

# Brandspjæld

## BFD-CS rektangulært brandspjæld

FIRE DAMPER



**Our Fire Damper (BFD-CS) with EN1366-2:1999 EIS120 certification and CE marklet.**

**E – Integrity:** Integrity is the ability of a component of a fire damper to prevent the transmission of fire as a result of the passage of significant quantities of flames or hot gases from the fire to the unexposed side, thereby causing ignition either of the non-fire exposed surface or of any material adjacent to that surface.

**I – Insulation:** Insulation is the ability of a component of a fire damper to withstand fire exposure without the transmission of fire as a result of significant transfer of heat.

**S – Smoke Leakage:** Smoke leakage is the ability of a product to resist the passage of smoke under defined temperature and pressure conditions.

### **120 – Value in minutes of EIS classification periods (120 minutes resistance)**

– **Fire damper is a part of fire wall.** The primary function of fire damper is closing when the temperature inside air duct reaches to 72°C. Besides this on usual time periods.

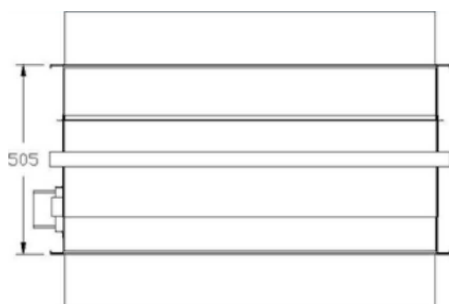
– **Fire damper should have thermal sensor.** The ability of closing at 72°C of fire dampers is through the agency of thermal sensor. Motorized fire dampers can be also connected to smoke-sensitive fire detection systems in order to react earlier.

– **Fire damper must be closed during fire.** Until temperature inside air duct increases, the dampers can be closed or opened for various of purposes. But when the temperature reaches to 72°C fire damper must be closed and provide integrity of fire wall. Fire damper must be also closed in case of power failure. Spring and lock mechanism inside actuator are resistant to high temperature. After fire damper is closed, it is not allowed to be opened by remote intervention.

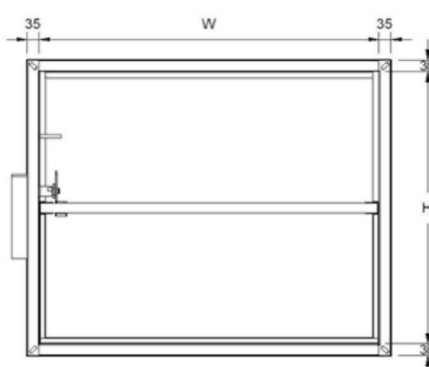
## Fire Damper (BFD-CS) Standard Dimensions, Effective Area and Flow Rate Chart:

Standard dimensions (WxH) mm	Effective Area (m <sup>2</sup> )	Recommended Max. flow rate (m <sup>3</sup> /h)
250 x 250	0,041	890
300 x 250	0,051	1100
300 x 250	0,060	1300
400 x 250	0,070	1520
300 x 300	0,064	1390
350 x 300	0,076	1650
400 x 300	0,088	1900
450 x 300	0,100	2160
500 x 300	0,112	2420
400 x 400	0,125	2700
500 x 400	0,159	3440
600 x 400	0,193	4170
500 x 500	0,206	4450
600 x 500	0,250	5400
700 x 500	0,294	6350
800 x 500	0,338	7300
600 x 600	0,307	6640
700 x 600	0,361	7800
800 x 600	0,415	8970
900 x 600	0,469	10130
700 x 700	0,428	9250
800 x 700	0,492	10630
900 x 700	0,556	12010
1000 x 700	0,620	13400
800 x 800	0,569	12290
900 x 800	0,643	13890
1000 x 800	0,717	15490

View from above

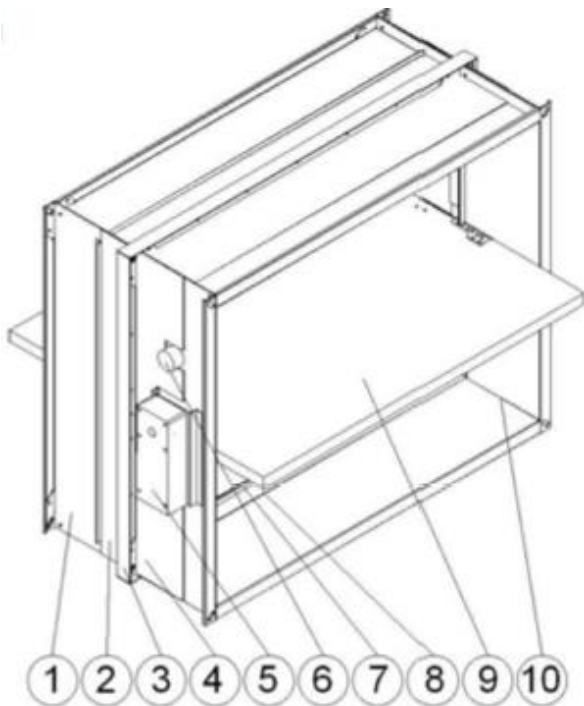


View from side



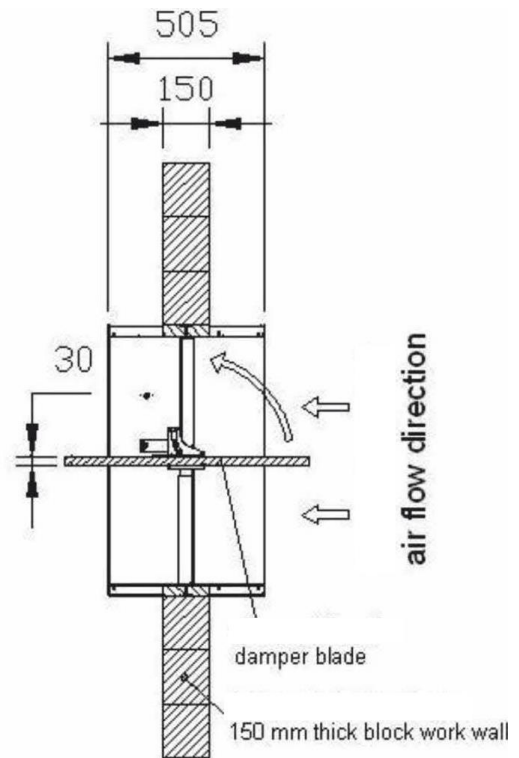
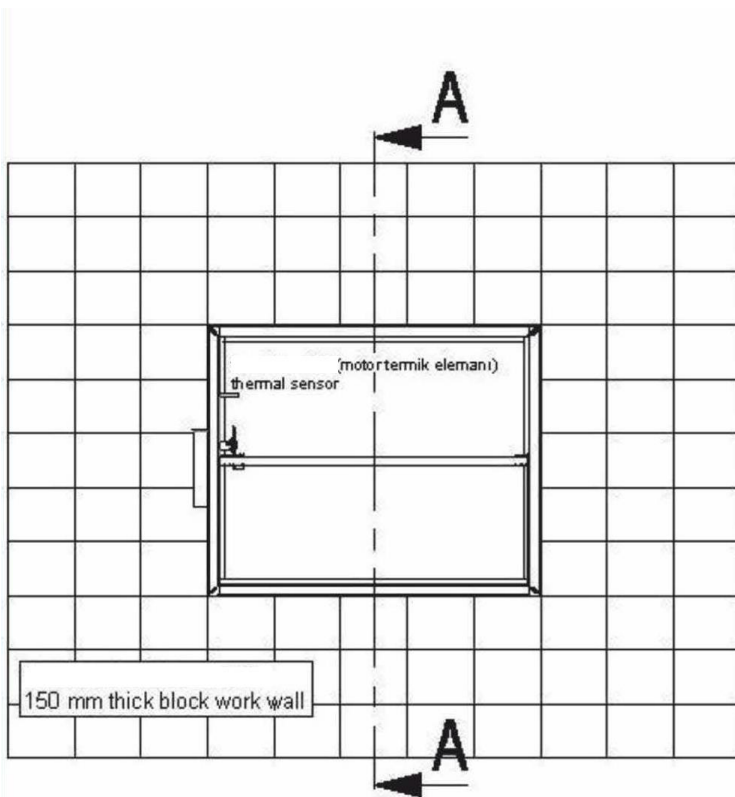
## Fire Damper (BFD-CS) Component (For Wall Installation)

- 1 – 1,50 mm galvanized frame
- 2 – Special gasket (Providing tightness between wall and casing)
- 3 – Intumescent gasket (Providing tightness)
- 4 – 1,50 mm galvanized frame
- 5 – Fire damper with actuator (72°C thermal)
- 6 – 72°C thermal sensor
- 7 – Ceramic gasket
- 8 – Intumescent gasket (Providing tightness)
- 9 – 30 mm thick calcium silicate board
- 10 – High temperature resistant silicon

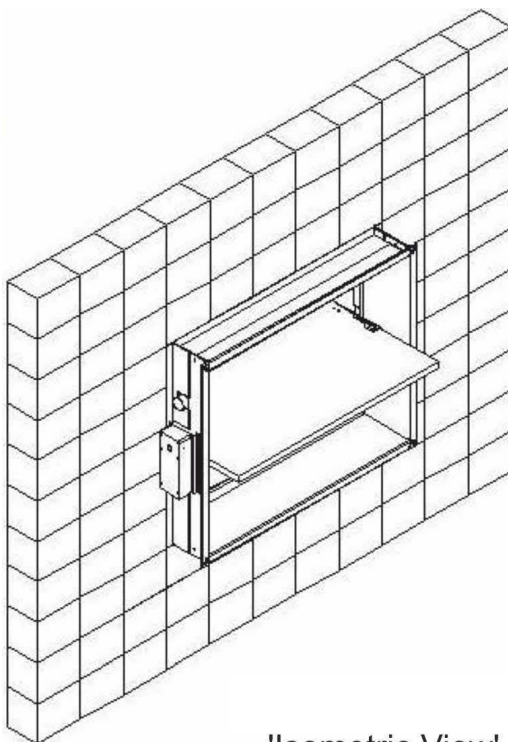


## Fire Damper (BFD-CS) Wall Installation Detail:

Front View



A-A Section

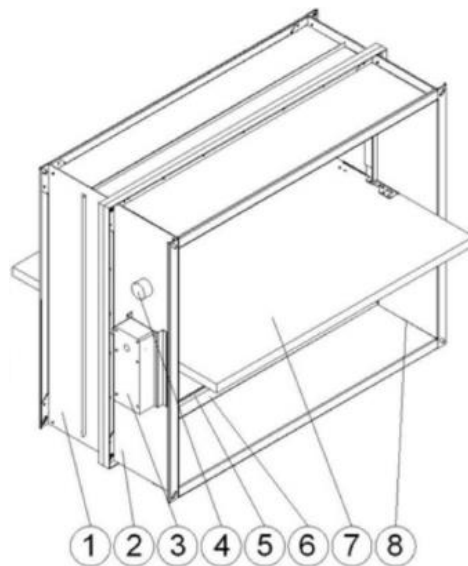


'Isometric View'

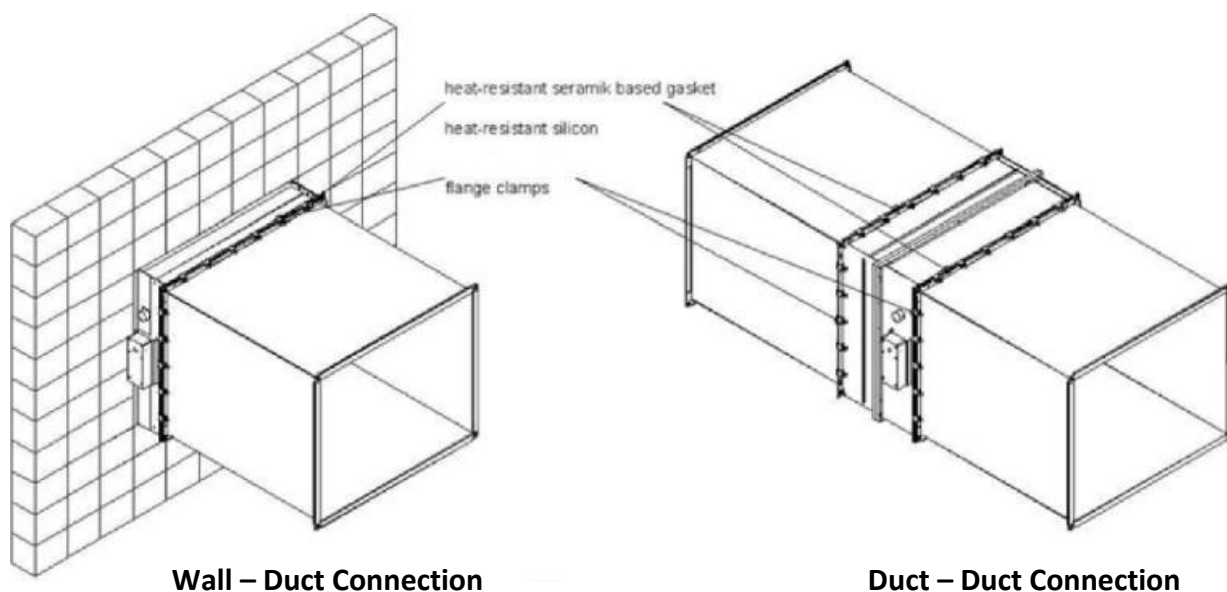
There should be no space between wall and fire damper and they should form a tight structure. Thermal sensor of actuator should be on the upper side as shown at the drawing above. Damper blade should be at the middle of the wall. Fire damper should be installed vertically to the wall.

### Fire Damper (BFD-CS) Components (For Duct Installation):

- 1 – 1,50 mm galvanized frame
- 2 – 1,50 mm galvanized frame
- 3 – Fire damper with actuator (72°C thermal)
- 4 – 72°C thermal sensor
- 5 – Ceramic gasket
- 6 – Intumescent gasket (Providing tightness)
- 7 – 30 mm thick calcium silicate board
- 8 – High temperature resistant silicon



### Fire Damper (BFD-CS) Duct Installation Detail:



Seramic based gasket and heat-resistant silicon must be used between damper and air duct. Air duct must be tightly connected to fire damper with M8 bolt+washer+nut from every corner of facing flanges. Also, fire damper and air duct must be connected to each other using flange clamps with equal spacing between 15-20 cm. Heat-resistant silicon must be used on every place on duct that may have leakage.

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Notified body N° 0370



# CERTIFICATE

Nr.

0370-CPR-1657

## CERTIFICATE OF CONSTANCY OF PERFORMANCE

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), this certificate applies to the construction product:

**VENTILATION FOR BUILDINGS. FIRE DAMPERS BFD-CS**

Produced by:

**BSK HAVALANDIRMA EKIPMANLARI A.Ş.  
MIMAR SINAN MAH. BASRA CAD. NO:59  
A 34935, SULTANBEYLİ/İSTANBUL**

And produced in the manufacturing plant:

**BSK HAVALANDIRMA EKIPMANLARI A.Ş.  
MIMAR SINAN MAH. BASRA CAD. NO:59  
A 34935, SULTANBEYLİ/İSTANBUL**

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard

**EN 15650:2010**

under system 1 are applied and that **the product fulfils all the prescribed requirements set out above.**

This certificate was first issued on 31<sup>st</sup> January 2014 and will remain 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.

Bellaterra, 31<sup>st</sup> January 2014



Jordi Brufau Redondo  
General Manager



Xavier Ruiz Peña  
Product Conformity B.U., Managing Director



This document is not valid without its technical annex, whose number coincides with the number of certificate.

LGAJ TECHNOLOGICAL CENTER, S.A. C.I.F. A-63207492



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laboratories

X/F

**Title:**

Classification report of the Fire Resistance of a rectangular fire damper according to EN 13501-3:2005+A1:2009 "Fire classification of construction products and building elements. Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers." (equivalent to UNE EN 13501-3:2007+A1:2010).

**Tested sample:**

Rectangular fire damper reference "BFD-CS Fire Damper" supplied by BSK Havalandırma Ekipmanları A.S.

Damper was tested fitted in a vertical wall.

File number: 13/7390-3258 Part 2

**Solicitor:**

BSK HAVALANDIRMA EKIPMANLARI A.S.  
Mimar Sinan Mah. Başra Cad. No:59  
Sultanbeyli (Istanbul)

**Report date:**

12 December 2013

**Test date:**

4 October 2013

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