



# TECHNICAL MANUAL

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## FDC25/FDC40

Circular Fire damper



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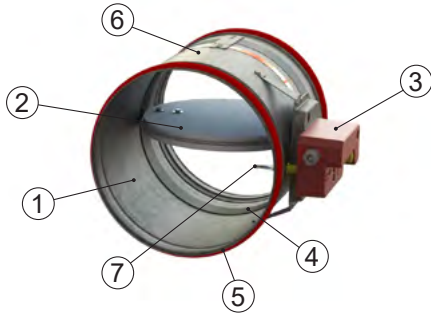
## 1. PRODUCT PRESENTATION

Fire dampers FD25/FD40 are installed in ventilation ducts between fire compartments in order to stop the spread of fire and smoke through the duct. They have a modular (manual or magnet) or motorized mechanism, entirely outside the wall.

Casing is made out of galvanized steel sheet, damper blade is made of special insulating material, and damper blade shaft and push rod are made of stainless steel. Bearings are of brass, seals of polyurethane and elastomer.

The fire damper can be equipped with a simple mechanism with thermal fuse, or with solenoid actuator mechanism or with electric actuator mechanism.

- Tested according to EN 1366-2 up to 500 Pa
- Airtightness according to standard EN 1751 class C
- Approved for installation in a concrete wall, a concrete slab, plasterboard wall and gypsum blocks wall
- Operating mechanism completely outside the wall
- Easy to install
- Maintenance free



1. Galvanized steel casing
2. Fire resistant damper blade
3. Control mechanism
4. Intumescent joint
5. Connection flanges
6. Product marking on the casing
7. Thermal fuse

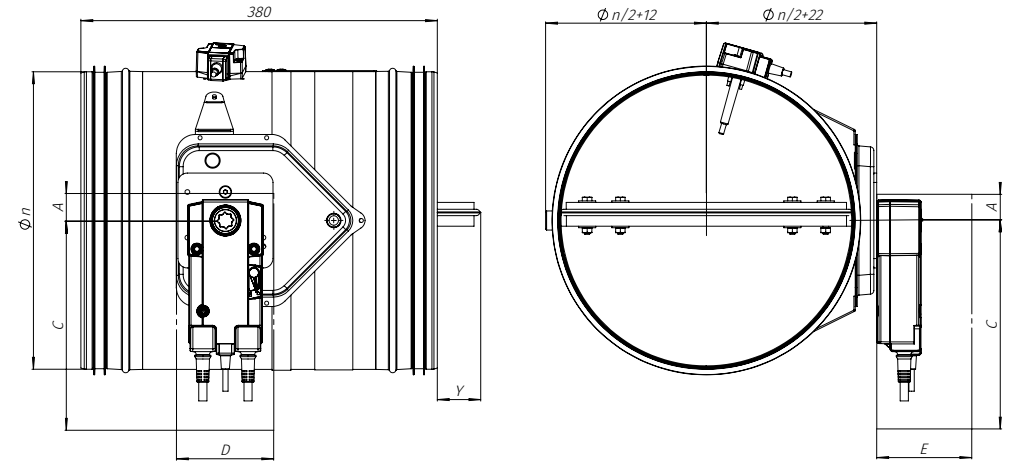
## 2. DIMENSIONAL RANGE

	Dimensioni (mm)	Sezione lorda (dm <sup>2</sup> )	Sezione netta (dm <sup>2</sup> )
FDC25	100	0,74	0,50
	125	1,17	0,87
	160	1,93	1,55
	200	3,05	2,56
	250	4,79	4,18
	300	6,18	5,74
	315	7,64	6,87
FDC40	355	9,73	8,33
	400	12,37	10,79
	450	15,69	13,91
	500	19,39	17,41
	630	30,86	28,36
	710	39,24	36,42
	800	49,86	46,68

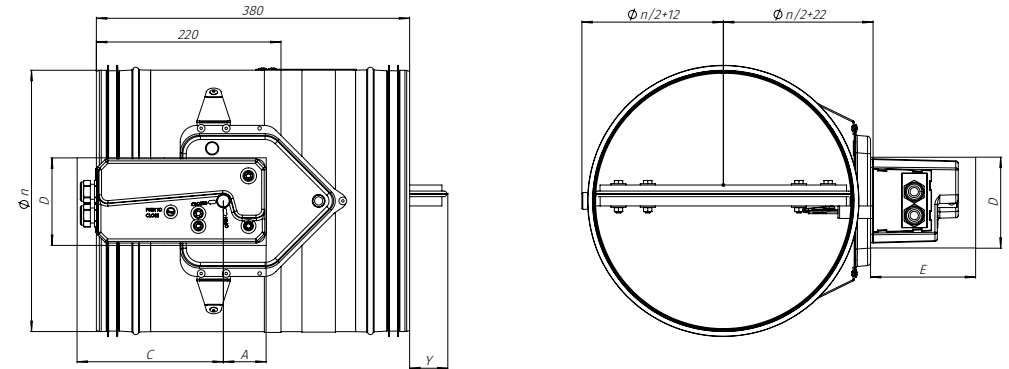
Free area for  $\phi$  100 to  $\phi$  315 (blade 25 mm) =  $[(\pi \times (\phi-3)^2 / 4) - 25 \times (\phi - 5)] / 10\ 000$  with  $\phi$  in mm  
 Free area for  $\phi$  350 to  $\phi$  800 (blade 40 mm) =  $[(\pi \times (\phi-3)^2 / 4) - 40 \times (\phi - 5)] / 10\ 000$  with  $\phi$  in mm

## 3. DIMENSIONS

FDC25



FDC25-R / FDC40-R



**Length of damper blade outside of casing** (Y dimension on front side and X dimension on back side)

$$X=(Dn/2)-270 \text{ (mm)}$$

$$Y=(Dn/2)-110 \text{ (mm)}$$

Product		A	C	D	E
Belimo	BFL (M)	25	200	90	120
	BFN (M)	25	225	100	120
	BF (M)	50	250	100	120
Klimaoprema	-R (FD 25 & FDC 25)	55	150	105	150
	-R (FD 40 & FDC 40)	55	200	105	200
	-EMS/EMP (FD 25/40 & FDC 25/40)	55	200	105	200

## 4. STORAGE AND HANDLING

As a safety element, the fire damper must be stored, handled and installed carefully.

Pay attention to:

- unload in a dry area
- avoid any shocks
- do not use the damper as a workbench or scaffolding
- do not fit the small dampers in the large one

The damper must be stored in a dry place, and kept out of water and frost.

It should not be stacked beyond the original packaging.

It must be properly stowed so as to prevent any damage or deformation resulting from an impact or high humidity.

It must not be exposed to direct sunlight to prevent premature aging of the thermal fuse.

Once the damper is installed, the mechanism should be kept away from any projections (cement, paint, flocking, water, dust) that may harm its operation.

The damper must be protected against the risk of heavy condensation.

The intumescent joints are essential for the fire resistance of the damper, all mechanical actions on the refractory parts are to be excluded.

All precautions shall be taken to ensure that premature aging of the damper does not occur before it is actually installed.

The actions of wedging and caulking during the sealing of the dampers must not cause deformations that will alter the good functioning of the damper and in particular the closing of the blade.

## 5. INSTALLATION AND IMPLEMENTATION

### 5.1 INSTALLATION:

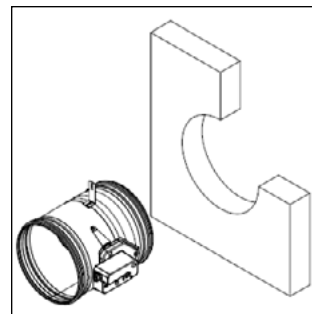
- Mounting is possible with the blade axis in horizontal or in vertical position
- The installation must comply with the tests that were performed during certification, s explained in 8.2.
- Avoid any obstruction of the moving blade by the connected ducts
- The class of air-tightness is maintained in case the installation of the damper is made in accordance with the technical manual
- Operating temperature: 50° C max
- For indoor use only

The FD25 / FD40 fire damper is always tested in standardized support frames (both in a concrete wall and in a flexible wall) in accordance with EN 1366-2: 1999 table 3/4/5. The results obtained are valid for all similar support frames which have a thickness and / or density and / or fire resistance similar or greater than the one of the test.

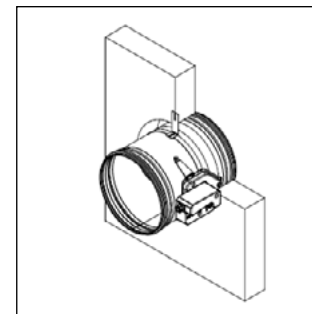
### 5.2 INSTALLATION AND SEALING:

#### 5.2.1 Concrete wall and reinforced concrete wall installation

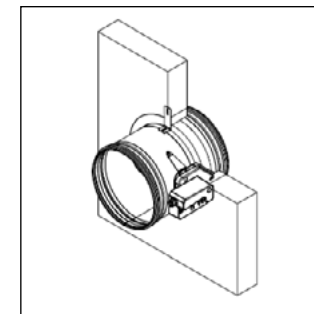
The wall is composed of concrete blocks (minimum density of 550 kg/m<sup>3</sup>) and with a minimum thickness of 100 mm.



Place the damper in an opening of  $\phi+70$  mm or more



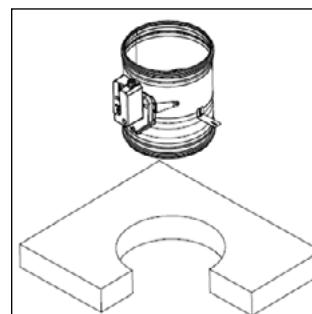
Fix the damper to the wall using screws



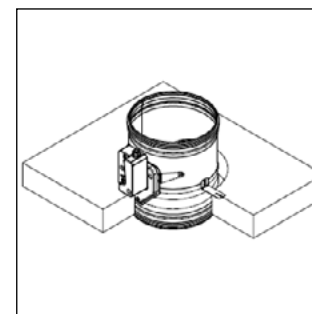
Fill the space between the damper and the wall with mortar

#### 5.2.2 Aerated concrete ceiling installation and reinforced concrete ceiling installation

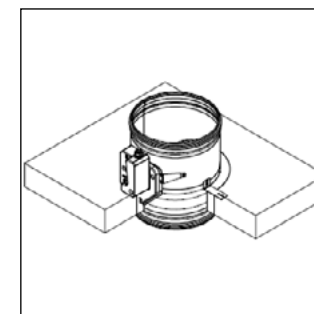
The ceiling is made of aerated concrete with a minimum density of 550 kg/m<sup>3</sup> and a minimum thickness of 100 mm.



Place the damper in an opening of  $\phi+70$  mm or more



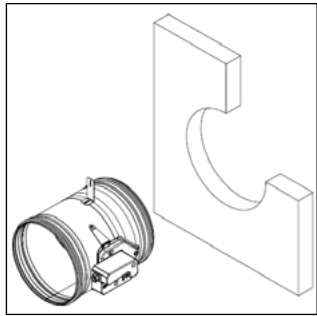
Fix the damper to the slab using screws



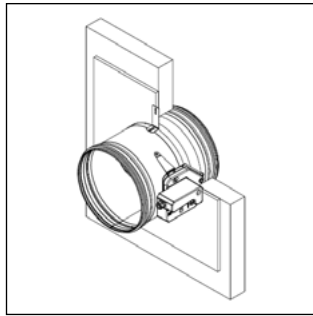
Fill the space between the damper and the slab with mortar

### 5.2.3 Gypsum blocks wall 70mm

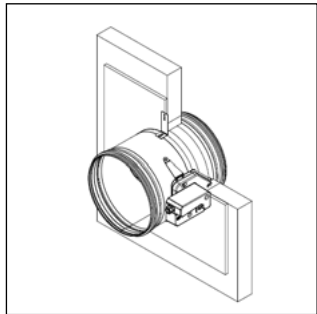
The wall is composed of gypsum blocks (minimum density of 995kg/m<sup>3</sup>), and with minimum thickness of 70mm.



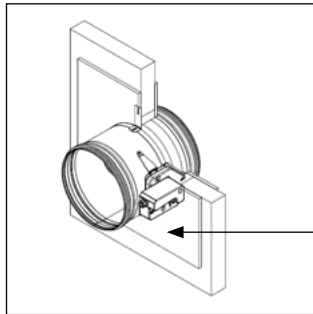
Place the damper in an opening of  $\varnothing+70$  mm or more



Fix damper and GFK gypsum boards (12,5mm thick) to wall with screws



Fill the space between the damper and the wall with mortar



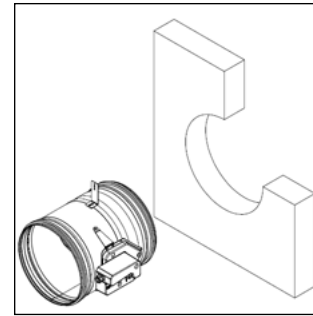
Cover the mortar with GFK gypsum boards (12,5 mm thick)

Width of the damper B (mm)	Mounting kit
100	60061429
125	60061430
160	60061431
200	60061432
250	60061433
315	60061435
355	60061436
400	60061437
450	60061438
500	60061439
560	60061440
630	60061441
710	60061442
800	60061443

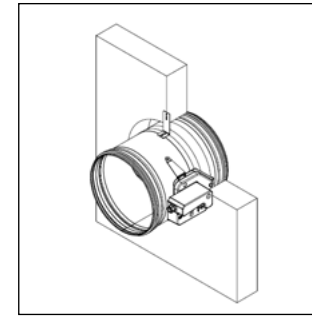
\* The Kit is universal for all dimensions and must be cut to fit the specific dimensions of the damper

### 5.2.4 Gypsum blocks wall 100mm

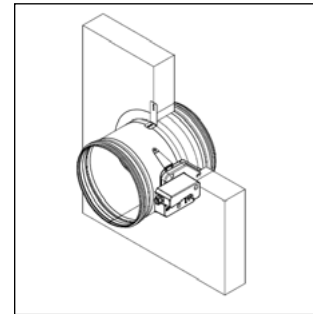
The wall is composed of gypsum blocks (minimum density of 995kg/m<sup>3</sup>), and with minimum thickness of 100mm.



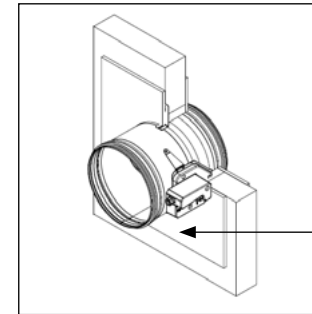
Place the damper in an opening of  $\varnothing+70$  mm or more



Fix the damper to the wall using screws



Fill the space between the damper and the wall with mortar



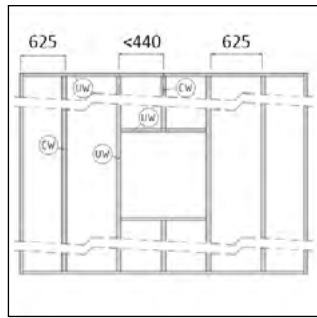
Cover the mortar with GFK gypsum boards (12,5 mm thick)

Width of the damper B (mm)	Mounting kit
100	60061429
125	60061430
160	60061431
200	60061432
250	60061433
315	60061435
355	60061436
400	60061437
450	60061438
500	60061439
560	60061440
630	60061441
710	60061442
800	60061443

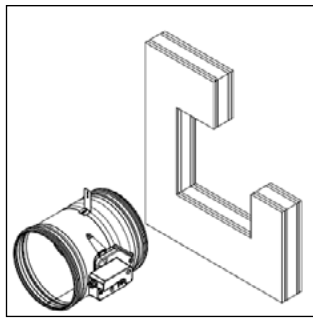
\* The Kit is universal for all dimensions and must be cut to fit the specific dimensions of the damper

### 5.2.5 Flexible wall mounting

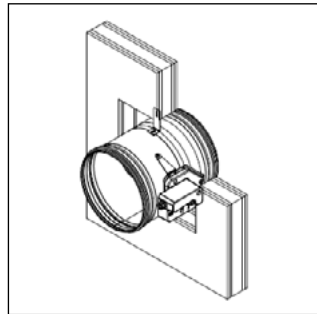
The wall is composed of 2x2 GFK plates, 12,5 mm thick, installed on a 48 mm wide steel construction. The interior of the wall is filled with mineral wool of 100 kg / m<sup>3</sup> density.



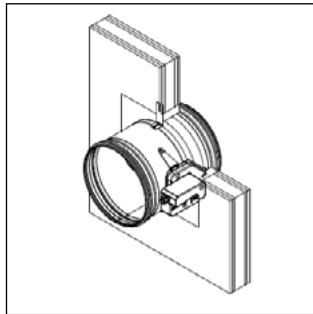
Realization of the steel construction



Place the damper in an opening of  $\phi+70\text{ mm}$  or more



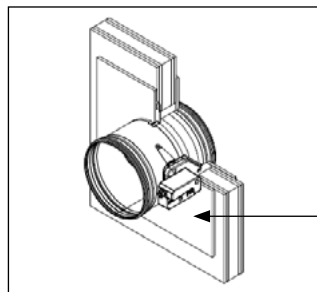
Fix the damper to the wall using screws



Fill the space between the damper and the wall with mineral wool (100 kg/m<sup>3</sup> of density)

Width of the damper B (mm)	Mounting kit
100	60061429
125	60061430
160	60061431
200	60061432
250	60061433
315	60061435
355	60061436
400	60061437
450	60061438
500	60061439
560	60061440
630	60061441
710	60061442
800	60061443

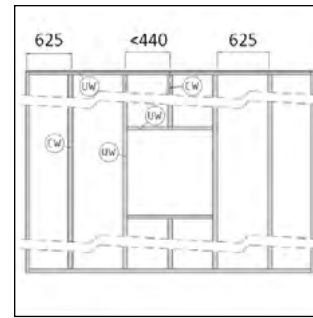
\* The Kit is universal for all dimensions and must be cut to fit the specific dimensions of the damper



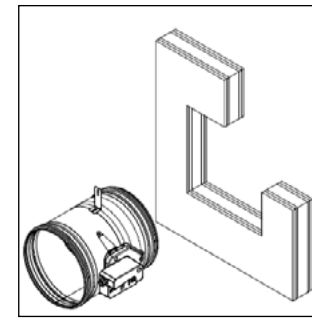
Cover the mineral wool with GFK gypsum boards (12,5 mm thick)

### 5.2.6 Flexible wall mounting

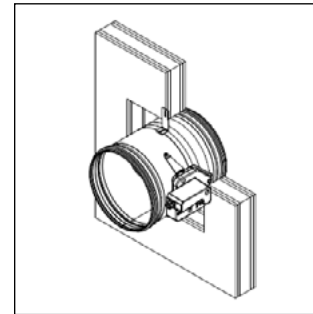
The wall is composed of 2x2 GFK plates (example PROMATECT 100, 12,5 mm thick), installed on a steel construction of 48 mm width.



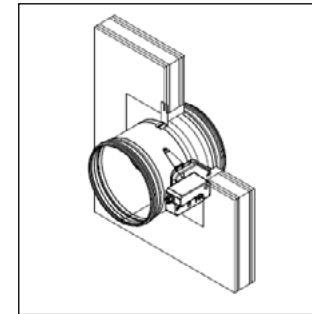
Realization of the steel construction



Place the damper in an opening of  $\phi+70\text{ mm}$  or more



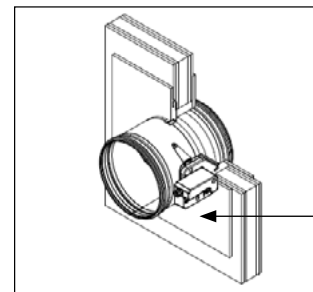
Fix the damper to the wall using screws



Fill the space between the damper and the wall with mortar

Width of the damper B (mm)	Mounting kit
100	60061429
125	60061430
160	60061431
200	60061432
250	60061433
315	60061435
355	60061436
400	60061437
450	60061438
500	60061439
560	60061440
630	60061441
710	60061442
800	60061443

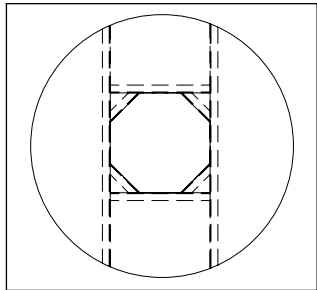
\* The Kit is universal for all dimensions and must be cut to fit the specific dimensions of the damper



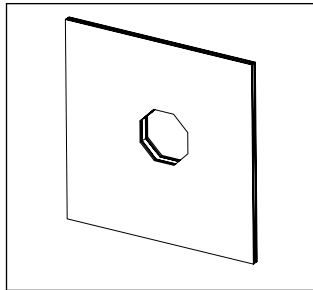
Cover the mortar with GFK gypsum boards (12,5 mm thick)

### 5.2.7 Installation remote from flexible/rigid wall

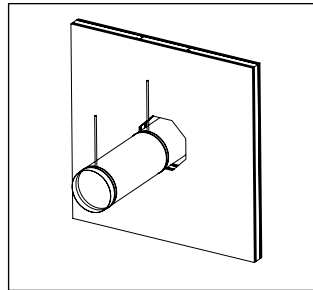
The wall is composed of 2x2 GFK plates, 12.5 mm thick, installed on a 48 mm wide steel construction. The interior of the wall is filled with mineral wool of 100 kg / m<sup>3</sup> density.



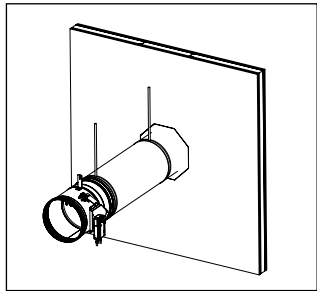
Arrangement of steel profiles.



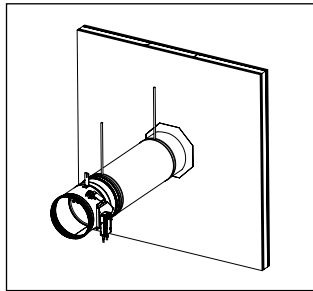
Recommended wall opening is  $\varnothing n+70$ mm (wall cover with gypsum plates)



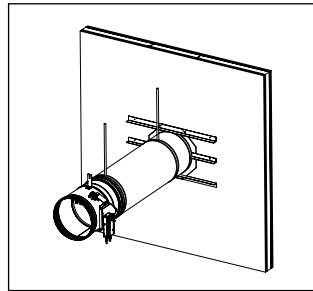
Place ventilation duct trough wall



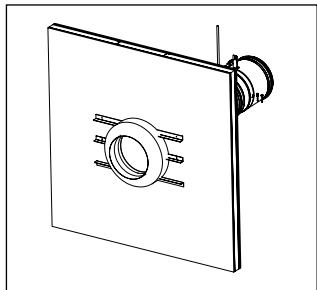
Install fire damper and secure it with self-tapping screws 4,3x10 to duct



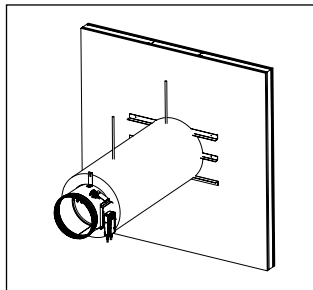
Fill space between duct and wall with mineral wool (Isover U protect). Additionally paint wool with Isover BSF in thickness of 1mm



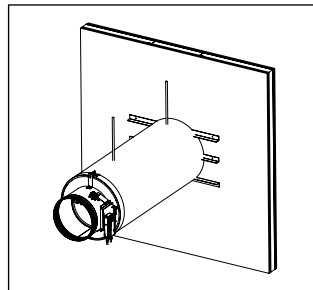
Close installation with L profiles 30x30x3mm. Additionally fix profiles to duct with self-tapping screws, and screw them to wall with 4,5x50 screws.



Repeat the same procedure on the other side. Place the wool on ventilation duct and secure on joint woolwool with wire every 80mm.



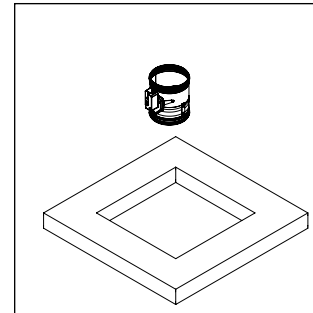
On connection wool-wall apply glue Isover BSK in thickness of 2mm.



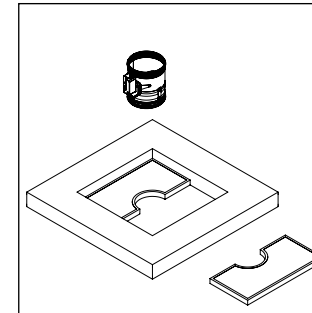
Additionally place steel protection on place where insulation on damper ends.

### 5.2.8 Installation in ceiling (Weichschott)

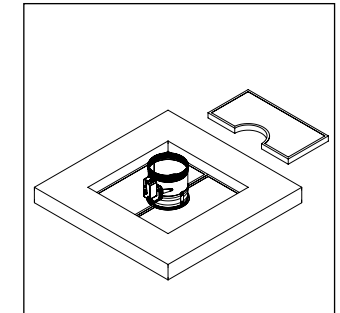
Installation material: Fire damper FDC, Mineral wool >140kg/m<sup>3</sup>, Fire protection coating, (HILTI weichschott system)



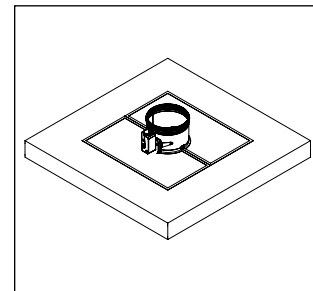
Recommended ceiling opening for fire damper installation is  $\varnothing + 400$ mm, but openings from  $\varnothing + 80 \dots 600$  mm can also be used



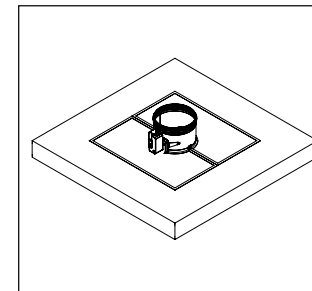
Insert fire damper into ceiling  
Damper blade must be closed during installation!



Fix the damper to the wall using screws



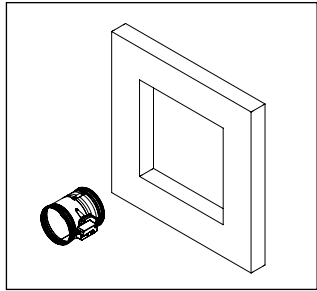
Connections of mineral wool should be sealed with intumescent fire resistant sealant. Mineral wool and damper casing must be coated with 2 mm thick fire protection coating



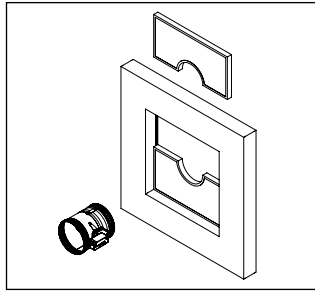
Cut additional 50 mm thick rings to cover fire damper perimeter from both sides

### 5.2.9 Installation in flexible wall (Weichschott)

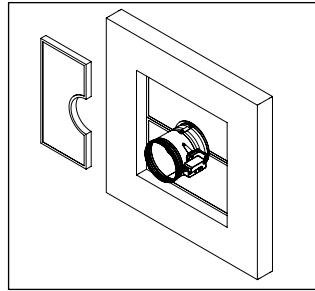
Installation material: Fire damper FDC, Mineral wool >140kg/m<sup>3</sup>, Fire protection coating, (HILTI weichschott system)



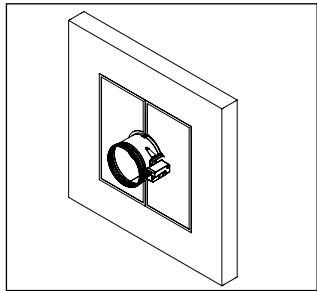
Recommended wall opening for fire damper installation is Ø + 400mm, but openings from Ø + 80...600 mm can also be used



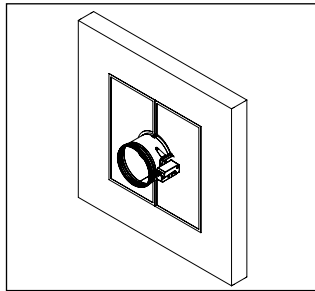
Insert fire damper into wall  
Damper blade must be closed during installation!



Space between casing and wall close with three layers of mineral wool (density 140 kg/m<sup>3</sup> or more, coated on one side)



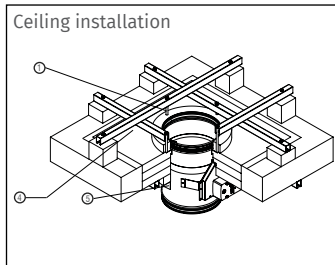
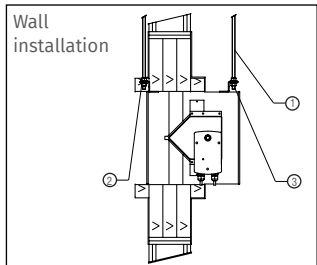
Connections of mineral wool seal with intumescent fire resistant sealant. Mineral wool and damper casing must be coated with 2 mm thick fire protection coating



Cut additional 50 mm thick rings to cover fire damper perimeter from both sides

### Suspension for mortarless installation

Suspension systems are required for the dry mortarless installation of the fire damper with mineral wool in solid walls, flexible walls and 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. Suspension systems longer than 1.5 m require fire-resistant insulation.



- ① Threaded rod (M10), galvanized steel
- ② Washer, galvanized steel
- ③ Nut, galvanized steel
- ④ Bracket, 45x30x1,5 mm, galvanized steel
- ⑤ L shaped profile (50x50x1) secured with self tapping screw to damper housing

## 6. CONTROL MECANISMS

### MANUAL FUSE ONLY MECHANISM (Non-evolutive)

Self-operating mechanism equipped with a thermal fuse.

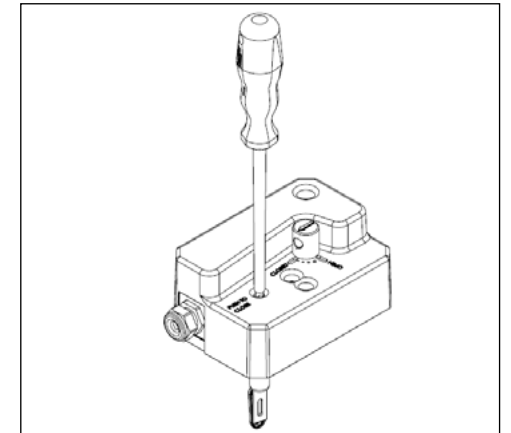
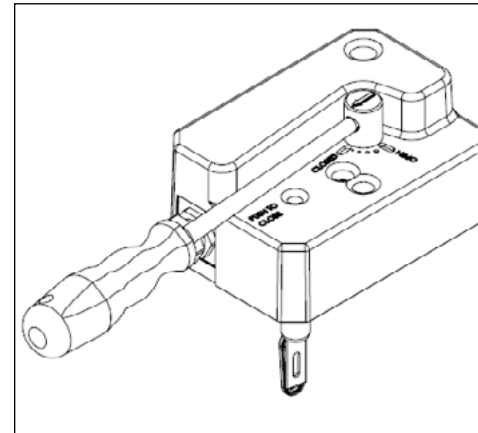
The Manual fuse only control mechanism closes the damper blade automatically if the temperature in the duct exceeds 72 °C. The damper is reset manually by means of a screwdriver.

Standard equipment:

- Thermal fuse 72 °C
- Manual triggering is possible
- Manual reset, use the screwdriver (turn counterclockwise)

To open the damper, insert the screwdriver into the shaft (parallel to the ventilation duct axis) and turn counterclockwise

To close the damper, press the thermal fuse head with a screwdriver



### Options :

For this self-operating version, the double contact – S - is available as an option (factory option or after-sales kit):  
The double contact S (OPEN / CLOSED) consists of:

- electric limit switch indicating CLOSED position
- electric limit switch indicating OPEN position

### MANUAL FUSE ONLY MECHANISM UPGRADABLE TO SOLENOID ACTUATOR

#### FD25/FD40 in self-operating version

### Activation :

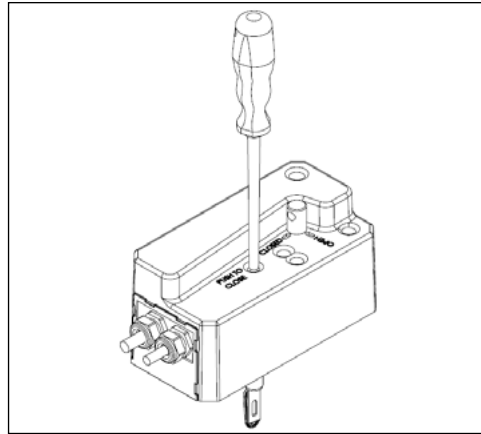
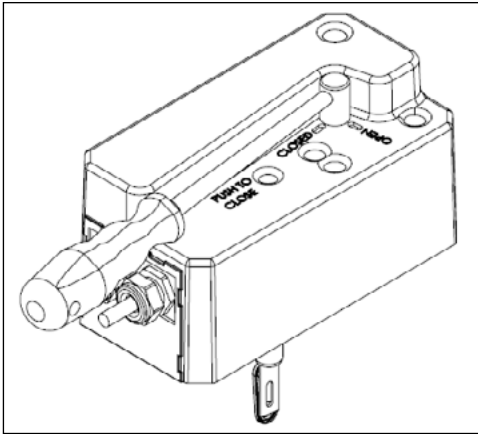
- Manual activation: Push the release button.
- Self-operating activation: With a fuse at 72 °C

### Resetting :

- Manual resetting: Turn the lever counter-clockwise

To open the damper, insert the screwdriver into the shaft (parallel to the ventilation duct axis) and turn counterclockwise

To close the damper, press the thermal fuse head with a screwdriver



**Options:**

- For this self-operating version, the double contact – S and the 4-contacts – S2 - are available as an option (factory option or after-sales kit):

The 4-contact – S2 - consists of:

- electric limit switch indicating CLOSED position
- electric limit switch indicating OPEN position
- additional electric limit switch indicating CLOSED position
- additional electric limit switch indicating OPEN

**FD25/FD40 solenoid actuator version**

**Activation:**

- Manual activation: Push the release button.
- Self-operating activation: With a fuse at 72 ̊C
- Remote activation: By emission or break of current (solenoid with 24/48 V automatic voltage)

**Resetting:**

- Manual resetting: Turn the lever counter-clockwise

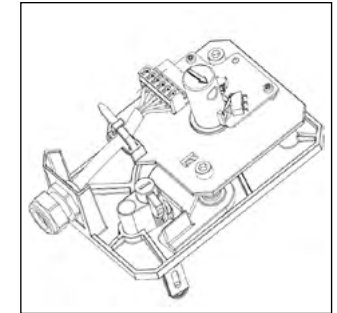
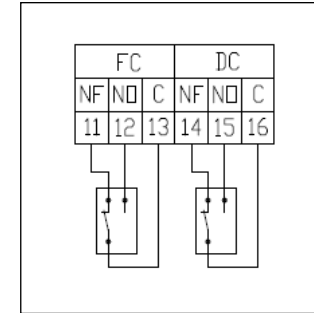
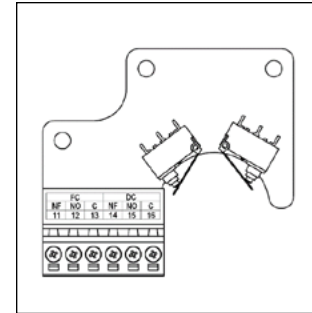
**Reminder:**

- For this version with remote activation, the double contact S (OPEN / CLOSED) are mounted as standard equipment
- The 4-contact – S2 - are available as an option (factory option or after-sales kit).

**7. ELECTRICAL CONNECTIONS**

**FD25 MANUAL FUSE ONLY MECHANISM**

- Electrical wiring of the S option
- Electronic control board



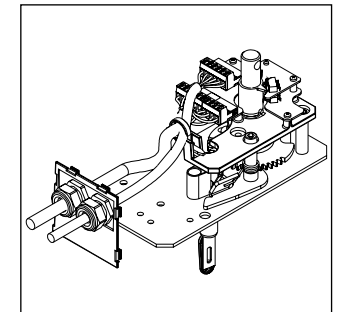
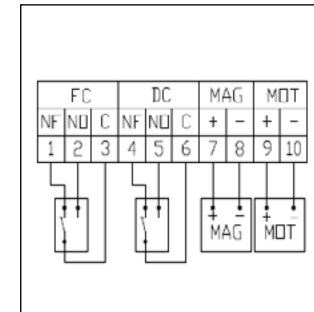
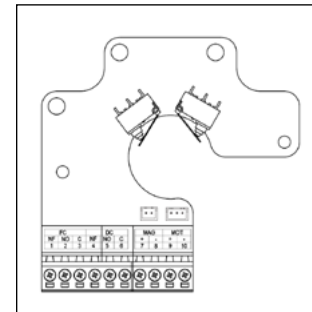
FC = Limit switch - end  
DC = Limit switch - start

C = common  
NO = normally open

NF = normally closed

**MANUAL FUSE ONLY MECHANISM UPGRADABLE TO SOLENOID ACTUATOR**

- Electrical wiring of solenoid option
- Main electronic control board of coil supply



MOT = not in use

MAG = solenoid power supply terminals (24 or 48 VDC)

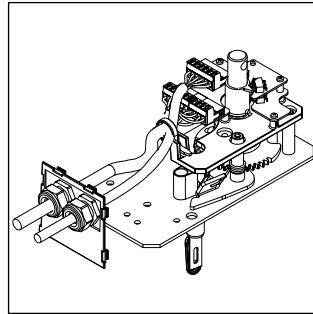
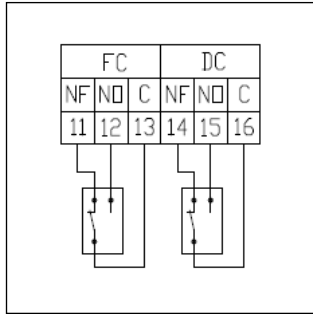
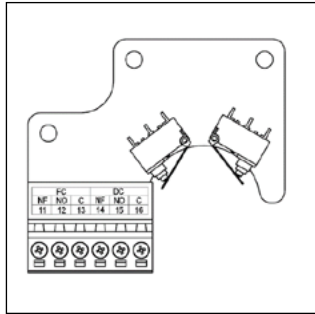
- Electrical wiring of the S option
- Main electronic control board of coil supply

FC = Limit switch - end  
DC = Limit switch - start

C = common  
NO = normally open

NF = normally closed





FC = Limit switch - end  
DC = Limit switch - start

C = common  
NO = normally open

NF = normally closed

ELECTRICAL SPECIFICATIONS	FD25 FUSE ONLY	FD25/FD40 FUSE ONLY UPGRADABLE TO SOLENOID ACTUATOR
Nominal voltage	N/A	Solenoid: 24/48 VDC (automatic change on the electronic card)
Power	N/A	Dual voltage SOLENOID: • Break of current: P <sub>nom</sub> = 1.6W • Emission of current: P <sub>max</sub> = 3.5 W
Switching capacity of the FDCU and FDCB contactors	1mA...500mA, 5VDC...48VDC	1mA...500mA, 5VDC...48VDC
Blade closure time	Spring: 1 second	Spring: 1 second
Blade opening time	Manual	
Degree of protection	IP 42	IP 42

## 8. OTHER MECHANISMS

### Belimo

#### Operation

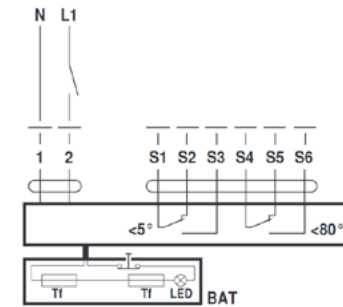
Damper is delivered in closed position. When electric actuator is connected to the power supply damper will open. When the damper reaches the end position (damper open), in which it is blocked, the electromotor will stop. Closing fire damper takes place automatically when a power failure occurs. Thermal 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 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 (counterclockwise) for Belimo BF, and by puling brake on Belimo BFL and BFN.

To unlock the electromotor, 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 after power failure (thermoelectric fuse).

#### Wiring diagram



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

1	negative (direct-current) or neutral (alternating current)
2	positive (direct-current) or phase (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
TF1	temperature sensor on the outer side of the duct (ambient temperature) max. 72°C
TF2	temperature sensor on the inner side of the duct (temperature in the duct) max. 72°C
TF3	temperature sensor on the inner side of the duct (temperature in the duct) max. 72°C

### SCHISCHEK ExMax

#### Operation

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 it is blocked, the electromotor 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 tripping device will close damper. When switch on tripping device is released, the damper will open.



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

Type Examination Certificate Number:  
EXA 14 ATEX0064X

Equipment complies with the essential health and safety requirements relating to the design and construction of equipment intended to use in potentially explosive atmospheres given in annex II of the directive 94/9/EC.

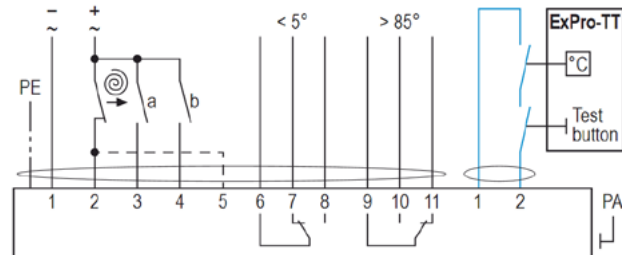


II - 2G - IIC - T6



II - 2D - IIC - T80°

#### Wiring diagram



## 9. EVOLUTION OR SERVICE KITS

	Designation	Code	
Fuse only mechanism	Fuse kit	FD-JHERM-72	
	Double contact S kit	FD-S-KIT	
Upgradeable to solenoid	4-contacts S2 kit	FD-DS-KIT	
	Solenoid current emission kit	FD-EMS-KIT	
	Solenoid current break kit	FD-EMP-KIT	

## 10. MAINTENANCE

- Observe the requirements specified in the NF S 61-933.
- Provide at least one annual check of the damper
- After each intervention, provide a systematic cleaning of dust and especially the solenoid and its movable plate
- Check the if the electrical terminals are tightened



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F-91193 Saint-Aubin  
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CERTIFICAT DE CONSTANCE  
DES PERFORMANCES  
CERTIFICATE OF CONSTANCY OF  
PERFORMANCE

CERTIFICAT DE CONSTANCE DES PERFORMANCES  
CERTIFICATE OF CONSTANCY OF PERFORMANCE

N° 1812-CPR-1162

Conformément au Règlement 305/2011/EU du Parlement européen et du Conseil du 9 mars 2011 (Règlement Produits de Construction - RPC), il a été établi que le produit de construction ;  
In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), it was established that the construction product:

Produit / Product: **CLAPETS COUPE-FEU / FIRE DAMPERS**

Référence du produit / Reference of the product: **Rectangular fire dampers FD 25 & FD 40**

mis sur le marché par ou pour / placed on the market by or for: **KLIMAOPREMA d.d.  
Gradna 78A  
10430 SAMOBOR - Croatia**

et produit dans l'usine de fabrication de / and produced in the manufacturing plant located in: **Nova Gradiska (Croatia)**

est soumis par le fabricant à un contrôle de production en usine, et que LECTIS France, organisme de certification notifié, a réalisé les essais/calculs de type initiaux relatifs aux caractéristiques concernées du produit, l'inspection initiale de l'usine et du contrôle de la production en usine, et réalise la surveillance continue, l'évaluation et l'acceptation du contrôle de la production en usine.

is submitted by the manufacturer to a factory production control, and that the notified certification body EFFECTIS France, has performed the initial type-testing for the relevant characteristics of the product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of factory production control.

Ce certificat atteste que toutes les dispositions concernant l'évaluation et la vérification de la constance des performances et les performances décrites dans l'annexe ZA de la norme de référence EN 15650 : 2010 pour le système 1 sont appliquées, et que le ou les produits satisfont toutes les exigences prescrites.

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performance, described in Annex ZA of the standard EN 15650 : 2010 under system 1 are applied, and that the product(s) all the prescribed requirements set out above.

Ce certificat, délivré pour la première fois le 30 janvier 2017, demeure valide tant que les exigences relatives aux méthodes d'essai et au contrôle de production en usine incluses dans la norme harmonisée et utilisées pour évaluer les caractéristiques déclarées restent inchangées, et que le produit et les conditions de fabrication dans l'usine ne sont pas modifiées de manière significative.

This certificate, first issued on January 30<sup>th</sup> 2017, remains valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product and the manufacturing conditions in the plant are not modified significantly.

Ce certificat permet au fabricant, ses mandataires ou ses distributeurs, établis dans l'Espace Economique Européen, d'apposer le marquage CE.

This certificate allows the manufacturer, its mandatories or its distributors, stated in the European Economic Area, to affix the CE-marking.

Certificat établi à Saint-Aubin le / Certificate established at Saint-Aubin on: **30/01/2017.**

Par délégation du Directeur technique Certification / By delegation of the technical Certification director:

Yannick LE TALLEC  
Directrice Certification / Certification director



Organisme notifié  
Notified body  
n° 1812

DECLARATION OF PERFORMANCE  
No: DOP 710/207\_1\_EN

1. Unique identification code of the product-type: Rectangular fire damper
2. Identification of the construction product: FD25/FD40
3. Intended use(s) of the construction product: Rectangular fire damper to be used in conjunction with fire separating elements to maintain fire compartments in HVAC installations.
4. Name and contact address of the manufacturer: Klimaoprema d.d., Gradna 78A, 10430 Samobor
5. Not applicable
6. System of assessment and verification of constancy of performance of the construction product: System 1
7. In case of the declaration of performance concerning a construction product covered by a harmonised standard: The notified body 1396 carried out the initial inspection of the manufacturing plant and of the factory production control as well as the continuous surveillance, assessment and evaluation of factory production control under system 1 and issued the Certificate of constancy of performance 1812 - CPR - 1162
8. Not applicable
9. Declared performance according to EN 15650: (Fire resistance according to EN 1366-2 and classifications according to EN 13501-3)

Essential characteristics	Supporting construction	Supporting construction details	Type of installation	Performance
	Rigid wall	Aerated concrete (≥250kg/m³) ≥100mm/battery Reinforced concrete (≥220kg/m³) ≥100mm/battery	Gypsum plaster/Mortar Gypsum plaster/Mortar	El 120 (re I-re)S (500Pa) El 120 (re I-re)S (500Pa)
	Flexible wall	Gypsum blocks (≥995kg/m³) ≥70mm Plasterboard type 96/48 ≥100mm Plasterboard type 96/48 ≥100mm	Gypsum plaster/Mortar Gypsum plaster/Mortar Mineral wool + cover boards	El 120 (re I-re)S (500Pa) El 120 (re I-re)S (500Pa) El 120 (re I-re)S (500Pa)
	Floor/ceiling	Aerated concrete (≥250kg/m³) ≥100mm Reinforced concrete (≥220kg/m³) ≥100mm	Gypsum plaster/Mortar Gypsum plaster/Mortar	El 120 (re I-re)S (500Pa) El 120 (re I-re)S (500Pa)
	Type of installation: built in, 0-90-180-270°			
	Nominal activation conditions/sensitivity according to ISO 10294-4: - sensing element load bearing capacity - sensing element response temperature			
	Response delay (closing time) according to EN 1366-2: - sensing element response temperature			
	Operational reliability (opening, closing) according to EN 1366-2: - sensing element response temperature			
	Durability of response delay according to ISO 10294-4: - sensing element response to temperature and load bearing capacity			
	Durability of operational reliability (opening and closing cycle) according to EN 15650: - Fuse only, Fuse + electromagnet (Klimaoprema) - 300 cycles			
	Protection against corrosion according to EN 60068-2-52: - 300 cycles			
	Damage (leak and cabin leakage) according to EN 1251: - 300 cycles			
	10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7. The declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for on behalf of the manufacturer by: Sergej Galošić, General manager			

Harmonised standard EN 15650:2010







**Klimaoprema d.d.**

Gradna 78A, 10430 Samobor, Croatia

Tel. +385 (0)1 33 62 513 | Fax. +385 (0)1 33 62 905

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[www.klimaoprema.hr](http://www.klimaoprema.hr)