



JZ-RS WITH ACTUATOR

SMOKE PROTECTION
DAMPER JZ-RS-G WITH
ACTUATOR



LONMARK[®]
PARTNER

WITH TROXNETCOM AS
AN OPTION



JZ-RS WITH AS-I MODULE



SMOKE PROTECTION
DAMPER, TYPE JZ-RS,
WITH INSTALLATION
SUBFRAME

JZ-RS

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

Application



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

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

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

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)

Description



Construction

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

Parts and characteristics

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

- Side seal, side H

Attachments

- Installation subframe ER
- Duct smoke detector
- TROXNETCOM

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

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 INFORMATION

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



- ① Casing
- ② Opposed blades
- ③ Travel stop (angle section)
- ④ Actuator
- ⑤ Transverse link
- ⑥ External linkage
- ⑦ Side seal

Schematic illustration of JZ-RS with installation subframe



- ① Casing
- ② Installation subframe
- ③ External linkage
- ④ Actuator
- ⑤ Transverse link
- ⑥ Travel stop (angle section)
- ⑦ Opposed blades

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

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

v	Damper blade position α									
	OPEN/0°		20°		40°		60°		80°	
v	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

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

Life cycle assessment

A life cycle assessment is available for the product series in form of an Environmental Product Declaration (EPD) that has been checked and published by a programme holder.

JZ - RS - G - R / 1000x1005 / ER / ZF06

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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 x 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
ZF10 24 V AC / DC, with control actuator