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CE
2483

TECHNICAL CATALOGUE

Butterfly fire damper cartridge
BFDC

Butterfly fire damper cartridge with air valve
BFDC-V

TABLE OF CONTENTS

Product details

The circular end valves are installed in circular ventilation ducts at the wall passages, for stop the spread of fire. They have fire resistance up to 120 minutes.

We have 2 types of products:

- BFDC is used to guarantee the fire resistance of the walls when passing air ducts.
- BFDC-V is equipped with a ventilation opening and is used for mounting at the end of the air ducts.

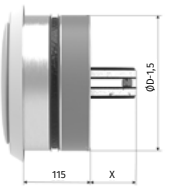
The products are equipped with a thermal fuse.

1. Steel casing
2. Damper blades
3. Intumescent joints around the casing
4. Rubber seals
5. Thermal fuse 72 ° C
6. 2 safety clips
7. Regulation disc
8. Product marking

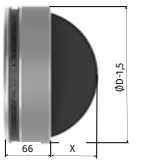
BFDC

BFDC-V

Dimensions



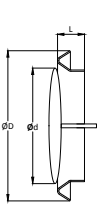
BFDC-V

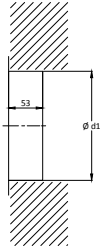


BFDC

Ø (mm)	BFDC EI60S BFDC E120S BFDC-V EI60S BFDC-V E120S	BFDC EI90S BFDC-V EI90S	BFDC EI120S BFDC-V EI120S
100	18	18	18
125	30,5	30,5	30,5
160	48	48	48
200	68	68	68

	100	125	160	200
Ø D	150	185	220	260
Ø d	89	115	145	182
L	47	49	51	53
Ød1	99	124	159	199





Certifications and test reports

All our end valves are subjected to several tests by official institutions. The reports of these tests form the basis of the certifications of our products.

CE 2483 **Europa: Classification according to EN 15650: 2010**

Storage and handling

As a security feature, the terminal valve must be stored and handled with care.

Warning :

- Avoid any deterioration.
- Avoid contact with water.
- Avoid casing deformation during assembly and operation.
- Unload in a dry area.
- Avoid shocks.

Installation

- Mounting is possible with the axis in horizontal or vertical position.
- The installation must conform to the test report.
- The direction of air circulation is indifferent.
- The product must be accessible for inspection and maintenance.

Blade positions

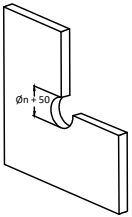
The terminal valve is always tested in standardized support frames (both in a massive wall, slab massive than in a flexible wall) in accordance with NBN EN 1366-2: 1 999 table 3/4/5 'of support frames standardized. The results obtained are valid for all frames of similar supports that have a fire resistance and / or a thickness and / or density similar or greater than that of the test.

Examples of similar constructions

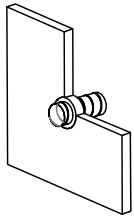
Reinforced concrete wall min. 100 mm + density 2,200 kg / m³ + fire resistance ≥ 120 '	Masonry wall made of hollow or solid bricks, concrete, concrete cellular, light concrete ...
Reinforced concrete slab thickness 100 mm + density 2,200 kg / m³ + fire resistance 120 '	Concrete parts, prestressed concrete ...
Flexible wall: metal stud + drywall resistance with fire: 100 mm + fire resistance ≥ 120 '	Metal stud + Rf plates, multiple levels of plaster

Wall mounting / solid slab or ceiling in

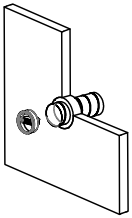
The terminal valve was tested in a 100 mm reinforced concrete wall, a 100 mm cellular concrete wall (120' fire resistance) and a 100 mm reinforced concrete slab (120' fire resistance). 240').

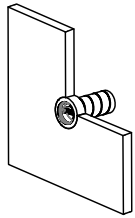


1. Provide an opening in the wall / slab / ceiling of at least = Øn + 50 mm.

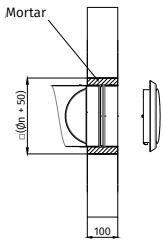


2. Place a metal conduit in the opening. The clearance between the duct and the wall / slab / ceiling must be filled completely with mortar

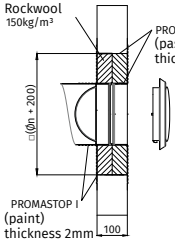




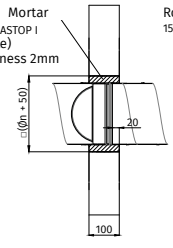
3. Insert the damper into the duct at a depth of 20mm from the wall surface so that the blade is oriented in the direction of the sheath.



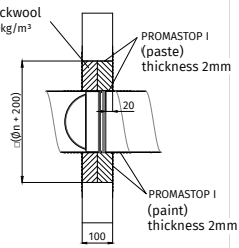
BFDC-V
Installation in rigid wall



BFDC-V
Installation in rigid wall



BFDC
Installation in rigid wall



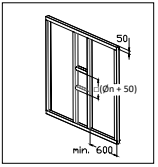
BFDC
Installation in rigid wall

Flexible wall mounting - plasterboard wall

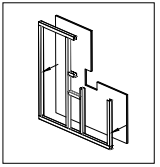
The fire damper cartridge has been tested in a metal wall stud plasterboard (fire resistance 120') with a thickness of at least 100 mm. The fire resistance of the wall must be similar or greater than that of the terminal valve.

A plasterboard wall is composed of:

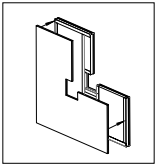
- A metal frame consisting of metal horizontal and vertical studs (minimum width 50 mm).
- Rock wool with a thickness of 40 mm and a density of at least 100 kg / m³ between the coating.
- Double coating: two GKB plasterboards on both sides (fire resistance 60 ').



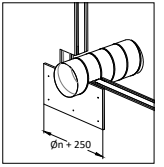
1. Provide an opening of at least = (Øn + 50) mm x (Øn + 50) mm + horizontal studs in the wall.



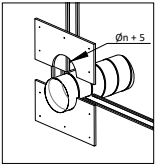
2. Attach two GKB plasterboards 12.5 mm thick to one side of the stud wall. For a metal stud wall with 60 'fire resistance, use fire-resistant plasterboard of the same thickness.



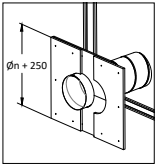
3. Insulate the wall entirely with rockwool (40 mm - 100 kg / m³) and finish with two GKB plaster plates.



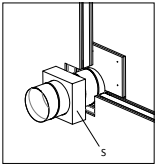
4. Insert the ventilation duct into a hole in the wall and press it on the GKB plate of width (Øn + 250mm) and with the central hole (Øn + 5mm), then tighten with self-tightening screws. tapping machines 5,5x70 mm.



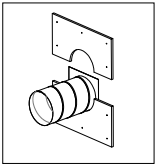
5. Cover with another GKB plate of the same dimensions and tighten with self-tapping screws 5.5x70 mm.



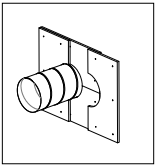
6. Install another layer of GKB plates perpendicular to the first layer and tighten with 5.5x70 mm self-tapping screws.



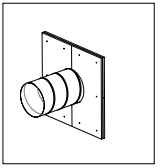
7. Completely fill the S connection between the duct and the wall with rock wool (density of at least 100 kg / m³)



8. Complete the filling with a layer of GKB plates and tighten them with the 5.5x70 mm screws.



9. Install another layer of GKB plates perpendicular to the previous one and tighten with self-tapping screws 5.5x70 mm



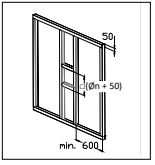
10. Place the fire damper cartridge in the conduit so that the face of the cartridge is 45 mm from the surface of the wall. A CBT must be mounted so that the mouth is positioned against the wall

Flexible wall mounting - plasterboard wall

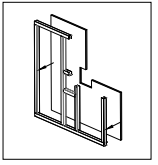
The fire damper cartridge has been tested in a metal wall stud plasterboard (fire resistance 120 ') with a thickness of at least 100 mm. The fire resistance of the wall must be similar or greater than that of the terminal valve.

A wall of plasterboard is composed of:

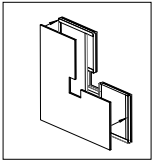
- A metal frame consisting of metal horizontal and vertical studs (minimum width 50 mm).
- The space between the duct and the wall is filled with plaster of gypsum
- Double coating: two GKF drywall on both sides (120 'fire resistance).



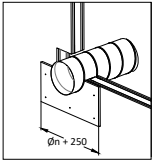
1. Provide an opening of at least = (Øn + 50) mm x (Øn + 50) mm + horizontal consolidations in the wall.



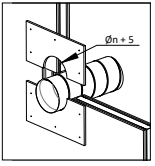
2. Attach two GKF plasterboards 12.5 mm thick to one side of the stud wall. For a metal stud wall with 120 'fire resistance, use fire-resistant plasterboard of the same thickness.



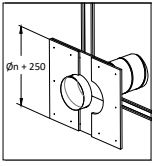
3. Insulate the wall entirely with rockwool (40 mm - 100 kg / m³) and finish with two GKF plaster lacquers.



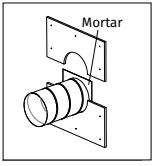
4. Insert the ventilation duct into a hole in the wall and press it on the GKF plate of width (Øn + 250mm) and with the central hole (Øn + 5mm), then tighten with self-tightening screws. tapping machines 5,5x70 mm.



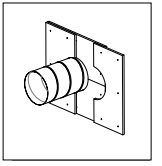
5. Cover with another GKF plate of the same dimensions and tighten with self-tapping screws 5.5x70 mm.



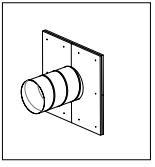
6. Install another layer of GKF plates perpendicular to the first layer and tighten with 5.5x70 mm self-tapping screws.

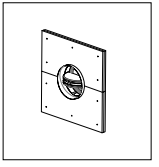


7. Fill the gap between the wall and the valve with plaster, cover it with the GKF plate and tighten it with screws.



8. Install another layer of GKF plates perpendicular to the previous one and tighten with screws.





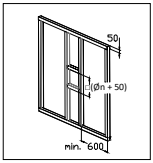
9. Insert the CTCF valve into the duct at a depth of 20 mm from the wall surface so that the blade is oriented in the direction of the duct.

Flexible wall mounting - plasterboard wall

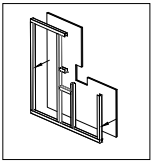
The fire damper cartridge has been tested in a metal wall stud plasterboard (fire resistance 120 ') with a thickness of at least 100 mm. The fire resistance of the wall must be similar or greater than that of the terminal valve.

A wall of plasterboard is composed of:

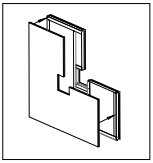
- A metal frame composed of metal horizontal and vertical studs (minimum width 50 mm).
- Rock wool with a thickness of 40 mm and a density of at least 100 kg / m³ between the coating.
- Double coating: two GKF drywall on both sides (120 'fire resistance).



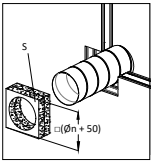
1. Provide an opening of at least = (Øn + 50) mm x (Øn + 50) mm + horizontal consolidations in the wall.



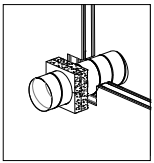
2. Attach two GKF plasterboards 12.5 mm thick to one side of the stud wall. For a metal stud wall with 120 'fire resistance, use fire-resistant plasterboard of the same thickness.

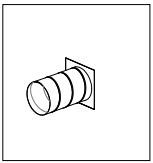


3. Insulate the wall entirely with rockwool (40 mm - 100 kg / m³) and finish with two GKF plaster lacquers.

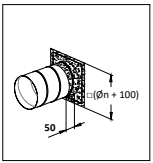


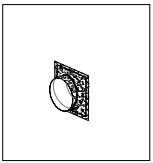
4. Insert the ventilation duct into a hole in the wall and fill the gap between the duct and the wall with two layers of mineral wool 150 kg / m3 density, 50 mm thick and (Øn + 50) mm width . The outer and inner edges as well as the tactile surfaces between the layers of wool should be previously primed fireproof coating.



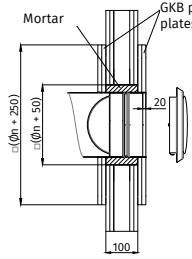


5. Coat the wool filler, the sheath portion and the wall contact points and fill the rock wool with a fire-resistant coating in the thickness of 2 mm.

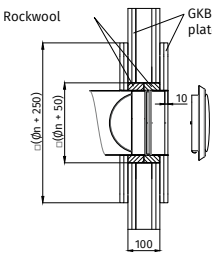




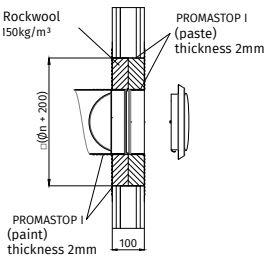
6. Insert the BFDC valve into the duct at a depth of 20 mm from the wall surface so that the blade is facing in the direction of the duct.



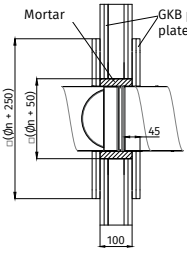
BFDC-V
Installation in flexible wall



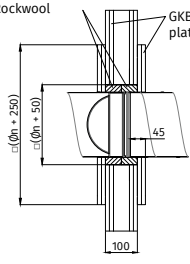
BFDC-V
Installation in flexible wall



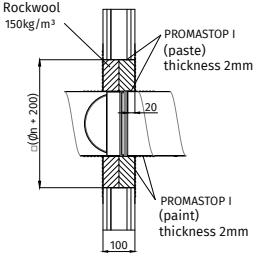
BFDC-V
Installation in flexible wall



BFDC
Installation in flexible wall



BFDC
Installation in flexible wall



BFDC
Installation in flexible wall

OPERATION

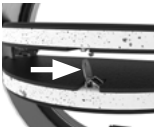
The circular fire damper cartridge is held in the open position by the fuse. As soon as the temperature in the sheath exceeds 72 ° C, the thermal fuse trips and both blades close. The terminal valve is then in the closed position.

Two stop tabs lock the blades in this position, ensuring a perfect seal against flames and smoke.

1. Push the two stop tabs to unlock the blades.

2. Push the blades toward each other.

3. Snap the fuse into the bracket to lock the blades.



4. Trigger the blades by pushing them towards each other and exerting light pressure on the fuse.

MAINTENANCE AND SERVICE

- No special maintenance.
- Cleaning the assembly (dust) at start-up.
- Respect the terms of the standard NF S 61-933.
- Attention, the BFDC and BFDC-V, in closed position, can move in the sheath in case of pressure too strong.

SERVICE KITS

	Fusible BFDC-5026		Kit FCU BFDC-5025
	Thermal fuse (5 pieces)		Unipolar limit switch contact

Explanation of abbreviations

E = integrity
I = thermal insulation
S = smoke leakage
o → i = fire side = side opposite the fuse
ve = wall mounting in duct
ho = slab / ceiling mounting
MOD = Module
DAS MOD = modular product

TECHNICAL DATA

Control mechanism	BFDC	BFDC-V
Type of product	Butterfly fire damper cartridge	Butterfly fire damper cartridge with air valve
Family	Circular section	Circular section
Certificate	CE 2483	CE 2483
Obligation	Resettable by direct action on the movable element after manual extraction of the flap valve	
Prohibition	Remote rearming prohibited	Remote rearming prohibited
Operating mode	Intrinsic energy	Intrinsic energy
Command mode	Self-controlled by thermal release calibrated at 70 ° C + - 7 ° C	
Mounting direction	Horizontal or vertical	Horizontal or vertical
Direction of air circulation	Indifferent	Indifferent
Free surface	BFDC 60 Ø 100 - 125 : SL (dm²) = [π/4 (ØD - 15,2)² - 33(ØD - 15,2) - 97,5] / 10 000 Ø 160 - 200 : SL (dm²) = [π/4 (ØD - 15,2)² - 33(ØD - 15,2) - 220] / 10 000 BFDC 90 BFDC 120 Ø 100 - 125 : SL (dm²) = [π/4 (ØD - 15,2)² - 33(ØD - 15,2) - 97,5] / 10 000 Ø 160 - 200 : SL (dm²) = [π/4 (ØD - 15,2)² - 33(ØD - 15,2) - 220] / 10 000	
Dimensions L x H	Ø 100 mm to 200 mm	Ø 100 mm to 200 mm
Endurance	After 50 cycles the characteristics remained within the declared limit values	
Degrees of resistance	Fire resistance according to EN 13501-3: - BFDC-120 / BFDC-V-120 : EI120 (ve, ho o → i)S : Ø100 - Ø200 : - BFDC-90 / BFDC-V-90 : EI90 (ve, ho o → i) S : Ø100 - Ø200 : - BFDC-60 / BFDC-V-60 : EI60 (ve, ho o → i) S : Ø100 - Ø200 :	100 mm solid wall mounting Assembly in 100 mm solid slab Flexible wall mounting 120 '100 mm 100 mm solid wall mounting Assembly in 100 mm solid slab Flexible wall mounting 120 '100 mm 100 mm solid wall mounting Assembly in 100 mm solid slab Flexible wall mounting 120 '100 mm 100 mm solid wall mounting Assembly in 100 mm solid slab
fire	Recessed wall or floor according to the configuration	
Mounting type	Side opposite the thermal fuse	Side opposite the thermal fuse
Fire side	Closed	Closed
Security position	No	No
Position indication	Max. 50 ° C	Max. 50 ° C
Temperature of use	For indoor use	For indoor use
Environment	IP 65	IP 65
Degree of protection	Maintenance free	Maintenance free
Interview	Yes	Yes
Modular product	See page 9	See page 9
List of modules		

If the operations are not carried out in accordance with this manual, France Air can not be held responsible and the warranty conditions will not be applied! You can find more information about this product in the datasheet on our website: www.klimaoprema.hr