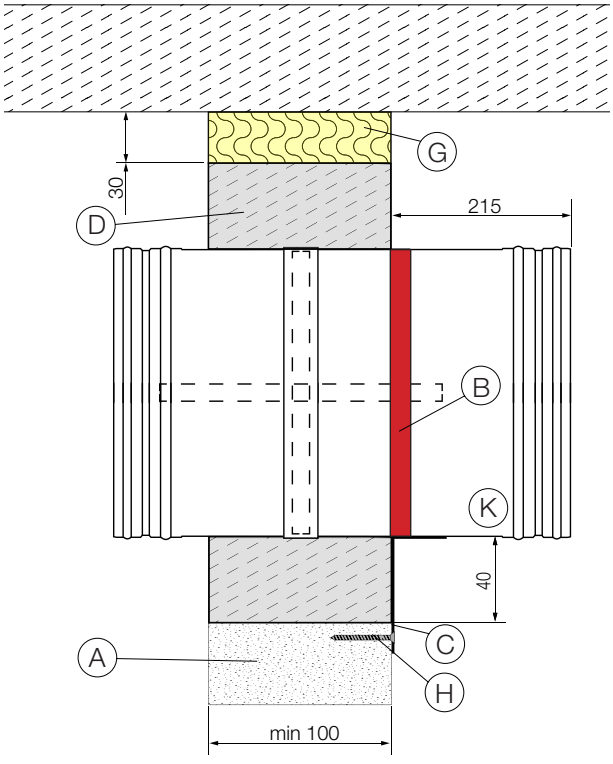
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexibile ceiling joint
Gypsum blocks flexibile wall

DOP WALLS MATERIALS



The wall is composed out of gypsum blocks (minimum density of 450 kg/m^3) and with minimum thickness of 100mm. Installation material is gypsum plaster and mineral wool (70 kg/m^3), thickness of the wool is 40mm.



Flexibile ceiling joint installation

A Rigid wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
G Mineral wool sheets, 70 kg/m^3, min. thickness 40mm
H Drywall screw 3,5 x 35 mm
K Fire damper casing

Classification

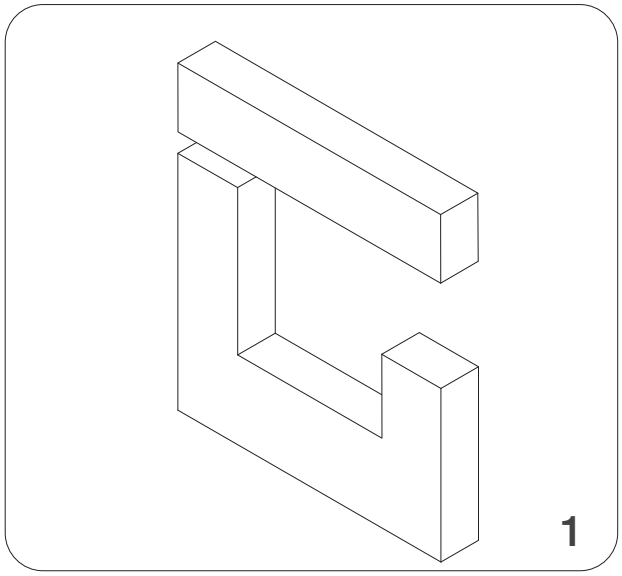
FDC25: EI 120 (ve i↔o)S
FDC40: EI 120 (ve i↔o)S

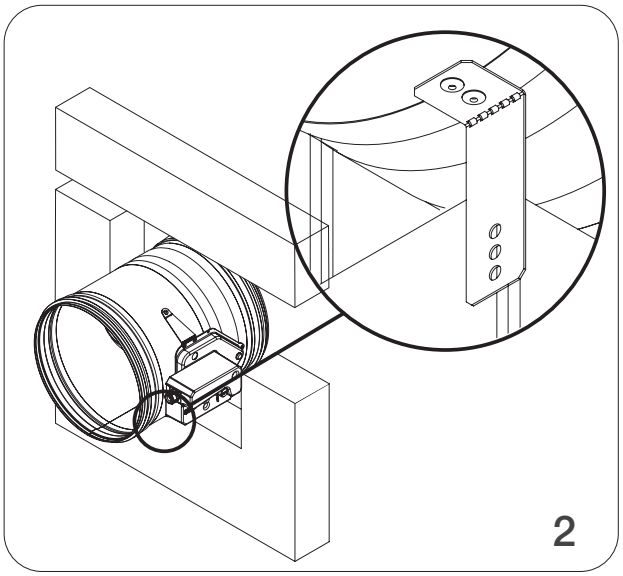
* The images shown are for illustration purposes only and may not be an exact representation of the product.

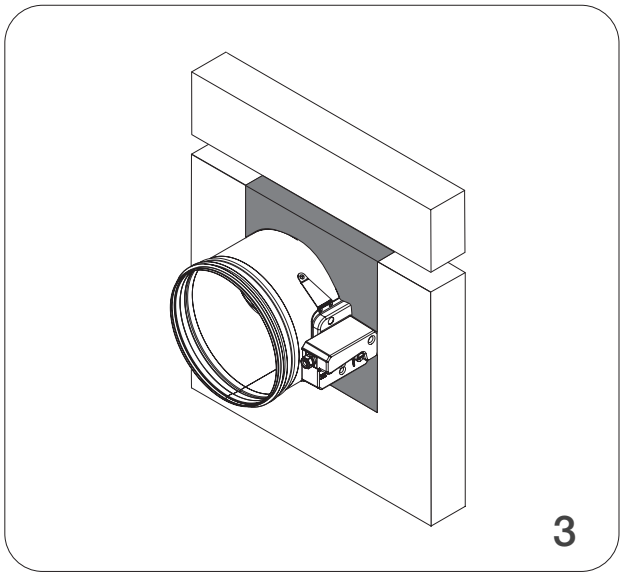
Possible damper orientations

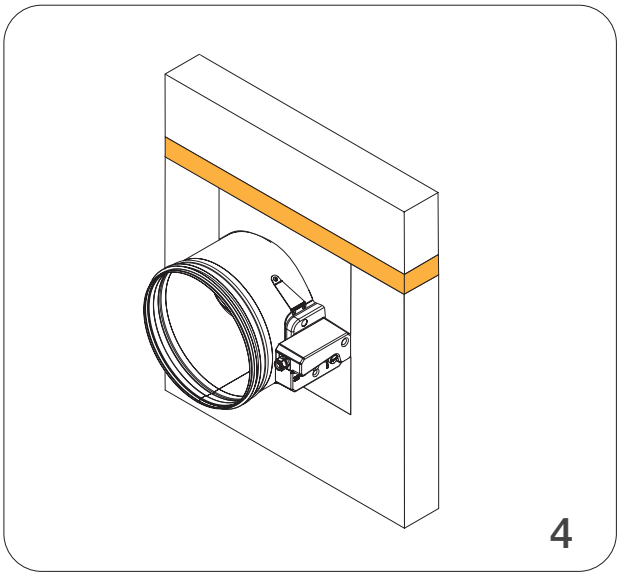


0-90˚-
180˚-270˚









Damper blade must be closed during installation!

1. Create an opening in the wall (D + 80mm), 30mm below the ceiling.

2. Bend the fixing bracket 90°. Insert the fire damper into the opening and fix the mounting bracker with draywall screw (3,5 x 35mm).

3. Fill the space between the damper and the wall with gypsum plaster/ mortar.

4. Fill the space between the ceiling and the wall with mineral wool (70 kg/m^3, thickness 40mm).

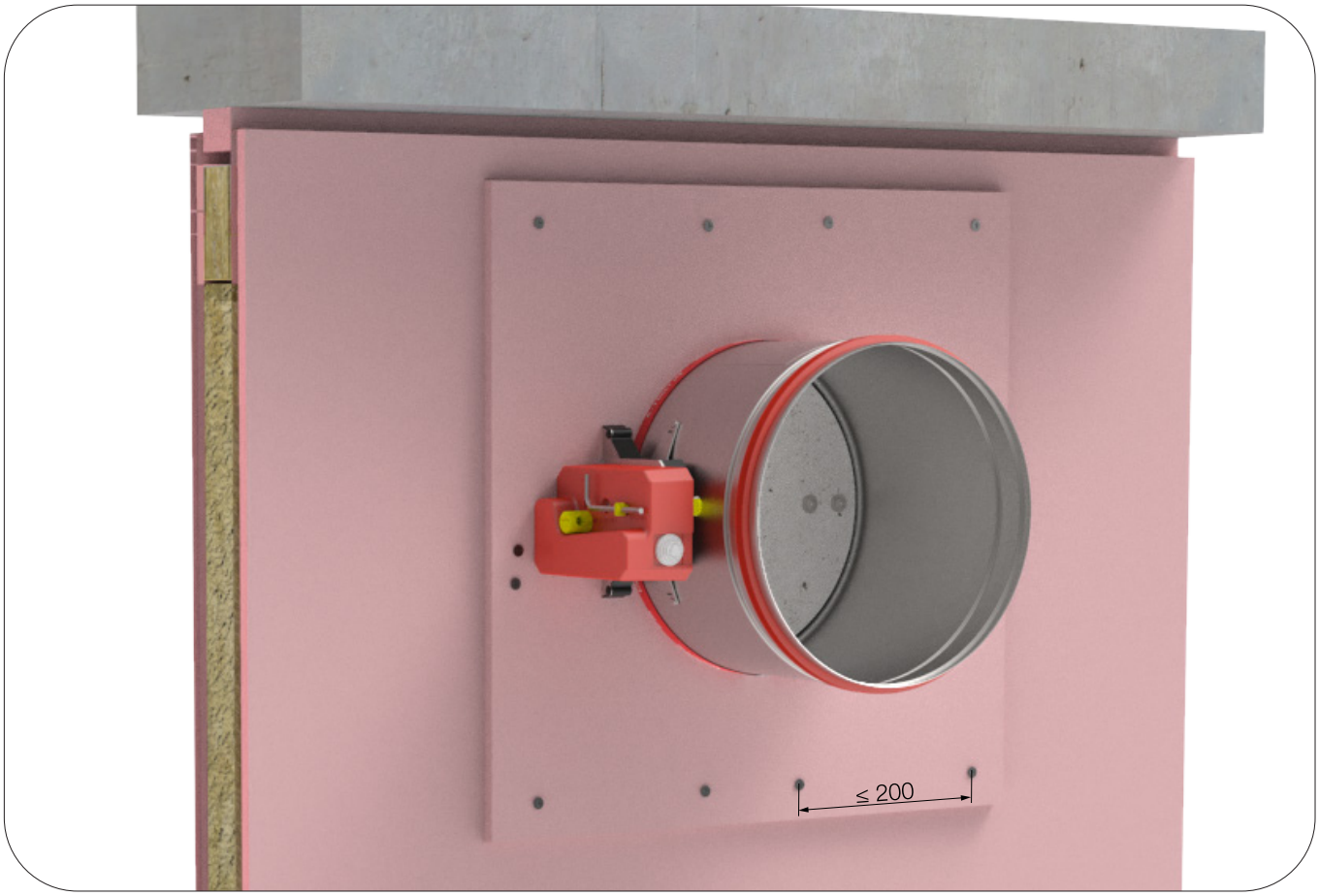
*Multiple fire dampers can be installed next to each other or ceiling/wall with the minimal distance of 30mm between them.

Test the operation of the damper blade!

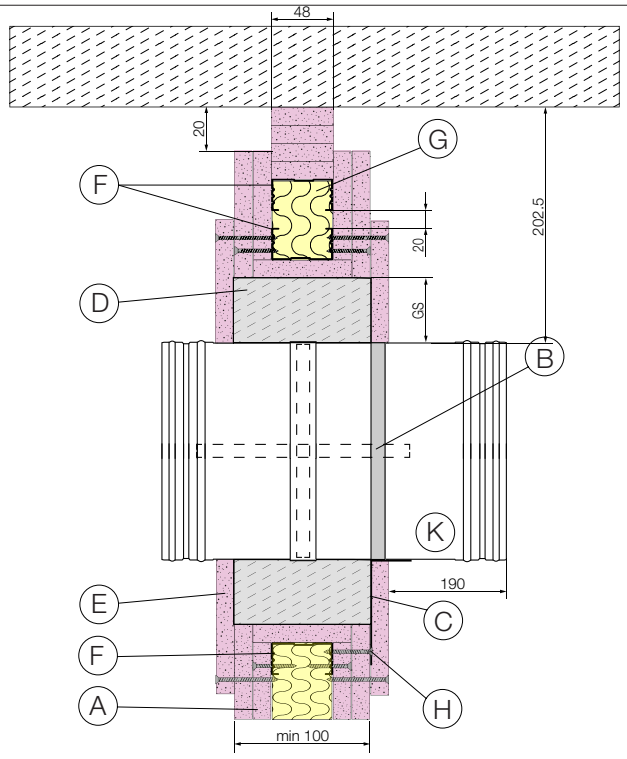
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexibile ceiling joint Plasterboard type F flexibile wall

DOP WALLS MATERIALS



The wall is composed of 2x2 plasterboard boards, 12,5 mm 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 115 kg/m^3 can be used).The minimum thickness of the wall is 100 mm.
Installation material is gypsum plaster and mineral wool (115 kg/m^3), thickness of the wool is 50 mm.



Flexibile ceiling joint installation

A Flexible wall
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E GKF cover boards with drywall screws 35 and 45mm
F UW 50 Profile and Mineral wool 50mm, 115 kg/m^3
G Mineral wool sheets, 115 kg/m^3, min. thickness 40mm
H Drywall screw 3,5 x 55mm
K Fire damper casing

Classification

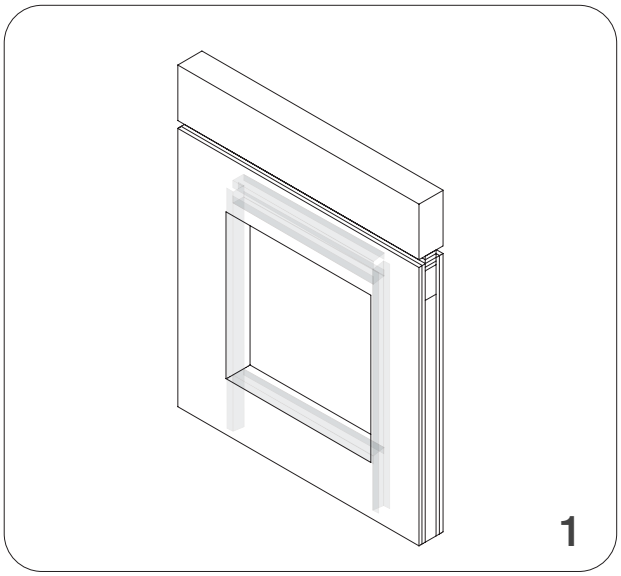
FDC25: EI 120 (ve i↔o)S
FDC40: EI 120 (ve i↔o)S

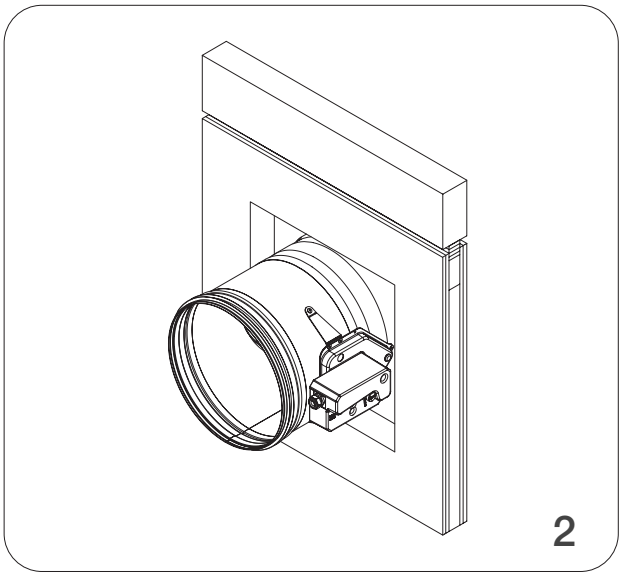
* The images shown are for illustration purposes only and may not be an exact representation of the product.

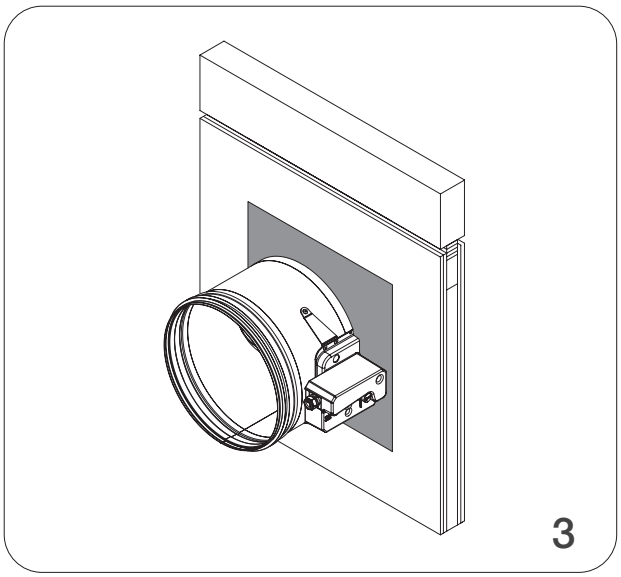
Possible damper orientations

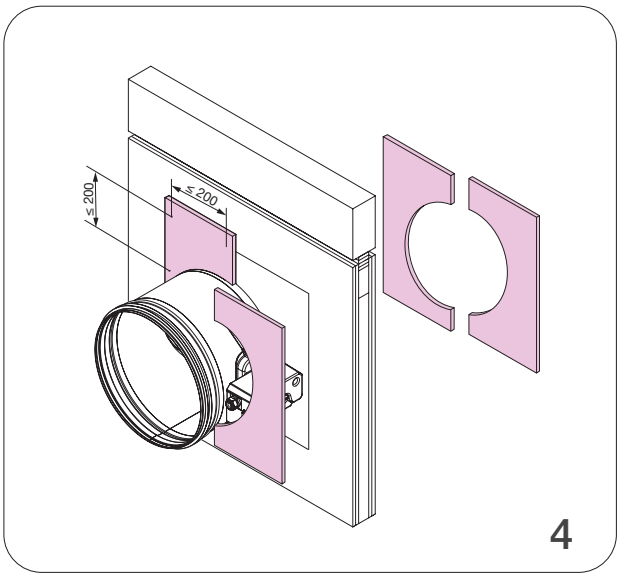


0-90˚-
180˚-270˚









Damper blade must be closed during installation!

1.Prepare subconstruction and cladding of the wall with gypsum boards acc. to technical drawing. Take care that cladding of the wall is not connected to profile connected to the ceiling so it could compensate movement of the ceiling without impact to the wall. Fill the space between the ceiling segment and the wall with mineral wool. Create an opening in the wall.

2. Bend the fixing bracket 90°. Insert the fire damper into the opening and fix the mounting bracket with dry wall screws (6 x 50mm)

3. Fill the space between the damper and the wall with gypsum plaster/ mortar.

4. Cover the mineral wool with GKF gypsum boards (12,5mm thick), fix them with drywall screw, 3,5 x 55mm.

Test the operation of the damper blade!

Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

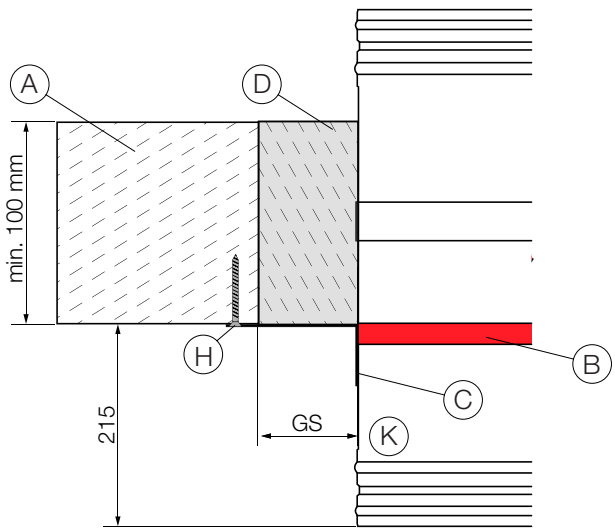
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid floor/ceiling installation (mortar sealing)

DOP WALLS MATERIALS



The floor/ceiling is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100 mm. Installation material is gypsum plaster or mortar.



Installation in floor/ ceiling

A Rigid floor / ceiling
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
H Masonry screw 6x50mm (optional)
K Fire damper casing

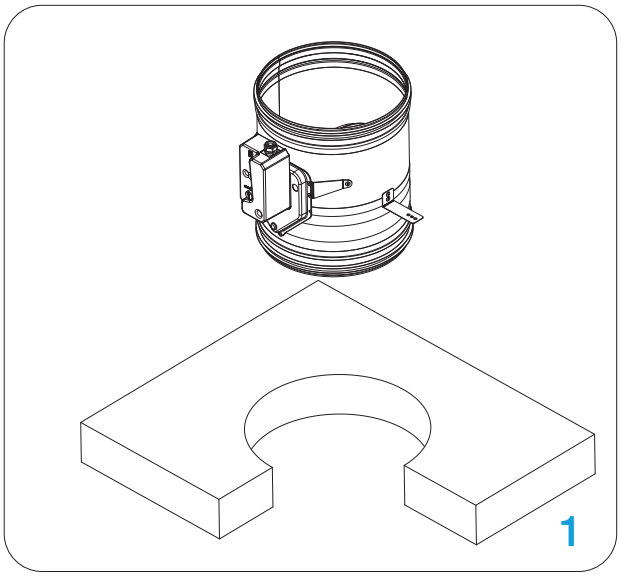
Classification

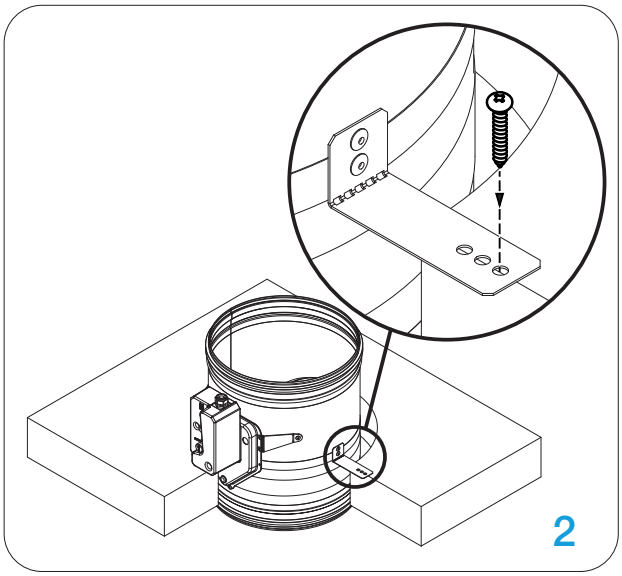
FDC25: EI 120 (ho i↔o)S
FDC40: EI 120 (ho i↔o)S

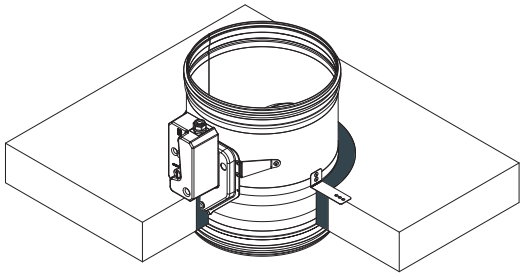
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations

0-360°

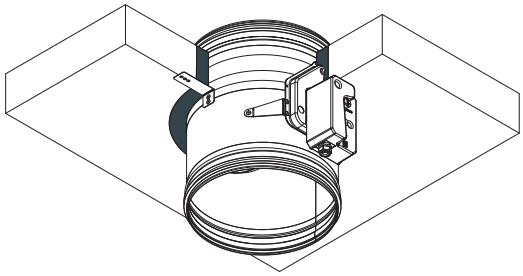






*Installation in floor

3



*Installation in ceiling

4

Damper blade must be closed during installation!

1. Create an opening in the floor/ceiling and bend the fixing bracket 90°.
Place the damper in the opening up to the wall limit mark on the damper.

2. Fix the damper to the slab using screws (bracket screw hole is 6 mm in diameter).

3/3*. Fill the space between the damper and the slab with mortar or gypsum plaster.

Test the operation of the damper blade!

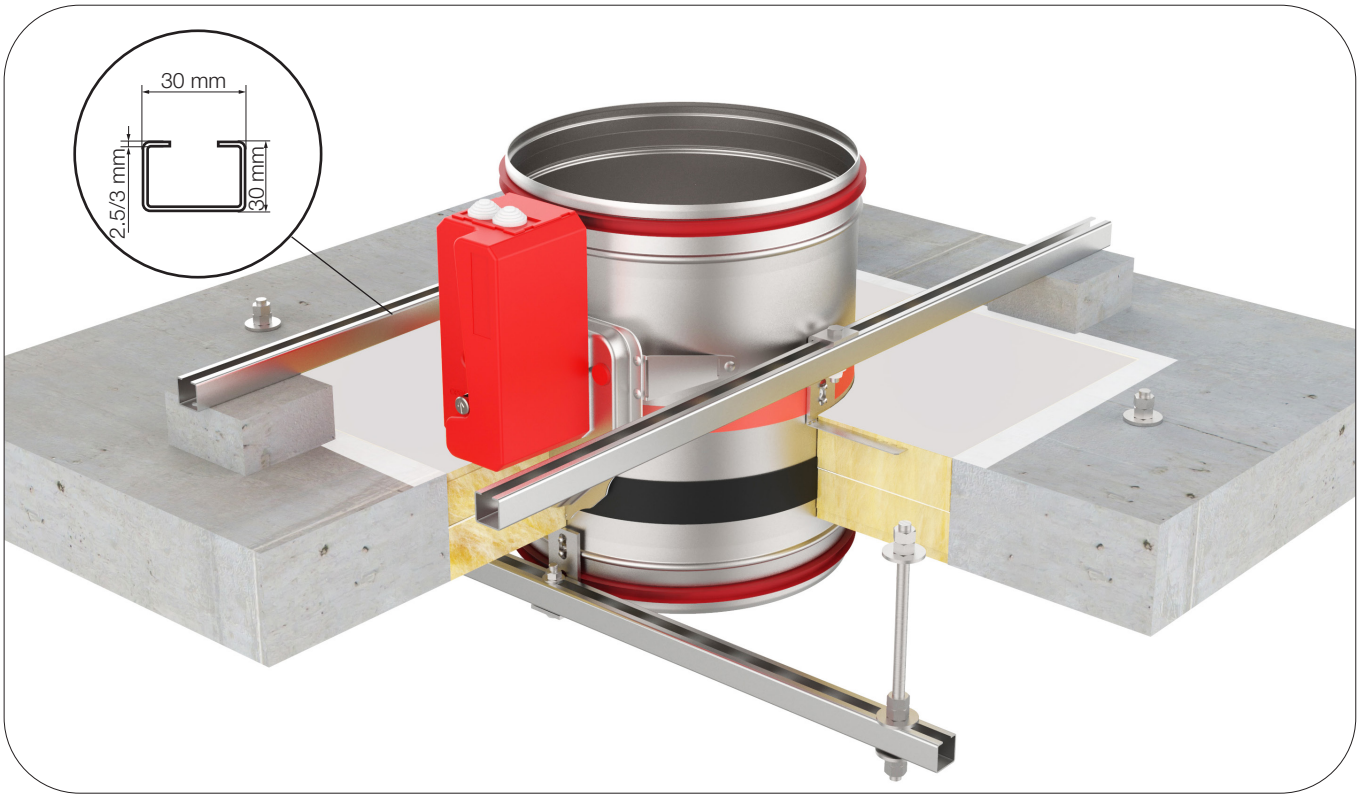
Damper size - Ød [mm]	Gap size - GS	Opening size - Dn+2GS
100	55 mm	210 mm
125	52,5 mm	230 mm
160	47,5 mm	255 mm
200	45 mm	290 mm
250	42,5 mm	335 mm
315	40 mm	390 mm
355	40 mm	435 mm
400	37,5 mm	475 mm
450	37,5 mm	525 mm
500	35 mm	570 mm
560	35 mm	630 mm
630	35 mm	700 mm
710	32,5 mm	775 mm
800	32,5 mm	865 mm

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid floor installation (Fire Batt/ Weichschott)

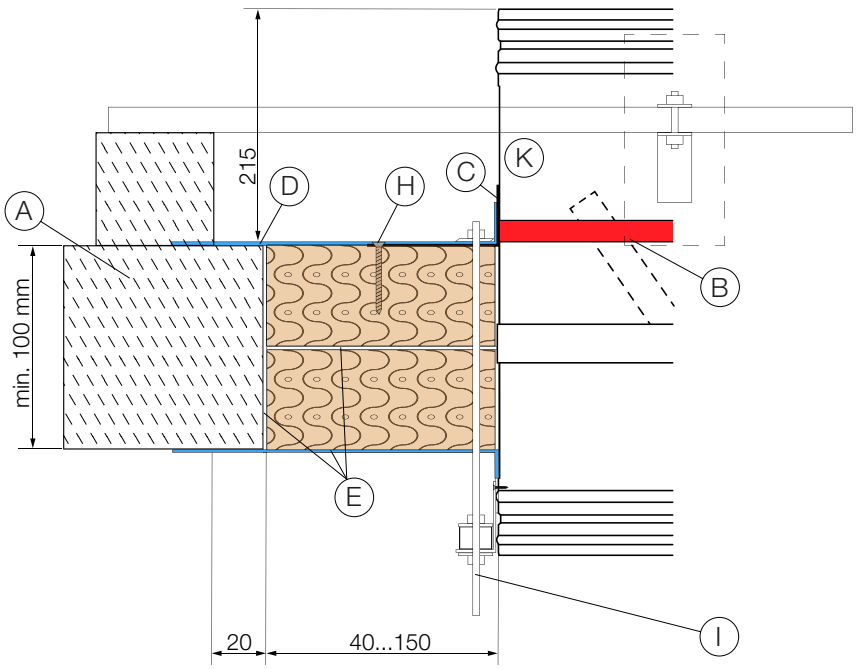
DOP WALLS MATERIALS

Suspension systems are required for the Fire Batt/ Weichschott installation of the fire damper with mineral wool in floor slabs. Fire dampers can be suspended from solid floor slabs using adequately sized threaded rods. Load the suspension system only with the weight of the fire damper. Ducts must be suspended separately.



The floor is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100 mm.
Installation material: Mineral wool (minimum density of 140 kg/m^3), fire protection coating.

Suspension systems are required for the Fire Batt/Weichschott installation of the fire damper with mineral wool in floor and ceiling slabs.



Floor installation

Actuator up

A Rigid floor
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
H Masonry screw 6x50mm (optional)
K Fire damper casing
I Threaded rod suspension (M8)

Classification

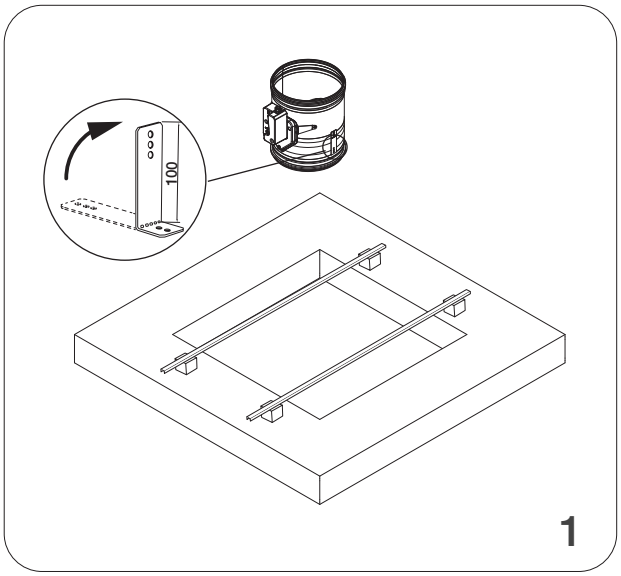
FDC25: EI 90 (ho i↔o)S
FDC40: EI 90 (ho i↔o)S

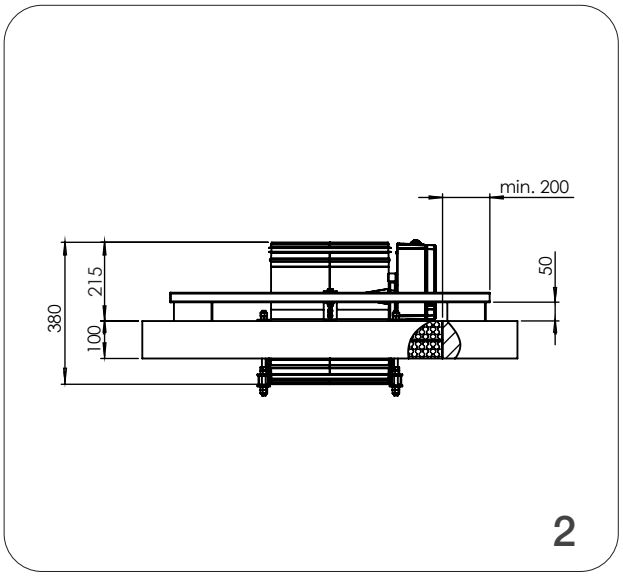
* The images shown are for illustration purposes only and may not be an exact representation of the product.

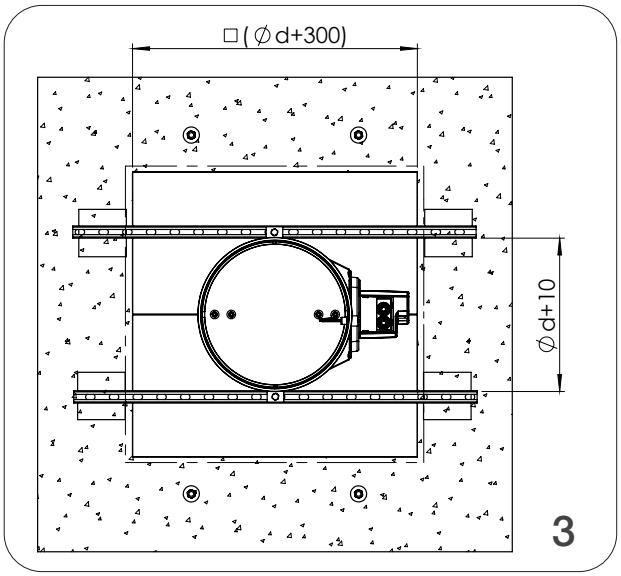
Possible damper orientations

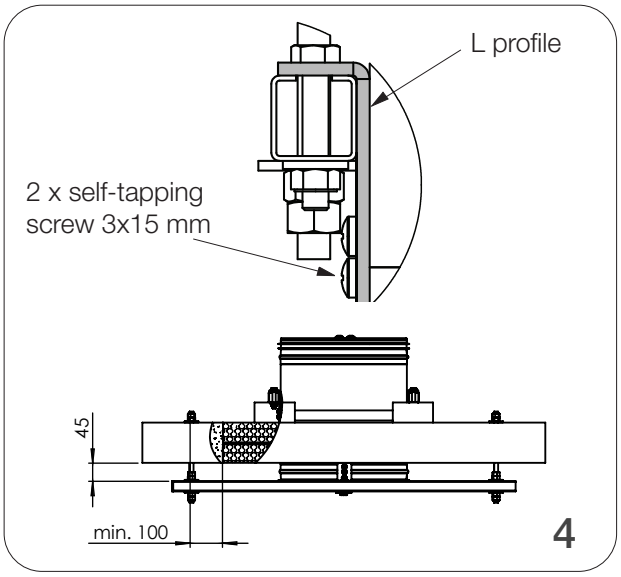


0-90˚-
180˚-270˚









Damper blade must be closed during installation!

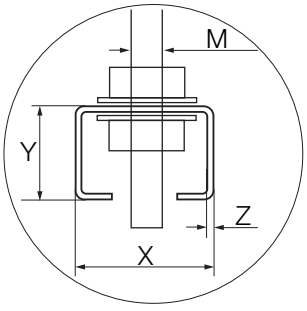
1. Create an opening in the floor (D + 40_150mm). Bend the mounting bracket by 90°. Insert the damper into the opening up to the wall boundary mark on the damper.
For easier installation, the fire damper can be mounted on the floor / ceiling. Use approved / suitable screws for this purpose. (The mounting hole has a diameter of 6 mm.)

2. Suspension strut should be connected with drop rods (8/10mm) to the floor slab above. It is used to support the damper and ease the installation.

3. When using L profile fixation, support steel C profile with 50mm high piece of aerated concrete or similar rigid material. Not necessary if connecting rods directly to damper.

4. Damper casing is fixed to suspended and supported steel C profiles by two self tapping screws 4,8x16 **(make sure that it doesn't interfere with damper blade)** with L profile hanger **(detail A)** fixed to steel C profiles by M8 screw and nut. Position of self-tapping screws is through the middle of damper casing.

Test the operation of the damper blade!



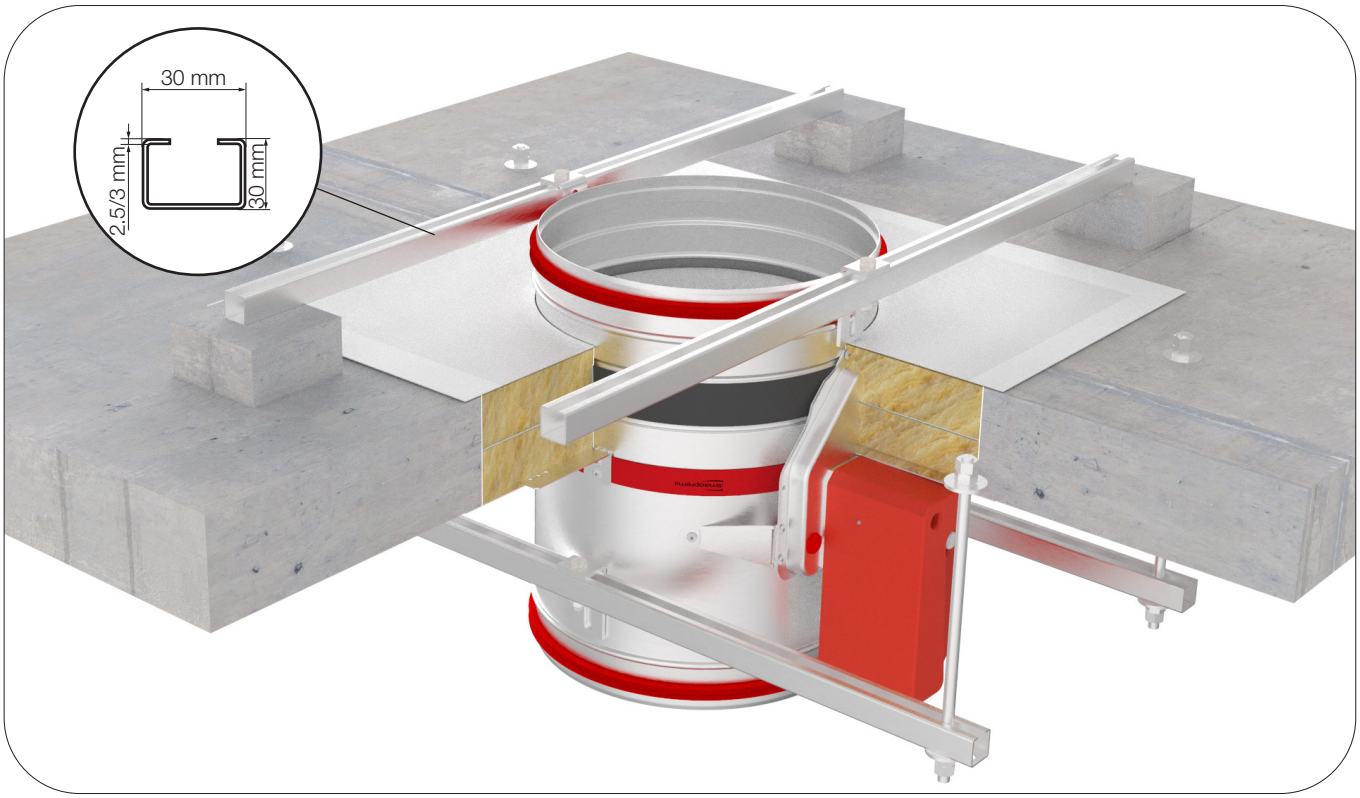
Suspension dimensions	X	Y	Z	M
FDC25	30	30	2.5	M8
FDC40	30	30	3	M10

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid ceiling installation (Fire Batt/ Weichschott)

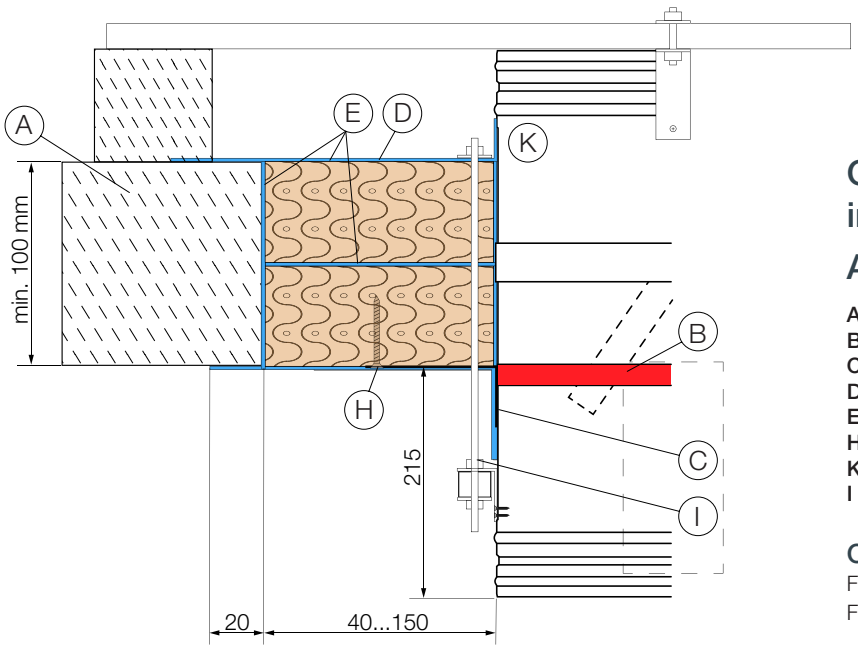
DOP WALLS MATERIALS

Suspension systems are required for the Fire Batt/ Weichschott installation of the fire damper with mineral wool in ceiling slabs. Fire dampers can be suspended from solid ceiling slabs using adequately sized threaded rods. Load the suspension system only with the weight of the fire damper. Ducts must be suspended separately.



The ceiling is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.
Installation material: Mineral wool (minimum density of 140 kg/m^3), fire protection coating.

Suspension systems are required for the Fire Batt/Weichschott installation of the fire damper with mineral wool in floor and ceiling slabs.



Ceiling installation

Actuator down

A Rigid ceiling
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
E Intumescent fire resistant sealant (blue lines)
H Masonry screw 6x50mm (optional)
K Fire damper casing
I Threaded rod suspension (M8)

Classification

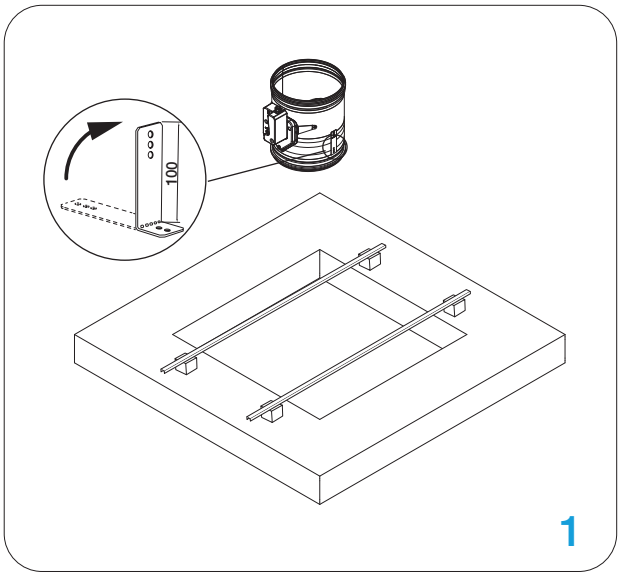
FDC25: EI 90 (ho i↔o)S
FDC40: EI 90 (ho i↔o)S

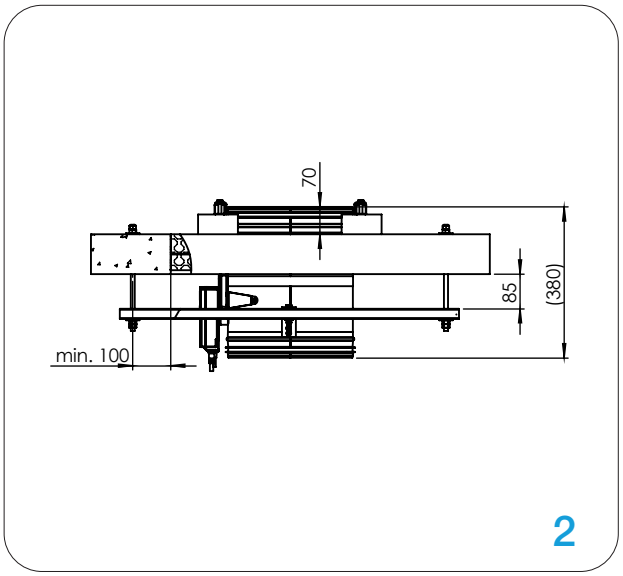
* The images shown are for illustration purposes only and may not be an exact representation of the product.

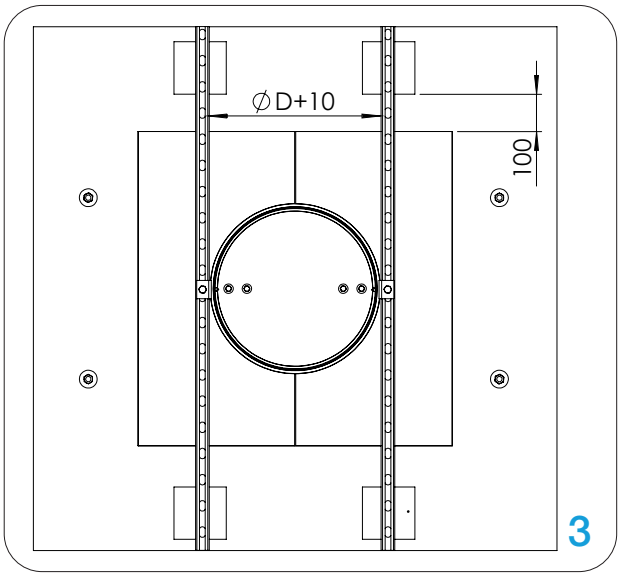
Possible damper orientations

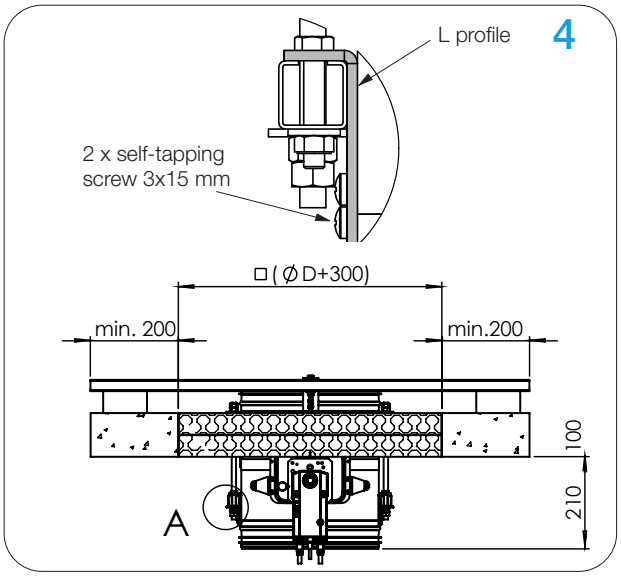


0-90˚-
180˚-270˚









Damper blade must be closed during installation!

1. Create an opening in the ceiling (D + 40_150mm). Bend the mounting bracket by 90°. Insert the damper into the opening up to the wall boundary mark on the damper.
For easier installation, the fire damper can be mounted on the floor / ceiling. Use approved / suitable screws for this purpose. (The mounting hole has a diameter of 6 mm.)

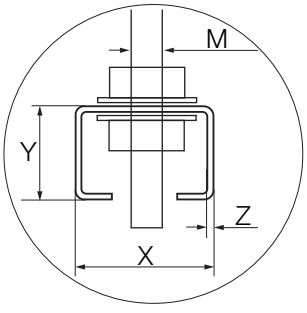
2. Suspension strut should be connected with drop rods (8/10mm) to the floor slab above. It is used to support the damper and ease the installation.

3. When using L profile fixation, support steel C profile with 50mm high piece of aerated concrete or similar rigid material. Not necessary if connecting rods directly to damper.

4. Damper casing is fixed to suspended and supported steel C profiles by two self tapping screws 4,8x16 **(make sure that it doesn't interfere with damper blade)** with L profile hanger **(detail A)** fixed to steel C profiles by M8 screw and nut. Position of self-tapping screws is through the middle of damper casing.

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Test the operation of the damper blade!

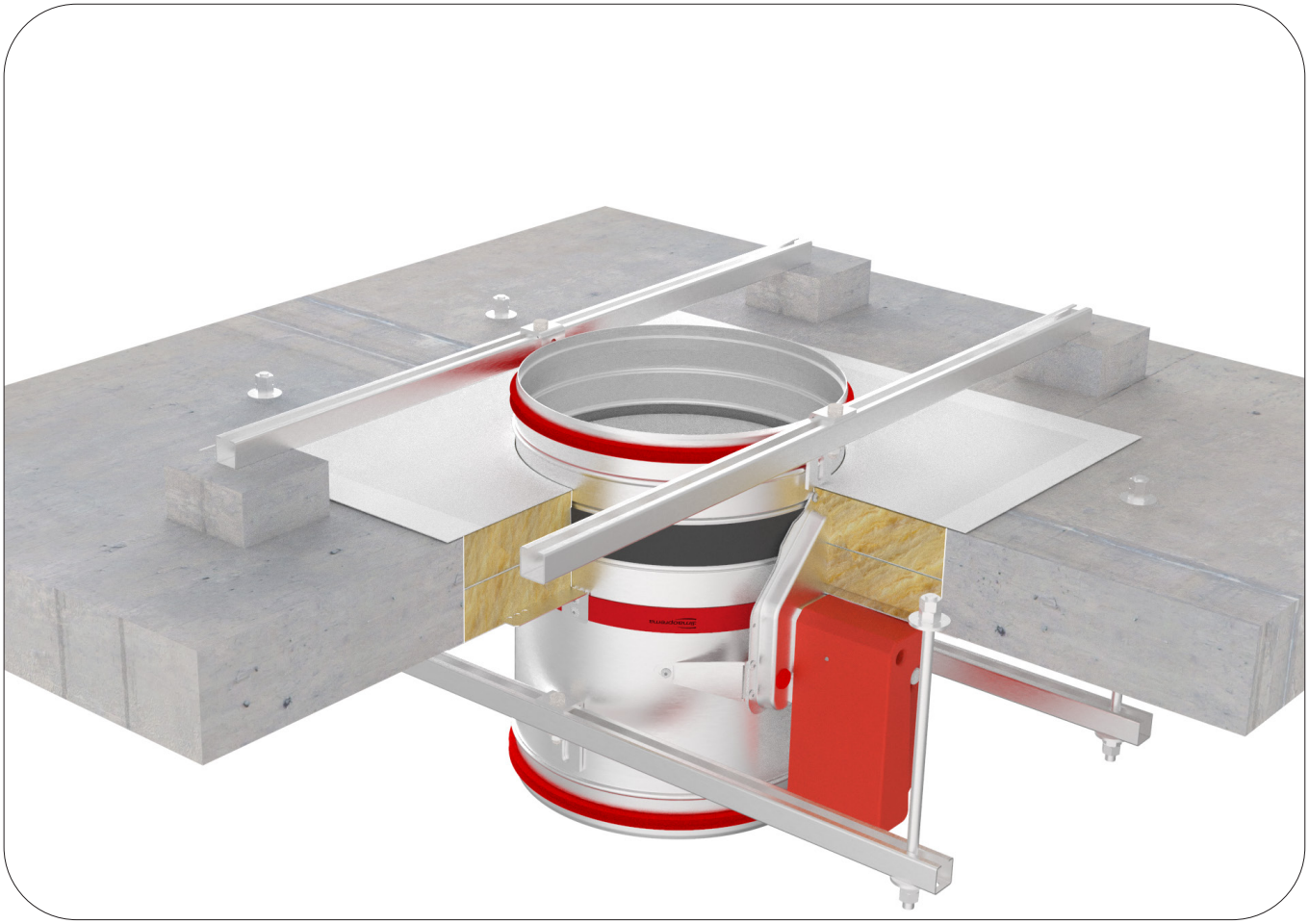


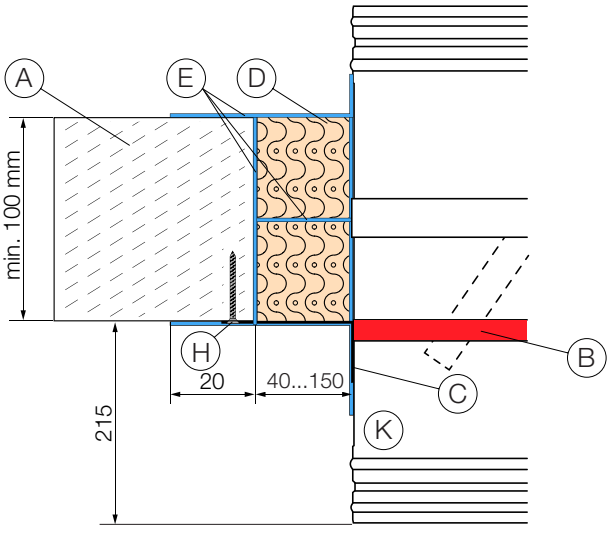
Suspension dimensions	X	Y	Z	M
FDC25	30	30	2.5	M8
FDC40	30	30	3	M10

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid floor/ceiling installation (Fire Batt/ Weichschott)

DOP WALLS MATERIALS





Installation in floor/ ceiling

A Rigid ceiling/floor
B Limit mark
C Fixing bracket with screw hole Ød 6mm
D Sealing material
H Masonry screw 6x50mm (optional)
K Fire damper casing

Classification

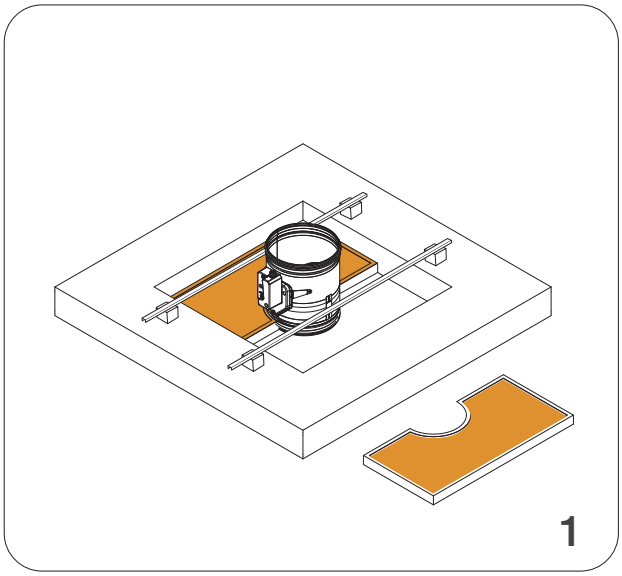
FDC25: EI 90 (ho i↔o)S
FDC40: EI 90 (ho i↔o)S

* The images shown are for illustration purposes only and may not be an exact representation of the product.

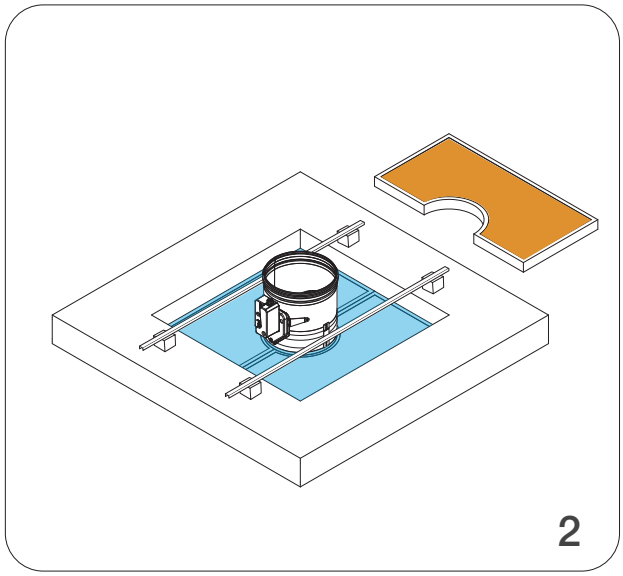
Possible damper orientations



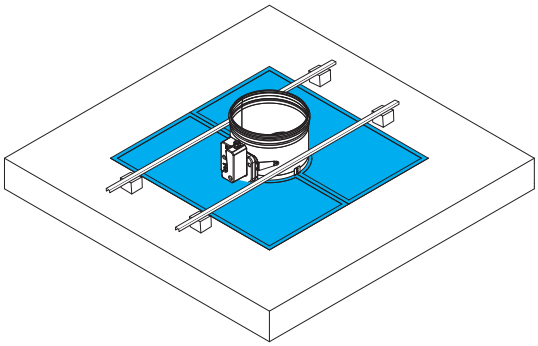
0-90˚-
180˚-270˚



1

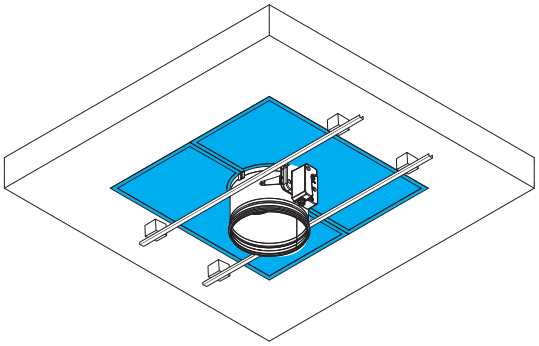


2



*Installation in floor

3



*Installation in ceiling

Damper blade must be closed during installation!

1. Close the gap between the housing and the wall with the first layer of mineral wool (50mm thick, coated on the inside). Seal the joints between the pieces of mineral wool with intumescent, fire-resistant sealant.

2. Close the gap between the housing and the wall with the second layer of mineral wool (50mm thick, coated on the inside). The joints between the mineral wool pieces must be sealed with intumescent, fire-resistant sealant.

3. The outside of the mineral wool and the damper housing must be coated with a 2 mm thick fire protection coating. The damper housing should be coated up to the profile projections.

*Fire Batt floor/ceiling installations require a suspension for the fire damper.

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Test the operation of the damper blade!

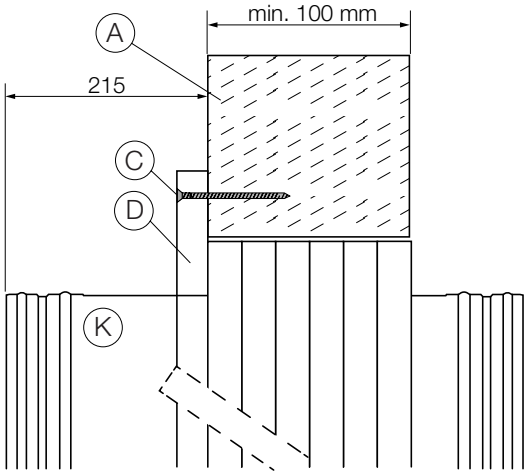
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid wall installation
Applique installation frame

DOP WALLS MATERIALS



The wall is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.



Rigid wall installation

A Rigid wall
C Masonry screw 8 x (6 x 50mm)
D Applique installation kit
K Fire damper casing

Classification

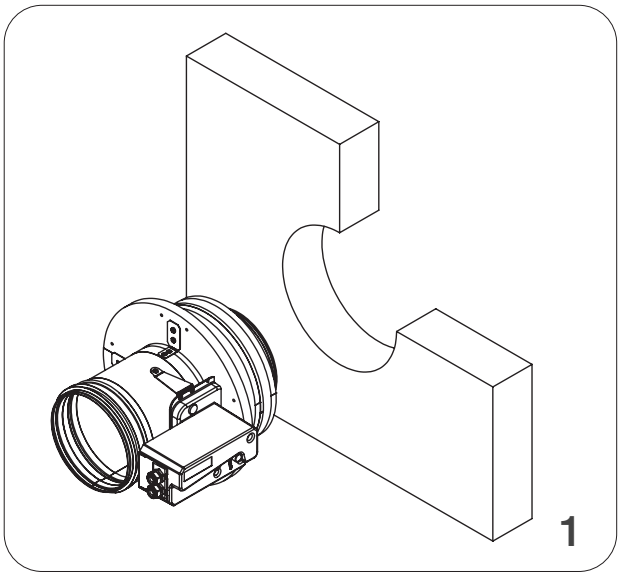
FDC25: EI 90 (ve i↔o)S

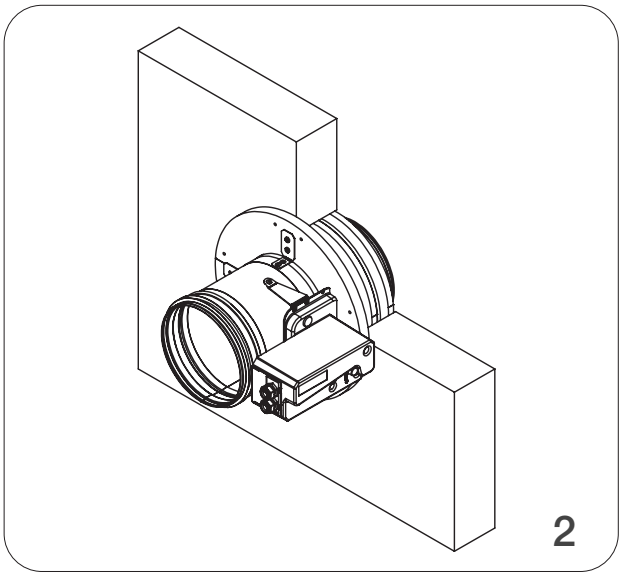
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚





Wall opening dimensions	
Damper diameter Ød [mm]	Wall opening [mm]
100	Ød + 110...120 mm
125-180	Ød + 100...110 mm
200-315	Ød + 85...95 mm

Damper blade must be closed during installation!

1. Create a wall opening according to the dimensions in the table below.

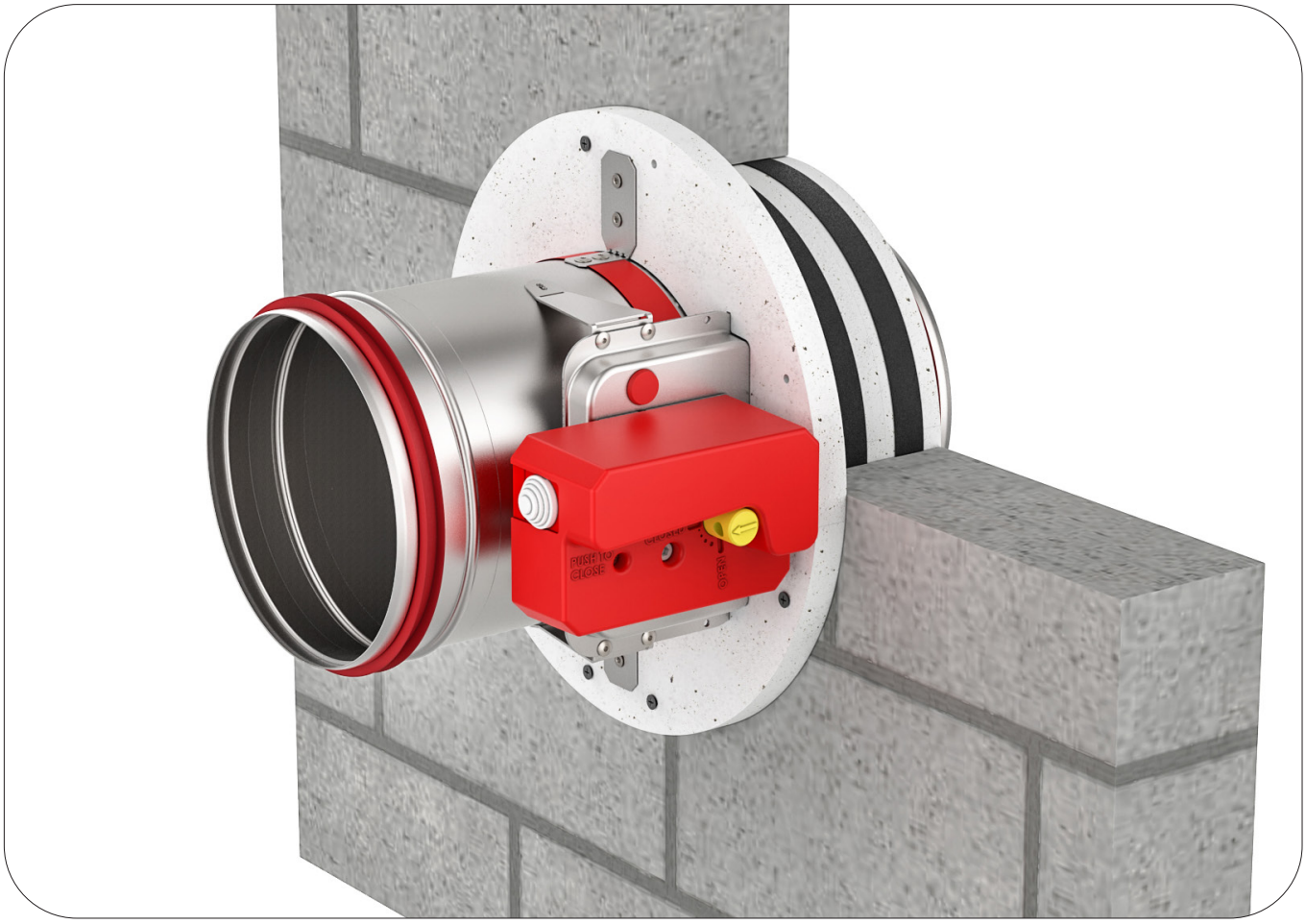
2. Insert fire damper into wall and fasten with screws (8 pcs, 6x50mm).

Test the operation of the damper blade!

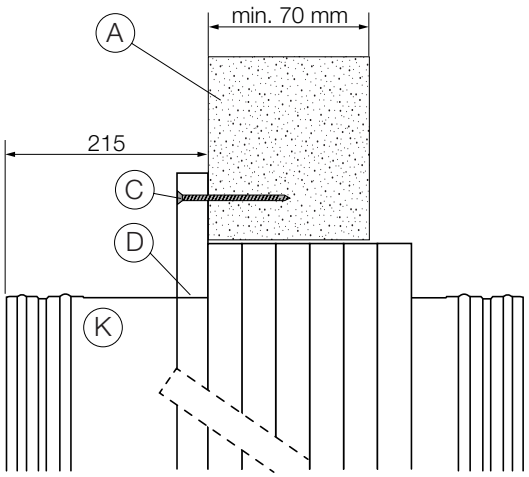
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Gypsum blocks wall installation
Applique installation frame

DOP WALLS MATERIALS



The wall is composed of gypsum blocks (minimum density of 995 kg/m^3), and with minimum thickness of 70mm.



Gypsum blocks wall installation

A Gypsum wall
C Masonry screx 6 x 50mm
D Applique installation kit
K Fire damper casing

Classification

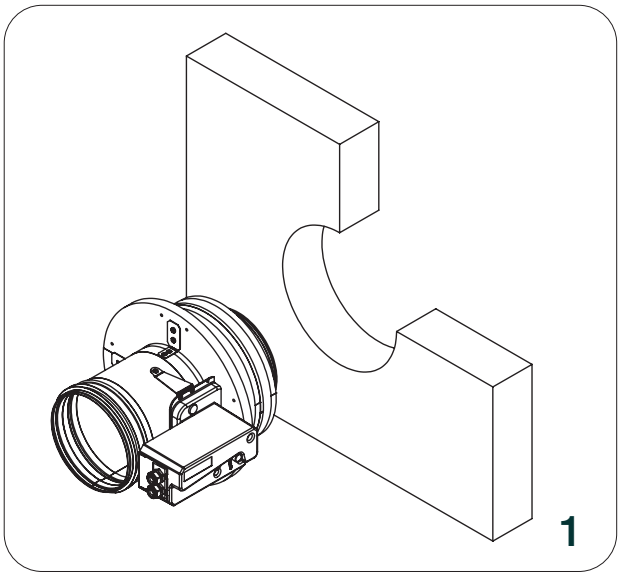
FDC25: EI 90 (ve i↔o)S

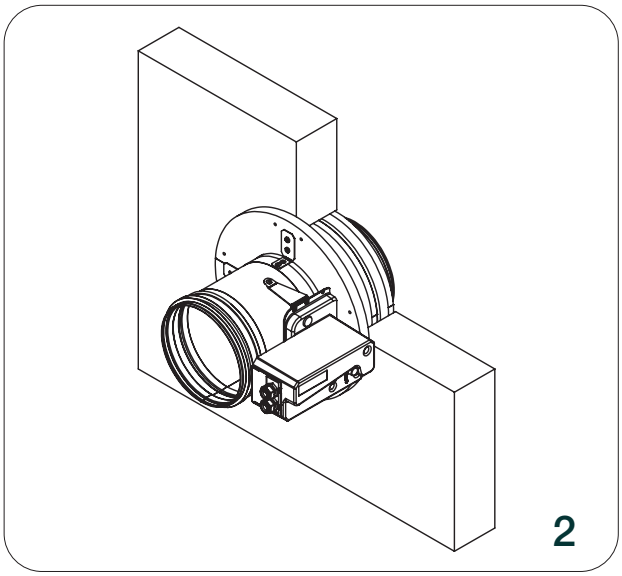
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚





Wall opening dimensions	
Damper diameter Ød [mm]	Wall opening [mm]
100	Ød + 110...120 mm
125-180	Ød + 100...110 mm
200-315	Ød + 85...95 mm

Damper blade must be closed during installation!

1. Create a wall opening according to the dimensions in the table below.

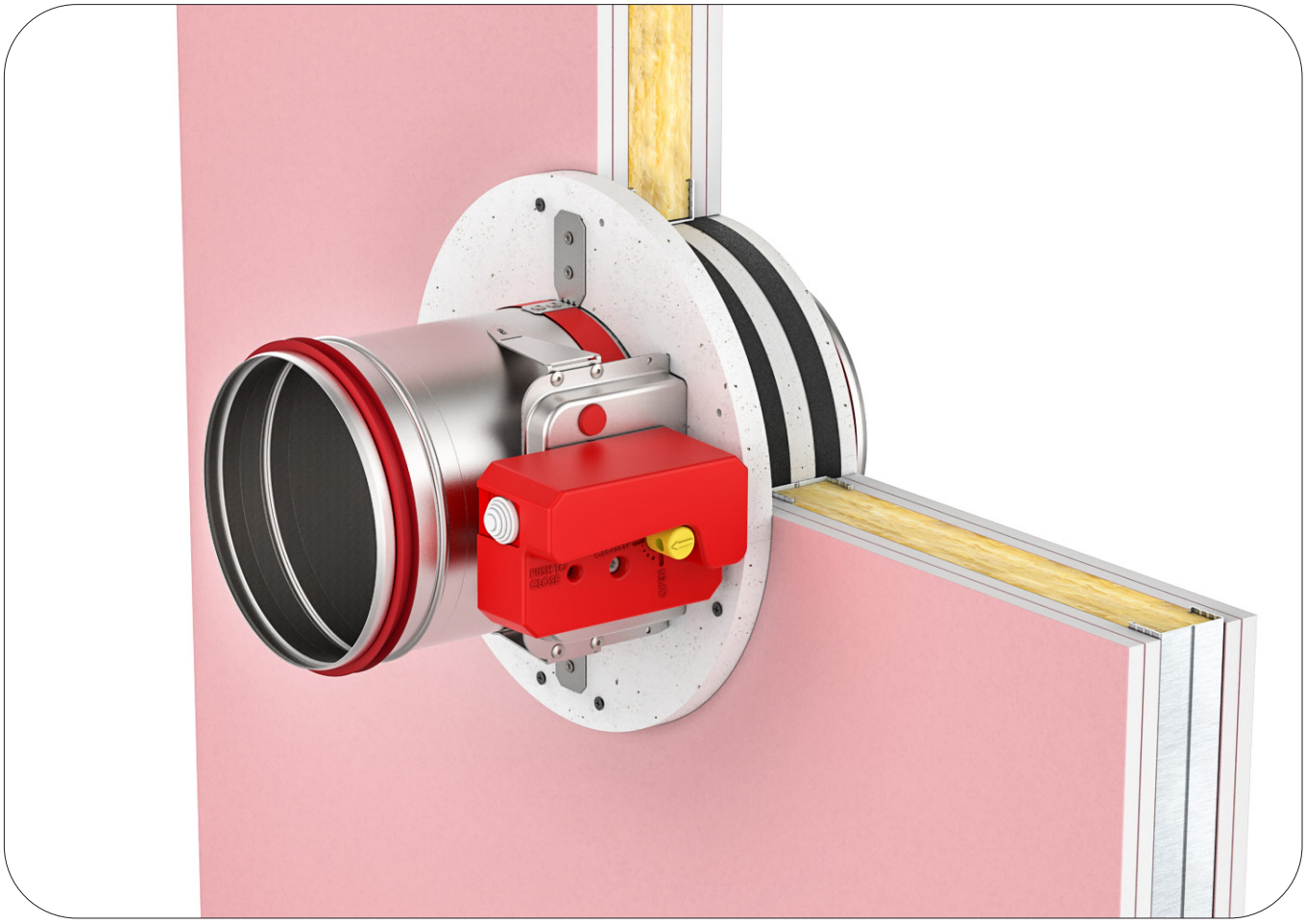
2. Insert fire damper into wall and fasten with screws (8 pcs, 6x50 mm).

Test the operation of the damper blade!

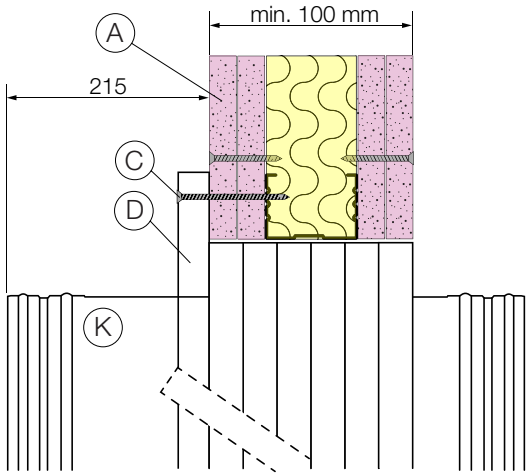
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Flexible wall installation
Applique installation frame

DOP WALLS MATERIALS



The wall is composed of 2x2 plasterboard boards, 12,5 mm 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/m^3 can be used).The minimum thickness of the wall is 100 mm.
EI 90 (ve i↔o)S The wall is made out of type F (EN520) gypsum plaster boards.
EI 60 (ve i↔o)S The wall is made out of type A (EN520) gypsum plaster boards.



Flexible wall installation

A Flexible wall
C Drywall screw 8 x (4,8 x 60 mm)
D Applique installation kit
K Fire damper casing

Classification

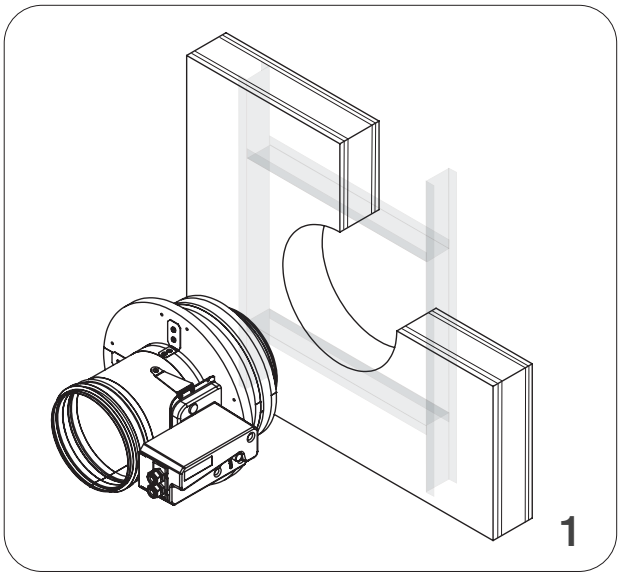
(type F wall) EI 90 (ve i↔o)S
(type A wall) EI 60 (ve i↔o)S

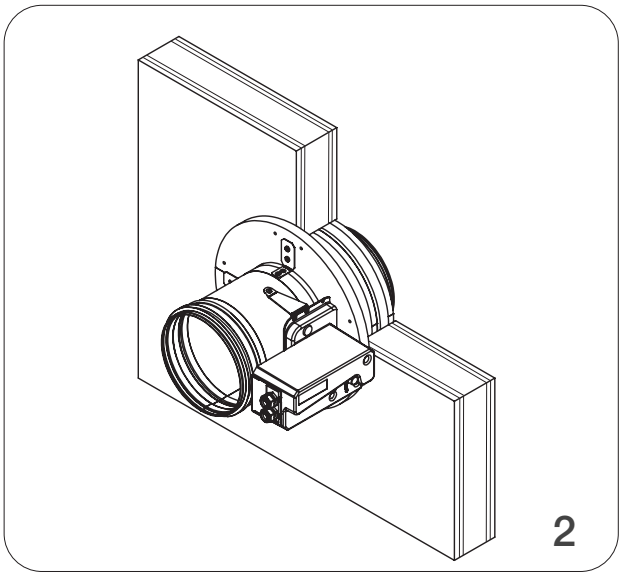
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚





Wall opening dimensions	
Damper diameter Ød [mm]	Wall opening [mm]
100	Ød + 110...120 mm
125-180	Ød + 100...110 mm
200-315	Ød + 85...95 mm

Damper blade must be closed during installation!

***Create an opening according to the table below and build the subframe according to the drawing.

1. Place the fire damper in the opening.

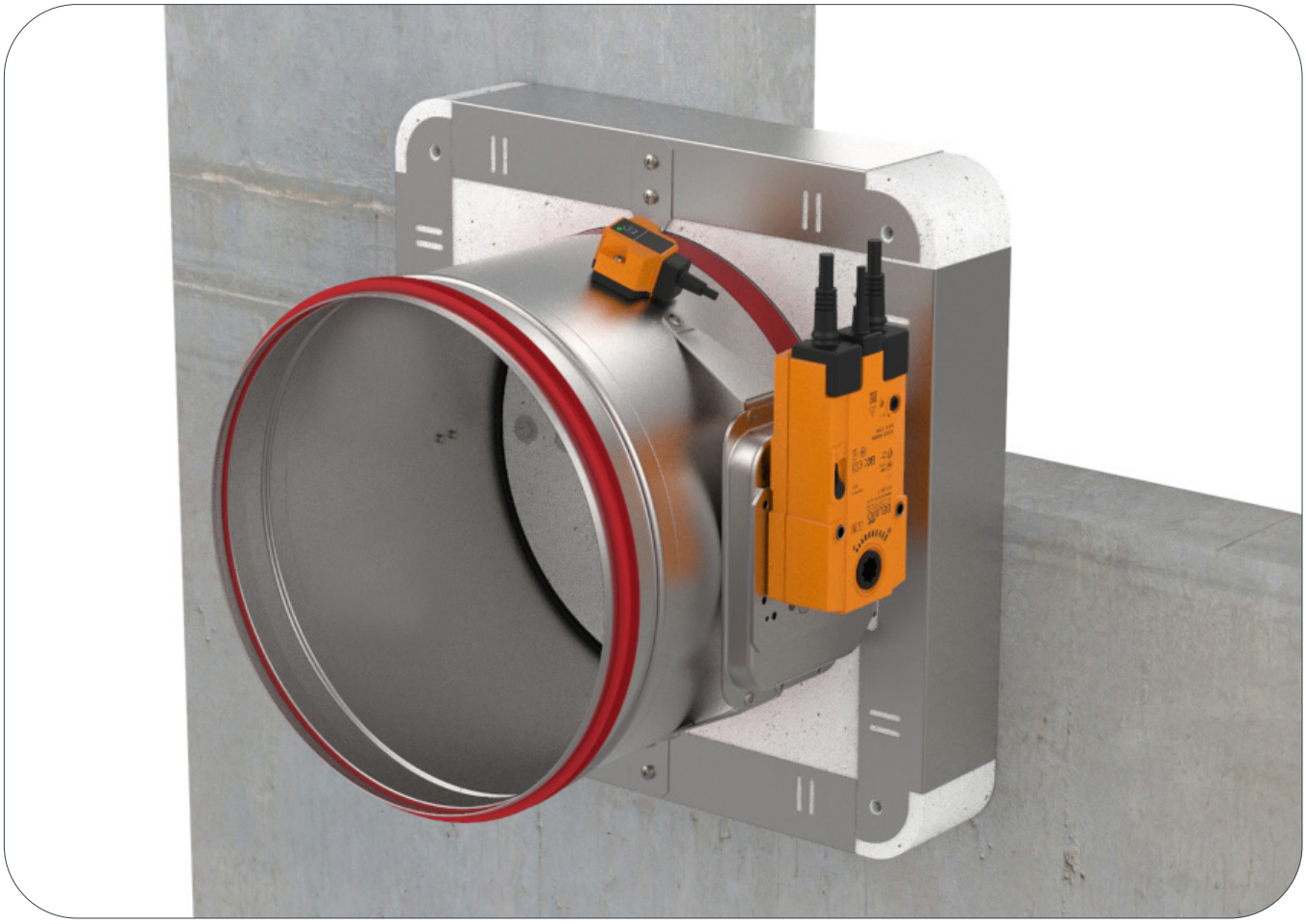
2. Fasten the fire damper with screws (8 pcs, 4,8x60mm).

Test the operation of the damper blade!

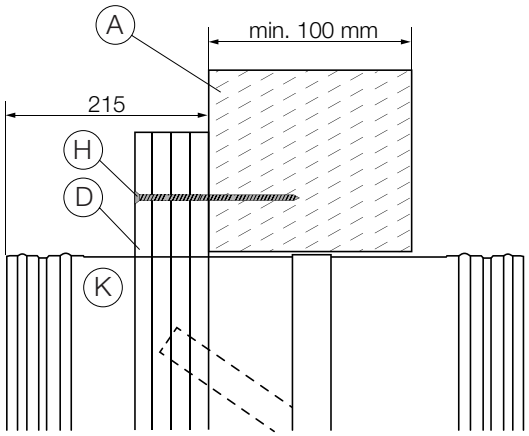
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Rigid wall installation
MF1/MF2 installation frame

DOP WALLS MATERIALS



The wall is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.



Rigid wall installation

A Rigid wall
D MF installation kit
H Masonry screw, (MF1 FDC25 4 pcs. 6x120mm, MF2 FDC25 12 pcs. 6x160mm,MF2 FDC40 12 pcs. 6x160mm)
K Fire damper casing

Classification

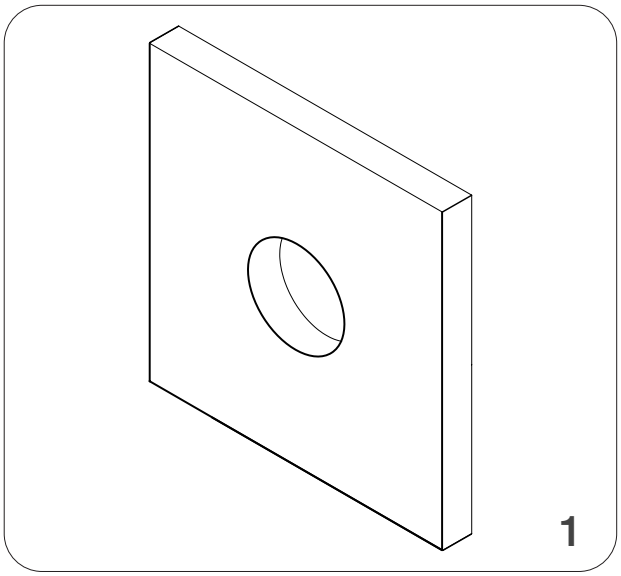
FDC25 MF1: EI 60 (ve i↔o)S
FDC40 MF2: EI 90 (ve i↔o)S

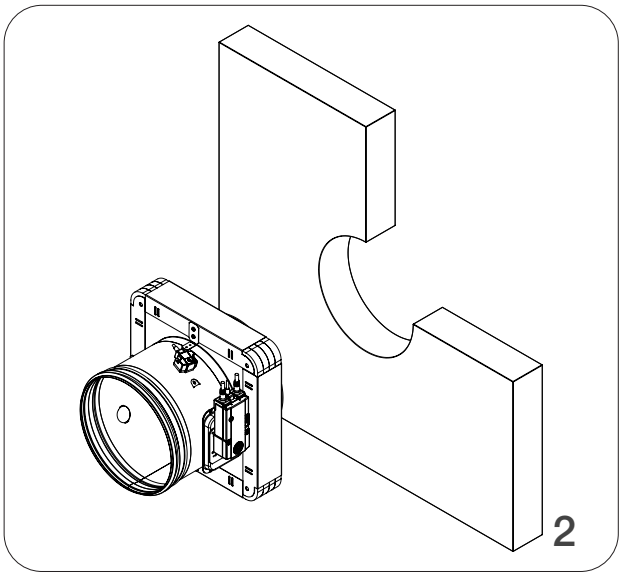
* The images shown are for illustration purposes only and may not be an exact representation of the product.

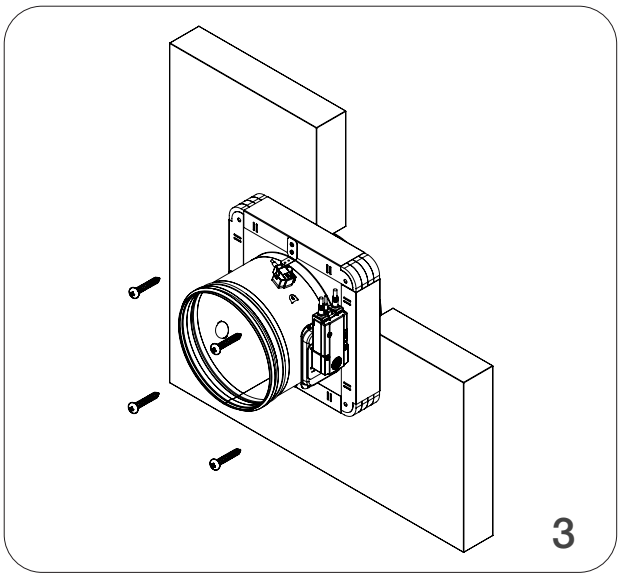
Possible damper orientations



0-90˚-
180˚-270˚







Damper blade must be closed during installation!

1. Create an opening in the wall (FDC25- Ød +10 mm, FDC40-Ød + 25mm).

2. Place the damper in the opening.

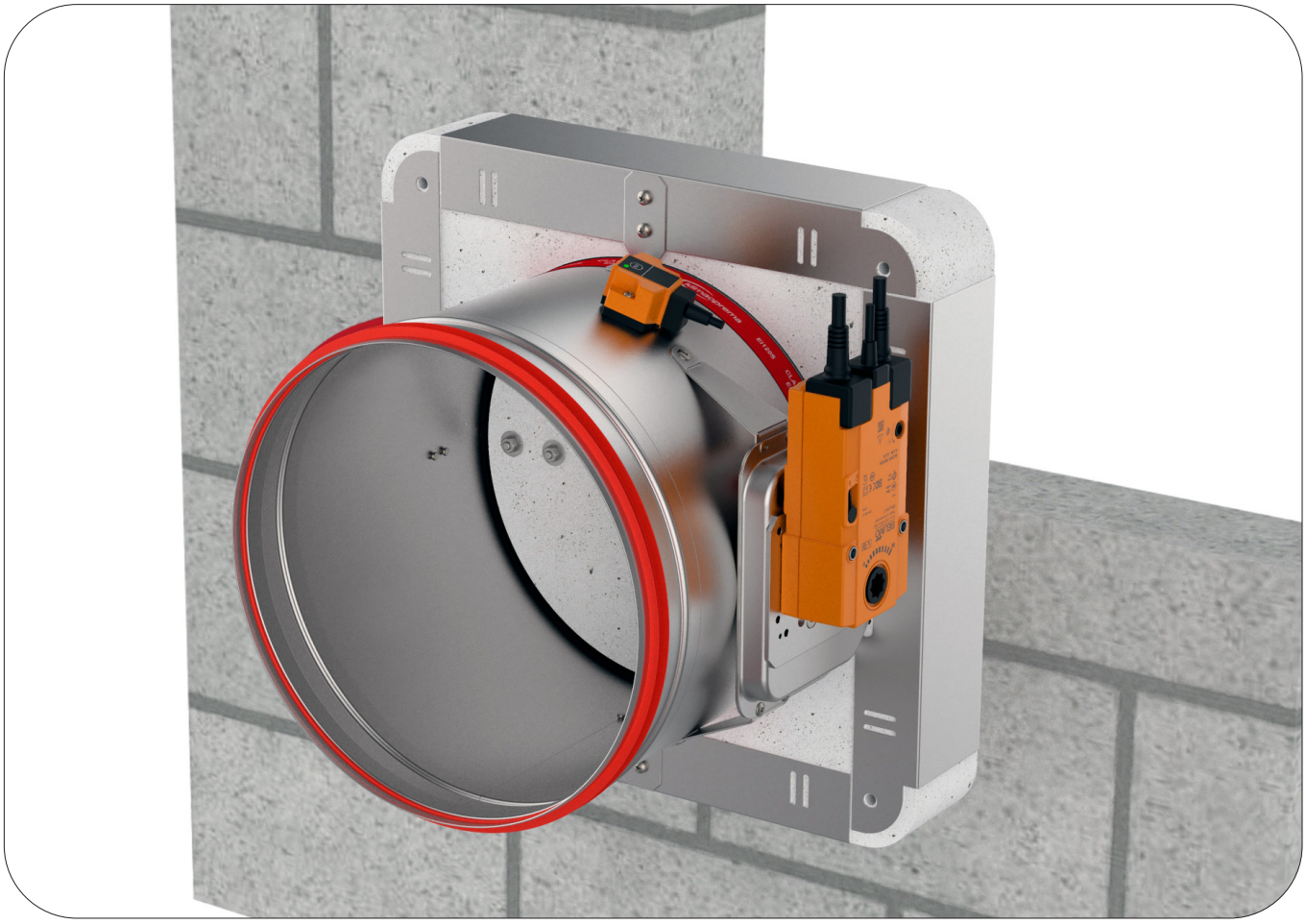
3. Fasten the fire damper with Masonry screws
   MF1 FDC25 4 pcs. 6x120mm
   MF2 FDC25 12 pcs. 6x160mm
   MF2 FDC40 12 pcs. 6x160mm)

Test the operation of the damper blade!

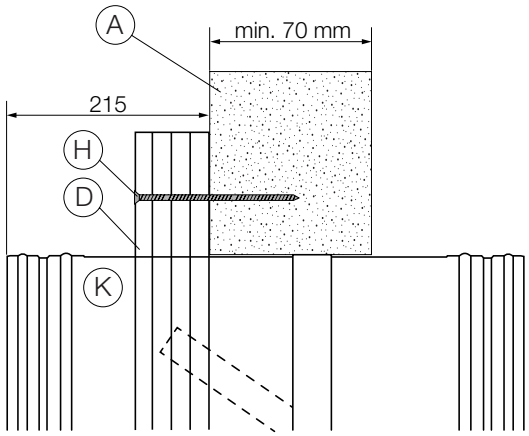
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Gypsum blocks wall MF1/MF2 installation frame

DOP WALLS MATERIALS



The wall is composed of gypsum blocks (minimum density of 995 kg/m^3) and with minimum thickness of 70 mm.



Gypsum blocks wall installation

A Gypsum blocks wall
D MF installation kit
H Masonry screw (MF1 FDC25 4 pcs. 6x120mm, MF2 FDC25 12 pcs. 6x160mm,MF2 FDC40 12 pcs. 6x160mm)
K Fire damper casing

Classification

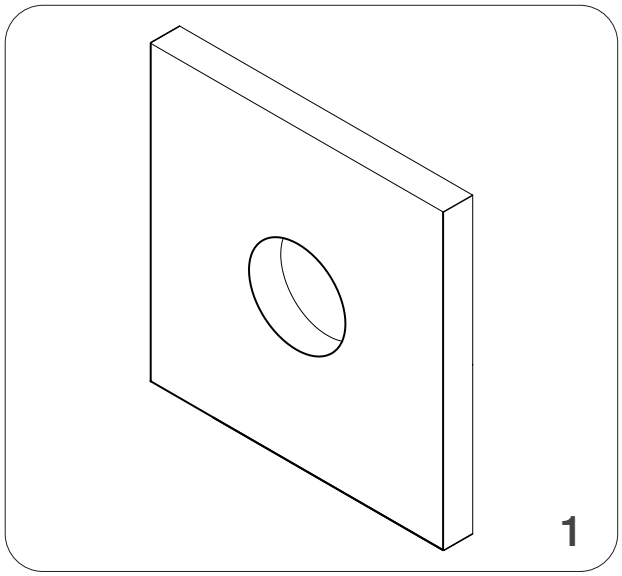
FDC25 MF1: EI 60 (ve i↔o)S
FDC40 MF2: EI 90 (ve i↔o)S

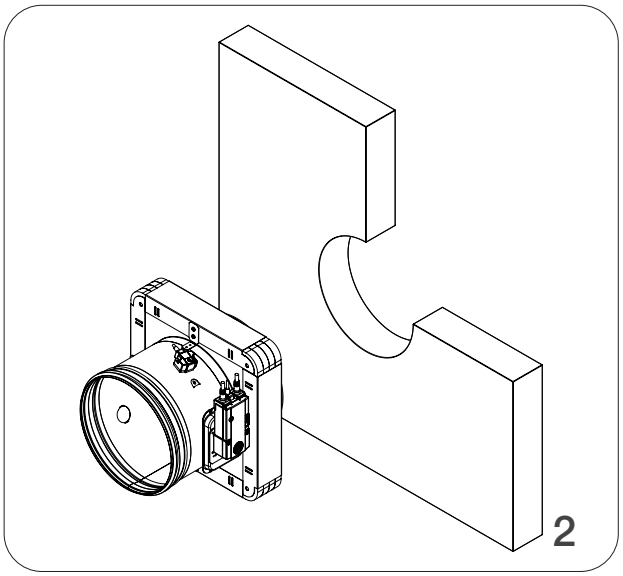
* The images shown are for illustration purposes only and may not be an exact representation of the product.

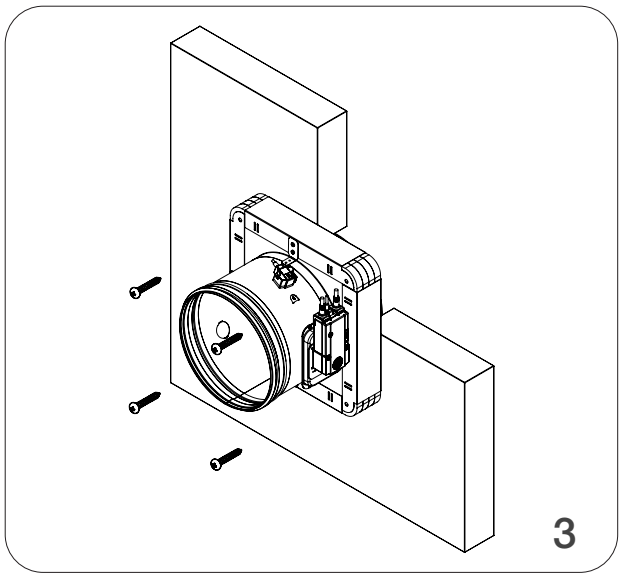
Possible damper orientations



0-90˚-
180˚-270˚







Damper blade must be closed during installation!

1. Create an opening in the wall (FDC25- Ød +10 mm, FDC40-Ød + 25mm).

2. Place the damper in the opening.

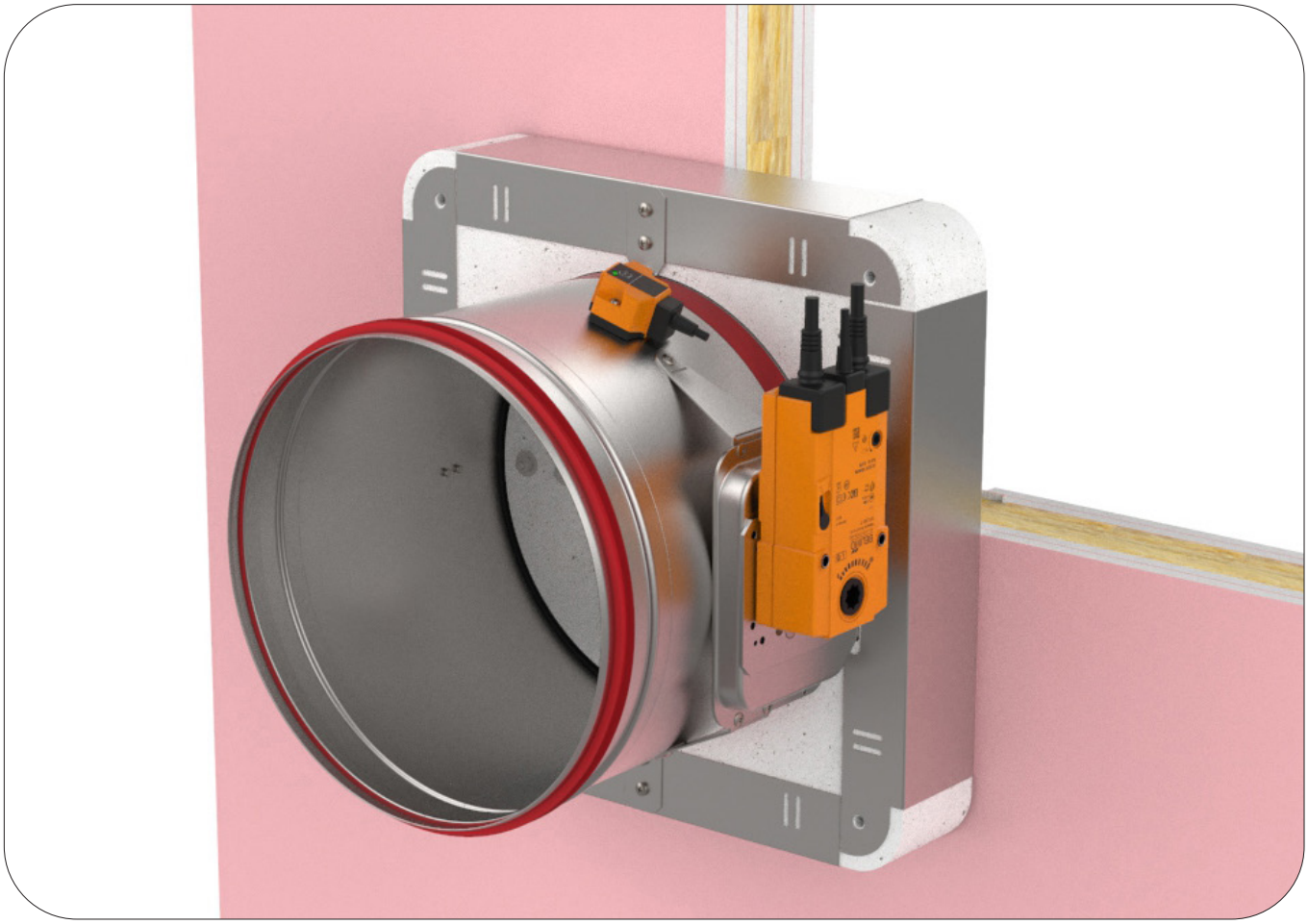
3. Fasten the fire damper with screws
   MF1 FDC25 4 pcs. 6x120mm
   MF2 FDC25 12 pcs. 6x160mm
   MF2 FDC40 12 pcs. 6x160mm)

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

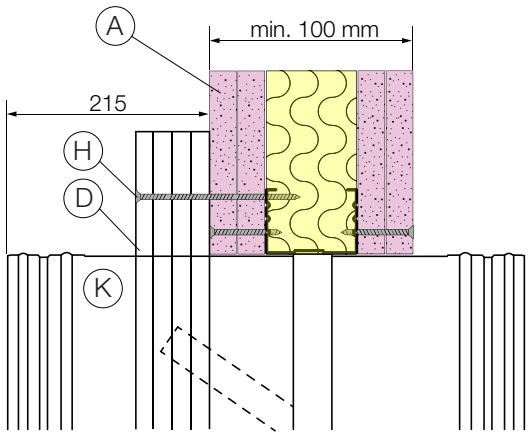
Flexible wall installation
MF1/MF2 installation frame

DOP WALLS MATERIALS



MF1 (EI 60 (ve i↔o)S)
The wall is made out of type A /type F (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/m^3 can be used). The minimum thickness of the wall is 100mm.

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 115kg/m^3 can be used). The minimum thickness of the wall is 100mm.



Flexible wall installation

A Flexible wall
D MF installation kit
H Drywall screw
MF1 FDC25 4 pcs. 6x120mm,
MF2 FDC25 12 pcs. 6x160mm,
MF2 FDC40 12 pcs. 6x160mm
K Fire damper casing

Classification

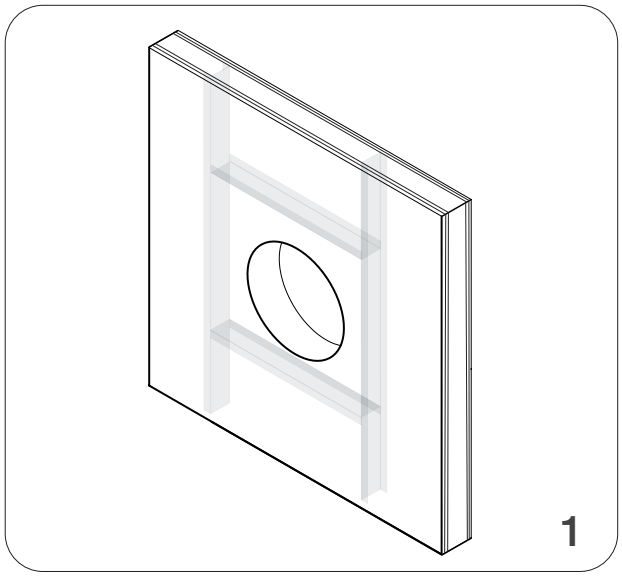
FDC25 MF1: EI 60 (ve i↔o)S
FDC25 MF2: EI 60 (ve i↔o)S (Type A)
FDC25 MF2: EI 90 (ve i↔o)S (Type F)
FDC40 MF2: EI 90 (ve i↔o)S (Type F)
FDC40 MF2: EI 60 (ve i↔o)S (Type A)

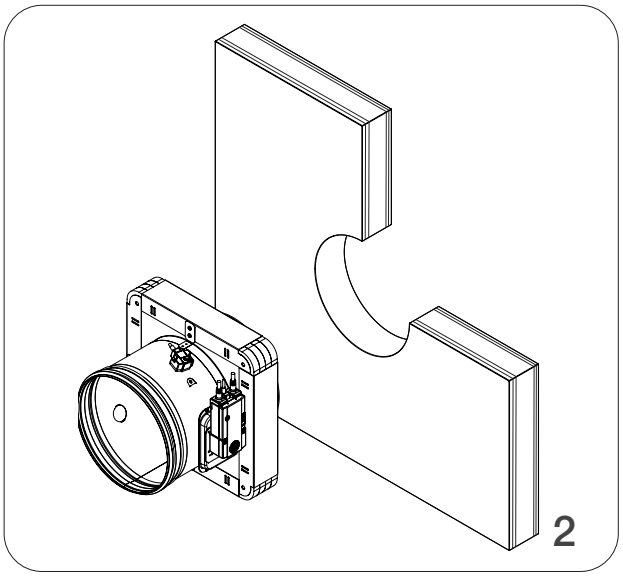
* The images shown are for illustration purposes only and may not be an exact representation of the product.

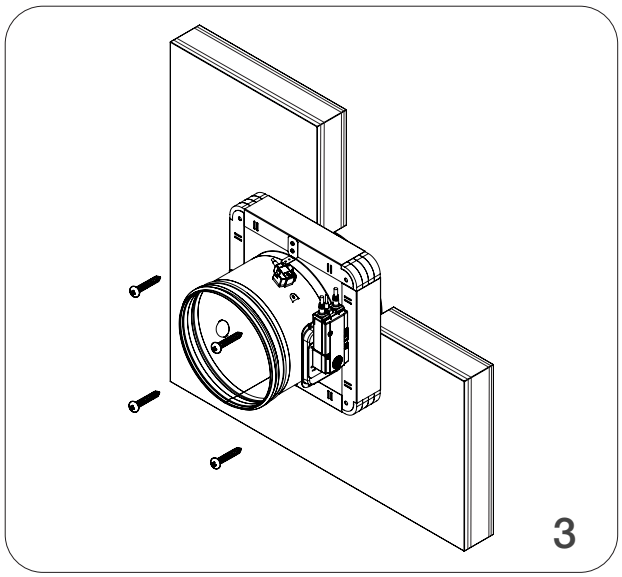
Possible damper orientations



0-90˚-
180˚-270˚







Damper blade must be closed during installation!

1. Create an opening in the wall (FDC25- Ød +10mm, FDC40-Ød + 25mm) and build the subframe according to the drawing.

2. Place the fire damper in the opening.

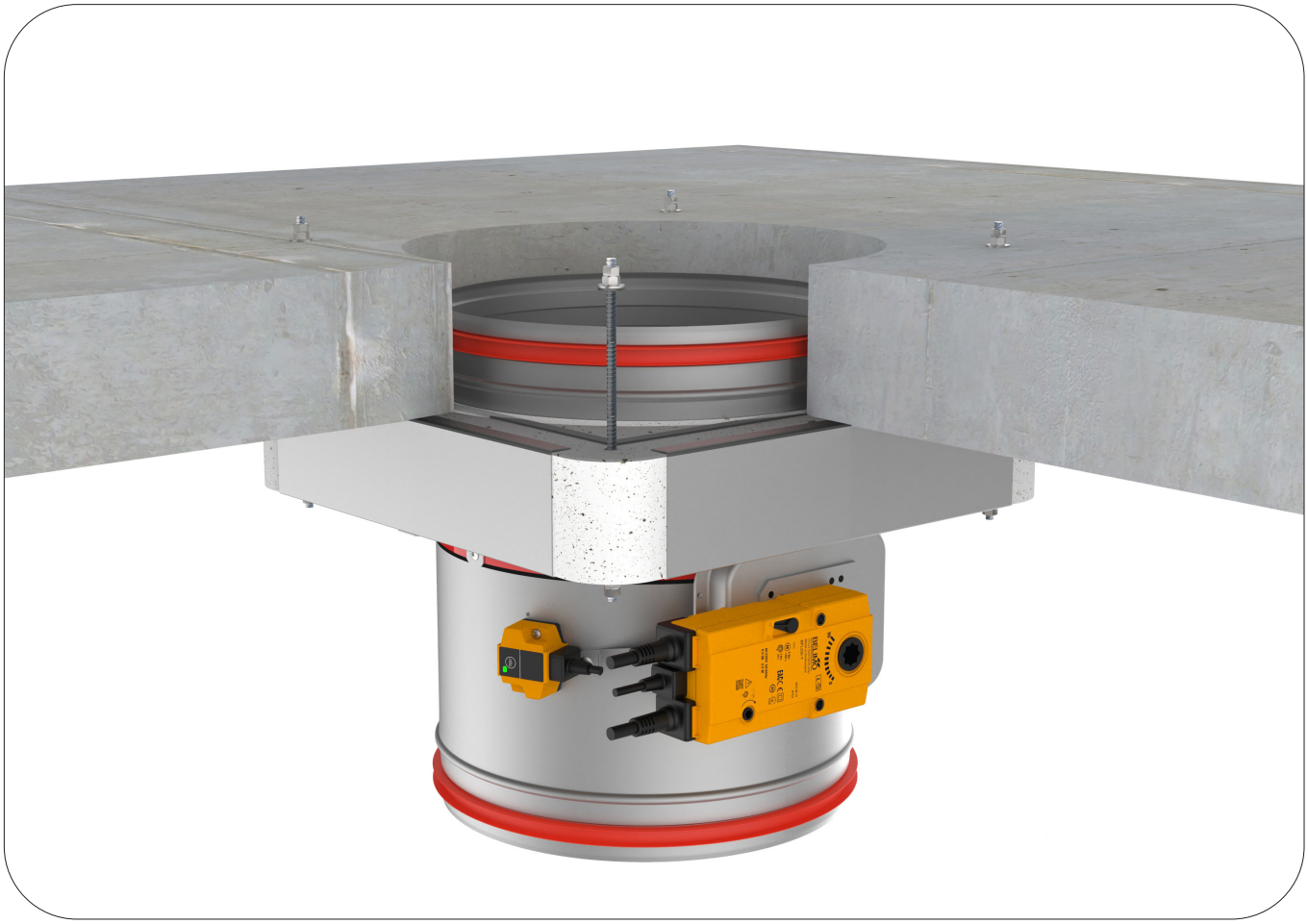
3. Fasten the fire damper with screws
   MF1 FDC25 4 pcs. 6x120mm,
   MF2 FDC25 12 pcs. 6x160mm,
   MF2 FDC40 12 pcs. 6x160mm

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

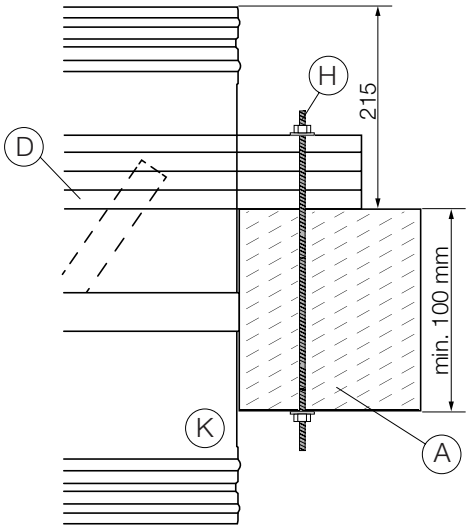
Rigid floor/ceiling installation
MF2 installation frame

DOP WALLS MATERIALS



The floor/ceiling is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100 mm.

No FDC25 MF2 in ceiling installation!



Floor/ceiling installation
Actuator down

A Rigid floor/ceiling
D MF installation kit
H MF1 4pcs of M6 threaded rods trough ceiling and tightened with M6 nut/counternut from both sides
H MF2 12pcs of M6 threaded rods trough ceiling and tightened with M6 nut/counternut from both sides

K Fire damper casing

Classification

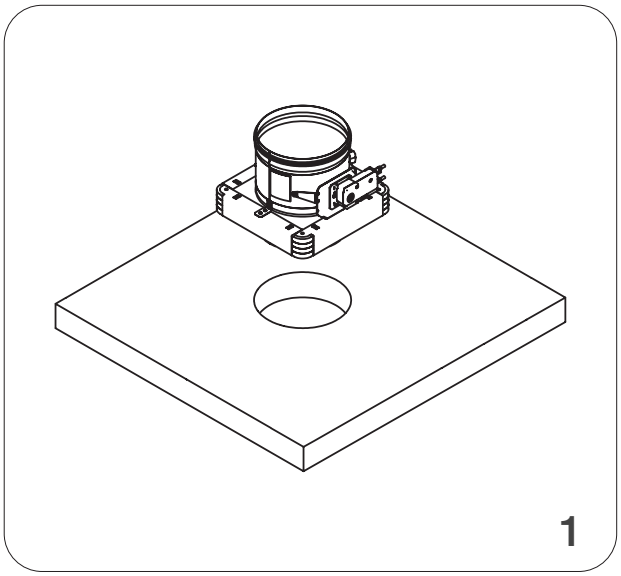
FDC25 MF1 EI120S (ho i↔o)S
FDC40 MF2: EI 90 (ho i↔o)S

* The images shown are for illustration purposes only and may not be an exact representation of the product.

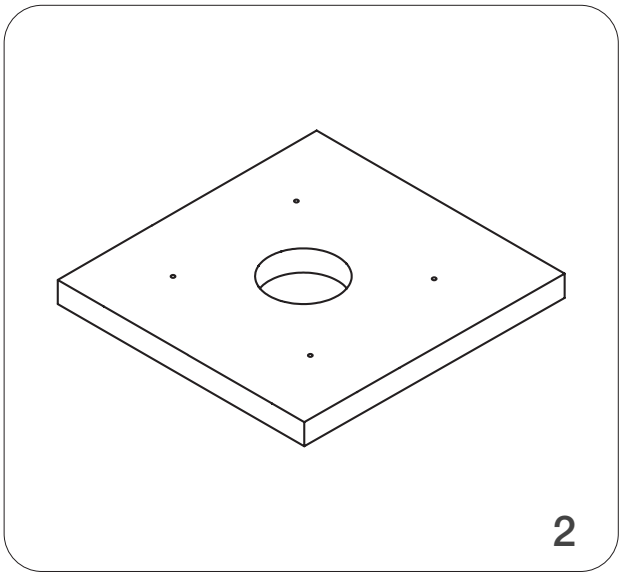
Possible damper orientations



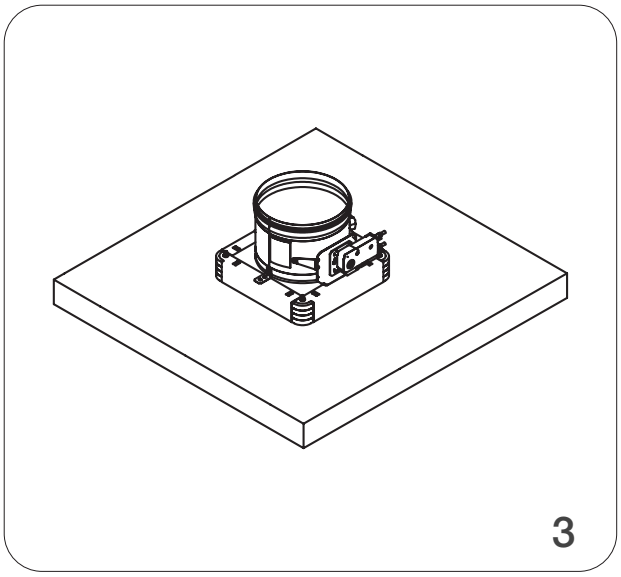
0-360°



1



2



3

Damper blade must be closed during installation!

1. Create an opening in the floor/ceiling (FDC25- Ød +10mm, FDC40-Ød + 25mm).
Insert the fire damper into the opening and mark the places for drilling holes.

2. Remove the fire damper and drill the marked places (8mm).

3. Mount 4/12 sets of pre-cut threaded rods, washer, nut and counternut on one side. Place pre-assembled threaded rods in holes in floor/ceiling, and place the damper in the opening. Tighten the tightening sets from opposite side with washer, nut and counternut.

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

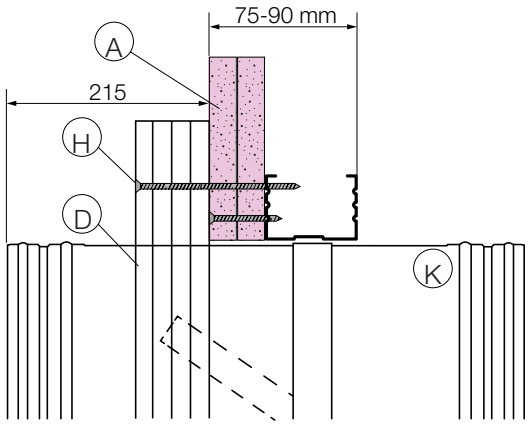
Shaft wall installation
MF2 installation frame

DOP WALLS MATERIALS



The wall is composed of 1x2 plasterboard boards, 12,5mm / 20mm thick, installed on a steel frame construction.

FDC25/FDC40 MF2 (**EI 60 (ve i↔o)S**) - 12,5mm - GKF/Piano
FDC25/FDC40 MF2 (**EI 90 (ve i↔o)S**) - 20mm - Fireboard



Flexible wall installation

A Shaft wall
D MF installation kit
H Drywall screw
MF2 FDC25 12 pcs. 6x160mm,
MF2 FDC40 12 pcs. 6x160mm
K Fire damper casing

Classification

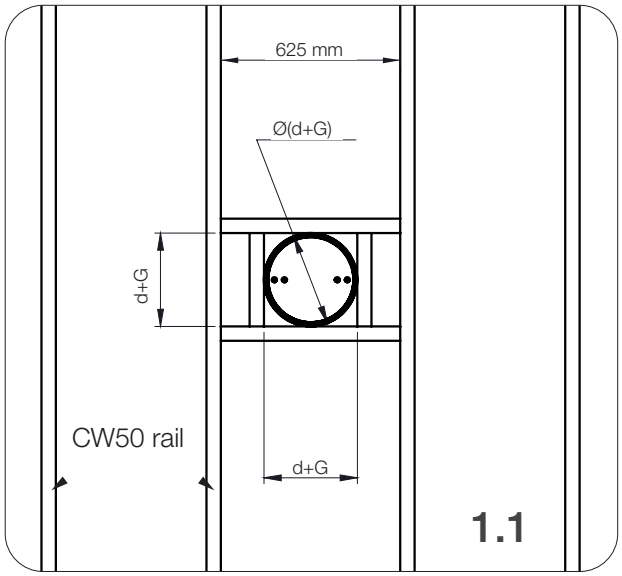
FDC25 MF2: EI 60 (ve i↔o)S (GKF/Piano)
FDC40 MF2: EI 60 (ve i↔o)S (GKF/Piano)
FDC25 MF2: EI 90 (ve i↔o)S (Fireboard)
FDC40 MF2: EI 90 (ve i↔o)S (Fireboard)

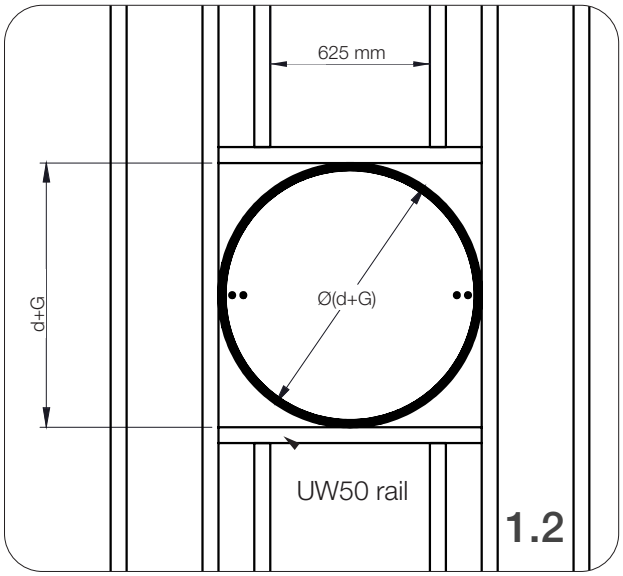
* The images shown are for illustration purposes only and may not be an exact representation of the product.

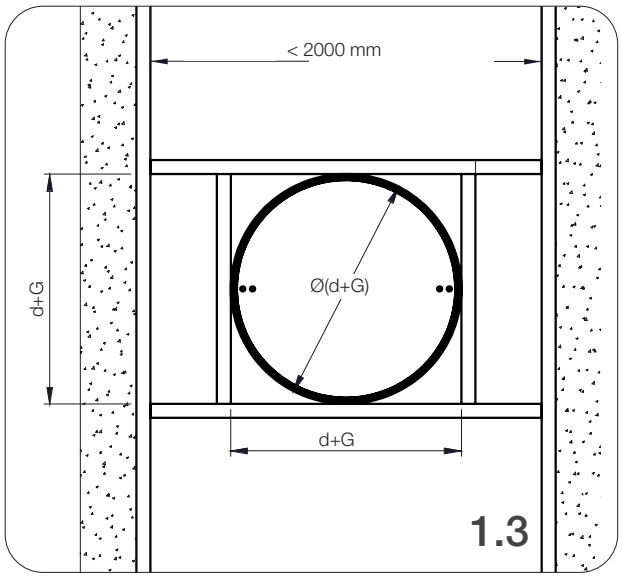
Possible damper orientations



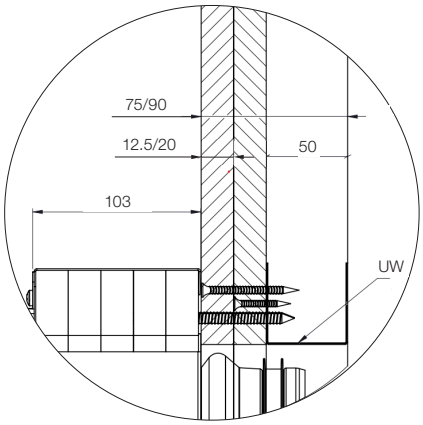
0-90˚-
180˚-270˚







FDC25, FDC40 - side cross section



Damper blade must be closed during installation!

(1.1) For fire dampers **Ød < 625 mm,** make a steel subframe according to drawing
(1.2). For fire dampers **Ød > 625 mm,** make a steel subframe according to drawing.
(1.3) For installation in shaft walls without metal studs, make a steel subframe according to drawing.

2. Place the fire damper in the opening.

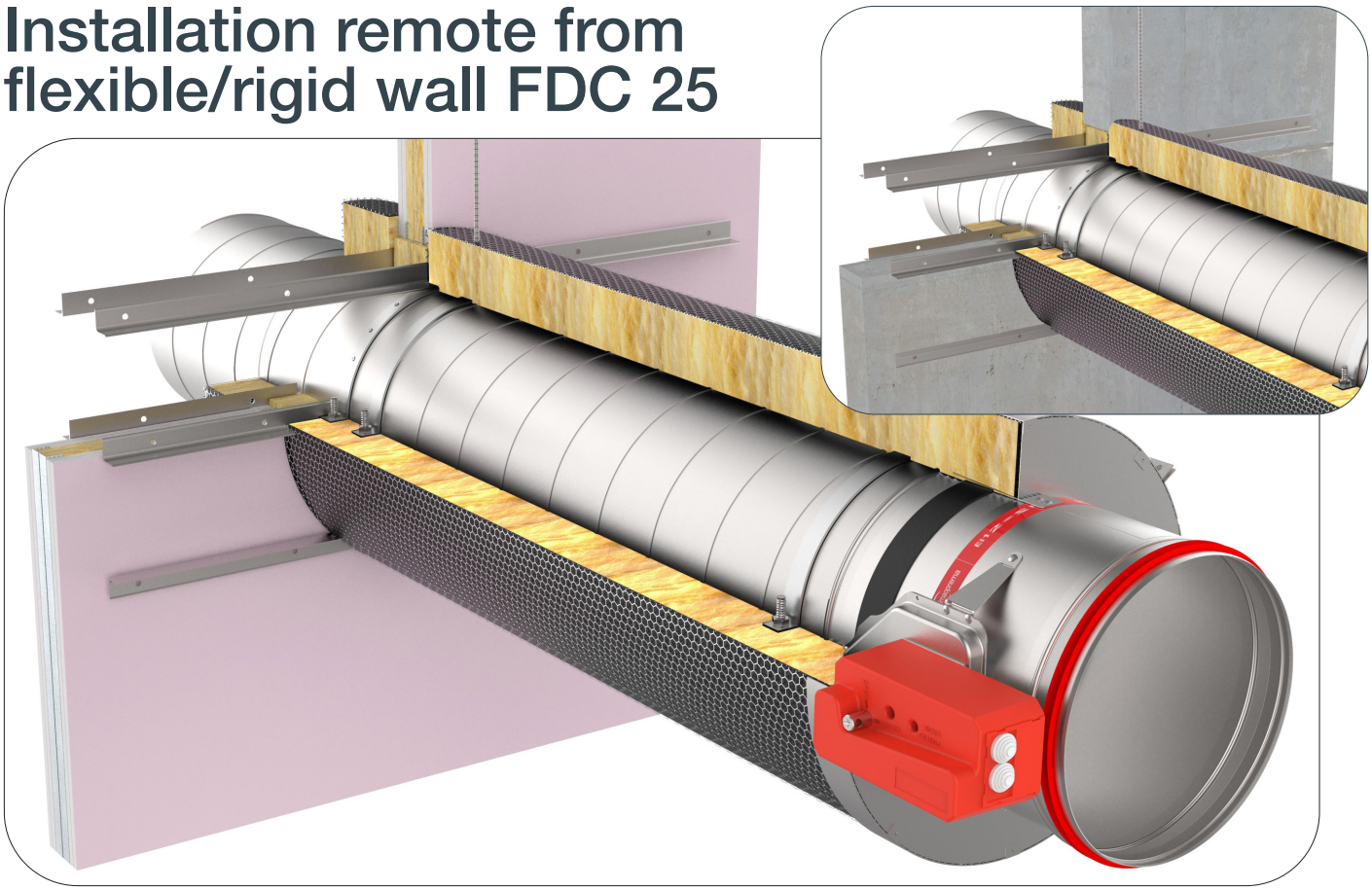
3. Insert fire damper into wall and fasten with screws (12pcs, 6x160mm).

Test the operation of the damper blade!

* Dimension G depending of the damper type is:
G=10 mm for FDC25
G=25 mm for FDC40

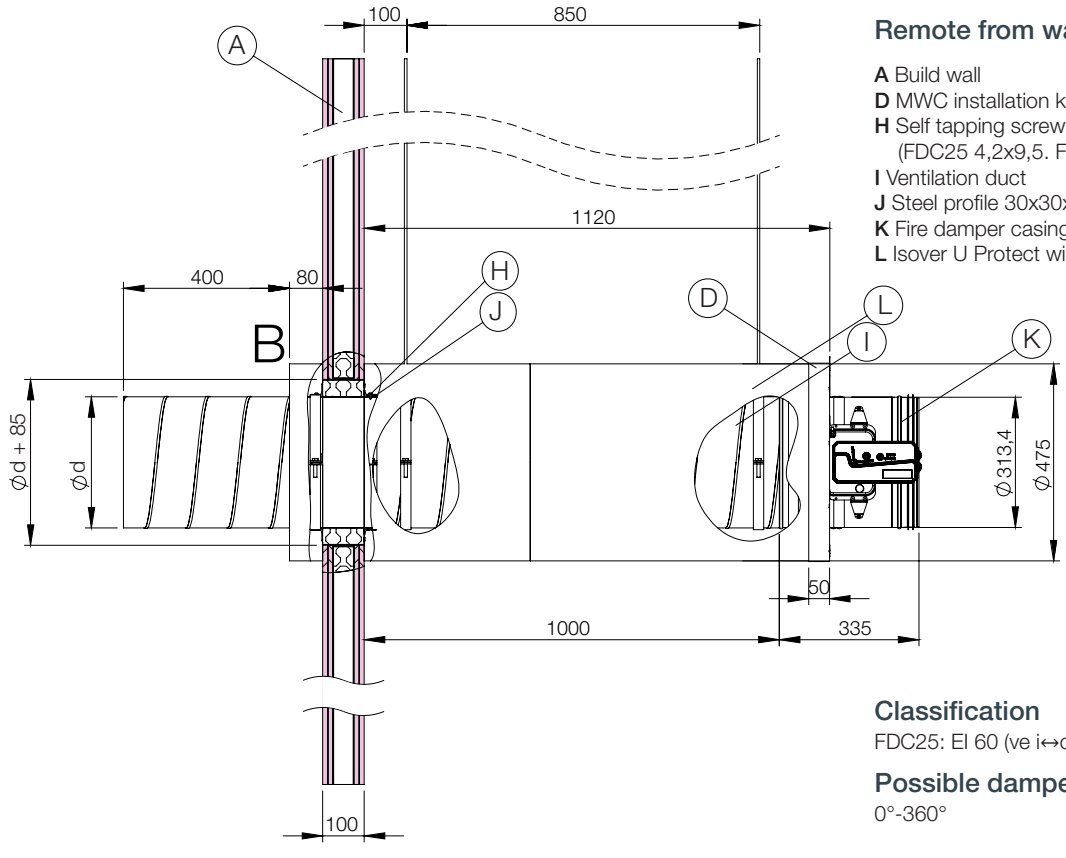
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Installation remote from flexible/rigid wall FDC 25



Flexible wall: The wall is composed 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 115 kg/m^3 can be used). The minimum thickness of the wall is 100 mm.

Rigid wall: The wall is composed of areated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.



Remote from wall installation

A Build wall
D MWC installation kit
H Self tapping screw 6x140mm, (FDC25 4,2x9,5. FDC40 4,3x10)
I Ventilation duct
J Steel profile 30x30x3
K Fire damper casing
L Isover U Protect wired mat alu, 80mm

Classification

FDC25: EI 60 (ve i↔o)S

Possible damper orientations

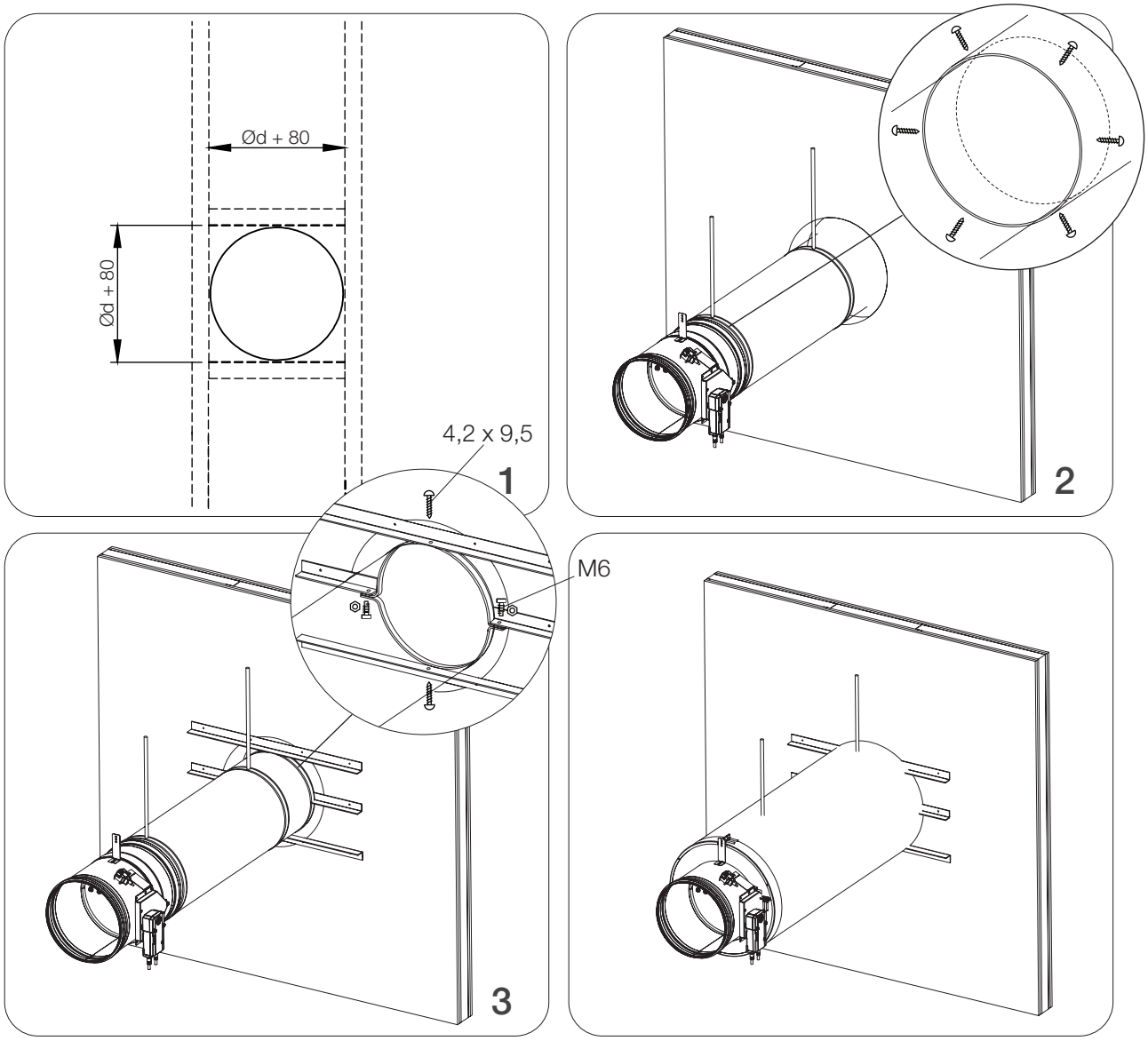
0°-360°

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚



Damper blade must be closed during installation!

1. Install fire damper and secure it with self-tapping screws 4,2x9,5 to duct. Fill space between duct and wall with mineral wool (Isover U protect Wired Mat Alu 1, min. 80mm thickness).

2. Place the damper in an opening according to the picture. Place ventilation duct through wall (thickness of threaded rod for suspension should be M10)

3. Close installation with L profiles 30x30x3 mm. Additionally fix profiles to duct with self-tapping screws, and screw them to wall with 4,5x50 screws with 200 mm distance between them. On connection between the wool and the wall. Repeat the same procedure on the other side. Place the wool on ventilation duct in length of 80 mm

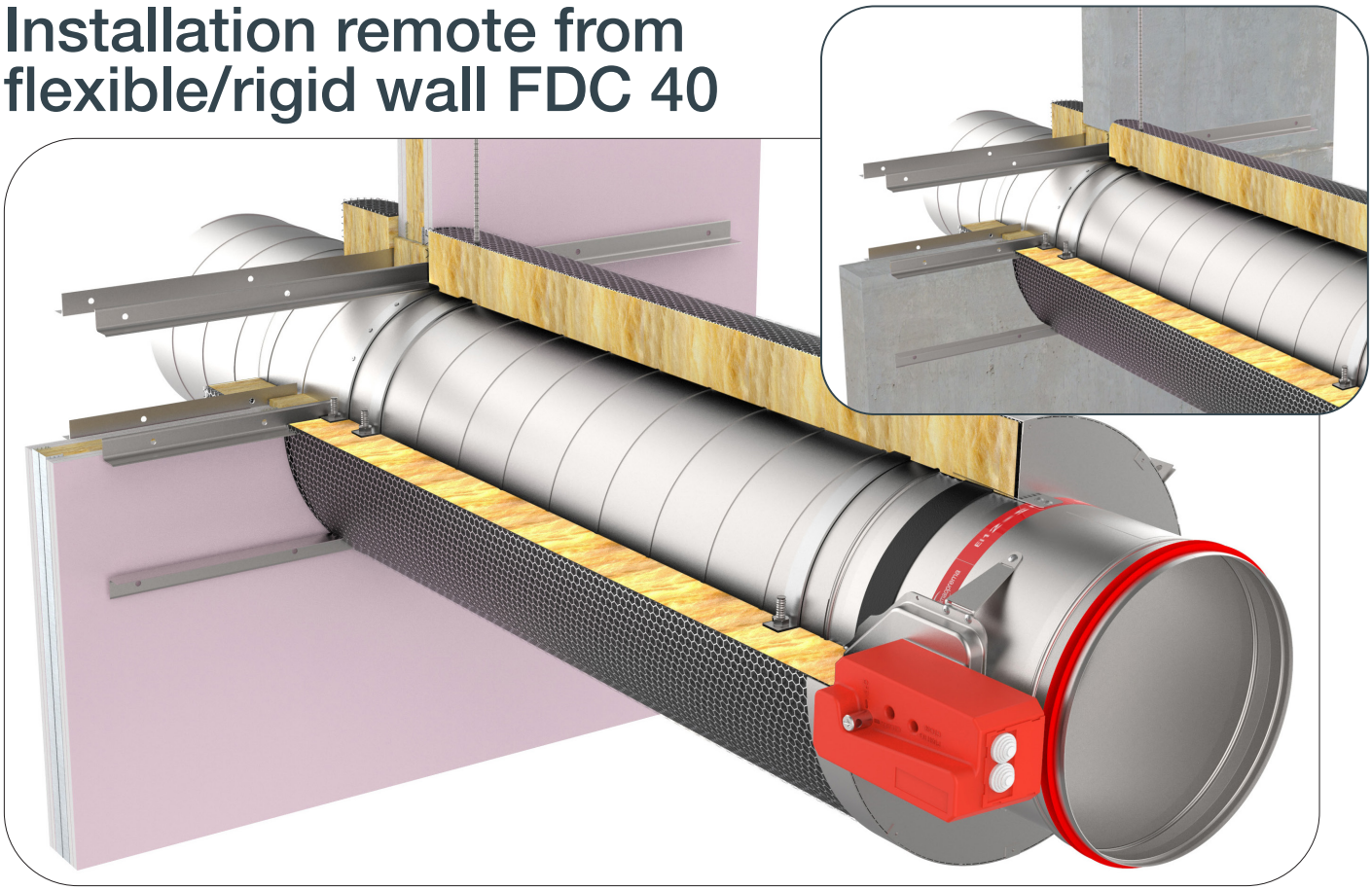
4. Place steel protection on place where insulation on damper ends (80x80mm, 1 mm thick metal sheet cover)

Max. dimension for this installation Ød 315
***Use MWC accessories kit for installation!**

Test the operation of the damper blade!

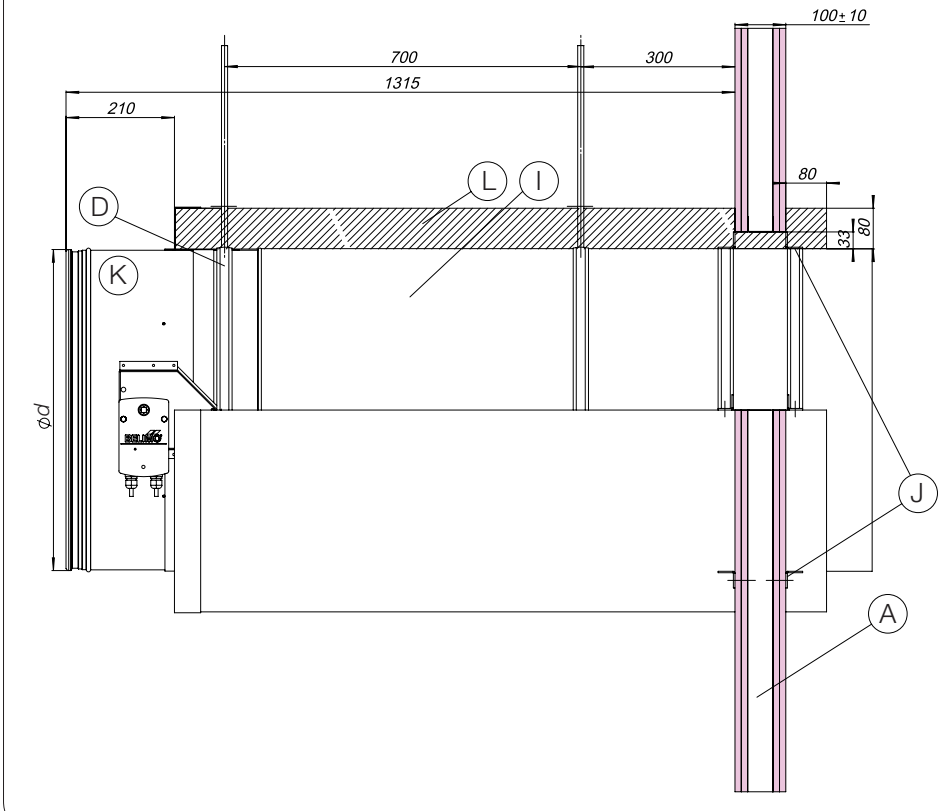
* The images shown are for illustration purposes only and may not be an exact representation of the product.

Installation remote from flexible/rigid wall FDC 40



Flexible wall: The wall is composed of 2x2 plasterboard boards, 12,5 mm 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 60 kg/m^3 can be used). The minimum thickness of the wall is 100mm.

Rigid wall: The wall is composed of aerated concrete (minimum density of 450 kg/m^3) or reinforced concrete (minimum density of 2200 kg/m^3) and with a minimum thickness of 100mm.



Remote from wall installation

A Build wall
D MWC installation kit
I Ventilation duct
J Steel profile 30x30x3
K Fire damper casing
L Isover U Protect wired mat, 80mm

Classification

FD40: EI 60 (ve i↔o)S

Possible damper orientations

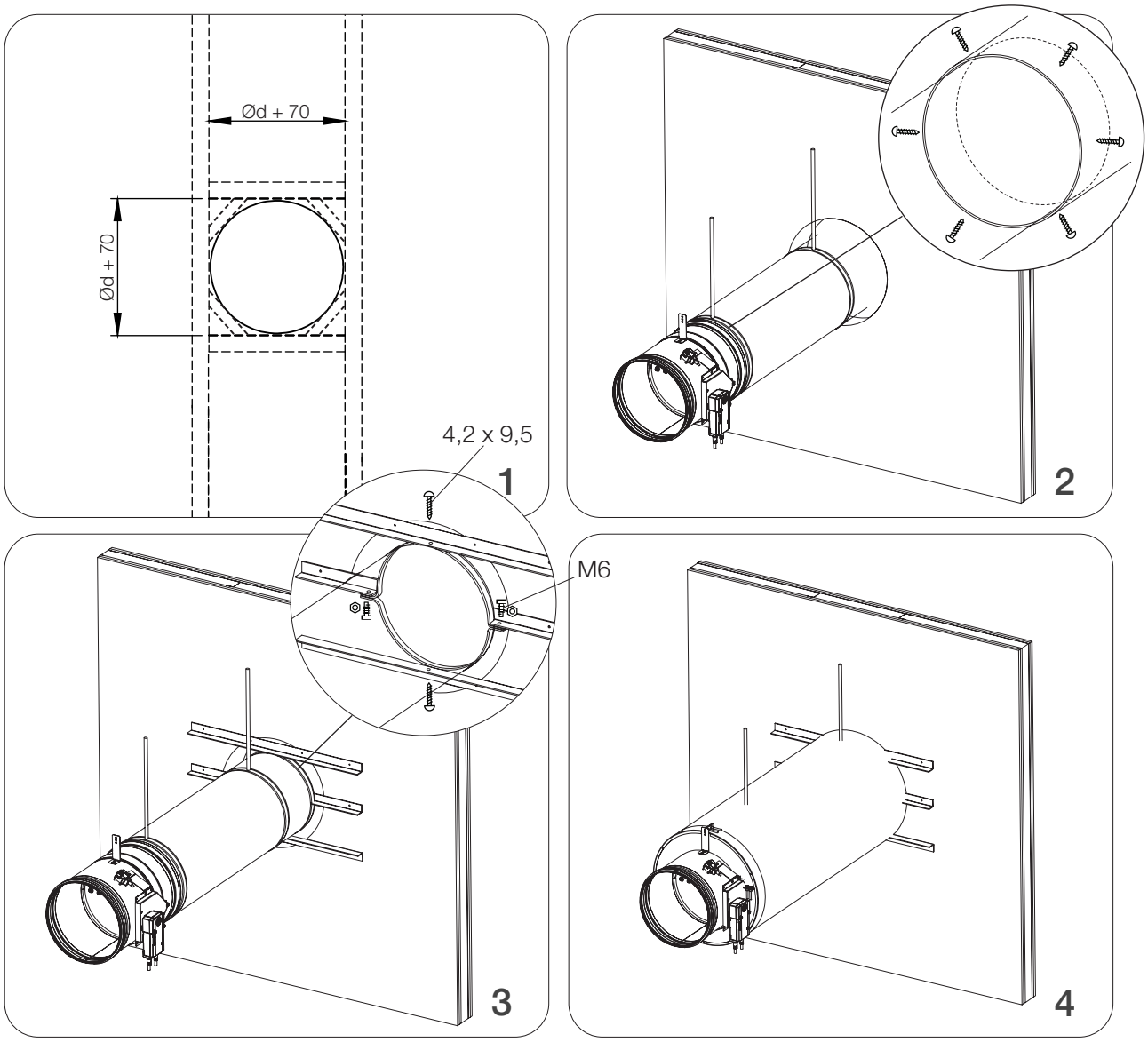
0°-360°

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Possible damper orientations



0-90˚-
180˚-270˚



Damper blade must be closed during installation!

1. Install fire damper and secure it with self-tapping screws 4,3x10 to duct. Fill space between duct and wall with mineral wool (Isover U protect Wired Mat 1, min. 80mm thickness).

2. Place the damper in an opening according to the picture. Place ventilation duct through wall (thickness of threaded rod for suspension should be M12)

3. Close installation with L profiles 30x30x3mm. Additionally fix profiles to duct with self-tapping screws, and screw them to wall with 4,5x50 screws with 200mm distance between them. On connection between the wool and the wall. Repeat the same procedure on the other side. Place the wool on ventilation duct in length of 80mm

4. Place steel protection on place where insulation on damper ends (80x80mm, 1 mm thick metal sheet cover)

Max. dimension for this installation Ød 630

***Use MWC accessories kit for installation!**

Test the operation of the damper blade!

* The images shown are for illustration purposes only and may not be an exact representation of the product.

Multiple fire dampers installation



Damper blade must be closed during installation!

Weichschott/Firebatt - Mineral wool

1*. Prepare opening in the wall according to the installation type. (Weichschott/Firebatt installation- build the subframe according to the drawing. In case of lightweight wall build subframe according to guidelines, but without subframe between dampers in the same opening and distances between them from 30-200mm.

2. In case of weichschott/firebatt installation fill the space between the dampers and between the dampers and ceiling with coated mineral wool up to flanges.

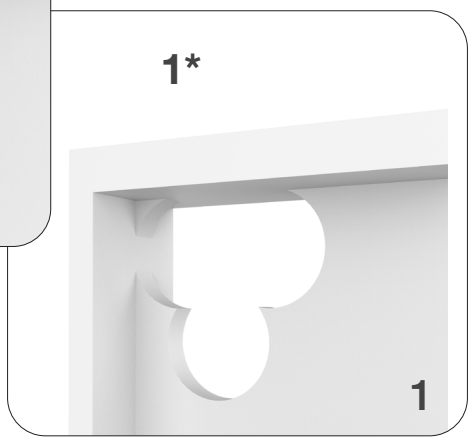
3. Complete the installation according to the assembly instructions for the particular installation. Mineral wool and damper casing must be coated with 2 mm thick fire protection coating. Damper casing should be coated up to profile protrusions.

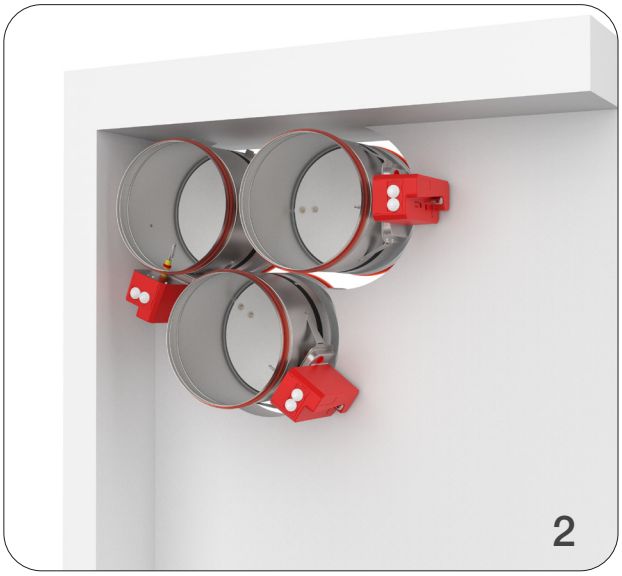
Mortar - Gypsum blocks

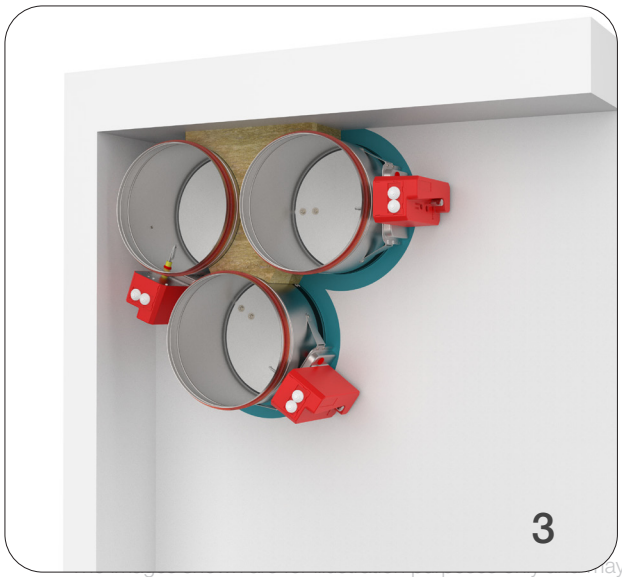
1. Prepare opening in the wall according to the installation. Fire damper can be installed with minimal distance of 30mm between wall/ ceiling and 30mm from other dampers.

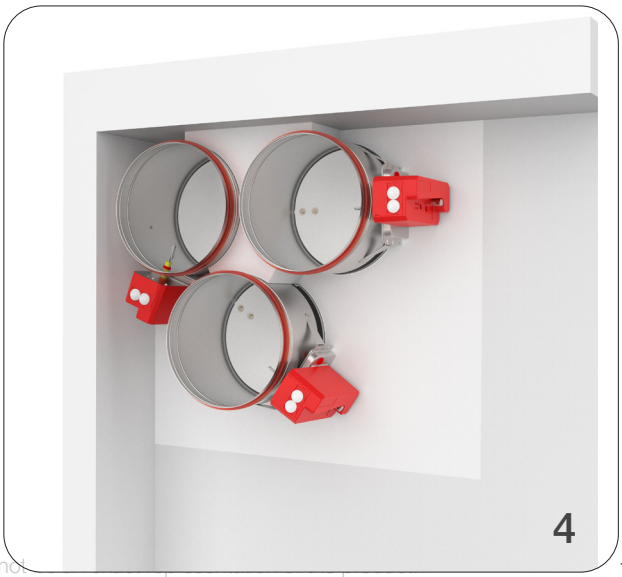
2. Insert the fire dampers into the wall and fill the space between the dampers and between dampers and wall with material specified in DOP.





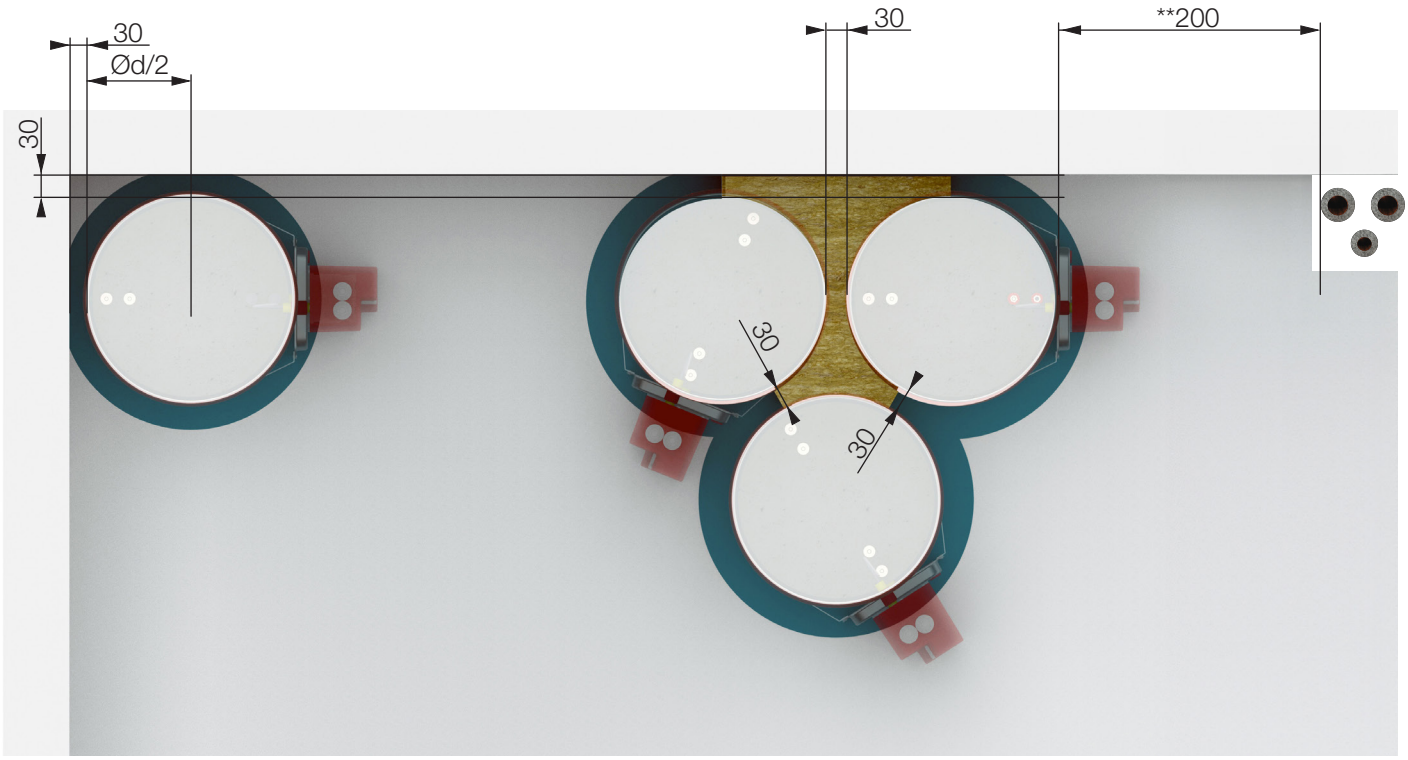






Material in width of supporting constructions compliant with the classification from DoP

*Coated mineral wool 240mm wide (140 kg/m^3) only in case of weichschott/firebatt



* Minimal distances from another damper or wall/ceiling.
** Minimal distances from any other penetration through the wall.

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DOP WALLS MATERIALS

Accessories

1 **FD-A-CSP** GKF boards for dry installation - gypsum plasterboard Type F are used in dry installations as insulation cover. It keeps the insulation in place and provides for better fire penetration characteristics of the whole installation. Cover the complete perimeter around fire damper from both sides with boards in 150mm height.

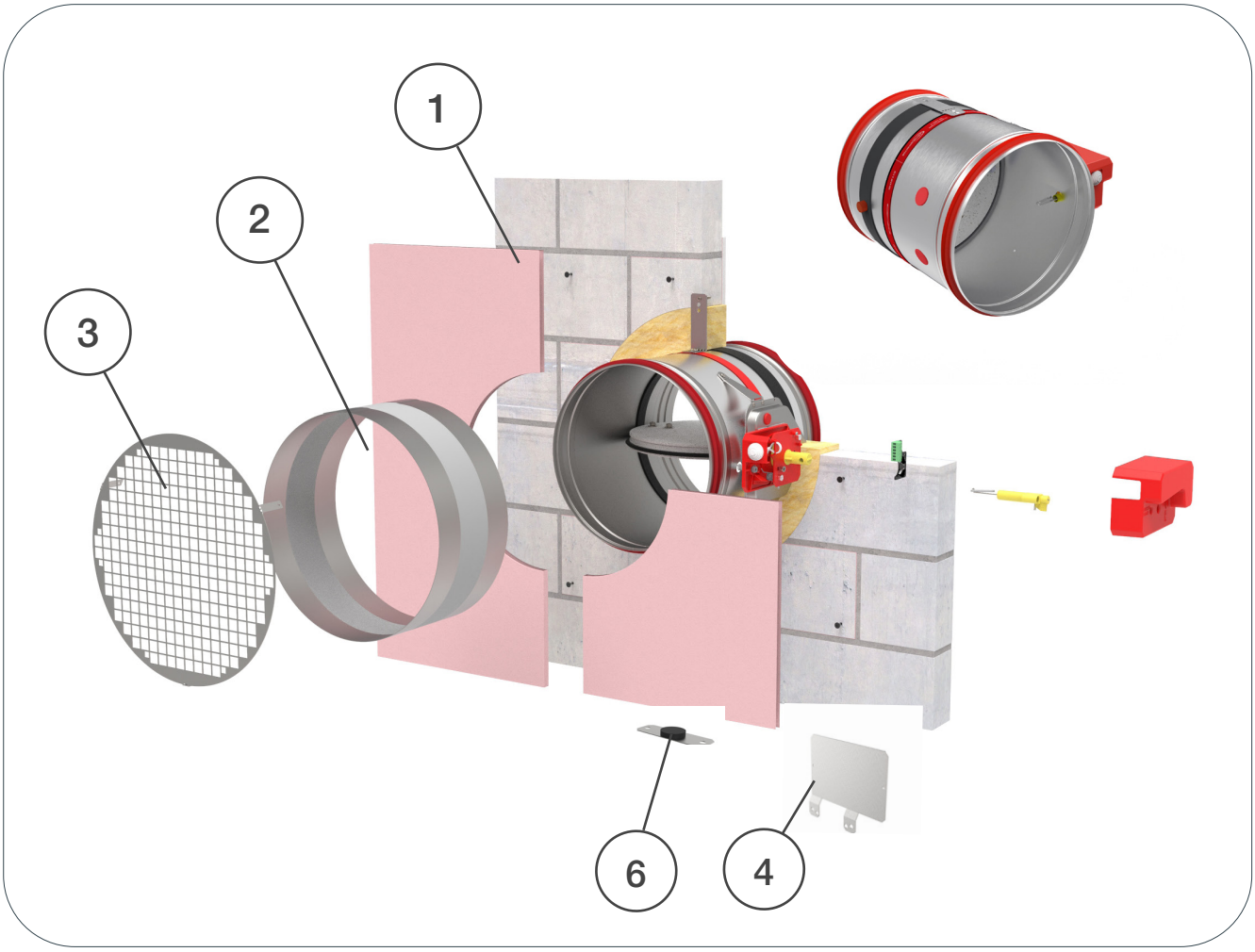
2 **FLEX** Flexible duct connections - Flexible duct connectors are used in HVAC systems for isolation from structure-borne noise, expansion compensation and fire damper connections (total length 190 mm, flexible 70mm).

3 **FD-A-SG** Safety grill- Safety grill is used for protection of the fire damper and duct from large debris. Safety grille is produced out of galvanized steel and perforated with square 10x10mm perforation providing approx. 70% free cross section area. Fire damper, safety grille and, if applicable, extension piece are assembled at the factory form a unit. FD-A-SG1-operation side, FD-A-SG2-installation side

4 **FD-A-CMB** Communication module bracket

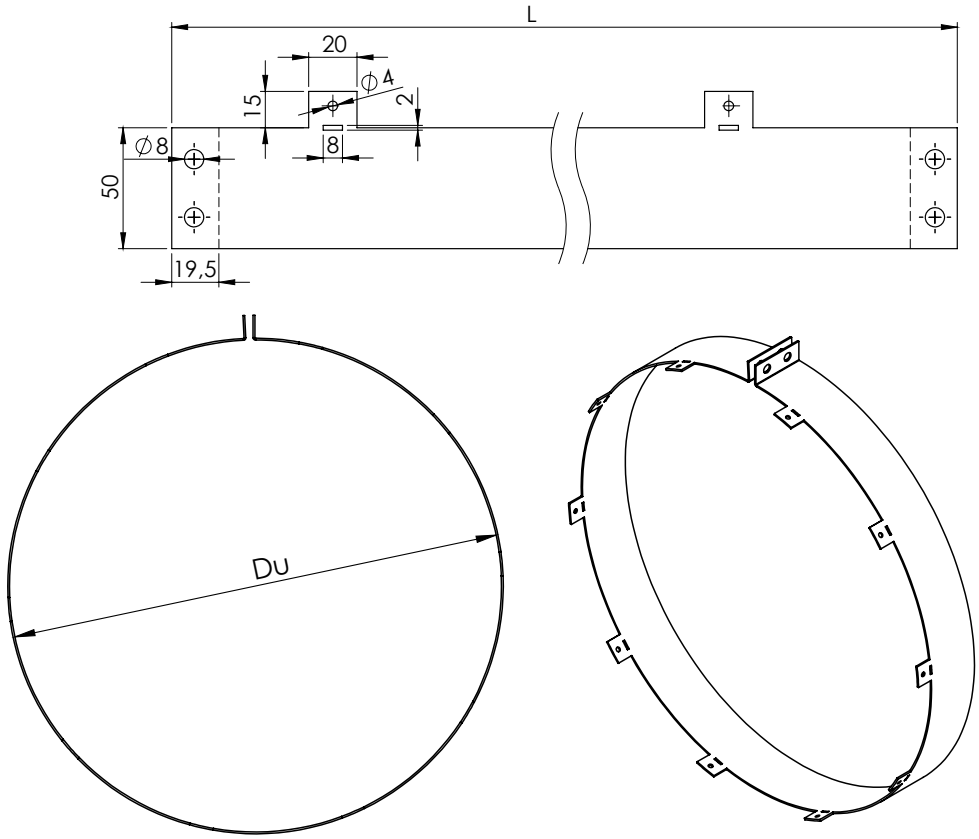
5 **FD-A-IH** Inspection hatch - is used for performing regular visual functionality inspection checks.

6 **FD-A-BP-KIT** Thermal fuse blanking plate- is used for covering the thermal fuse hole on the casing in case of changing from the motor to the manual actuator. Installation with performed with 2 self-taping screws



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7 **MWC** Mineral wool cover (for remote installation) - MWC kit,
- Steel 1,0 mm
- Galvanised



FDC	Du	L
100	256,6	844
125	281,6	922
160	316,6	1032
200	356,6	1157
250	406,6	1313
315	471,6	1519
355	511,5	1644
400	556,6	1785
450	606,6	1941
500	656,6	2100
630	786,6	2507
710	866,6	2759
800	956,6	3040

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Spare parts

For safety reasons, parts need to be changed by a trained personnel or the manufacturer.

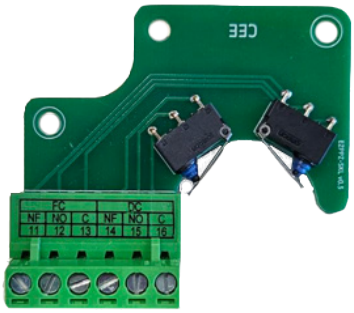
WARNING! Install the original parts only!

1. **FD-A-THERM-72** Fuse kit
2. **FD-A-R25S-KIT** Double contact S kit
3. **FD-A-R40S-KIT** Double contact S kit
4. **FD-A-EMS-KIT** Solenoid actuator
5. **FD-A-BAT72** Belimo thermal fuse 72°C
6. **FD-A-BAT95** Belimo thermal fuse 95°C
7. **Belimo BFL** Kit A Upgrade to electric actuator (Belimo BFL)
8. **Belimo BFN** Kit B Upgrade to electric actuator (Belimo BFN)
9. **Belimo BF** Kit C Upgrade to electric actuator (Belimo BF)
10. **FD-A-R25** R25 manual mechanism
11. **FD-A-R40** R40 manual mechanism
12. **FD-SSA** Smoke sensor
13. **MWC** Mineral wool cover (for remote installation)

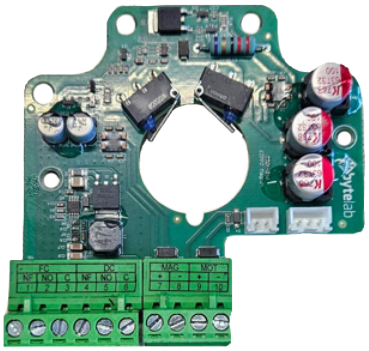
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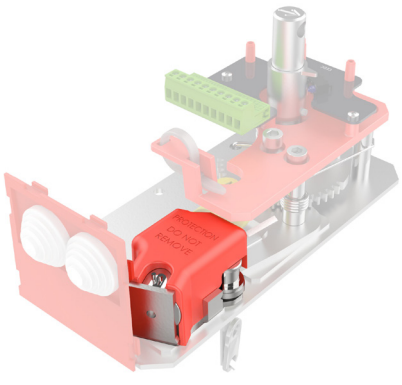
2



3



4



5



6



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7



8



9



10



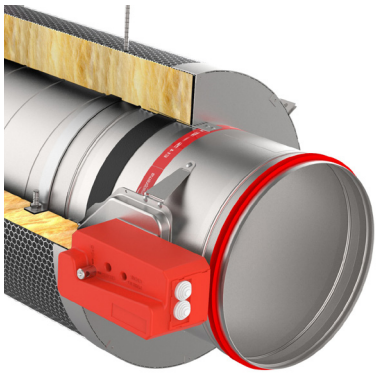
11



12



13



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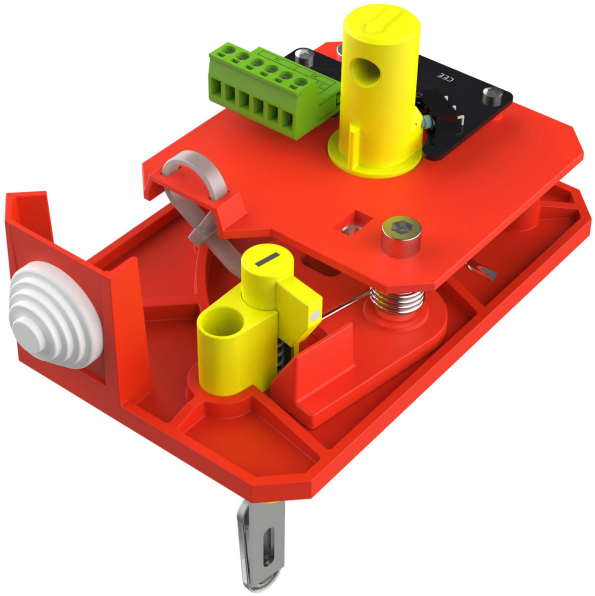
MANUAL ACTUATORS
R, R-S

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 manual actuator is installed on FDC25 fire dampers range from Ø100mm up to Ø315mm. 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.
To upgrade to EMS, upgrade of R25 to R40 is required.

R40
R40 manual actuator is installed on FDC40 fire dampers from Ø355mm up to Ø800mm. It is available in version with (R-S) and without (R) end switches. In case remote activation is needed, R40 actuator is easily upgradeable to electromagnetic EMS-S actuator with installation of the electromagnet.
End switches, thermal fuse and electromagnet are easily replaceable and available as service parts.

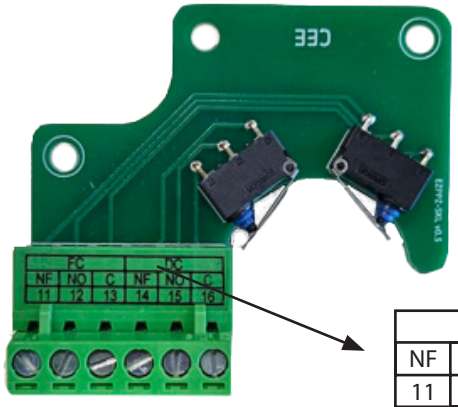


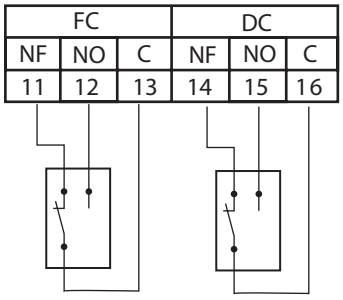


Technical specifications

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. 300 cycles
Maintenance	Maintenance-free
Weight R25/R40	0,5 kg / 1,7 kg

Wiring diagram





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

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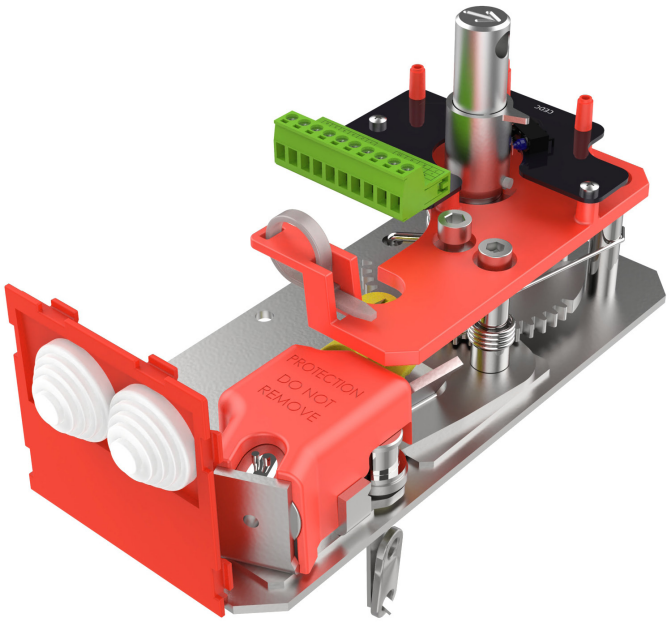
SOLENOID ACTUATOR
EMS-S

Electromagnetic operating mechanism, comes with end switches as standard. In case of fire, the fire damper closes automatically. Damper closing can be initiated either by thermal fuse melting or remotely by triggering the electromagnet. Electromagnet is constantly under power and activates closing of the damper blade in case the power cuts out. Upon closure, damper blade is locked in closed position and can only be opened manually. Thermal fuse melting point is 72°C. EMS-S mechanism is the same for FDC25/FDC40 fire dampers.

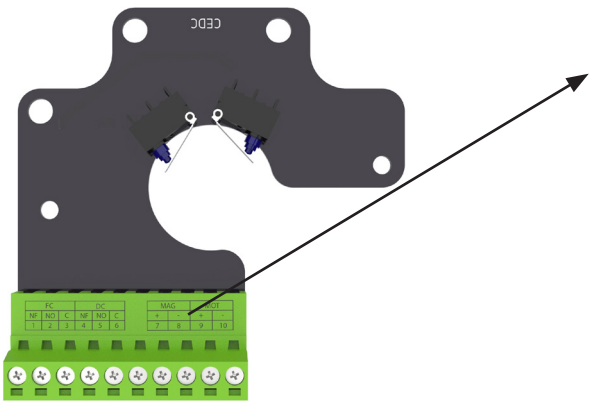


Technical specifications

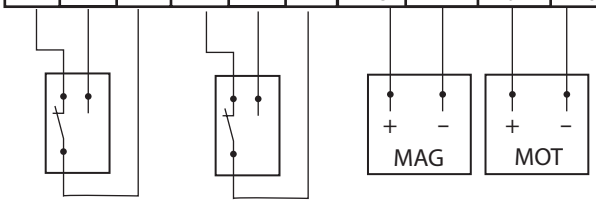
Nominal voltage	Solenoid: 24/48 VDC
Power	Dual voltage SOLENOID: Break of current: Pnom = 1.6W
Switching capacity	1 mA…500 mA, 5 VDC…48 VDC
Blade closing time	Spring: 1 sec
Blade opening time	Manual
Manual activation	Release button on the casing
Degree of protection	IP 42
Ambient temperature range	min. -30 °C, max. 50 °C
Ambient humidity	95% r.h., non-condensing
Service life	Min. 300 cycles
Maintenance	Maintenance-free
Weight	2,2 kg



Wiring diagram



FC			DC			MAG		MOT	
NF	NO	C	NF	NO	C	++	--		
1	2	3	4	5	6	78		91	0



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

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ELECTRIC ACTUATOR
M24-S, M230-S, M230-SST, M24-S-SR, M24-S-SR



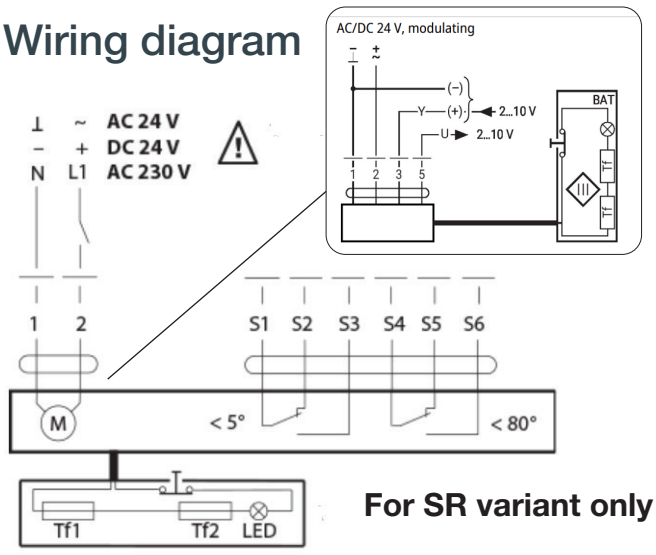
Damper is delivered in closed position. When electric actuator is connected to the power supply damper will open. When the damper reaches the end position (damper open), the electro motor will stop. Closing fire damper takes place automatically when a power failure occurs. Thermal tripping device that 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 turning the 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-TN	BF230-TN
Nominal voltage / power	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 W	3,2 W	2,6 W	5 W	7 W	8.5 W
	holding	0,7 W	1,2 W	0,7 W	1,3 W	2 W	3 W
	for wire sizing	2,8 VA	2,8 VA	4 VA	6,5 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					

Wiring diagram



For SR variant only

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

M24-SR-T

3	input voltage for the actuator, position to requested angle
5	feedback, output from the actuator

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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.

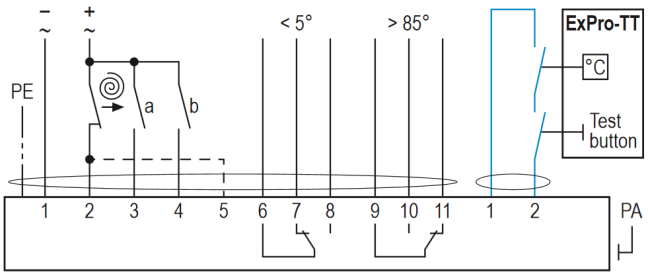
1) Tecnical documentation Safety temperature trigger Schischek ExPro-TT
2) Tecnical documentation electric actuator Schischek ExMax-5.10-BF
3) Tecnical documentation Ex-e terminal box ExBox-BF

Technical specifications

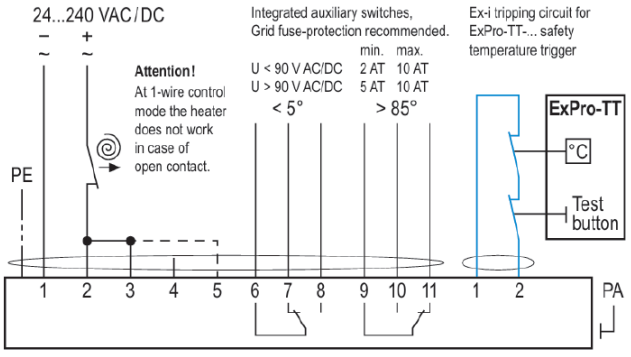
Type	ExMax -5.10-BF
Torque	5/10 Nm
Power Supply	24-230 V AC/DC
Running time	3/15/30/60/120 s / 90°
Spring return	3 or 10s / 90°
Control mode	On-Off, 3 position
Feedback	2 x aux switches + Ex. tripping device
Ambient temperature range	min. -40 °C, max. 40 °C
Ambient humidity	0-90% r.h., non-condensing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

Wiring diagram

3 Positon version



On / Off version



Spring return in ~ 10 s = Standard wiring
Spring return in ~ 3 s = Additional wiring on terminal 5

* The images shown are for illustration purposes only and may not be an exact representation of the product.

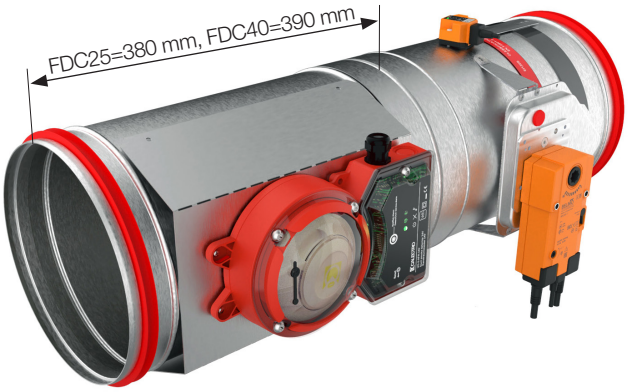
SMOKE SENSOR ASSEMBLY FD-SSA

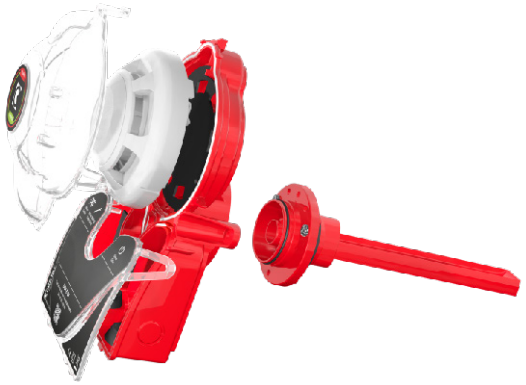
Smoke sensor assembly is developed to detect smoke in ventilation ducts and combines a smoke detector and an adaptor system where both tube and housing are specially designed for optimum airflow through the smoke detector. Smoke sensor provides the signal for the fire damper which is activated when smoke is detected. Smoke sensor assembly consists of casing (length: 415 mm), smoke sensor and specially designed venturi pipe inside the duct.

For proper functioning of the smoke sensor (as it is physically connected as in the render above) a straight length of 5 times hydraulic diameter, in the size of the connecting duct, should be in front of the sensor. When the sensor is installed separate from the fire damper there are two conditions to be met:

1) Length of 5 times diameter, in the size of the connecting duct, should be in front of the sensor.

2) Length of 3 times diameter, in the size of the connecting duct, should be after the sensor.



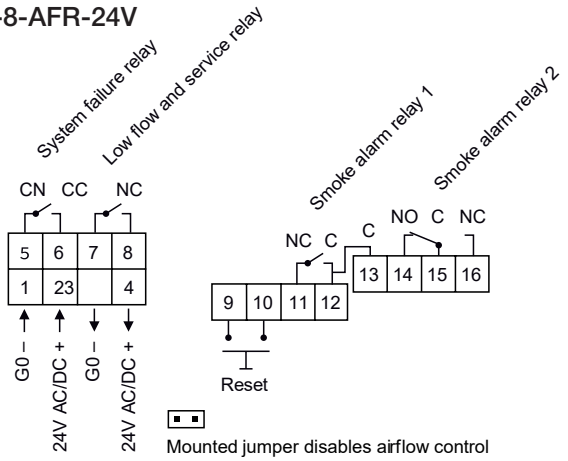


Technical specifications

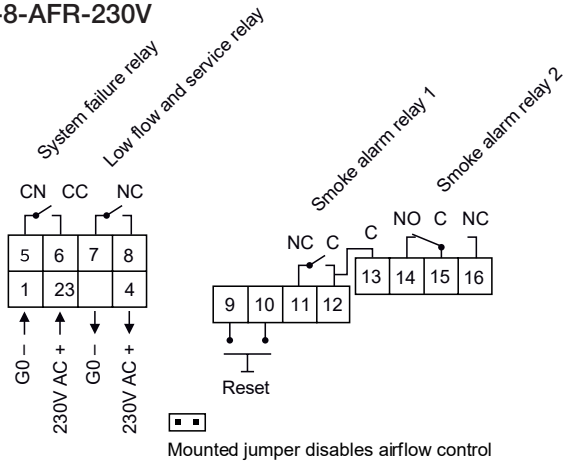
	FD-A-UG-8-E-24	FD-A-UG-8-E-230
Voltage Supply	24V AC/DC ±10% Not polarity sensitive	230V AC ±10%, Not polarity sensitive
Detector type	Optical EVC-PR-DA	Optical EVC-PR-DA
Max. power consumption	85 mA (DC), 235 mA (AC)	100 mA
Operating temperature	-20°C to +55°C	
Maximum humidity	95% rH	
Duct air velocity range	1 to 20 m/s	
Approvals	VdS, CE, EN-54-27	
Relay output	Potential free	
Smoke alarm relays	One changing contacts 250V, 8A and one bracking contact 250V, (A	
Service alarm	One breaking contact 250V, 1A	
System error alarm	One breaking contact 250V, 1A	
Low Flow alarm:	One breaking contact 250V, 1A	
LED on smoke detector:	Yellow - service alarm(contamination) Red - smoke alarm	
LED on PCB:	Green - normal operation Yellow flashing - system error Yellow - Low-Flow	

Wiring diagram

FD-A-UG-8-AFR-24V

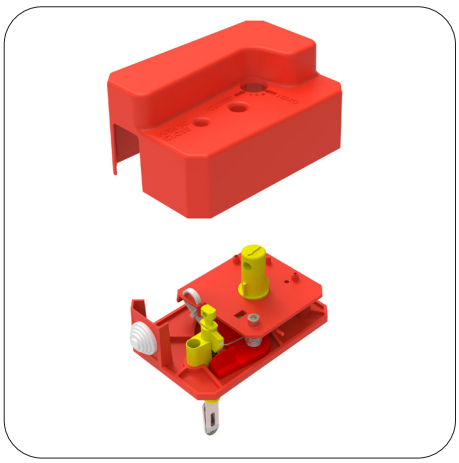


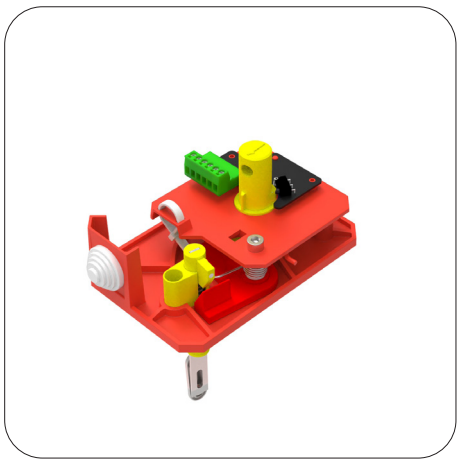
FD-A-UG-8-AFR-230V

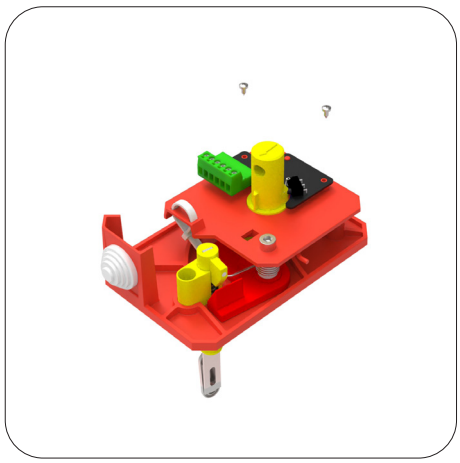


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UPGRADE TO END CONTACTS (R25 → R25-S)

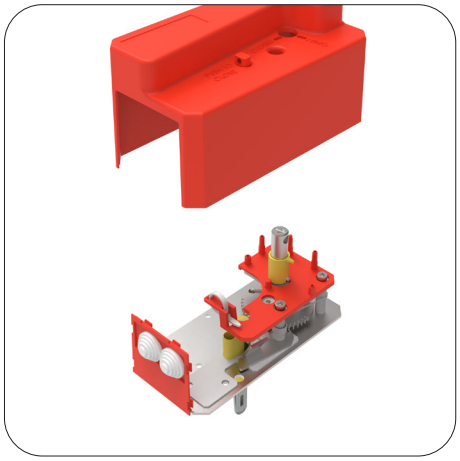


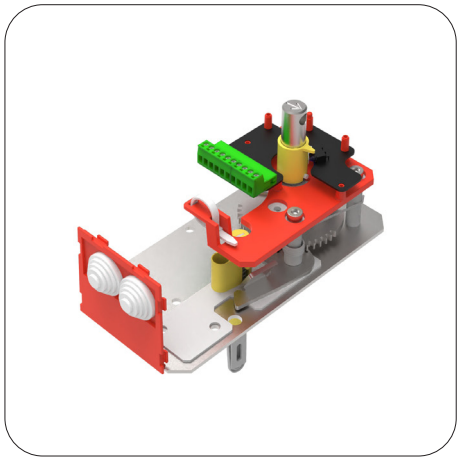


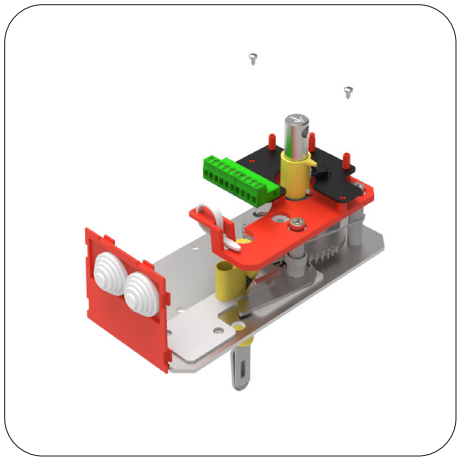


1. Locate hex screw, unscrew it and remove the cover.
2. Insert CEE (R25)/CEDC (R40) board in the appropriate place.
3. Screw the board to the plate. Put the cover back in place!

UPGRADE TO END CONTACTS (R40 → R40-S)



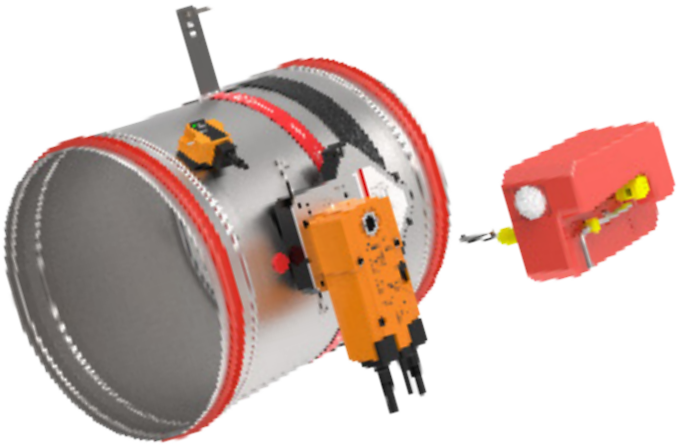




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UPGRADE TO ELECTRIC ACTUATOR

R25 <-> Belimo



Ø100-Ø315
The blade must be closed before replacement the mechanism.

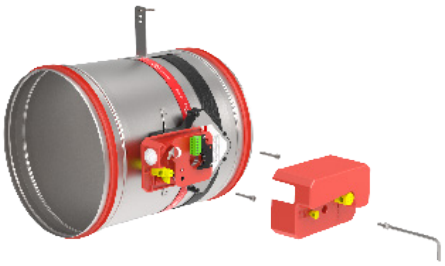
Service work may only be performed by authorized persons!

NOTE: Use kit according to table (upgrade to electric actuator)! * Find the screw and remove the cover!

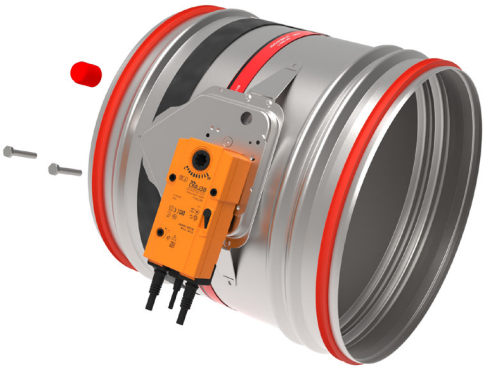
1. Find the 3 hex screws located on the board of mechanism, unscrew them and remove manual mechanism.
2. Insert the rubber plug into the opening for the thermal fuse. Install square shaft into the hole put Belimo actuator on the shaft and fasten the actuator with screws (2 hexagon screws M6x55).
***Check the rotation direction of the actuator!** (Clockwise actuation, R mark on the actuator)
3. Drill hole (ø16 mm) for the fuse of Belimo mechanism and fix it with self-tapping screws.

NOTE: Install the thermal fuse in a place where it will not interfere with the operation of the damper blade!

Record changes on an additional label!



1



2

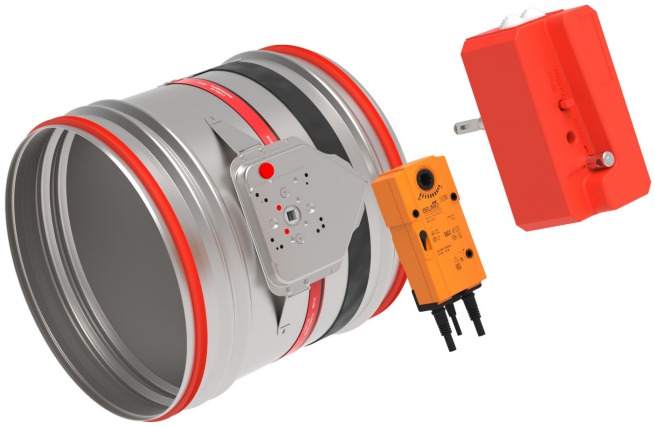


3

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UPGRADE TO ELECTRIC ACTUATOR

R40 <-> Belimo

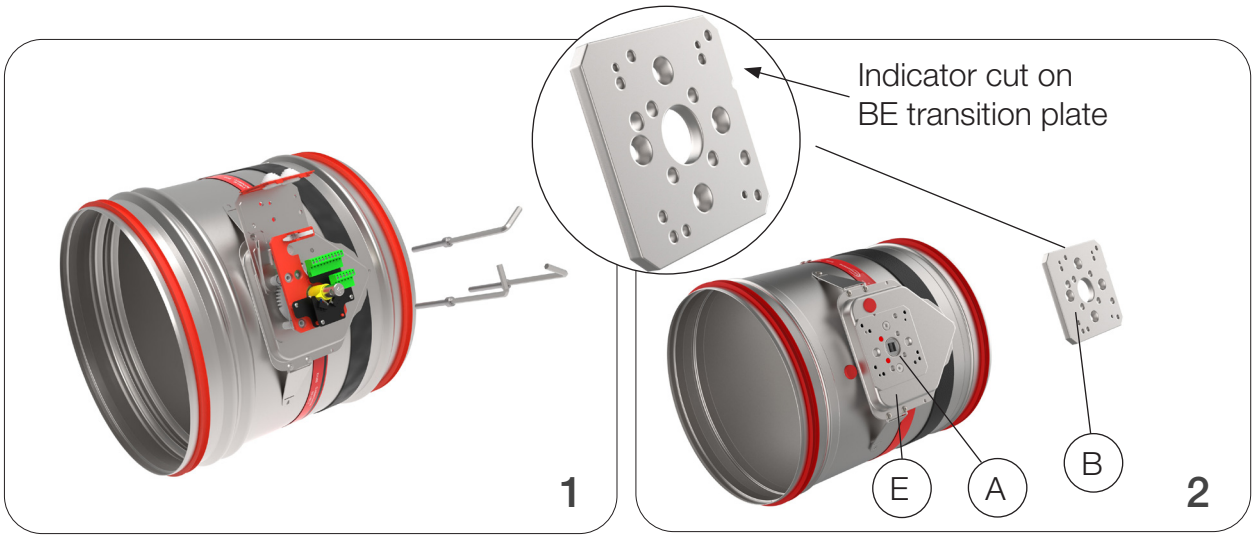


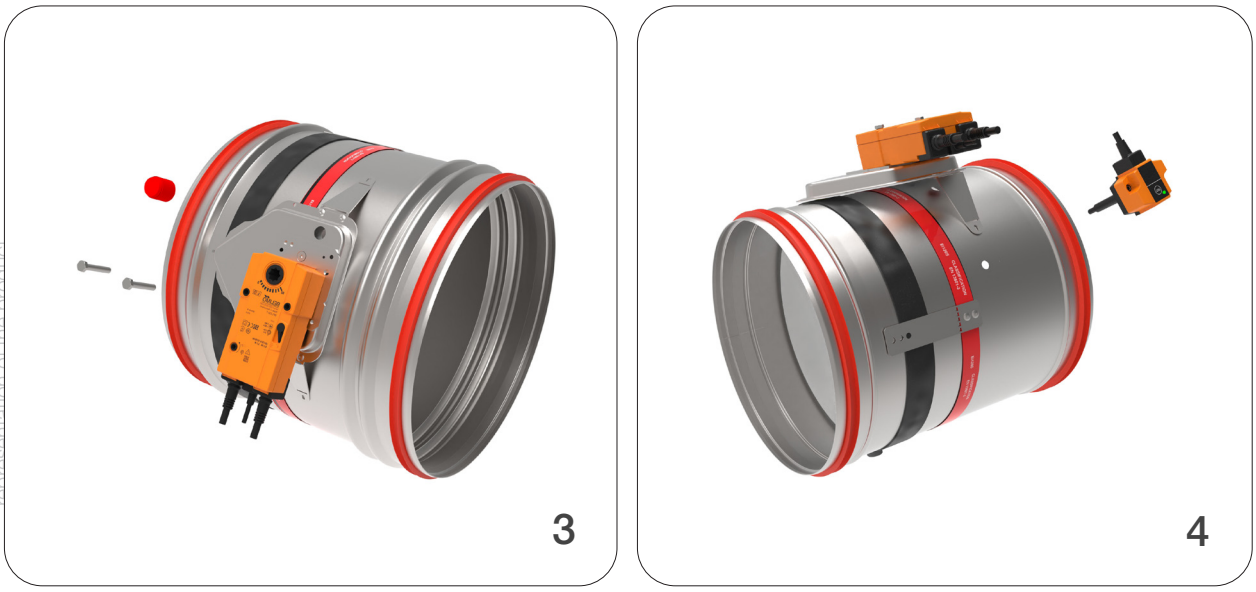
Ø355-Ø800
The blade must be closed before replacement the mechanism.

Service work may only be performed by authorized persons!

NOTE: Use kit according to table (upgrade to electric actuator)! * Find the screw and remove the cover!

1. Find the 3 hex screws located on the board of mechanism, unscrew them and remove manual mechanism.
2. Find the 2 hex screws located on the mechanism (E), unscrew them and replace the manual mechanism plate (A) with BE transition plate (B) provided in the kit. **NOTE:** Pay attention to the position of indication cut on the BE transition plate.
3. Insert the rubber plug into the opening for the thermal fuse. Install square shaft into the hole put Belimo actuator on the shaft and fasten the actuator with screws (2 hexagon screws M6x55).
***Check the rotation direction of the actuator!** (Clockwise actuation, R mark on the actuator)
4. Drill hole (ø16 mm) for the fuse of Belimo mechanism and fix it with self-tapping screws.
NOTE: Install the thermal fuse in a place where it will not interfere with the operation of the damper blade!
Record changes on an additional label!





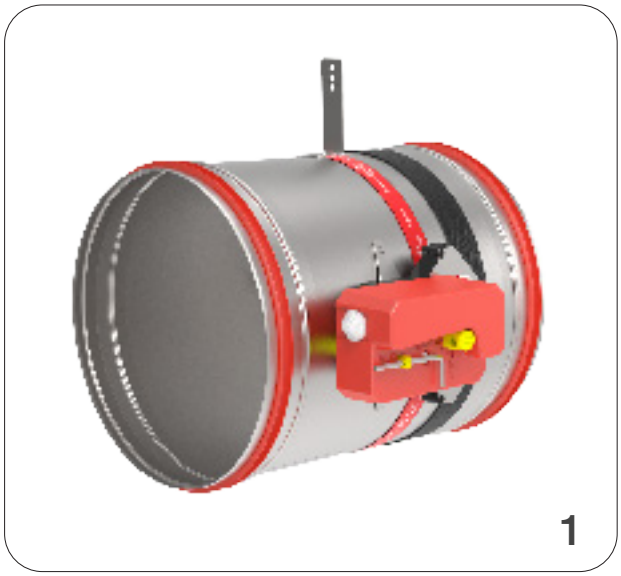
* The images shown are for illustration purposes only and may not be an exact representation of the product.

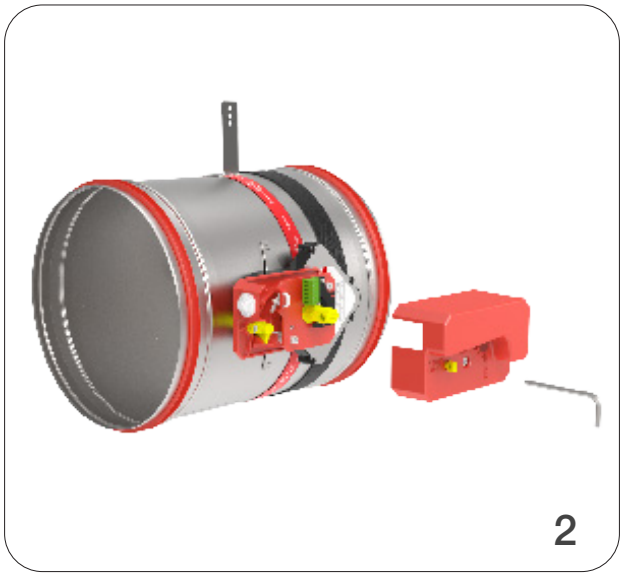
REPLACEMENT OF THERMAL FUSE (R25)

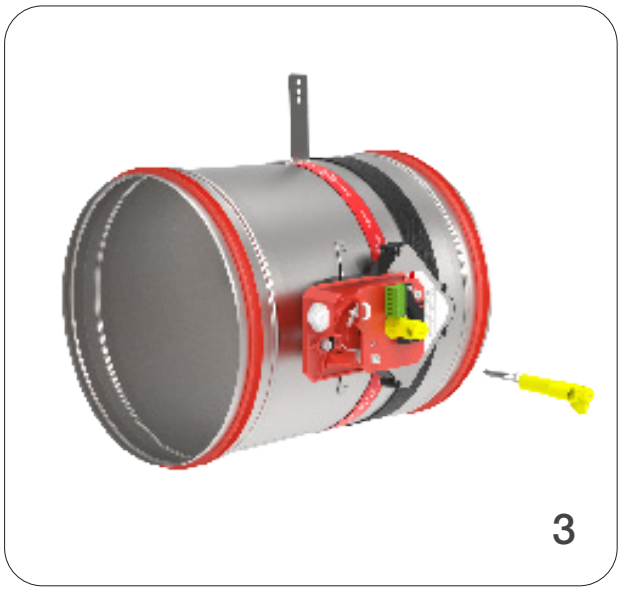


1. Find the hex screw located on the cover. Unscrew and remove the screw and the cover.
2. Find the hex screw on the thermal fuse and unscrew it.
3. Remove the old thermal fuse. Insert a new thermal fuse and screw it back on.
4. Put the cover back in place.

Test the operation of the damper blade!









UPGRADE FROM MANUAL (R40-S) TO EMS

Before upgrade R40 to EMS, it is necessary to install kit for end contacts (FD-A-R40S-KIT).
Before upgrade R25/RS25-S to EMS, it is necessary to install R40 mechanism (FD-A-R40) and kit for end contacts (FD-A-R40S-KIT).

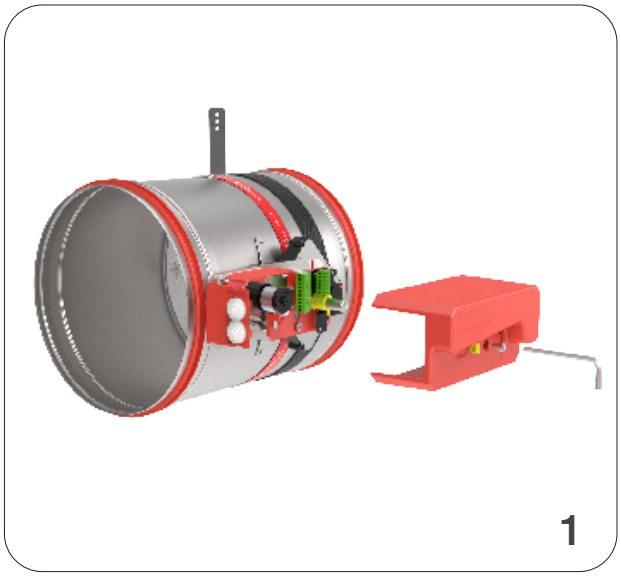
To upgrade to EMS you need to use the EMS kit!

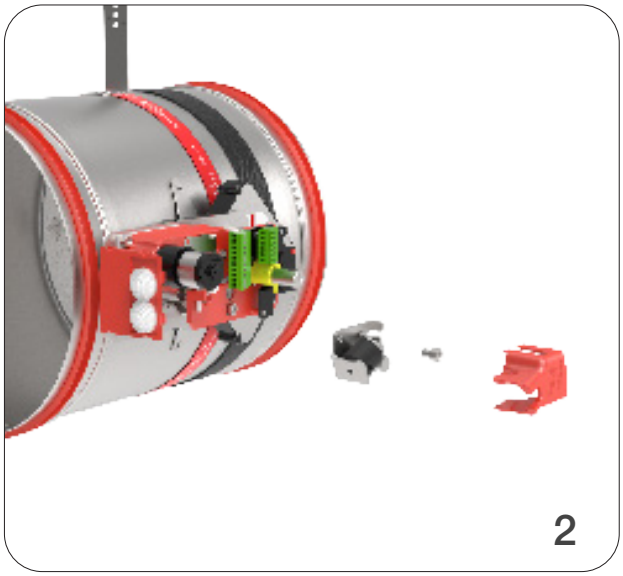
Service work may only be performed by authorized persons!

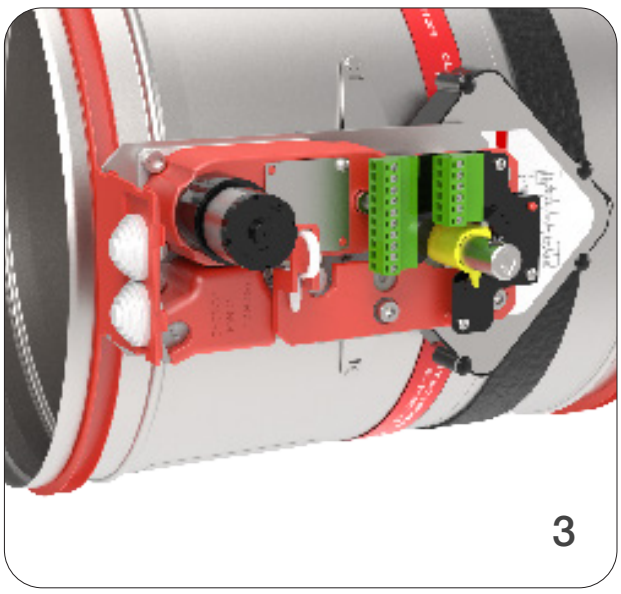


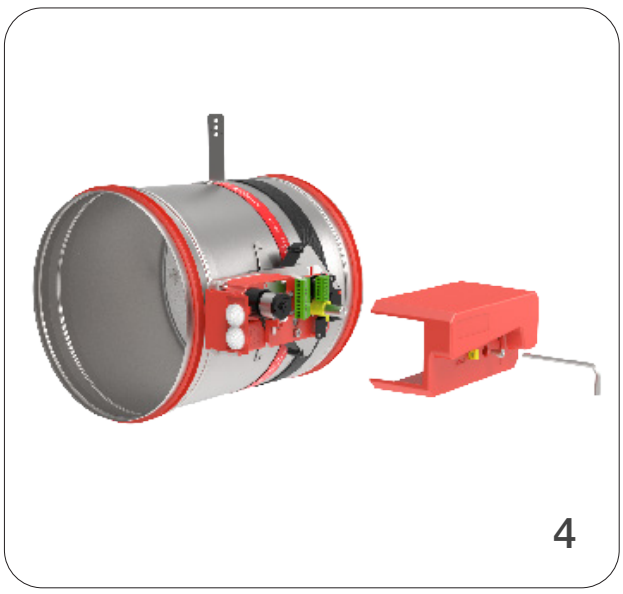
1. Locate hex screw. Unscrew it and remove the cover.
2. Insert the EMS on the custom plate.
3. Screw the EMS to the plate and connect the 2-pin connector into the appropriate socket on the CEDC board.
4. Put the cover back in place.

Test the operation of the damper blade!

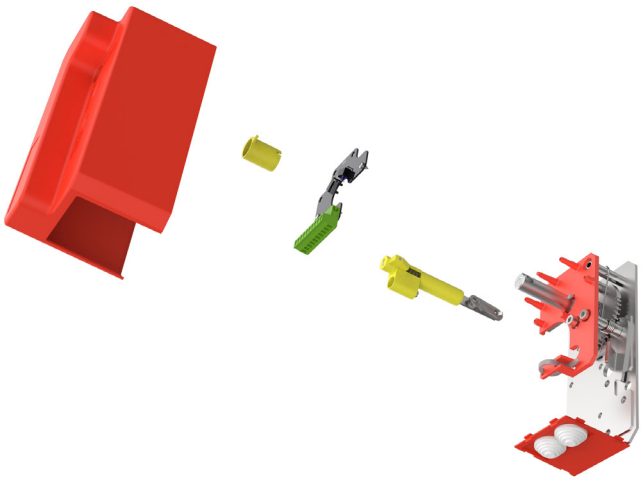






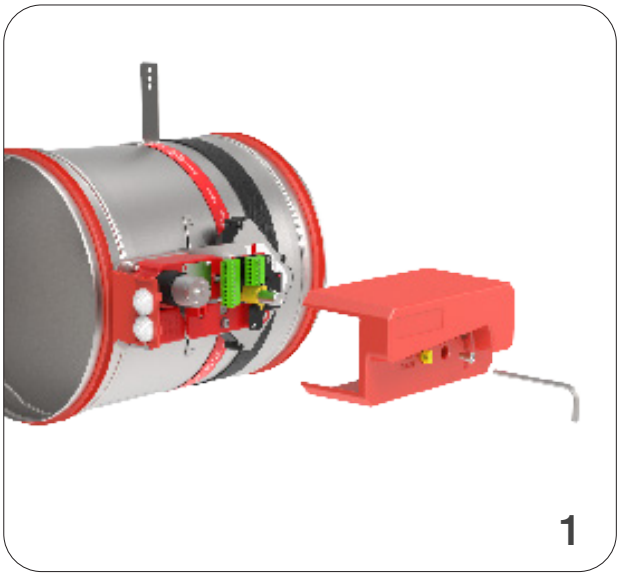


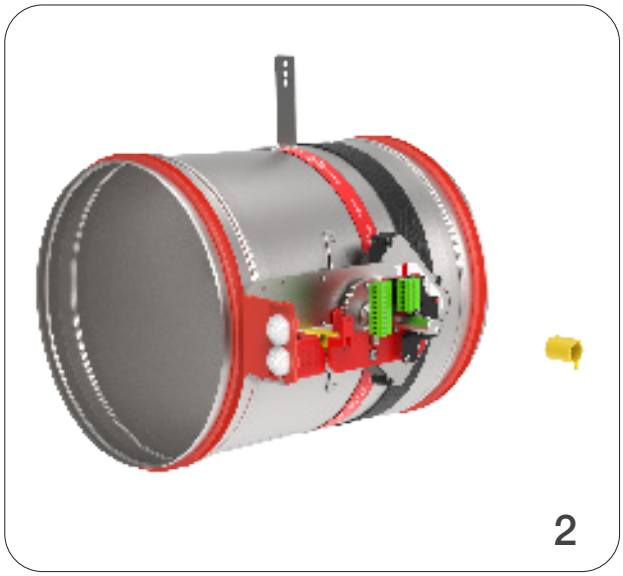
REPLACEMENT OF THERMAL FUSE (R40)

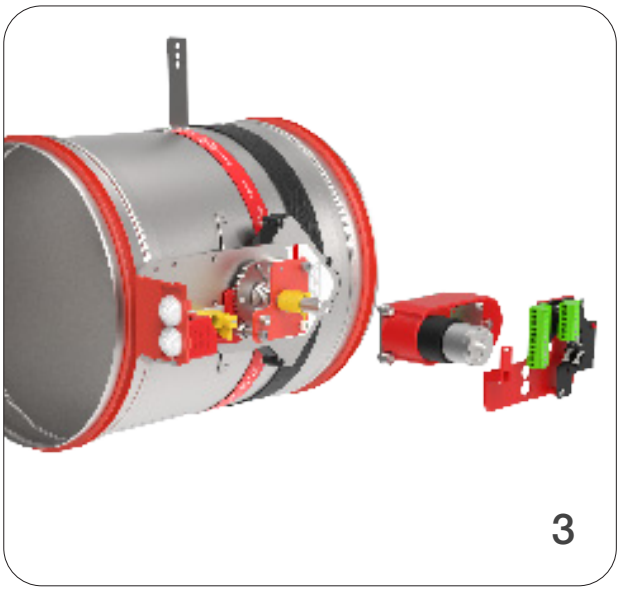


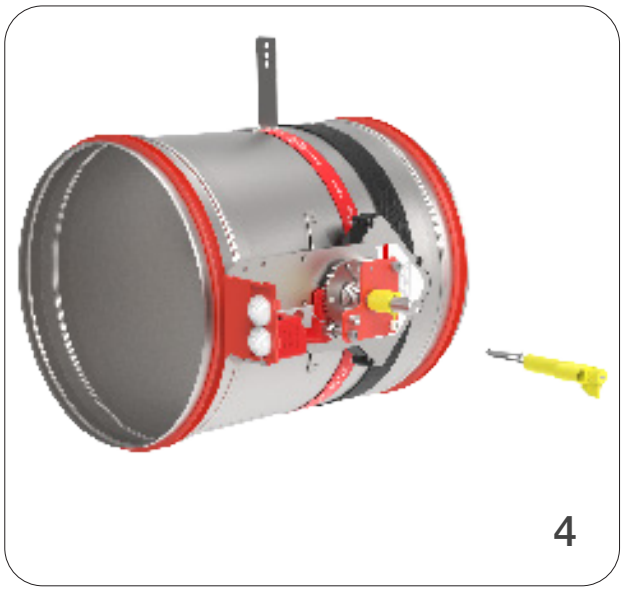
1. Find the hex screw located on the cover, unscrew and remove the screw and the cover.
2. Remove the position indicator sleeve.
3. Locate the 3 hex screws. Unscrew them. Remove the CEDC board (if applicable).
4. Locate the screw on the thermal fuse. Unscrew it. Remove the old thermal fuse. Insert a new thermal fuse. Put the CEDC board and the cover back in place.

Test the operation of the damper blade!







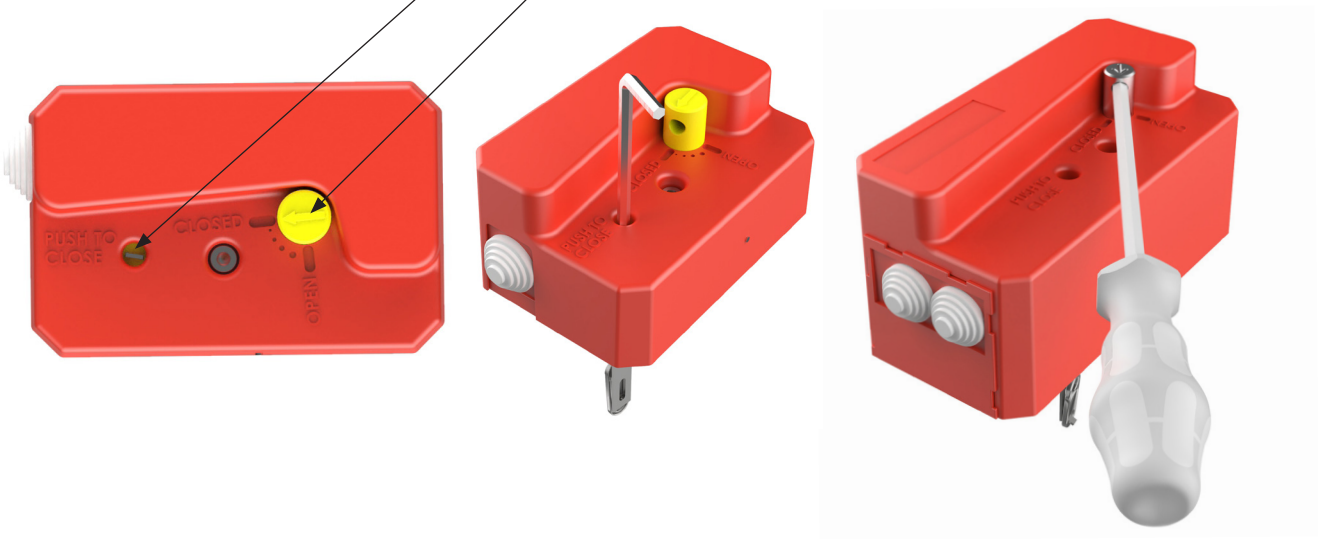


FIRE DAMPER TESTING

MANUAL ACTUATORS/ SOLENOID ACTUATOR

1. Close the damper blade by pushing the thermic actuator through the hole on the casing.

2. Open the damper blade by inserting the metal rod (i.e. screwdriver, hex wrench) max. 7 mm in diameter, into the yellow/ silver part and rotate the arrow to the open position.



ELECTRIC ACTUATOR

1. Test the operation of the damper blade by pushing the test button.

(Please ensure the power supply to the actuator is removed).

2. Opening the damper blade:
Insert the handle provided with the Belimo actuator into the hole. Rotate it as shown on the actuator.



MAINTENANCE AND OPERATION

Fire dampers are designed with fully enclosed drive mechanism outside of the duct and as such do not require cleaning and regular maintenance.
However, fire dampers should be part of the routine cleaning and maintenance of the ventilation system.

Provide periodic inspection in accordance with the requirements of the law or by the building regulations or other local regulations.
In the absence of specific regulations, it is recommended to carry out the following control activities at intervals of no more than every 12 months:

Check access to the fire damper. Confirm that internal and external components of the fire damper are easily accessible.

Inspect the servomotor electrical wiring for any signs of damage (where applicable), check if the electrical terminals are tightened.

Inspect the end-switch wiring for damage (where applicable), check if the electrical terminals are tightened.

Check the fire damper for damage, examine the condition of the damper blades and seals, report if necessary.

Check the cleanliness of the damper and clean if necessary.

TRANSPORT

After arrival, check the fire damper for transport damage and shortcomings. In case of any damage or shortcomings, immediately contact your supplier.

STORAGE

If the damper is not installed immediately:

- Remove any wrapping.
- Protect fire damper from dust and contamination. Do not expose the fire damper to the effects of weather - store fire damper in a dry place.
- Do not store the unit below -20 °C or above 50 °C.

Please properly dispose of packaging material!

FUNCTIONAL TESTS

During normal operation, the damper blade remains open. The functional test consists of closing the damper blade and then reopening it.
According to EN 15650, a functional test should be performed at least every six months. If two tests in a row are successful, the next test can be performed a year later.

Verify correct manual opening and closing of the fire damper in accordance with the technical manual, testing procedure for different mechanisms.

Test the damper's opening and closing functions when controlled by the fire alarm system (if applicable)

Check the operation of the end switches in both open and closed positions, adjust and report as required

Ensure the damper performs its intended function as part of the control system (where applicable);

Confirm that the damper is returned to its normal operating position, typically the open position.

The functional test must be carried out in compliance with the basic maintenance principles of the European norms EN 13306, EN 15423 and EN15650.

COMMISSIONING

1) Carefully unpack FDC fire damper - be careful of sharp edges and do not use excessive force
2) Inspect the fire damper - check the fire damper for damage
3) Installation of the fire damper - according to the installation instructions.
4) Before commissioning: check the fire damper functions

CLEANING

May be cleaned with a sponge, with water or a mild detergent. Take precaution if using disinfectant (disinfectant may contain alcohol which is flammable, take precaution to avoid ignition).

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SAFEGARDSYSTEMS

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