



## OPERATION

### GENERAL

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 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 CE marked.

### INSPECTION

The operation of the fire damper must always be inspected before and after installation.

Ensure that the casing is circular and that the blade moves and closes unobstructed. Remove any construction material remains and dust from the inside of the damper.

Function testing of the damper has to be carried out at least twice a year.

### SETTING THE DAMPER WITH THERMAL FUSE AND REPLACING THE FUSE

Loosen the fuse screw by approximately 7 mm. By turning the setting handle, set the blade into the "open" position. Tighten the screw by hand. ATTENTION! DO NOT USE ANY TOOL. To replace the fuse, unscrew the fuse screw together with the fuse. Then install a new fuse and set the fire damper as described above. BE CAREFUL NOT TO LET THE SPRING-LOADED HANDLE HURT YOUR HAND.

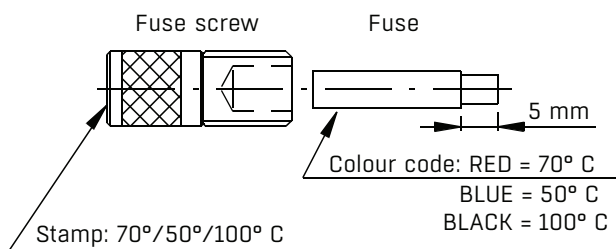


Fig. 1. Fuse

### REPLACEMENT FUSES

Fuse 70° C	= ETPR-99-01-4
Fuse 50° C	= ETPR-99-01-3
Fuse 100° C	= ETPR-99-01-7



### TESTING MOTORIZED DAMPERS

Motorized dampers can be tested before connecting the electricity by using the tool delivered with the unit, and when electricity is connected by operating the thermal switch. Note! If you open the damper using the tool, do not forget to release the damper back to closed position before connecting electricity.

Electric installations are only allowed to properly trained electricians and according to separate drawings and wiring diagrams. Damper motor wiring diagram is shown in Fig. 2.

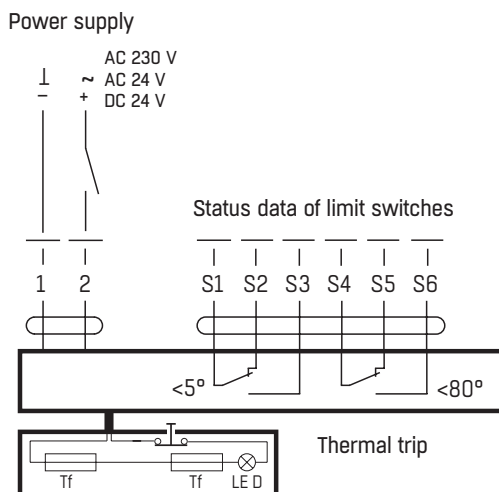


Fig. 2. Wiring diagram for damper motor

## INSTALLATION AND MAINTENANCE

### 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.

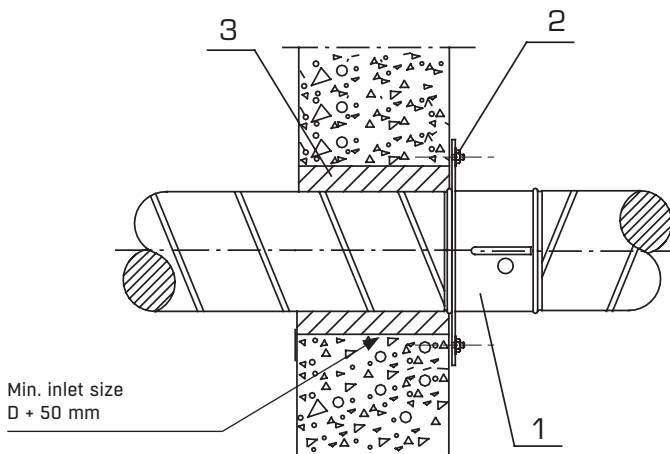


Fig. 3. Installation of fire damper into building elements (walls and intermediate floors) made of concrete or masonry, construction thickness  $\geq 110$  mm. The blade shaft can be placed in any position.

1. Fire damper
2. Fastening into concrete or masonry building element: steel anchor  $\geq M6$ , 4 pcs  
Fastening into lightweight plasterboard building element: steel anchors suited for boards  $\geq M6$ , 4 pcs

### MAINTENANCE

The function testing interval is always determined separately for each building, but testing must be carried out at least twice a year according to product standard EN 15650:2010 (see example of check list beside).

**WARNING!** Never put your hands inside the damper while it is closing. Clean the fire damper by means of a vacuum cleaner. Avoid chemical cleaning agents.

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.

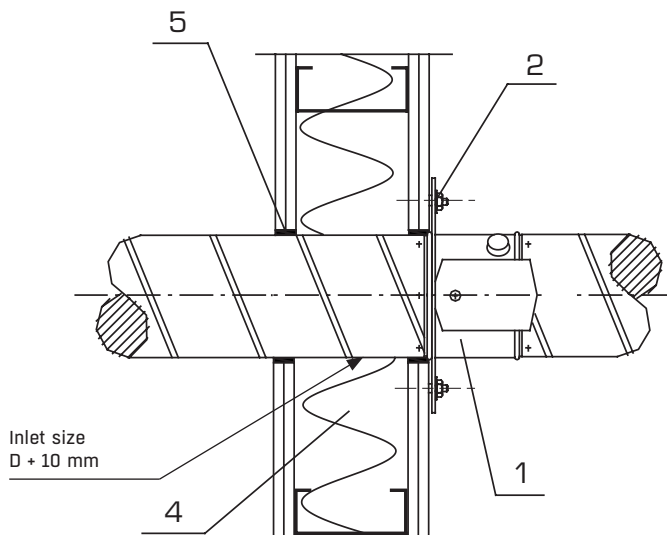


Fig. 4. Installation of fire damper into lightweight plasterboard building elements (gypsum board or similar), wall thickness  $\geq 116$  mm. The blade shaft can be placed in any position.

3. Grouting, gypsum or concrete based, 25-35 mm thick
4. Mineral wool, min. density 40 kg/m<sup>3</sup>
5. Fire resistant mass

### MAINTENANCE CHECK LIST

Fire damper reference
Date of inspection
Check actuator wiring for damage (where applicable)
Check end-switch wiring for damage (where applicable)
Check fire damper cleanliness and clean where necessary
Check the condition of blades and seals, rectify and report where necessary
Confirm the safety closure operation of the fire damper according to the manufacturer's instructions
Confirm operation of damper to OPEN and CLOSE by use of the control system and physical observation of the fire damper, rectify and report where necessary
Confirm operation of OPEN and CLOSED end-switches, rectify and report where necessary
Confirm that the fire damper fullfills its function as a part of the control system (where applicable)
Confirm that the fire damper is left in its normal working position
NOTE! A fire damper is usually part of a system. As this is the case, the whole system should be checked as governed by the operation and maintenance requirements for the system.

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