

Fire damper ETPR-E-1

TECHNICAL DATA





Fire and smoke damper ETPR-E-1 is used as a closing device for preventing the spread of fire and smoke in ventilation ducts between fire compartments. Fire dampers are equipped with fusible link and spring mechanism for closing or with electrical actuator.

ETPR-E-1 is CE marked based on product standard EN 15650 and conforms to fire resistance class E 120 / E 60 S when installed in vertical ducting and E 90 / E 60 S in horizontal ducting. Fire damper is tested according to test standard EN 1366-2 and classified according to EN 13501-3. ETPR-E-1 is approved for installation into building elements made of concrete, lightweight concrete, brick or gypsum plate walls. The damper shaft can be installed in horizontal or vertical position. An E-classified fire damper requires fire insulation for ducts in order to comply with the compartmentation requirement (EI).

ETPR-E-1 is available in standard duct sizes 100 to 500 mm in diameter. Hot-galvanized damper casing conforms to EN 1506 and is equipped with a VELODUCT® gasket. Damper casing fulfils the requirements of tightness class C according to EN 1751. ETPR-E-1 fulfils the requirements of smoke leakage classification S according to EN 13501-3.

The standard release temperature of the fusible link is + 70 C. Other temperatures for fusible link are available to special order (+ 50 C, +100 C).

Electrical actuator is available as type 24 V or 230 V. When using control and monitoring system FICO, the actuator has to be always of type 24 V. More information of FICO systems can be found in separate brochure of FICO-PRO or FICO-MINI.

The motorized dampers are tested 10000 times (open/close) and therefore dampers can be used also for daily ventilation purposes. The use of motorized damper enables automatic function testing (by e.g. FICO) and the use of a smoke-detector-based release system. The motor is equipped with built-in micro switches for both open and closed position. In case of a power cut, the damper closes automatically.

PRODUCT DATA

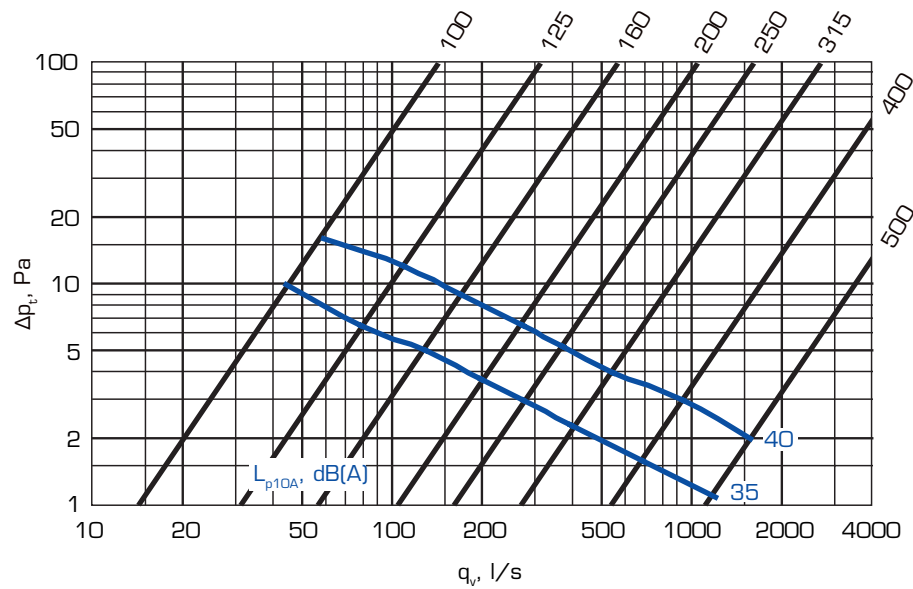
- Sizes Ø100 - Ø500
- CE marked (EN 15650:2010)
- Declaration of Performance 002CPR2019-10-28
- Fire class according to EN 13501-3
E 60 (ve i <-> o) S
E 90 (ve i <-> o)
E 60 (ho i <-> o) S
E 120 (ho i <-> o)
- The damper casing fulfils the requirements of tightness class C according to EN 1751
- The fire damper fulfils the requirements of tightness class 3 according to EN 1751
- ETPR-E-1 fulfils the requirements of BS 476: Part 20: 1987

PRODUCT CODE EXAMPLE

Fire damper ETPR-E-1-315-03-3

TECHNICAL DATA - PRESSURE DROP, SOUND DATA

PRESSURE DROP AND SOUND PRESSURE LEVEL



SOUND POWER LEVEL CORRECTION BY OCTAVE BANDS

Octave bans (Hz)	125	250	500	1000	2000	4000	8000
Correction K_{oct}	16	10	5	0	-7	-13	-18
Tolerance \pm	6	3	3	3	3	3	3

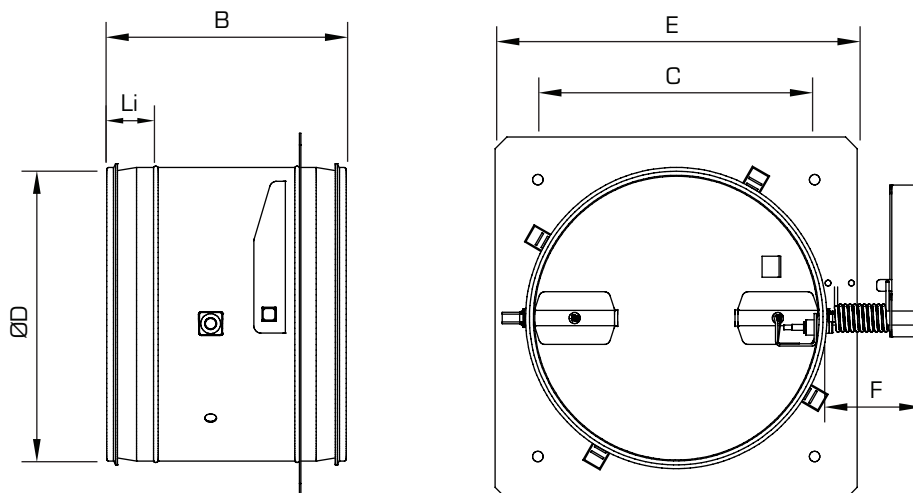
$$L_{w_{oct}} = L_{p10A} + K_{oct}$$

DEFINITIONS

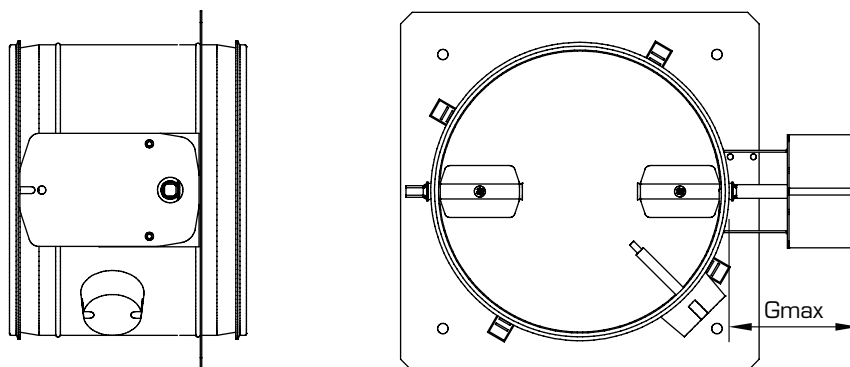
q_v	Air flow	l/s
$L_{w_{oct}}$	Sound power level in kanal	dB
L_{p10A}	Sound pressure level with 4 dB room attenuation (10 m ² sab)	dB(A)
K_{oct}	Correction	dB
Δp_s	Pressure drop	Pa

DIMENSIONS AND WEIGHTS

DAMPER WITH THERMAL FUSE



MOTORIZED DAMPER



DIMENSIONS

Size ØD	D	B	C	E	F	Gmax	Li
100	100	205	129	160	80	125	35
125	125	205	134	185	80	125	35
160	160	205	159	220	80	125	35
200	200	205	203	260	80	130	35
250	250	205	237	310	80	130	40
315	315	205	281	380	80	130	40
400	400	280	390	470	80	130	60
500	500	280	480	570	80	130	60

WEIGHTS

Size ØD	with thermal fuse kg	motorized damper kg
100	1,0	2,6
125	1,4	3,1
160	1,7	3,4
200	2,0	3,7
250	2,6	4,2
315	3,07	5,4
400	5,8	7,4
500	7,7	9,4

PRODUCT CODE AND ACCESSORIES

DESCRIPTION

FläktGroup CE marked fire damper ETPR-E-1 which is suitable for installation into building elements of fire class EI 60 / EI 90 / EI 120 made of concrete, lightweight concrete, brick or gypsum plate walls of the same class. The dampers are installed according to the mounting instructions provided by the manufacturer.

PRODUCT CODE

Fire damper

ETPR-E-1-aaa-bb-c

Size (aaa)

Connection diameter in mm

100, 125, 160, 200, 250, 315, 400, 500

Actuator (bb)

01 = fuse +70° C

03 = 24V AC/DC and thermal trip

05 = 230V AC and thermal trip

08 = auxiliary device microswitch open +70° C

12 = auxiliary device pneumatic cylinder, long fuse +70° C

Actuator model (c)

0 = without actuator

3 = FG

ACCESSORIES

Inspection piece

FWD-aaa-1

Size (aaa)

100, 125, 160, 200, 250, 315, 400, 500

Grille

FND-aaaa-1-1

Size (aaa)

0100, 0125, 0160, 0200, 0250, 0315, 0400, 0500

Control system

FICO-PRO / FICO-MINI

See separate brochures.

Replacement fuse

ETPR-99-01-c

Model (c)

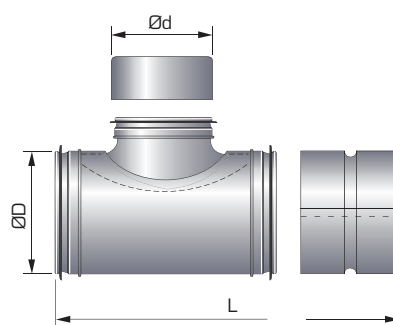
4 = fuse 70° C

6 = long fuse 70° C *)

7 = fuse 100° C

*) for electric and gas release

INSPECTION PIECE FWD-AAA-1



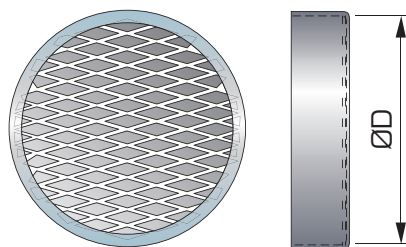
FWD length L (consists of pieces BDEG+BDEM+BDET)

L = 200 mm Ø100 - Ø200

L = 310 mm Ø250 - Ø315

L = 430 mm Ø400 - Ø500

GRILLE FND-AAAA-1-1



AUXILIARY DEVICES AND WIRING DIAGRAM FOR DAMPER MOTOR

PNEUMATIC RELEASE

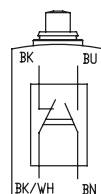
A fire damper equipped with a pressure cylinder closes either when the thermal fuse blows or by means of a pressure impact when the pressure is switched on. The pressure is obtained from HALON / CO₂ or other automatic extinction system network. The required pressure impulse for the cylinder is approximately 200 kPa. The pressure cylinder is connected to the system by a Cu D8 pipe.

MICROSWITCH

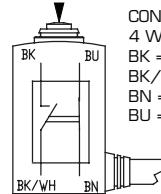
The microswitch indicates blade position, sends an impulse after the blade has been closed to other fire dampers equipped for remote release, gives an alarm in the control system or stops / starts the operation of fans depending on the designed system. The microswitch has no effect on the thermal fuse, nor does it cause the release of the fire damper.

The microswitch can also be installed in contact with pneumatic or electrical release. In that case, it must be specified in order.

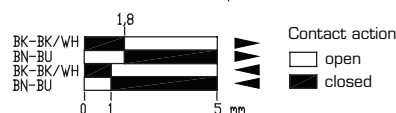
Switch position when fire damper is set up (open) = stud pushed in
Fire damper tripped = blade closed



Fire damper set up = blade open



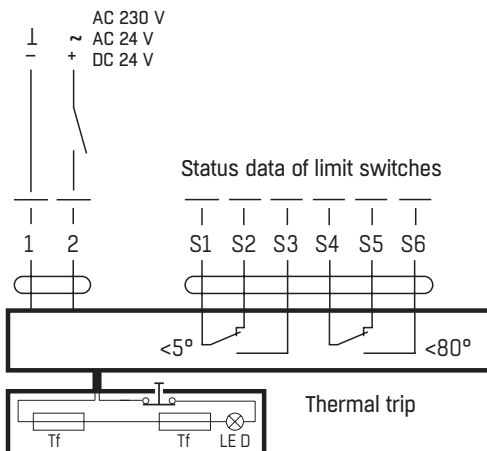
CONNECTION CABLE PvR 2 m
4 WIRES Ø 0,75 mm²
BK = black
BK/WH = black/white
BN = brown
BU = blue



ELECTRICAL PROPERTIES: OPERATING TEMPERATURE -25 ... +70°C
AC-15: B300 (U_e=230VAC, I_e=1,5A)
DC-13: R300 (U_e=24VDC, I_e=3A)

WIRING DIAGRAM FOR DAMPER MOTOR

Power supply



ACTUATOR ELECTRICAL DATA

Fire damper size	Voltage	Equipment	Max power hold/drive	Power for wire sizing
100 - 315	24V AC/DC 230V AC	Thermal trip	2,0 W / 6,5 W	9 VA
		Thermal trip	1,5 W / 5,5 W	9,5 VA
400 - 630	24V AC/DC 230V AC	Thermal trip	2,0 W / 5,0 W	7 VA
		Thermal trip	1,5 W / 5,5 W	11,5 VA

Storage temperature of fire damper actuator should not exceed +50°C.

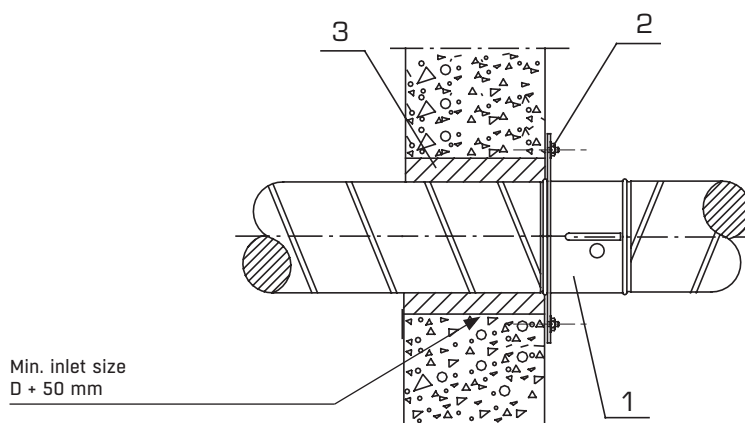
INSTALLATION

To secure the performance and operation of the fire damper, it is necessary to do the installation according to these instructions and local regulations.

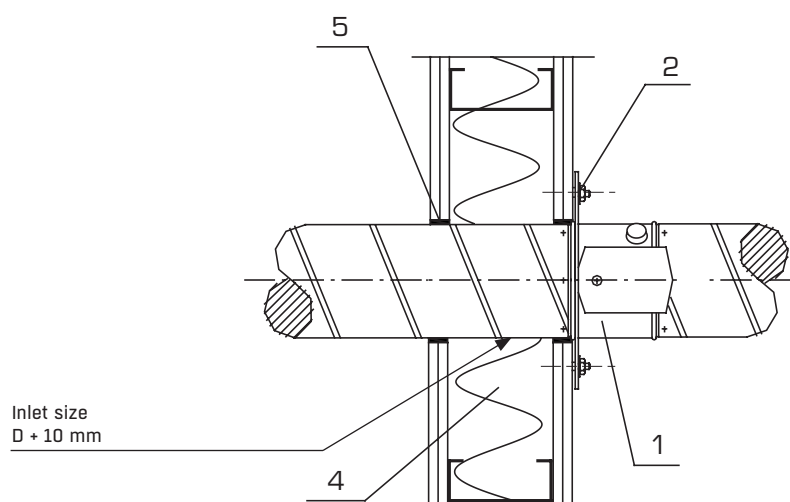
Fire damper ETPR-E-1 can be fitted with either to horizontal or vertical ducting. Max. velocity of air flow through the damper is 15 m/s, and operation is not dependent on the air flow direction.

The body has to be fixed firmly into building element. Damper has a factoryfitted installation plate for mounting. Fire damper is installed into building element according to installation drawings below.

Fire damper has to be fitted into ducting so, that it is easy to inspect and clean.



Installation of fire damper into building elements (walls and intermediate floors) made of concrete or masonry, construction thickness $\geq 110 \text{ mm}$. The blade shaft can be placed in any position.



Installation of fire damper into lightweight plasterboard building elements (gypsum board or similar), wall thickness $\geq 116 \text{ mm}$. The blade shaft can be placed in any position.

- | | |
|---|---|
| 1. Fire damper | 3. Grouting, gypsum or concrete based, 25-35 mm thick |
| 2. Fastening into concrete or masonry building element:
steel anchor $\geq \text{M6}$, 4 pcs | 4. Mineral wool, min. density 40 kg/m^3 |
| Fastening into lightweight plasterboard building element:
steel anchors suited for boards $\geq \text{M6}$, 4 pcs | 5. Fire resistant mass |

EXCELLENCE IN SOLUTIONS

FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side, ready to deliver Excellence in Solutions.

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