

TECHNICAL DOCUMENTATION

BDK60 / BDK120

Fire damper

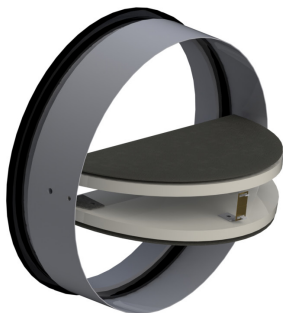


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REGULATORY DESIGNATION

Damper	BDK-60	BDK-120
Remote Controlled	X	X

CERTIFIED CHARACTERISTICS





Damper	BDK-60	BDK-120
Operating mode	Intrinsic energy	
Control mode	Remote controlled (auto) by fusible link set to 72° C	
Remote Control Mode	NA	
Modularity	NA	

GENERAL CHARACTERISTICS

General characteristics of the fire dampers

CE characteristics	<p>Obligation:</p> <p>Change to safety mode by fusible link. Cold reset after switch to safety mode.</p>
NF characteristics	<p>Obligation:</p> <p>Fusible link in accordance with ISO 10294-4 Resettable by directly acting on the mobile element after manually removing the product from the duct.</p> <p>Not Permitted:</p> <p>Remote reset is not permitted</p> <p>Safety options:</p> <p>Contact for safety position (end of run)</p>
Operational reliability	After 50 cycles the general characteristics remain within the set limits
Free Area	See page 5
Dimensions	Nominal Dimensions of Ø100 to Ø 200 mm
Fire resistance rating	See page 3
Mounting Type	Embedded in duct
Mounting Orientation	Blade axis horizontal
Direction of air circulation	Indifferent

FIRE RESISTANCE RATING (EN13501-3)

BDK-60 	Dimensions (mm)	Support work details	Placement of the Installation	Installation	Classification
	$\varnothing: 100 \rightarrow 200$	$d = 150 \text{ mm}$ $\rho = 1900 \text{ Kg/m}^3$	Ceramic brick wall	Mortar	EI 60 (ve i \rightarrow o) S
	$\varnothing: 100 \rightarrow 200$	$d = 100 \text{ mm}$	Stud wall	Plasterboard	
BDK-120 	Dimensions (mm)	Support work details	Placement of the Installation	Installation	Classification
	$\varnothing: 100 \rightarrow 200$	$d = 150 \text{ mm}$ $\rho = 1900 \text{ Kg/m}^3$	Ceramic brick wall	Mortar	EI 120 (ve i \rightarrow o) S
	$\varnothing: 100 \rightarrow 200$	$d = 100 \text{ mm}$	Stud wall	Plasterboard	

EXPLANATION OF THE PRODUCT CODE

E = Integrity
 I = Insulation
 120 = Fire resistance time in minutes
 i \rightarrow o = Fire on opposite side from fusible link
 Ve = Application in vertical enclosure (wall / stud wall).
 S = Smoke Leakage
 Pa = Pressure in Pascals

EXPLANATION OF THE CODE FOR MARKING

auto = Remote controlled
 Pa = Pressure in Pascals
 Dim.nom = Nominal dimensions
 S.L. = Free area

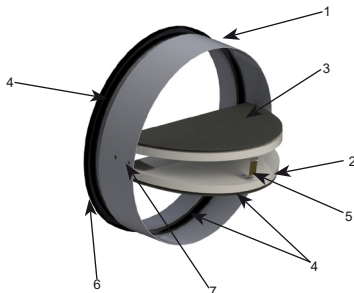
PRESENTATION

The round end dampers are installed inside the round ducts in the wall pass-through to prevent fire propagation.

There are two types of dampers:

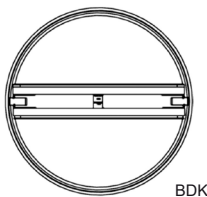
BDK 60: Fire stability of 60 min.

BDK 120: Fire stability of 120 min.

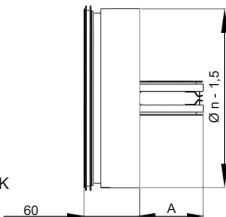


1. Collar
2. Blade
3. Adhesive
4. Intumescent gasket
5. Fusible link, 72°C
6. Rubber gasket
7. Steel Band

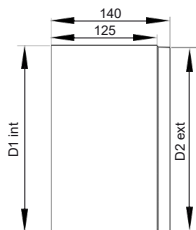
DIMENSIONS



BDK



D (mm)	A (mm)
100	20
125	33
150	41
160	51
180	61
200	71



MOUNTING RING

D1 (mm)	D2 (mm)
100	99
125	124
150	149
160	159
180	179
200	199

FREE AREA (dm²)

$$\text{BDK 60: S.L (dm}^2\text{)} = \frac{\pi \cdot \left(\frac{\varnothing_n - 17.5}{2}\right)^2 - (\varnothing_n - 17.5) \cdot 12 \cdot 2}{10^4}$$

$$\text{BDK 120: S.L (dm}^2\text{)} = \frac{\pi \cdot \left(\frac{\varnothing_n - 17.5}{2}\right)^2 - (\varnothing_n - 17.5) \cdot 15 \cdot 2}{10^4}$$

CERTIFICATION

All dampers have undergone appropriate testing by the official institutes. The following certification was issued based on the results obtained:



Europe: EN 15650:2010 classification

In addition to the aforementioned requirements, the BDK60 and BDK-120 models also comply with the French regulations NF-S 61-937-1 and NF-S 61-937-5, obtaining the certification corresponding to reference NF 537:



- Compliance with the standard NF S 61-937 Parts 1 and 5: "Fire Safety Systems-- Actuated Safety Devices"
- Compliance with the order of March 22, 2004 modified on March 14, 2011 for fire resistance rating.
- The values of the characteristics that are included in this instruction. Certifying Body: AFNOR Certification.

11, Rue Francis de Pressensé 93571

La Plaine Saint Denis Cedex

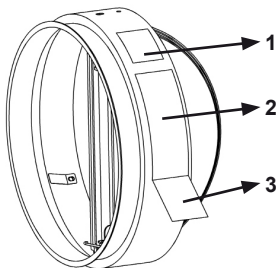
T +33(0)1 41 62 80 00

Fax: +33(0)1 49 17 90 00

Webpage: <http://www.afnor.org> and <http://www.marque-nf.com>

E-mail: certification@afnor.org

MARKING



- 1: NF Marking
- 2: CE Marking
- 3: Separate from marking to affix to duct

STORAGE AND HANDLING

Because it is a safety component, it must be stored and handled with caution. It is necessary to prevent it from deterioration, contact with water and damage during installation.

MOUNTING INSTRUCTIONS

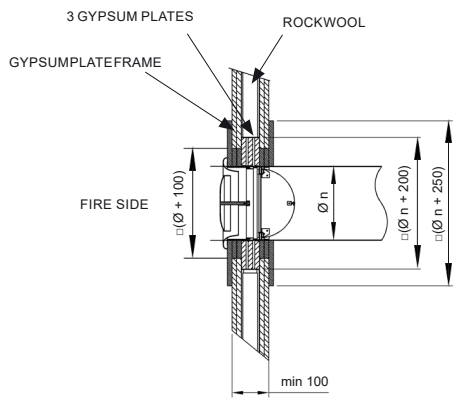
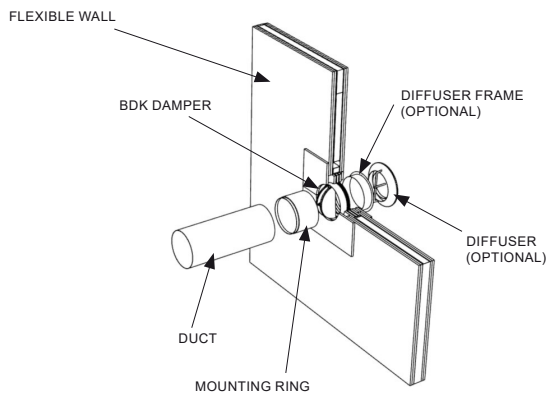
The installation must conform to the test certificates.

The air can flow in any direction.

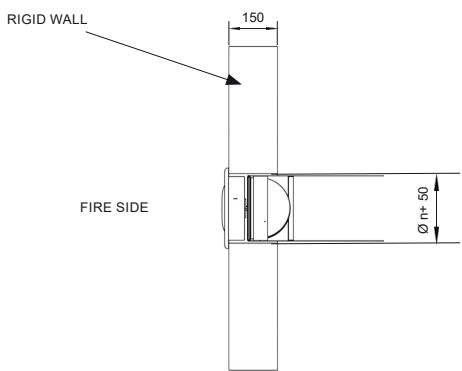
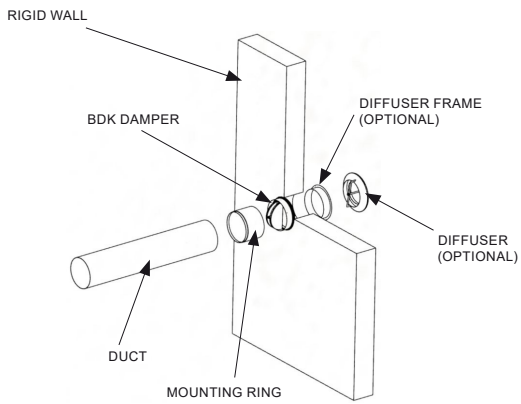
Mounting is horizontal.

The installation must be performed such that the damper is accessible for inspections.

The end damper has been tested in a gypsum plate wall on a metal frame with a thickness of at least 110 mm (fire resistance of 120 minutes).



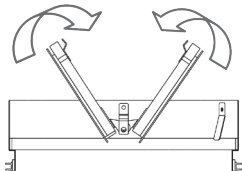
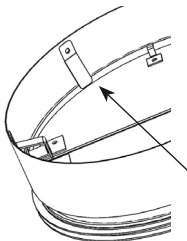
CHECK THAT THE DIFFUSER SCREW DOES NOT INTERFERE WITH THE BDK DAMPER



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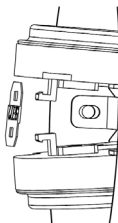
OPERATION

The BDK damper remains open because of the fusible link. When the temperature exceeds 72°C, the fusible link blows and the blade closes automatically. Two steel bands ensure that the damper remains closed.

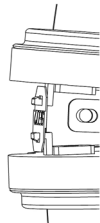


1. Remove the damper from the duct; to open, press with the hand on the steel bands to release the blade.

2. Move the two blades together simultaneously.



3. Align the fusible link with the supports placed on the blades



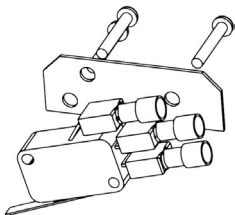
4. Insert the fusible link in the blade supports. Release the blades slowly (precaution due to possible entrapment). The damper will remain open and ready for operation.

POSTSALES KIT

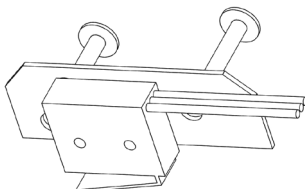
- Fusible link



- Options for unipolar limit micro-switch and support



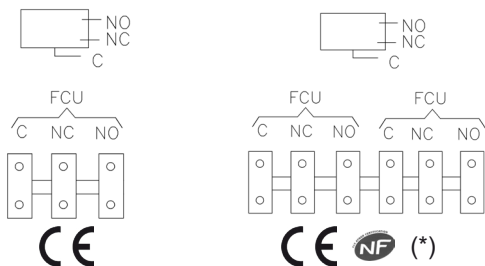
CE





CE NF (*)






(*) Dampers BDK-60 / BDK-120 are certified to **CE NF** and equipped with two micro-switches (one for each blade) to reliably signal the safety position.

ELECTRICAL CONNECTIONS



(* Connections in dampers BDK-60 / BDK-120 certified to   must be made in a junction box, reference 3050 (FAMATEL) supplied with the damper.

Cross sections and number of compatible electrical conductors

Activation	Certification	Number of conductors	Section min.	Section max.
TH70	  0370	-	-	-
TH70 + FCU	 0370	3	0.50 mm ²	1,50 mm ²
TH70 + FCU	  0370	6	0.50 mm ²	1,50 mm ²

TECHNICAL DATA

Designation	BDK-120	BDK-60
Type of product / Family	End round fire damper	
Certificate	16-0370-CPR-2459	16-0370-CPR-2460
Obligation	Remove from the duct to reset	
Operation	Automatic	
Command mode	Controlled by fusible link set to 72°C	
Air circulation direction	Any	
Dimensions	Ø100 to Ø200 mm. See page 4	
Nominal activation conditions / sensitivity	Pass	
Response delay (response time)	Pass	
Service life	50 cycles.	
Fire resistance: EN 13501-3		
Integrity Insulation Leakage flow Mechanical stability (under E) Maintenance of the cross-section (under E)	EI 120 (ve i → o) S flexible wall and rigid wall	EI 60 (ve i → o) S flexible wall and rigid wall
Durability of response delay	Pass	
Durability of operational reliability	NA	
Type of mounting	Duct-recessed (see mounting instructions)	
Fire side	Opposite to fusible link	
Safety position	Closed	
Position indicator	Optional	
Mounting ring	Optional	
Operating Temperature	Max. 50°C	
Environment	Indoor use	
Degree of protection	IP 42	
Maintenance	Maintenance-free	