

Installation on concrete and masonry walls and ceilings. Fire damper can be installed also on plasterboard walls. In concrete, masonry and plasterboard walls fire classifications class is ES-60 and E-90, and in concrete ceilings ES-60. FDS can be used as EI-60 damper with additional duct insulation (As indicated in Finnish National Building Code E7, picture 11). The fire damper can be installed vertically or horizontally on the wall.

**3**  
Fix the fire damper in the middle of the opening.



**6**  
The space between the fire damper and wall or ceilings must be filled with noncombustible insulation material like rock wool. Weight of the rock wool min. 40 kg/m<sup>3</sup>.



**9**  
Attach the fire damper to the ductwork using batten connections.



**1**  
The size of installation hole is the dimension of the side of product +60mm



**4**  
Attach the flange to the separating element with screws.



**7**  
Electric actuator can be tested manually by using hexagon spanner. (Include in the deliveries).



**10**  
**Modular installation:**  
If the fire dampers are installed on the same duct or separately on the ductwork, a minimum space of 100mm must be left between them. Install the fire dampers on the separating element one by one, so that their flanges overlap. Note the difference in level, and use a duct gasket when installing the module on the ductwork. Ensure the air tightness of the products by inserting a sheet metal strip (not included in the delivery) between the products.

Note: The fire damper can be installed vertically or horizontally on the wall. Maintenance space in front of actuator is minimum 200mm. Ensure the smoke tightness between wall and duct by using fire protected substance material.

**2**  
When the damper is installed to plasterboard walls a steel frame or a wooden joist must be mounted on the edges of the opening.



**5**  
Check the cross dimension and ensure the correct operation of the fire damper product after installation.



**8**  
Electric actuator can be test when power is on by using switch.



## FDS/SDS/EDS

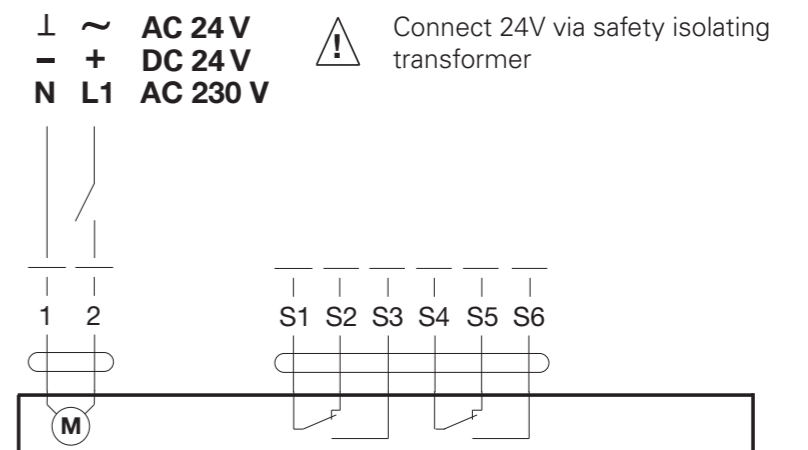
### INSTALLATION INSTRUCTIONS AND CERTIFICATE

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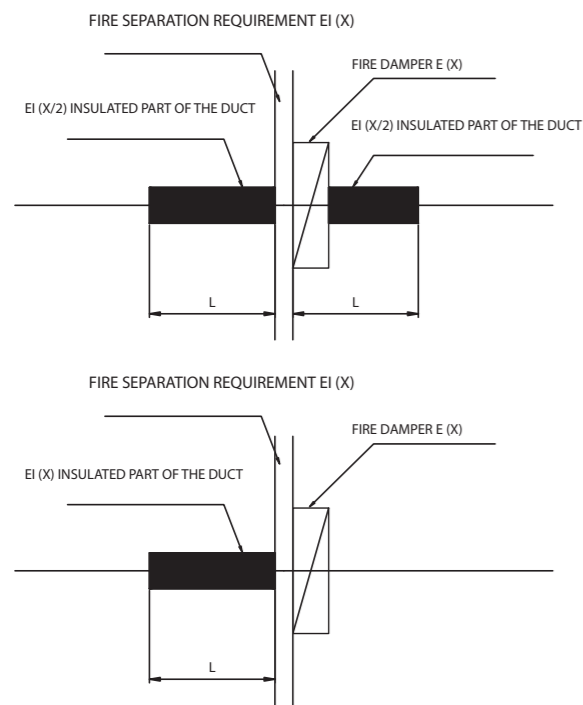
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CARE FOR INDOOR AIR

#### To test the operation of motorised model

Check the motor voltage (24/230 V) before switching on the power supply. Always perform a final test to ensure the correct operation of the fire damper via the control system. The test can be performed without the use of electricity, by using the separate setting handle supplied with the motor. See the detailed instructions on the motor's data plate. The fire damper opens when the motor voltage is switched on, and it closes when it is switched off. The evacuation damper closes when the motor voltage is switched on, and it opens when it is switched off.



May be used as EI 60 damper with additional duct insulation (As indicated in National Building Code). Cover the duct with a sheet so as to achieve the required non-combustibility insulation material like rock wool.

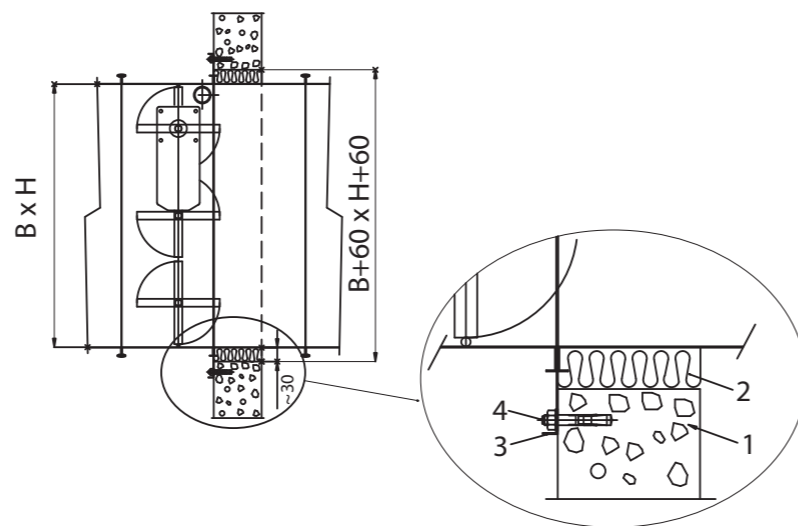


**Fire insulation of ducts when a fire damper does not meet the insulation requirements**

Fire resistant requirement of the building element (min)	Nominal size of the duct	
	≤ 300	> 300
	Length of the insulated duct section L (min)	
30	0.5	1.0
60	1.0	2.0
90--120	2.0	4.0
240	4.0	4.0

Note to the table:  
The nominal size of the duct refers to the internal dimension of a round duct or to the internal dimension of the longer side of a rectangular duct.

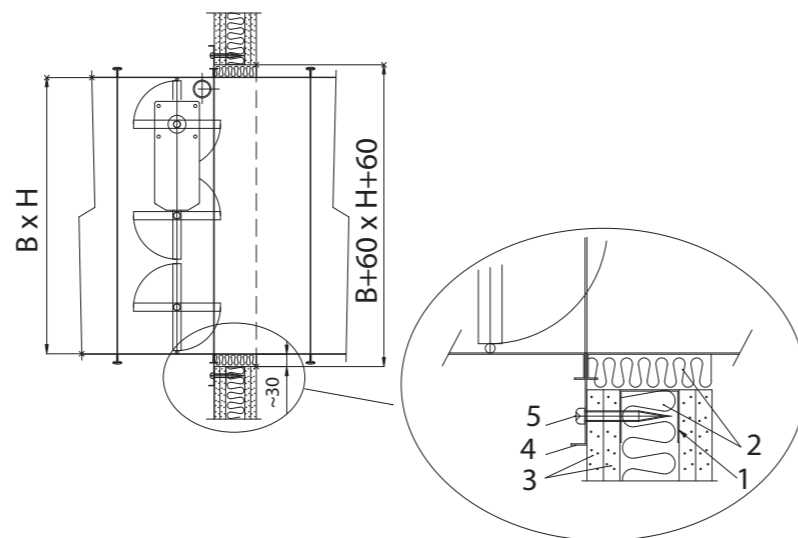
**Installation in concrete & masonry walls**



Installation opening: product size + 60mm in both horizontal and vertical direction

1. Concrete or masonry wall
2. Rock wool, specific weight min. 40kg/m<sup>3</sup>
3. Installation flange
4. Anchor screw

**Installation in lightweight wall**



Installation opening: product size + 60mm in both horizontal and vertical direction

- 1 Installation frame; steel or wood
- 2 Rock wool, specific weight min. 40kg/m
- 3 Plasterboard
- 4 Installation flange
- 5 Self drilling screw

An installation certificate form must be completed when installing fire dampers. A separate certificate must be filled in for each fire damper. This installation certificate applies only to Halton products.

**FDS/SDS/EDS**

Type approval decision Dno: (FDS) YM 88/6221/2007

Name of the installation location: \_\_\_\_\_

Address: \_\_\_\_\_

Product number from the type plate (production order no.): \_\_\_\_\_

Actuator fuse release temperature \_\_\_\_\_

Installed by: \_\_\_\_\_

Company name: \_\_\_\_\_

Address: \_\_\_\_\_

Company telephone no.: \_\_\_\_\_

E-mail or Web address: \_\_\_\_\_

Installer's telephone no.: \_\_\_\_\_

Installer name(s): \_\_\_\_\_

Date of installation: \_\_\_\_\_

Installation location identification (section/floor/room): \_\_\_\_\_

Notes and considerations: \_\_\_\_\_

I hereby verify that the installation of this fire damper, the tightness of the gland, and the product (manual and/or electric) testing have been performed according to the manufacturers installation instructions:

Place and date: \_\_\_\_\_, on \_\_\_\_\_, 20\_\_\_\_

Installer's name and signature: \_\_\_\_\_

Installation supervisor's name and signature: \_\_\_\_\_

This installation certificate must be enclosed with the deed of transfer of the building in question, and a copy of it must be given to rescue officials upon request.