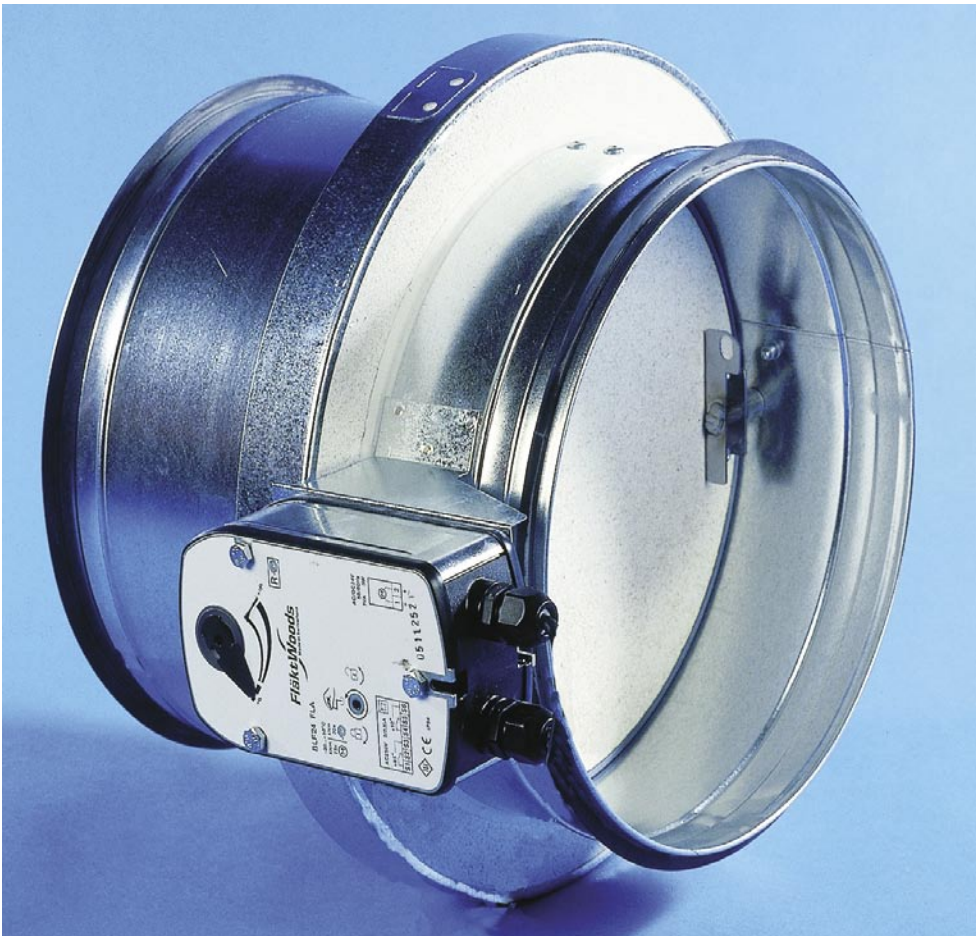


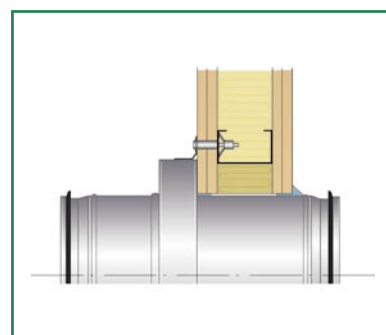
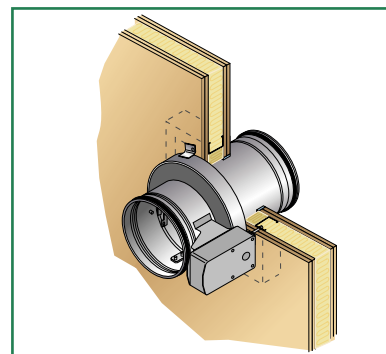
# **Fire damper ETPR-EI**

Technical data



7/2006

## Fire damper ETPR-EI



The circular fire damper ETPR-EI is available both as motorised and with thermal fuse. ETPR-EI is designed for installation in wall or intermediate floor and for circular duct connection. The damper casing is manufactured from hot-galvanised steel sheet and the blade from fire-insulating material. The fire damper is type-approved to the test standard EN 1366-2 in several European countries, and it meets the requirements of fire class EI 60 / E 120. The product satisfies the requirements of tightness class C.

The light-structured ETPR-EI has been developed and tested in the fire laboratory of Fläkt Woods, and a patent is pending for the damper construction. The fire damper can be installed onto the surface of a fire-separating building element, which enables simple and cost-effective installation. The damper is equipped with a Veloduct joint, which provides for tight duct installation. The construction enables the installation of damper shaft both to the horizontal and vertical position.

The damper version with thermal fuse allows versatile auxiliary alternatives: electrical release, pneumatic release and microswitch.

The use of a motorised damper enables automatic function testing (by e.g. FICO or FCM) and the use of a smoke-detector-based release system. The motor is equipped with built-in microswitches for both open and closed position.

When using control and monitoring system FICO / FCM, the actuator is always of type 24 V. The damper is also available with electrical actuator of 230 V. See Fläkt Woods control and monitoring system FICO or FCM.

### Product description

Sizes Ø100 - 630 mm

Type-approved,  
Dno YM 74/6221/2006,  
fire class EI 60/E 120

Tested according to standard SFS-EN 1366-2

Fire damper meets the requirements of tightness class 3 according to EN 1751

Fire damper meets the requirements of tightness class C according to EN 1751

Pressure drop across a closed damper is allowed to be 2500 Pa, corresponding to pressure class B

### Product code example

Fire damper ETPR-EI - 160 - 4

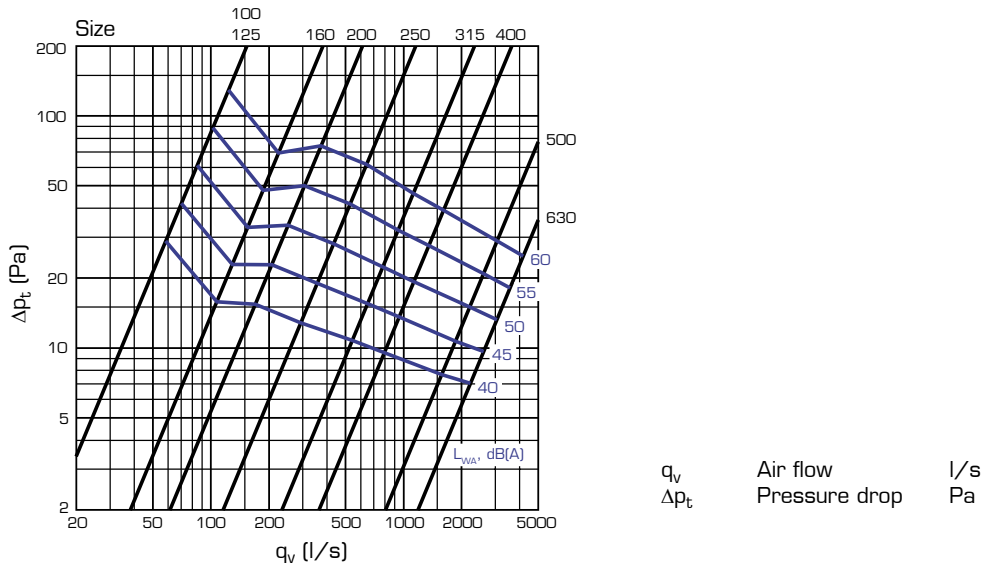
Size (160=Ø160 mm)

Actuator (4=24V)

See product code on page 5

# Technical data - pressure drop, sound data

## Pressure drop and sound power level



## Sound power level correction by octave bands

OCTAVE BAND (Hz)	125	250	500	1000	2000	4000	8000
CORRECTION $K_{oct}$	12	9	5	0	-4	-10	-17
TOLERANCE +/-	6	3	3	3	3	3	3

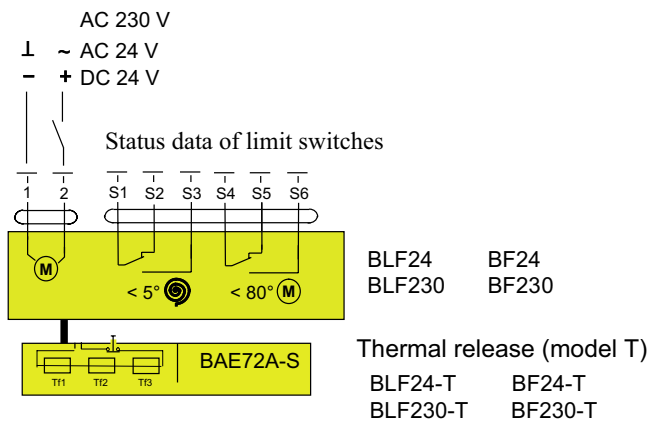
$$L_{woct} = L_{WA} + K_{oct}$$

where

- $L_{WA}$  = sound power level (dB)
- $L_{woct}$  = sound power level broken down by octave bands (dB)
- $K_{oct}$  = correction according to table (dB)

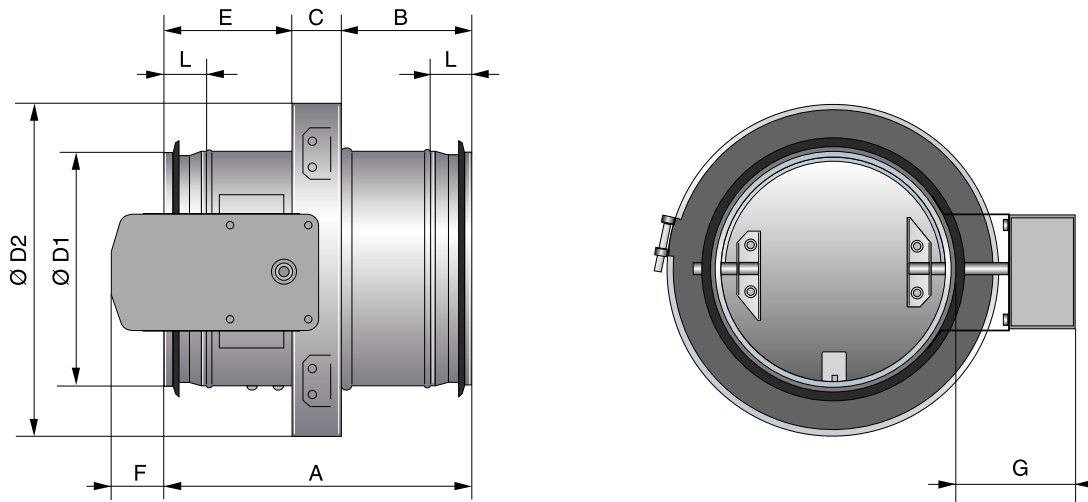
## Wiring diagram for damper motor

Power supply

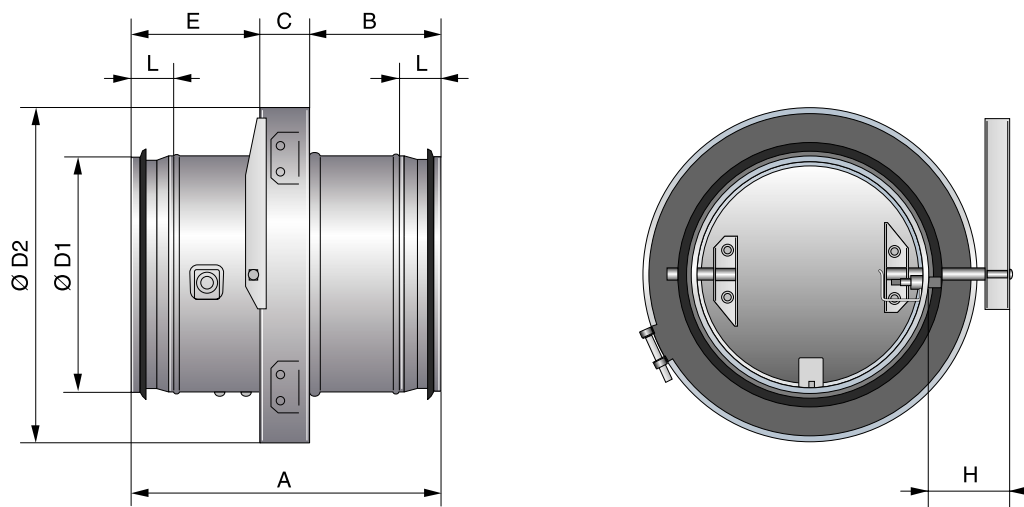


# Dimensions and weights

## Motorized damper



## Damper with thermal fuse



## Dimensions

Size D1	D2	A	B	C	E	F	G	H	L
100 *	210	448	175	26	117	23	107	70	35
125	210	318	175	26	117	23	107	70	35
160	245	318	175	26	117	23	107	70	35
200	285	318	168	41	109	23	107	70	35
250	335	318	168	41	109	23	107	70	40
315	400	318	168	41	109	23	107	70	40
400	505	368	177	41	150	78	120	80	50
500	605	368	177	41	150	78	120	80	50
630	735	368	177	41	150	78	120	80	50

## Weights

Size D1	Motorised damper kg	Damper with thermal fuse kg
100 *	3,4	1,8
125	3,2	1,6
160	3,6	2,0
200	4,5	2,9
250	5,6	4,0
315	6,6	5,0
400	11,5	8,5
500	15,0	12,0
630	20,0	17,0

\* Delivered with extension piece BDED.

# Product code and accessories

## Description

Fläkt Woods fire damper ETPR-EI which is type-approved for installation into building elements of fire class EI 60/EI 120 made of rock material, or gypsum plate walls of the same class. The damper is installed according to the mounting instructions provided by the manufacturer.

## Product code

Fire damper ETPR-EI-aaa-e

Size \_\_\_\_\_

Connection diameter 100...630 mm  
(see table under Dimensions and weights)

Actuator \_\_\_\_\_

- 0 = fuse +50° C
- 1 = fuse +70° C
- 3 = 24V AC/DC and heat detector
- 4 = 24V AC/DC
- 5 = 230V AC/DC and heat detector
- 6 = 230V AC
- 7 = auxiliary device microswitch open +50° C
- 8 = auxiliary device microswitch open +70° C
- 9 = auxiliary device microswitch closed +50° C
- 10 = auxiliary device microswitch closed +70° C
- 11 = auxiliary device pneumatic cylinder, long fuse +50° C
- 12 = auxiliary device pneumatic cylinder, long fuse +70° C
- 13 = auxiliary device electrical release 24V, long fuse +50° C
- 14 = auxiliary device electrical release 24V, long fuse +70° C
- 15 = auxiliary device electrical release 230V, long fuse +50° C
- 16 = auxiliary device electrical release 230V, long fuse +70° C

## Accessories

Extension piece FLD-aaa-1

Size (diameter mm) \_\_\_\_\_  
100, 125, 160, 200, 250, 315, 400, 500, 630

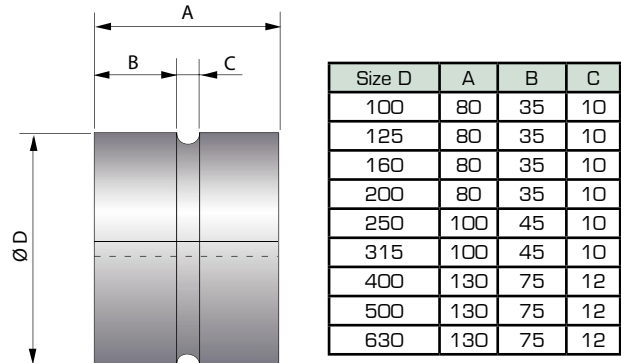
Inspection piece FWD-aaa-1

Size (diameter mm) \_\_\_\_\_  
100, 125, 160, 200, 250, 315, 400, 500, 630

Protective grille FND-aaa-1-1

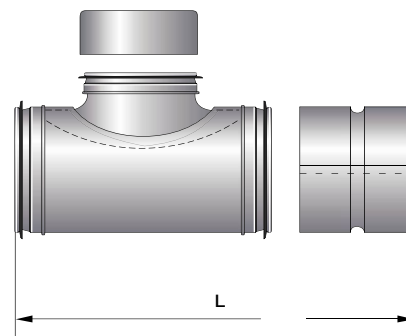
Size (diameter mm) \_\_\_\_\_  
100, 125, 160, 200, 250, 315, 400, 500, 630

## Extension piece FLD-aaa-1



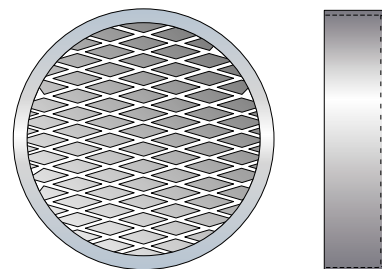
Consists of piece BDEM. Extension 200 mm.

## Inspection piece FWD-aaa-1



FWD length L (consists of pieces BDEG+BDEM+BDET)  
L = 200 mm Ø100 - Ø200, 310 mm Ø250 - Ø315 and 430 mm Ø400 - Ø630.

## Protective grille FND-aaa-1-1



# Auxiliary devices

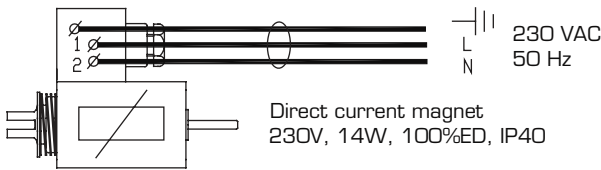
## Pneumatic release

If a fire damper is equipped with a pneumatic cylinder, it will close either when the thermal fuse trips or when the damper receives a pressure stroke.

The pressure is obtained from the network of HALON / CO2 or other automatic extinguishing system. The required pressure impulse to the cylinder is about 200 kPa. The pressure cylinder connection is to be done with Cu D8 pipe.

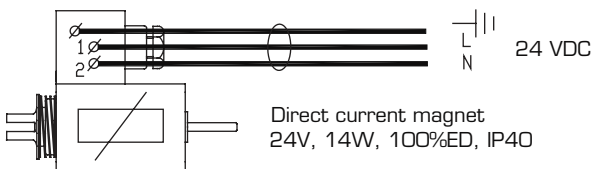
## Electrical release 24 VDC / 230 VAC

If a fire damper is equipped with an electromagnetic actuator, it will close either when the thermal fuse trips or when the damper receives an electric impulse as the electric circuit closes. The electric impulse is received through a centralised monitoring system from smoke or heat detectors, press-button of monitoring station or from microswitches of other dampers, depending on the designed system.



NOTE! The magnet includes a rectifier

### CONNECTION 230 VAC

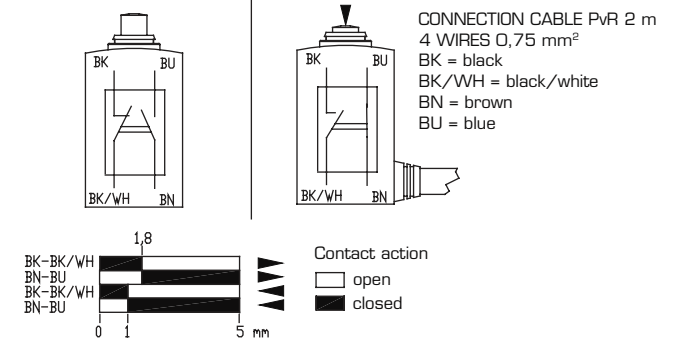


### CONNECTION 24 VDC

## Microswitch

The microswitch indicates damper blade position, sends an impulse to other remote-release fire dampers if the blade is closed, trips an alarm in the monitoring system or stops / starts fans, depending on the designed system. The microswitch has no influence on the thermal fuse or release mechanism. The microswitch can also be installed in contact with pneumatic or electrical release. In this case, it must be specified in the order.

Switch position when fire damper is set up (open) = stud pushed in  
Fire damper tripped = blade closed | Fire damper set up = blade open



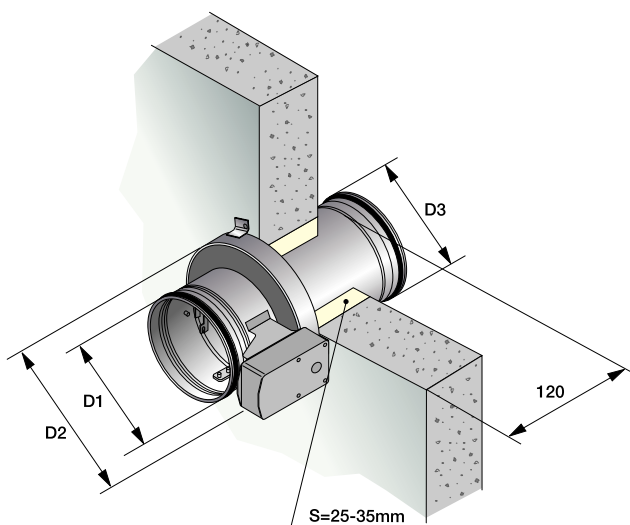
ELECTRICAL PROPERTIES: OPERATING TEMPERATURE -25 ... +70°C  
AC-15: B300 (Ue=240VAC, Ie=1,5A)  
DC-13: R300 (Ue=23VDC, Ie=3A)

## Installation in building elements of rock material

Complete installation, operation and maintenance instructions can be found on the Fläkt Woods home page [www.flakt-woods.com](http://www.flakt-woods.com). Installation instructions, along with an installation certificate, are also delivered with every fire damper. For additional information, contact the nearest Fläkt Woods sales representative.

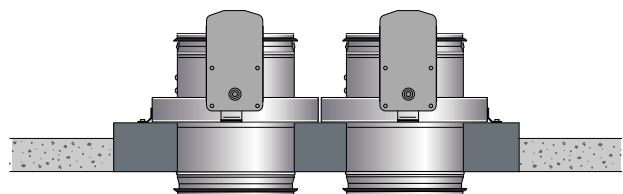
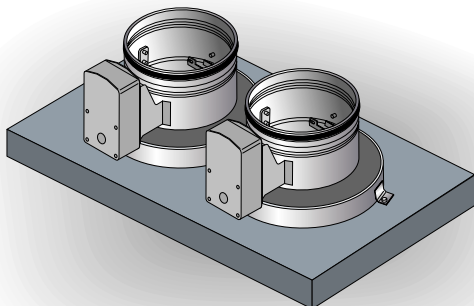
The fire class of fire damper ETPR-EI is EI 60/E 120. If the fire class of the penetrated wall is EI 120, additional insulation corresponding to one hour must be added on the ducts.

Installation of fire damper into building elements (walls and intermediate floors) made of rock material (concrete, lightweight concrete or brick) and having fire class EI 60 / EI 120.



Size D1	Casing D2	Penetration D3
100	210	175-195
125	210	175-195
160	245	210-230
200	285	250-270
250	335	300-320
315	400	365-385
400	505	450-470
500	605	550-570
630	735	680-700

Building element of rock material.  
Penetration size according to table on the right.



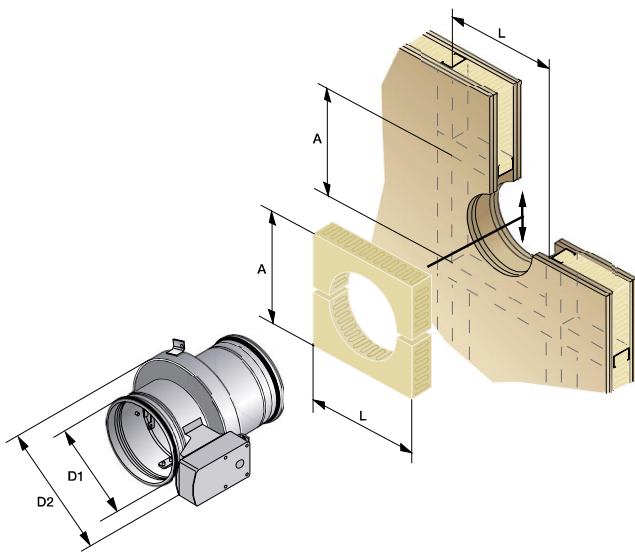
Installation using a cast plate, two dampers are installed adjoined to each other.

# Installation into building elements made of gypsum plate or similar material

Complete installation, operation and maintenance instructions can be found on the Fläkt Woods home page [www.flakt-woods.com](http://www.flakt-woods.com). Installation instructions, along with an installation certificate, are also delivered with every fire damper. For additional information, contact the nearest Fläkt Woods sales representative.

The fire class of fire damper ETPR-EI is EI 60/E 120. If the fire class of the penetrated wall is EI 120, additional insulation corresponding to one hour must be added on the ducts.

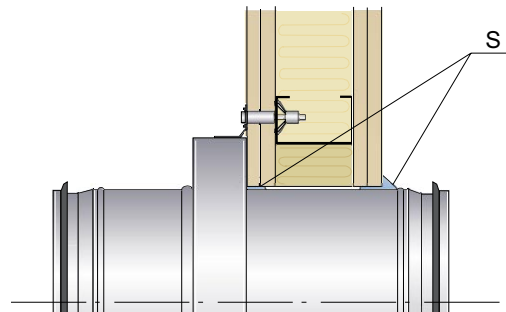
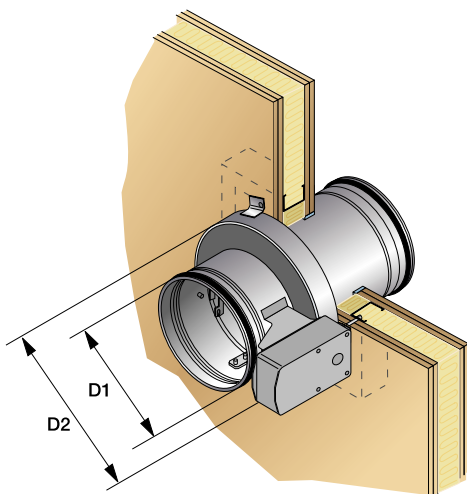
Installation of fire damper into plate-structured building elements (gypsum plate or similar) with fire class EI 60/EI 120.



Size D1	Casing D2	Dimension A
100	210	190
125	210	190
160	245	225
200	285	265
250	335	315
315	400	380
400	505	485
500	605	585
630	735	915

Note! Dimension L = A in normal mounting situations.

Penetration size according to table on the right.



S = sealing

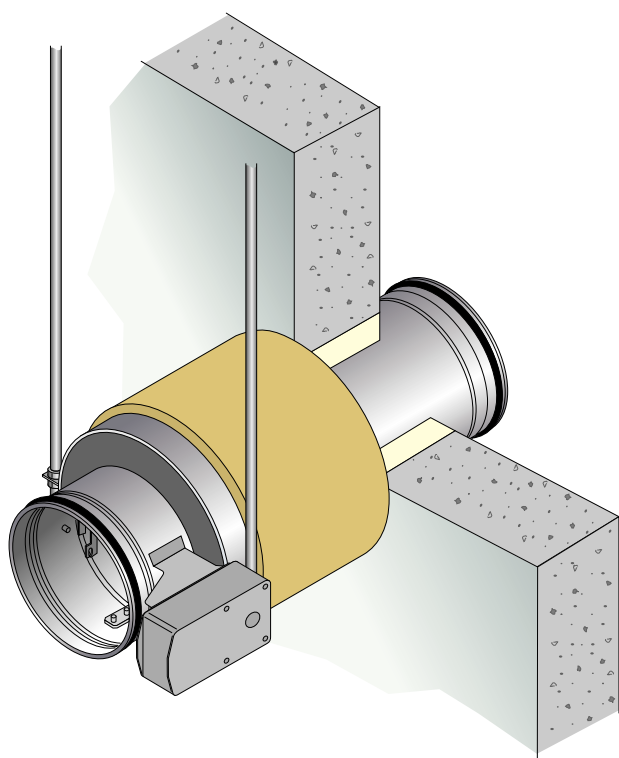
## Installation outside building element

Complete installation, operation and maintenance instructions can be found on the Fläkt Woods home page [www.flakt-woods.com](http://www.flakt-woods.com). Installation instructions, along with an installation certificate, are also delivered with every fire damper. For additional information, contact the nearest Fläkt Woods sales representative.

The fire class of fire damper ETPR-EI is EI 60/E 120. If the fire class of the penetrated wall is EI 120, additional insulation corresponding to one hour must be added on the ducts.

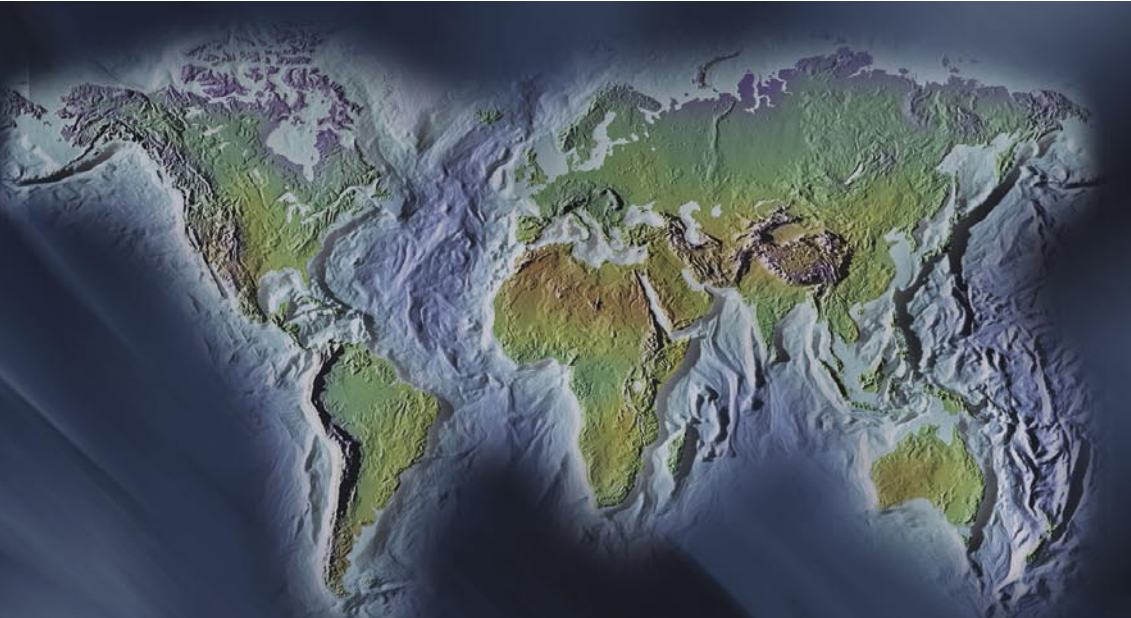
---

Installation outside building element. Fire class of building element EI 60/EI 120.



Installation outside building element.

***We Bring Air to Life***



**Fläkt Woods Group provides a full range of products and solutions for buildings ventilation, air treatment and industrial air movement**

**Head office**

Fläkt Woods Group Ltd  
Affolternstrasse 40  
8050 Zürich  
Tel: +41 43 288 38 00  
Fax: +41 43 288 38 10  
Email: [info@flaktwoods.com](mailto:info@flaktwoods.com)

Sales Offices available World Wide - See our website for details

**[www.flaktwoods.com](http://www.flaktwoods.com)**

Due to a policy of continuous development and improvement the right is reserved to supply products which may differ from those illustrated and described in this publication. Certified dimensions will be supplied on request on receipt of order.