

Butterfly fire damper

FDA-BU / FDA-BU-E



Description

The fire dampers are manufactured in the following nominal sizes: DN100, DN125, DN160, DN200. The fire dampers are equipped with a thermal fuse mechanism ensuring the damper switch to the safe position in case of reaching an ambient temperature equal to or higher than 72°C. The fire dampers allow using limit switches signalling closed position of the damper blade (1 limit switch) or blades (in case of using 2 limit switches).

The casing is made from galvanised steel sheet; the fire damper blade is made from a silicate cement board.

Version: 001/04/21/MC

Available labelling:

FDA-BU - aaa - bbb - ccc

FDA-BU-E- aaa - bbb - ccc

aaa - nominal size: 100, 125, 160, 200

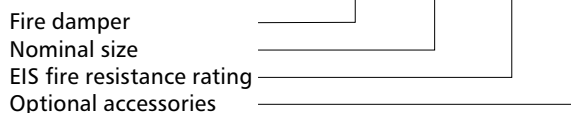
bbb - fire resistance: EIS120, EIS90, EIS60

ccc - optional accessories:

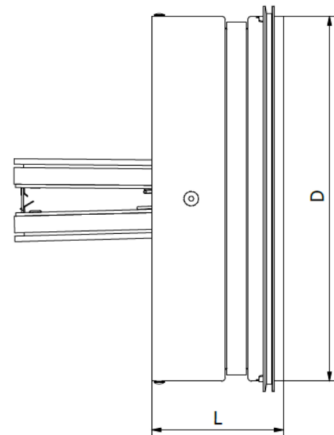
- No limit switches (standard)
- Z1 - one limit switch (closed position)
- Z2 - two limit switch (closed position)

Product code example

Product code: **FDA-BU - 160 - EIS120 - Z2**

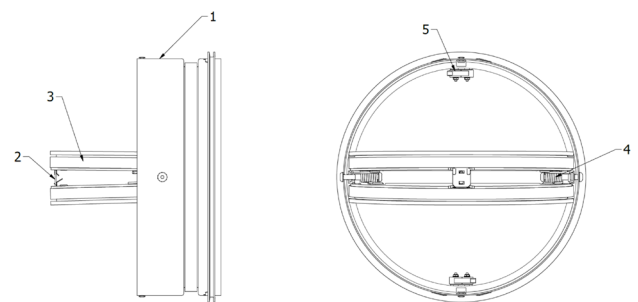


Dimensions



| Product code | Diameter [mm] | D [mm] | L [mm] | Weight [kg] | Effective area A_{eff} [m ²] |
|--------------|---------------|--------|--------|-------------|--|
| FDA-BU-100 | 100 | 97,5 | 70 | 0,33 | 0,0027 |
| FDA-BU-125 | 125 | 122,5 | 70 | 0,44 | 0,0056 |
| FDA-BU-160 | 160 | 157,5 | 70 | 0,64 | 0,0113 |
| FDA-BU-200 | 200 | 197,5 | 70 | 0,90 | 0,0202 |
| FDA-BU-E-100 | 100 | 97,5 | 70 | 0,33 | 0,0027 |
| FDA-BU-E-125 | 125 | 122,5 | 70 | 0,44 | 0,0056 |
| FDA-BU-E-160 | 160 | 157,5 | 70 | 0,64 | 0,0113 |
| FDA-BU-E-200 | 200 | 197,5 | 70 | 0,90 | 0,0202 |

Design



1. casing
2. thermal fuse
3. damper blade
4. torsion spring
5. limit switch

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Tests and certificates

- Fire resistance rating: EIS 120, EIS 90, EIS 60,
- Test method as per EN 1366-2:2015, classification method as per EN 13501-3+A1:2010P,
- Corrosion resistance as per EN 15650,
- EC declaration of conformity (EN 15650).

Intended use and application

Circular fire dampers used in general ventilation, incorporated in the system at the point of passage through the building partition, are intended to reproduce the characteristics and protective functions of the partition. The fire damper blade remains open under normal operating conditions – it is closed automatically in the event of a fire.

| Partition type | Minimum partition thickness [mm] | |
|--|----------------------------------|----------|
| | FDA-BU | FDA-BU-E |
| concrete ceiling | 150 | - |
| concrete wall | 130 | 100 |
| solid brick wall | 130 | 100 |
| cellular concrete block wall | 130 | 100 |
| plasterboard wall supported on a steel structure | 130 | 100 |

Possible installation of fire dampers with any position of the rotation axis.

All necessary information is contained in the operation and maintenance manual.

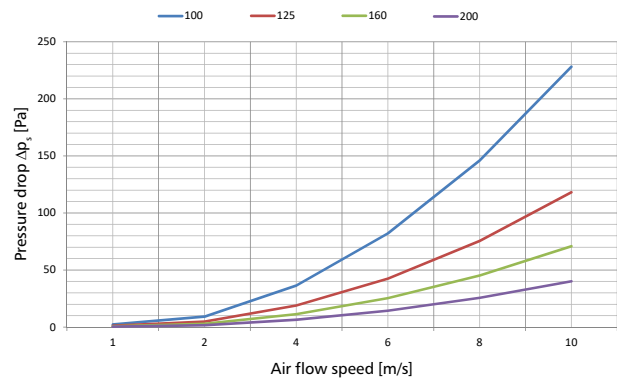
Characteristics

The FDA-BU circular fire dampers are designed for use in general ventilation systems as a protection to prevent smoke and fire from spreading between separated adjacent fire zones.

The fire dampers are classified according to procedures included in PN-EN 13501-3+A1:2010P standard (Fire classification of construction products and building elements). The fire resistance was tested according to PN-EN 1366-2:2015 standard (Fire resistance tests for service installations - Part 2: Fire dampers). The entire manufacturing process meets the requirements of EN 15650:2010 standard. The FDA-BU fire dampers can be used in vertical building partitions providing fire resistance up to EI 120 class (ve i↔o)S class (depending on building partition resistance class) and in horizontal building partitions providing fire resistance up to EI 90 class (ho i↔o)S class (depending on building partition resistance class).

Technical specifications

Pressure losses for air density $\rho=1,21 \text{ kg/m}^3$



Coefficient of local pressure loss ζ

| Diameter ØD [mm] | Local pressure loss ζ |
|------------------|-----------------------------|
| Ø100 | 3,773 |
| Ø125 | 1,954 |
| Ø160 | 1,171 |
| Ø200 | 0,664 |