



FK-EU with fusible link
for 72 °C or 95 °C



CE compliant according
to European regulations



With TROXNETCOM
as an option



ATEX certification



Tested to VDI 6022

Fire dampers

Type FK-EU



For diverse applications

Rectangular fire damper for the isolation of duct penetrations between fire compartments, for a variety of installation situations, available in many different sizes and constructions

- Nominal sizes 200 × 200 – 1500 × 800 mm, in increments of 1 mm
- Low differential pressure and sound power level
- Explosion-proof construction (ATEX) as an option
- Air transfer damper as an option
- Optional stainless steel casing or powder-coated casing for increased corrosion protection
- Integration into the central BMS with TROXNETCOM
- Universal installation options

Optional equipment and accessories

- Electric actuator 24 V/230 V
- Release temperature 72/95 °C
- Duct smoke detector RM-O-3-D

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Variants

Product examples

FK-EU with fusible link



FK-EU with spring return actuator



FK-EU with spring return actuator
(explosion-proof)



FK-EU as air transfer damper



Description



Fire damper Type FK-EU

For detailed information on attachments see Chapter K4 – 1.2.

Application

- TROX fire dampers of Type FK-EU, with CE marking and declaration of performance, for the isolation of duct penetrations between fire compartments in the event of a fire
- To prevent the propagation of fire and smoke through ductwork to adjacent designated fire compartments

Classification

- Class of performance to EN 13501-3, up to EI 180 (v_e , h_o , $i \leftrightarrow o$) S

Variants

- With fusible link
- With fusible link for use in potentially explosive atmospheres
- With spring return actuator
- With spring return actuator for use in potentially explosive atmospheres
- With spring return actuator and duct smoke detector
- With spring return actuator, duct smoke detector and cover grilles on both ends for use as an air transfer damper, with general building inspectorate licence Z-6.50-2031

Nominal sizes

- B × H: 200 × 200 – 1500 × 800 mm (in increments of 1 mm))
- L: 375 mm or 500 mm

Attachments

- Limit switch for damper blade position indication
- Limit switch for damper blade position indication for use in potentially explosive atmospheres
- Spring return actuator for 24 V AC/DC or 230 V AC supply voltage
- Spring return actuator for 24 – 230 V supply voltage, for use in potentially explosive atmospheres
- Network module for the integration with AS-i or LON networks
- Spring return actuator and pre-wired duct smoke detector, 24 V or 230 V supply voltage

Accessories

- Installation subframe and installation kit for dry mortarless installation in solid walls
- Installation kit for installation into solid non-load-bearing walls with flexible ceiling joint
- Installation kit for dry mortarless installation on the face of solid walls
- Installation kit for dry mortarless installation adjacent to solid walls
- Installation kit for dry mortarless installation remote from solid walls and ceiling slabs
- Installation kit for dry mortarless installation in lightweight partition walls/fire walls with metal support structure and cladding on both sides
- Installation kit for dry mortarless installation into shaft walls with or without metal support structure but with cladding on one side
- Installation kit for installation into lightweight partition walls with flexible ceiling joint
- Flexible connectors
- Cover grille
- Circular spigots

Useful additions

- Duct smoke detector RM-O-3-D
- Duct smoke detector with airflow monitor RM-O-VS-D

Special characteristics

- Declaration of performance according to Construction Products Regulation
- Classification to EN 13501-3, up to EI 180 (v_e , h_o , $i \leftrightarrow o$) S
- Building inspectorate licence Z-56.4212-991 for fire resistance properties
- Complies with the requirements of EN 15650
- Tested to EN 1366-2 for fire resistance properties
- Hygiene complies with VDI 6022 part 1 (07/2011), VDI 3803 (10/2002), DIN 1946 part 4 (12/2008), and EN 13779 (09/2007)
- Corrosion protection according to EN 15650 in connection with EN 60068-2-52
- Closed blade air leakage to EN 1751, class 2
- Casing air leakage to EN 1751, class C; $(B + H) \leq 700$, class B
- Low differential pressure and sound power level
- Any airflow direction
- Integration into the central BMS with TROXNETCOM

Parts and characteristics

- Fire dampers with casing length L = 500 mm only for installation: with installation subframe and installation kit; with installation kit for lightweight partition walls; adjacent to solid walls and remote from solid walls
- Release temperature 72 °C or 95 °C (for use in warm air ventilation systems)
- Single-handed operation

Construction features

- Rectangular or square construction, rigid casing, both flanges with fixing holes
- Suitable for the connection of ducts, spigots, flexible connectors or a cover grille
- The release mechanism is accessible and can be tested from the outside
- Two inspection access panels
- Remote control with spring return actuator

Materials and surfaces

Casing:

- Galvanised sheet steel
- Galvanised sheet steel, powder-coated RAL 7001
- Stainless steel 1.4301

Damper blade:

- Special insulation material
- Special insulation material with coating

Other components:

- Damper blade shafts and driving linkage made of stainless steel
- Brass or stainless steel bearings
- Seals of polyurethane or elastomer

The construction variants with stainless steel or powder-coated casing meet even more critical requirements for corrosion protection. Detailed listing on request.

Installation and commissioning

Installation is to be carried out according to the operating and installation manual

Mortar-based installation:

- In solid walls and ceiling slabs
- In non-load-bearing solid walls with flexible ceiling joint: with installation kit GM
- In lightweight partition walls and fire walls with metal support structure and cladding on both sides

Dry mortarless installation:

- In solid walls: with installation kit and installation subframe E1/E2
- In lightweight partition walls and fire walls with metal support structure and cladding on both sides: with installation kit ES
- In lightweight partition walls with metal support structure, cladding on both sides and flexible ceiling joint: with installation kit GL100
- In shaft walls with or without metal support structure and cladding on one side: with installation kit ES
- On the face of solid walls: with installation kit WA or WA short
- Adjacent to solid walls: with installation kit WV
- Remote from solid walls: with installation kit WE
- Remote from solid ceiling slabs: with installation kit WE (in horizontal duct)

Standards and guidelines

- Construction Products Regulation
- EN 15650:2010 – Ventilation for buildings – Fire dampers
- EN 1366-2:1999 Fire resistance tests for service installations – Fire dampers
- EN 13501-3:2010 Fire classification of construction products and building elements
- EN 1751:1999 Ventilation for buildings – Air terminal devices

Maintenance

- The functional reliability of the fire damper must be tested at least every six months; this has to be arranged by the owner of the ventilation system; functional tests must be carried out in compliance with the basic maintenance principles stated in EN 13306 and DIN 31051. If two consecutive tests, one 6 months after the other, are successful, the next test can be conducted one year later.
- A functional test involves closing the damper blade and opening it again; with a spring return actuator this can be done via remote control
- Fire dampers must be included in the regular cleaning schedule of the ventilation system.
- For details on maintenance and inspection, refer to the installation and operating manual

Technical data

Nominal sizes	200 × 200 to 1500 × 800 mm
Casing lengths	375 and 500 mm
Volume flow rate range	Up to 14400 l/s or up to 51840 m³/h
Differential pressure range	Up to 2000 Pa
Operating temperature	At least 0 – 50 °C **
Release temperature	72 °C or 95 °C (for warm air ventilation systems)
Upstream velocity*	≤ 8 m/s with standard construction; ≤ 12 m/s with spring return actuator

Note: Upstream velocity for the explosion-proof actuator ExMax/RedMax-15-BF TR is ≤ 10 m/s

* Data applies to uniform upstream and downstream conditions for the fire damper

** Temperatures may differ for units with attachments

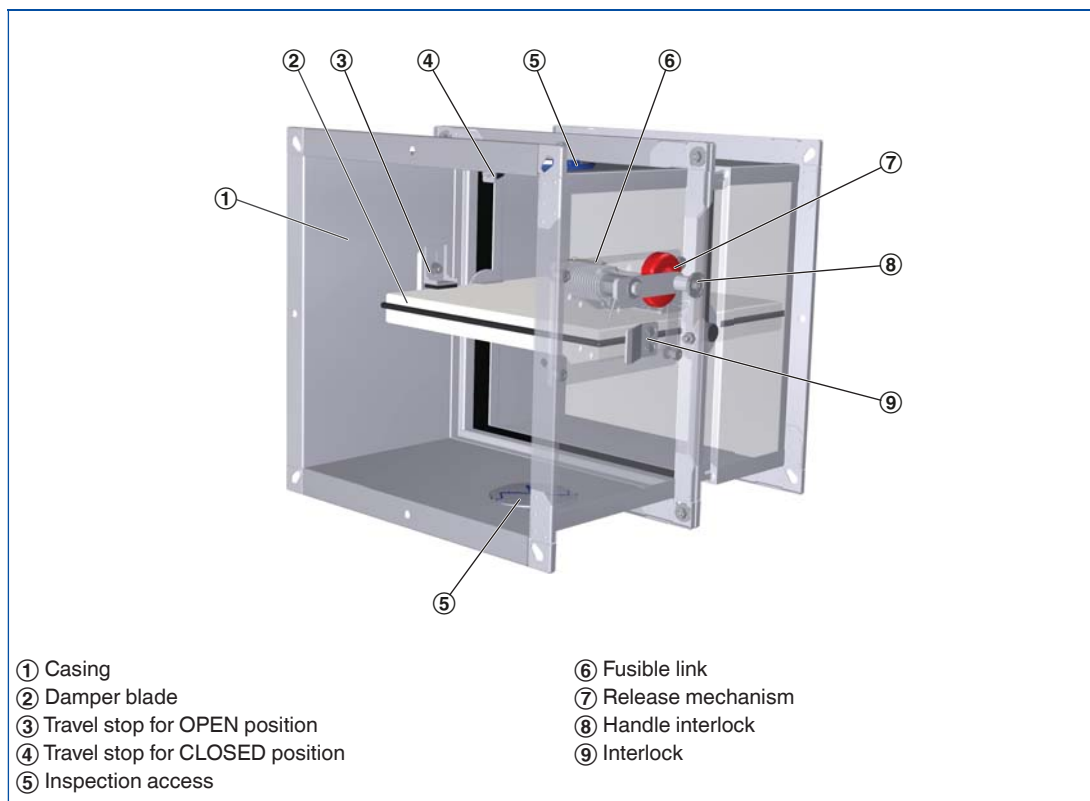
Function

Construction with fusible link

Functional description

In the event of a fire, fire dampers shut automatically to prevent the propagation of fire and smoke through ductwork to adjacent designated fire compartments. In the event of a fire, the damper is triggered at 72 °C or at 95 °C (use in warm air ventilation systems) by a fusible link. The release mechanism is accessible and can be tested from the outside.

Schematic illustration of FK-EU with fusible link



Function

Construction
with spring return actuator

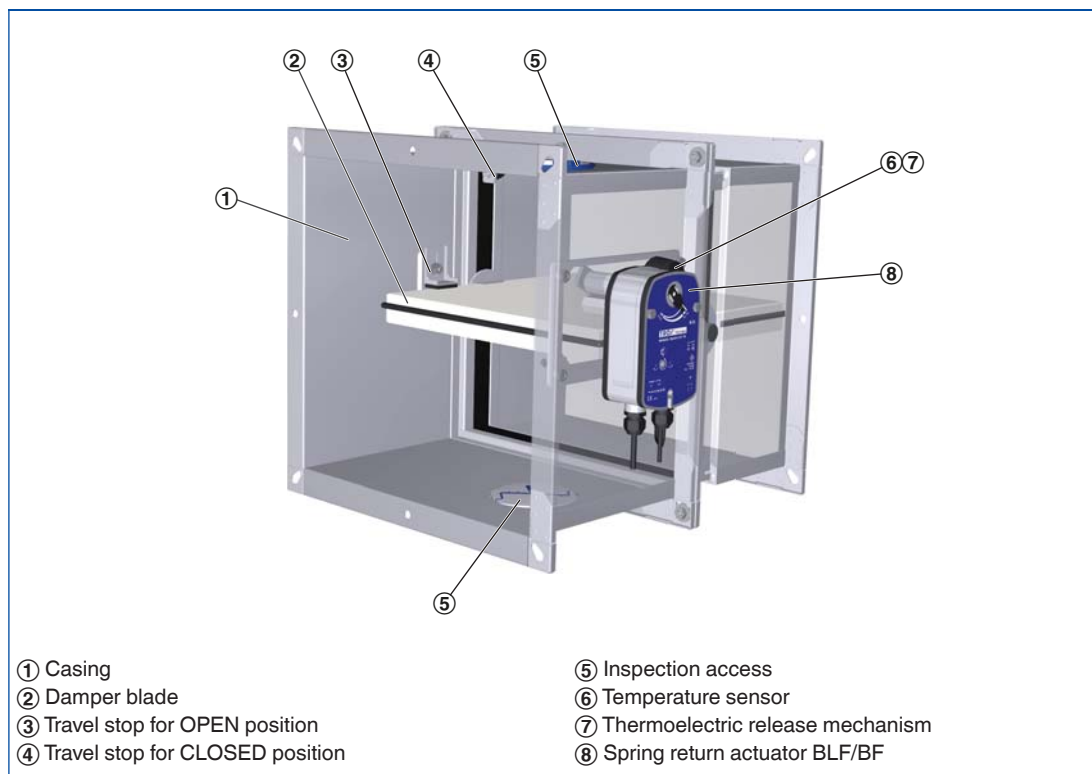
Functional description

The spring return actuator enables the motorised opening and closing of the damper blade; it can be activated by the central BMS.

In the event of a fire, the damper is triggered thermoelectrically at 72 °C or 95 °C (use in warm air ventilation systems).

As long as power is supplied to the actuator, the damper blade remains open. If the supply voltage fails, the damper closes (power off to close). Motorised fire dampers can be used to shut off ducts. The torque of each actuator is sufficient to open and close the damper blade even while the fan is running. The spring return actuator is fitted with limit switches that can be used for capturing the damper blade position.

Schematic illustration of FK-EU with spring return actuator



Function

Construction with spring return actuator, explosion-proof

Functional description

The fire damper is used as a shut-off device to prevent fire and smoke from spreading through ducting in areas with potentially explosive atmospheres. The fire damper is suitable for supply air and extract air systems in potentially explosive atmospheres. For the operation of the fire damper, the operating and installation manual and the technical data in the additional operating manual must be observed.

Use in areas with

potentially explosive atmospheres (ATEX)

According to declaration of conformity TÜV 11 ATEX 085420 X, the fire damper may be used in the following areas with potentially explosive atmospheres. The ambient temperatures and types of release and actuation specified in the technical data must be observed.

RedMax:

- Zone 2: Gases, mists and vapours
- Zone 22: Dusts

ExMax:

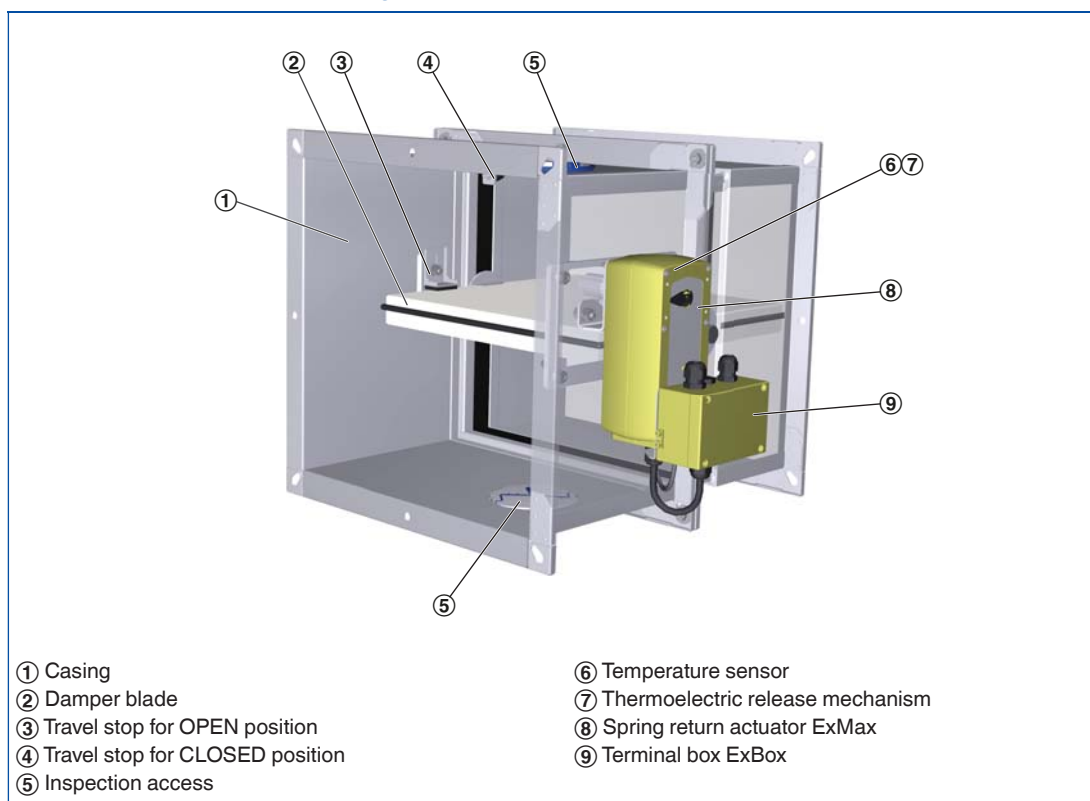
- Zones 1, 2: Gases, mists and vapours
- Zones 21, 22: Dusts



ATEX certification

Release mechanism	Type of actuation	Marking	Ambient temperature	Maximum airflow velocity
ExPro-TT	ExMax-15-BF TR	II 2D c T80 °C II 2G c IIC T6	–40 to 40 °C	10 m/s
	RedMax-15-BF TR	II 3D c T80 °C II 3G c IIC T6	–40 to 40 °C	10 m/s

Schematic illustration of FK-EU with spring return actuator, explosion-proof construction (e.g. ExMax-15-BF TR)



Function

Air transfer damper

Functional description

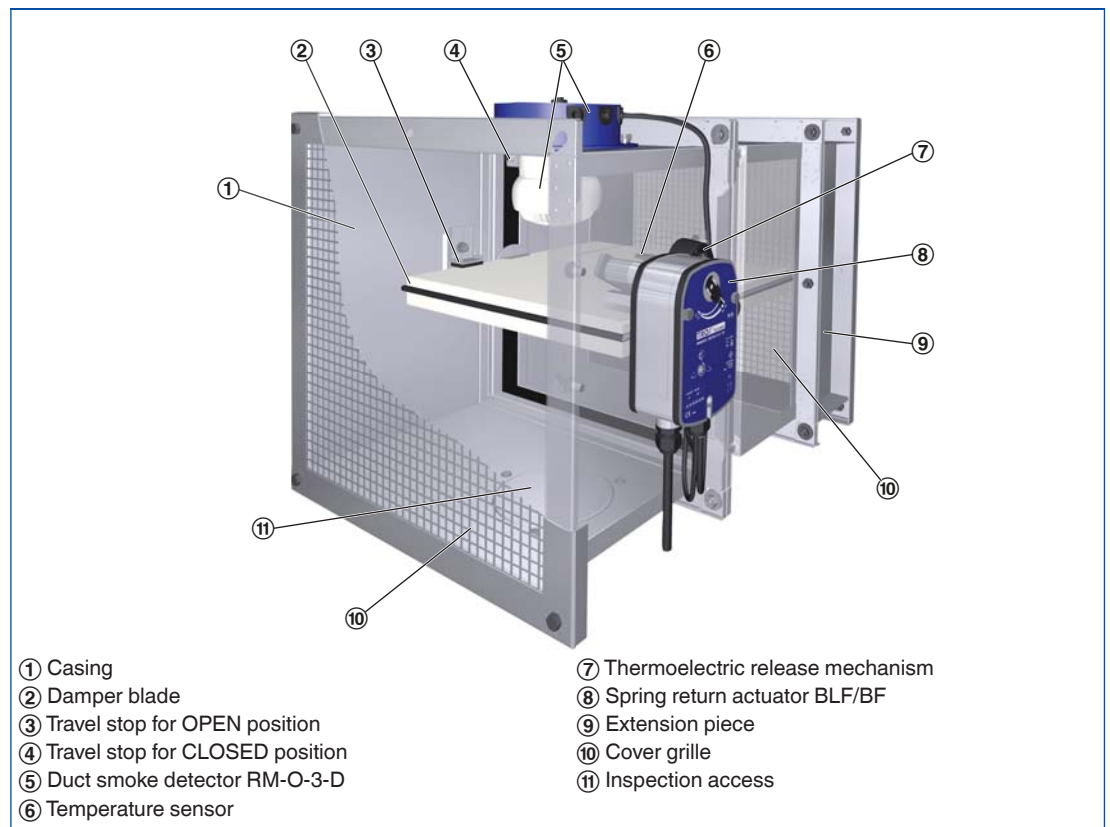
Air transfer dampers are designed to shut off openings for air transfer in fire resistant internal walls and ceiling slabs. To prevent smoke from spreading in buildings, it is extremely important that the smoke is detected at an early stage. Duct smoke detector Type RM-O-3-D is required to control and trigger the air transfer damper. The smoke detector operates on the principle of light scattering and detects the smoke regardless of its temperature so that the fire dampers can be closed before the release temperature is reached. The thermoelectric release mechanism of the spring return actuator also triggers the closure of the damper blade. When the release temperature (72 °C) is reached, the temperature sensor in the airflow interrupts the supply voltage to the spring return actuator. The spring return in the actuator causes the fire damper to close (power off to close). A second temperature sensor monitors the ambient temperature. If the supply voltage fails, the damper closes. Air transfer dampers consist of an FK-EU fire damper, an RM-O-3-D duct smoke detector with general building inspectorate licence Z-78.6-125, a spring return actuator (24 V AC/DC or 230 V AC) with two integral limit switches, and cover grilles on both ends.

Special characteristics

- Easy electrical connection
- Integration into the central BMS with TROXNETCOM
- General building inspectorate licence: Z-6.50-2031

For further and up-to-date information, including the general building inspectorate licence and the operating and installation manual, please refer to our website. For a more detailed selection and design of our fire dampers please refer to the Easy Product Finder design programme on our website.

Schematic illustration of FK-EU as air transfer damper



1

Design information



- Approved only for use in ventilation and air conditioning systems
- A class of performance up to EI 120 ($v_e, h_o, i \leftrightarrow o$) S can only be achieved with ducts connected on both ends, or with a duct on one end and a cover grille on the other end.
- If the fire damper is installed in a solid wall, solid ceiling slab, lightweight partition wall or shaft wall with a lower fire resistance class than that of the fire damper, the fire resistance class of the wall or ceiling slab applies also to the FK-EU (details upon request)
- Ducting must be installed in such a manner that it does not impose any significant loads on the fire damper in the event of a fire.
- For particular applications it is recommended that flexible connectors are used to connect rigid ducting to the unit.
- Fire dampers must be installed, connected and secured according to the operating and installation manual.

Incorrect use

Never use the fire damper:




- without specially approved attachments in areas with potentially explosive atmospheres
- as a smoke control damper
- outdoors without sufficient protection against the effects of weather
- in atmospheres where chemical reactions, whether planned or unplanned, may cause damage to the fire damper or lead to corrosion

Correct use in solid walls

Installation location		Construction and building material	Minimum thickness	Performance class	Mortar-based installation		Dry mortarless installation		
			mm		EI TT (v _e -h _o , i ↔ o) S	Casing length [mm]			
						L = 375	L = 500	L = 375	L = 500
In solid walls		Solid walls, gross density ≥ 500 kg/m³	100	EI 90 S	N	N	–	E	
		Solid walls, gross density ≥ 500 kg/m³	100	EI 120 S	–	–	–	W	
		Solid walls, gross density ≥ 500 kg/m³	100	EI 90 S	–	–	W	W	
In non-load-bearing solid walls with flexible ceiling joint and installation kit GM		Solid walls, gross density ≥ 500 kg/m³	100	EI 90 S	–	–	–	E	






N = mortar-based installation, E = installation kit, W = fire batt

Correct use on the face of, adjacent to and remote from solid walls

Installation location		Construction and building material	Minimum thickness	Performance class	Mortar-based installation		Dry mortarless installation	
			mm		Casing length [mm]			
					L = 375	L = 500	L = 375	L = 500
On the face of solid walls		Solid walls, gross density ≥ 500 kg/m³	100	EI 90 S	–	–	–	E
Adjacent to solid walls		Solid walls, gross density ≥ 500 kg/m³	100	EI 90 S	–	–	–	E
Remote from solid walls		Solid walls, gross density ≥ 500 kg/m³	100	EI 90 S	–	–	–	E

E = Installation kit






Correct use in solid ceiling slabs

Installation location		Construction and building material	Minimum thickness	Performance class	Mortar-based installation		Dry mortarless installation	
			mm	EI TT (v _e -h _o , i ↔ o) S	Casing length [mm]			
					L = 375	L = 500	L = 375	L = 500
In solid ceiling slabs ¹		Solid ceiling slabs, gross density ≥ 600 kg/m³	125	EI 90 S	N	N	–	–
		Solid ceiling slabs, gross density ≥ 600 kg/m³	150	EI 120 S	–	–	–	W
		Solid ceiling slabs, gross density ≥ 600 kg/m³	125	EI 90 S	N	N	–	–
		Solid ceiling slabs, gross density ≥ 600 kg/m³	125	EI 90 S	N	N	–	–
		Solid ceiling slabs, gross density ≥ 600 kg/m³	125	EI 90 S	N	N	–	–
Suspended installation below the ceiling		Solid ceiling slabs, gross density ≥ 600 kg/m³	125	EI 90 S	–	–	–	E

N = mortar-based installation, W = fire batt

¹ For FK-EU as air transfer damper only up to B × H = 500 × 500 mm

Correct use in lightweight partition walls and fire walls

Installation location		Construction and building material	Minimum thickness	Performance class	Mortar-based installation		Dry mortarless installation	
					Casing length [mm]			
			mm	EI TT (v _e -h _o , i ↔ o) S	L = 375	L = 500	L = 375	L = 500
Lightweight partition walls with metal support structure and cladding on both sides		Lightweight partition walls	100	EI 90 S	N	N	–	E
		Lightweight partition walls	100	EI 120 S ²	–	–	–	W
		Lightweight partition walls	100	EI 90 S	–	–	W	W
Lightweight partition walls with metal support structure and cladding on both sides, and with flexible ceiling joint		Lightweight partition walls	100 ³	EI 90 S	–	–	–	E
Fire walls with metal support structure and cladding on both sides		Fire walls	115	EI 90 S	N	N	–	E
Lightweight partition walls with metal support structure and cladding on one side		Shaft walls	90	EI 90 S	–	–	–	E
Lightweight partition walls without metal support structure and cladding on one side		Shaft walls	40	EI 90 S	–	–	–	E

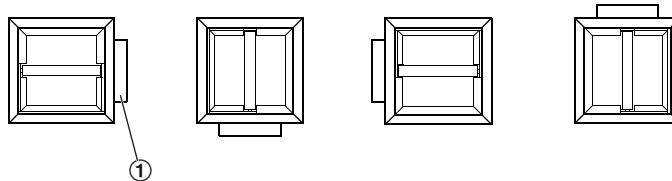
N = mortar-based installation, E = installation kit, W = fire batt

² Only with lightweight partition walls with a fire resistance \geq F 120

³ Wall thickness \leq 225 mm and 175 mm width of metal studs

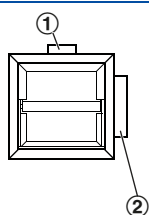
1 Installation orientation

Installation orientation with horizontal ducts



① Release mechanism (mechanical or spring return actuator)

Installation orientation when used as an air transfer damper with horizontal ducts



① Duct smoke detector

② Spring return actuator

Order code

FK-EU

FK – EU – 1 / DE / 600x400x500 / ES / SS / Z43						
1	2	3	4	5	6	7

1 Type

FK-EU Fire damper

2 Construction

- No entry: standard construction
- 1** Casing powder-coated RAL 7001
- 2¹** Casing made of stainless steel
- 7** With coated damper blade
- 1 – 7** Casing powder-coated RAL 7001, with coated damper blade
- 2 – 7¹** Casing made of stainless steel, with coated damper blade
- W²** With fusible link 95 °C (only for use in warm air ventilation systems)

3 Country of destination

- DE** Germany
- Other destination countries upon request

4 Nominal size [mm]

B × H × L

5 Accessories 1

No entry: none

E1 – GL 100³

6 Accessories 2

No entry: none

A0 – SS

7 Attachments

Z00 – ZEX4

¹ Not for use with fire batts

² W can be combined with all constructions listed under **2**, but not with attachments listed under **7** ZEX1 – ZEX4 and Z43RM – Z45RM

³ GL 100 for wall thickness 100 mm when 50 mm sections are used. Other wall thicknesses and section widths upon request.

Order examples

FK-EU-1/600x400x500/A0/Z43

Construction	Casing powder-coated, RAL 7001, silver grey
Nominal size	600 × 400 × 500 mm
Attachment	Cover grille on operating side
Accessories	Spring return actuator 230 V AC

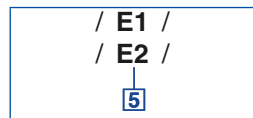
FK-EU-1/600x400x500/AA/Z43RM

Construction	Casing powder-coated, RAL 7001, silver grey
Nominal size	600 × 400 × 500 mm
Attachment	Cover grilles on both sides
Accessories	Spring return actuator 230 V AC with factory mounted and pre-wired duct smoke detector (air transfer application)

FK-EU-2/600x400x500/ZEX1

Construction	Casing made of stainless steel
Nominal size	600 × 400 × 500 mm
Accessories	Spring return actuator 24 – 230 V, explosion-proof

Description



Order code detail

Application

- Installation in solid walls without perimeter mortar infill (dry mortarless installation) requires an installation subframe and an installation kit
- Fire damper, installation subframe and installation kit are supplied unassembled
- Assembly and installation are to be performed by others
- Fire dampers with installation subframe and installation kit only with casing length $L = 500$ mm
- The installation subframe and the fire damper with installation kit must be installed and secured according to the operating and installation manual
- Fire dampers installed in this manner can be easily removed.

Materials and surfaces

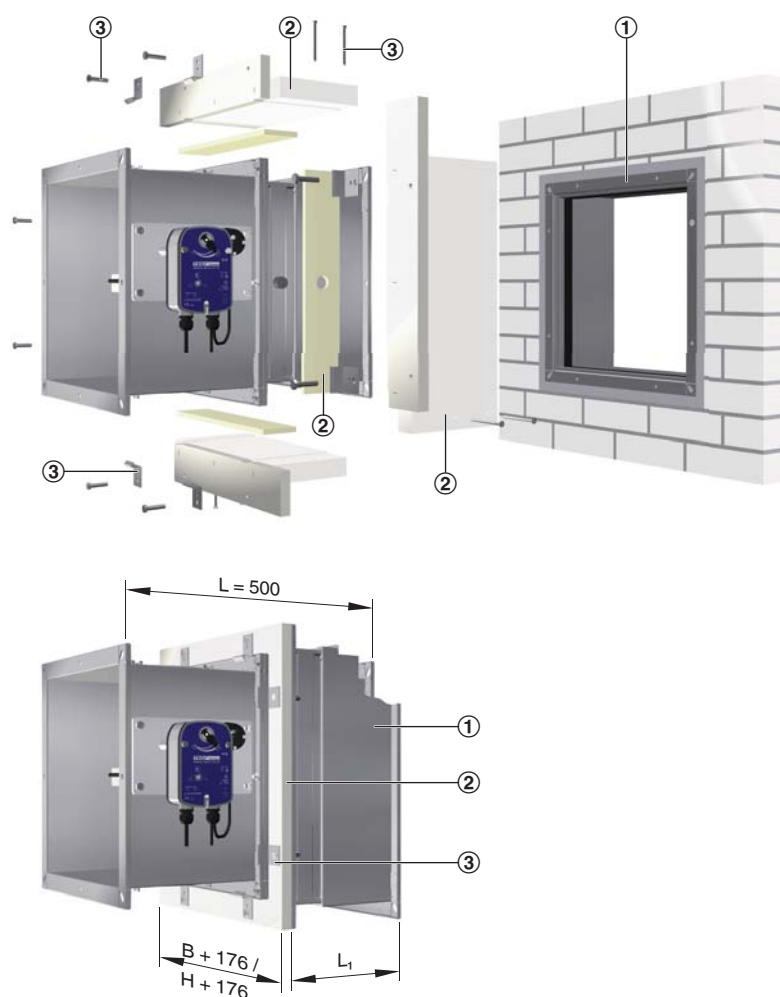
- Installation subframe made of galvanised steel and with intumescent seal
- Installation kit made from special insulation material and mineral wool strips
- Fixing elements made of galvanised steel

Installation kit for dry mortarless installation in solid walls

L_1 in mm	L [mm]	Order code
115	500	E1
240	500	E2

FK-EU with installation subframe and installation kit E1 or E2

1



Installation subframe and installation kit E1 or E2, consisting of:

① Installation subframe

② Installation kit

③ Fixing elements

Description

/ GM /

5

Order code detail

Application

- Installation into solid non-load-bearing internal walls with flexible ceiling joint requires an installation kit
- With the installation kit the fire damper may be installed just below the movement joint; the joint is not interrupted by the installation kit
- The mineral wool used for the flexible joint can also be used above the fire damper
- The fire damper is mortared in together with the installation kit on three sides (to be performed by others)
- Fire dampers with installation kit only with casing length $L = 500$ mm
- The fire damper and the installation kit must be installed and secured according to the operating and installation manual

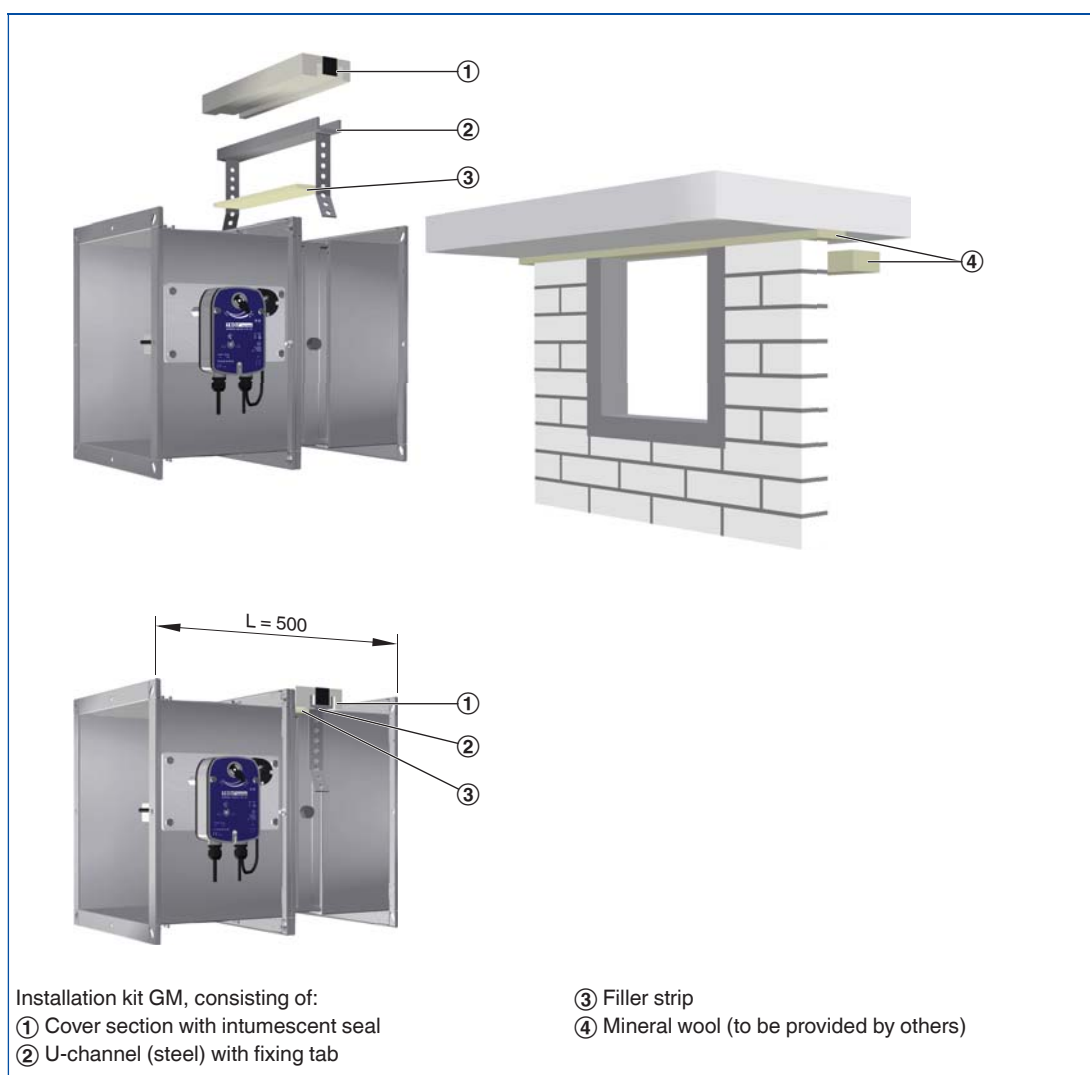
Materials and surfaces

- Cover section made of special insulation material and with intumescent seal
- U-channels made of galvanised steel
- Fixing tabs made of galvanised steel
- Filler strips made of mineral wool

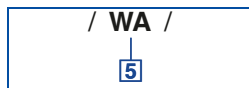
Installation kit for installation into solid non-load-bearing walls with flexible ceiling joint

L [mm]	Order code
500	GM

FK-EU with installation kit GM



Description



Order code detail

Application

- Dry mortarless installation on the face of solid walls requires an installation kit
- Fire damper and installation kit are supplied partly assembled
- Assembly and installation are to be performed by others
- The fire damper and the installation kit must be installed and secured according to the fire damper operating and installation manual and the WA installation manual
- Fire dampers with installation kit only with casing length $L = 500$ mm

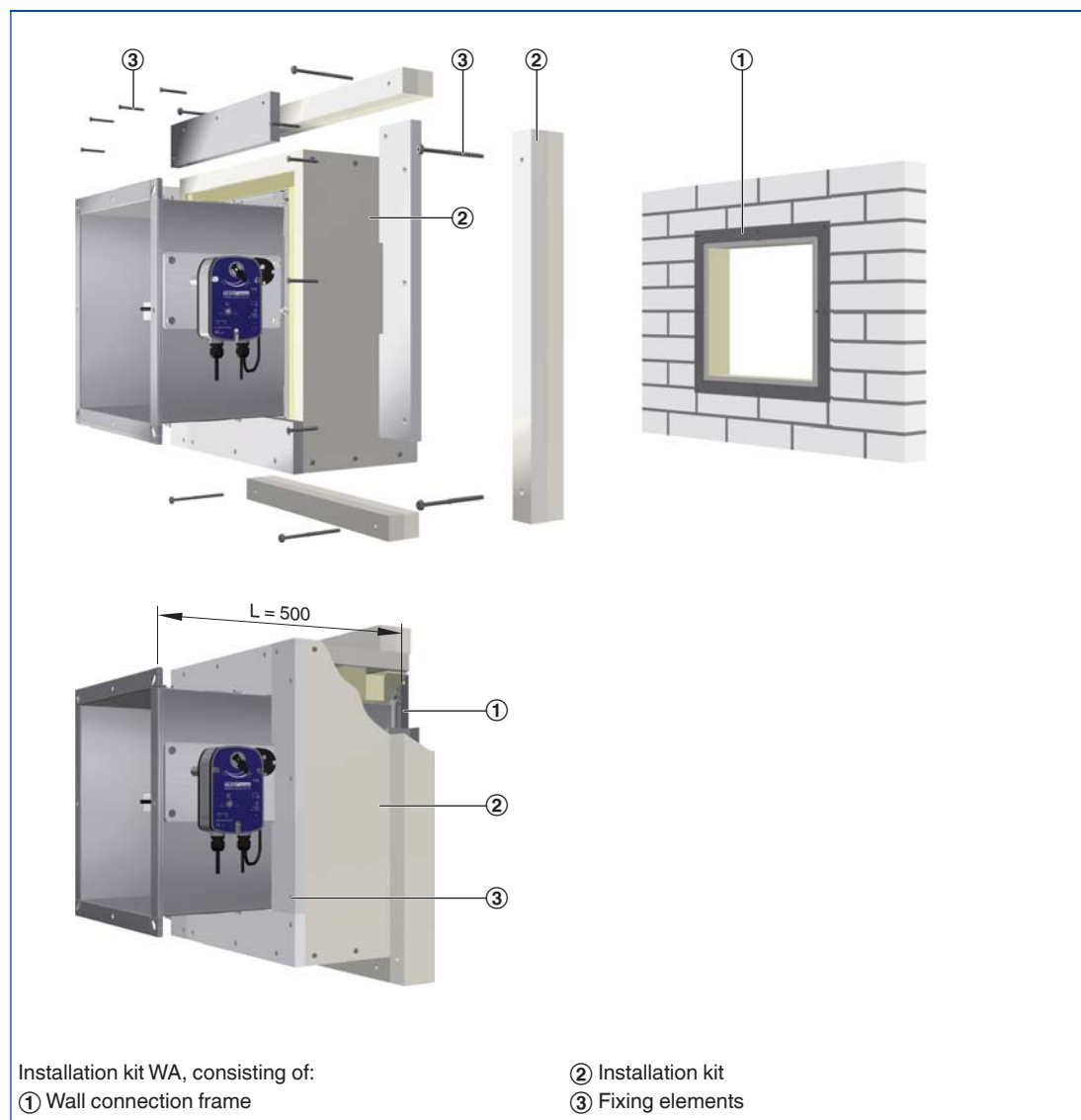
Materials and surfaces

- Wall connection frame made of galvanised steel and with seal
- Installation kit made from special insulation material and mineral wool strips
- Fixing elements made of galvanised steel

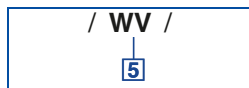
Installation kit for dry mortarless installation on the face of solid walls

L [mm]	Order code
500	WA

FK-EU with installation kit WA



Description



Order code detail

Application

- Dry mortarless installation adjacent to solid walls requires an installation kit
- The installation kit is used for the refurbishment of old fire dampers that have been mortared in, or for the connection to a sheet steel duct that has been mortared in; with $x \leq 260$ mm
- Fire damper and installation kit are supplied partly assembled
- Assembly and installation are to be performed by others
- Fire dampers with installation kit only with casing length $L = 500$ mm
- The fire damper and the installation kit must be installed and secured according to the fire damper operating and installation manual and the WV installation manual

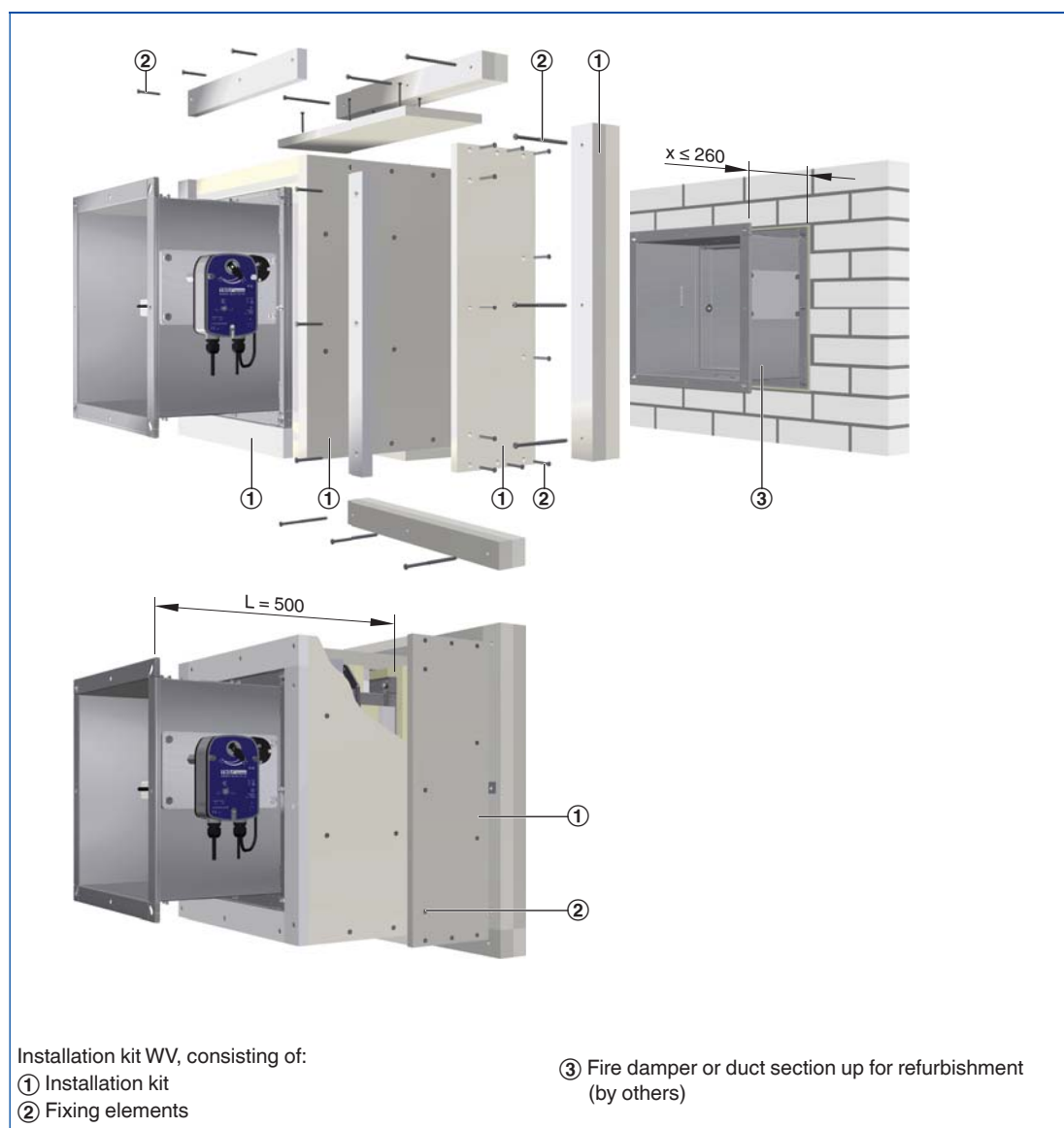
Materials and surfaces

- Installation kit made from special insulation material and mineral wool strips
- Fixing elements made of galvanised steel

Installation kit for dry mortarless installation adjacent to solid walls, with $x \leq 260$ mm

L [mm]	Order code
500	WV

FK-EU with installation kit WV



Description



Order code detail

Application

- Dry mortarless installation remote from solid walls or ceiling slabs requires an installation kit
- The installation kit contains all special parts
- Cut-to-size calcium silicate boards are to be provided by others
- Fire damper and installation kit are supplied partly assembled
- Assembly and installation are to be performed by others
- The fire damper and the installation kit must be installed and secured according to the fire damper operating and installation manual and the WE installation manual
- Fire dampers with installation kit only with casing length L = 500 mm

Materials and surfaces

- Installation kit made from special insulation material and mineral wool strips
- Fixing elements made of galvanised steel
- Existing ducts made of galvanised steel

Installation kit for dry mortarless installation remote from solid walls

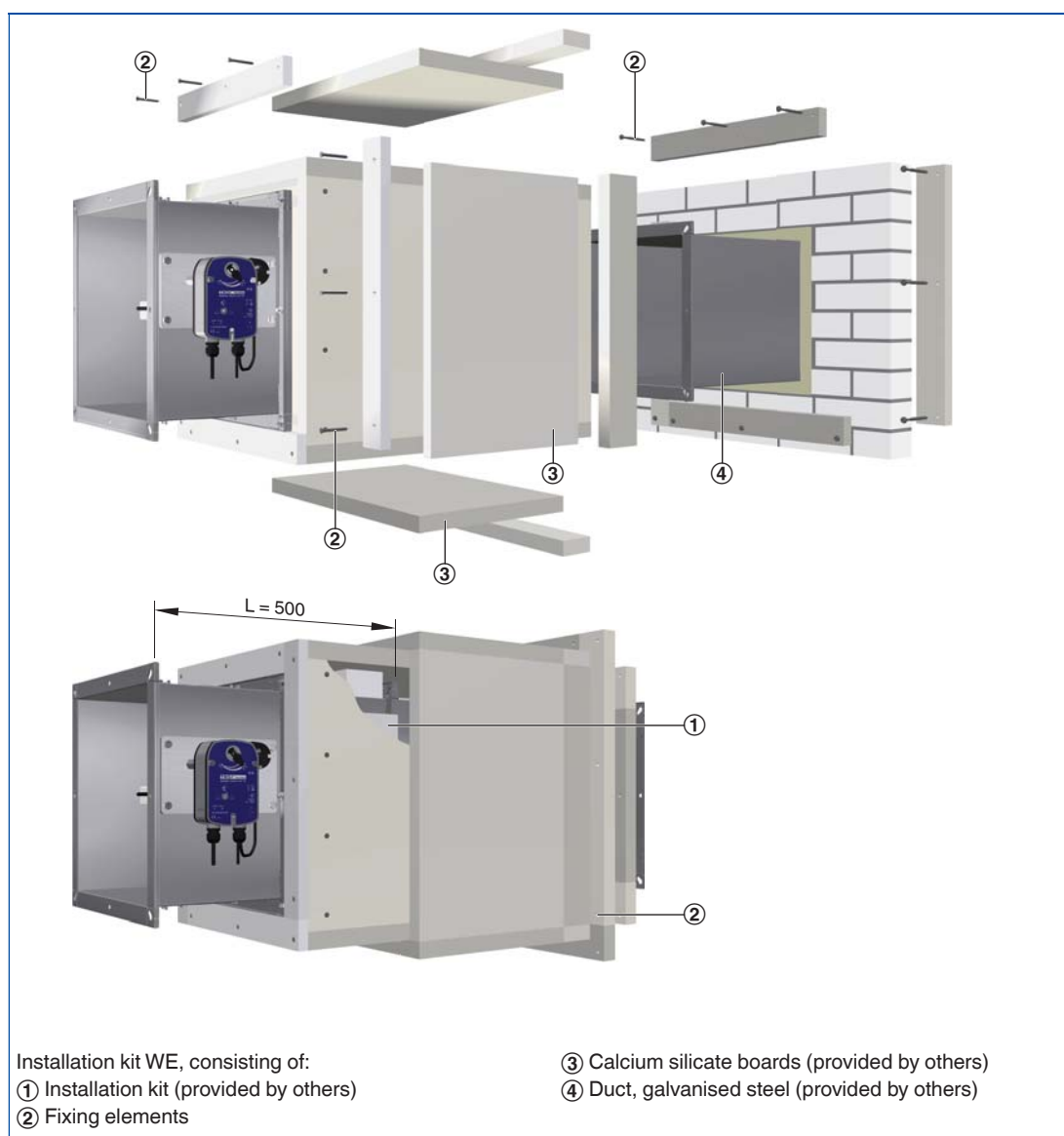
L [mm]	Order code
500	WE

To be provided by others

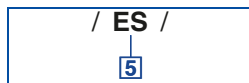
Name	Property/size
Mineral wool	Gross density $\geq 80 \text{ kg/m}^3$, melting point $> 1000^\circ\text{C}$
Mineral wool, 80 mm thick (slab)	Gross density $\geq 80 \text{ kg/m}^3$, melting point $> 1000^\circ\text{C}$
Fixing tab	HUS-H 6 x 100
Washer	8.4, EN ISO 7093-1
Hexagon head screw	M8 x 16, EN ISO 4017
Hexagonal nut	M8, EN 24032
Dry wall screw	$\varnothing 5 \times 50$, $\varnothing 5 \times 70$, $\varnothing 5 \times 80$
Threaded rod	M12
Hilti mounting rail	MQ 41-3 or equivalent
Hilti perforated plate	MQZ L13 or equivalent
Steel wire clip	63/11, 2/1, 53
Adhesive	Promat K84
PROMASEALMastic fire protection mastic	Paste
Promatect-LS and Promatect-H	–

Other details according to the WE installation manual.

FK-EU with installation kit WE



Description



Order code detail

Application

- Installation without perimeter mortar infill (dry mortarless installation) in lightweight partition walls with metal support structure and cladding on both sides, or installation in shaft walls with or without metal support structure but with cladding on one side requires an installation kit.
- Fire damper and installation kit are supplied unassembled
- Assembly and installation are to be performed by others
- Fire dampers with installation kit only with casing length $L = 500$ mm
- The fire damper and the installation kit must be installed and secured according to the operating and installation manual

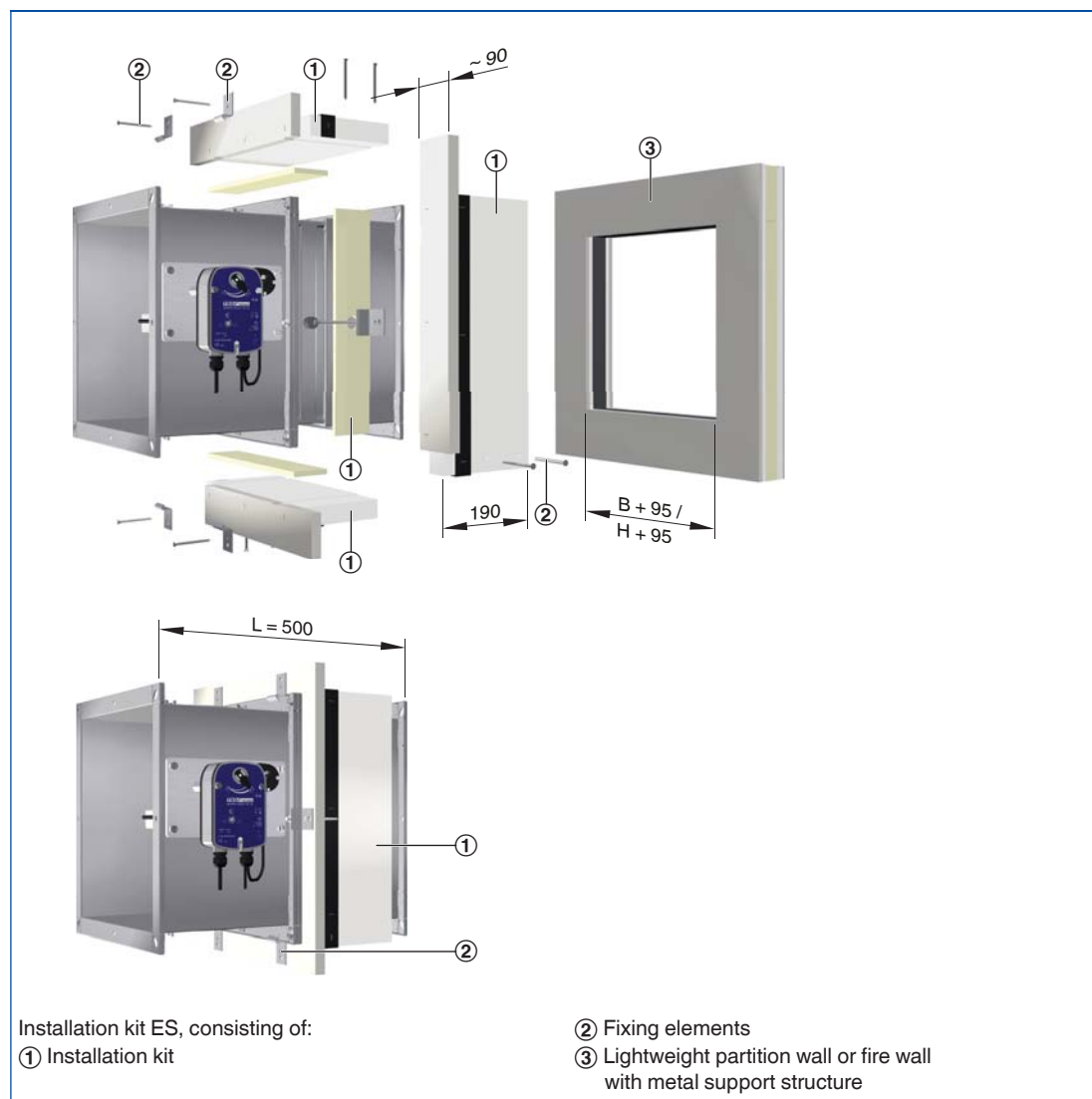
Materials and surfaces

- Installation kit made from special insulation material with intumescent seal and mineral wool strips
- Fixing elements made of galvanised steel

Installation kit for dry mortarless installation in lightweight partition walls, fire walls and shaft walls

L [mm]	Order code
500	ES

FK-EU with installation kit ES



Description

/ GL100¹ /

5

Order code detail

Application

- Dry mortarless installation in lightweight partition walls with metal support structure, cladding on both sides, and with flexible ceiling joint, directly underneath solid ceiling slabs, requires an installation kit.
- The installation kit allows for subsidence of the slab whilst maintaining sealing integrity around the fire damper
- Installation kit, extension piece and the U-channel underneath the installation kit are assembled at the factory to form a unit.
- The fire damper is fixed to the ceiling slab with the fixing elements for the installation kit (to be performed by others)
- Fire dampers with installation kit only with casing length $L = 500$ mm
- The fire damper and the installation kit must be installed and secured according to the operating and installation manual

Materials and surfaces

- Installation subframe made of special insulation material
- U-channels made of galvanised steel
- Threaded rods made of galvanised steel
- Fixing elements made of galvanised steel
- Extension piece made of galvanised steel (constructions 1, 2, 1-7 and 2-7 additionally powder coated, silver-grey, RAL 7001)

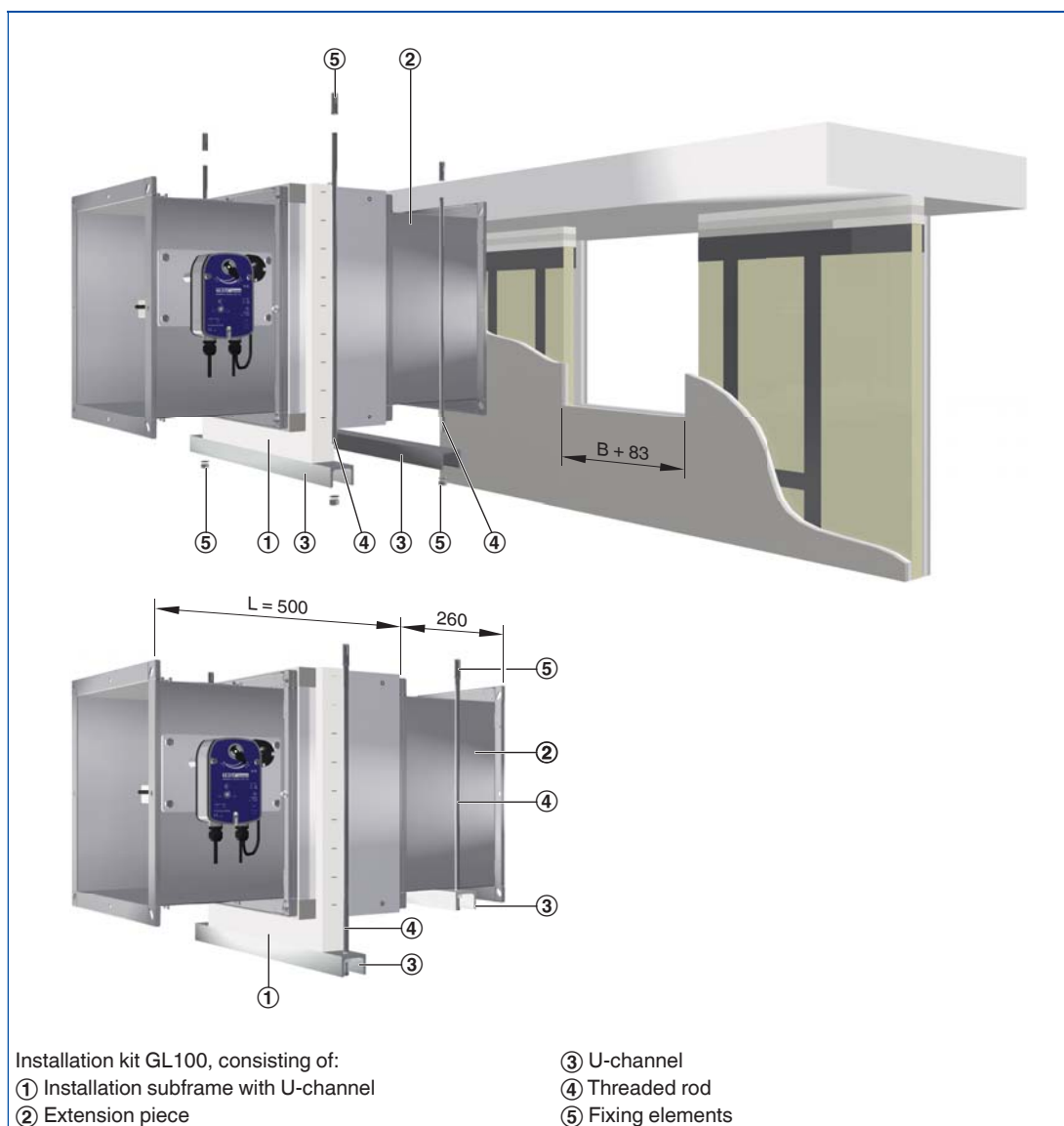
Installation kit for lightweight partition walls with flexible ceiling joint

Wall thickness [mm]	L [mm]	Order code
100	500	GL100 ¹

¹For wall thickness 100 mm when 50 mm sections are used.

Other wall thicknesses and section widths upon request.

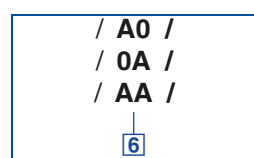
FK-EU with installation kit GL100



Description



Cover grille



Order code detail

Application

- If only one end is to be ducted on site, the other end must have a cover grille
- For certain heights an extension piece may be required, see table
- Fire damper, cover grille and, if applicable, extension piece are factory assembled to form a unit
- The free area of the cover grille is approx. 70%
- The fixing holes in the cover grilles and extension pieces match those in the fire damper flanges
- Cover grilles are also available separately
- Cover grilles both ends are approved in Germany only for Type FK fire dampers used as air transfer dampers, general building inspectorate licence Z-6.50-2031.

Materials and surfaces

- Cover grilles made of galvanised sheet steel (and powder-coated silver grey, RAL 7001, when used with powder-coated (1) and stainless steel (2) dampers)

Cover grilles for FK-EU · FK-EU-1 · FK-EU-2 · FK-EU-7

Operating side	Installation side	Order code
Cover grille	–	A0
–	Cover grille	0A
Cover grille	Cover grille	AA

Note: AA for FK-EU as air transfer damper

Technical data

Location and length of extension pieces [mm]

H	Operating side	Installation side	L	Order code
200 – 550	–	–	375/500	A0
600 – 800	120	–	375/500	A0
200 – 300	–	–	500	0A
350 – 550	–	120	500	0A
600 – 800	–	260	500	0A
200 – 300	–	–	500	AA
350 – 550	–	120	500	AA
600 – 800	120	260	500	AA

Note:

Cover grilles for both sides (AA) are available only for the construction used as an air transfer damper.

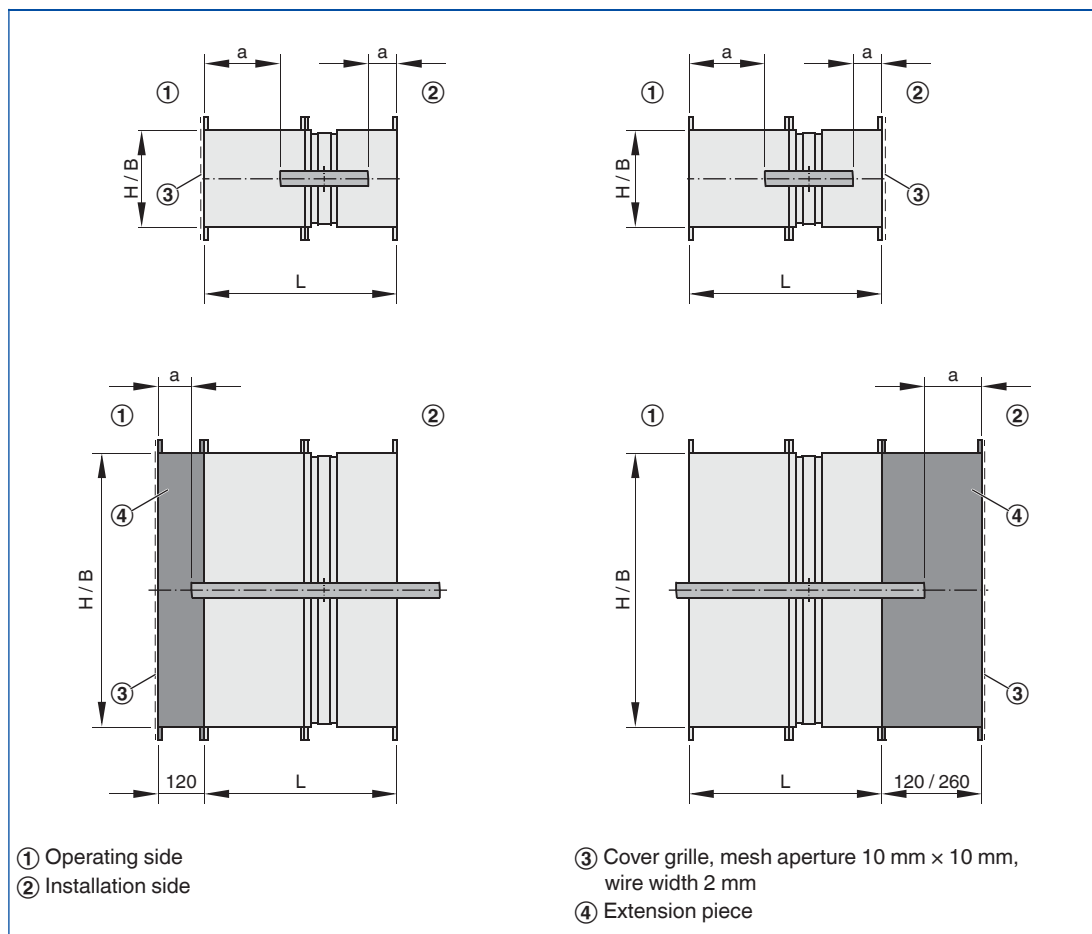
The distance »a« between the open damper blade and the spigot should be 50 mm.

Cover grille



The distance »a«
between the open damper
blade and the spigot
should be 50 mm.

Cover grille



Extension piece and cover grille are supplied factory assembled.

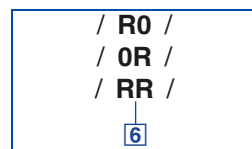
Description

Application

- Use of circular spigots facilitates the direct connection of circular ducts
- For certain heights an extension piece may be required, see table
- Fire damper, spigot and, if applicable, extension piece are factory assembled to form a unit
- The fixing holes in the spigot plates and extension pieces match those in the fire damper flanges
- Spigot plates are also available separately.

Materials and surfaces

- Circular spigot plates made of galvanised sheet steel (and powder-coated silver grey, RAL 7001, when used with powder-coated (1) and stainless steel (2) dampers)



Order code detail

Circular spigot plate for FK-EU · FK-EU-1 · FK-EU-2 · FK-EU-7

Operating side	Installation side	Order code
Spigot	–	R0
–	Spigot	OR
Spigot	Spigot	RR

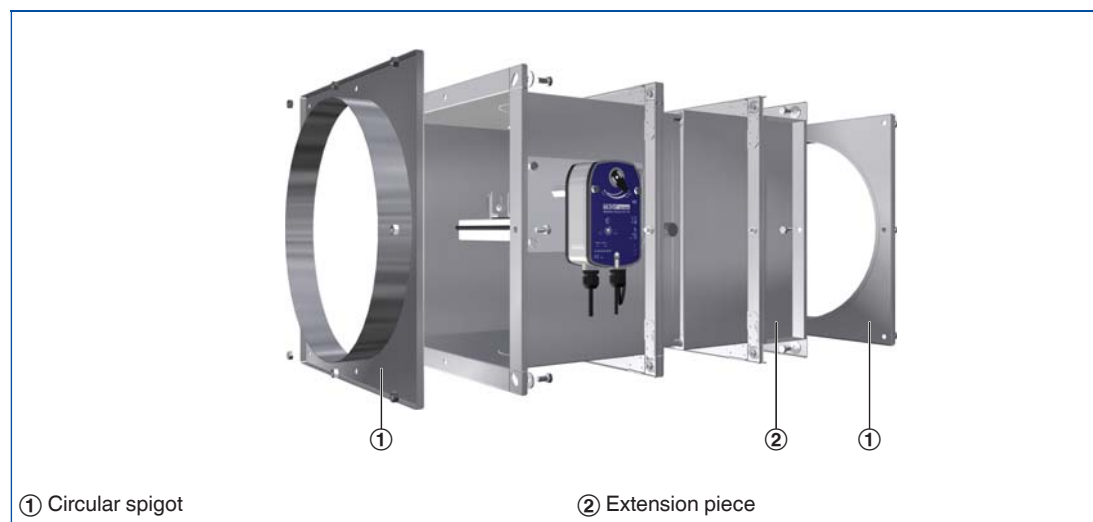
Technical data

Location and length of extension pieces [mm]

H	Operating side	Installation side	L	Order code
200 – 550	–	–	375/500	R0
600 – 800	120	–	375/500	R0
200 – 300	–	–	500	OR
350 – 550	–	120	500	OR
600 – 800	–	260	500	OR
200 – 300	–	–	500	RR
350 – 550	–	120	500	RR
600 – 800	120	260	500	RR

The distance »a« between the open damper blade and the spigot should be 50 mm.

Circular spigot

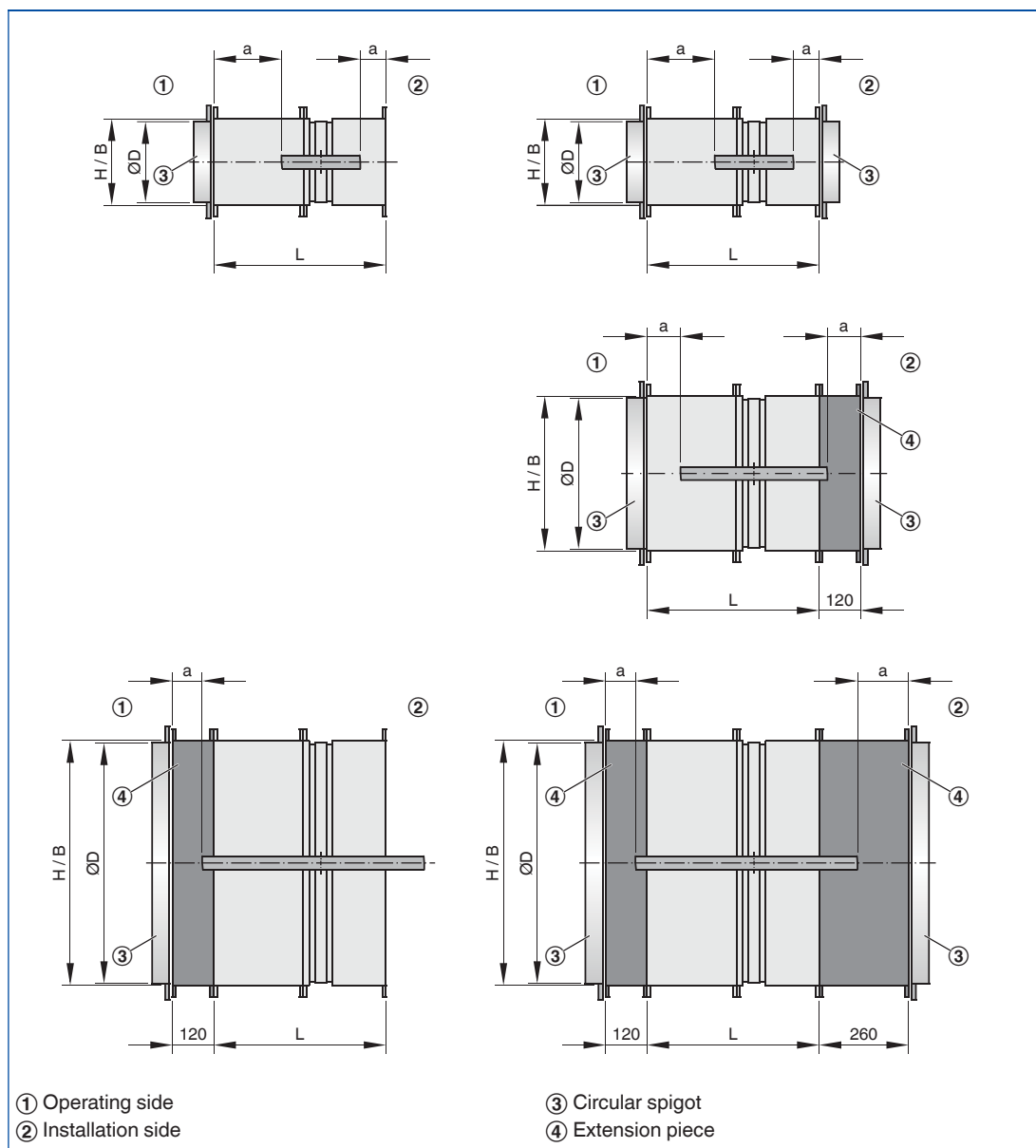


① Circular spigot

② Extension piece

The distance »a«
between the open damper
blade and the spigot
should be 50 mm.

Circular spigot



Extension pieces and spigot plates are supplied factory assembled

Dimensions [mm]

Nominal size	B × H	ØD
200	200 × 200	198
250	250 × 250	248
300	300 × 300	248
350	350 × 350	313
400	400 × 400	398
450	450 × 450	448
500	500 × 500	498
550	550 × 550	498
600	600 × 600	558
650	650 × 650	628
700	700 × 700	628
750	750 × 750	708
800	800 × 800	798

Description



Flexible connector

/ S0 /
/ OS /
/ SS /
6

Order code detail

Application

- For information on how to limit such loads please refer to the guideline regarding fire protection requirements on ventilation systems (Lüftungsanlagen-Richtlinie, LÜAR)
- As ducts may expand and walls may become deformed in the event of a fire, we recommend using flexible connectors for the following applications: installation in lightweight partition walls, in lightweight shaft walls, with fire batts, and in lightweight fire walls
- Flexible connectors should be installed in such a way that both ends can compensate both tension and compression
- Flexible ducts can be used as an alternative
- For certain heights an extension piece may be required, see table
- The fixing holes in the flexible connectors and extension pieces match those in the fire damper flanges
- Flexible connectors are also available separately

Materials and surfaces

- Flexible connectors made of galvanised steel and fibre-reinforced plastic
- Fire resistance properties to 4102; B2

Flexible connector for FK-EU · FK-EU-1 · FK-EU-2 · FK-EU-7

Operating side	Installation side	Order code
Flexible connector	–	S0
–	Flexible connector	OS
Flexible connector	Flexible connector	SS

Technical data

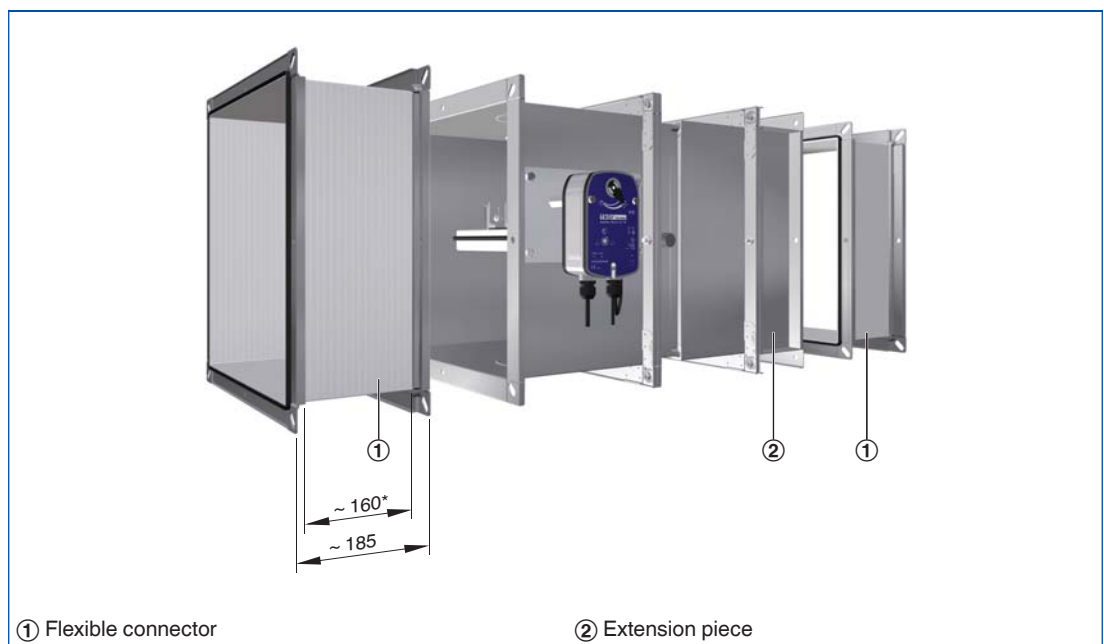
Location and length of extension pieces [mm]

H	Operating side	Installation side	L	Order code
200 – 550	–	–	375/500	S0
600 – 800	120	–	375/500	S0
200 – 300	–	–	500	OS
350 – 550	–	120	500	OS
600 – 800	–	260	500	OS
200 – 300	–	–	500	SS
350 – 550	–	120	500	SS
600 – 800	120	260	500	SS

* flexible length
≥ 100 mm when installed

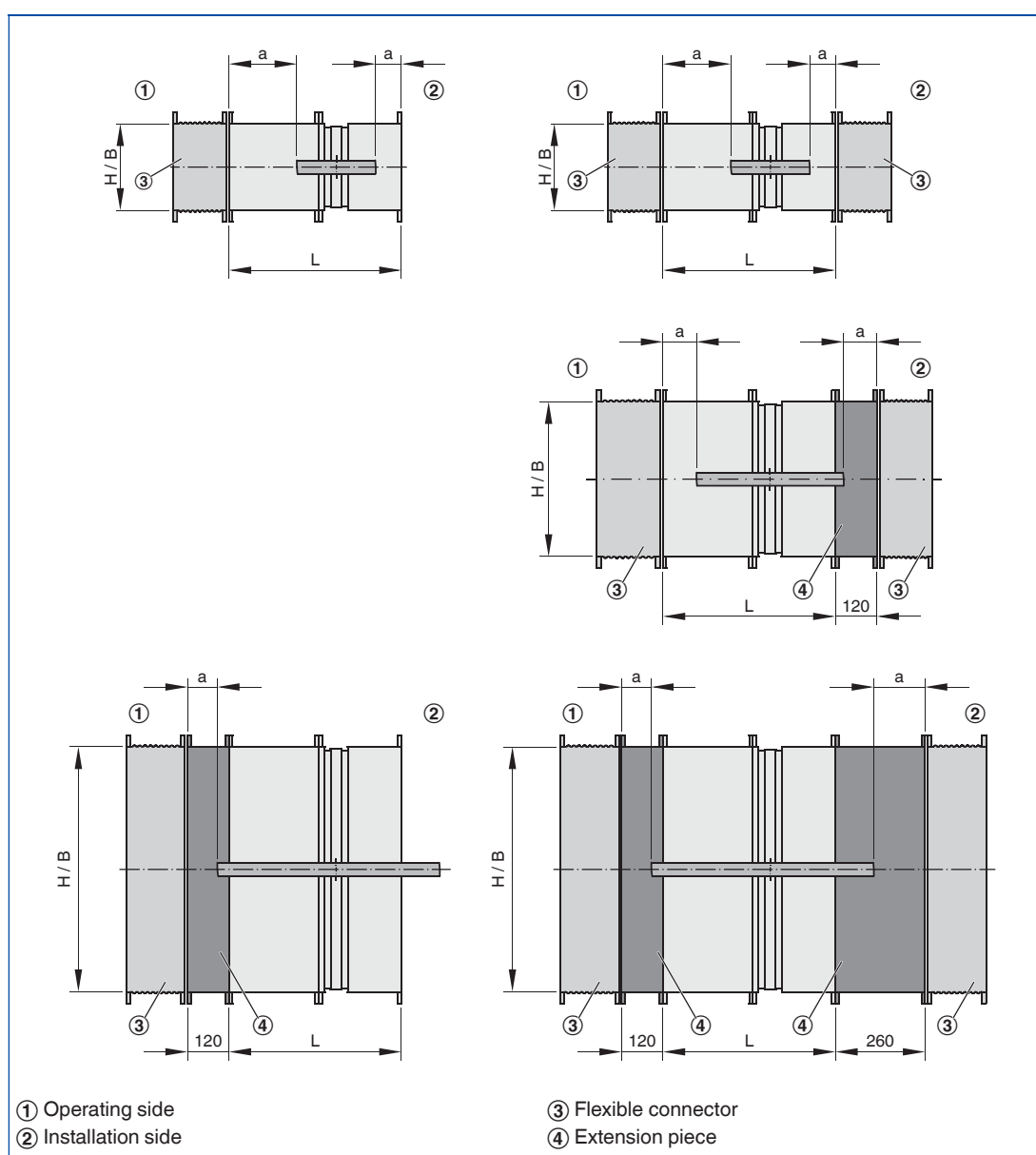
The distance »a« between the open damper blade and the flexible connector should be 50 mm.

Flexible connector



1 The distance »a« between the open damper blade and the flexible connector should be 50 mm.

Flexible connector



Extension pieces are supplied factory assembled.

Flexible connectors are supplied unassembled, connection material is to be provided by others.

Description



Extension piece

Application

- Fire dampers ordered with flexible connector, cover grille or circular spigot plate are supplied including extension piece.
- Extension pieces are also available separately

Materials and surfaces

- Extension pieces made of galvanised sheet steel (and powder-coated silver grey, RAL 7001, when used with powder-coated (1) and stainless steel (2) dampers)

Technical data

When using cover grilles, circular spigot plates or flexible connectors an extension piece may be required.

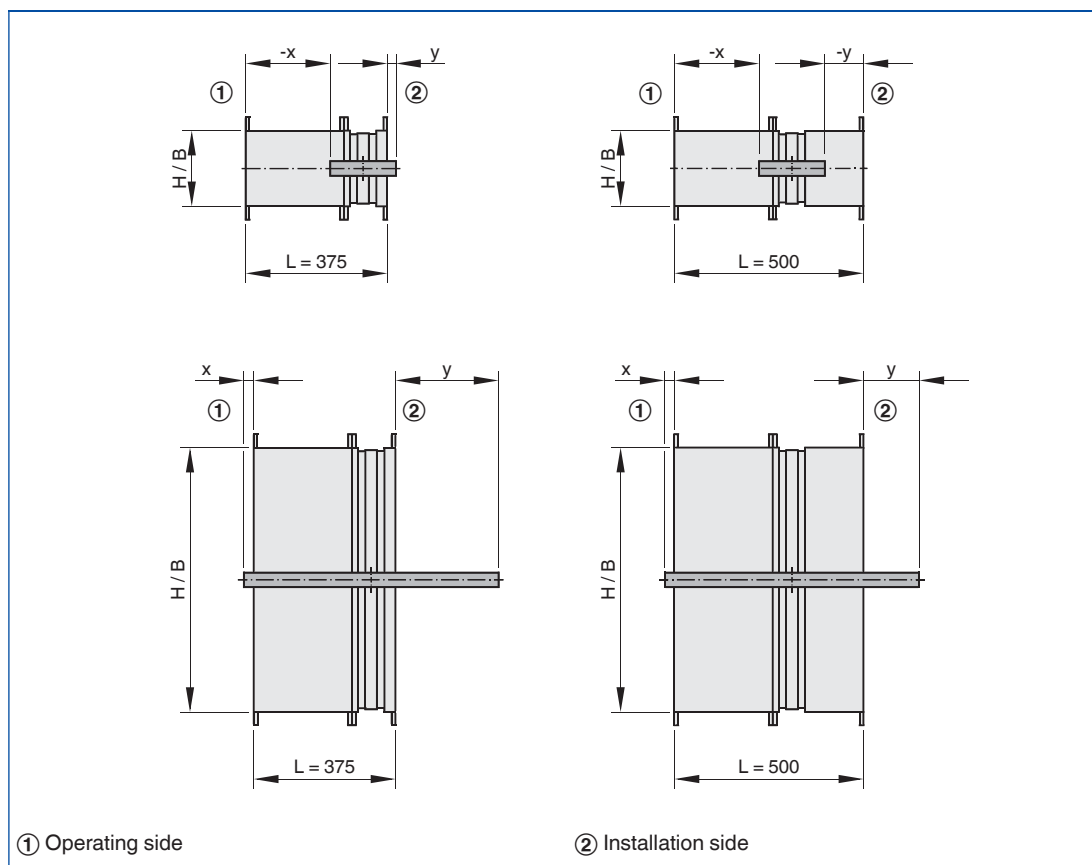
Dimensions [mm]

H	200	250	300	350	400	450	500	550	600	650	700	750	800
x	-224	-199	-174	-149	-124	-99	-74	-49	-24*	1*	26*	51*	76*
y													
L = 375	23*	48*	73*	98*	123*	148*	173*	198*	223*	248*	273*	298*	323*
L = 500	-102	-77	-52	-27*	-2*	23*	48*	73*	98*	123*	148*	173*	198*

* Extension piece required

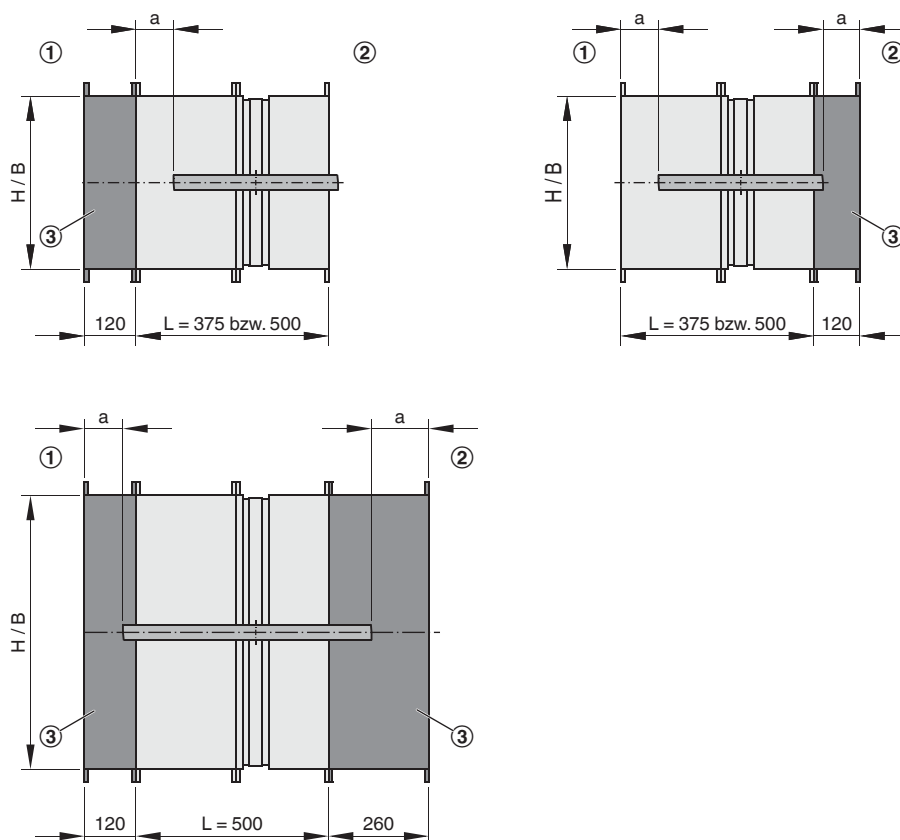
The distance »a« between the open damper blade and the cover grille, circular spigot or flexible connector should be 50 mm.

Open blade protrusion



1 The distance »a« between the open damper blade and the flexible connector should be 50 mm.

Extension piece



① Operating side
② Installation side

③ Flexible connector, on operating and/or installation side

Description



Limit switch

For detailed information
on limit switches
see Chapter 1.2

/ Z01
/ Z02
/ Z03

Order code detail

FK-EU with limit switch

- Limit switches with volt-free contacts enable the damper blade position indication.
- Up to the maximum switch rating, relays or indicator lights for fire alarm systems can be used
- One limit switch each is required for damper blade positions OPEN and CLOSED
- Fire dampers with a fusible link can be supplied with one or two limit switches; the switches can also be fitted later

Attachments	Order code
Limit switch for damper blade position CLOSED	Z01
Limit switch for damper blade position OPEN	Z02
Limit switches for damper blade positions CLOSED and OPEN	Z03

Description



Limit switch
(explosion-proof)

For detailed information
on limit switches
see Chapter 1.2

/ Z01EX
/ Z02EX
/ Z03EX

Order code detail

FK-EU with limit switch (explosion-proof)

- According to declaration of conformity TÜV 11 ATEX 085420 X explosion-proof limit switches with volt-free contacts can indicate the damper blade position.
- Up to the maximum switch rating, relays or indicator lights for fire alarm systems can be used
- The limit switches must be connected in a separately approved casing with a type of protection according to EN 60079-0
- One limit switch each is required for damper blade positions OPEN and CLOSED
- Fire dampers with a fusible link can be supplied with one or two limit switches; the switches can also be fitted later

Attachments	Order code
Limit switch (explosion-proof) for damper blade position CLOSED	Z01EX
Limit switch (explosion-proof) for damper blade position OPEN	Z02EX
Limit switches (explosion-proof) for damper blade positions CLOSED and OPEN	Z03EX



ATEX certification

ATEX areas of application for the FK-EU

Release mechanism	Marking	Ambient temperature	Maximum airflow velocity
Fusible link	II 2D c T80 °C/II 2G c IIC T6	–40 to 40 °C	8 m/s
Fusible link and limit switch	II 2D c T80 °C/II 2G c IIC T6	–20 to 40 °C	8 m/s

Description



FK-EU
with spring return actuator

For detailed information
on the spring return
actuator see Chapter 1.2

FK-EU with spring return actuator

- An open/close actuator allows for the remote control of the fire damper and/or release by a suitable duct smoke detector
 - If the supply voltage fails, or with thermoelectric release, the damper closes (power off to close)
 - Fire dampers with spring return actuators can be functionally checked OPEN/CLOSED/OPEN
 - Ambient temperature, normal operation –30 to 50 °C
 - Two integral limit switches with volt-free contacts enable the damper blade position indication (OPEN and CLOSED)
 - B(L)F24-T-ST TR: The connecting cables of the spring return actuator are fitted with plugs, which ensure quick and easy connection to the TROX AS-i bus system
- A conversion kit is available for adding an actuator to the standard construction
 - In case of conventional wiring (Z45) the voltage is supplied by a safety transformer

/ Z43
/ Z45
/ Z60
/ Z61
/ Z64
/ Z65
/ Z66



Order code detail

Attachments	Order code
B(L)F230-T TR	Z43
B(L)F24-T-ST TR	Z45
B(L)F24-T-ST TR including power supply unit BKN230-24-1 TR	Z60
B(L)F24-T-ST TR including power supply unit BKN230-24-1 TR and control module BKS24-1 TR	Z61
Joventa SFR1.90 T (24 V)	Z64
Joventa SFR2.90 T (230 V)	Z65
Joventa SFR1.90 T SLC (24 V)	Z66

Spring return actuator BLF for FK-EU in sizes up to B × H ≤ 800 × 400 mm.

Spring return actuator BF for FK-EU in sizes from B × H ≤ 800 × 400 mm.

Description



FK-EU with spring return
actuator (explosion-proof)

For detailed information
on the spring return
actuator see Chapter 1.2

FK-EU

with explosion-proof spring return actuator

- An open/close actuator allows for the remote control of the fire damper and/or release by a suitable duct smoke detector
 - The fire damper can be used in supply and extract air systems in areas with potentially explosive atmospheres
 - If the supply voltage fails, or with thermoelectric release, the damper closes (power off to close)
 - Fire dampers with spring return actuators can be functionally checked OPEN/CLOSED/OPEN
 - Two integral limit switches with volt-free contacts enable the damper blade position indication (OPEN and CLOSED)
- The electrical connection is made in the explosion-proof terminal box
 - Release temperature of the spring return actuator is 72 °C
 - Declaration of conformity: TÜV 11 ATEX 085420 X

/ ZEX1
/ ZEX3



Order code detail

Attachments	Order code
ExMax-15-BF TR	ZEX1
RedMax-15-BF TR	ZEX3

ATEX areas of application

Release mechanism	Attachments	Marking	Ambient temperature
ExPro-TT	ExMax-15-BF TR	II 2D c T80 °C II 2G c IIC T6	–40 to 40 °C
	RedMax-15-BF TR	II 3D c T80 °C II 3G c IIC T6	–40 to 40 °C



ATEX certification

Description



FK-EU
as air transfer damper

For detailed information
on the spring return
actuator see Chapter 1.2

For detailed information
on the duct smoke
detector see Chapter 1.2

**FK-EU as air transfer damper
with spring return actuator BLF or BF
and duct smoke detector RM-O-3-D**

- An open/close actuator allows for remote control of the air transfer damper and/or release by a suitable duct smoke detector
- If the supply voltage fails, or with thermoelectric release or smoke detection the damper closes (power off to close)
- Fire dampers with spring return actuators can be functionally checked OPEN/CLOSED/OPEN
- Two integral limit switches with volt-free contacts enable the damper blade position indication (OPEN and CLOSED)

Duct smoke detector Type RM-O-3-D

Just as the spring return actuator, the duct smoke detector RM-O-3-D is a permanent part of the air transfer damper.

Essential characteristics
of the duct smoke detector:

- General building inspectorate licence Z-78.6-125
- For airflow velocities from 1 – 20 m/s
- Independent of the airflow direction
- Supply voltage 230 V AC, 50/60 Hz*
- Volt-free signal and alarm relays
- Integral signal lamps
- Contamination level indicator
- Automatic adjustment of alarm threshold
- Long service life
- Temperature range 0 – 60 °C

* The 24 V construction includes a voltage monitoring module

/ Z43RM
/ Z45RM

Order code detail

Attachments	Order code
Duct smoke detector RM-O-3-D with spring return actuator B(L)F230-T TR (cover grilles both sides required [AA])	Z43RM
Duct smoke detector RM-O-3-D with spring return actuator B(L)F24-T ST TR (cover grilles both sides required [AA])	Z45RM

Spring return actuator BLF for FK-EU in sizes up to $B \times H \leq 800 \times 400$ mm.
Spring return actuator BF for FK-EU in sizes from $B \times H \leq 800 \times 400$ mm.

Description



FK-EU with
TROXNETCOM module

For detailed information
on TROXNETCOM
see Chapter 1.2

FK-EU with spring return actuator and TROXNETCOM

- The fire dampers with spring return actuator BLF24-T-ST TR or BF24-T-ST TR and the modules shown here as attachments form a functional unit ready for automatic operation
- The components are factory assembled and wired
- It enables the integration of different components (modules) into a network regardless of the manufacturer
- The modules control actuators and/or receive signals from sensors

Application

LON:

- LON indicates a standard local operating network system with manufacturer-independent communications
- Data transmission is based on a uniform protocol
- LonMark defines standards to ensure product compatibility
- Only the bus line and the supply voltage remain to be connected by others
- LON-WA1/B2: To provide the control input signal for up to two fire dampers
- LON-WA1/B2-AD: Connection box for connecting the second fire damper with 24 V DC supply voltage to LON-WA1/B2-AD

- LON-WA17B2-AD230: Connection box with integral 230/24 V power supply unit for the connection of a second actuator-driven 24 V fire damper to LON-WA1/B2

AS-i:

- The AS interface is a global standard bus system according to EN 50295 and IEC 62026-2
- The module sends the control signals between the spring return actuator and the controller and power unit
- This allows for controlling the actuator and monitoring of its running time during functional testing
- The voltage (24 V DC) for the module and the actuator is supplied via the two-wire AS-i flat cable
- Function display: operation, 4 inputs, 2 outputs

/ ZL06
/ ZL07
/ ZL08



Order code detail

/ ZA07
/ ZA11



Order code detail

Attachments	Order code
LON-WA1/B2 and B(L)F24-T-ST TR	ZL06
LON-WA1/B2-AD and B(L)F24-T-ST TR	ZL07
LON-WA1/B2-AD230 and B(L)F24-T-ST TR	ZL08
AS-EM and B(L)F24-T-ST TR	ZA07
AS-RM/BD-UE, B(L)F24-T-ST TR and RM-O-3-D	ZA11

Spring return actuator BLF for FK-EU in sizes up to $B \times H \leq 800 \times 400$ mm.

Spring return actuator BF for FK-EU in sizes from $B \times H \leq 800 \times 400$ mm.

Description



ATEX certification

FK-EU with spring return actuator (explosion-proof) and TROXNETCOM

- The AS interface is a global standard bus system according to EN 50295 and IEC 62026-2
- It enables the integration of different components (modules) into a network regardless of the manufacturer
- The fire dampers with spring return actuator ExMax/RedMax-15-BF-TR and module AS-EM/C form a functional unit ready for automatic operation.
- The modules control actuators and/or receive signals from sensors
- The module is to be installed and wired outside of the potentially explosive atmosphere by others

Application

- The module sends the control signals between the spring return actuator and the controller and power unit
- This allows for controlling the actuator and monitoring of its running time during functional testing
- The voltage (24 V DC) for the module and the actuator is supplied via the two-wire AS-i flat cable
- Function display: operation, 4 inputs, 2 outputs

/ ZEX2
/ ZEX4



Order code detail

Attachments	Order code
AS-Interface module and ExMax-15-BF TR	ZEX2
AS-Interface module and RedMax-15-BF TR	ZEX4

Description



Duct smoke detector
RM-O-3-D



Duct smoke detector
RM-O-VS-D

For detailed information
on the duct smoke
detector see Chapter 1.2

General

- To prevent smoke from spreading in buildings, it is extremely important that the smoke is detected at an early stage.
- Duct smoke detectors that operate on the principle of light scattering detect the smoke regardless of its temperature so that the fire dampers can be closed before the release temperature of 72 °C is reached
- If the air contains suspended particles, as is the case with smoke, beams of light are deflected off these. A sensor (photodiode), which does not receive light in clear air, is illuminated by the scattered light.
- The fire damper or smoke protection damper blade is released when the brightness of the scattered light exceeds a certain threshold

Application

RM-O-3-D:

- Duct smoke detector for fire dampers and smoke protection dampers
- General building inspectorate licence Z-78.6-125
- For airflow velocities from 1 – 20 m/s
- Independent of the airflow direction
- Supply voltage 230 V AC, 50/60 Hz or 24 V DC with voltage monitoring module (VWM) (upon request)
- Volt-free signal and alarm relays
- Integral signal lamps
- Contamination level indicator
- Automatic adjustment of alarm threshold
- Long service life
- Temperature range 0 – 60 °C

RM-O-VS-D:

- Duct smoke detector for fire dampers and smoke protection dampers
- General building inspectorate licence Z-78.6-67
- For airflow velocities from 1 – 20 m/s
- Independent of the airflow direction
- Airflow monitoring with warning for lower limit 2 m/s
- Supply voltage 230 V AC, 50/60 Hz
- Volt-free signal and alarm relays
- Integral signal lamps
- Contamination level indicator
- Automatic adjustment of alarm threshold
- Long service life
- Temperature range 0 – 60 °C

Attachments	Order code
Smoke detector	RM-O-3-D
	RM-O-VS-D

Duct smoke detectors are attachments and to be ordered separately.
RM-O-3-D can also be supplied assembled and wired for standard application fire dampers.

Volume flow rate \dot{V} [m³/h] at differential pressure $\Delta p_{st} < 35$ Pa

B [mm]	L _{WA} [dB(A)]	H [mm]													
		200	250	300	350	400	450	500	550	600	650	700	750	800	
200	35	666	900	1152	1404	1620	1116	1260							
	45	936	1296	1620	1944	2268	1584	1800							
250	35	864	1188	1476	1764	2052	1476	1692							
	45	1188	1620	2052	2448	2844	2088	2376							
300	35	1044	1404	1764	2124	2448	1836	2088	2340	2592	2844	3060	3312	3564	
	45	1476	1980	2484	2952	3420	2628	2952	3312	3672	4032	4356	4716	5076	
350	35	1224	1656	2088	2484	2844	2196	2484	2808	3096	3384	3672	3960	4248	
	45	1728	2304	2880	3456	3996	3132	3564	3960	4392	4824	5220	5652	6048	
400	35	1404	1908	2376	2808	3240	2556	2916	3240	3600	3924	4284	4608	4968	
	45	1980	2664	3312	3924	4572	3636	4140	4608	5112	5580	6084	6552	7056	
450	35	1584	2124	2664	3168	3636	2916	3312	3708	4104	4500	4860	5256	5652	
	45	2232	2988	3708	4392	5112	4176	4716	5256	5832	6372	6912	7488	8028	
500	35	1764	2376	2916	3492	4032	3276	3744	4176	4608	5040	5472	5904	6336	
	45	2484	3312	4104	4860	5652	4680	5292	5904	6552	7164	7776	8388	9000	
550	35	1944	2592	3204	3816	4428	3636	4140	4608	5112	5580	6048	6552	7020	
	45	2736	3636	4500	5328	6156	5184	5868	6552	7236	7920	8604	9288	9972	
600	35	2124	2808	3492	4140	4788	3996	4536	5076	5616	6120	6660	7164	7704	
	45	2952	3924	4860	5796	6696	5688	6444	7200	7956	8712	9468	10188	10944	
650	35	2304	3024	3744	4464	5148	4356	4932	5508	6084	6660	7236	7812	8388	
	45	3204	4248	5256	6228	7200	6192	7020	7848	8676	9468	10296	11124	11916	
700	35	2448	3240	4032	4788	5508	4716	5364	5976	6588	7200	7848	8460	9072	
	45	3420	4572	5652	6696	7740	6696	7596	8496	9360	10260	11124	12024	12888	
750	35	2628	3492	4284	5112	5904	5076	5760	6444	7092	7776	8424	9072	9756	
	45	3672	4860	6012	7128	8244	7236	8172	9144	10080	11052	11988	12924	13860	
800	35	2808	3708	4572	5400	6264	5436	6156	6879	7596	8316	9000	9720	10440	
	45	3888	5148	6372	7560	8748	7740	8748	9792	10080	11808	12816	13824	14832	
900	35	1944	2808	3672	4500	5328	6156	6984	7776	8604	9396	10188	10980	11808	
	45	2772	3996	5220	6408	7596	8748	9900	11052	12204	13356	14508	15624	16776	
1000	35	2160	3132	4104	5040	5940	6876	7776	8676	9576	10476	11376	12276	13140	
	45	3096	4464	5832	7164	8460	9756	11052	12348	13608	14904	16164	17424	18720	
1100	35	2412	3456	4536	5544	6588	7596	8568	9576	10584	11556	12564	13536	14508	
	45	3744	4932	6444	7884	9324	10764	12204	13608	15048	16452	17820	19224	20700	
1200	35	2628	3816	4932	6084	7200	8280	9396	10476	11556	12636	13716	14796	15876	
	45	4068	5400	7020	8640	10224	11808	13356	14904	16452	17964	19440	21060	22500	
1300	35	2844	4140	5364	6588	7812	9000	10188	11376	12564	13716	14904	16056	17208	
	45	4392	5868	7632	9396	11124	12816	14508	16164	17856	19440	21240	22860	24480	
1400	35	3096	4464	5796	7128	8424	9720	11016	12276	135236	14796	16056	17316	18540	
	45	4716	6336	8244	10116	11988	13824	15624	17460	19260	21060	22860	24660	26460	
1500	35	3312	4788	6228	7632	9036	10440	11808	13176	14544	15876	17244	18540	19980	
	45	4716	6804	8856	10872	12852	14832	16776	1870	20700	22500	24480	26460	28260	

Sizing example

Given data	Quick sizing
Volume flow rate: 3312 m³/h	FK-EU / 300 × 550 × 500
Maximum width: 300 mm	
Sound power level: 45 dB(A)	

The Easy Product Finder allows you to size products using your project-specific data.
You will find the Easy Product Finder on our website.

Volume flow rate \dot{V} [l/s] at differential pressure $\Delta p_{st} < 35$ Pa

B [mm]	L_{WA} [dB(A)]	H [mm]												
		200	250	300	350	400	450	500	550	600	650	700	750	800
200	35	185	250	320	390	450	310	350						
	45	260	360	450	540	630	440	500						
250	35	240	330	410	490	570	410	470						
	45	330	450	570	680	790	580	660						
300	35	290	390	490	590	680	510	580	650	720	790	850	920	990
	45	410	550	690	820	950	730	820	920	1020	1120	1210	1310	1410
350	35	340	460	580	690	790	610	690	780	860	940	1020	1100	1180
	45	480	640	800	960	1110	870	990	1100	1220	1340	1450	1570	1680
400	35	390	530	660	780	900	710	810	900	1000	1090	1190	1280	1380
	45	550	740	920	1090	1270	1010	1150	1280	1420	1550	1690	1820	1960
450	35	440	590	740	880	1010	810	920	1030	1140	1250	1350	1460	1570
	45	620	830	1030	1220	1420	1160	1310	1460	1620	1770	1920	2080	2230
500	35	490	660	810	970	1120	910	1040	1160	1280	1400	1520	1640	1760
	45	690	920	1140	1350	1570	1300	1470	1640	1820	1990	2160	2330	2500
550	35	540	720	890	1060	1230	1010	1150	1280	1420	1550	1680	1820	1950
	45	760	1010	1250	1480	1710	1440	1630	1820	2010	2200	2390	2580	2770
600	35	590	780	970	1150	1330	1110	1260	1410	1560	1700	1850	1990	2140
	45	820	1090	1350	1610	1860	1580	1790	2000	2210	2420	2630	2830	3040
650	35	640	840	1040	1240	1430	1210	1370	1530	1690	1850	2010	2170	2330
	45	890	1180	1460	1730	2000	1720	1950	2180	2410	2630	2860	3090	3310
700	35	680	900	1120	1330	1530	1310	1490	1660	1830	2000	2180	2350	2520
	45	950	1270	1570	1860	2150	1860	2110	2360	2600	2850	3090	3340	3580
750	35	730	970	1190	1420	1640	1410	1600	1790	1970	2160	2340	2520	2710
	45	1020	1350	1670	1980	2290	2010	2270	2540	2800	3070	3330	3590	3850
800	35	780	1030	1270	1500	1740	1510	1710	1911	2110	2310	2500	2700	2900
	45	1080	1430	1770	2100	2430	2150	2430	2720	2800	3280	3560	3840	4120
900	35	540	780	1020	1250	1480	1710	1940	2160	2390	2610	2830	3050	3280
	45	770	1110	1450	1780	2110	2430	2750	3070	3390	3710	4030	4340	4660
1000	35	600	870	1140	1400	1650	1910	2160	2410	2660	2910	3160	3410	3650
	45	860	1240	1620	1990	2350	2710	3070	3430	3780	4140	4490	4840	5200
1100	35	670	960	1260	1540	1830	2110	2380	2660	2940	3210	3490	3760	4030
	45	1040	1370	1790	2190	2590	2990	3390	3780	4180	4570	4950	5340	5750
1200	35	730	1060	1370	1690	2000	2300	2610	2910	3210	3510	3810	4110	4410
	45	1130	1500	1950	2400	2840	3280	3710	4140	4570	4990	5400	5850	6250
1300	35	790	1150	1490	1830	2170	2500	2830	3160	3490	3810	4140	4460	4780
	45	1220	1630	2120	2610	3090	3560	4030	4490	4960	5400	5900	6350	6800
1400	35	860	1240	1610	1980	2340	2700	3060	3410	37566	4110	4460	4810	5150
	45	1310	1760	2290	2810	3330	3840	4340	4850	5350	5850	6350	6850	7350
1500	35	920	1330	1730	2120	2510	2900	3280	3660	4040	4410	4790	5150	5550
	45	1310	1890	2460	3020	3570	4120	4660	519	5750	6250	6800	7350	7850

Sizing example

Given data	Quick sizing
Volume flow rate: 1010 l/s	FK-EU / 450 × 400 × 500
Maximum width: 400 mm	
Sound power level: 35 dB(A)	

The Easy Product Finder allows you to size products using your project-specific data.
You will find the Easy Product Finder on our website.

1

H [mm]	Parameter	B [mm]									
		200	250	300	350	400	450	500	550	600	650
200	A [m ²]	0.02	0.027	0.034	0.041	0.048	0.055	0.062	0.069	0.076	0.083
	Z	1.12	0.94	0.77	0.71	0.65	0.59	0.53	0.53	0.47	0.47
	K	1	1	0	0	0	0	0	0	0.5	0.5
250	A [m ²]	0.029	0.039	0.048	0.058	0.067	0.077	0.086	0.096	0.105	0.115
	Z	0.91	0.77	0.62	0.58	0.53	0.48	0.43	0.43	0.38	0.38
	K	1	1	0	0	0	0	0	0	0.5	0.5
300	A [m ²]	0.038	0.05	0.062	0.074	0.086	0.098	0.11	0.122	0.134	0.146
	Z	0.78	0.66	0.53	0.49	0.45	0.41	0.37	0.37	0.33	0.33
	K	1	1	0	0	0	0	0	0	0.5	0.5
350	A [m ²]	0.047	0.062	0.076	0.091	0.105	0.12	0.134	0.149	0.163	0.178
	Z	0.68	0.58	0.47	0.43	0.4	0.36	0.32	0.32	0.29	0.29
	K	1	1	0	0	0	0	0	0	0.5	0.5
400	A [m ²]	0.056	0.073	0.09	0.107	0.124	0.141	0.158	0.175	0.192	0.209
	Z	0.63	0.53	0.43	0.4	0.36	0.33	0.3	0.3	0.26	0.26
	K	1	1	0	0	0	0	0	0	0.5	0.5
450	A [m ²]	0.049	0.067	0.084	0.102	0.119	0.137	0.154	0.172	0.189	0.207
	Z	1.48	1.13	0.98	0.85	0.79	0.73	0.67	0.61	0.61	0.61
	K	5.5	3.5	2	2	1	1	0	0	0	0
500	A [m ²]	0.056	0.076	0.096	0.116	0.136	0.156	0.176	0.196	0.216	0.236
	ζ	1.35	1.03	0.86	0.76	0.7	0.65	0.59	0.54	0.54	0.54
	K	5.5	3.5	2	2	1	1	0	0	0	0

H [mm]	Parameter	B [mm]									
		700	750	800	900	1000	1100	1200	1300	1400	1500
200	A [m ²]	0.09	0.097	0.104	0.084	0.094	0.104	0.114	0.124	0.134	0.144
	Z	0.41	0.41	0.41	2.18	2.18	2.18	2.18	2.18	1.9	1.9
	K	1	1	1	-1	-1	-1	-1	-1	-1	-1
250	A [m ²]	0.124	0.134	0.143	0.126	0.141	0.156	0.171	0.186	0.201	0.216
	Z	0.34	0.34	0.34	1.26	1.26	1.26	1.26	1.26	1.11	1.11
	K	1	1	1	-1	-1	-1	-1	-1	-1	-1
300	A [m ²]	0.158	0.17	0.182	0.168	0.188	0.208	0.228	0.248	0.268	0.288
	Z	0.29	0.29	0.29	0.89	0.89	0.89	0.89	0.89	0.78	0.78
	K	1	1	1	-1	-1	-1	-1	-1	-1	-1
350	A [m ²]	0.192	0.207	0.221	0.21	0.235	0.26	0.285	0.31	0.335	0.36
	Z	0.25	0.25	0.25	0.69	0.69	0.69	0.69	0.69	0.6	0.6
	K	1	1	1	-1	-1	-1	-1	-1	-1	-1
400	A [m ²]	0.226	0.243	0.26	0.252	0.282	0.312	0.342	0.372	0.402	0.432
	Z	0.23	0.23	0.23	0.57	0.57	0.57	0.57	0.57	0.5	0.5
	K	1	1	1	-1	-1	-1	-1	-1	-1	-1
450	A [m ²]	0.224	0.242	0.259	0.294	0.329	0.364	0.399	0.434	0.469	0.504
	Z	0.55	0.55	0.55	0.49	0.49	0.49	0.49	0.49	0.43	0.43
	K	0	0	-1	-1	-1	-1	-1	-1	-1	-1
500	A [m ²]	0.256	0.276	0.296	0.336	0.376	0.416	0.456	0.496	0.536	0.576
	ζ	0.49	0.49	0.49	0.43	0.43	0.43	0.43	0.43	0.38	0.38
	K	0	0	-1	-1	-1	-1	-1	-1	-1	-1

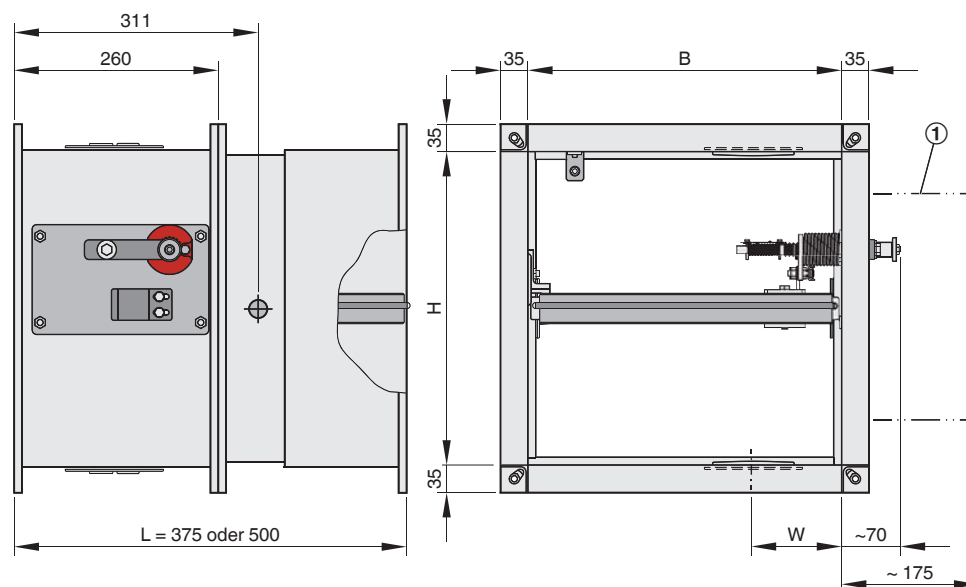
H [mm]	Parameter	B [mm]								
		300	350	400	450	500	550	600	650	700
550	A [m ²]	0.108	0.131	0.153	0.176	0.198	0.221	0.243	0.266	0.288
	Z	0.78	0.69	0.64	0.59	0.54	0.49	0.49	0.49	0.44
	K	2	2	1	1	0	0	0	0	0
600	A [m ²]	0.12	0.145	0.17	0.195	0.22	0.245	0.27	0.295	0.32
	Z	0.7	0.62	0.57	0.53	0.48	0.44	0.44	0.44	0.4
	K	2	2	1	1	0	0	0	0	0
650	A [m ²]	0.132	0.16	0.187	0.215	0.242	0.27	0.297	0.325	0.352
	Z	0.66	0.57	0.53	0.49	0.45	0.41	0.41	0.41	0.37
	K	2	2	1	1	0	0	0	0	0
700	A [m ²]	0.144	0.174	0.204	0.234	0.264	0.294	0.324	0.354	0.384
	Z	0.61	0.53	0.49	0.46	0.42	0.38	0.38	0.38	0.34
	K	2	2	1	1	0	0	0	0	0
750	A [m ²]	0.156	0.189	0.221	0.254	0.286	0.319	0.351	0.384	0.416
	Z	0.58	0.5	0.47	0.43	0.4	0.36	0.36	0.36	0.32
	K	2	2	1	1	0	0	0	0	0
800	A [m ²]	0.168	0.203	0.238	0.273	0.308	0.343	0.378	0.413	0.448
	ζ	0.54	0.48	0.44	0.41	0.37	0.34	0.34	0.34	0.31
	K	2	2	1	1	0	0	0	0	0

H [mm]	Parameter	B [mm]								
		750	800	900	1000	1100	1200	1300	1400	1500
550	A [m ²]	0.311	0.333	0.378	0.423	0.468	0.513	0.558	0.603	0.648
	Z	0.44	0.44	0.39	0.39	0.39	0.39	0.39	0.34	0.34
	K	0	-1	-1	-1	-1	-1	-1	-1	-1
600	A [m ²]	0.345	0.37	0.42	0.47	0.52	0.57	0.62	0.67	0.72
	Z	0.4	0.4	0.35	0.35	0.35	0.35	0.35	0.31	0.31
	K	0	-1	-1	-1	-1	-1	-1	-1	-1
650	A [m ²]	0.38	0.407	0.462	0.517	0.572	0.627	0.682	0.737	0.792
	Z	0.37	0.37	0.33	0.33	0.33	0.33	0.33	0.29	0.29
	K	0	-1	-1	-1	-1	-1	-1	-1	-1
700	A [m ²]	0.414	0.444	0.504	0.564	0.624	0.684	0.744	0.804	0.864
	Z	0.34	0.34	0.31	0.31	0.31	0.31	0.31	0.27	0.27
	K	0	-1	-1	-1	-1	-1	-1	-1	-1
750	A [m ²]	0.449	0.481	0.546	0.611	0.676	0.741	0.806	0.871	0.936
	Z	0.32	0.32	0.29	0.29	0.29	0.29	0.29	0.25	0.25
	K	0	-1	-1	-1	-1	-1	-1	-1	-1
800	A [m ²]	0.483	0.518	0.588	0.658	0.728	0.798	0.868	0.938	1.008
	ζ	0.31	0.31	0.27	0.27	0.27	0.27	0.27	0.24	0.24
	K	0	-1	-1	-1	-1	-1	-1	-1	-1

FK-EU with fusible link



FK-EU with fusible link



W: 115 mm (B < 250 mm: 94 mm)

① Keep clear to provide access to the release mechanism

H	B									
	200	250	300	350	400	450	500	550	600	650
200	10	11	12	13	15	16	17	18	19	20
250	11	12	13	15	16	17	18	19	21	22
300	12	13	14	16	17	18	19	21	23	24
350	13	15	16	17	18	20	22	23	25	26
400	15	16	17	18	20	22	24	26	27	28
450	16	17	18	20	22	24	26	28	29	29
500	17	18	19	22	24	26	28	29	30	31
550			21	23	26	28	29	30	32	34
600			23	25	27	29	30	31	34	36
650			24	26	28	29	31	33	35	37
700			25	27	28	31	33	35	37	40
750			26	28	30	32	34	37	39	42
800			27	29	32	34	36	38	42	45

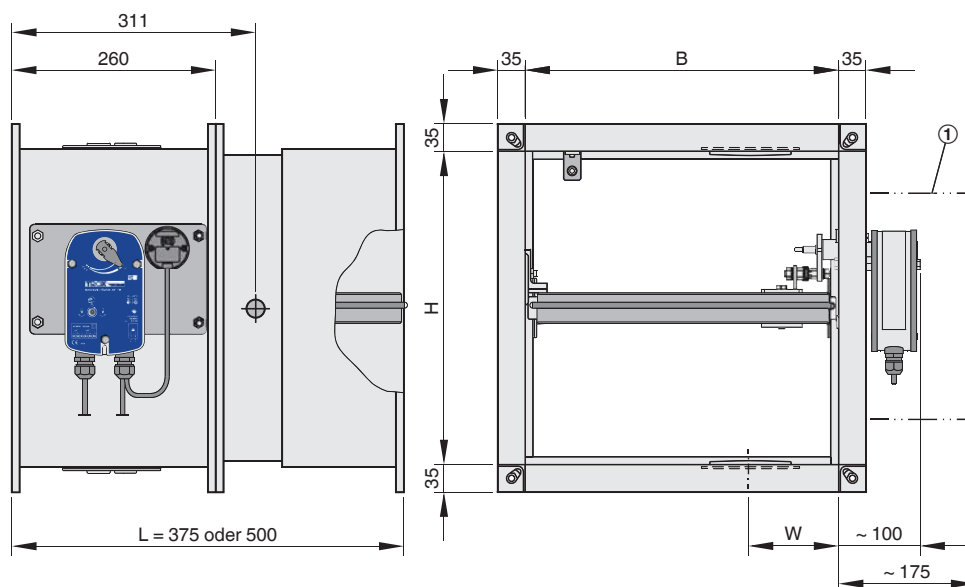
H	B									
	700	750	800	900	1000	1100	1200	1300	1400	1500
200	22	23	24	26	28	30	31	33	35	38
250	24	25	26	28	30	32	34	36	38	41
300	25	26	28	30	31	34	36	38	40	44
350	27	29	30	32	34	37	39	41	44	48
400	30	31	32	35	38	40	43	46	48	52
450	31	32	34	37	40	44	47	49	52	57
500	33	34	36	39	45	47	50	53	56	62
550	35	37	38	43	47	50	54	57	60	67
600	37	39	42	46	50	54	57	61	64	71
650	40	42	45	49	53	57	61	64	68	75
700	43	45	48	52	56	60	64	67	71	78
750	45	48	50	55	59	63	66	69	73	81
800	47	50	52	57	62	65	68	71	75	84

Dimensions

FK-EU with spring return actuator (FK-EU/.../Z4*)



FK-EU
with spring return actuator



W: 115 mm (B < 250 mm: 94 mm)

① Keep clear to provide access to the spring return actuator

Weight

H	B									
	200	250	300	350	400	450	500	550	600	650
200	13	14	15	16	18	19	20	21	22	23
250	14	15	16	18	19	20	21	22	24	25
300	15	16	17	19	20	21	22	24	26	27
350	16	18	19	20	21	23	25	26	28	29
400	18	19	20	21	23	25	27	29	30	31
450	19	20	21	23	25	27	29	31	32	32
500	20	21	22	25	27	29	31	32	33	34
550			24	26	29	31	32	33	35	37
600			26	28	30	32	33	34	37	39
650			27	29	31	32	34	36	38	40
700			28	30	31	34	36	38	40	43
750			29	31	33	35	37	40	42	45
800			30	32	35	37	39	41	45	48

Weight

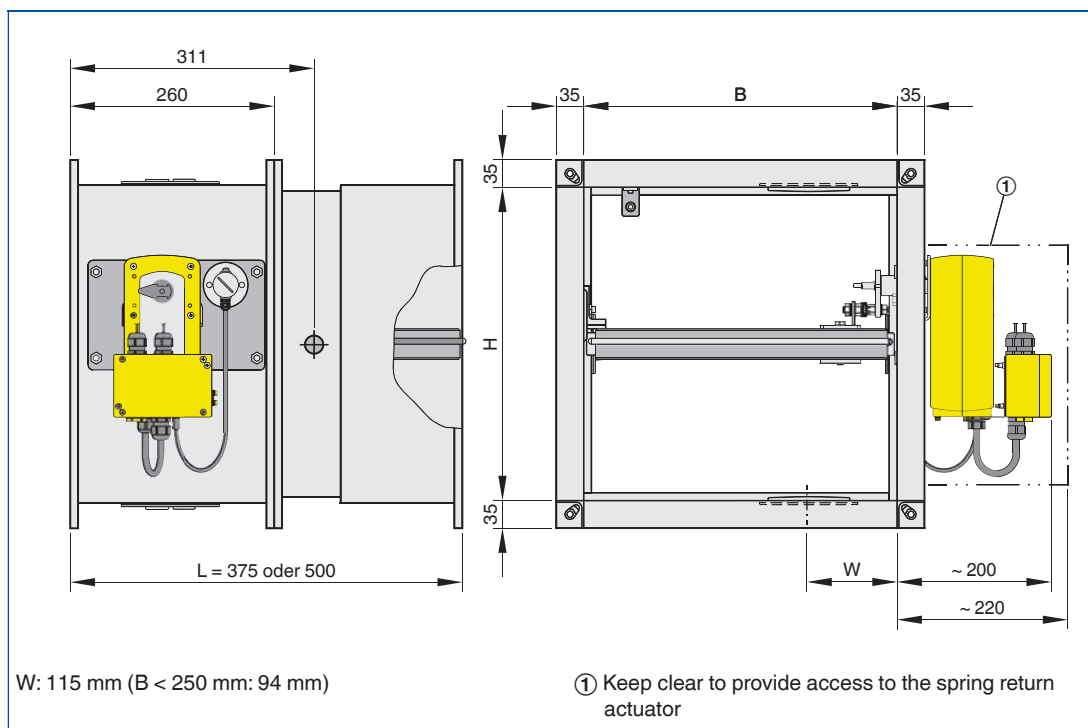
H	B									
	700	750	800	900	1000	1100	1200	1300	1400	1500
200	25	26	27	29	31	33	34	36	38	41
250	27	28	29	31	33	35	37	39	41	44
300	28	29	31	33	34	37	39	41	43	47
350	30	32	33	35	37	40	42	44	47	51
400	33	34	35	38	41	43	46	49	51	55
450	34	35	37	40	43	47	50	52	55	60
500	36	37	39	42	48	50	53	56	59	65
550	38	40	41	46	50	53	57	60	63	70
600	40	42	45	49	53	57	60	64	67	74
650	43	45	48	52	56	60	64	67	71	78
700	46	48	51	55	59	63	67	70	74	81
750	48	51	53	58	62	66	69	72	76	84
800	50	53	55	60	65	68	71	74	78	87

Dimensions

FK-EU with explosion-proof actuator (FK-EU/.../ZEX1* and ZEX3*)



FK-EU with spring return actuator (explosion-proof)



Weight

H	B									
	200	250	300	350	400	450	500	550	600	650
200	15	16	17	18	20	21	22	23	24	25
250	16	17	18	20	21	22	23	24	26	27
300	17	18	19	21	22	23	24	26	28	29
350	18	20	21	22	23	25	27	28	30	31
400	20	21	22	23	25	27	29	31	32	33
450	21	22	23	25	27	29	31	33	34	34
500	22	23	24	27	29	31	33	34	35	36
550			26	28	31	33	34	35	37	39
600			28	30	32	34	35	36	39	41
650			29	31	33	34	36	38	40	42
700			30	32	33	36	38	40	42	45
750			31	33	35	37	39	42	44	47
800			32	34	37	39	41	43	47	50

Weight

H	B									
	700	750	800	900	1000	1100	1200	1300	1400	1500
200	27	28	29	31	33	35	36	38	40	43
250	29	30	31	33	35	37	39	41	43	46
300	30	31	33	35	36	39	41	43	45	49
350	32	34	35	37	39	42	44	46	49	53
400	35	36	37	40	43	45	48	51	53	57
450	36	37	39	42	45	49	52	54	57	62
500	38	39	41	44	50	52	55	58	61	67
550	40	42	43	48	52	55	59	62	65	72
600	42	44	47	51	55	59	62	66	69	76
650	45	47	50	54	58	62	66	69	73	80
700	48	50	53	57	61	65	69	72	76	83
750	50	53	55	60	64	68	71	74	78	86
800	52	55	57	62	67	70	73	76	80	89

FK-EU as air transfer damper (FK-EU/.../Z**RM)

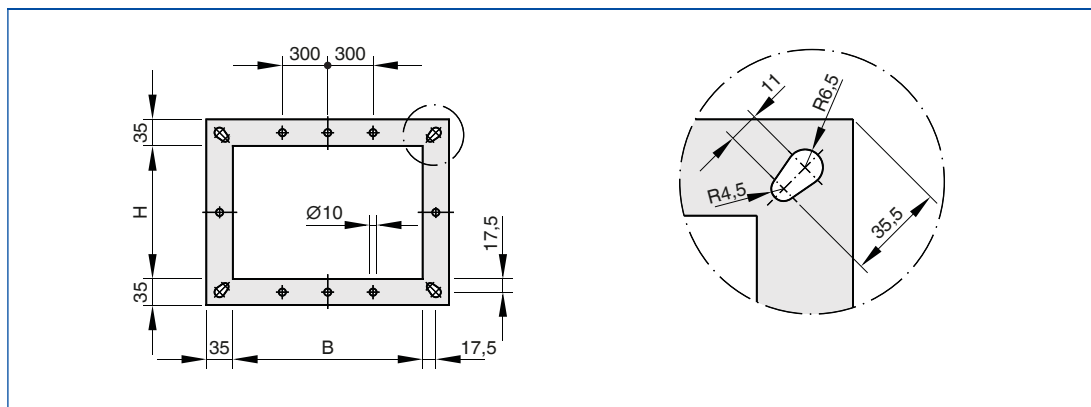
W: 115 mm (B < 250 mm: 94 mm) ① Keep clear to provide access to the duct smoke detector and to the spring return actuator

H	B									
	200	250	300	350	400	450	500	550	600	650
200	16	17	18	19	21	22	23	24	25	26
250	17	18	19	21	22	23	24	25	27	28
300	18	19	20	22	23	24	25	27	29	30
350	19	21	22	23	24	26	28	29	31	32
400	21	22	23	24	26	28	30	32	33	34
450	22	23	24	26	28	30	32	34	35	35
500	23	24	25	28	30	32	34	35	36	37
550			27	29	32	34	35	36	38	40
600			29	31	33	35	36	37	40	42
650			30	32	34	35	37	39	41	43
700			31	33	34	37	39	41	43	46
750			32	34	36	38	40	43	45	48
800			33	35	38	40	42	44	48	51

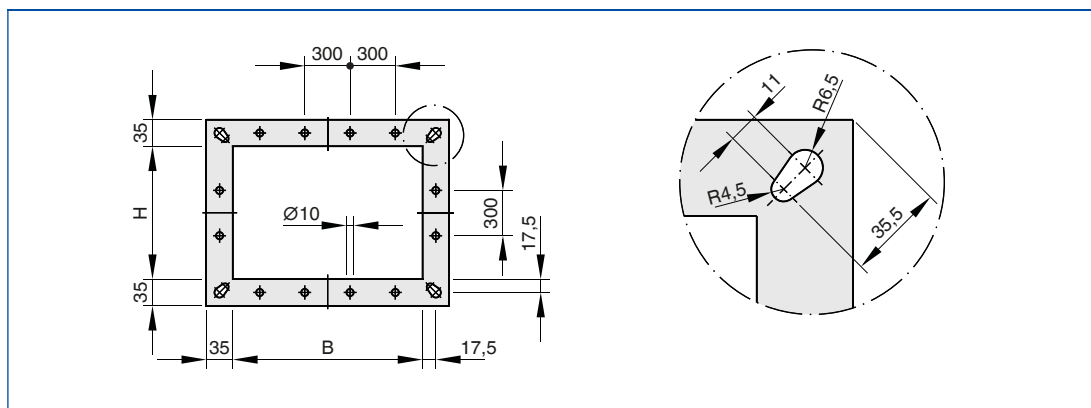
H	B									
	700	750	800	900	1000	1100	1200	1300	1400	1500
200	28	29	30	32	34	36	37	39	41	44
250	30	31	32	34	36	38	40	42	44	47
300	31	32	34	36	37	40	42	44	46	50
350	33	35	36	38	40	43	45	47	50	54
400	36	37	38	41	44	46	49	52	54	58
450	37	38	40	43	46	50	53	55	58	63
500	39	40	42	45	51	53	56	59	62	68
550	41	43	44	49	53	56	60	63	66	73
600	43	45	48	52	56	60	63	67	70	77
650	46	48	51	55	59	63	67	70	74	81
700	49	51	54	58	62	66	70	73	77	84
750	51	54	56	61	65	69	72	75	79	87
800	53	56	58	63	68	71	74	77	81	90

Dimensions

Flange – uneven number of holes



Flange – even number of holes



Dimensions [mm]

B or H	200	300	400	500	600	650	750	900	1100	1300	1500
	250	350	450	550		700	800	1000	1200	1400	
No. of holes horizontally (B)*			1	1	1	2	2	3	3	4	4
No. of holes vertically (H)*			1	1	1	2	2				

* excluding corner holes

Description

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Rectangular or square fire dampers for the isolation of duct penetrations between fire compartments. Tested for fire resistance properties to EN 1366-2, with CE marking and declaration of performance according to the Construction Products Regulation. Ready-for-operation unit, which includes a fire-resistant damper blade and a release mechanism. For mortar-based installation and dry mortarless installation into solid walls and ceiling slabs, mortar-based installation into non-load-bearing solid walls with flexible ceiling joint, mortar-based and dry mortarless installation into lightweight partition walls, lightweight partition walls with cladding on both sides, lightweight fire walls and lightweight-shaft walls. For dry mortarless installation on the face of solid walls, adjacent to solid walls, remote from solid walls and remote from solid ceiling slabs. For installation in lightweight partition walls with metal support structure and flexible ceiling joint; for dry mortarless installation in solid walls and ceiling slabs when using a fire batt; in lightweight partition walls with metal support structure and cladding on both sides. Casing length 375 mm or 500 mm, for the connection to ducts made of non-combustible or combustible materials. Thermal or thermoelectric release at 72 °C or 95 °C (warm air ventilation systems). Constructions with spring return actuator for opening and closing the fire damper independent of the nominal size and even while the ventilation system is running, e.g. for a functional test. Explosion-proof constructions for zones 1, 2, 21 and 22 with limit switch or spring return actuator. Construction as air transfer damper (general building inspectorate licence Z-6.50-2031) with duct smoke detector, spring return actuator and cover grilles on both ends. Simple construction for dry mortarless installation with installation kit: WA, WA short, WV, WE, E1, E2, ES, GL100, GM.

Technical data

- Nominal sizes: 200 × 200 to 1500 × 800 mm
- Casing lengths: 375 and 500 mm
- Volume flow rate range:
 - Up to 14400 l/s or 51840 m³/h
- Differential pressure: up to 2000 Pa
- Operating temperature: at least 0 – 50 °C **
- Upstream velocity:
 - ≤ 8 m/s with standard construction;
 - ≤ 12 m/s * with spring return actuator

Note: Upstream velocity for the explosion-proof actuator ExMax/RedMax-15-BF TR is ≤ 10 m/s
 * Data applies to uniform upstream and downstream conditions for the fire damper
 ** Temperatures may differ for units with attachments

Special characteristics

- Declaration of performance according to Construction Products Regulation
- Classification to EN 13501-3, up to EI 180 (v_e, h_o, i ↔ o) S
- Building inspectorate licence Z-56.4212-991 for fire resistance properties
- Complies with the requirements of EN 15650
- Tested to EN 1366-2 for fire resistance properties
- Hygiene complies with VDI 6022 part 1 (07/2011), VDI 3803 (10/2002), DIN 1946 part 4 (12/2008), and EN 13779 (09/2007)
- Corrosion protection according to EN 15650 in connection with EN 60068-2-52
- Closed blade air leakage to EN 1751, class 2
- Casing air leakage to EN 1751, class C; (B + H) ≤ 700, class B
- Low differential pressure and sound power level
- Any airflow direction
- Integration into the central BMS with TROXNETCOM
- Any airflow direction
- Integration into the central BMS with TROXNETCOM

Materials and surfaces

Casing:

- Galvanised sheet steel
- Galvanised sheet steel, powder-coated RAL 7001
- Stainless steel 1.4301

Damper blade:

- Special insulation material
- Special insulation material with coating

Other components:

- Damper blade shafts and driving linkage made of stainless steel
- Brass or stainless steel bearings
- Seals of polyurethane or elastomer

The construction variants with stainless steel or powder-coated casing meet even more critical requirements for corrosion protection. Detailed listing on request.

Sizing data

- \dot{V} _____ [m³/h]
- Δp_{st} _____ [Pa]
- L_{WA} Air-regenerated noise _____ [dB(A)]

1

Order options

1 Type

FK-EU Fire damper

2 Construction

- ☐ No entry: standard construction
- ☐ **1** Casing powder-coated RAL 7001
- ☐ **2¹** Casing made of stainless steel
- ☐ **7** With coated damper blade
- ☐ **1 – 7** Casing powder-coated RAL 7001, with coated damper blade
- ☐ **2 – 7¹** Casing made of stainless steel, with coated damper blade
- ☐ **W²** With fusible link 95 °C (only for use in warm air ventilation systems)

3 Country of destination

- ☐ **DE** Germany
- Other destination countries upon request

4 Nominal size [mm]

- ☐ B × H × L

5 Accessories 1

No entry: none

- ☐ **E1 – GL 100³**

6 Accessories 2

No entry: none

- ☐ **A0 – SS**

7 Attachments

- ☐ **Z00 – ZEX4**

¹ Not for use with fire batts

² W can be combined with all constructions listed under **2**, but not with attachments listed under **7** ZEX1 – ZEX4 and Z43RM – Z45RM

³ GL 100 for wall thickness 100 mm when 50 mm sections are used. Other wall thicknesses and section widths upon request.

Fire dampers

Basic information and nomenclature



- Product selection
- Principal dimensions
- Nomenclature
- Colour codes according to IEC 60757
- Sizing

Fire dampers

Basic information and nomenclature

Product selection

Fire dampers

Usage			Type							
Installation location	Construction/ building material	Minimum thickness	FK-EU				FKS-EU		FKR-EU	
			Mortar-based installation		Dry mortarless installation		Mortar-based installation	Dry mortarless installation	Mortar-based installation	Dry mortarless installation
			peri-meter	parti-ally ⁵	Fire batt	Instal-lation kit ²	perimeter	Installation kit ²	perimeter	Installation kit ²
	mm	Fire resistance class								
In solid walls	Walls/gross density ≥ 500 kg/m³	100	EI 90 S	EI 90 S	EI 120 S	EI 90 S	EI 120 S	EI 90 S	EI 120 S	–
In solid walls with movement joint	Walls/gross density ≥ 500 kg/m³	100	EI 90 S	–	–	–	–	–	–	–
On the face of solid walls	Walls/gross density ≥ 500 kg/m³	100	–	–	–	EI 90 S	–	–	–	–
Adjacent to solid walls ¹	Walls/gross density ≥ 500 kg/m³	100	–	–	–	EI 90 S	–	–	–	–
Remote from solid walls ¹	Walls/gross density ≥ 500 kg/m³	100	–	–	–	EI 90 S	–	–	–	–
In solid ceiling slabs	Ceiling slabs/gross density ≥ 600 kg/m³	125	EI 90 S	–	–	–	–	–	–	–
	Ceiling slabs/gross density ≥ 600 kg/m³	150	EI 90 S		EI 120 S		EI 120 S	EI 90 S	EI 120 S	–
In solid ceiling slabs, with concrete base	Ceiling slabs/gross density ≥ 600 kg/m³	125	EI 90 S	–	–	–	EI 90 S	–	EI 90 S	–
Lightweight partition walls with metal support structure and cladding on both sides	Lightweight partition walls	100	EI 90 S	–	EI 120 S	EI 90 S	EI 90 S	EI 90 S	EI 90 S	EI 90 S
Lightweight partition walls with metal support structure and cladding on both sides, flexible ceiling joint ¹	Lightweight partition walls	100	–	–	–	EI 90 S	–	–	–	–
Fire walls with metal support structure and cladding on both sides	Fire walls	115	EI 90 S	–	–	EI 90 S	EI 90 S	EI 90 S	EI 90 S	EI 90 S
Lightweight partition walls with metal support structure and cladding on one side	Shaft walls	90	–	–	–	EI 90 S	EI 90 S	EI 90 S	EI 90 S	EI 90 S
Lightweight partition walls without metal support structure but with cladding on one side	Shaft walls	40 or 50 ⁴	–	–	–	EI 90 S	–	–	EI 90 S	EI 90 S
In self supporting fire-resistant suspended ceilings	Tile ceilings, screw-fixed and primed	–	–	–	–	–	–	–	–	–
	Lay-in ceiling tiles made of panel materials	–	–	–	–	–	–	–	–	–
	Metal ceilings	–	–	–	–	–	–	–	–	–

¹ Not for FK-EU as air transfer damper

² Installation kit for the selected installation situation

³ For ØDN 100 to 200 in lightweight partition wall with metal support structure and mineral wool

⁴ 50 only for FKR-EU

⁵ Additional mineral wool

Fire dampers

Basic information and nomenclature

Product selection Fire dampers

1

Usage			Type						
Installation location	Construction/building material	Minimum thickness	FKRS-EU			FV-EU	KA-EU	FVZ-K30	KU-K30
			Mortar-based installation	Dry mortarless installation		Mortar-based installation			Dry mortarless installation
			perimeter	Fire batt	Installation kit ²	peri-meter	Mortar-based installation	Installation kit	
		mm	Fire resistance class						
In solid walls	Walls/gross density ≥ 500 kg/m³	100	EI 120 S	EI 120 S ³ , EI 90 S	EI 90 S	EI 120 S	K90	–	–
In solid walls with movement joint	Walls/gross density ≥ 500 kg/m³	100	–	–	–	–	–	–	–
On the face of solid walls	Walls/gross density ≥ 500 kg/m³	100	EI 90 S	–	EI 90 S	–	–	–	–
Adjacent to solid walls ¹	Walls/gross density ≥ 500 kg/m³	100	–	–	–	–	–	–	–
Remote from solid walls ¹	Walls/gross density ≥ 500 kg/m³	100	–	–	–	–	–	–	–
In solid ceiling slabs	Ceiling slabs/gross density ≥ 600 kg/m³	125	–	–	–	–	–	–	–
	Ceiling slabs/gross density ≥ 600 kg/m³	150	EI 120 S	EI 120 S ³ , EI 90 S	EI 90 S	EI 120 S	K90	–	–
In solid ceiling slabs, with concrete base	Ceiling slabs/gross density ≥ 600 kg/m³	125	–	–	–	–	–	–	–
Lightweight partition walls with metal support structure and cladding on both sides	Lightweight partition walls	100	EI 120 S ³ , EI 90 S	EI 120 S ³ , EI 90 S	EI 120 S ³ , EI 90 S	EI 120 S	K90	–	–
Lightweight partition walls with metal support structure and cladding on both sides, flexible ceiling joint ¹	Lightweight partition walls	100	–	–	EI 90 S	–	–	–	–
Fire walls with metal support structure and cladding on both sides	Fire walls	115	EI 90 S	–	EI 90 S	–	K90	–	–
Lightweight partition walls with metal support structure and cladding on one side	Shaft walls	90	EI 90 S	–	EI 90 S	–	–	–	–
Lightweight partition walls without metal support structure but with cladding on one side	Shaft walls	40 or 50 ⁴	–	–	–	–	–	–	–
In self supporting fire-resistant suspended ceilings	Tile ceilings, screw-fixed and primed	–	–	–	–	–	–	K30-U	K30-U
	Lay-in ceiling tiles made of panel materials	–	–	–	–	–	–	K30-U	K30-U
	Metal ceilings	–	–	–	–	–	–	K30-U	K30-U

¹ Not for FK-EU as air transfer damper

² Installation kit for the selected installation situation

³ For ØDN 100 to 200 in lightweight partition wall with metal support structure and mineral wool

⁴ 50 only for FK-EU

⁵ Additional mineral wool

Fire dampers

Basic information and nomenclature

Principal dimensions

Rectangular fire dampers

Circular fire dampers

B [mm]

Width of the fire damper

H [mm]

Height of the fire damper

Nominal size [mm]

Diameter of the fire damper

L [mm]

Length of the fire damper

Nomenclature

\dot{V} [m³/h] and [l/s]

Volume flow rate

L_{WA} [dB(A)]

A-weighted sound power level of air-regenerated noise for the fire damper

A [m²]

Free area

ζ

Resistance coefficient (fully ducted)

Δp_{st} [Pa]

Static differential pressure

v [m/s]

Airflow velocity based on the upstream cross section (B × H or diameter)

K

Correction value

Wiring

Colour codes according to IEC 60757

Code	Colour
BK	black
BN	brown
RD	red
OG	orange
YE	yellow
GN	green
BU	blue

Colour codes according to IEC 60757

Code	Colour
VT	violet
GY	grey
WH	white
PK	pink
TQ	turquoise
GNYE	green-yellow

Sizing with the help of this catalogue

This catalogue provides convenient quick sizing tables for fire dampers. The volume flow rates for all available dimensions and nominal sizes are provided based on a particular differential pressure. Sizing data for other volume flow rates and differential pressures can be determined quickly and precisely using the Easy Product Finder design programme.

Easy Product Finder



The Easy Product Finder allows you to size products using your project-specific data.

You will find the Easy Product Finder on our website.

