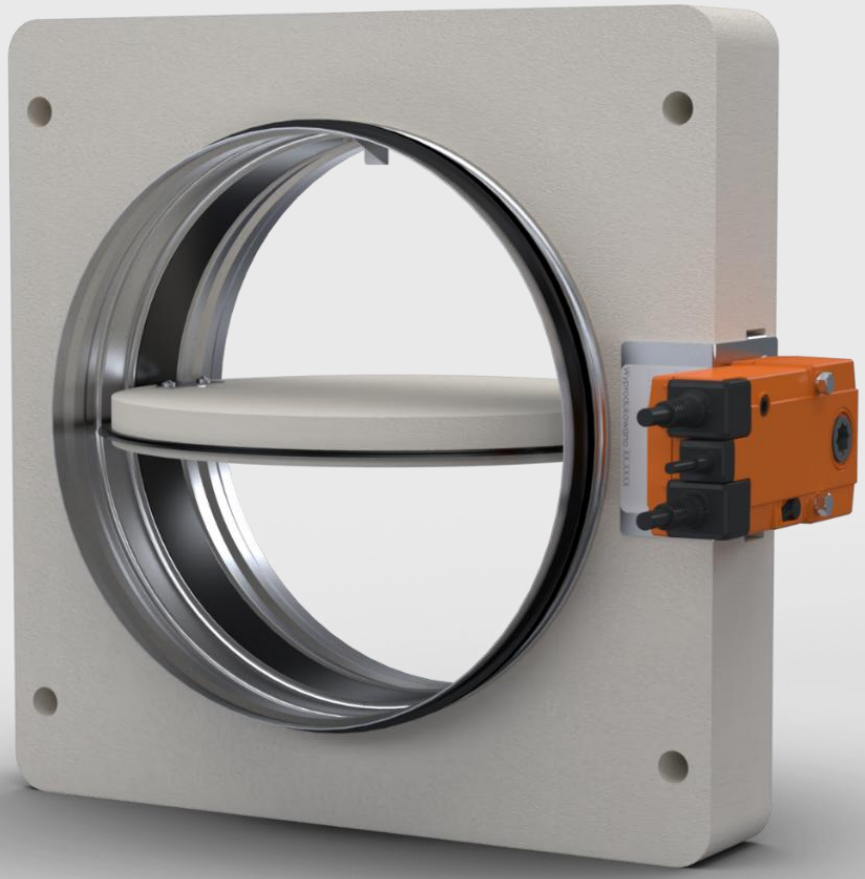
KTQ-O

Fire Damper – round

Installation manual



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Version 6.3

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TABLE OF CONTENT

1. INSTALLATION TECHNOLOGY 3
2. INSTALLATION TECHNOLOGY – CEILING 5
3. INSTALLATION TECHNOLOGY – FLEXIBLE WALL 7
4. INSTALLATION TECHNOLOGY – RIGID WALL 10

1. INSTALLATION TECHNOLOGY

Before proceeding with the installation of fire dampers, it is essential to check for any damage that may have occurred during transport or storage. Special attention should be paid to the BAT72 thermal release connected to the actuator, ensuring that its tip is not bent or broken.

Check that the blade can be opened and closed (full opening and closing position). To open the KTQ-O-E damper, use the actuator key or supply the appropriate voltage to the actuator. For KTQ-O-S dampers, turn the manual lever until it locks with the trigger latch (steel rod). At the initial stage of movement, a noticeable resistance of the partition lock must be overcome. To close the damper, pull the trigger latch in the direction opposite to the manual lever (as shown in the illustration below).Opening and closing of the damper must be performed smoothly (not stepwise) from the fully open position to the fully closed position. Do not pull by blade to open or close fire damper, it may cause permanent damage, not covered by the warranty.

The damper is designed for quick, one-sided installation in building partitions. The actuator can be positioned on any side of the damper. Due to the absence of additional filling around the damper after installation, it is essential to maintain smooth surfaces and dimensional tolerance of the installation opening.

If finishing or construction work is carried out after the damper has been installed but before the ductwork is connected to the damper, the interior of the damper should be protected with foil or another covering material to prevent contamination and potential damage to the damper's components. The actuator should remain covered with the factory protective foil until all finishing work is completed.

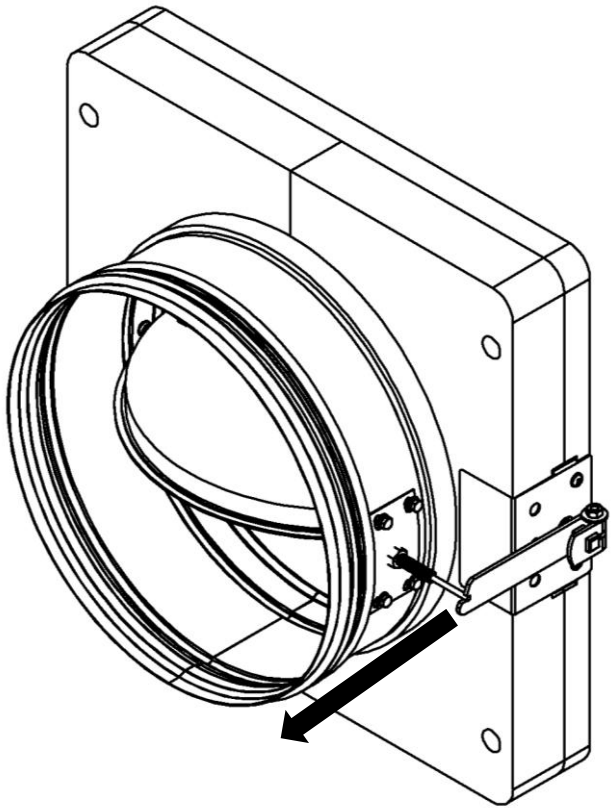

Figure 1. Releasing the mechanism lever KTQ-O-S

To maintain the declared fire resistance, insulation, and smoke leakage of EIS120, the dampers should be installed in walls classified as EIS120. The wall's parameters (technology, thickness, fire resistance) should be consistent with the perpendicular building partition or at least maintained within a 200mm distance around the damper

It is allowed to use KTQ-O dampers in walls with different fire resistance ratings; however, it should be noted that the fire resistance (EI) of the entire KTQ-O damper assembly will be limited by the lowest fire resistance rating of any element within the system.

Ducts made of flammable and non-flammable materials can be connected to the damper. Ducts should be installed that they cannot load the damper during fire. Ducts lengthening during fire can be compensated by support and knee.

ATTENTION: Distance between fire dampers or fire damper and construction elements must be:

a) min. 200 mm between fire dampers installed in separate ventilation ducts,
b) min. 75 mm between fire damper and construction element (wall/ceiling).

ATTENTION!

Due to the construction of the KTQ-O damper, the BAT72 thermal release connected to the actuator must be installed in the pipeline after the damper is mounted on the wall surface. This is an absolutely necessary component of the damper installation, without which the damper will not maintain the performance parameters declared by the manufacturer.

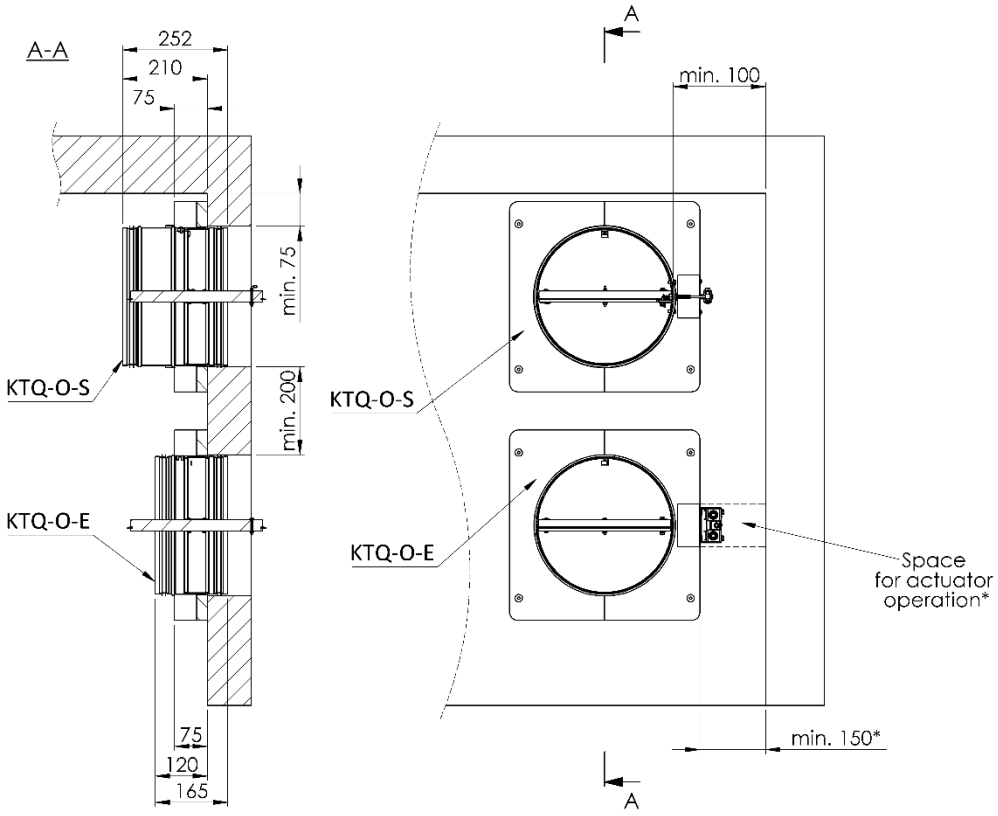

Figure 2. Required distances between KTQ-O dampers

2. INSTALLATION TECHNOLOGY – CEILING

a. Prepare or make an opening in the ceiling with dimensions ranging from DN+5 mm to DN+40 mm (where DN denotes the nominal damper diameter, e.g., DN = 315 mm). If required, from installation side level the wall surface within a width of 100 mm around the mounting opening, e.g., using finishing or plaster mortar.

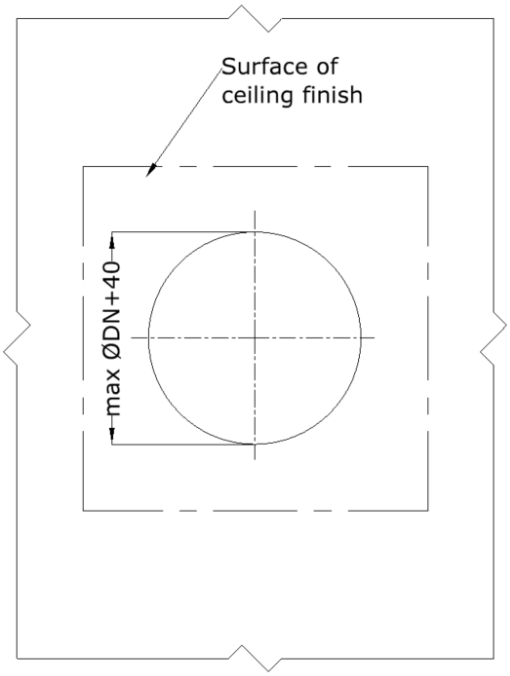

Figure 3. Dimensions of the final opening in a ceiling

b. If a ventilation duct passes through the building partition, it must be cut flush with the surface of the partition on the installation side.

c. Place the damper against the partition in its final position and mark the locations of the four mounting holes. Drill the necessary holes and, if required, install the anchors.

d. Directly before installing the damper, apply a continuous strip of fire sealant (e.g., Hilit CFS-S) around the perimeter of the installation opening on the ceiling. If a ventilation duct passes through the ceiling and the damper is not equipped with a duct connection seal, provision should also be made to seal this connection before installing the damper, for example, using silicone.

e. Insert the closed damper into the installation opening/ventilation duct. The flange should fit tightly against the ceiling; it should be gently pressed or twisted so that the sealant spreads between the flange and the ceiling. The actuator can be positioned on any side. Tighten the damper through the four mounting holes using M8 screws or anchors of appropriate length. The screw heads should press the flange firmly against the ceiling. Any gaps around the flange should be filled with fire sealant or finished with the wall's surface layer.

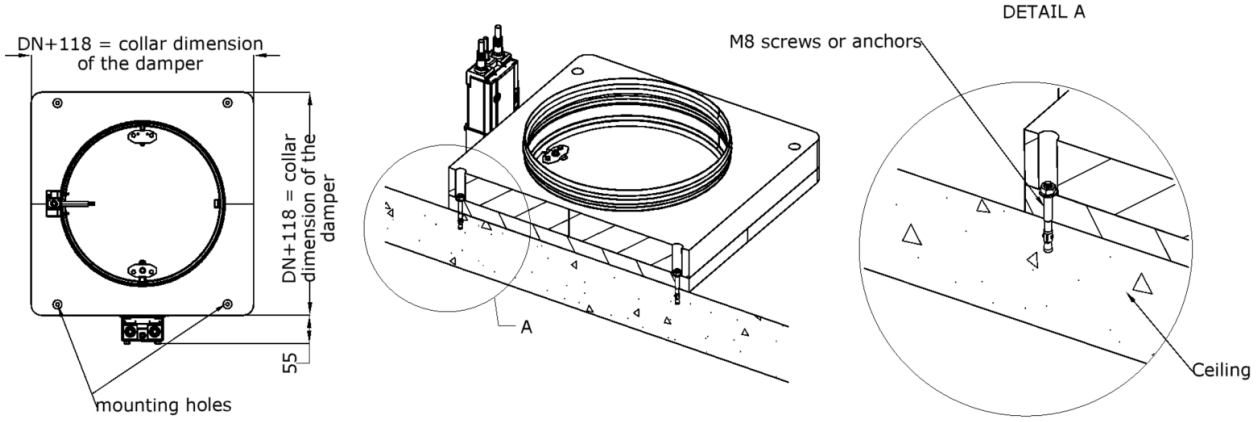

Figure 4. Ceiling mounting location

f. At this stage, it is recommended to check the proper functioning of the damper by opening it using either electrical voltage or the provided key.

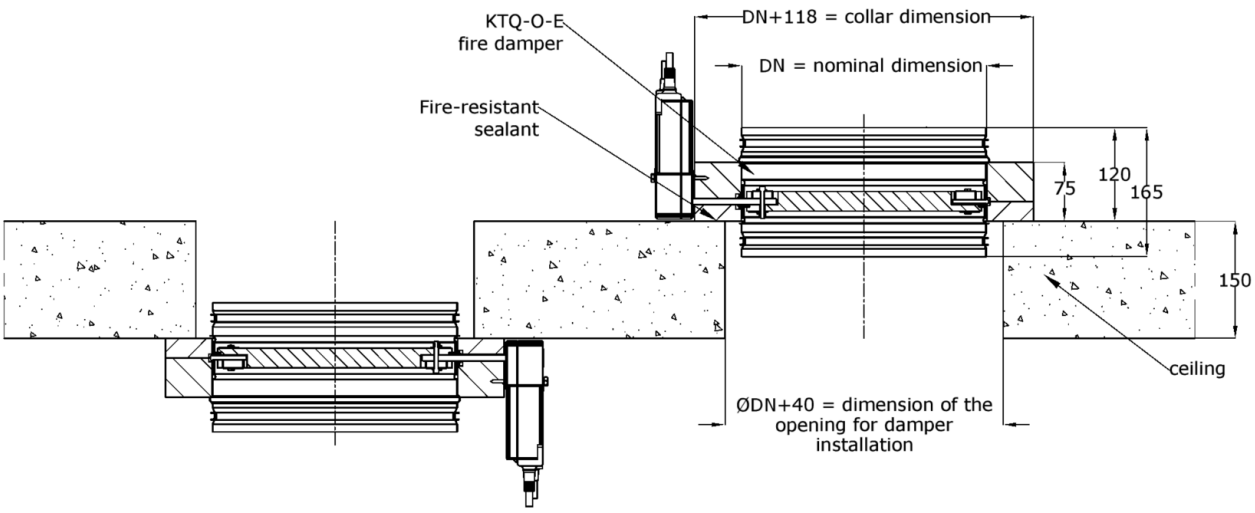

Figure 5. Installation method for KTQ-O fire dampers in ceiling

g. Attach the ventilation duct(s) to the damper and suspend them. Make a Ø10mm hole on the duct installed on the flap side at a maximum distance of 175mm from the ceiling, anywhere around the duct circumference. In this hole, install the BAT72 thermal release connected to the actuator, securing it to the duct using the supplied sheet metal screws.

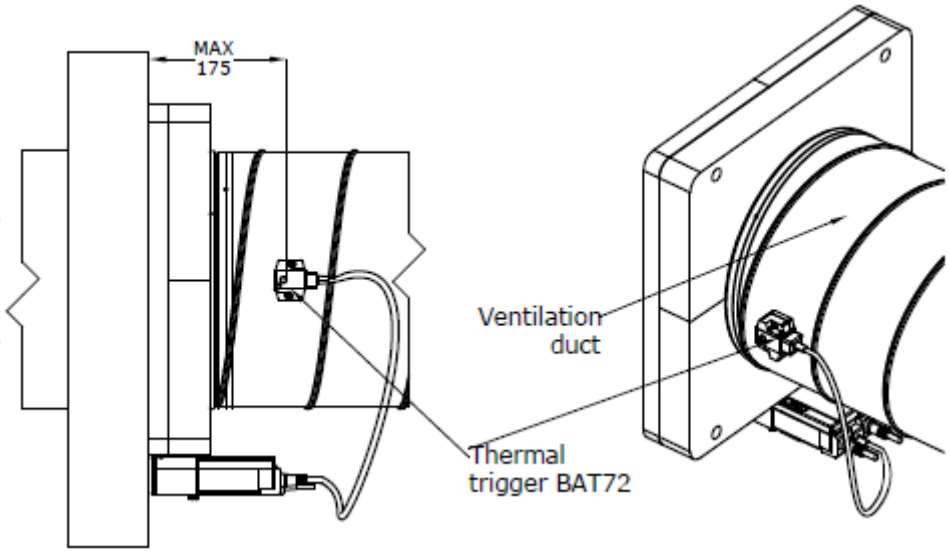

Figure 6. Installation method for the BAT72 thermal release in the duct

3. INSTALLATION TECHNOLOGY – FLEXIBLE WALL

a. During the wall construction phase, create a rectangular opening with a frame made of profiles around the perimeter at the intended location of the damper. If the wall is already built, cut out the opening and then add the missing profiles to form a frame around the perimeter of the opening. The distance between the vertical and horizontal profiles of the frame should be DN+35mm (where DN is the nominal diameter of the damper).

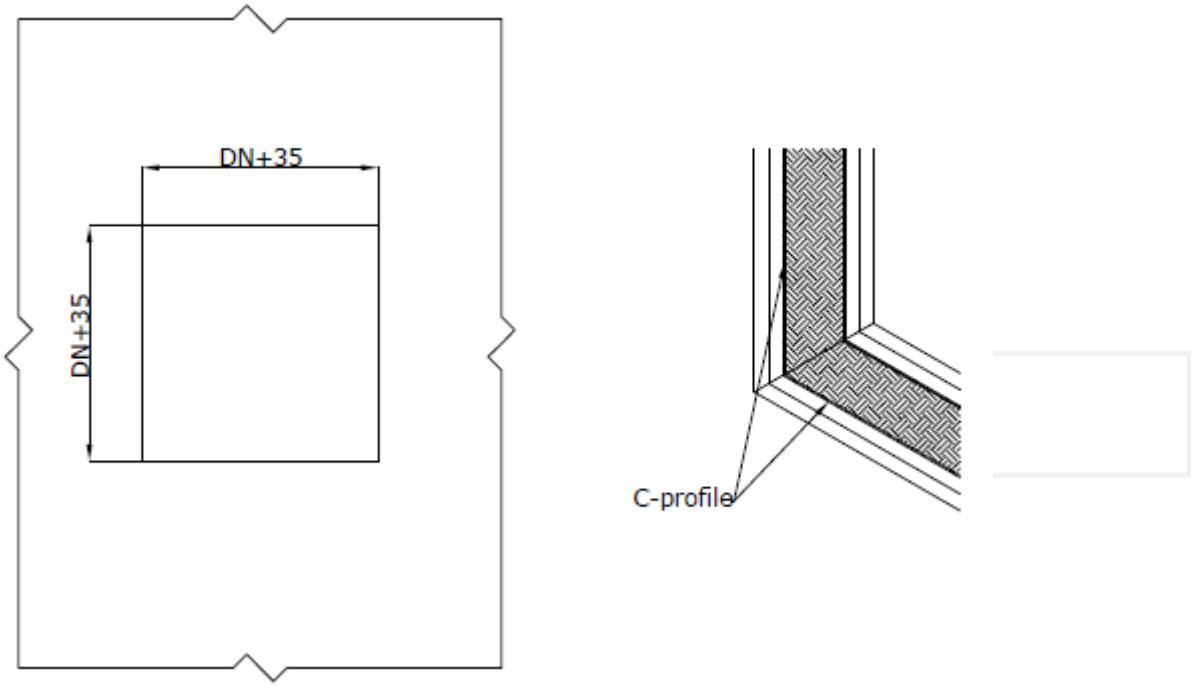

Figure 7. Preliminary opening dimensions in a flexible wall

b. Construct a frame using strips of 15mm thick GKF board with a width equal to the thickness of the wall around the opening, ensuring that the wall profiles are covered. Secure the strips to the profiles. On both sides of the wall, smooth the connection between the frame and the wall, as well as other joints between the boards, over a width of 100mm around the installation opening, using plaster or leveling compound. The maximum dimensions of the final opening should be DN+5mm by DN+5mm.

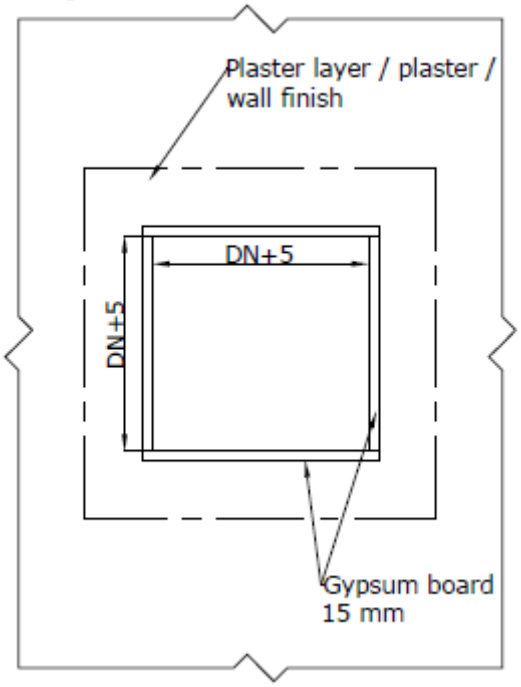

Figure 8. Dimensions of the final opening in a flexible wall

It is also permissible to make round openings in the boards with a maximum diameter of ØDN+5mm. There is no need to fill the space between the wall profiles with insulation.

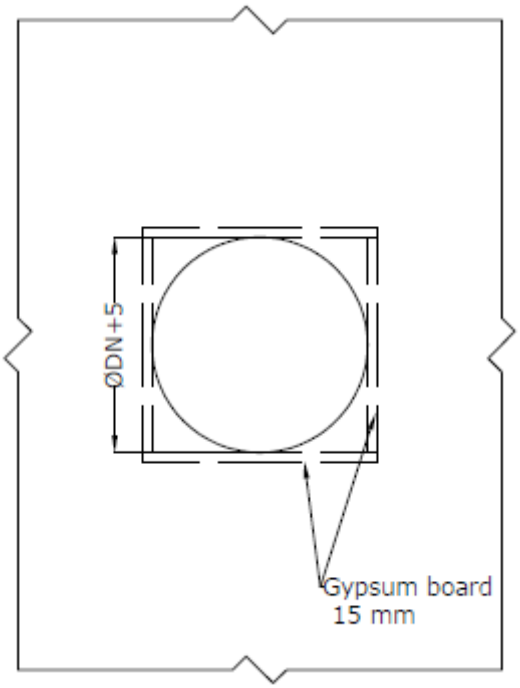

Figure 9. Dimensions of a round opening in flexible wall

c. If a ventilation duct passes through the wall, it should be cut flush with the surface of the wall on the installation side.

d. Directly before installing the damper, apply a continuous strip of fire sealant (e.g., Hilit CFS-S) around the perimeter of the installation opening on the wall. If a ventilation duct passes through the wall and the damper is not equipped with a duct connection seal, provision should also be made to seal this connection before installing the damper, for example, using silicone.

e. Insert the closed damper into the installation opening/ventilation duct. The flange should fit tightly against the wall; it should be gently pressed or twisted so that the sealant spreads between the flange and the wall. Align the flange horizontally; the actuator in KTQ-O-E damper type can be positioned on any side, lever in spring mechanism in KTQ-O-S damper type should be on left or right side of the damper. Secure the damper using four self-tapping screws Ø6.3, with a minimum length of 75mm, making sure the screws penetrate into the steel profile of the wall. The screw heads should be countersunk into the outer layer of the flange and press the thinner layer of the flange against the wall. Any gaps around the flange should be filled with fire sealant or finished with the wall's surface layer.

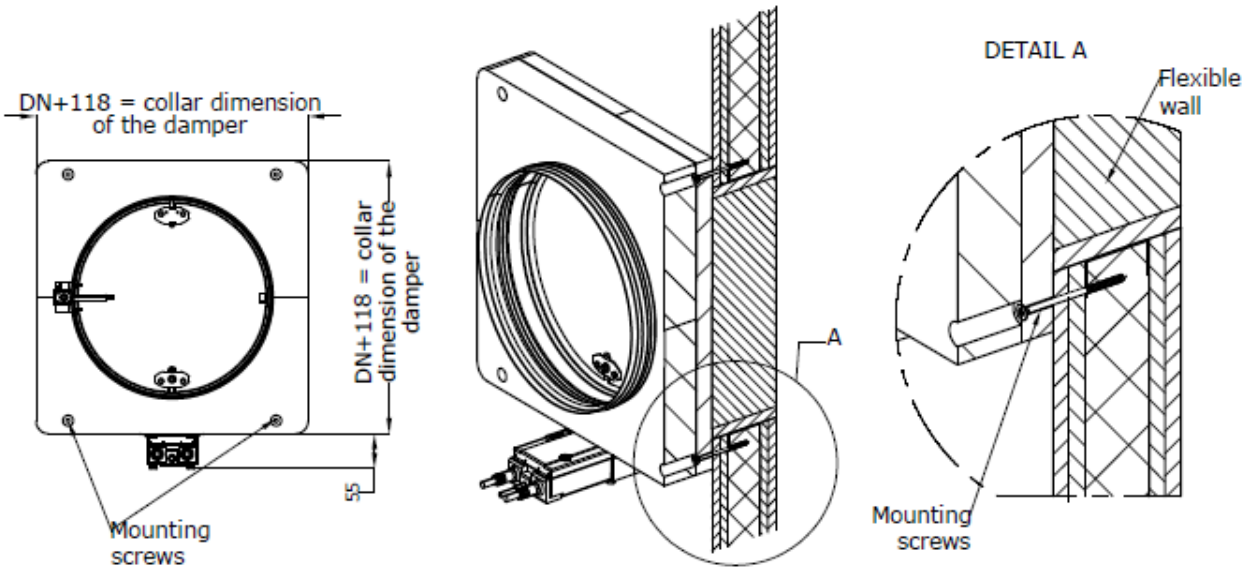

Figure 10. Wall mounting location

f. At this stage, it is recommended to check the proper functioning of the damper by opening it using either electrical voltage or the provided key in KTQ-O-E damper type or by using lever of spring mechanism in KTQ-O-S damper type.

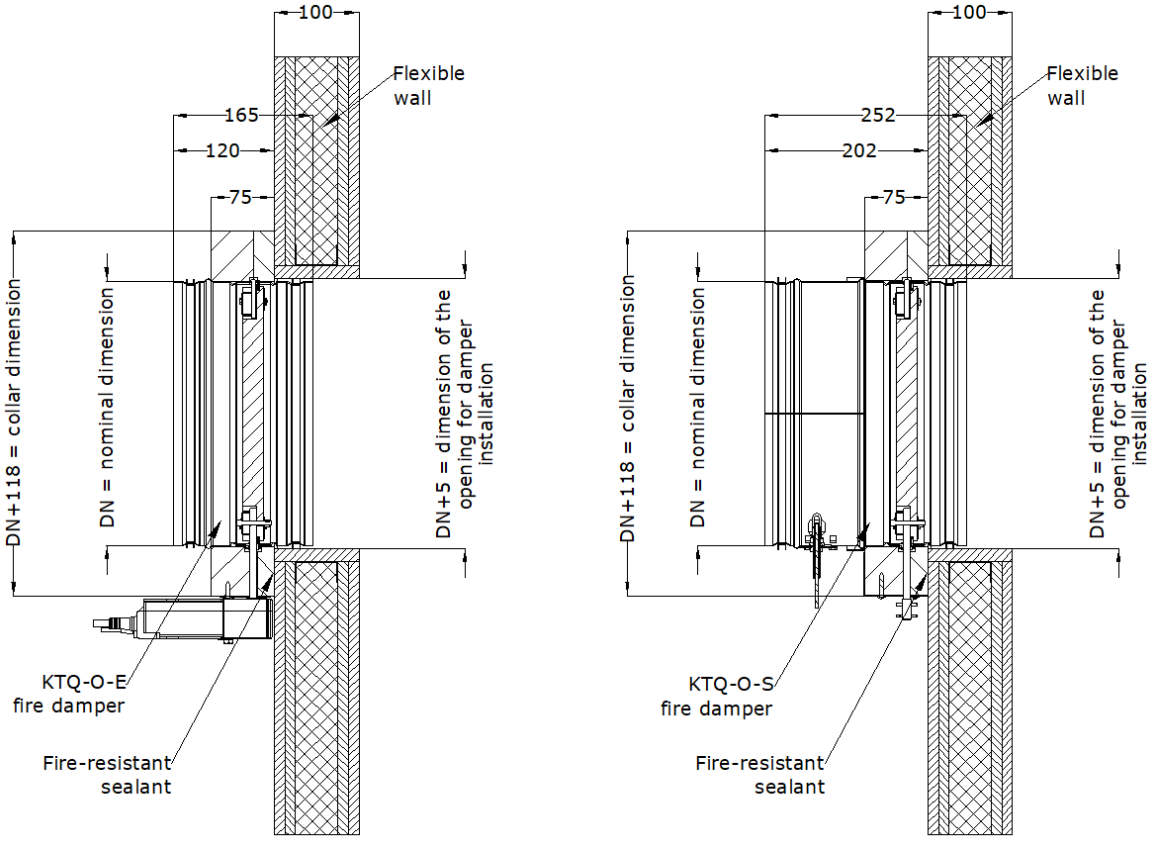

Figure 11. Installation method for KTQ-O fire dampers in flexible wall

g. Attach the ventilation duct(s) to the damper and suspend them. Only for electric type of the damper (KTQ-O-E): make a Ø10mm hole on the duct installed on the flap side at a maximum distance of 175mm from the wall, anywhere around the duct circumference. In this hole, install the BAT72 thermal release connected to the actuator, securing it to the duct using the supplied sheet metal screws.

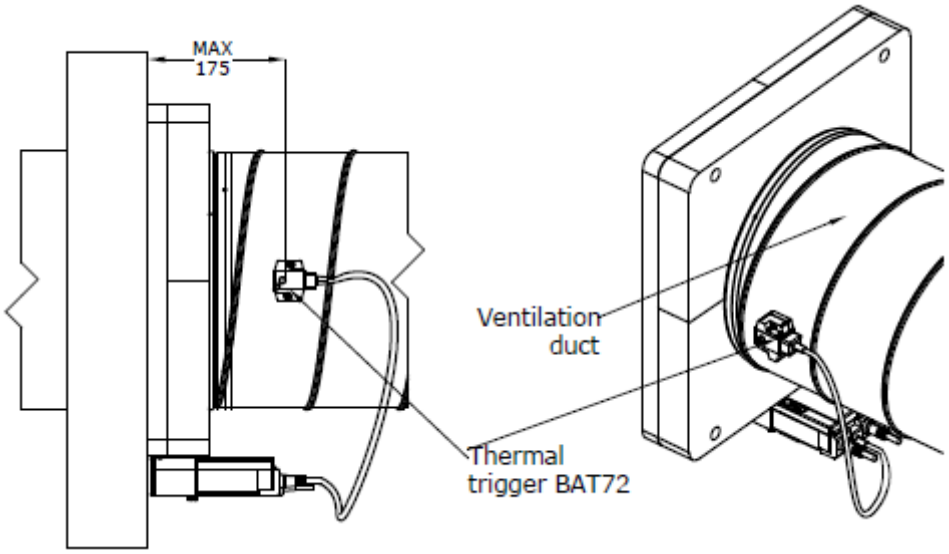

Figure 12. Installation method for the BAT72 thermal release in the duct

4. INSTALLATION TECHNOLOGY – RIGID WALL

a. Create a square opening in the wall with dimensions up to 5 mm larger than the nominal size of the damper, i.e., DN+5mm or a round opening with dimensions ranging from DN+5 mm to DN+40 mm. On the installation side, smooth the wall surface to a width of 100 mm around the installation opening, using materials such as leveling compound or plaster.

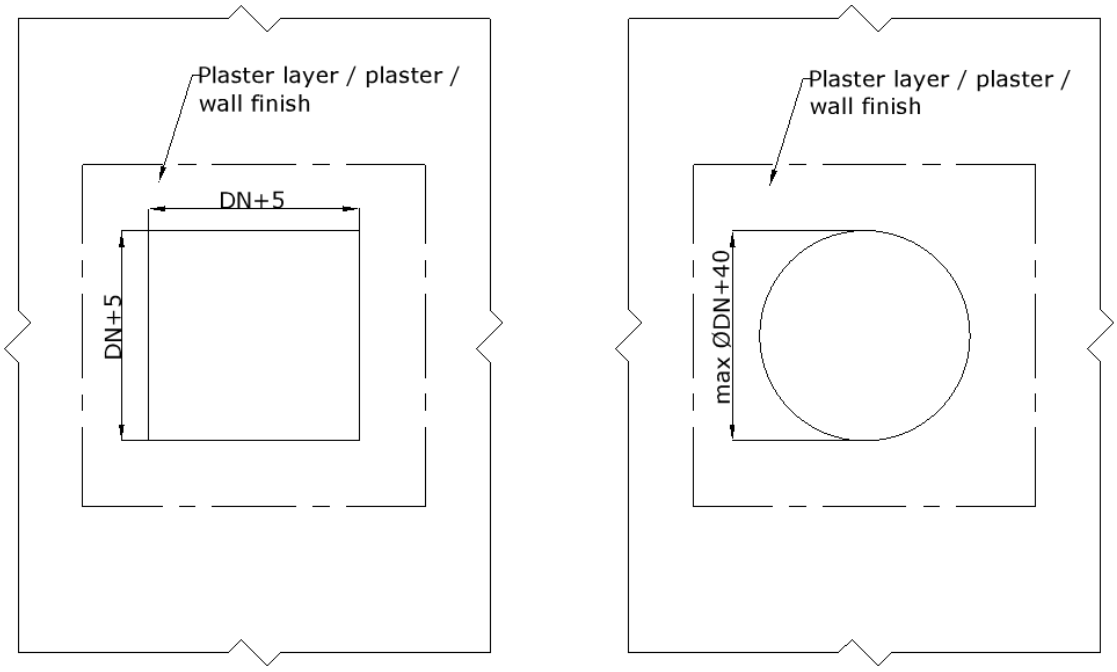

Figure 13. Dimensions of the final opening in a rigid wall

b. If a ventilation duct passes through the wall, it should be cut flush with the surface of the wall on the installation side.

c. Directly before installing the damper, apply a continuous strip of fire sealant (e.g., Hilit CFS-S) around the perimeter of the installation opening on the wall. If a ventilation duct passes through the wall and the damper is not equipped with a duct connection seal, provision should also be made to seal this connection before installing the damper, for example, using silicone.

d. Insert the closed damper into the installation opening/ventilation duct. The flange should fit tightly against the wall; it should be gently pressed or twisted so that the sealant spreads between the flange and the wall. Align the flange horizontally; the actuator in KTQ-O-E damper type or lever in spring mechanism in KTQ-O-S damper type can be positioned on any side. Secure the damper using four self-tapping screws Ø6.3, with a minimum length of 75mm. The screw heads should be countersunk into the outer layer of the flange and press the thinner layer of the flange against the wall. For concrete walls, it is recommended to use M8 impact or screw anchors with screws, which require prior installation (as for ceiling installation). Any gaps around the flange should be filled with fire sealant or finished with the wall's surface layer.

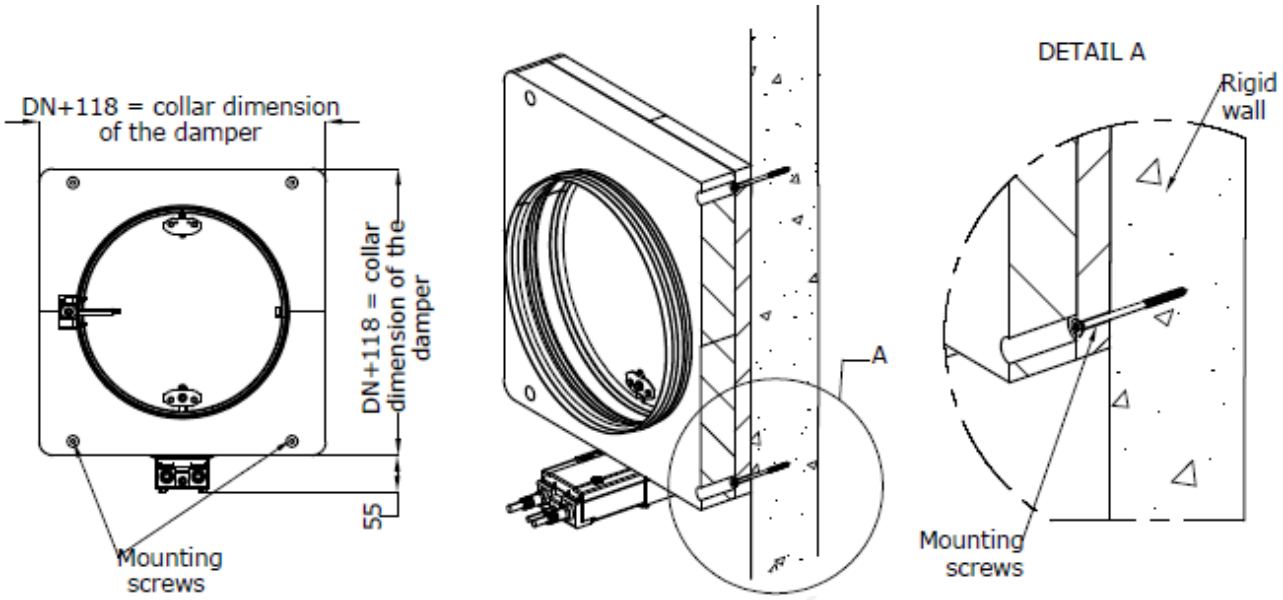

Figure 14. Wall mounting location

e. At this stage, it is recommended to check the proper functioning of the damper by opening it using either electrical voltage or the provided key in KTQ-O-E damper type or by using lever of spring mechanism in KTQ-O-S damper type.

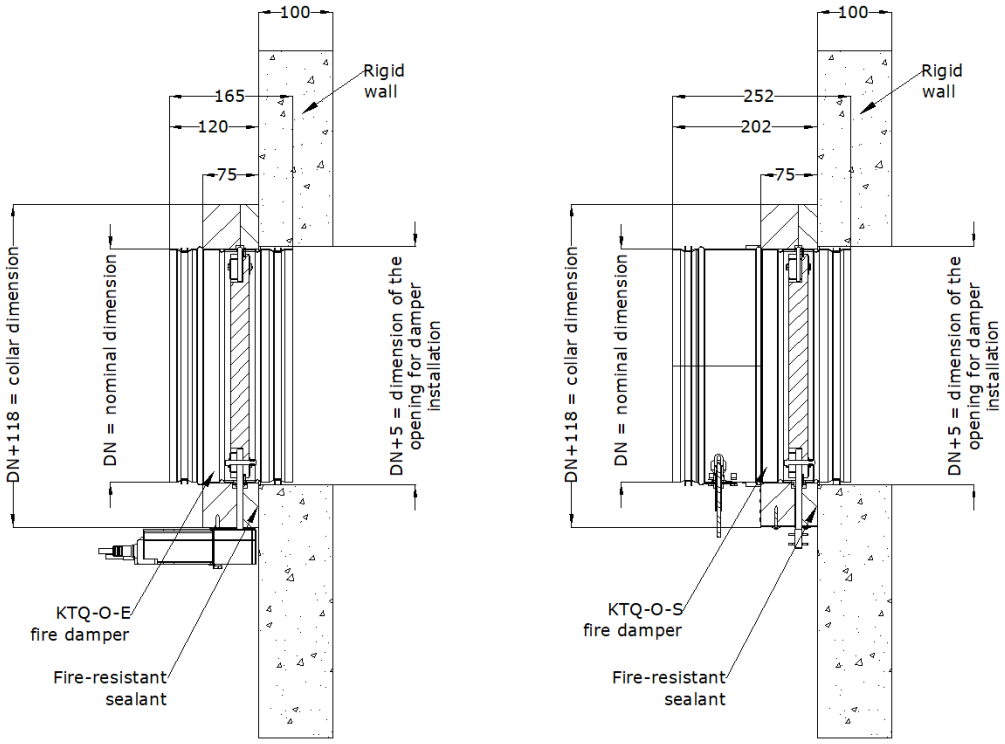

Figure 15. Installation method for KTQ-O fire dampers in rigid wall

f. Attach the ventilation duct(s) to the damper and suspend them. Only for electric type of the damper (KTQ-O-E): make a Ø10mm hole on the duct installed on the flap side at a maximum distance of 175mm from the wall, anywhere around the duct circumference. In this hole, install the BAT72 thermal release connected to the actuator, securing it to the duct using the supplied sheet metal screws.

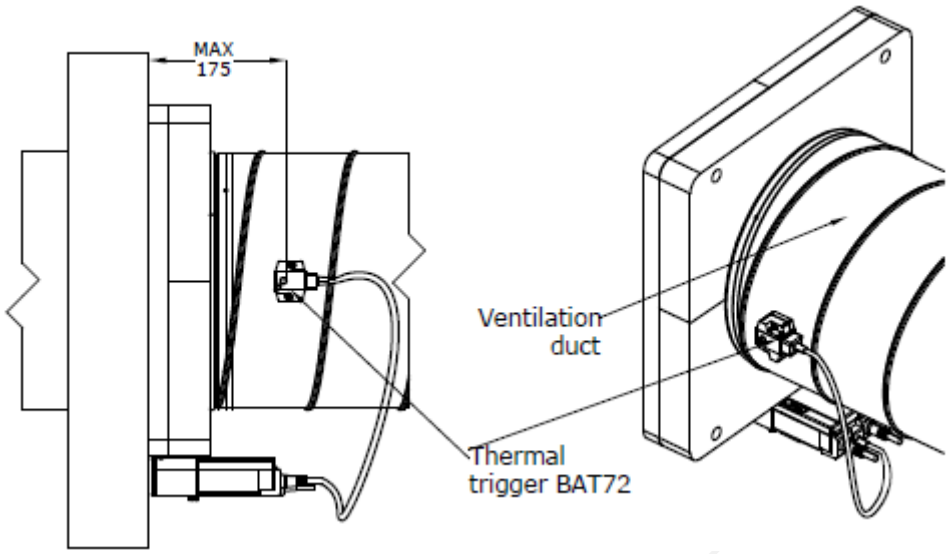

Figure 16. Installation method for the BAT72 thermal release in the duct