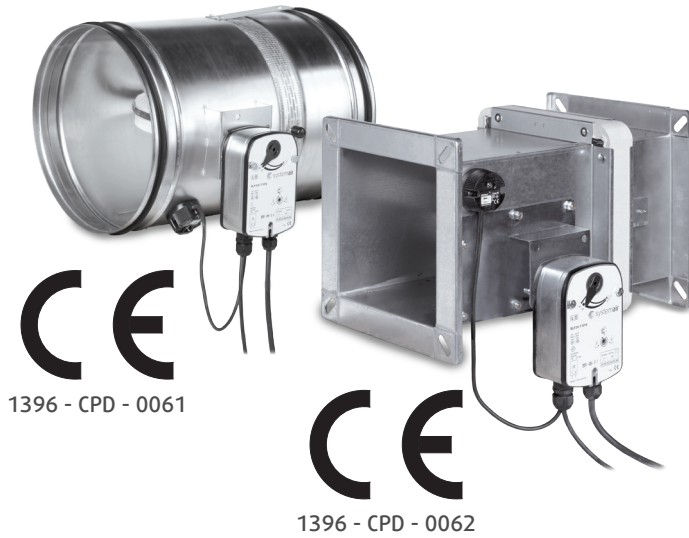


FIRE DAMPER AND FIRE DAMPER FOR EXPLOSIVE AREAS



Round - PKIR3G / PKIR EI30S / EI60S / EI90S / EI120S / EI180S & EKIR EI30S & E60S
Square - PKIS3G / PKIS EI90S / EI120S

For explosive areas:

Round - PKI2-Ex-R-EI60 / 90 / 120S



Square - PKI2-Ex-S-EI90 / 120S



ORIGINAL INSTALLATION, OPERATION AND INSPECTION MANUAL



EVERY FIRE DAMPER NEEDS TO BE INSTALLED IN ACCORDANCE WITH THIS MANUAL!

Installation methods for the round fire dampers

Name	Certificate no.	Activating mechanism	Dimension range (mm)	Installation ¹⁾			Fire resistivity	Tested by under-pressure (Pa)				
				Solid wall	Flexible wall	Ceiling						
PKIR3G	 1396 - CPR - 0076	ZV, DV1 up to DV9-T-SR	ø 100 up to 400	wet			EI60 (ve ho i ↔ o) S	500				
				dry		-		300				
				soft crossing installation kit				-	500			
				on a wall		-			300			
				out of a wall		-		300				
				wet				EI90 (ve ho i ↔ o) S	500			
				dry		-	300					
				soft crossing installation kit			-		500			
				on a wall		-			300			
				out of a wall		-	300					
				wet installation kit			-		500			
				installation kit				EI120 (ve ho i ↔ o) S	500			
				PKIR-EI60S	 1396 - CPD - 0061	ZV, DV1 up to DV9-T-SR	ø > 400 up to 630	wet, dry		wet	EI60 (ve ho i ↔ o) S	300
				PKIR-EI90S		ZV, DV1 up to DV9-T-W	ø > 400 up to 1000	wet, dry		wet	EI90 (ve ho i ↔ o) S	300
PKIR-EI120S	ZV, DV1 up to DV9-T-W	ø > 400 up to 1000 ²⁾	wet, dry			wet ²⁾	EI120 (ve ho i ↔ o) S	300				

Tab. 1: Permitted installation methods for the round fire dampers based on fire resistivities

Installation methods for the square fire dampers

Name	Certificate no.	Activating mechanism	Dimension range (mm)	Installation ¹⁾			Fire resistivity	Tested by under-pressure (Pa)				
				Solid wall	Flexible wall	Ceiling						
PKIS3G	 1396 - CPR - 0077	ZV, DV1 up to DV9-T-SR	100 × 100 up to 800 × 600	wet			EI60 (ve ho i ↔ o) S	500				
				dry		-		300				
				soft crossing installation kit				-	500			
				on a wall		-			300			
				out of a wall		-		300				
				wet				EI90 (ve ho i ↔ o) S	500			
				dry		-	300					
				soft crossing installation kit			-		500			
				on a wall		-			300			
				out of a wall		-	300					
				wet installation kit			-		500			
				installation kit				EI120 (ve ho i ↔ o) S	500			
				PKIS-EI90S	 1396 - CPD - 0062	ZV, DV1 up to DV9-T-W	W > 800 mm and / or H > 600 mm up to 1000 × 1000 ³⁾ up to 1600 × 1000 ⁴⁾	wet, dry		wet	EI90 (ve ho i ↔ o) S	300
				PKIS-EI120S				wet		EI120 (ve ho i ↔ o) S	300	

Tab. 2: Permitted installation methods for the square fire dampers based on fire resistivities

The fire dampers are certified according to EN 15650, tested according to EN 1366-2 and classified according to EN 13501-3.

ACCORDING TO EN 15650 EACH FIRE DAMPER MUST BE INSTALLED ACCORDING TO THE INSTALLATION INSTRUCTIONS PROVIDED BY THE MANUFACTURER!

NOTES:

- 1) The walls must have a fire resistance equal to or better than according to Tab. 3 - 5 in EN 1366-2.
- 2) Nominal diameters above ø 800 mm in wet ceiling installation, vertically only solid wall and dry or wet installation with coverplates.
- 3) All supporting constructions
- 4) Solid wall and ceiling

1.1 WET

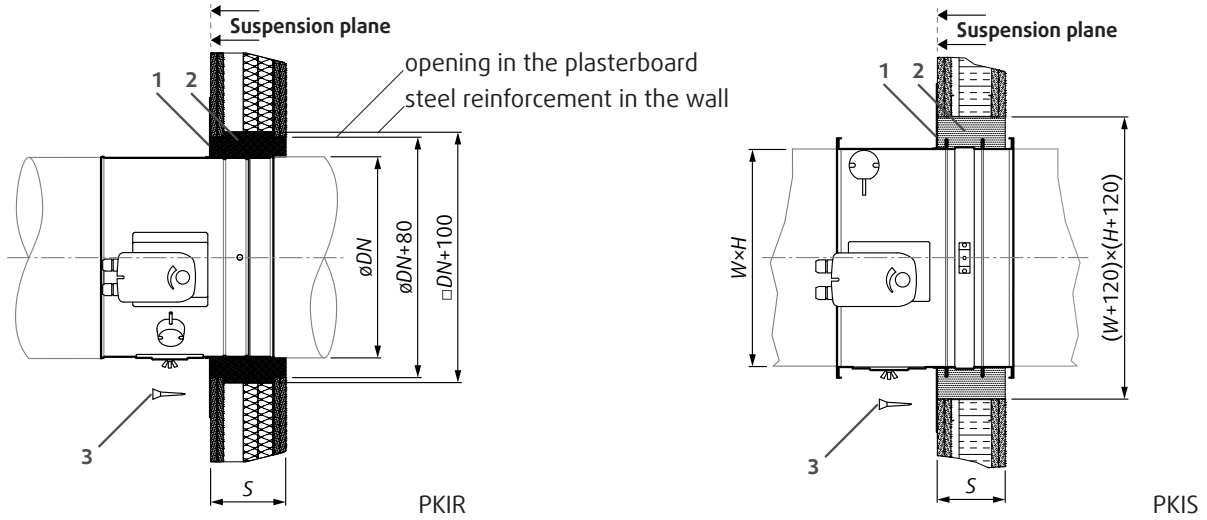


Fig. 1: **Wet installation** of the round and square fire damper using plaster mixture by mortar or concrete.

1.2 DRY

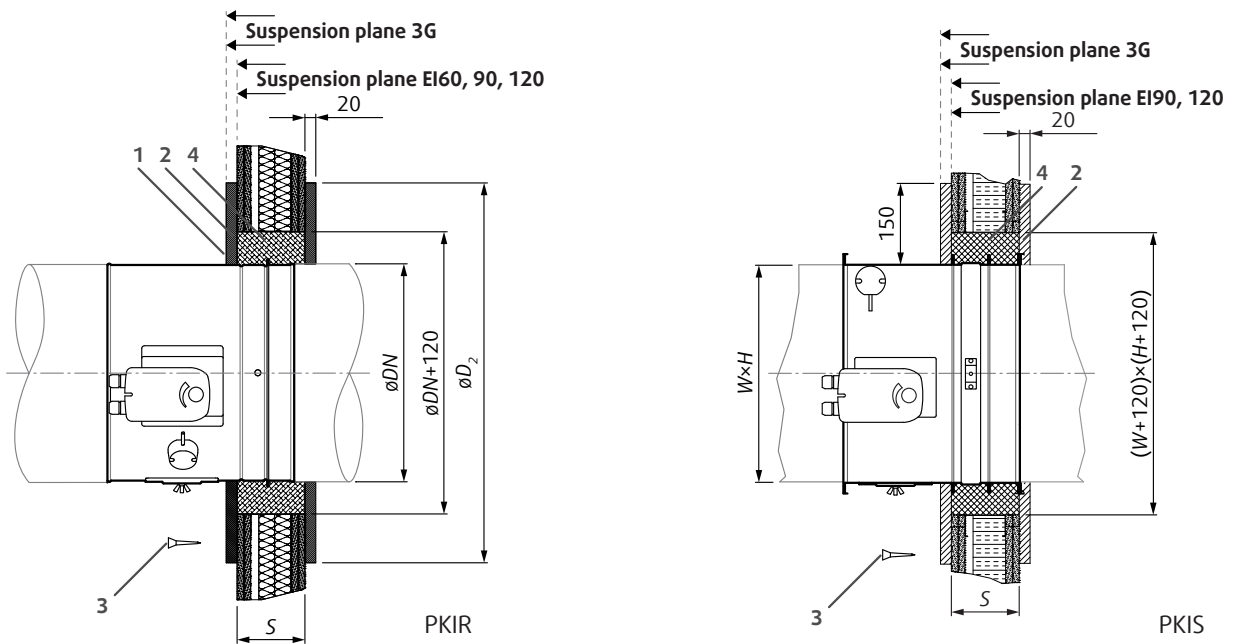


Fig. 2: **Dry installation** of the round and square fire damper using mineral wool with coverplates

1.3 SOFT CROSSING

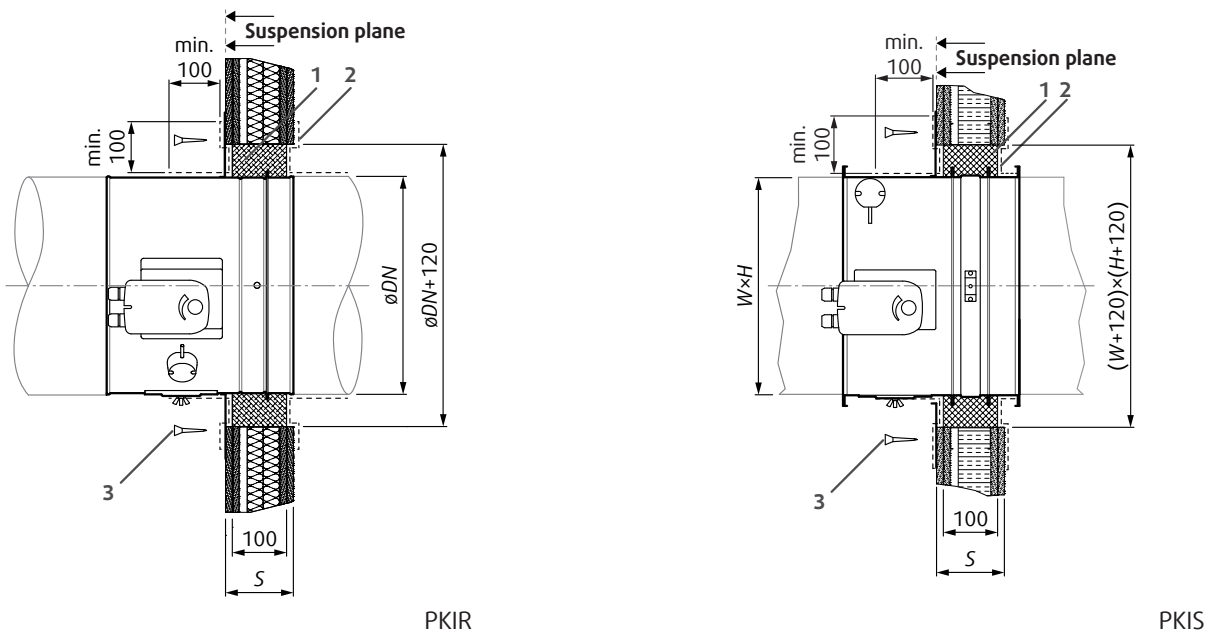


Fig. 3: **Installation** of the round and square fire damper into a soft crossing

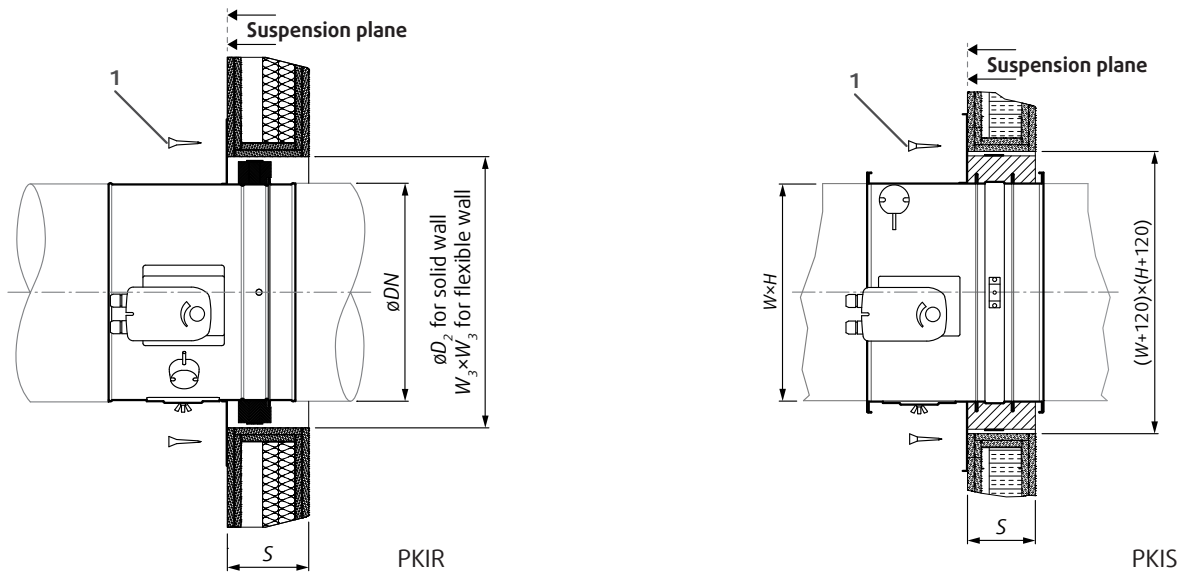


Fig. 4a: Installation of the round and square fire damper using an installation kit

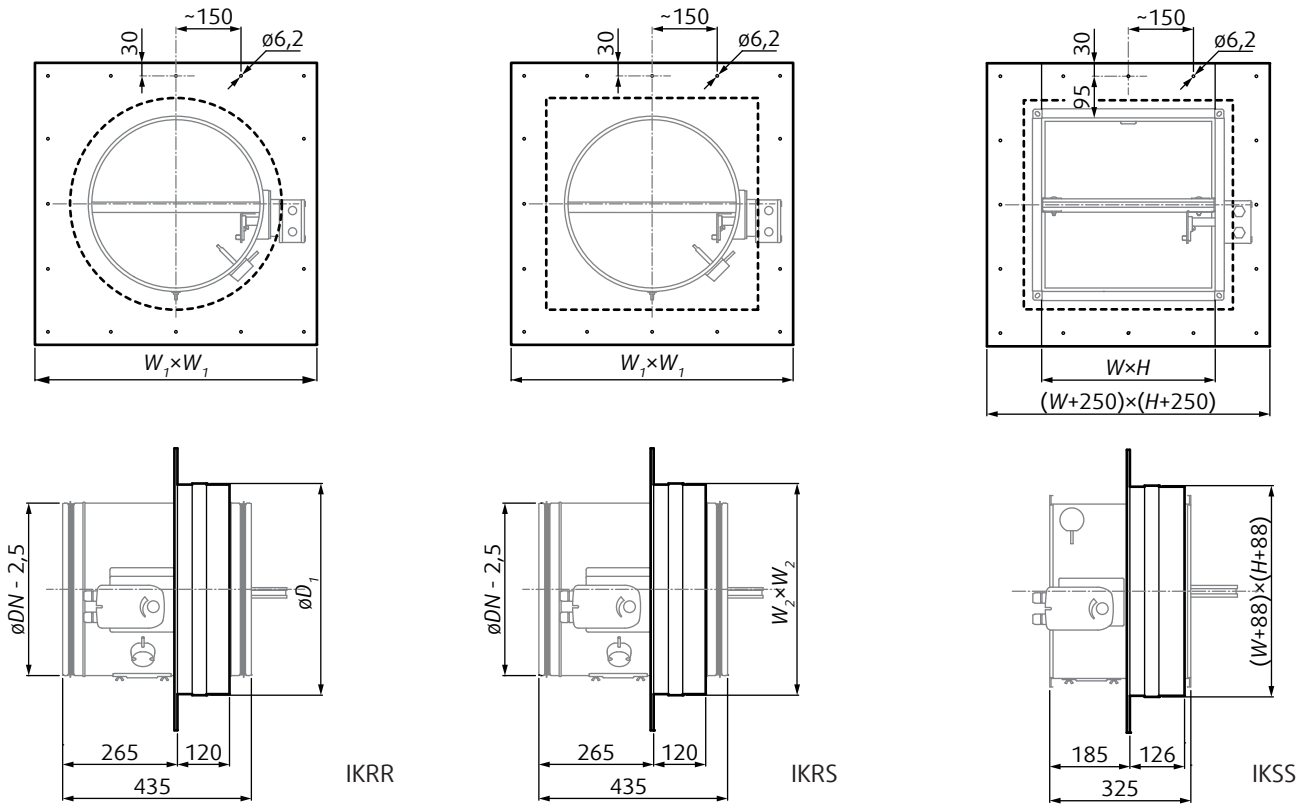


Fig. 4b: Installation kit (IKRR, IKRS, IKSS)

DN	W ₁	W ₂	W ₃	(mm)	
				D ₁	D ₂
100	350	187	200	187	200
125	375	237	250	237	250
150	400				
180	430	287	300	287	300
200	450				
225	475	337	350	337	350
250	500				
280	530	387	400	387	400
315	565				
355	605	437	450	437	450
400	650	487	500	487	500

Tab. 3: Basic dimensions of the IKRR, IKRS and their openings

1.5 ON A WALL

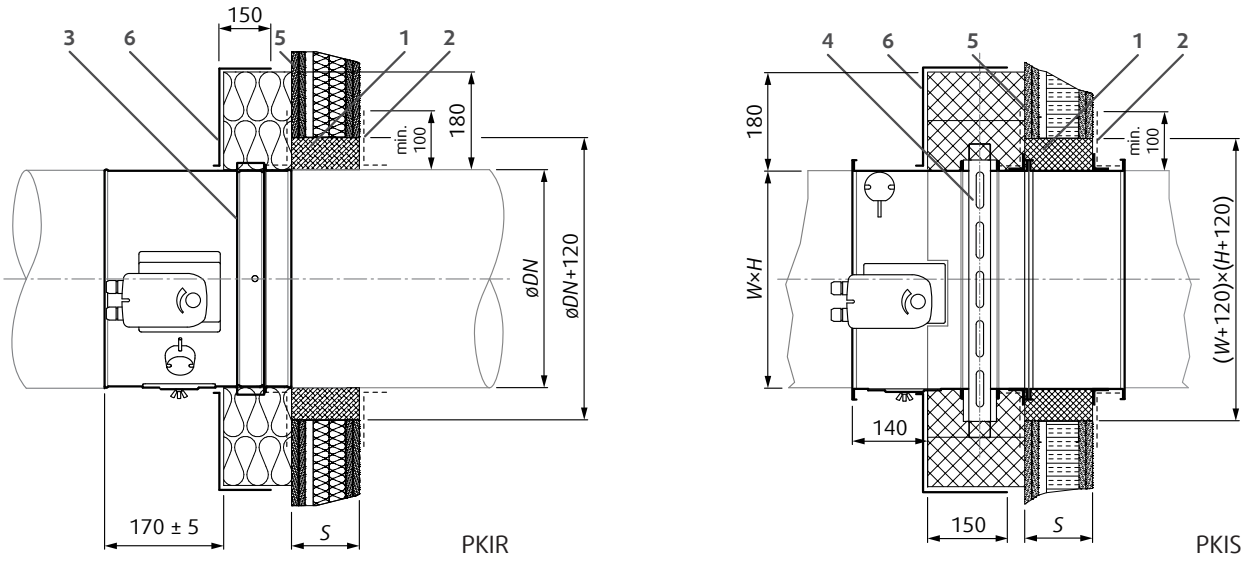


Fig. 5: **Installation** of the round and square fire damper **on a wall**

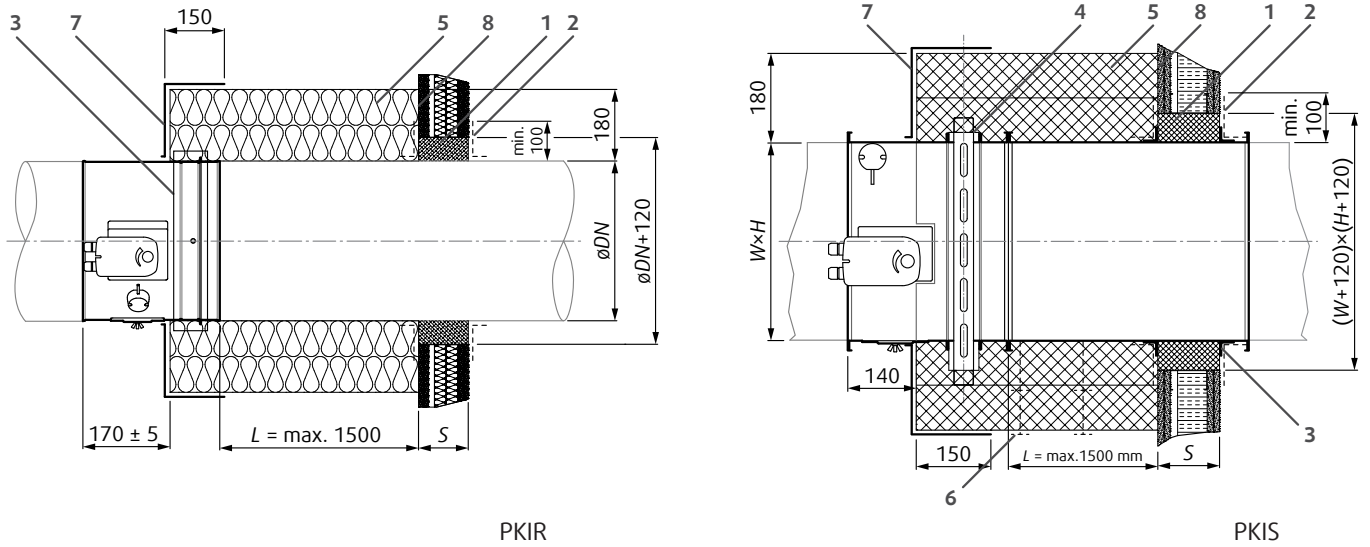
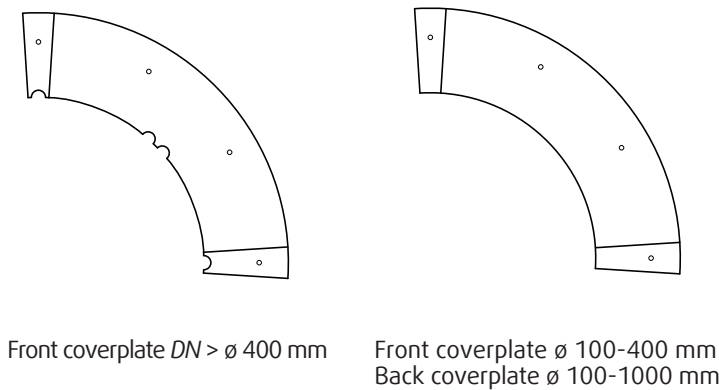


Fig. 6: **Installation** of the round and square fire damper **out of a wall**

1.6 OUT OF A WALL



Front coverplate $DN > \varnothing 400 \text{ mm}$ Front coverplate $\varnothing 100-400 \text{ mm}$
 Back coverplate $\varnothing 100-1000 \text{ mm}$

Fig. 7: Front and back coverplate for PKIR



Fig. 8: Thermal fuse control switch

Activating mechanism			Type of activation	Manual														With servomotor																			
				ZV	DV1	DV1-2	DV3	DV5	DV5-2	DV4	DV6	DV6-2	DV3C *	DV5C *	DV5C-2 *	DV3B	DV5B	DV5B-2	DV4B	DV6B	DV6B-2	DV3D *	DV5D *	DV5D-2 *	DV7	DV7-T	DV9	DV9-T	DV9-ST	DV9-T-ST	DV9-W	DV9-T-W	DV9-SR	DV9-T-SR			
Switch	Open	Current type	Voltage																																		
	Switch	Open	AC/DC	230 V																																	
Closed		AC/DC	230 V																																		
Electromagnet	Impulse connection	AC	24 V																																		
			230 V																																		
	Interruption connection	AC	24 V																																		
			230 V																																		
		DC	24 V																																		
			24 V																																		
Servomotor Belimo BLF / BF	230 **	AC	230 V																																		
	230-T		230 V																																		
	24 **	AC/DC	24 V																																		
	24-T		24 V																																		
	24-ST **		24 V																																		
	24-T-ST		24 V																																		
	24-W **		24 V																																		
	24-T-W		24 V																																		
	24-SR **		24 V																																		
	24-SR-T		24 V																																		

Tab. 4: Composition of the activation mechanisms according to the ordering codes

NOTES:

- * Only for dimensions up to 800 × 600 mm and ø 400 mm including.
- ** Servomotor without thermoelectric fuse - not allowed in EU - par. 4.2.1.2.1, EN 15 650

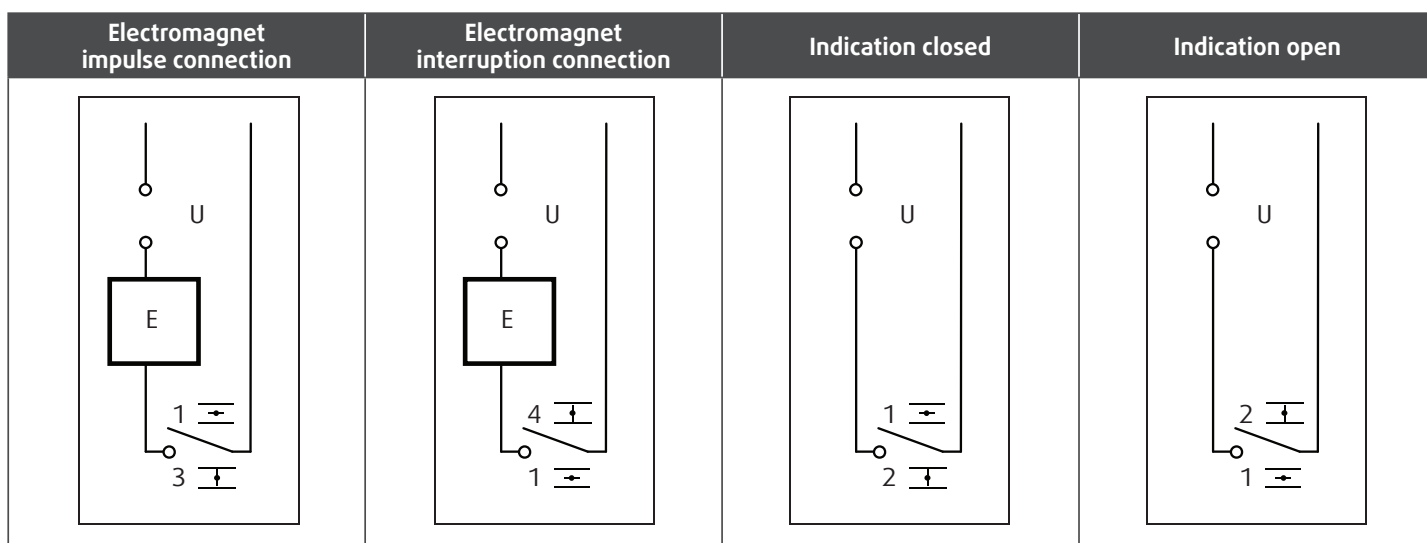
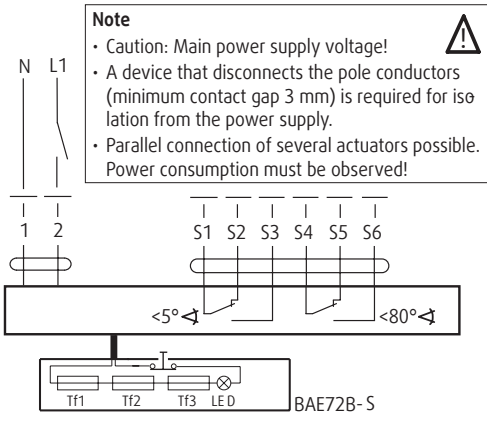


Fig. 9: Connection of the electromagnets and end switches according to Tab. 4

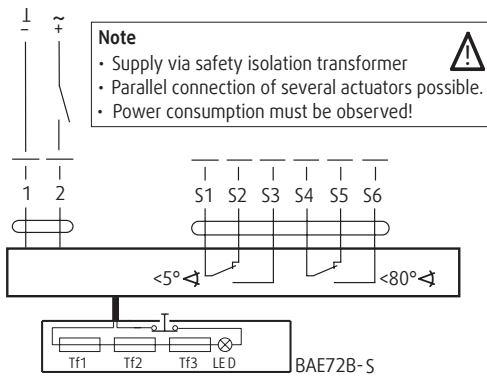
Legend

DC	- Direct Current
AC	- Alternating current
230	- Servomotor 230 V
24	- Servomotor 24 V
T	- Servomotor with thermoelectric fuse
ST	- Servomotor with the supply and communication unit BKN320-24
W	- Servomotor with cables for the supply and communication unit
SR	- Modulated servomotor with the control 0-10 V
1	- Open
2	- Closed

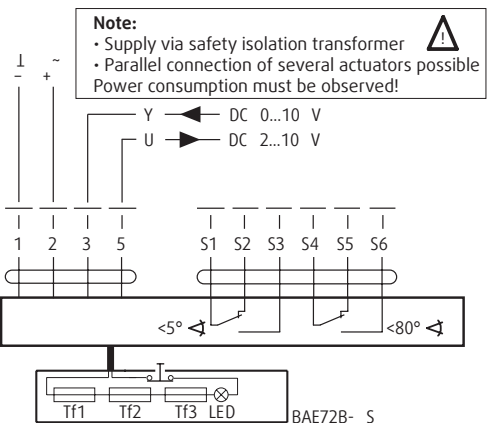
3	- Closed in impulse circuit
4	- Closed after interruption of the circuit
U	- Source voltage according to Tab. 4
E	- Electromagnet according to Tab. 4
DV3, DV5, DV5-2	- Electromagnet EVJ 1, MEP Postřelmov, AC 24V 50Hz, 10/1,70 A, top electric energy consumption 240 VA, closure time 100ms, coverage IP00
Switch open/closed	- Microswitch Zippy vk-03 – 3A 125/250VAC
DV4, DV6, DV6-2	- Electromagnet E1AS 0551-1, MEP Postřelmov, AC 230 V, 6 W, load factor 100%, coverage IP65



BELIMO BLF230-T, BF230-T
Fig. 10: Servomotor connection scheme for DV7-T



BELIMO BLF24-T, BF24-T
Fig. 11: Servomotor connection scheme for DV9-T



BELIMO BF24-SR-T
Fig. 12 Servomotor connection scheme

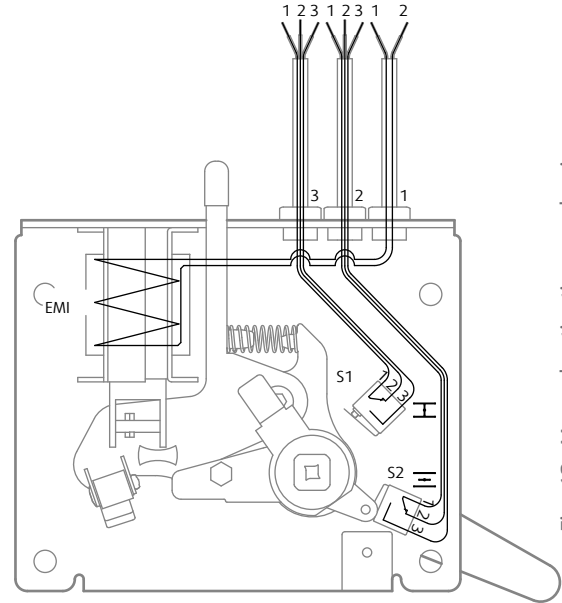


Fig. 13: Manual activation mechanism with an electromagnet in impulse connection for fire dampers with dimensions \varnothing 100 - 400 mm and 100 x 100 mm up to 800 v 600 mm

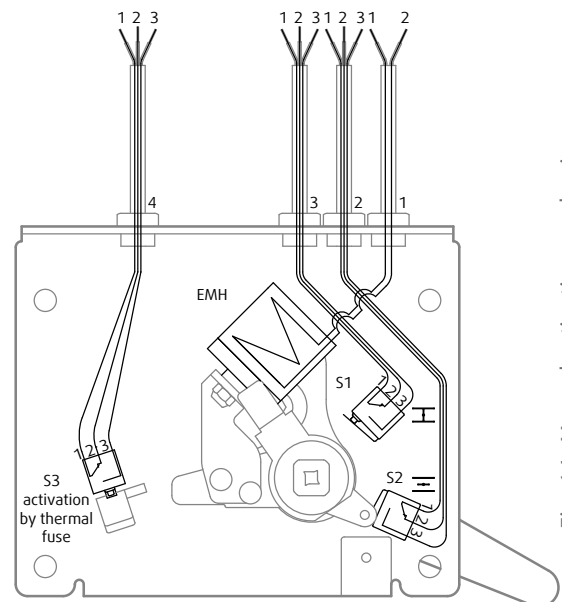


Fig. 14: Manual activation mechanism with an electromagnet in interruption connection for fire dampers with dimensions \varnothing 100 - 400 mm and 100 x 100 mm up to 800 x 600 mm

S1-S3 - microswitch Zippy ADW-N3S-01E0-EA001-Z - 3A 125/250VAC
EMI - electromagnet in impulse connection
EMH - holding electromagnet in interruption connection

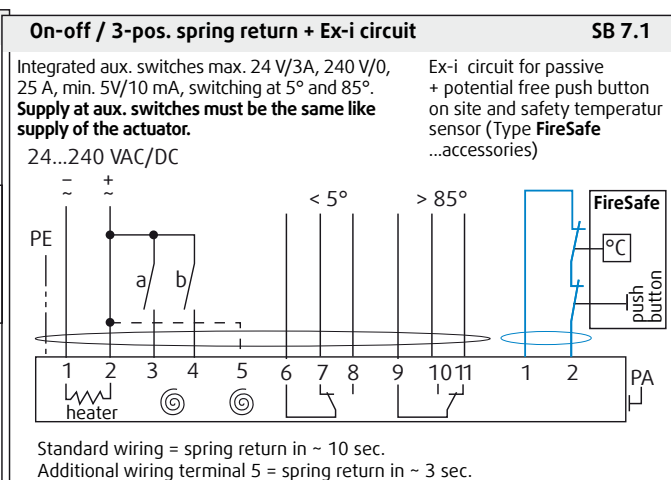
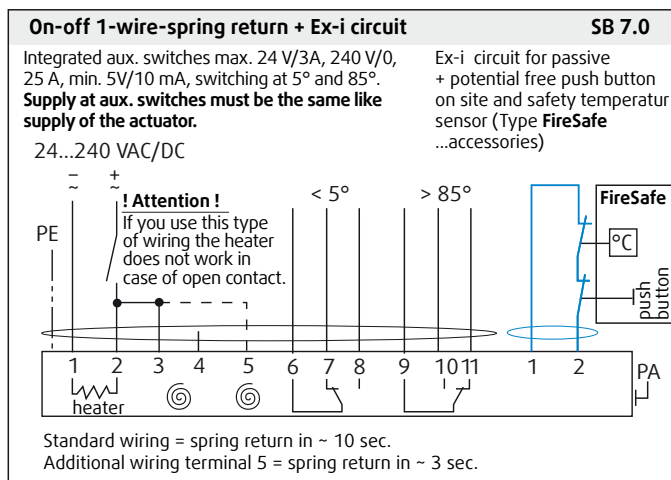


Fig. 15: Electrical connection of the Schischek ExMax-15 BF servomotor with a FireSafe thermal fuse

This installation, operation and inspection manual applies to fire damper types PKIR and PKIS with fire resistance EI30S, EI60S, EI90S, EI120S and to fire dampers PKIR3G and PKIS3G. This manual also applies to evacuation dampers EKIR EI30S & E60S (in the following text we will use the damper name if it concerns both fire and evacuation dampers). The permitted installation methods can be found in Tab. 1 and Tab. 2. This manual also applies to fire dampers adjusted in accordance with the 94/9/EK directive, which outlines the technical requirements for devices and protection systems intended for usage in an area with explosion risk – fire dampers are a class II, category 2/-G for protection against inflammation of gases belonging to explosibility class IIB according to STN EN 13463-1:2009. It contains basic information and recommendations regarding installation, usage and inspection, which must be followed in order to ensure a proper and trouble free damper operation. The key to this is to read this manual thoroughly, use the damper according to the instructions provided herein and follow the safety requirements.

Warning

Some damper parts can have sharp edges – therefore it is necessary to use gloves during damper installation and manipulation. In order to prevent an electric injury, fire or any other damage which could result from incorrect damper usage and operation, it is important to:

- install the damper in accordance with the installation manual and by a properly trained employee
- execute the damper inspection in accordance with the maintenance and inspection manual.

Operating Conditions

Systemair fire dampers can be defined as fire shutters for ventilation ducts in the place where they pass through the wall or ceiling, which are the fire area border. In case of fire the dampers function as a fire safety element and by closing themselves they prevent the fire and smoke from expanding through the ventilation duct during the defined time.

- The PKI fire dampers are designed for installations according to Tab. 1 and Tab. 2
- All fire dampers are either manual or with an electric driving mechanism as standard.
- They are intended for installation in places which are protected against weather disruptions in the ducts distributing air without any mechanical or chemical contamination in the following operating conditions:
 - Maximum air flow velocity 12 m/s
 - Temperature within the range -10 up to 60 °C

NOTE: The accessories for installation – coverplates for dry installation PRR / PRS, silencers enabling duct dilatation TVK / TVH, clutches MPC, adapters MPA, flanges for round dampers RFA, adapter with smoke sensor SSAR a SSAS and installation kits IKRR, IKRS and IKSS (see TPI28_PKIR_S_SK.pdf) can be ordered along with the fire dampers.

In a standard design all manual and servomotor-operated fire dampers are equipped with a thermal fuse which, after reaching or exceeding 72 ± 2 °C, activates the spring which closes the damper blade.

From the noise perspective all Systemair dampers are passive. Increased noise can only be heard when the damper is being closed or opened in case of inspection or fire (which lasts less than 20 seconds).

1 Installation Manual

- The duct connected to the fire damper must be supported or hung in such way that the damper does not carry its weight. The damper must not support any part of the surrounding construction or wall which could cause damage and consecutive damper failure.
- The damper driving mechanism can be placed on any side of the wall, however it needs to be placed in a way to ensure easy access during inspection.

- The distance between the fire dampers must be at least 200 mm according to STN EN 1366-2.
- The distance between the wall / ceiling and the fire damper must be at least 75 mm according to STN EN 1366-2.
- The fire damper must be installed into a fire partition structure in such way that the damper blade in its closed position is located inside this structure.
- The fire dampers can be installed into a wall or a ceiling with minimum width according to STN EN 1366-2.
- All dampers can be installed with the blade axis in a horizontal or a vertical position.
- The fire damper in a non-explosive version must be grounded after being installed into the duct.
- The design of a non-explosive electric device installed inside or on a fire damper must correspond with the given surrounding environment with an explosion risk according to STN-EN 66079-10.

1.1 WET INSTALLATION of a PKIR / PKIS fire damper into a solid or flexible wall or ceiling using plaster mixture, mortar or concrete (Fig. 1)

1. For a round damper installation prepare a round opening with diameter $DN + 80$ mm, for a square damper a square opening with dimensions $W + 120$ mm and $H + 120$ mm. The flexible wall opening must be reinforced according to the standards for plasterboard walls.
2. Insert the closed damper into the middle of the opening so that the damper blade is in the wall. Use the bendable hanging (1; or hangings, if there is two of them) to secure the damper against the wall by a suitable screw (3; recommended screw diameter 5,5 - for example DIN 7981).
3. Fill in the area between the wall and the damper with plaster mixture, mortar or concrete (2), while paying attention to prevent fouling of the damper's functional parts, which could limit its correct functionality. The best way is to cover the functional parts during installation. The seepage of the filling material can be prevented by using the supplied coverplates PRR / PRS. However, these are not permitted for wet installation.
4. If needed, uncover and clean the damper after installation.
5. Check the damper functionality.

1.2 DRY INSTALLATION of a PKIR / PKIS fire damper into a solid or flexible wall or ceiling using mineral wool and coverplates (Fig. 2)

1. For a round damper installation prepare a round opening with diameter $DN + 120$ mm, for a square damper a square opening with dimensions $W + 120$ mm and $H + 120$ mm. The flexible wall opening must be reinforced according to the standards for plasterboard walls.
2. Insert the closed damper into the middle of the opening so that the damper blade is in the wall. Use the bendable hanging (1; or hangings, if there is two of them) to secure the damper against the wall by a suitable screw (3; recommended screw diameter 5,5 - for example DIN 7981).
3. From the hanging (hangings) side close the gap between the damper and the mounting opening for the round damper by coverplates PRR (2), for the square damper by coverplates PRS using screws (3) via pre-drilled holes.
4. Fill in the area between the wall and the damper with mineral wool (4), while paying attention to prevent fouling of the damper's functional parts, which could limit its correct functionality.
5. Close the gap between the damper and the mounting opening, for round damper use coverplates PRR, for the square damper use coverplates PRS using screws via pre-drilled holes.
6. All gaps between the coverplates, between coverplates and the wall, between coverplates and fire damper need to be filled with fire resistive mastic (e.g. Intumex AN).
7. If needed, clean the damper after installation.
8. Check the damper functionality (see operating manual).

1.3 INSTALLATION of a PKIR / PKIS fire damper INTO A SOFT CROSSING (Fig. 3)

1. For a round damper installation prepare a round opening with diameter $DN + 120$ mm, for a square damper a square opening with dimensions $W + 120$ mm and $H + 120$ mm. The flexible wall opening must be reinforced according to the standards for plasterboard walls.
2. Prepare 150 kg/m^3 basalt wool installation segments (1), 100 mm thick. First apply suitable glue (e.g. Intumex AC) onto the damper at the place of its future placement, take down and glue the filling of the future installation with the same glue. After the glue has dried the damper along with the filling are ready for installation.
3. Apply the same glue onto the internal surface of the wall opening. Also apply the same glue on the external surface of the filling glued on the damper surface. Immediately after the application put the damper into the wall opening. The damper blade must be placed into the supporting structure. Then fix the damper using the bendable bracket assembled on the damper.
4. After inserting the damper into the opening and fixing it by a suitable screw (3; recommended screw diameter 5,5 - for example DIN 7981) apply the same material (2) on the opening filling and wall edges on both sides 100 mm wide from both sides on the damper housing as well as the adjacent duct. The layer of the material must be 2 mm thick.
5. Before the glue dries, remove the unwanted remnants of the glue.
6. If needed, uncover and clean the damper after installation.
7. Check the damper functionality.

1.4 INSTALLATION of a PKIR / PKIS fire damper USING AN INSTALLATION KIT (Fig. 4)

1. For a round damper installation prepare a round opening with diameter $D_2 \pm 5$ mm for solid wall, or $W_3 \times W_3 \pm 5$ mm for a flexible wall, according to Tab. 3 and for a square damper a square opening with dimensions $W + 120$ mm and $H + 120 \text{ mm} \pm 5$ mm. The opening in the flexible wall must be reinforced according to the standards for plasterboard walls.
2. This is the simplest installation method, insert the damper into the opening and fix the front panel using appropriate screws (1; recommended screw diameter 5,5 - for example DIN 7981) into pre-drilled holes.
3. If needed, uncover and clean the damper after installation.
4. Check the damper functionality.

1.5 INSTALLATION of a PKIR / PKIS fire damper ON A WALL (Fig. 5)

1. For a round damper installation prepare a round opening with diameter $DN + 120$ mm, for a square damper a square opening with dimensions $W + 120$ mm and $H + 120$ mm. The flexible wall opening must be reinforced according to the standards for plasterboard walls.
2. Insert a duct into the opening in a load-bearing structure. Press insulation around the duct (1) and cut its edges to make it flush with the wall surface. Coat the insulation surface with a suitable material (2; e.g. BSF, ISOVER). Add in the damper casing to the load-bearing structure using rolled L-profiles. Add in the round damper using profiles only in the lowest and the highest point.
3. Hang the round damper onto a suitable hanging (3) made of sheet metal ringlets mounted in the blade location. Begird the square damper's perimeter in the blade location by U-profiles (4) and hang it using threaded rods M10.
4. Apply suitable glue (5; e.g. BSK, ISOVER) onto the load-bearing structure in such way that makes it possible to glue two 90 mm layers of insulation with density in the amount of 66 kg/m^3 onto it. Secure the insulation in two 90 mm layers onto the square duct using 90 mm long welding pins (6). Entwine the round damper insulation with a binding wire

- in the usual way that is applied when insulating round ducts.
5. Cover the insulation face and perimeter up to a distance of 150 mm from the insulation corner using galvanized sheet (6) with width at least 0.9 mm, secure the sheet against the damper housing using texo-screws.
ATTENTION! Any protrusive screws which could stand in the way of the blade during its opening need to be shortened in the housing's interior.
 6. If needed, uncover and clean the damper after installation.
 7. Check the damper functionality.

1.6 INSTALLATION of the PKIR / PKIS fire damper OUT OF A WALL (Fig. 6)

1. For a round damper installation prepare a round opening with diameter $DN + 120$ mm, for a square damper a square opening with dimensions $W + 120$ mm and $H + 120$ mm. The opening in the flexible wall must be reinforced according to the standards for plasterboard walls.
2. Press insulation around the duct inserted into a load-bearing structure opening (1) and cut its edges to even it with the wall surface. Paint the insulation surface with a suitable coat of paint (2; e.g. BSF, ISOVER). Add in the duct to the partition structure using rolled profiles. Add the square duct in by its perimeter, add the round duct in only in the lowest and highest point.
3. Hang the round damper onto a suitable hanging (3) made of sheet metal ringlets mounted in the blade location. Begird the square damper's perimeter in the blade location by U-profiles (4) and hang it onto threaded rods M10.
4. Insulate (5) the damper and duct parts between the damper and the partition structure. Glue the insulation onto the partition wall using suitable glue (8; e.g. BSK, ISOVER). Secure the insulation with density in the amount of 66 kg/m^3 in two 90 mm layers onto the square duct using 90 mm (1st level) and 180 mm (2nd level) long welding pins (6). Entwine the round damper part and duct insulation with a binding wire in the usual way that is applied when insulating round ducts.
5. Cover the insulation face and perimeter up to a distance of 150 mm from the insulation corner using galvanized sheet (7) with width at least 0.9 mm, secure the sheet against the damper housing using texo-screws.
ATTENTION! Any protrusive screws which could stand in the way of the blade during its opening need to be shortened in the housing's interior.
6. If needed, uncover and clean the damper after installation.
7. Check the damper functionality.

2 Operation Manual

After installation it is needed to adjust the damper into its operating position – open the fire damper, close the evacuation damper.

2.1 Servomotor-operated activation mechanism

Connect the electric driving mechanism to the pertaining electric power supply (Fig. 10, 11, 12, 15). The electromotor is activated and adjusts the damper into its operating position.

2.2 Manually operated fire damper activating mechanism

Turn and detent the crank into the „OPEN“ position (Fig. 13 and 14). The damper blade opens, if the damper is connected (according to the damper connection, Fig. 9) the control system signals the damper blade's open position.

2.3 Manually operated fire damper activating mechanism with an electromagnet

The process is the same as in 2.2 and in addition it is needed to connect the electromagnet to the control system, which will control the electromagnet in case of the fire damper activation from the control center (Fig. 9).

3 Fire Damper Functionality Check

3.1 Manual

- Open the damper – turn the crank using a four-square wrench (damper dimensions $W \leq 800$ and $H \leq 600$ mm) / turn the crank into the „OPEN“ position and detent (damper dimensions > 800 and / or $H > 600$ mm) – the crank needs to remain in the „OPEN“ position, the microswitch for the open position indication must be braced if installed.
- Close the damper – release the mechanism by the crank (damper dimensions $W \leq 800$ and $H \leq 600$ mm) / pulling the locking pin (damper dimensions > 800 and / or $H > 600$ mm) – the crank needs to adjust itself into the „CLOSED“ position and remain locked in this position, the microswitch for the closed position indication must be braced if installed.
- Open the damper – turn the crank using a four-square wrench (damper dimensions $W \leq 800$ and $H \leq 600$ mm) / turn the crank into the „OPEN“ position and detent (damper dimensions > 800 and / or $H > 600$ mm) – the crank needs to remain in the „OPEN“ position, the microswitch for the open position indication must be braced if installed.

3.2 Servomotor operated activation mechanism

- The fire damper must open / the evacuation damper must close automatically after servo circuit closing – the arrow on the servo axis must be showing position 0° .
- Press the control switch on the thermal fuse (Fig. 8) and hold it until the fire damper is fully closed / evacuation damper is fully open – the arrow on the servo axis must be showing position 90° .
- Release the control switch on the thermal fuse. The fire damper must become fully open / evacuation damper must be fully closed – the arrow on the servo axis must be showing position 0° - which is the operating position.

4 Damper Inspection

The activating mechanism keeps the dampers on stand-by during their entire life cycle in accordance with the Operation manual issued by the manufacturer. Without the manufacturer's consent it is not permitted to alter the dampers in any way nor perform any changes to their structure.

The operator performs regular checks of the dampers according to established regulations and standards at least once in 12 months. The check needs to be performed by an employee who has been specifically trained for this purpose by the manufacturer. The current fire damper condition determined during the inspection needs to be entered into an operating journal along with the date of the inspection, a legible name, surname and signature of the employee who performed the inspection. The journal includes a copy of the employee's authorization. If any discrepancies are discovered, these need to be entered in the operating journal along with a proposal for their removal. The journal can be found on the last but one page of this manual.

Immediately after the damper installation and activation it needs to be checked with the identical conditions as apply for the above mentioned 12-month inspections. The table for damper activation can be found on the last but one page of this manual.

Visual check enables seeing visible damages on the inspected damper parts. On its external side check the damper housing and the activating mechanism. Due to the need to perform a visual check of the damper's internal parts, it is necessary to dismount the base plate with the activating mechanism, which will enable us to access the inside of the damper or open the inspection lid if the damper is equipped with one. The removable mechanism always needs to be dismounted from the damper and returned back into the damper with the damper blade being closed. We check the damper's internal casing, thermal fuse, sealing, foaming substance, the damper blade condition and accuracy of its closure during its leaning against the backstop in the closed position. There must not be any strange objects nor a layer of impurities from the air distribution systems inside the damper.

NEVER OPEN THE INSPECTION LID WHEN THERE IS AIR FLOWING IN THE DUCT CONNECTED TO THE FIRE DAMPER!


Recommended course of action and inspection log according to STN EN 15 650:

1. Damper identification
2. Date of inspection
3. Check of electric connection of the activating mechanism (where applicable)
4. Check of electric connection of the end switches (where applicable)
5. Check of the damper for cleanliness and possible need for cleaning (where needed)
6. Check of the blade and sealing condition, possible correction and log (where needed)
7. Check of the proper fire damper closure – details can be found in the previous paragraphs
8. Check of the damper functionality – opening and closing using the control system, physical examination of the damper's behavior, possible correction and log (where needed)
9. Check of the end switches' functionality at an open and a closed position, possible correction and log (where needed)
10. Check whether the damper is fulfilling its role as part of the regulation system (where needed)
11. Check whether the damper remains in its standard operating position.

The damper is usually part of a system. In that case the whole system needs to be checked as described in its operation and maintenance requirements.

5 Warranty Conditions:

1. Systemair Ltd. provides warranty for all its manufactured PKI fire dampers; the warranty lasts for 24 months starting on the product delivery date, in case of a special agreement a maximum of 30 months starting on the date of delivery.
2. The product undergoes an examination in the factory before dispatch. The manufacturer guarantees that all the product attributes will remain in compliance with the relevant technical specifications throughout the whole warranty period, provided that the customer uses it in accordance with the operating manual.
3. The customer can only request a warranty repair in writing and including the serial number of the damper in question.
4. The warranty does not apply to damages caused by unprofessional manipulation, incorrect assemblage, incorrect installation, mechanical damage or not respecting instructions stated in the Operation manual.
5. The warranty period is extended by the amount of time which has elapsed between the filing of the warranty repair claim and execution of the repair.
6. The repair is executed in the customer's premises and the manufacturer bears any costs that are necessary for the repair execution.
7. In case no defects applicable for warranty are identified, the costs associated with the arrival of the service technician will be handled by the customer who filed the warranty repair claim.

The dampers are transported in covered means of transport on pallets or in boxes. When handling during transport and storage, the dampers must be protected against damage and weather conditions. The damper blades must be in the „CLOSED“ position – icon . It is recommended to store these products in a closed, dry area where the temperature falls within the range of -10°C up to $+50^\circ\text{C}$.

Operation Journal

Activation of the damper

Mark the applied installation method by a cross:


<input type="checkbox"/> 1.1 dry	<input type="checkbox"/> 1.2 wet	<input type="checkbox"/> 1.3 soft crossing	<input type="checkbox"/> 1.4 installation kit	<input type="checkbox"/> 1.5 on a wall	<input type="checkbox"/> 1.6 out of a wall
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NOTE: It is also needed to indicate the applied installation method onto the label on the fire damper.

Date	Description of identified defects and malfunctions	Inspection technician's signature

Periodic damper inspections – at least once in 12 months


Date	Description of identified defects and malfunctions	Inspection technician's signature


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IMOS-Systemair 90043 Kalinkovo 146 Slovakia
EN 15650:2010

Fire resistance:

- maintenance of the cross section (under E)
- integrity E
- insulation I
- smoke leakage S
- mechanical stability (under E)
- cross section (under E)

1396-CPD-0061 PKI-R EI30/60/90/120(ve ho i ↔ o)S
+FTZU 13 ATEX 0046:
 II 2/- G IIB PKI2-Ex-R EI60/90/120(ve ho i ↔ o)S

1396-CPD-0062 PKI-S EI90/120S(ve ho i ↔ o)S
+FTZU 13 ATEX 0046:
 II 2/- G IIB PKI2-Ex-S EI90/120(ve ho i ↔ o)S

1396-CPD-0069 PKI-R E60S E60S(ve ho i ↔ o)S

1396-CPR-0076 PKIR3G fire resistance see Tab. 2
1396-CPR-0077 PKIS3G fire resistance see Tab. 3

Nominal activation conditions/sensitivity: **Pass**

- sensing element load bearing capacity
- sensing element response temperature

Response delay (resp. time) **Pass**

- closure time

Operational reliability: **Pass**

- cycling motorized 10200 cycles
- cycling manual 50 cycles

Durability of response delay: **Pass**

- sensing element response temperature and load bearing capacity

Damper Identification	
Building object	
Emplacement	
Room no.	
Position no.	
Identification	
Signalization	

Warranty Service

Date of warranty repair notification	Date of warranty repair finalization	Description of the executed warranty repair	Representative of the manufacturer (stamp, signature)