

Smoke protection dampers

Type JZ-RS



JZ-RS with AS-i module



Smoke protection damper, Type JZ-RS, with installation subframe



JZ-RS with actuator



With TROXNETCOM as an option



To prevent the spreading of smoke

Smoke protection dampers are used in ventilation plant rooms or in ducts to prevent smoke from spreading

- Casing air leakage to EN 1751, class C
- Low differential pressure and sound power level
- Airflow direction is not critical
- Available in standard sizes and many intermediate sizes

Optional equipment and accessories

- Duct smoke detector RM-O-VS-D or RM-O-3-D
- Installation subframe
- Integration into the central BMS with TROXNETCOM

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Variants

Product examples

Smoke protection damper JZ-RS-G with actuator



Smoke protection damper with actuator, flange holes on both sides

JZ-RS-G-R with installation subframe



JZ-RS with AS-i module



Description



Smoke protection damper of Type JZ-RS

Application

- Smoke protection dampers of Type JZ-RS are used in ventilation plant rooms or in ducts to prevent smoke from spreading (according to the German guideline regarding fire protection requirements on ventilation systems, LüAR)
- For the refurbishment of systems with regard to fire safety
- Can be triggered by duct smoke detectors with general building inspectorate licence
- Integration into the central BMS with TROXNETCOM

Classification

- Building inspectorate licence Z-78.4-51 from the DIBt, Berlin, Germany
- Casing air leakage to EN 1751, class C
- Closed blade air leakage at a differential pressure of 40 Pa = 200 m³/h per m²
- Long-term testing: 10,000 open/close cycles

Construction

- Galvanised sheet steel, corner holes on both sides, brass bearings
- G: Flange holes on both sides

Nominal sizes

- Standard: B = 400 – 2000 mm (in increments of 200 mm), H = 345 – 1995 mm (in increments of 165 mm)
- R20 sizes: B = 357 – 1998 mm (in R20 increments), H = 357 – 1998 mm (in R20er increments)

Attachments

- Installation subframe ER
- Smoke detector
- TROXNETCOM

Special characteristics

- Low differential pressure and sound power level
- Aerofoil blades
- Low-maintenance, robust construction
- No parts with silicone
- Available in standard sizes and many intermediate sizes
- Closed cell side seals meet increased hygiene requirements

Parts and characteristics

- Frame
- Blade
- Spring return actuator
- External linkage
- Travel stop (angle section), side B
- Side seal, side H

Construction features

- Rectangular casing, welded, material thickness 1.25 mm
- Blades, material thickness 1 mm, opposed action
- Flanges on both sides, suitable for duct connection, either flange holes or corner holes
- Spring return actuator on the 2nd blade (for all sizes)
- Control input signal from the central BMS or TROXNETCOM
- External linkage, robust and durable, consisting of the coupling rod and horizontal arms
- Blade shafts, Ø12 mm, with notch to indicate the blade position
- Construction and materials comply with the EU directive and guidelines for use in potentially explosive atmospheres (ATEX)
- Side seals between the regular blades and the frame
- Travel stop (angle section) ensures tight closure of the top and bottom blades

Materials and surfaces

- Casing, blades and travel stop (angle section) made of formed galvanised sheet steel; flanges on both sides with corner holes
- Blade shafts, drive arm and external linkage made of galvanised steel
- Side seal made of stainless steel
- Brass bearings

Installation and commissioning

- Installation position is independent of the airflow direction
- With horizontal blades
- Between ducts
- On walls and ceilings (with installation subframe)
- With or without installation subframe
- Torsion-free installation
- After installation the damper must remain accessible for inspection, cleaning and repair
- Connected ducts must have an inspection access

Standards and guidelines

- German 'Bau- und Prüfgrundsätze' [Principles of Construction and Testing], 2/84 edition
- Maintenance standards DIN 31051 and EN 13305

Maintenance

- Smoke protection dampers and duct smoke detectors must be maintained regularly and must be operational at all times
- To maintain the normal function of the unit, or to re-instate its normal function, maintenance standards DIN 31051 and EN 13305 must be complied with
- Smoke protection dampers must be maintained at least every 12 months
- A maintenance report must be created; documents must be kept for reference
- Maintenance-free as construction and materials are not subject to wear

Technical data

| | |
|---|---|
| Nominal sizes | 357 × 345 to 2000 × 1998 mm |
| Volume flow rate range | 200 – 40,000 l/s or 720 – 143,640 m ³ /h |
| Maximum static differential pressure | Up to 3000 Pa |
| Operating temperature | –20 to 150 °C |

Function

Functional description

Smoke protection dampers with external linkage have opposed action blades. An external linkage transfers the synchronous rotational movement from the drive arm to the individual blades. Even large dampers can be safely opened and closed with this type of linkage. Opposed action blades close at different speeds since the linkage includes a transverse link. This facilitates the closing process and reduces the closed blade air leakage.

Schematic illustration of JZ-RS

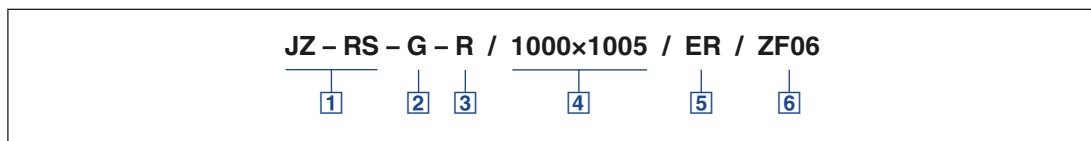


Schematic illustration of JZ-RS with installation subframe



Order code

JZ-RS



1 Type

JZ-RS Smoke protection damper

2 Construction

No entry: standard construction

G Flange holes on both sides

3 Drive side

R Right side

L Left side

(If the drive side is not specified with the order, R will be supplied.)

4 Nominal size [mm]

B × H

5 Installation subframe

No entry: none

ER With (only for construction G)

6 Attachments

Spring return actuator (power off to close), IP 54

ZF06 24 V AC / DC

ZF07 24 – 240 V AC

ZF08 24 V AC / DC, with limit switches

ZF09 24 – 240 V AC, with limit switches

Actuator without spring return

(power off to close), IP 54

ZF10 24 V AC / DC

Order example

JZ-RS-G-L/600x1500/ER/ZF10

| | |
|------------------------------|---|
| Construction | Flange holes on both sides |
| Drive side | Left side |
| Nominal size | 600 × 1500 mm |
| Installation subframe | With |
| Attachments | Spring return actuator, actuator without spring return SF24A-SR, power off to close |

Description

/ ZF06 / N...

Order code detail

Application

- Spring return actuator SF24A
- Opening and closing with safety function
- Safety position of the smoke protection damper: NC (power off to close)

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Supply voltage on/off
- Mechanical stops

2

Technical data



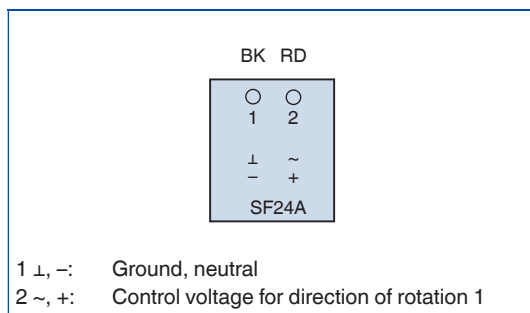
Actuator SF24A

Actuator SF24A

| | |
|----------------------------|-------------------------------------|
| Supply voltage (AC) | 24 V AC ± 20 %, 50/60 Hz |
| Supply voltage (DC) | 24 V DC -10 %, +20 % |
| Power rating (AC) | 7 VA max. |
| Power rating (DC) | 5 W max. |
| Torque | 20 Nm |
| Motor running time for 90° | < 75 s |
| Spring return time | 20 s (for < -20 °C up to 60 s) |
| Control input signal | Supply voltage on/off |
| Connecting cable | 2 × 0.75 mm ² , 1 m long |
| IEC protection class | III (protective extra-low voltage) |
| Protection level | IP 54 |
| EC conformity | EMC according to 2004/108/EC |
| Operating temperature | -30 to 50 °C |
| Weight | 2.1 kg |

Wiring

Connecting cable core identification



Description

/ ZF07 / N...

Order code detail

Application

- Spring return actuator SFA
- Opening and closing with safety function
- Safety position of the smoke protection damper: NC (power off to close)

Parts and characteristics

- Supply voltage 24 – 240 V AC or 24 – 125 V DC
- Control input signal: Supply voltage on/off
- Mechanical stops

Technical data



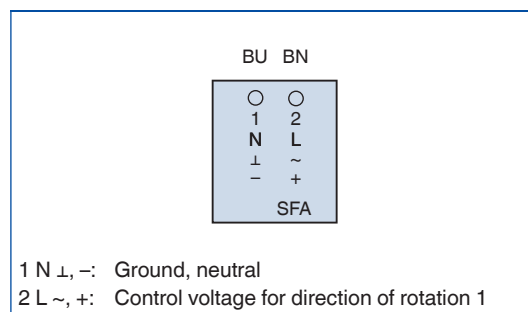
Actuator SFA

Actuator SFA

| | |
|----------------------------|---|
| Supply voltage (AC) | 19.2 – 264 V AC, 50/60 Hz |
| Supply voltage (DC) | 21.6 – 137 V DC |
| Power rating (AC) | 18 VA max. |
| Power rating (DC) | 7 W max. |
| Torque | 20 Nm |
| Motor running time for 90° | < 75 s |
| Spring return time | 20 s (for < -20 °C up to 60 s) |
| Control input signal | Supply voltage on/off |
| Connecting cable | 2 × 0.75 mm ² , 1 m long |
| IEC protection class | II (protective insulation) |
| Protection level | IP 54 |
| EC conformity | EMC to 2004/108/EU, low voltage to 2006/95/EU |
| Operating temperature | -30 to 50 °C |
| Weight | 2.2 kg |

Wiring

Connecting cable core identification



Description

/ ZF08 / N...

Order code detail

Application

- Spring return actuator SF24A-S2 with integral auxiliary switches
- Opening and closing with safety function
- Safety position of the smoke protection damper: NC (power off to close)

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Supply voltage on/off
- Mechanical stops
- Two auxiliary switches with volt-free contacts for signalling or activating switch functions
- Fixed auxiliary switch, switching point 10 %
- Adjustable auxiliary switch, switching point 10 – 90 %

Technical data



Actuator SF24A-S2

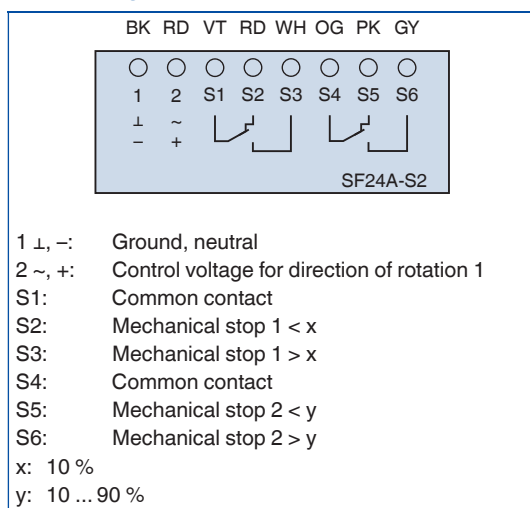
Actuator SF24A-S2

| | |
|-------------------------------------|--|
| Supply voltage (AC) | 24 V AC ± 20 %, 50/60 Hz |
| Supply voltage (DC) | 24 V DC ±10 % |
| Power rating (AC) | 7.5 VA max. |
| Power rating (DC) | 5 W max. |
| Torque | 20 Nm |
| Motor running time for 90° | < 75 s |
| Spring return time | 20 s (< -20 °C max. 60 s) |
| Control input signal | Supply voltage on/off |
| Auxiliary switch: type of contact | 2 changeover contacts ¹⁾ |
| Max. switching voltage (AC) | 250 V AC |
| Max. switching current (AC) | 3 A (resistive load); 0.5 A (inductive load) |
| Max. switching voltage (DC) | 110 V DC |
| Max. switching current (DC) | 0.5 A (resistive load); 0.2 A (inductive load) |
| Connecting cable – actuator | 2 × 0.75 mm ² , 1 m long |
| Connecting cable – auxiliary switch | 6 × 0.75 mm ² , 1 m long |
| IEC protection class | III (protective extra-low voltage) |
| Protection level | IP 54 |
| EC conformity | EMC to 2004/108/EU, low voltage to 2006/95/EU |
| Operating temperature | -30 to 50 °C |
| Weight | 2.3 kg |

¹⁾ If both auxiliary switches are used the switching voltages must be the same

Wiring

Connecting cable core identification



Description

/ ZF09 / N...

Order code detail

Application

- Spring return actuator SFA-S2 with integral auxiliary switches
- Opening and closing with safety function
- Safety position of the smoke protection damper: NC (power off to close)

Parts and characteristics

- Supply voltage 24 – 240 V AC or 24 – 125 V DC
- Control input signal: Supply voltage on/off
- Mechanical stops
- Two auxiliary switches with volt-free contacts for signalling or activating switch functions
- Fixed auxiliary switch, switching point 10 %
- Adjustable auxiliary switch, switching point 10 – 90 %

Technical data



Actuator SFA-S2

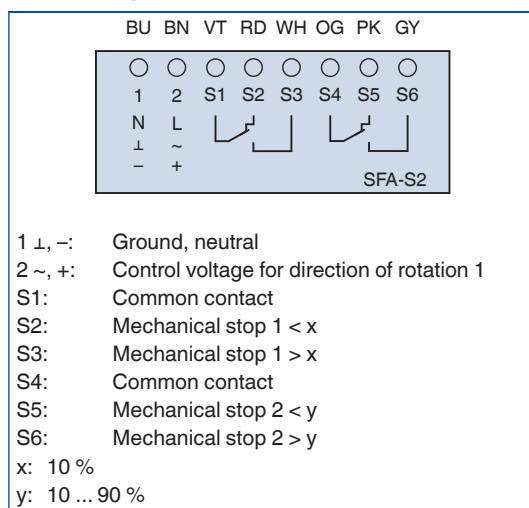
Spring return actuator SFA-S2

| | |
|-------------------------------------|--|
| Supply voltage (AC) | 19.2 – 264 V AC, 50/60 Hz |
| Supply voltage (DC) | 21.6 – 137 V DC |
| Power rating (AC) | 18 VA max. |
| Power rating (DC) | 7 W max. |
| Torque | 20 Nm |
| Motor running time for 90° | < 75 s |
| Spring return time | 20 s (< -20 °C max. 60 s) |
| Control input signal | Supply voltage on/off |
| Auxiliary switch: type of contact | 2 changeover contacts ¹⁾ |
| Max. switching voltage (AC) | 250 V AC |
| Max. switching current (AC) | 3 A (resistive load); 0.5 A (inductive load) |
| Max. switching voltage (DC) | 110 V DC |
| Max. switching current (DC) | 0.5 A (resistive load); 0.2 A (inductive load) |
| Connecting cable – actuator | 2 × 0.75 mm ² , 1 m long |
| Connecting cable – auxiliary switch | 6 × 0.75 mm ² , 1 m long |
| IEC protection class | II (protective insulation) |
| Protection level | IP 54 |
| EC conformity | EMC to 2004/108/EU, low voltage to 2006/95/EU |
| Operating temperature | -30 to 50 °C |
| Weight | 2.4 kg |

¹⁾ If both auxiliary switches are used the switching voltages must be the same

Wiring

Connecting cable core identification



Description

/ ZF10 / NC

Order code detail

Application

- Spring return actuator SF24A-SR
- Stepless adjustment as well as opening and closing of smoke protection dampers with safety function
- Safety position of the smoke protection damper: NC (power off to close)

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops

2

Technical data



Actuator SF24A-SR

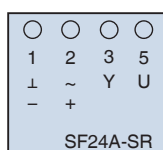
Actuator SF24A-SR

| | |
|----------------------------|--------------------------------------|
| Supply voltage (AC) | 24 V AC –10 %, + 20 %, 50/60 Hz |
| Supply voltage (DC) | 24 V DC ± 20 % |
| Power rating (AC) | 7 VA max. |
| Power rating (DC) | 5 W max. |
| Torque | 20 Nm |
| Motor running time for 90° | 150 s |
| Spring return | 20 s (for < –20 °C up to 60 s) |
| Control signal | 2 – 10 V DC, R _a > 100 kΩ |
| Connecting cable | 4 × 0.75 mm ² , 1 m long |
| IEC protection class | III (protective extra-low voltage) |
| Protection level | IP 54 |
| EC conformity | EMC according to 2004/108/EC |
| Operating temperature | –30 to 50 °C |
| Weight | 2.1 kg |

Wiring

Connecting cable core identification

BK RD WH OG



- 1 ⊥, –: Ground, neutral
 2 ~, +: Supply voltage
 3 Y: Setpoint value signal
 4 U: Actual value signal

Description



Smoke protection damper, Type JZ-RS, with installation subframe

... / **ER** / ...

Order code detail

Any accessories are defined with the order code of the smoke protection damper.

Application

- For the installation of smoke protection damper on walls and ceilings
- Simplified installation
- The installation subframe allows for the fast, simple and precise installation of smoke protection damper

Parts and characteristics

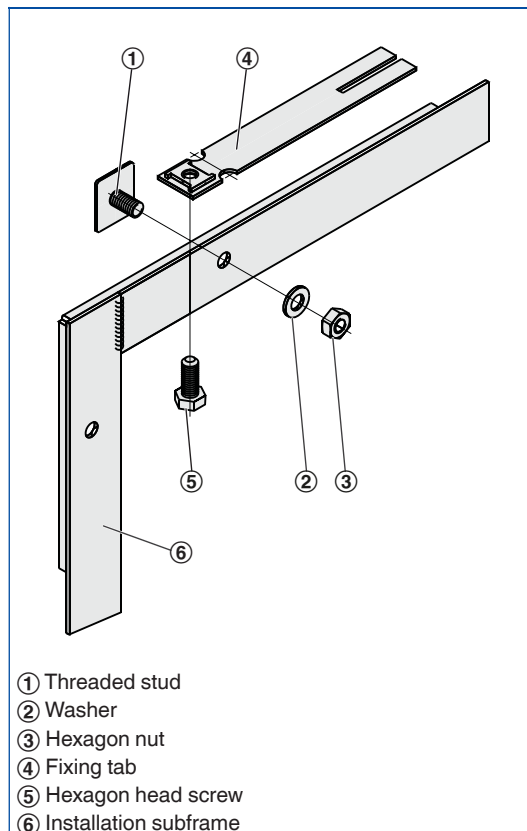
- Installation subframe consisting of angle sections
- Threaded studs
- Washers
- Hexagon nuts
- Fixing tabs

Materials and surfaces

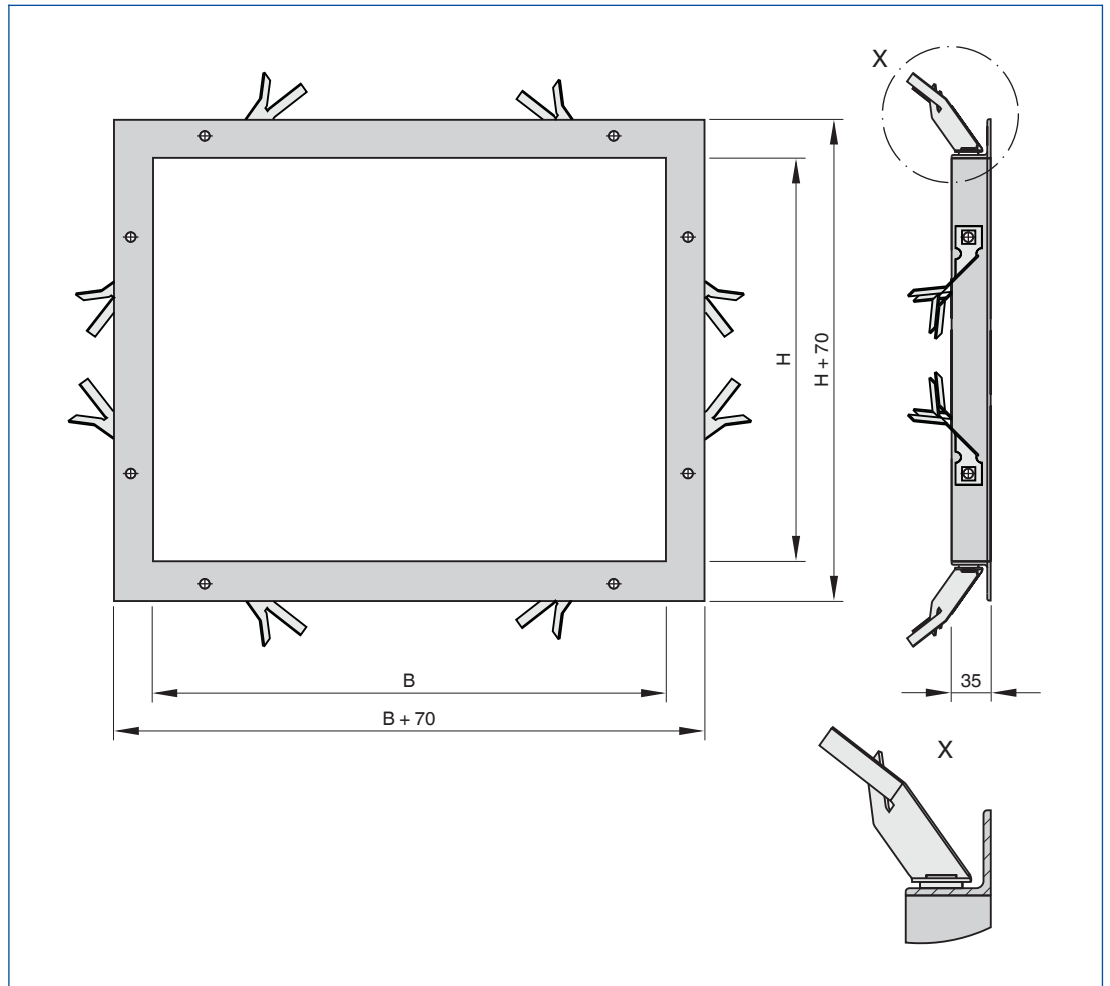
JZ-RS

- Installation subframe made of galvanised steel (angle section 35 × 35 × 3 mm)
- Screw-on fixing tabs, threaded studs, screws, nuts and washers made of galvanised steel

Installation subframe for multileaf dampers and for smoke protection dampers

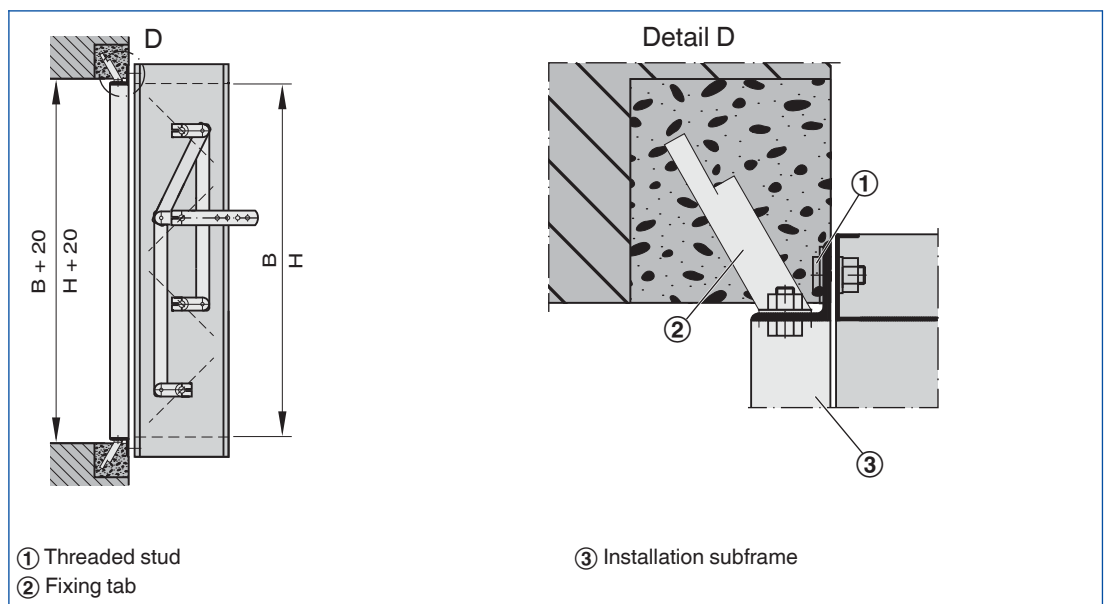


Installation subframe ready to be mortared in

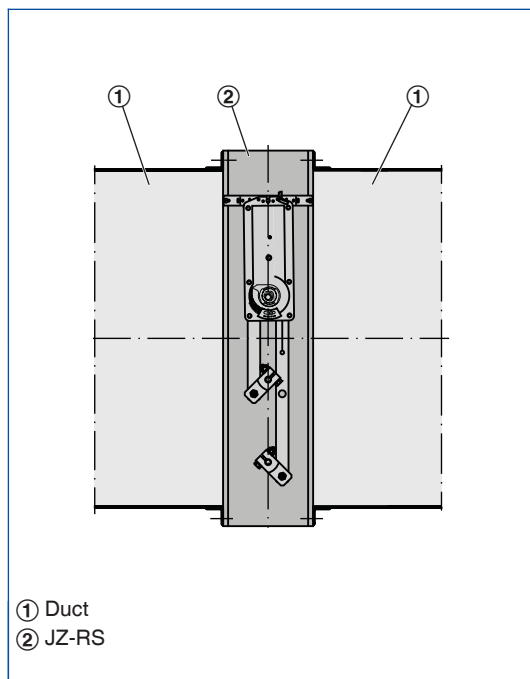


Before the subframe is mortared in, the fixing tabs must be bent and spread (by others).

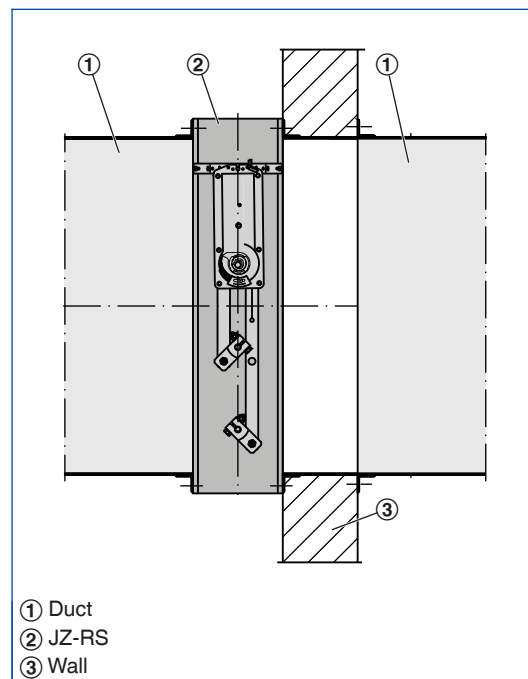
Installation subframe for JZ-RS



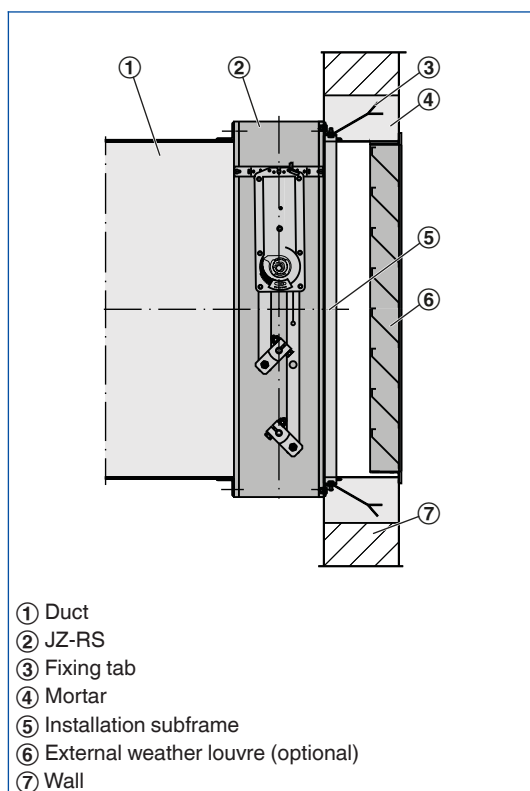
Installation in non-combustible ducts



Installation on the face of walls or ceilings



Installation on the face of walls or ceilings
with installation subframe



Quick sizing – differential pressure and sound power level

Quick sizing tables provide a good overview of the sound power levels and differential pressures that can be expected. Approximate intermediate values can be interpolated. Precise intermediate values and spectral data can be calculated with our Easy Product Finder design programme.

Quick sizing – differential pressure and sound power level for JZ-RS

| v | Damper blade position α | | | | | | | | | |
|-----|--------------------------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|
| | OPEN/0° | | 20° | | 40° | | 60° | | 80° | |
| | Δp_{st} | L_{WA} | Δp_{st} | L_{WA} | Δp_{st} | L_{WA} | Δp_{st} | L_{WA} | Δp_{st} | L_{WA} |
| m/s | Pa | dB(A) | Pa | dB(A) | Pa | dB(A) | Pa | dB(A) | Pa | dB(A) |
| 0.5 | <5 | <30 | <5 | <30 | <5 | <30 | 22 | 44 | 255 | 67 |
| 1 | <5 | <30 | <5 | <30 | 8 | 38 | 85 | 59 | 1010 | 82 |
| 2 | <5 | 31 | <5 | 35 | 28 | 53 | 335 | 74 | >2000 | >90 |
| 4 | <5 | 46 | 10 | 50 | 110 | 68 | 1395 | 89 | >2000 | >90 |
| 6 | <5 | 55 | 22 | 59 | 250 | 77 | >2000 | >90 | >2000 | >90 |
| 8 | 8 | 61 | 40 | 65 | 440 | 83 | >2000 | >90 | >2000 | >90 |
| 10 | 14 | 66 | 60 | 70 | 690 | 88 | >2000 | >90 | >2000 | >90 |

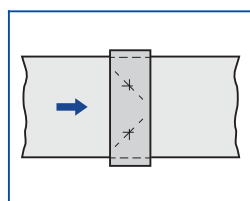
2

Sound power level for a closed smoke protection damper JZ-RS

| Δp_{st} | Area B x H [m ²] | | | | | | | |
|-----------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|
| | 0.14 | 0.2 | 0.4 | 0.6 | 0.8 | 1.2 | 2 | 4 |
| Pa | L_{WA} dB(A) | | | | | | | |
| 100 | 57 | 58 | 61 | 63 | 64 | 64 | 68 | 71 |
| 200 | 63 | 65 | 68 | 69 | 71 | 71 | 75 | 78 |
| 500 | 71 | 72 | 76 | 78 | 79 | 79 | 85 | 87 |
| 1000 | 78 | 80 | 82 | 84 | 85 | 85 | 89 | >90 |
| 1500 | 81 | 82 | 86 | 88 | 89 | 89 | >90 | >90 |
| 2000 | 84 | 86 | 89 | >90 | >90 | >90 | >90 | >90 |

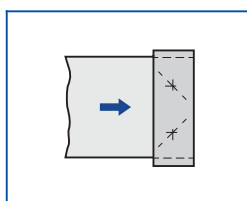
Installation types

Installation type A



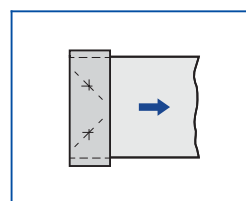
Ducts on both sides

Installation type B



Air discharge

Installation type C



Air intake

Free area

Free area, standard sizes of smoke protection damper JZ-RS

| H | B [mm] | | | | | | | |
|------|----------------|------|------|------|------|------|------|------|
| | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| mm | m ² | | | | | | | |
| 345 | 0.11 | 0.17 | 0.23 | 0.28 | 0.34 | 0.40 | 0.45 | 0.51 |
| 510 | 0.17 | 0.25 | 0.33 | 0.42 | 0.50 | 0.58 | 0.67 | 0.75 |
| 675 | 0.22 | 0.33 | 0.44 | 0.55 | 0.66 | 0.77 | 0.88 | 0.99 |
| 840 | 0.27 | 0.41 | 0.55 | 0.69 | 0.82 | 0.96 | 1.10 | 1.23 |
| 1005 | 0.33 | 0.49 | 0.66 | 0.82 | 0.98 | 1.15 | 1.31 | 1.47 |
| 1170 | 0.38 | 0.57 | 0.76 | 0.95 | 1.14 | 1.33 | 1.52 | 1.72 |
| 1335 | 0.43 | 0.65 | 0.87 | 1.09 | 1.30 | 1.52 | 1.74 | 1.96 |
| 1500 | 0.49 | 0.73 | 0.98 | 1.22 | 1.47 | 1.71 | 1.95 | 2.20 |
| 1665 | 0.54 | 0.81 | 1.08 | 1.36 | 1.63 | 1.90 | 2.17 | 2.44 |
| 1830 | 0.60 | 0.89 | 1.19 | 1.49 | 1.79 | 2.08 | 2.38 | 2.68 |
| 1995 | 0.65 | 0.97 | 1.30 | 1.62 | 1.95 | 2.27 | 2.60 | 2.92 |

Intermediate sizes: Intermediate widths can be interpolated

Maximum static differential pressure for a closed smoke protection damper

| Construction | Width [mm] | | | | | | |
|-----------------------|------------|------|------|------|------|------|------|
| | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | [Pa] | | | | | | |
| Standard construction | 3000 | 2500 | 2200 | 1950 | 1750 | 1600 | 1500 |

The pressures given are independent of the height of the smoke protection damper

Dimensions

JZ-RS Standard sizes



Smoke protection damper
JZ-RS-G with actuator

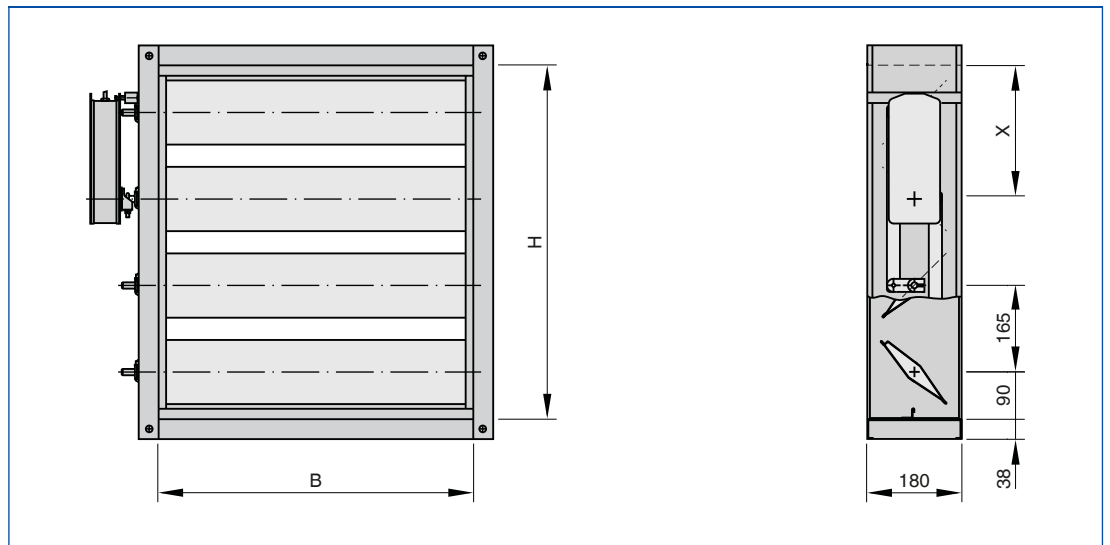


Illustration shows smoke protection damper with spring return actuator, operating side on the right

Weights (incl. actuator)

| H | B [mm] | | | | | | | | |
|------|--------|-----|-----|------|------|------|------|------|------|
| | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| mm | kg | | | | | | | | |
| 345 | 13 | 15 | 17 | 20 | 22 | 24 | 26 | 29 | 31 |
| 510 | 15 | 18 | 21 | 24 | 27 | 30 | 32 | 35 | 38 |
| 675 | 18 | 21 | 25 | 28 | 32 | 35 | 38 | 42 | 45 |
| 840 | 20 | 24 | 28 | 33 | 37 | 42 | 46 | 51 | 55 |
| 1005 | 22 | 27 | 32 | 37 | 43 | 48 | 53 | 58 | 64 |
| 1170 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 1335 | 27 | 33 | 40 | 46 | 53 | 60 | 66 | 73 | 79 |
| 1500 | 28 | 35 | 42 | 49 | 56 | 64 | 71 | 78 | 85 |
| 1665 | 30 | 38 | 46 | 54 | 62 | 70 | 77 | 85 | 93 |
| 1830 | 32 | 40 | 49 | 57 | 66 | 74 | 83 | 91 | 100 |
| 1995 | 34 | 43 | 52 | 61 | 71 | 80 | 89 | 99 | 108 |

JZ-RS standard sizes

| H | No. of blades | Actuator position | |
|------|---------------|-------------------|-------|
| | | X | Blade |
| mm | - | mm | - |
| 345 | 2 | 255 | 2 |
| 510 | 3 | 255 | 2 |
| 675 | 4 | 255 | 2 |
| 840 | 5 | 255 | 2 |
| 1005 | 6 | 255 | 2 |
| 1170 | 7 | 255 | 2 |
| 1335 | 8 | 255 | 2 |
| 1500 | 9 | 255 | 2 |
| 1665 | 10 | 255 | 2 |
| 1830 | 11 | 255 | 2 |
| 1995 | 12 | 255 | 2 |

Dimensions

JZ-RS
intermediate sizes

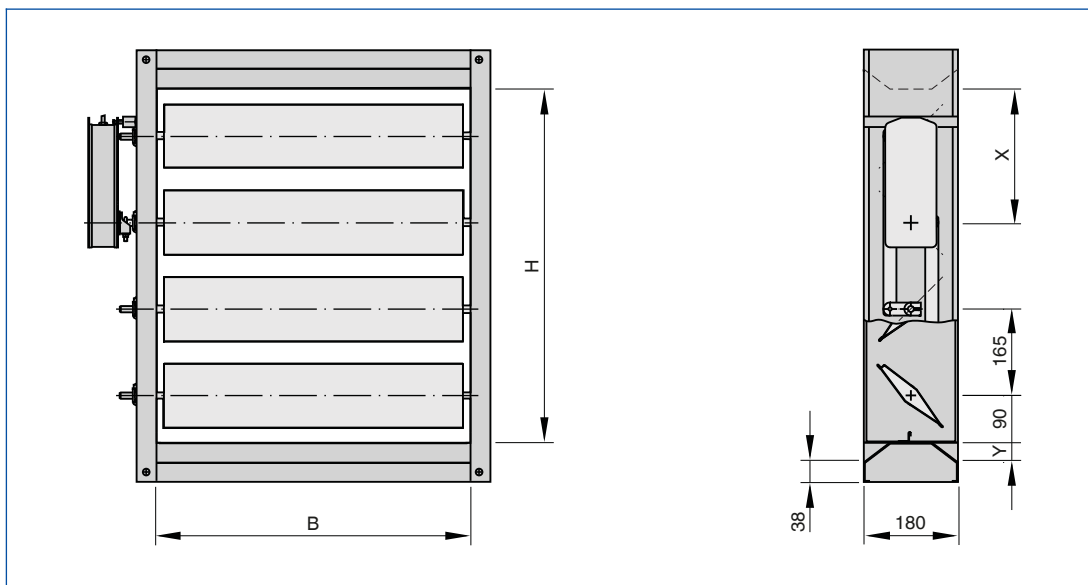


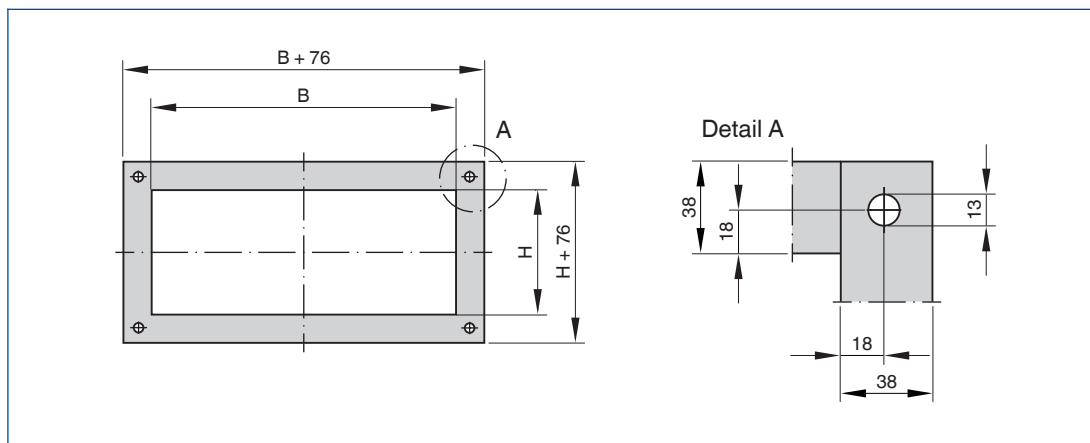
Illustration shows smoke protection damper with spring return actuator, operating side on the right

JZ-RS
intermediate sizes

| H | No. of blades | Actuator position | | |
|-------------|---------------|-------------------|-------|------------|
| | | X | Blade | Y |
| mm | - | mm | - | mm |
| 348 - 508 | 2 | 255 | 2 | 1.5 - 81.5 |
| 513 - 673 | 3 | 255 | 2 | 1.5 - 81.5 |
| 678 - 838 | 4 | 255 | 2 | 1.5 - 81.5 |
| 843 - 1003 | 5 | 255 | 2 | 1.5 - 81.5 |
| 1008 - 1168 | 6 | 255 | 2 | 1.5 - 81.5 |
| 1173 - 1333 | 7 | 255 | 2 | 1.5 - 81.5 |
| 1338 - 1498 | 8 | 255 | 2 | 1.5 - 81.5 |
| 1503 - 1663 | 9 | 255 | 2 | 1.5 - 81.5 |
| 1668 - 1828 | 10 | 255 | 2 | 1.5 - 81.5 |
| 1833 - 1993 | 11 | 255 | 2 | 1.5 - 81.5 |
| 1995 | 12 | 255 | 2 | 1.5 |

Corner holes

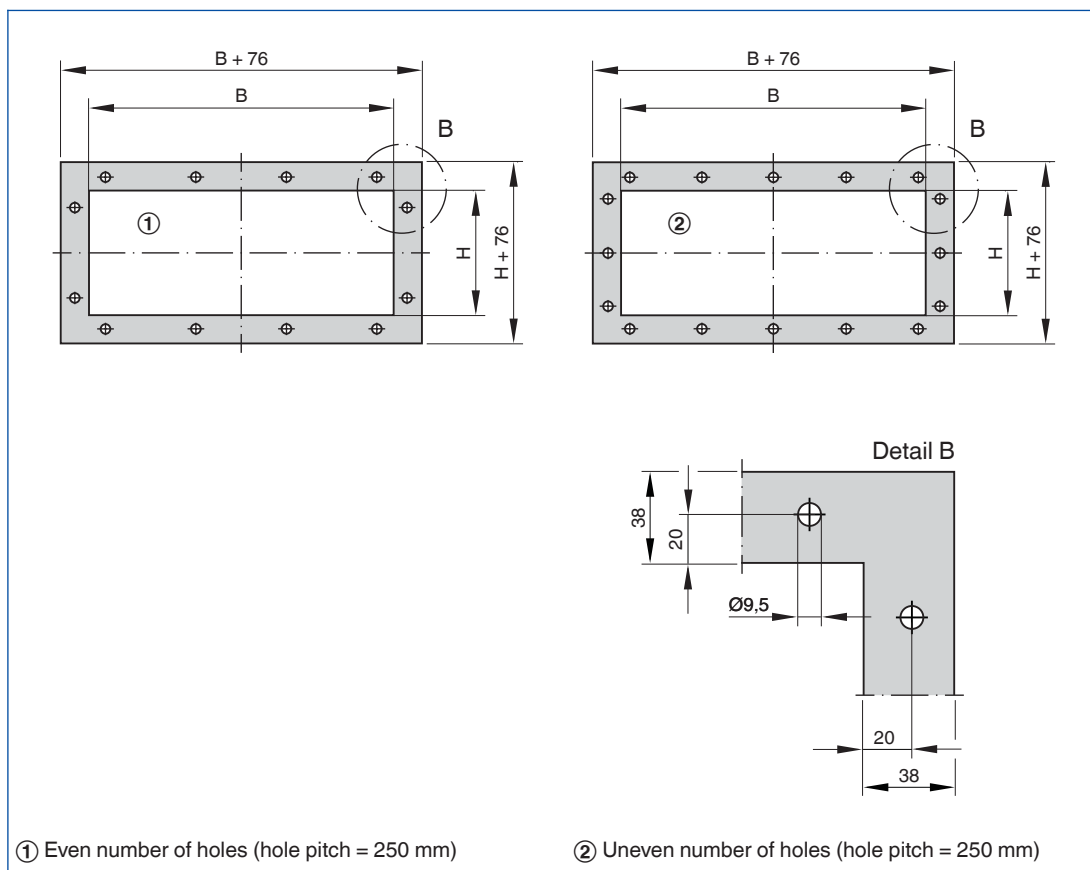
Smoke protection dampers – corner holes



Flange holes

Smoke protection dampers – flange holes

Constructions with flange holes (-G) do not have corner holes.



Dimensions

No. of holes per side

| B | No. of holes | |
|-------------|--------------|---|
| | n | |
| mm | - | |
| 400 – 537 | | 2 |
| 538 – 787 | | 3 |
| 788 – 1037 | | 4 |
| 1038 – 1287 | | 5 |
| 1288 – 1437 | | 6 |
| 1538 – 1787 | | 7 |
| 1788 – 2000 | | 8 |

No. of holes per side

| H | No. of holes | |
|-------------|--------------|---|
| | n | |
| mm | - | |
| 345 – 461 | | 2 |
| 462 – 711 | | 3 |
| 712 – 961 | | 4 |
| 962 – 1211 | | 5 |
| 1212 – 1461 | | 6 |
| 1462 – 1711 | | 7 |
| 1712 – 1961 | | 8 |
| 1962 – 1995 | | 9 |

Description

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

Smoke protection dampers for use in ventilation plant rooms or in ducts to prevent smoke from spreading; frame made from C-sections, with aerodynamically profiled hollow blades and external linkage, spring return actuator, with general building inspectorate licence Z-78.4-51 from the DIBt, Berlin, Germany. Can be triggered by duct smoke detectors with general building inspectorate licence, e.g. TROX duct smoke detector RM-O-VS-D or RM-O-3-D.

Special characteristics

- Low differential pressure and sound power level
- Aerofoil blades
- Low-maintenance, robust construction
- No parts with silicone
- Available in standard sizes and many intermediate sizes
- Closed cell side seals meet increased hygiene requirements

Materials and surfaces

- Casing, blades and travel stop (angle section) made of formed galvanised sheet steel; flanges on both sides with corner holes
- Blade shafts, drive arm and external linkage made of galvanised steel
- Side seal made of stainless steel
- Brass bearings

Construction

- Galvanised sheet steel, corner holes on both sides, brass bearings
- G: Flange holes on both sides

Technical data

- Nominal sizes: 357 × 345 to 2000 × 1998 mm
- Volume flow rate range: 200 to 40,000 l/s or 720 to 143,640 m³/h
- Acceptable static differential pressure: up to 3000 Pa
- Operating temperature: -20 to 150 °C

Sizing data

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

Order options

1 Type

JZ-RS Smoke protection damper

2 Construction

- No entry: standard construction
- G** Flange holes on both sides

3 Drive side

- R** Right side
- L** Left side
- (If the drive side is not specified with the order, R will be supplied.)

4 Nominal size [mm]

B × H

5 Installation subframe

- No entry: none
- ER** With (only for construction G)

6 Attachments

Spring return actuator (power off to close), IP 54

- ZF06** 24 V AC / DC
- ZF07** 24 – 240 V AC
- ZF08** 24 V AC / DC, with limit switches
- ZF09** 24 – 240 V AC, with limit switches

Actuator without spring return (power off to close), IP 54

- ZF10** 24 V AC / DC

Smoke protection dampers

Basic information and nomenclature

2



- Product selection
- Colour codes according to IEC 60757

Smoke protection dampers

Basic information and nomenclature

Product selection

Smoke protection dampers

| | Smoke protection dampers |
|--|---|
| | JZ-RS |
| Casing and blades | |
| Galvanised sheet steel | ● |
| Rotation | |
| Opposed | ● |
| Duct connection | |
| Corner holes | ● |
| Flange holes | ● |
| Bearings | |
| Brass | ● |
| Dynamics | |
| External linkage | ● |
| Spring return actuators | |
| 24 V AC/DC without limit switches | ● |
| 230 V AC without limit switches | ● |
| 24 V AC/DC with limit switches | ● |
| 230 V AC with limit switches | ● |
| Actuator without spring return | |
| 24 V AC/DC with limit switches | ● |
| Nominal sizes | |
| Width | 357 – 2000 mm |
| Increments | 1 mm |
| Width subdivided | ● |
| Height | 345 – 1998 mm |
| Increments | 1 mm |
| Height subdivided | ● |
| Casing | |
| Length | 180 mm |
| Areas of application | |
| Temperature resistance | 150 °C |
| Casing air leakage to EN 1751 | Class C |
| Closed blade air leakage | 200 m ³ /h per m ² at 40 Pa |
| Equipment and accessories | |
| Duct smoke detector RM-O-VS-D or RM-O-3-D | ● |
| Installation subframe | ● |
| Integration into the central BMS with TROXNETCOM | ● |
| | Possible |
| | Not possible |

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 |